April 23, 2021

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

RE: **Notice of Exempt Modification for T-Mobile**
Crown Site ID# 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 in Berlin. The property is owned by the Town of Berlin and the Tower is owned by Crown Castle. T-Mobile now intends to replace three (3) existing antennas with three (3) new antennas. This modification/proposal includes hardware that is both 4G(LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Planned Modifications:
Tower:

Remove and Replace:
(3) RFS – APX16DWV-16DWV-S-E-A20 Antennas **(REMOVE)** - (3) AIR6449 B41 Antennas **(REPLACE)**

(3) RRUS11 B12 radios **(REMOVE) –** (3) Ericsson – 4415 B25_CCIV2 Radios **(REPLACE)**

Install New:
(3) Ericsson – 4449 B71_B85A radios
(1) 1 5/8'' hybrid cable

Remove:
(6) TMA
(1) 9x18 hybrid cable

Ground:

Install New:
(1) 6160 cabinet
(1) B160 battery cabinet

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, and Maureen Giusti, Acting Town Planner for the Town of Berlin.

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).

Sincerely,

Richard Zajac
Site Acquisition Specialist
4545 East River Road, Suite 320
West Henrietta, NY
(585) 445-5896
Richard.zajac@crowncastle.com

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

Zajac, Richard

From: Zajac, Richard
Sent: Friday, April 23, 2021 2:04 PM
To: mkaczynski@town.berlin.ct.us
Subject: Connecticut Siting Council exempt modification application notification
Attachments: CSC Exempt Modification Application - 240 Kensington Rd.pdf

Good afternoon Mayor Kaczynski,
Please see the attached application to the Connecticut Siting Council regarding antenna work on the existing cell tower located at 240 Kensington Road in Berlin.

Should you have any questions/comments/concerns regarding this application, please do not hesitate to contact me.

Thank you,
RICH ZAJAC
Site Acquisition Specialist
T: (585) 445-5896 M: (607) 346-7212
F: (724) 416-4461
CROWN CASTLE
4545 East River Road, Suite 320
West Henrietta, NY 14586

Zajac, Richard

From: Zajac, Richard
Sent: Friday, April 23, 2021 2:06 PM
To: mgiusti@town.berlin.ct.us
Subject: Connecticut Siting Council exempt modification application notification
Attachments: CSC Exempt Modification Application - 240 Kensington Rd.pdf

Good afternoon Ms. Giusti,
Please see the attached application to the Connecticut Siting Council regarding antenna work on the existing cell tower located at 240 Kensington Road in Berlin.

Should you have any questions/comments/concerns regarding this application, please do not hesitate to contact me.

Thank you,
RICH ZAJAC
Site Acquisition Specialist
T: (585) 445-5896 M: (607) 346-7212
F: (724) 416-4461
CROWN CASTLE
4545 East River Road, Suite 320
West Henrietta, NY 14586

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
TOWN CLERK

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

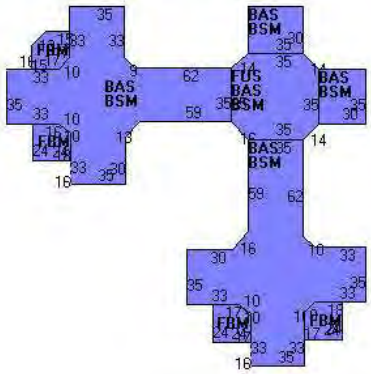
Property Information

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 4/22/2021

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

Outbuilding and Extra Features

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

Sub Areas

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

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 4/22/2021

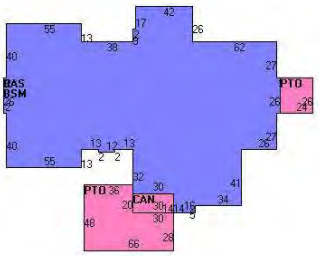
Town of Berlin, CT

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)
First Floor	21704	21704
Patio	3192	0
Basement	21704	0
Canopy Attached	420	0

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

Report Created On 4/22/2021


Percival Field
Georgini Dr
Marjorie Moore
Marjorie Moore
Kensington Rd
Berlin-Peck
Memorial Library
Town of Berlin
Berlin Parks & Recreation
Hall Ln
Towne Dr
Primrose Ln
Robbins Rd
Robbins Rd
Kensington Rd
Robbins Rd
Kensington Rd
Lawndale St
Towne Dr
Robbins Rd

Exhibit C

Construction Drawings

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 ANCHOR PROJECT

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" N
LONGITUDE:	72° 46' 32.33" W
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	129'-0"± AMSL
CURRENT ZONING:	----
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 OFG BERLIN CONNECTICUT 240 KENSINGTON RD C/O TOWN MANAGER BERLIN, CT 06037
TOWER OWNER:	CROWN CASTLE MU LLC 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 12920 SE 38TH STREET BELLEVUE, WA 98006
ELECTRIC PROVIDER:	NORTHEAST UTILITIES (800) 286-2000
TELCO PROVIDER:	LIGHTOWER (845) 458-7720

PROJECT TEAM

A&E FIRM:	TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C. 1279 ROUTE 300 NEWBURGH, NY 12550 PHONE: (845) 567-6656
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3 CORPORATE PARK DRIVE, SUITE 101 CLIFTON PARK, NY 12065
	TRICIA PELTON - PROJECT MANAGER (518) 373-3507
	JASON D'AMICO - CONSTRUCTION MANAGER (860) 209-0104

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	OVERALL SITE PLAN
C-1.2	SITE PLAN & EQUIPMENT PLAN
C-2	FINAL ELEVATION & ANTENNA PLANS
C-3	ANTENNA & CABLE SCHEDULE
C-4	PLUBING DIAGRAM
C-5	EQUIPMENT SPECS
E-1	AC PANEL SCHEDULES & ONE LINE DIAGRAM
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.

PROJECT DESCRIPTION

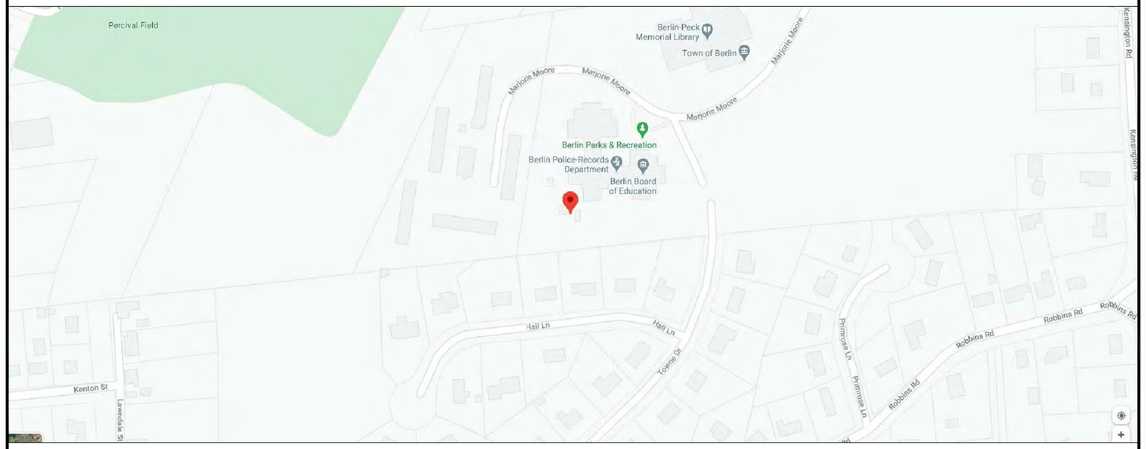
THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
- REMOVE (3) ANTENNAS
- REMOVE (3) RRUs
- REMOVE (6) TMAs
- REMOVE (1) 9X18 HYBRID CABLE
- REMOVE (12) 1-5/8" COAX CABLE
- INSTALL (3) ANTENNAS
- INSTALL (6) RRHs
- INSTALL (1) 1-5/8" HYBRID CABLE

GROUND SCOPE OF WORK:
- INSTALL (1) 6160 ENCLOSURE CABINET
- INSTALL (1) B160 BATTERY CABINET

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

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	2015 IBC
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	B+T GROUP (PASSING)
DATED:	12/26/2019
MOUNT ANALYSIS:	B+T GROUP (PASSING)
DATED:	03/02/2021
RFDS REVISION:	7
DATED:	2/17/2021
ORDER ID:	544398
REVISION:	0

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

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.

T-Mobile
4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering & Surveying Consultants P.C.
70 Pleasant Hill Road
P.O. Box 37
Mountainville, NY 10953
Phone: (845) 534-5959
(800) 522-5531
www.tectonicengineering.com
Project Contact Info
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656

TECTONIC WO#: 10545.CT11004B

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	03/24/2021	VS	PRELIMINARY	----

STATE OF CONNECTICUT
ANTONIO A. GUASTELLA
PEN.0025406
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: T-1
REVISION: A

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

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

GENERAL NOTES:

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

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

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

GREENFIELD GROUNDING NOTES:

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

ELECTRICAL INSTALLATION NOTES:

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

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

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

APWA UNIFORM COLOR CODE:

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

ABBREVIATIONS:

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

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4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

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Phone: (845) 567–6656
TECTONIC WO#: 10545.CT11004B

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0"
MONOPOLE

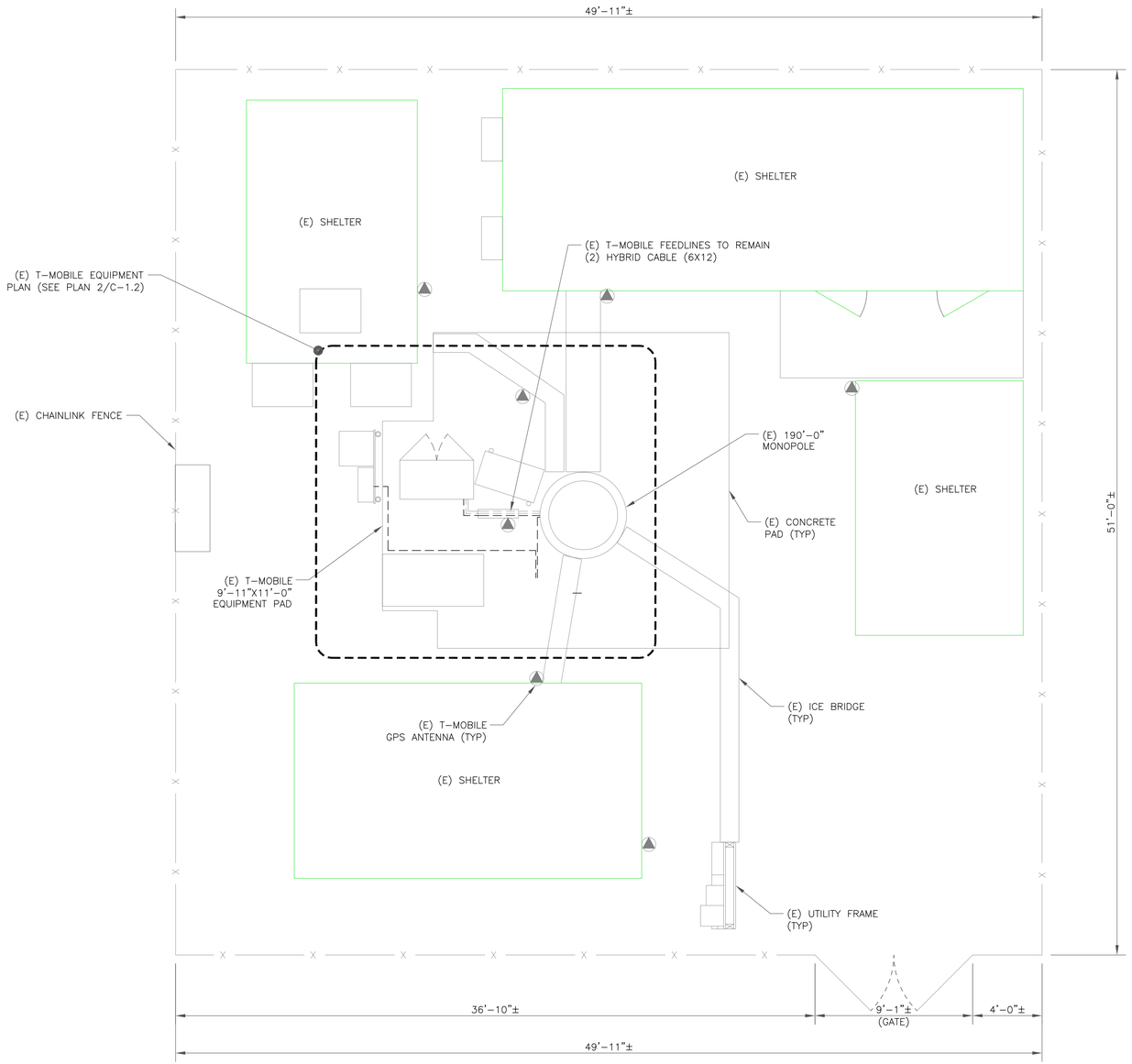
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	03/24/2021	VS	PRELIMINARY	----

SHEET NUMBER: T-2
REVISION: A

SITE PLAN DISCLAIMER:

PROPERTY LINES AND STRUCTURES HAVE BEEN DIGITIZED FROM PREVIOUS PLAN SETS OR FROM ASSESSORS MAPS. CROWN CASTLE USA INC. HAS NOT COMPLETED A SITE SURVEY AND THEREFORE MAKES NO CLAIMS AS TO THE ACCURACY OF INFORMATION DEPICTED ON THIS SHEET



1 OVERALL SITE PLAN

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

N

T-Mobile

4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE

3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

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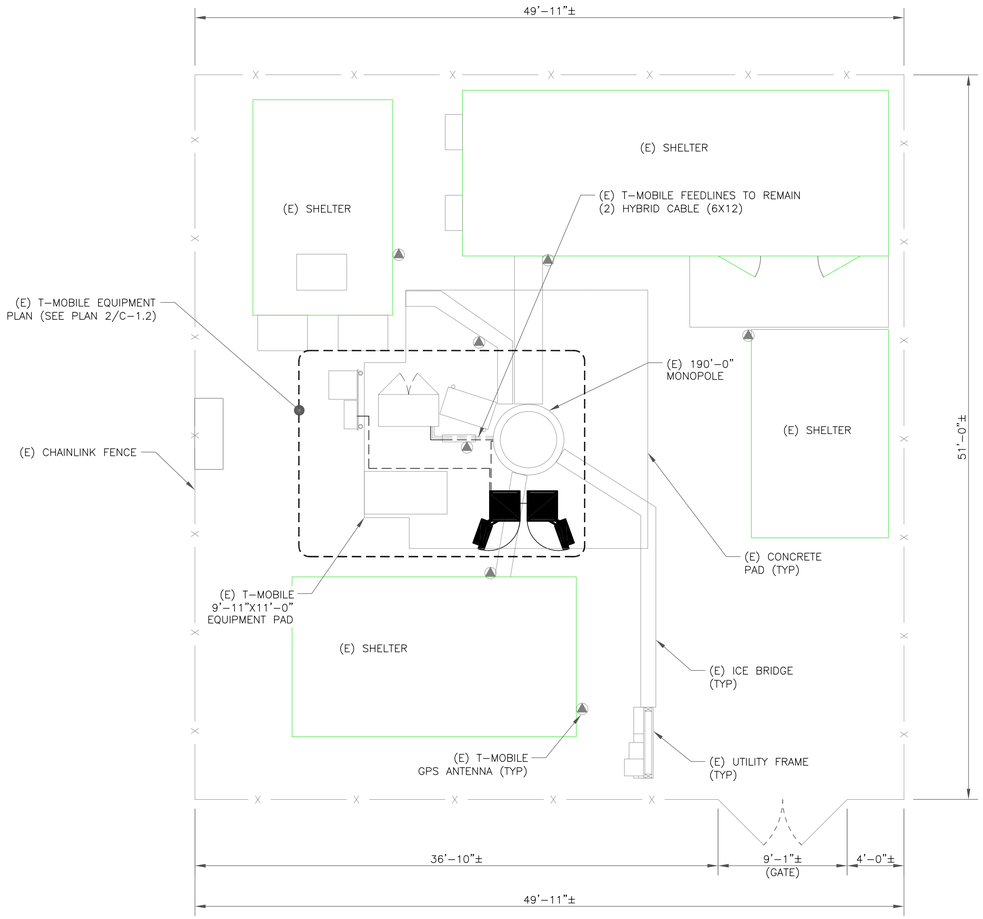
A	03/24/2021	VS	PRELIMINARY	---

STATE OF CONNECTICUT
ANTONIO A. GUASTELLA
PEN.0025406
LICENSED PROFESSIONAL ENGINEER

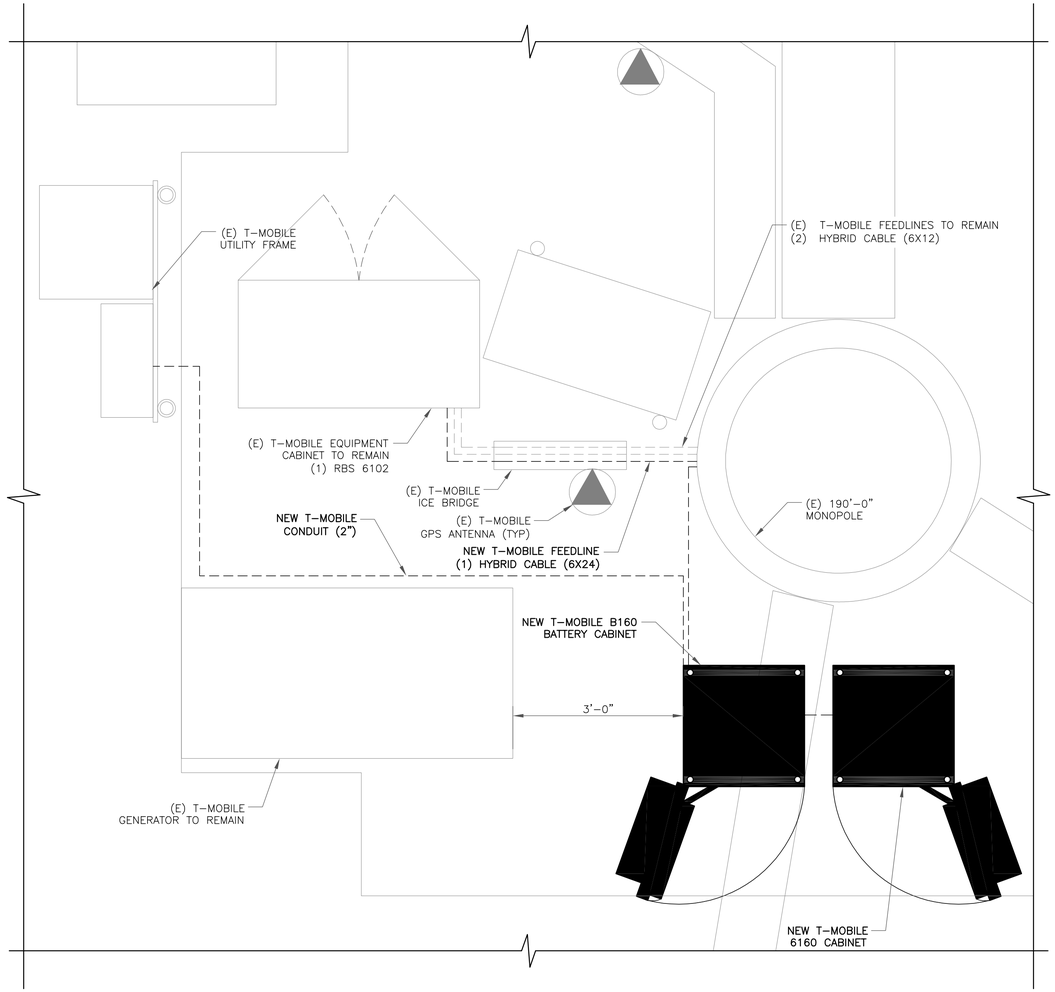
SHEET NUMBER: C-1.1

REVISION: A



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

N



2 EQUIPMENT PLAN
SCALE: 1' 6" 0 1' 3/4"=1'-0" (FULL SIZE) 3/8"=1'-0" (11x17)

N

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EXISTING 190'-0"
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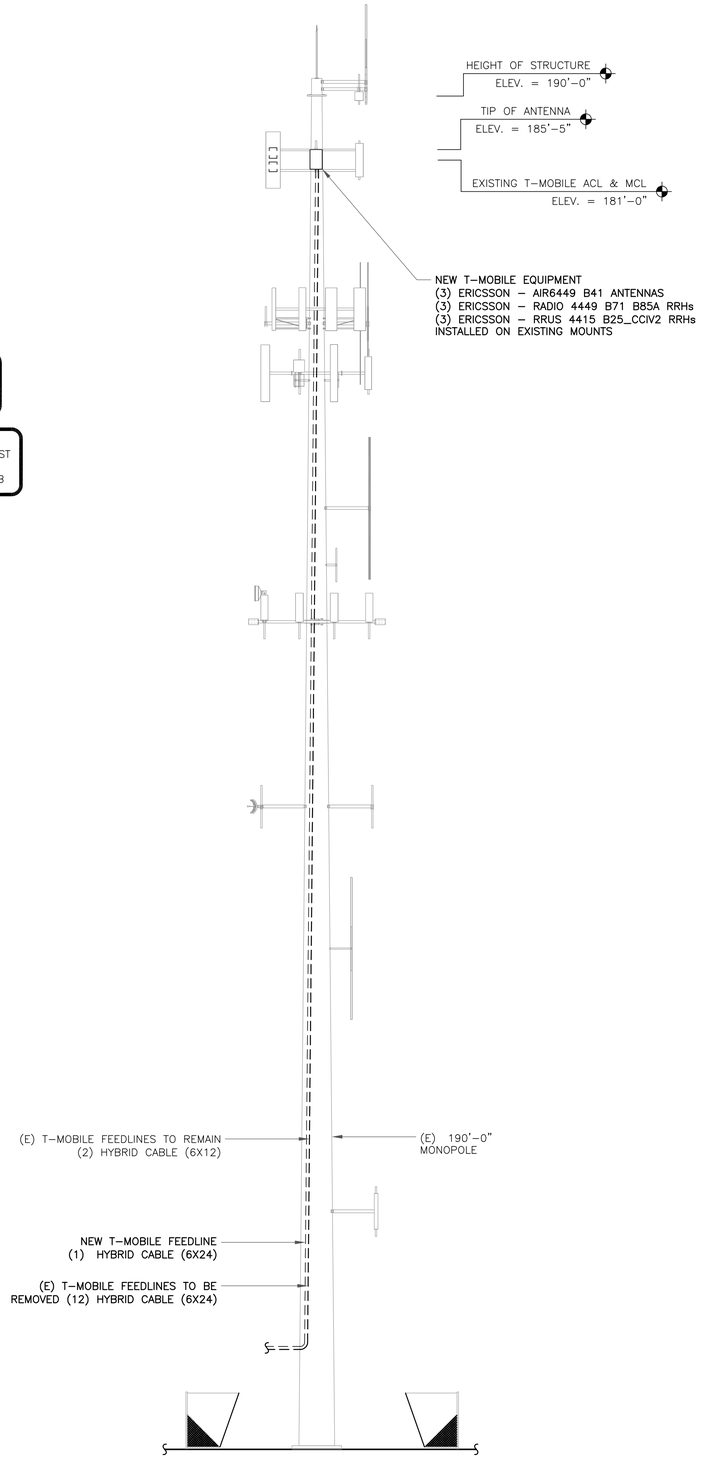
A	03/24/2021	VS	PRELIMINARY	----

SHEET NUMBER: C-1.2

REVISION: A

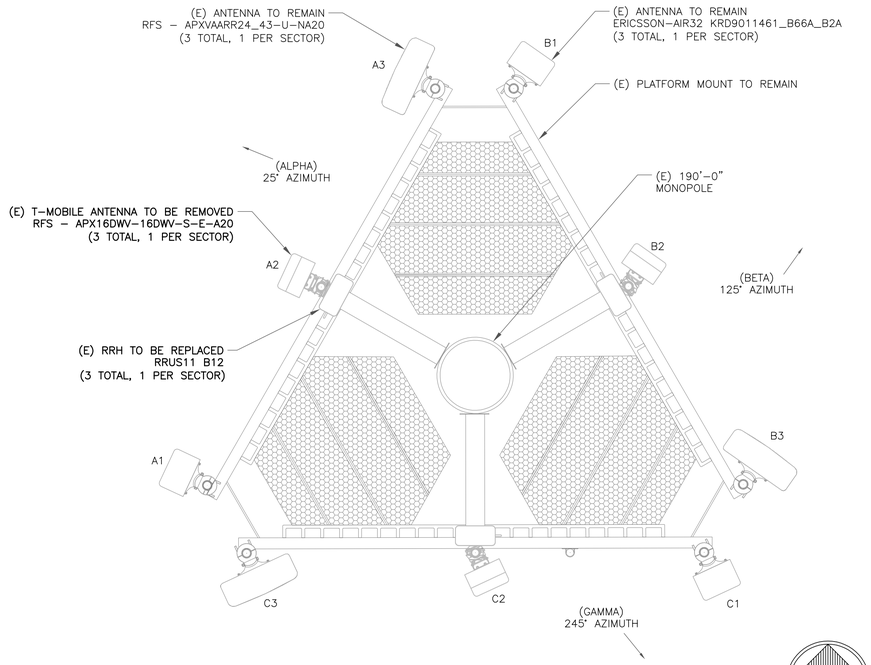


1 FINAL ELEVATION
SCALE: NOT TO SCALE

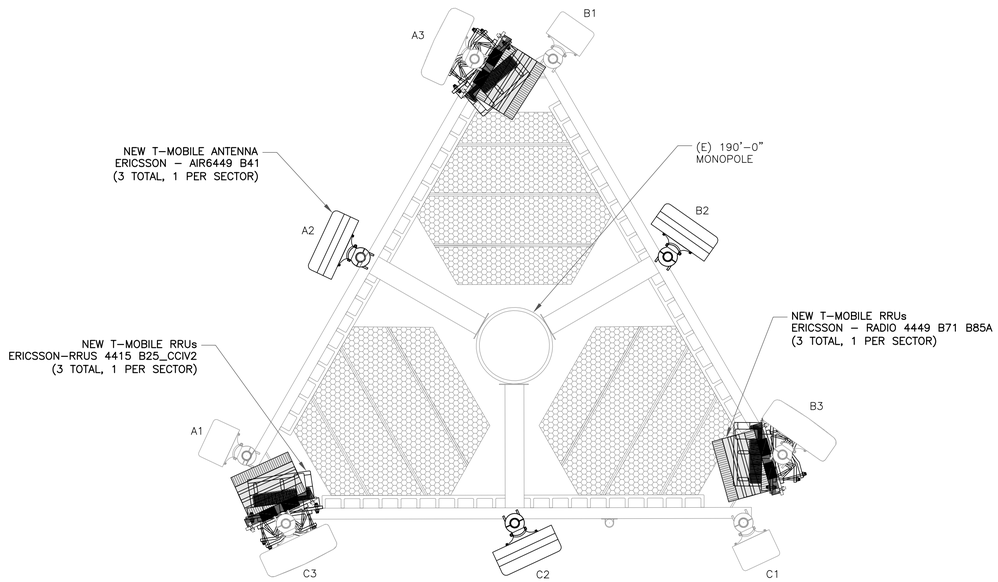
T-MOBILE EQUIPMENT

ANTENNA CL: 181'-0"
MOUNT CL: 181'-0"

ANY AND ALL TOWER MOUNTED EQUIPMENT MUST NOT TRAP OR INTERFERE W/EXISTING SAFETY CLIMB



2 EXISTING ANTENNA LAYOUT
SCALE: NOT TO SCALE



3 FINAL ANTENNA LAYOUT
SCALE: NOT TO SCALE

STRUCTURAL NOTE:
THE EXISTING ANTENNA MOUNT AT ELEV. 181'-0" SUFFICIENT FOR THE PROPOSED INSTALLATION PER THE STRUCTURAL REPORT DATED 03/02/2021 PREPARED BY B+T GRP ENGINEERING LLC PRIOR TO THE PROPOSED INSTALLATION TAKING PLACE.

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PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

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Phone: (845) 534-5959
(800) 829-8531
www.tectonicengineering.com
Project Contact Info
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656

TECTONIC WO#: 10545.CT11004B

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	03/24/2021	VS	PRELIMINARY	----

SHEET NUMBER: C-2

REVISION: A

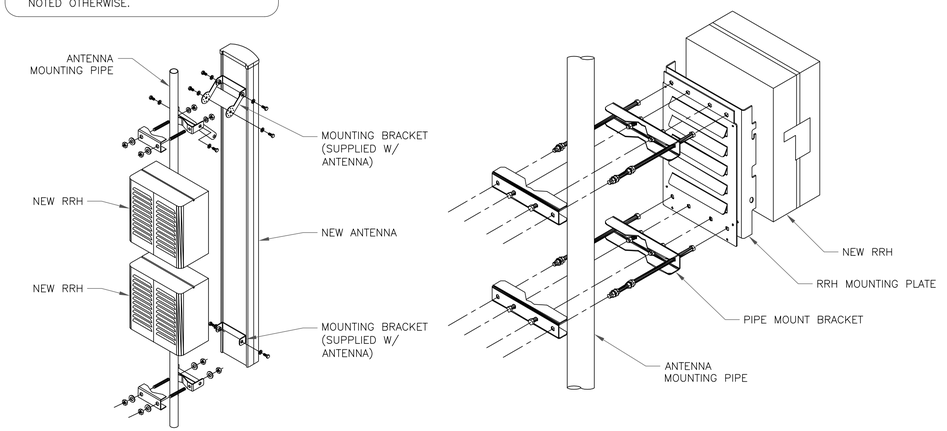
ANTENNA SCHEDULE

SECTOR	POS.	TECHNOLOGY	RAD CENTER	AZIMUTH	ANTENNA MANUFACTURER	ANTENNA MODEL	MECH. TILT	ELECT. TILT	TOWER MOUNTED EQUIPMENT	FEEDLINE TYPE
ALPHA	A1	L2100/L1900/G1900	181'-0"	25°	ERICSSON	AIR32 KRD901146-1_B66A_B2A	0°	2°/2°/2°/2°		(1) 1-5/8" HYBRID
ALPHA	**A2**	**L2500/N2500**	**181'-0"**	**25°**	**ERICSSON**	**AIR6449 B41**	**0°**	**2°/2°**		**(1) 1-5/8" HYBRID**
ALPHA	A3	L700/L600/N600/ L1900/	181'-0"	25°	RFS/CELWAVE	APXVAARR24_43-U-NA20	0°	2°/2°/2°/2°	(1) ERICSSON - RRUS 4449 B71+B85	(1) 1-5/8" HYBRID
									(1) ERICSSON - RRUS 4415 B25	(1) 1-5/8" HYBRID
BETA	B1	L2100/L1900/G1900	181'-0"	125°	ERICSSON	AIR32 KRD901146-1_B66A_B2A	0°	2°/2°/2°/2°		(1) 1-5/8" HYBRID
BETA	**B2**	**L2500/N2500**	**181'-0"**	**125°**	**ERICSSON**	**AIR6449 B41**	**0°**	**2°/2°**		**(1) 1-5/8" HYBRID**
BETA	B3	L700/L600/N600/ L1900/	181'-0"	125°	RFS/CELWAVE	APXVAARR24_43-U-NA20	0°	2°/2°/2°/2°	(1) ERICSSON - RRUS 4449 B71+B85	(1) 1-5/8" HYBRID
									(1) ERICSSON - RRUS 4415 B25	(1) 1-5/8" HYBRID
GAMMA	G1	L2100/L1900/G1900	181'-0"	245°	ERICSSON	AIR32 KRD901146-1_B66A_B2A	0°	2°/2°/2°/2°		(1) 1-5/8" HYBRID
GAMMA	**G2**	**L2500/N2500**	**181'-0"**	**245°**	**ERICSSON**	**AIR6449 B41**	**0°**	**2°/2°**		**(1) 1-5/8" HYBRID**
GAMMA	G3	L700/L600/N600/ L1900/	181'-0"	245°	RFS/CELWAVE	APXVAARR24_43-U-NA20	0°	2°/2°/2°/2°	(1) ERICSSON - RRUS 4449 B71+B85	(1) 1-5/8" HYBRID
									(1) ERICSSON - RRUS 4415 B25	(1) 1-5/8" HYBRID

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.



2 ANTENNA WITH RRHs MOUNTING DETAIL
SCALE: NOT TO SCALE

T-Mobile
4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
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Project Contact Info
1279 Route 300
Newburgh, NY 12550 — Phone: (845) 567-6656
TECTONIC WO#: 10545.CT1004B

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0"
MONOPOLE

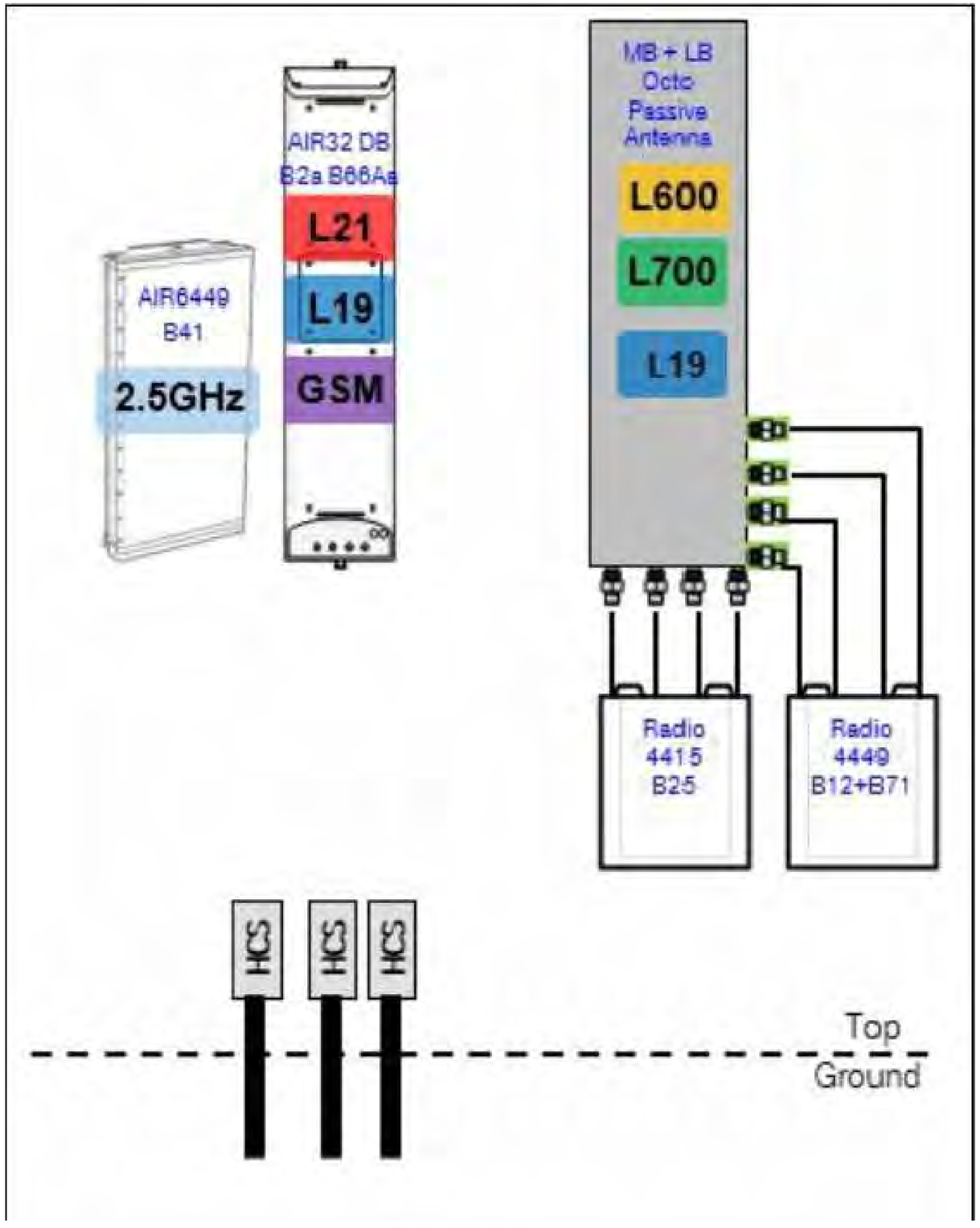
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	03/24/2021	VS	PRELIMINARY	----

STATE OF CONNECTICUT
ANTONIO A. GUATIERI
PEN.0025406
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: C-3

REVISION: A



1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

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4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
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Phone: (845) 567-6656

TECTONIC WO#: 10545.CT11004B

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

EXISTING 190'-0"
MONOPOLE

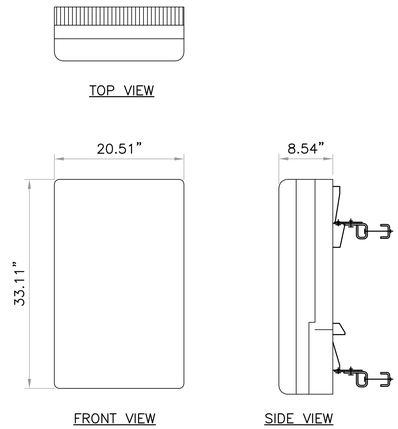
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	03/24/2021	VS	PRELIMINARY	----

STATE OF CONNECTICUT
ANTONIO A. GUALTIERI
PEN.0025406
LICENSED
PROFESSIONAL ENGINEER

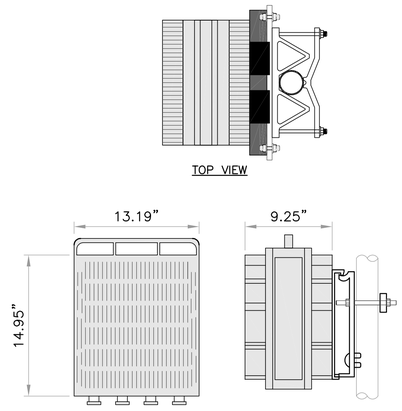
SHEET NUMBER: C-4

REVISION: A



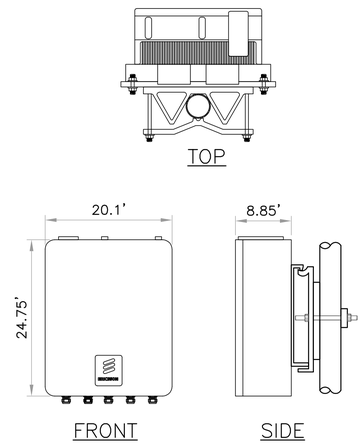
MANUFACTURER:		ERICSSON
MODEL NO.:		AIR6449 B41
DIMENSIONS		TOTAL WEIGHT:
A	33.11"	
B	20.51"	115 LBS
C	8.54"	

1 AIR6449 B41
SCALE: NOT TO SCALE



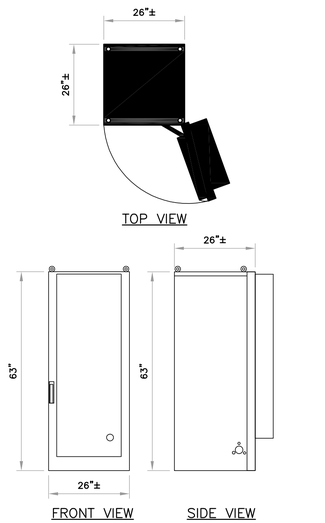
MANUFACTURER:		ERICSSON
MODEL NO.:		RADIO-4449 B71+B12
DIMENSIONS		TOTAL WEIGHT:
A	14.95"	
B	13.19"	75 LBS
C	9.25"	

2 ERICSSON – RADIO-4449
SCALE: NOT TO SCALE



MANUFACTURER:		ERICSSON
MODEL NO.:		RADIO-4415 B25
DIMENSIONS		TOTAL WEIGHT:
A	16.5"	
B	13.4"	46 LBS
C	5.9"	

3 ERICSSON – RADIO-4415 B25
SCALE: NOT TO SCALE

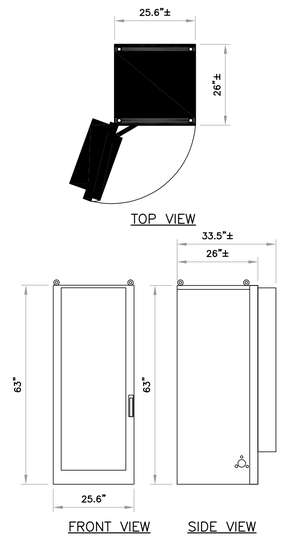


WEIGHT: 1883 LBS (W/3 BATTERY STRINGS)

ERICSSON ENCLOSURE B160

BATTERY CABINET B160

4 BATTERY CABINET B160
SCALE: NOT TO SCALE



WEIGHT: 605 LB (FULLY LOADED)

ERICSSON ENCLOSURE 6160 AC

ENCLOSURE 6160 (OUTDOOR)

5 ENCLOSURE 6160 (OUTDOOR)
SCALE: NOT TO SCALE

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Project Contact Info
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656
TECTONIC WO#: 10545.CT11004B

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	03/24/2021	VS	PRELIMINARY	----

SHEET NUMBER: C-5

REVISION: A

T-MOBILE PANEL SCHEDULE

MAIN: 200 AMP MAIN BREAKER | **VOLTAGE/PHASE**: 120/240V, 1-PHASE, 3-WIRE | **SHORT CIRCUIT CURRENT RATING:** ----
MOUNTING: INSIDE PPC ENCLOSURE | **ENCLOSURE**: NEMA 3R | **SURGE PROTECTECTION DEVICE**: YES

DESCRIPTION	LOAD (VA)	C or NC	C/B	CIR No.	LOAD (VA) A-PHASE	LOAD (VA) B-PHASE	CIR No.	C/B	C or NC	LOAD (VA)	DESCRIPTION
SURGE PROTECTION DEVICE	0	NC	60	1	180		2	20	NC	180	RECEPTACLE
	0	NC		3		200	4	20	NC	200	LIGHT
BLANK				5	4800		6	125	C	4800	BTS CABINET
				7		4800	8		C	4800	
				9	0		10				BLANK
				11		0	12				
				13	0		14				
				15		0	16				
				17	0		18				
				19		0	20				
				21	0		22				
				23		0	24				
BASE LOAD (VA) =					4980	5000	C= CONTINUOUS LOAD; NC = NON-CONTINUOUS LOAD				
25% OF CONTINUOUS LOAD (VA) =					1245	1250					
TOTAL LOAD (VA) =					6225	6250					
TOTAL LOAD (A) =					52	52					

"N" INDICATES NEW LOAD. ALL OTHER LOADS ARE EXISTING.
NEW BREAKER TO BE SAME TYPE AND HAVE SAME AIC RATING AS EXISTING.
CUSTOMER HAS NOT PROVIDED LOADS FOR EQUIPMENT CABINETS THEREFORE THE CABINET LOADS SHOWN.

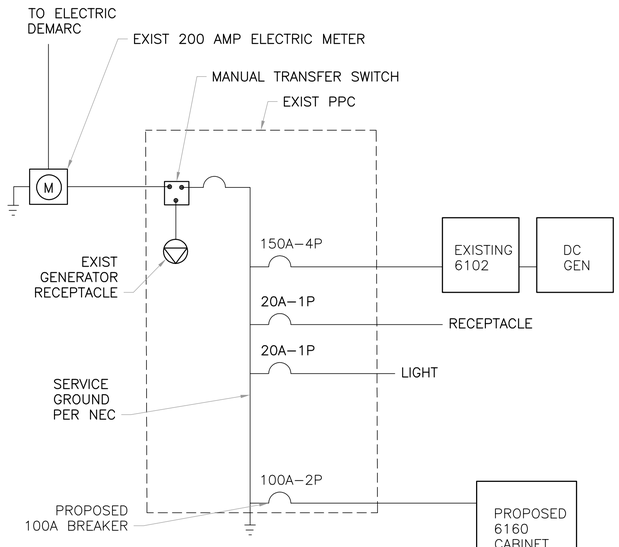
T-MOBILE PANEL SCHEDULE

MAIN: 200 AMP MAIN BREAKER | **VOLTAGE/PHASE**: 120/240V, 1-PHASE, 3-WIRE | **SHORT CIRCUIT CURRENT RATING:** ----
MOUNTING: INSIDE PPC ENCLOSURE | **ENCLOSURE**: NEMA 3R | **SURGE PROTECTECTION DEVICE**: YES

DESCRIPTION	LOAD (VA)	C or NC	C/B	CIR No.	LOAD (VA) A-PHASE	LOAD (VA) B-PHASE	CIR No.	C/B	C or NC	LOAD (VA)	DESCRIPTION
SURGE PROTECTION DEVICE	0	NC	60	1	180		2	20	NC	180	RECEPTACLE
	0	NC		3		200	4	20	NC	200	LIGHT
BLANK				5	3600		6	**150**	**C**	**3600**	**BTS CABINET****
				7		3600	8		**C**	**3600**	
				9	3600		10		**C**	**3600**	
				11		3600	12		**C**	**3600**	
				13	4800		14	**100**	**C**	**4800**	**6160 CABINET****
				15		4800	16		**C**	**4800**	
				17	0		18				BLANK
				19		0	20				
				21	0		22				
				23		0	24				
BASE LOAD (VA) =					12180	12200	C= CONTINUOUS LOAD; NC = NON-CONTINUOUS LOAD				
25% OF CONTINUOUS LOAD (VA) =					3045	3050					
TOTAL LOAD (VA) =					15225	15250					
TOTAL LOAD (A) =					127	127					

"N" INDICATES NEW LOAD. ALL OTHER LOADS ARE EXISTING.
NEW BREAKER TO BE SAME TYPE AND HAVE SAME AIC RATING AS EXISTING.
CUSTOMER HAS NOT PROVIDED LOADS FOR EQUIPMENT CABINETS THEREFORE THE CABINET LOADS SHOWN.

1 AC PANEL SCHEDULE
SCALE: NOT TO SCALE



NOTE:
THE ABOVE DIAGRAM IS GENERIC AND ANY ELECTRICAL WORK SHALL BE COMPLETED BY AN ELECTRICIAN IN ACCORDANCE WITH NEC STANDARDS.

2 ONE LINE DIAGRAM
SCALE: NOT TO SCALE

T-Mobile
4 SYLVAN WAY
PARSIPPANY, NJ 07054

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3530 TORINGDON WAY, SUITE 300
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1279 Route 300
Newburgh, NY 12550 — Phone: (845) 567–6656

TECTONIC WO#: 10545.CT11004B

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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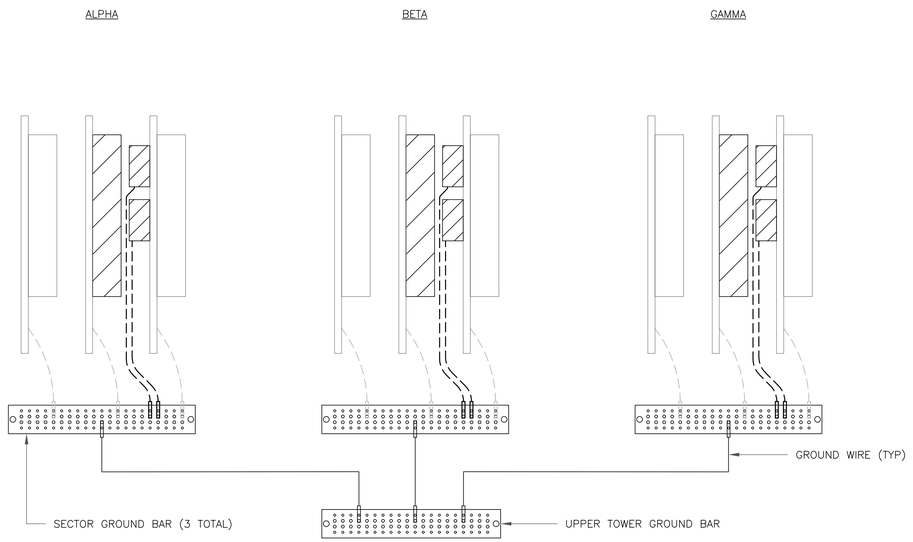
STATE OF CONNECTICUT
ANTONIO A. GUASTELLA
PEN.0025406
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: E-1
REVISION: A



NOTE:

ALL NEW GROUNDS TO BE #6 STRANDED COPPER WITH GREEN INSULATION UNLESS NOTED OTHERWISE.

1 ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE

T-Mobile

4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE

3530 TORINGDON WAY, SUITE 300
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Phone: (845) 567-6656

TECTONIC WO#: 10545.CT1004B

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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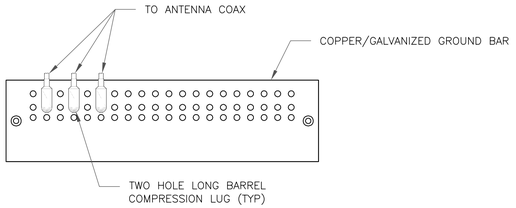
STATE OF CONNECTICUT
ANTONIO A. GUASTELLA
PEN.0025406
LICENSED
PROFESSIONAL ENGINEER

SHEET NUMBER: G-1

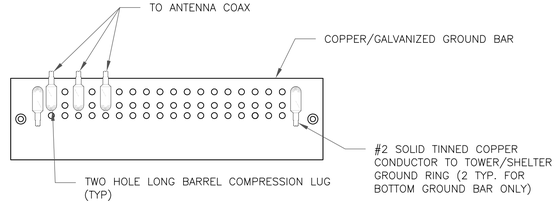
REVISION: A



NOTES:

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

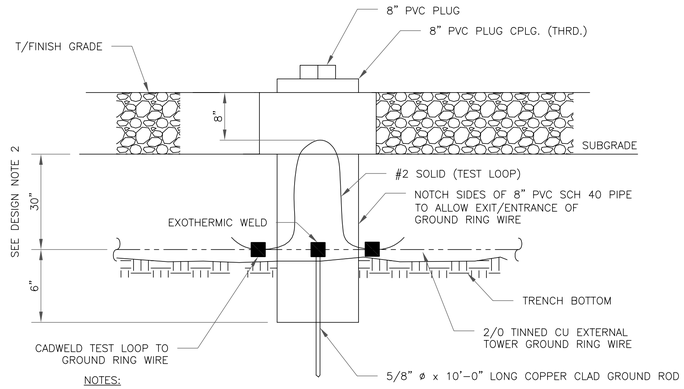
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

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

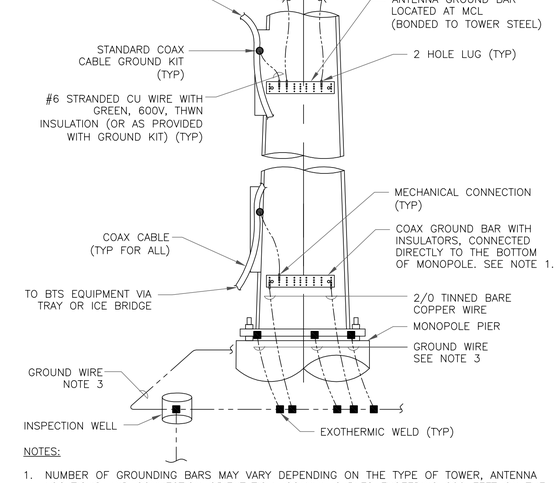
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



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)

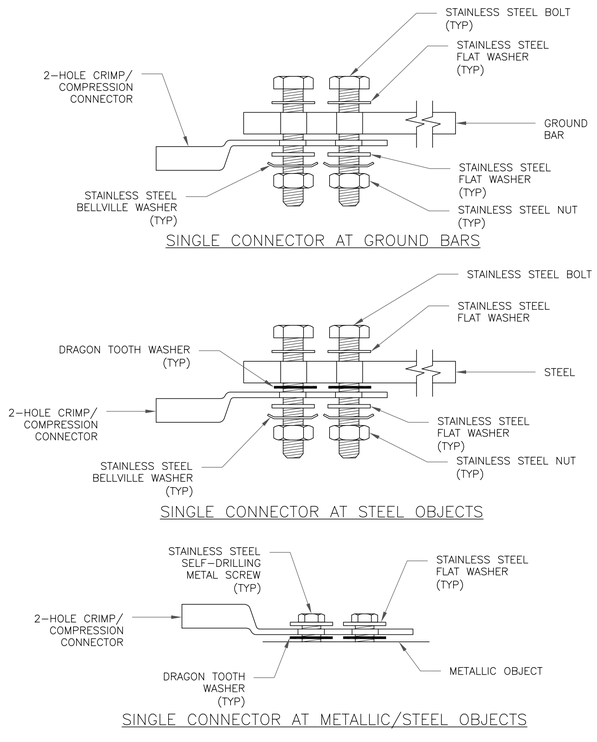
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



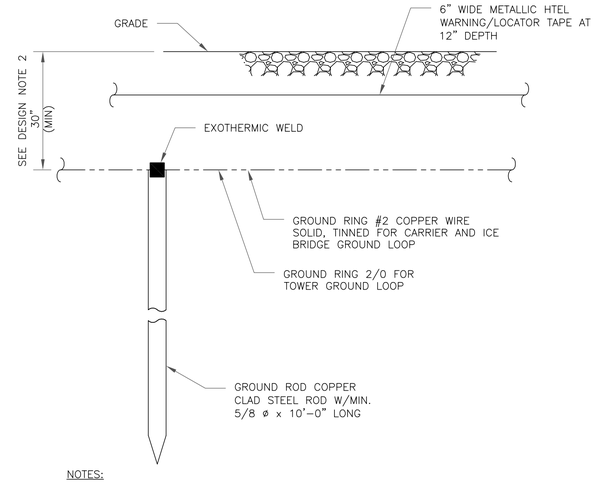
NOTES:

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
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Phone: (845) 567-6656
TECTONIC WO#: 10545.CT1104B

T-MOBILE SITE NUMBER:
CT11004B

BU #: **826217**
NEWINGTON_1

240 KENSINGTON ROAD
BERLIN, CT 06037

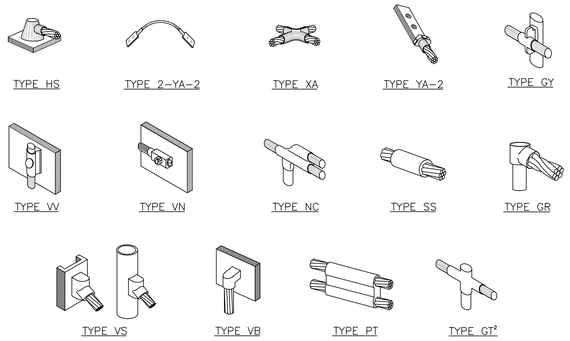
EXISTING 190'-0"
MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	03/24/2021	VS	PRELIMINARY	----

STATE OF CONNECTICUT
DONNO A. GUALTIERI
PEN.0025406
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: G-2
REVISION: A

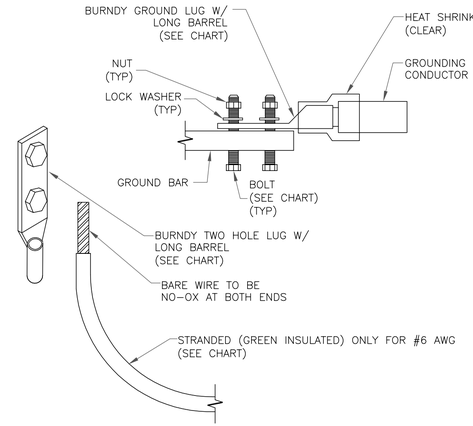


NOTE:

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

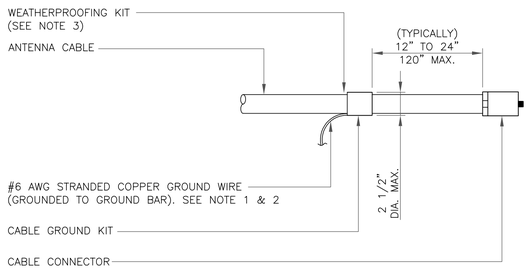
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" – 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" – 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" – 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" – 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" – 16 NC S 2 BOLT



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.

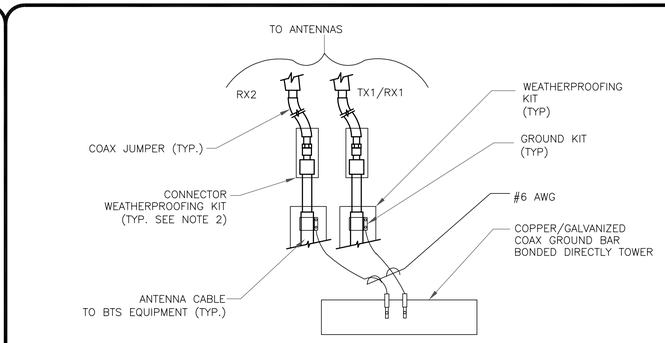
2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



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.

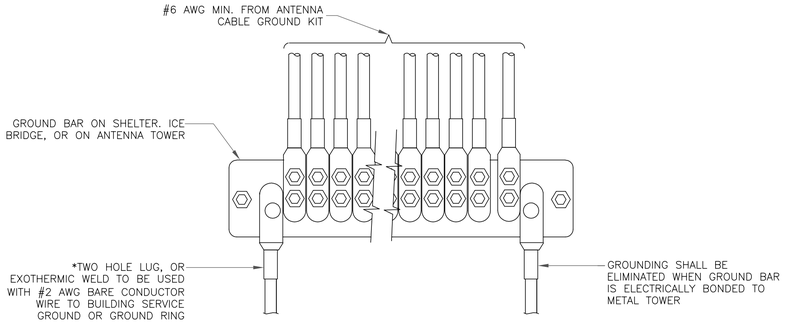
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



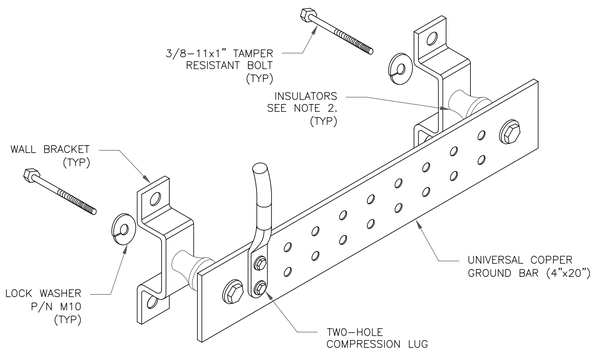
NOTES:

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



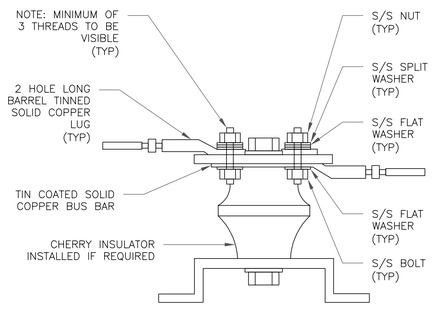
5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



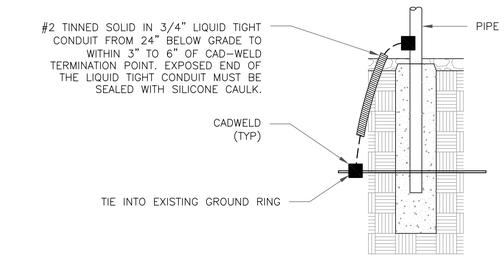
NOTES:

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
4 SYLVAN WAY
PARSIPPANY, NJ 07054

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

Tectonic
PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.
Tectonic Engineering & Surveying Consultants P.C.
70 Pleasant Hill Road
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www.tectonicengineering.com
Project Contact info
1279 Route 300
Newburgh, NY 12550
Phone: (845) 567-6656

TECTONIC WO#: 10545.CT11004B

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	03/24/2021	VS	PRELIMINARY	----

STATE OF CONNECTICUT
ANTONIO A. GUASTELLA
PEN.0025406
LICENSED
PROFESSIONAL ENGINEER

SHEET NUMBER: G-3

REVISION: A

Exhibit D

Structural Analysis Report

Date: **March 22, 2021**

MORRISON HERSHFIELD

Morrison Hershfield
1455 Lincoln Parkway. Suite 500
Atlanta GA 30346
(770) 379-8500

Subject:	**Structural Analysis Report**	
Carrier Designation:	***T-Mobile* Co-Locate**	
	Site Number:	CT11004B
Crown Castle Designation:	**BU Number:**	826217
	Site Name:	Newington_1
	JDE Job Number:	634974
	Work Order Number:	1931634
	Order Number:	544398 Rev. 0
Engineering Firm Designation:	**Morrison Hershfield Project Number:** CN7-585 / 2101398	
Site Data:	**240 Kensington Road, Berlin, Hartford County, CT 06037**	
	Latitude *41° 37' 34.3"*, Longitude *-72° 46' 32.33"*	
	191.667 Foot - PiRod Monopole Tower	

Morrison Hershfield 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**

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.

Respectfully submitted by:

G. Lance Cooke
2021.03.22
07:10:40-07'00'

G. Lance Cooke, P.E. (CT License No. PEN.0028133)
Senior Engineer

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 191.667 ft monopole tower designed by Pirod Manufactures Inc.

The tower was modified multiple times in the past to accommodate additional loading. All the modifications have been considered in this analysis per their respective post modification inspection reports.

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)
181.0	181.0	3	ericsson	AIR -32 B2A/B66AA w/ Mount Pipe	3	1-5/8
		3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe		
		3	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
		3	ericsson	RADIO 4415 B25_TMO		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	commscope	ATBT-BOTTOM-24V		
		1	-	Platform Mount [LP 405-1_HR-1]		

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)
192.0	196.0	1	kathrein	OGB4-900D	1	7/8
	192.0	1	-	Side Arm Mount [SO 701-1]		
191.0	196.0	1	andrew	DB589-A	1	5/16
	191.0	1	-	Side Arm Mount [SO 701-1]		
	190.0	1	motorola	WB2623 w/ Mount Pipe		
160.0	160.0	1	andrew	LNX-6514DS-A1M w/ Mount Pipe	14	1-5/8
		3	antel	BXA-171085-12BF-2 w/ Mount Pipe		
		2	commscope	LNX-8513DS-A1M w/ Mount Pipe		
		6	commscope	NNHH-65B-R4 w/ Mount Pipe		
		2	rfs celwave	DB-T1-6Z-8AB-0Z		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
160.0	160.0	3	samsung telecommunications	RFV01U-D1A	-	-
		3	samsung telecommunications	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]		
151.0	151.0	3	andrew	SBNH-1D6565C w/ Mount Pipe	12	1-1/4
		3	cci antennas	TPA-65R-LCUUUU-H8 w/ Mount Pipe		
		3	powerwave technologies	7770.00 w/ Mount Pipe		
		3	cci antennas	DTMABP7819VG12A		
		3	ericsson	RRUS 32		
		3	ericsson	RRUS 32 B2		
		3	kaelus	DBC0062F3V52-1		
		1	raycap	DC6-48-60-18-8F		
		1	-	Miscellaneous [NA 510-1]		
		1	-	Platform Mount [LP 403-1_KCKR]		
150.0	152.0	2	ericsson	RRUS 11	-	-
		1	raycap	DC6-48-60-18-8F		
	150.0	2	ericsson	RRUS 12		
		1	tme	TME_ONLY		
		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 104-3]		
		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	6 3 1 1	5/16 1-5/8 1/2 2C
	116.0	3	alcatel lucent	PCS 1900MHZ 4X45W-65MHZ		
		3	argus technologies	LLPX310R		
		3	commscope	NNVV-65B-R4		
		3	nokia	AHCC		
		4		Dual Mount Bracket		
		1	dragonwave	HORIZON DUO		
		3	samsung telecommunications	WIMAX DAP HEAD		
		1	-	Platform Mount [LP 405-1_HR-1]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
116.0	118.0	6	decibel	844G65VTZAS	12	1-5/8
		3	decibel	844G65VTZAS w/ Mount Pipe		
		3	-	Dual Mount Bracket		
90.0	99.0	1	decibel	DB205-A	2 1 1	1/2 7/8 5/16
	90.0	1	andrew	KP2F-34		
		1	mti wireless edge	MT-485002		
		1	-	Side Arm Mount [SO 702-3]		
70.0	70.0	1	sinclair	SRL-235-2	2	7/8
		1	-	Side Arm Mount [SO 102-3]		
		1	-	Side Arm Mount [SO 701-1]		
33.0	33.0	1	decibel	DB909XVTE-M	2	1/2
		1	-	Side Arm Mount [SO 102-3]		
		1	-	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	3438510	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	3463552	CCISITES
4-TOWER MANUFACTURER DRAWINGS	3438498	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3678661	CCISITES
4-POST-MODIFICATION INSPECTION	5493013	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	5753424	CCISITES
4-POST-MODIFICATION INSPECTION	5947973	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	4003976	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.7.5), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

3.2) Assumptions

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

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L1	191.67 - 186.67	Pole	TP18x18x0.375	Pole	1.2	Pass
L2	186.67 - 181.57	Pole	TP24x24x0.375	Pole	1.4	Pass
L3	181.57 - 176.57	Pole	TP24x24x0.375	Pole	5.5	Pass
L4	176.57 - 171.57	Pole	TP24x24x0.375	Pole	9.8	Pass
L5	171.57 - 166.57	Pole	TP24x24x0.375	Pole	14.3	Pass
L6	166.57 - 161.57	Pole	TP24x24x0.375	Pole	19.0	Pass
L7	161.57 - 156.57	Pole	TP24x24x0.375	Pole	26.4	Pass
L8	156.57 - 151.57	Pole	TP24x24x0.375	Pole	34.6	Pass
L9	151.57 - 146.57	Pole	TP24x24x0.375	Pole	47.1	Pass
L10	146.57 - 141.57	Pole	TP24x24x0.375	Pole	59.7	Pass
L11	141.57 - 141.42	Pole	TP24x24x0.375	Pole	60.1	Pass
L12	141.42 - 136.42	Pole	TP36x36x0.375	Pole	34.5	Pass
L13	136.42 - 131.42	Pole	TP36x36x0.375	Pole	40.8	Pass
L14	131.42 - 126.42	Pole	TP36x36x0.375	Pole	47.4	Pass
L15	126.42 - 121.42	Pole	TP36x36x0.375	Pole	54.2	Pass
L16	121.42 - 121.17	Pole	TP36x36x0.375	Pole	54.5	Pass
L17	121.17 - 116.17	Pole	TP42x42x0.375	Pole	46.2	Pass
L18	116.17 - 111.17	Pole	TP42x42x0.375	Pole	53.3	Pass
L19	111.17 - 110.04	Pole	TP42x42x0.375	Pole	54.8	Pass
L20	110.04 - 109.79	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	42.8	Pass
L21	109.79 - 105.08	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	48.0	Pass
L22	105.08 - 104.83	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	43.8	Pass
L23	104.83 - 100.92	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	48.0	Pass
L24	100.92 - 100.67	Pole	TP48x48x0.375	Pole	53.3	Pass
L25	100.67 - 95.83	Pole	TP48x48x0.375	Pole	59.1	Pass
L26	95.83 - 95.58	Pole + Reinf.	TP48x48x0.475	Pole	47.2	Pass
L27	95.58 - 90.58	Pole + Reinf.	TP48x48x0.475	Pole	52.2	Pass
L28	90.58 - 89.92	Pole + Reinf.	TP48x48x0.475	Pole	53.0	Pass
L29	89.92 - 89.67	Pole + Reinf.	TP48x48x0.575	Pole	44.2	Pass
L30	89.67 - 84.67	Pole + Reinf.	TP48x48x0.575	Pole	48.6	Pass
L31	84.67 - 80.83	Pole + Reinf.	TP48x48x0.575	Pole	52.2	Pass
L32	80.83 - 80.33	Pole + Reinf.	TP54x54x0.55	Pole	43.9	Pass
L33	80.33 - 80.08	Pole + Reinf.	TP54x54x0.4875	Pole	49.6	Pass
L34	80.08 - 75.08	Pole + Reinf.	TP54x54x0.4875	Pole	54.2	Pass
L35	75.08 - 70.08	Pole + Reinf.	TP54x54x0.4875	Pole	58.9	Pass
L36	70.08 - 69.5	Pole + Reinf.	TP54x54x0.4875	Pole	59.5	Pass
L37	69.5 - 69.25	Pole + Reinf.	TP54x54x0.5875	Pole	49.4	Pass
L38	69.25 - 64.25	Pole + Reinf.	TP54x54x0.5875	Pole	53.6	Pass
L39	64.25 - 60.58	Pole + Reinf.	TP54x54x0.5875	Pole	56.9	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L40	60.58 - 60.33	Pole + Reinf.	TP60x60x0.5125	Pole	53.4	Pass
L41	60.33 - 55.33	Pole + Reinf.	TP60x60x0.5125	Pole	57.6	Pass
L42	55.33 - 52.17	Pole + Reinf.	TP60x60x0.5125	Pole	60.3	Pass
L43	52.17 - 51.92	Pole + Reinf.	TP60x60x0.625	Pole	50.5	Pass
L44	51.92 - 46.92	Pole + Reinf.	TP60x60x0.625	Pole	54.2	Pass
L45	46.92 - 41.92	Pole + Reinf.	TP60x60x0.625	Pole	58.0	Pass
L46	41.92 - 40.23	Pole + Reinf.	TP60x60x0.6	Pole	59.8	Pass
L47	40.23 - 39.98	Pole + Reinf.	TP60x60x0.6	Pole	60.0	Pass
L48	39.98 - 34.98	Pole + Reinf.	TP60x60x0.6	Pole	63.9	Pass
L49	34.98 - 29.98	Pole + Reinf.	TP60x60x0.6	Pole	68.0	Pass
L50	29.98 - 28	Pole + Reinf.	TP60x60x0.6	Pole	69.6	Pass
L51	28 - 27.75	Pole + Reinf.	TP60x60x0.725	Pole	58.6	Pass
L52	27.75 - 22.75	Pole + Reinf.	TP60x60x0.725	Pole	62.2	Pass
L53	22.75 - 20.08	Pole + Reinf.	TP60x60x0.725	Pole	64.1	Pass
L54	20.08 - 19.83	Pole	TP60x60x0.625	Pole	71.5	Pass
L55	19.83 - 17	Pole	TP60x60x0.625	Pole	73.8	Pass
L56	17 - 16.75	Pole + Reinf.	TP60x60x0.725	Pole	64.0	Pass
L57	16.75 - 11.65	Pole + Reinf.	TP60x60x0.75	Pole	66.1	Pass
L58	11.65 - 11.42	Pole + Reinf.	TP60x60x0.75	Pole	66.3	Pass
L59	11.42 - 9.4	Pole + Reinf.	TP60x60x0.75	Pole	67.7	Pass
L60	9.4 - 9.15	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	67.4	Pass
L61	9.15 - 4.83	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	70.4	Pass
L62	4.83 - 4.58	Pole + Reinf.	TP60x60x0.75	Pole	72.0	Pass
L63	4.58 - 0	Pole + Reinf.	TP60x60x0.75	Pole	75.4	Pass
					Summary	
				Pole	75.4	Pass
				Reinforcement	73.4	Pass
				Overall	75.4	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Connection	181.583	2.0	Pass
1	Flange Connection	141.417	39.0	Pass
1	Flange Connection	121.167	31.1	Pass
1	Flange Connection	100.917	30.9	Pass
1	Flange Connection	80.833	32.3	Pass
1	Flange Connection	60.583	21.3	Pass
1	Flange Connection	40.083	16.0	Pass
1	Flange Connection	20.083	7.2	Pass
1	Anchor Rods	0	41.5	Pass
1	Base Plate		41.5	Pass
1	Base Foundation	0	79.5	Pass
1	Base Foundation Soil Interaction		76.2	Pass

Structure Rating (max from all components) =	79.5%*

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.

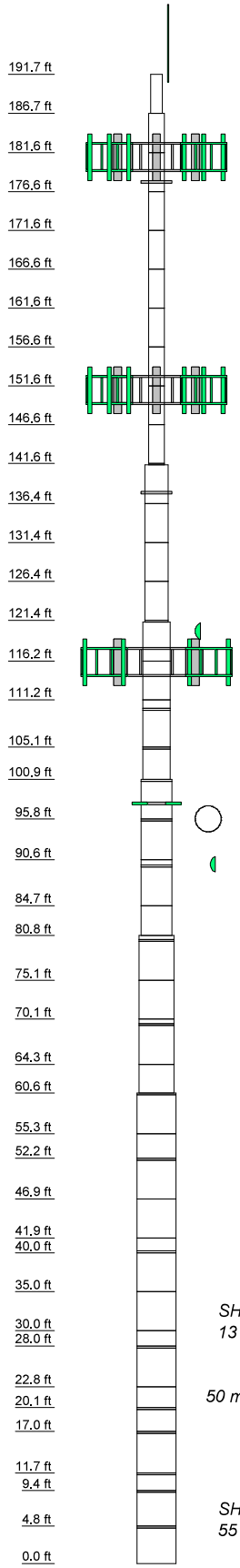
4.1) Recommendations

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

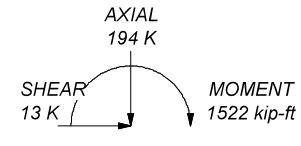
APPENDIX A

TNXTOWER OUTPUT

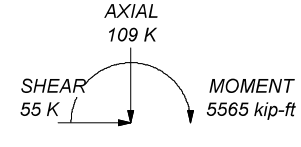
Section	Size	Length (ft)	Grade	Weight (K)
1	P30.375x0.375	5.00	A53-B-42	0.4
2	P30.375x0.375	5.10		0.5
3	P30.375x0.375	5.00		0.5
4	P30.375x0.375	5.00		0.5
5	P30.375x0.375	5.00		0.5
6	P30.375x0.375	5.00		0.5
7	P30.375x0.375	5.00		0.5
8	P30.375x0.375	5.00		0.5
9	P30.375x0.375	5.00		0.5
10	P30.375x0.375	5.00		0.5
11	P30.375x0.375	5.00		0.7
12	P30.375x0.375	5.00		0.7
13	P30.375x0.375	5.00		0.7
14	P30.375x0.375	5.00		0.7
15	P30.375x0.375	5.00		0.8
16	P30.375x0.375	5.00		0.8
17	P30.375x0.375	5.00		0.8
18	P30.375x0.375	5.00		0.8
19	P30.375x0.375	5.00		1.0
20	P30.375x0.375	5.00		1.0
21	P30.375x0.375	5.00		1.0
22	P30.375x0.375	5.00		1.0
23	P30.375x0.375	5.00		1.0
24	P30.375x0.375	5.00		1.0
25	P30.375x0.375	5.00		1.0
26	P30.375x0.375	5.00		1.2
27	P30.375x0.375	5.00		1.2
28	P30.375x0.375	5.00		1.2
29	P30.375x0.375	5.00		1.2
30	P30.375x0.375	5.00		1.4
31	P30.375x0.375	5.00		1.4
32	P30.375x0.375	5.00		1.4
33	P30.375x0.375	5.00		1.4
34	P30.375x0.375	5.00		1.4
35	P30.375x0.375	5.00		1.4
36	P30.375x0.375	5.00		1.7
38	P30.375x0.375	5.00		1.7
39	P30.375x0.375	5.00		1.7
40	P30.375x0.375	5.00		1.7
41	P30.375x0.375	5.00		1.6
42	P30.375x0.375	5.00		1.6
43	P30.375x0.375	5.00		1.6
44	P30.375x0.375	5.00		2.0
45	P30.375x0.375	5.00		2.0
46	P30.375x0.375	5.00		2.0
47	P30.375x0.375	5.00		1.9
48	P30.375x0.375	5.00		1.9
49	P30.375x0.375	5.00		1.9
50	P30.375x0.375	5.00		1.8
52	P30.375x0.375	5.00		2.3
53	P30.375x0.375	5.00		2.3
54	P30.375x0.375	5.00		2.3
55	P30.375x0.375	5.00		1.2
56	P30.375x0.375	5.00		1.2
57	P30.375x0.375	5.00		1.2
58	P30.375x0.375	5.00		1.2
59	P30.375x0.375	5.00		1.2
60	P30.375x0.375	5.00		1.2
61	P30.375x0.375	5.00		1.2
62	P30.375x0.375	5.00		1.2
63	P30.375x0.375	4.58		2.3



ALL REACTIONS ARE FACTORED



TORQUE 2 kip-ft
50 mph WIND - 2.0000 in ICE



TORQUE 6 kip-ft
REACTIONS - 125 mph WIND

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 0.00 ft
8. CCI POLE RATING: 75.4%

Morrison Hershfield
Consulting Engineers
1455 Lincoln Parkway. Suite 500
Atlanta GA 30346
Phone: (770) 379-8500
FAX: (770) 379-8501

Job: **CN7-585 / 2101398**			
Project: **826217 / Newington_1**			
Client: Crown Castle USA	Drawn by: RA	App'd:	
Code: TIA-222-H	Date: 03/22/21	Scale: NTS	
Path: C:\Users\RAtchartha\Desktop\My Jobs\Crown\CN7-585 - 826217 - Newington_1\CN7-585 SIA\Analysis\CN7-585 BU_826217 WD_193163.eri		Dwg No. E-1	

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: 133.00 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: 0.00 ft.
- Nominal ice thickness of 2.0000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- 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	191.67-186.67	5.00	P18x0.375	A53-B-42 (42 ksi)	
L2	186.67-181.57	5.10	P24x0.375	A53-B-42 (42 ksi)	
L3	181.57-176.57	5.00	P24x0.375	A53-B-42 (42 ksi)	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L4	176.57-171.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L5	171.57-166.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L6	166.57-161.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L7	161.57-156.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L8	156.57-151.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L9	151.57-146.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L10	146.57-141.57	5.00	P24x0.375	A53-B-42 (42 ksi)	
L11	141.57-141.42	0.15	P24x0.375	A53-B-42 (42 ksi)	
L12	141.42-136.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L13	136.42-131.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L14	131.42-126.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L15	126.42-121.42	5.00	P36x0.375	A53-B-42 (42 ksi)	
L16	121.42-121.17	0.25	P36x0.375	A53-B-42 (42 ksi)	
L17	121.17-116.17	5.00	P42x0.375	A53-B-42 (42 ksi)	
L18	116.17-111.17	5.00	P42x0.375	A53-B-42 (42 ksi)	
L19	111.17-110.04	1.13	P42x0.375	A53-B-42 (42 ksi)	
L20	110.04-109.79	0.25	P42x0.4875	A53-B-42 (42 ksi)	
L21	109.79-105.08	4.71	P42x0.4875	A53-B-42 (42 ksi)	
L22	105.08-104.83	0.25	P42x0.5625	A53-B-42 (42 ksi)	
L23	104.83-100.92	3.92	P42x0.5625	A53-B-42 (42 ksi)	
L24	100.92-100.67	0.25	P48x0.375	A53-B-42 (42 ksi)	
L25	100.67-95.83	4.83	P48x0.375	A53-B-42 (42 ksi)	
L26	95.83-95.58	0.25	P48x0.475	A53-B-42 (42 ksi)	
L27	95.58-90.58	5.00	P48x0.475	A53-B-42 (42 ksi)	
L28	90.58-89.92	0.67	P48x0.475	A53-B-42 (42 ksi)	
L29	89.92-89.67	0.25	P48x0.575	A53-B-42 (42 ksi)	
L30	89.67-84.67	5.00	P48x0.575	A53-B-42 (42 ksi)	
L31	84.67-80.83	3.83	P48x0.575	A53-B-42 (42 ksi)	
L32	80.83-80.33	0.50	P54x0.55	A53-B-42 (42 ksi)	
L33	80.33-80.08	0.25	P54x0.4875	A53-B-42 (42 ksi)	
L34	80.08-75.08	5.00	P54x0.4875	A53-B-42 (42 ksi)	
L35	75.08-70.08	5.00	P54x0.4875	A53-B-42 (42 ksi)	
L36	70.08-69.50	0.58	P54x0.4875	A53-B-42 (42 ksi)	
L37	69.50-69.25	0.25	P54x0.5875	A53-B-42 (42 ksi)	
L38	69.25-64.25	5.00	P54x0.5875	A53-B-42	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L39	64.25-60.58	3.67	P54x0.5875	(42 ksi) A53-B-42 (42 ksi)	
L40	60.58-60.33	0.25	P60x0.5125	A53-B-42 (42 ksi)	
L41	60.33-55.33	5.00	P60x0.5125	A53-B-42 (42 ksi)	
L42	55.33-52.17	3.17	P60x0.5125	A53-B-42 (42 ksi)	
L43	52.17-51.92	0.25	P60x0.625	A53-B-42 (42 ksi)	
L44	51.92-46.92	5.00	P60x0.625	A53-B-42 (42 ksi)	
L45	46.92-41.92	5.00	P60x0.625	A53-B-42 (42 ksi)	
L46	41.92-40.23	1.68	P60x0.6	A53-B-42 (42 ksi)	
L47	40.23-39.98	0.25	P60x0.6	A53-B-42 (42 ksi)	
L48	39.98-34.98	5.00	P60x0.6	A53-B-42 (42 ksi)	
L49	34.98-29.98	5.00	P60x0.6	A53-B-42 (42 ksi)	
L50	29.98-28.00	1.98	P60x0.6	A53-B-42 (42 ksi)	
L51	28.00-27.75	0.25	P60x0.725	A53-B-42 (42 ksi)	
L52	27.75-22.75	5.00	P60x0.725	A53-B-42 (42 ksi)	
L53	22.75-20.08	2.67	P60x0.725	A53-B-42 (42 ksi)	
L54	20.08-19.83	0.25	P60x0.625	A53-B-42 (42 ksi)	
L55	19.83-17.00	2.83	P60x0.625	A53-B-42 (42 ksi)	
L56	17.00-16.75	0.25	P60x0.725	A53-B-42 (42 ksi)	
L57	16.75-11.65	5.10	P60x0.75	A53-B-42 (42 ksi)	
L58	11.65-11.42	0.23	P60x0.75	A53-B-42 (42 ksi)	
L59	11.42-9.40	2.02	P60x0.75	A53-B-42 (42 ksi)	
L60	9.40-9.15	0.25	P60x0.8	A53-B-42 (42 ksi)	
L61	9.15-4.83	4.31	P60x0.8	A53-B-42 (42 ksi)	
L62	4.83-4.58	0.25	P60x0.75	A53-B-42 (42 ksi)	
L63	4.58-0.00	4.58	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 191.67-186.67				1	1	1			
L2 186.67-181.57				1	1	1			
L3 181.57-176.57				1	1	1			
L4 176.57-171.57				1	1	1			
L5 171.57-166.57				1	1	1			
L6 166.57-161.57				1	1	1			
L7 161.57-156.57				1	1	1			
L8 156.57-151.57				1	1	1			
L9 151.57-146.57				1	1	1			
L10 146.57-141.57				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
L11 141.57-141.42				1	1	1			
L12 141.42-136.42				1	1	1			
L13 136.42-131.42				1	1	1			
L14 131.42-126.42				1	1	1			
L15 126.42-121.42				1	1	1			
L16 121.42-121.17				1	1	1			
L17 121.17-116.17				1	1	1			
L18 116.17-111.17				1	1	1			
L19 111.17-110.04				1	1	1			
L20 110.04-109.79				1	1	0.983655			
L21 109.79-105.08				1	1	0.983655			
L22 105.08-104.83				1	1	0.976951			
L23 104.83-100.92				1	1	0.976951			
L24 100.92-100.67				1	1	1			
L25 100.67-95.83				1	1	1			
L26 95.83-95.58				1	1	0.981492			
L27 95.58-90.58				1	1	0.981492			
L28 90.58-89.92				1	1	0.981492			
L29 89.92-89.67				1	1	0.97009			
L30 89.67-84.67				1	1	0.97009			
L31 84.67-80.83				1	1	0.97009			
L32 80.83-80.33				1	1	0.976401			
L33 80.33-80.08				1	1	0.990478			
L34 80.08-75.08				1	1	0.990478			
L35 75.08-70.08				1	1	0.990478			
L36 70.08-69.50				1	1	0.990478			
L37 69.50-69.25				1	1	1.00601			
L38 69.25-64.25				1	1	1.00601			
L39 64.25-60.58				1	1	1.00601			
L40 60.58-60.33				1	1	0.987891			
L41 60.33-55.33				1	1	0.987891			
L42 55.33-52.17				1	1	0.987891			
L43 52.17-51.92				1	1	1.01747			
L44 51.92-46.92				1	1	1.01747			
L45 46.92-41.92				1	1	1.01747			
L46 41.92-40.23				1	1	0.995499			
L47 40.23-39.98				1	1	0.995499			
L48 39.98-34.98				1	1	0.995499			
L49 34.98-29.98				1	1	0.995499			
L50 29.98-28.00				1	1	0.995499			
L51 28.00-27.75				1	1	1.00337			
L52 27.75-22.75				1	1	1.00337			
L53 22.75-20.08				1	1	1.00337			
L54 20.08-19.83				1	1	1			
L55 19.83-17.00				1	1	1			
L56 17.00-16.75				1	1	1.04129			
L57 16.75-11.65				1	1	1.02849			
L58 11.65-11.42				1	1	1.02849			
L59 11.42-9.40				1	1	1.02849			
L60 9.40-9.15				1	1	1.00536			
L61 9.15-4.83				1	1	1.00536			
L62 4.83-4.58				1	1	1.04998			
L63 4.58-0.00				1	1	1.04998			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
* Reinforcement Plates*										
CCI 4" x 0.75" Plate	A	No	Surface Af (CaAa)	10.88 - 0.00	1	1	0.400 0.450	4.0000	9.5000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
CCI 4" x 0.75" Plate	B	No	Surface Af (CaAa)	10.88 - 0.00	1	1	-0.250 -0.200	4.0000	9.5000	0.00
CCI 4" x 0.75" Plate *	C	No	Surface Af (CaAa)	13.17 - 3.17	1	1	0.250 0.300	4.0000	9.5000	0.00
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	39.75 - 20.75	1	1	0.400 0.500	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	39.75 - 20.75	1	1	0.400 0.500	6.0000	14.0000	0.00
CCI 6" x 1" Plate *	C	No	Surface Af (CaAa)	39.75 - 20.75	1	1	0.400 0.500	6.0000	14.0000	0.00
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	59.92 - 40.83	1	1	-0.450 -0.400	6.5000	15.5000	0.00
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	59.92 - 40.83	1	1	-0.450 -0.400	6.5000	15.5000	0.00
CCI 6.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	59.92 - 40.83	1	1	-0.400 -0.350	6.5000	15.5000	0.00
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	80.17 - 61.17	1	1	-0.450 -0.400	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	80.17 - 61.17	1	1	-0.350 -0.300	6.0000	14.0000	0.00
CCI 6" x 1" Plate *	C	No	Surface Af (CaAa)	80.17 - 61.17	1	1	-0.450 -0.400	6.0000	14.0000	0.00
CCI 4" x 0.75" Plate	A	No	Surface Af (CaAa)	106.58 - 101.58	1	1	-0.500 -0.450	4.0000	9.5000	0.00
CCI 4" x 0.75" Plate	B	No	Surface Af (CaAa)	106.58 - 101.58	1	1	-0.500 -0.450	4.0000	9.5000	0.00
CCI 4" x 0.75" Plate *	C	No	Surface Af (CaAa)	106.58 - 101.58	1	1	-0.500 -0.450	4.0000	9.5000	0.00
1" x 2" Plate	A	No	Surface Af (CaAa)	50.42 - 40.58	1	1	-0.450 -0.400	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	50.42 - 40.58	1	1	-0.350 -0.300	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	50.42 - 40.58	1	1	0.200 0.250	1.0000	6.0000	6.81
1" x 2" Plate *	C	No	Surface Af (CaAa)	50.42 - 40.58	1	1	-0.350 -0.300	1.0000	6.0000	6.81
1" x 2" Plate	A	No	Surface Af (CaAa)	66.17 - 61.08	1	1	-0.350 -0.300	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	66.17 - 61.08	1	1	-0.450 -0.400	1.0000	6.0000	6.81
1" x 2" Plate	B	No	Surface Af (CaAa)	66.17 - 61.08	1	1	0.300 0.350	1.0000	6.0000	6.81
1" x 2" Plate *	C	No	Surface Af (CaAa)	66.17 - 61.08	1	1	-0.450 -0.400	1.0000	6.0000	6.81
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	19.00 - 0.00	1	1	0.300 0.350	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	19.00 - 0.00	1	1	0.400 0.450	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	19.00 - 0.00	1	1	0.450 0.500	6.0000	14.0000	0.00
CCI 6" x 1" Plate *	C	No	Surface Af (CaAa)	19.00 - 0.00	1	1	-0.500 -0.450	6.0000	14.0000	0.00
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	30.00 - 17.00	1	1	-0.150 -0.100	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	30.00 - 17.00	1	1	-0.450 -0.400	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	30.00 - 17.00	1	1	0.350 0.400	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	30.00 - 17.00	1	1	-0.500 -0.450	6.0000	14.0000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	50.17 - 37.17	1	1	0.250 0.300	6.0000	14.0000	0.00
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	50.17 - 37.17	1	1	0.100 0.150	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	50.17 - 37.17	1	1	-0.400 -0.350	6.0000	14.0000	0.00
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	50.17 - 37.17	1	1	0.450 0.500	6.0000	14.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	71.00 - 61.00	1	1	-0.250 -0.200	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	71.00 - 61.00	1	1	-0.450 -0.400	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	71.00 - 61.00	1	1	0.400 0.450	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	71.00 - 61.00	1	1	0.350 0.400	4.5000	11.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	97.33 - 81.33	1	1	-0.500 -0.450	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	97.33 - 81.33	1	1	-0.500 -0.450	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	97.33 - 81.33	1	1	-0.500 -0.450	4.5000	11.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	111.54 - 101.54	1	1	-0.350 -0.300	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	111.54 - 101.54	1	1	-0.350 -0.300	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	111.54 - 101.54	1	1	-0.350 -0.300	4.5000	11.0000	0.00
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	91.42 - 81.42	1	1	-0.150 -0.100	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	91.42 - 81.42	1	1	-0.150 -0.100	4.5000	11.0000	0.00
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	91.42 - 81.42	1	1	-0.150 -0.100	4.5000	11.0000	0.00
*										
* BS*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	27.50 - 12.67	1	1	0.400 0.450	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	27.50 - 12.67	1	1	-0.250 -0.200	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	27.50 - 12.67	1	1	0.450 0.500	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	27.50 - 12.67	1	1	-0.250 -0.200	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	27.50 - 12.67	1	1	0.350 0.400	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	27.50 - 12.67	1	1	-0.250 -0.200	6.5000	15.5000	27.65
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	47.83 - 32.83	1	1	0.400 0.450	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.400 -0.350	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.400 -0.350	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.250 -0.200	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.400 0.350	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	47.83 - 32.83	1	1	-0.250 -0.200	6.5000	15.5000	27.65
*										
CCI 8.5" x 1.25" Plate	A	No	Surface Af	60.08 -	1	1	0.200	8.5000	19.5000	36.16

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
			(CaAa)	55.25			0.250			
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	60.08 - 55.25	1	1	-0.400 -0.350	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	60.08 - 55.25	1	1	0.150 0.200	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	60.08 - 55.25	1	1	-0.350 -0.300	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	60.08 - 55.25	1	1	0.100 0.150	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	60.08 - 55.25	1	1	-0.500 -0.450	8.5000	19.5000	36.16
*										
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	61.08 - 60.08	1	1	0.200 0.250	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	61.08 - 60.08	1	1	-0.400 -0.350	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	61.08 - 60.08	1	1	0.150 0.200	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	61.08 - 60.08	1	1	-0.350 -0.300	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	61.08 - 60.08	1	1	0.100 0.150	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	61.08 - 60.08	1	1	-0.500 -0.450	8.5000	19.5000	36.16
*										
CCI 8.5" x 4.25" Plate	A	No	Surface Af (CaAa)	68.42 - 61.08	1	1	0.200 0.250	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	A	No	Surface Af (CaAa)	68.42 - 61.08	1	1	-0.400 -0.350	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	B	No	Surface Af (CaAa)	68.42 - 61.08	1	1	0.150 0.200	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	B	No	Surface Af (CaAa)	68.42 - 61.08	1	1	-0.350 -0.300	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	C	No	Surface Af (CaAa)	68.42 - 61.08	1	1	0.100 0.150	8.5000	25.5000	122.94
CCI 8.5" x 4.25" Plate	C	No	Surface Af (CaAa)	68.42 - 61.08	1	1	-0.500 -0.450	8.5000	25.5000	122.94
*										
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	73.42 - 68.42	1	1	0.200 0.250	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	73.42 - 68.42	1	1	-0.400 -0.350	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	73.42 - 68.42	1	1	0.150 0.200	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	73.42 - 68.42	1	1	-0.350 -0.300	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	73.42 - 68.42	1	1	0.100 0.150	8.5000	19.5000	36.16
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	73.42 - 68.42	1	1	-0.500 -0.450	8.5000	19.5000	36.16
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	80.33 - 76.50	1	1	0.050 0.100	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	80.33 - 76.50	1	1	0.000 0.050	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	80.33 - 76.50	1	1	0.150 0.200	6.5000	15.5000	27.65
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	80.50 - 80.33	1	1	0.050 0.100	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	80.50 - 80.33	1	1	0.000 0.050	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	80.50 - 80.33	1	1	0.150 0.200	6.5000	15.5000	27.65
*										
CCI 6.5" x 4.25" Plate	A	No	Surface Af (CaAa)	85.83 - 80.50	1	1	0.050 0.100	6.5000	21.5000	94.01
CCI 6.5" x 4.25" Plate	B	No	Surface Af	85.83 -	1	1	0.000	6.5000	21.5000	94.01

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
			(CaAa)	80.50			0.050			
CCI 6.5" x 4.25" Plate *	C	No	Surface Af (CaAa)	85.83 - 80.50	1	1	0.150 0.200	6.5000	21.5000	94.01
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	89.75 - 85.83	1	1	0.050 0.100	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	89.75 - 85.83	1	1	0.000 0.050	6.5000	15.5000	27.65
CCI 6.5" x 1.25" Plate *	C	No	Surface Af (CaAa)	89.75 - 85.83	1	1	0.150 0.200	6.5000	15.5000	27.65
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	100.42 - 97.92	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	100.42 - 97.92	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	100.42 - 97.92	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	101.42 - 100.42	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	101.42 - 100.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	101.42 - 100.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 4" Plate	A	No	Surface Af (CaAa)	104.42 - 101.42	1	1	-0.150 -0.100	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate	B	No	Surface Af (CaAa)	104.42 - 101.42	1	1	-0.100 -0.050	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate *	C	No	Surface Af (CaAa)	104.42 - 101.42	1	1	-0.100 -0.050	4.5000	17.0000	61.26
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	107.17 - 104.42	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	107.17 - 104.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	107.17 - 104.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	120.67 - 117.92	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	120.67 - 117.92	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	120.67 - 117.92	1	1	-0.200 -0.150	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	121.67 - 120.67	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	121.67 - 120.67	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	121.67 - 120.67	1	1	-0.200 -0.150	4.5000	11.0000	15.34
CCI 4.5" x 4" Plate	A	No	Surface Af (CaAa)	124.42 - 121.67	1	1	-0.150 -0.100	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate	B	No	Surface Af (CaAa)	124.42 - 121.67	1	1	-0.100 -0.050	4.5000	17.0000	61.26
CCI 4.5" x 4" Plate *	C	No	Surface Af (CaAa)	124.42 - 121.67	1	1	-0.200 -0.150	4.5000	17.0000	61.26
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	127.17 - 124.42	1	1	-0.150 -0.100	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	127.17 - 124.42	1	1	-0.100 -0.050	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate *	C	No	Surface Af (CaAa)	127.17 - 124.42	1	1	-0.200 -0.150	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	A	No	Surface Af	61.46 -	1	1	-0.250	4.5000	11.0000	15.34

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
			(CaAa)	58.00			-0.200			
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	61.46 - 58.00	1	1	-0.450 -0.400	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	61.46 - 58.00	1	1	0.400 0.450	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	61.46 - 58.00	1	1	0.350 0.400	4.5000	11.0000	15.34
*										
CCI 4.5" x 3" Plate	A	No	Surface Af (CaAa)	62.96 - 61.55	1	1	-0.250 -0.200	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	62.96 - 61.55	1	1	-0.450 -0.400	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	62.96 - 61.55	1	1	0.400 0.450	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	C	No	Surface Af (CaAa)	62.96 - 61.55	1	1	0.350 0.400	4.5000	15.0000	45.94
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	81.71 - 78.33	1	1	-0.500 -0.450	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	81.71 - 78.33	1	1	-0.500 -0.450	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	81.71 - 78.33	1	1	-0.500 -0.450	4.5000	11.0000	15.34
*										
CCI 4.5" x 3" Plate	A	No	Surface Af (CaAa)	83.21 - 81.71	1	1	-0.500 -0.450	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	83.21 - 81.71	1	1	-0.500 -0.450	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	C	No	Surface Af (CaAa)	83.21 - 81.71	1	1	-0.500 -0.450	4.5000	15.0000	45.94
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	101.79 - 98.42	1	1	0.300 0.350	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	101.79 - 98.42	1	1	0.300 0.350	4.5000	11.0000	15.34
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	101.79 - 98.42	1	1	0.300 0.350	4.5000	11.0000	15.34
*										
CCI 4.5" x 3" Plate	A	No	Surface Af (CaAa)	103.29 - 101.79	1	1	0.300 0.350	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	B	No	Surface Af (CaAa)	103.29 - 101.79	1	1	0.300 0.350	4.5000	15.0000	45.94
CCI 4.5" x 3" Plate	C	No	Surface Af (CaAa)	103.29 - 101.79	1	1	0.300 0.350	4.5000	15.0000	45.94
****										
HB158-1-08U8-S8J18(1-5/8)	B	No	Surface Ar (CaAa)	160.00 - 4.00	2	2	0.000 0.040	1.9800		1.30
AL7-50(1-5/8)	B	No	Surface Ar (CaAa)	160.00 - 4.00	12	12	-0.350 -0.100	1.9600		0.52
***										
LDF7-50A(1-5/8)	B	No	Surface Ar (CaAa)	116.00 - 4.00	12	3	-0.200 -0.100	1.9800		0.82
Banjo	B	No	Surface Af (CaAa)	116.00 - 4.00	1	1	-0.200 -0.100	1.0000	4.0000	8.40
****										
Safety Line 3/8	C	No	Surface Ar (CaAa)	191.67 - 4.00	1	1	0.000 0.010	0.3750		0.22
Step Pegs	C	No	Surface Ar (CaAa)	191.67 - 4.00	1	1	-0.050 0.050	1.0000		8.40
****										

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 plf
*									
****									
LDF5-50A(7/8)	B	No	No	Inside Pole	191.67 - 5.00	1	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
***									
ATCB-B01-001(5/16)	B	No	No	Inside Pole	191.00 - 5.00	1	No Ice	0.00	0.07
							1/2" Ice	0.00	0.07
							1" Ice	0.00	0.07
							2" Ice	0.00	0.07
****									
HCS 6X12 4AWG(1-5/8)	C	No	No	Inside Pole	184.00 - 5.00	2	No Ice	0.00	2.40
							1/2" Ice	0.00	2.40
							1" Ice	0.00	2.40
							2" Ice	0.00	2.40
****									
HB158-21U6S24-xxM_TMO(1-5/8)	C	No	No	Inside Pole	184.00 - 5.00	1	No Ice	0.00	2.50
							1/2" Ice	0.00	2.50
							1" Ice	0.00	2.50
							2" Ice	0.00	2.50
****									
LDF5-50A(7/8)	B	No	No	Inside Pole	158.00 - 4.00	2	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									
LDF6-50A(1-1/4)	C	No	No	Inside Pole	151.00 - 4.00	12	No Ice	0.00	0.60
							1/2" Ice	0.00	0.60
							1" Ice	0.00	0.60
							2" Ice	0.00	0.60
****									
LDF5-50A(7/8)	B	No	No	Inside Pole	132.00 - 4.00	1	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									
2" Rigid Conduit	B	No	No	Inside Pole	116.00 - 4.00	1	No Ice	0.00	2.80
							1/2" Ice	0.00	2.80
							1" Ice	0.00	2.80
							2" Ice	0.00	2.80
9207(5/16)	B	No	No	Inside Pole	116.00 - 4.00	6	No Ice	0.00	0.06
							1/2" Ice	0.00	0.06
							1" Ice	0.00	0.06
							2" Ice	0.00	0.06
LDF4-50A(1/2)	B	No	No	Inside Pole	116.00 - 4.00	1	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
****									
HB158-21U6M48-30F(1-5/8)	B	No	No	Inside Pole	116.00 - 4.00	3	No Ice	0.00	2.39
							1/2" Ice	0.00	2.39
							1" Ice	0.00	2.39
							2" Ice	0.00	2.39
****									
ATCB-B01-001(5/16)	B	No	No	Inside Pole	90.00 - 4.00	1	No Ice	0.00	0.07
							1/2" Ice	0.00	0.07
							1" Ice	0.00	0.07
							2" Ice	0.00	0.07
LDF4-50A(1/2)	B	No	No	Inside Pole	90.00 - 4.00	2	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
LDF5-50A(7/8)	B	No	No	Inside Pole	90.00 - 4.00	1	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									
LDF5-50A(7/8)	B	No	No	Inside Pole	70.00 - 4.00	2	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33
****									
LDF4-50A(1/2)	B	No	No	Inside Pole	33.00 - 4.00	2	No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15
****									

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	191.67-186.67	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.688	0.000	0.04
L2	186.67-181.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.701	0.000	0.06
L3	181.57-176.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.688	0.000	0.08
L4	176.57-171.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.688	0.000	0.08
L5	171.57-166.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.688	0.000	0.08
L6	166.57-161.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.688	0.000	0.08
L7	161.57-156.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	9.434	0.000	0.03
		C	0.000	0.000	0.688	0.000	0.08
L8	156.57-151.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	13.740	0.000	0.05
		C	0.000	0.000	0.688	0.000	0.08
L9	151.57-146.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	13.740	0.000	0.05
		C	0.000	0.000	0.688	0.000	0.11
L10	146.57-141.57	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	13.740	0.000	0.05
		C	0.000	0.000	0.688	0.000	0.12
L11	141.57-141.42	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.412	0.000	0.00
		C	0.000	0.000	0.021	0.000	0.00
L12	141.42-136.42	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	13.740	0.000	0.05
		C	0.000	0.000	0.688	0.000	0.12
L13	136.42-131.42	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	13.740	0.000	0.05
		C	0.000	0.000	0.688	0.000	0.12
L14	131.42-126.42	A	0.000	0.000	0.395	0.000	0.01
		B	0.000	0.000	14.135	0.000	0.06
		C	0.000	0.000	1.083	0.000	0.13
L15	126.42-121.42	A	0.000	0.000	2.541	0.000	0.20
		B	0.000	0.000	16.281	0.000	0.25
		C	0.000	0.000	3.229	0.000	0.32
L16	121.42-121.17	A	0.000	0.000	0.113	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	0.800	0.000	0.01
		C	0.000	0.000	0.147	0.000	0.01
L17	121.17-116.17	A	0.000	0.000	1.675	0.000	0.05
		B	0.000	0.000	15.415	0.000	0.10
		C	0.000	0.000	2.363	0.000	0.17
L18	116.17-111.17	A	0.000	0.000	0.844	0.000	0.00
		B	0.000	0.000	17.416	0.000	0.19
		C	0.000	0.000	0.688	0.000	0.12
L19	111.17-110.04	A	0.000	0.000	2.531	0.000	0.00
		B	0.000	0.000	3.947	0.000	0.04
		C	0.000	0.000	0.155	0.000	0.03
L20	110.04-109.79	A	0.000	0.000	0.563	0.000	0.00
		B	0.000	0.000	0.877	0.000	0.01
		C	0.000	0.000	0.034	0.000	0.01
L21	109.79-105.08	A	0.000	0.000	12.523	0.000	0.03
		B	0.000	0.000	18.450	0.000	0.22
		C	0.000	0.000	2.575	0.000	0.14
L22	105.08-104.83	A	0.000	0.000	0.832	0.000	0.00
		B	0.000	0.000	1.147	0.000	0.01
		C	0.000	0.000	0.304	0.000	0.01
L23	104.83-100.92	A	0.000	0.000	12.345	0.000	0.28
		B	0.000	0.000	18.680	0.000	0.43
		C	0.000	0.000	5.478	0.000	0.37
L24	100.92-100.67	A	0.000	0.000	0.250	0.000	0.01
		B	0.000	0.000	1.127	0.000	0.02
		C	0.000	0.000	0.284	0.000	0.01
L25	100.67-95.83	A	0.000	0.000	3.761	0.000	0.08
		B	0.000	0.000	20.722	0.000	0.27
		C	0.000	0.000	4.426	0.000	0.19
L26	95.83-95.58	A	0.000	0.000	0.188	0.000	0.00
		B	0.000	0.000	1.065	0.000	0.01
		C	0.000	0.000	0.222	0.000	0.01
L27	95.58-90.58	A	0.000	0.000	4.375	0.000	0.00
		B	0.000	0.000	21.919	0.000	0.19
		C	0.000	0.000	5.063	0.000	0.12
L28	90.58-89.92	A	0.000	0.000	0.999	0.000	0.00
		B	0.000	0.000	3.336	0.000	0.03
		C	0.000	0.000	1.091	0.000	0.02
L29	89.92-89.67	A	0.000	0.000	0.438	0.000	0.00
		B	0.000	0.000	1.315	0.000	0.01
		C	0.000	0.000	0.472	0.000	0.01
L30	89.67-84.67	A	0.000	0.000	11.325	0.000	0.22
		B	0.000	0.000	28.868	0.000	0.41
		C	0.000	0.000	12.012	0.000	0.33
L31	84.67-80.83	A	0.000	0.000	9.104	0.000	0.44
		B	0.000	0.000	22.557	0.000	0.59
		C	0.000	0.000	9.632	0.000	0.53
L32	80.83-80.33	A	0.000	0.000	0.642	0.000	0.04
		B	0.000	0.000	2.397	0.000	0.06
		C	0.000	0.000	0.711	0.000	0.06
L33	80.33-80.08	A	0.000	0.000	0.410	0.000	0.01
		B	0.000	0.000	1.287	0.000	0.02
		C	0.000	0.000	0.444	0.000	0.02
L34	80.08-75.08	A	0.000	0.000	8.671	0.000	0.13
		B	0.000	0.000	26.214	0.000	0.32
		C	0.000	0.000	9.358	0.000	0.24
L35	75.08-70.08	A	0.000	0.000	12.297	0.000	0.24
		B	0.000	0.000	30.528	0.000	0.44
		C	0.000	0.000	12.984	0.000	0.36
L36	70.08-69.50	A	0.000	0.000	2.176	0.000	0.04
		B	0.000	0.000	4.659	0.000	0.07
		C	0.000	0.000	2.256	0.000	0.06
L37	69.50-69.25	A	0.000	0.000	0.933	0.000	0.02
		B	0.000	0.000	1.998	0.000	0.03
		C	0.000	0.000	0.967	0.000	0.02
L38	69.25-64.25	A	0.000	0.000	19.430	0.000	1.10
		B	0.000	0.000	41.043	0.000	1.31
		C	0.000	0.000	20.118	0.000	1.21
L39	64.25-60.58	A	0.000	0.000	14.648	0.000	0.91

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	31.610	0.000	1.16
		C	0.000	0.000	15.152	0.000	1.00
L40	60.58-60.33	A	0.000	0.000	0.563	0.000	0.02
		B	0.000	0.000	1.577	0.000	0.04
		C	0.000	0.000	0.597	0.000	0.03
L41	60.33-55.33	A	0.000	0.000	16.020	0.000	0.40
		B	0.000	0.000	34.847	0.000	0.63
		C	0.000	0.000	16.708	0.000	0.51
L42	55.33-52.17	A	0.000	0.000	3.593	0.000	0.01
		B	0.000	0.000	14.702	0.000	0.13
		C	0.000	0.000	4.028	0.000	0.08
L43	52.17-51.92	A	0.000	0.000	0.271	0.000	0.00
		B	0.000	0.000	1.148	0.000	0.01
		C	0.000	0.000	0.305	0.000	0.01
L44	51.92-46.92	A	0.000	0.000	11.228	0.000	0.07
		B	0.000	0.000	29.355	0.000	0.30
		C	0.000	0.000	15.166	0.000	0.19
L45	46.92-41.92	A	0.000	0.000	22.083	0.000	0.31
		B	0.000	0.000	40.460	0.000	0.55
		C	0.000	0.000	27.771	0.000	0.43
L46	41.92-40.23	A	0.000	0.000	6.729	0.000	0.10
		B	0.000	0.000	12.860	0.000	0.18
		C	0.000	0.000	8.645	0.000	0.14
L47	40.23-39.98	A	0.000	0.000	0.792	0.000	0.01
		B	0.000	0.000	1.669	0.000	0.02
		C	0.000	0.000	1.076	0.000	0.02
L48	39.98-34.98	A	0.000	0.000	18.416	0.000	0.28
		B	0.000	0.000	35.960	0.000	0.48
		C	0.000	0.000	21.920	0.000	0.39
L49	34.98-29.98	A	0.000	0.000	9.682	0.000	0.12
		B	0.000	0.000	27.225	0.000	0.32
		C	0.000	0.000	10.386	0.000	0.23
L50	29.98-28.00	A	0.000	0.000	3.966	0.000	0.00
		B	0.000	0.000	10.924	0.000	0.08
		C	0.000	0.000	6.222	0.000	0.05
L51	28.00-27.75	A	0.000	0.000	0.500	0.000	0.00
		B	0.000	0.000	1.377	0.000	0.01
		C	0.000	0.000	0.784	0.000	0.01
L52	27.75-22.75	A	0.000	0.000	20.292	0.000	0.26
		B	0.000	0.000	37.835	0.000	0.47
		C	0.000	0.000	25.979	0.000	0.38
L53	22.75-20.08	A	0.000	0.000	10.445	0.000	0.15
		B	0.000	0.000	19.803	0.000	0.26
		C	0.000	0.000	13.479	0.000	0.21
L54	20.08-19.83	A	0.000	0.000	0.792	0.000	0.01
		B	0.000	0.000	1.669	0.000	0.02
		C	0.000	0.000	1.076	0.000	0.02
L55	19.83-17.00	A	0.000	0.000	10.971	0.000	0.16
		B	0.000	0.000	20.911	0.000	0.27
		C	0.000	0.000	16.194	0.000	0.22
L56	17.00-16.75	A	0.000	0.000	0.792	0.000	0.01
		B	0.000	0.000	1.669	0.000	0.02
		C	0.000	0.000	1.076	0.000	0.02
L57	16.75-11.65	A	0.000	0.000	13.940	0.000	0.23
		B	0.000	0.000	31.834	0.000	0.43
		C	0.000	0.000	20.753	0.000	0.34
L58	11.65-11.42	A	0.000	0.000	0.233	0.000	0.00
		B	0.000	0.000	1.051	0.000	0.01
		C	0.000	0.000	0.653	0.000	0.01
L59	11.42-9.40	A	0.000	0.000	3.007	0.000	0.00
		B	0.000	0.000	10.098	0.000	0.08
		C	0.000	0.000	5.667	0.000	0.05
L60	9.40-9.15	A	0.000	0.000	0.417	0.000	0.00
		B	0.000	0.000	1.294	0.000	0.01
		C	0.000	0.000	0.701	0.000	0.01
L61	9.15-4.83	A	0.000	0.000	7.188	0.000	0.00
		B	0.000	0.000	22.321	0.000	0.18
		C	0.000	0.000	12.094	0.000	0.10
L62	4.83-4.58	A	0.000	0.000	0.417	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B	0.000	0.000	1.294	0.000	0.01
		C	0.000	0.000	0.701	0.000	0.00
L63	4.58-0.00	A	0.000	0.000	7.638	0.000	0.00
		B	0.000	0.000	9.684	0.000	0.02
		C	0.000	0.000	10.190	0.000	0.01

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	191.67-186.67	A	2.024	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	4.736	0.000	0.11
L2	186.67-181.57	A	2.019	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	4.820	0.000	0.13
L3	181.57-176.57	A	2.013	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	4.714	0.000	0.15
L4	176.57-171.57	A	2.008	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	4.703	0.000	0.15
L5	171.57-166.57	A	2.002	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	4.691	0.000	0.15
L6	166.57-161.57	A	1.996	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	4.679	0.000	0.15
L7	161.57-156.57	A	1.990	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	15.207	0.000	0.24
		C		0.000	0.000	4.667	0.000	0.14
L8	156.57-151.57	A	1.983	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	22.133	0.000	0.35
		C		0.000	0.000	4.654	0.000	0.14
L9	151.57-146.57	A	1.977	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	22.117	0.000	0.35
		C		0.000	0.000	4.641	0.000	0.18
L10	146.57-141.57	A	1.970	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	22.100	0.000	0.34
		C		0.000	0.000	4.627	0.000	0.18
L11	141.57-141.42	A	1.966	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.663	0.000	0.01
		C		0.000	0.000	0.139	0.000	0.01
L12	141.42-136.42	A	1.963	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	22.082	0.000	0.34
		C		0.000	0.000	4.613	0.000	0.18
L13	136.42-131.42	A	1.956	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	22.064	0.000	0.34
		C		0.000	0.000	4.599	0.000	0.18
L14	131.42-126.42	A	1.948	0.000	0.000	0.548	0.000	0.02
		B		0.000	0.000	22.594	0.000	0.36
		C		0.000	0.000	5.132	0.000	0.20
L15	126.42-121.42	A	1.940	0.000	0.000	3.589	0.000	0.28
		B		0.000	0.000	25.615	0.000	0.63
		C		0.000	0.000	8.158	0.000	0.46
L16	121.42-121.17	A	1.936	0.000	0.000	0.169	0.000	0.01
		B		0.000	0.000	1.270	0.000	0.02
		C		0.000	0.000	0.397	0.000	0.02
L17	121.17-116.17	A	1.932	0.000	0.000	2.344	0.000	0.09
		B		0.000	0.000	24.349	0.000	0.43
		C		0.000	0.000	6.896	0.000	0.27
L18	116.17-111.17	A	1.924	0.000	0.000	1.082	0.000	0.02
		B		0.000	0.000	30.563	0.000	0.76
		C		0.000	0.000	4.535	0.000	0.18
L19	111.17-110.04	A	1.919	0.000	0.000	3.245	0.000	0.05

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	6.938	0.000	0.17
		C		0.000	0.000	1.018	0.000	0.04
L20	110.04-109.79	A	1.917	0.000	0.000	0.721	0.000	0.01
		B		0.000	0.000	1.541	0.000	0.04
		C		0.000	0.000	0.226	0.000	0.01
L21	109.79-105.08	A	1.913	0.000	0.000	16.226	0.000	0.27
		B		0.000	0.000	31.666	0.000	0.81
		C		0.000	0.000	6.902	0.000	0.25
L22	105.08-104.83	A	1.909	0.000	0.000	1.091	0.000	0.02
		B		0.000	0.000	1.910	0.000	0.05
		C		0.000	0.000	0.596	0.000	0.02
L23	104.83-100.92	A	1.905	0.000	0.000	16.390	0.000	0.56
		B		0.000	0.000	31.009	0.000	1.03
		C		0.000	0.000	10.433	0.000	0.56
L24	100.92-100.67	A	1.901	0.000	0.000	0.355	0.000	0.01
		B		0.000	0.000	1.893	0.000	0.05
		C		0.000	0.000	0.580	0.000	0.02
L25	100.67-95.83	A	1.896	0.000	0.000	5.320	0.000	0.16
		B		0.000	0.000	35.027	0.000	0.91
		C		0.000	0.000	9.651	0.000	0.33
L26	95.83-95.58	A	1.891	0.000	0.000	0.279	0.000	0.00
		B		0.000	0.000	1.814	0.000	0.04
		C		0.000	0.000	0.503	0.000	0.01
L27	95.58-90.58	A	1.886	0.000	0.000	6.378	0.000	0.08
		B		0.000	0.000	37.056	0.000	0.84
		C		0.000	0.000	10.837	0.000	0.25
L28	90.58-89.92	A	1.880	0.000	0.000	1.380	0.000	0.02
		B		0.000	0.000	5.463	0.000	0.12
		C		0.000	0.000	1.973	0.000	0.04
L29	89.92-89.67	A	1.879	0.000	0.000	0.597	0.000	0.01
		B		0.000	0.000	2.130	0.000	0.05
		C		0.000	0.000	0.820	0.000	0.02
L30	89.67-84.67	A	1.873	0.000	0.000	15.169	0.000	0.43
		B		0.000	0.000	45.789	0.000	1.20
		C		0.000	0.000	19.604	0.000	0.61
L31	84.67-80.83	A	1.864	0.000	0.000	12.252	0.000	0.64
		B		0.000	0.000	35.696	0.000	1.23
		C		0.000	0.000	15.638	0.000	0.78
L32	80.83-80.33	A	1.859	0.000	0.000	0.846	0.000	0.06
		B		0.000	0.000	3.901	0.000	0.14
		C		0.000	0.000	1.286	0.000	0.08
L33	80.33-80.08	A	1.858	0.000	0.000	0.538	0.000	0.02
		B		0.000	0.000	2.066	0.000	0.06
		C		0.000	0.000	0.759	0.000	0.03
L34	80.08-75.08	A	1.852	0.000	0.000	11.514	0.000	0.28
		B		0.000	0.000	42.031	0.000	1.04
		C		0.000	0.000	15.905	0.000	0.46
L35	75.08-70.08	A	1.839	0.000	0.000	15.554	0.000	0.45
		B		0.000	0.000	46.886	0.000	1.22
		C		0.000	0.000	19.920	0.000	0.63
L36	70.08-69.50	A	1.832	0.000	0.000	2.725	0.000	0.08
		B		0.000	0.000	6.828	0.000	0.18
		C		0.000	0.000	3.232	0.000	0.10
L37	69.50-69.25	A	1.831	0.000	0.000	1.168	0.000	0.03
		B		0.000	0.000	2.927	0.000	0.08
		C		0.000	0.000	1.386	0.000	0.04
L38	69.25-64.25	A	1.824	0.000	0.000	24.690	0.000	1.48
		B		0.000	0.000	60.612	0.000	2.32
		C		0.000	0.000	29.026	0.000	1.65
L39	64.25-60.58	A	1.812	0.000	0.000	19.088	0.000	1.23
		B		0.000	0.000	47.282	0.000	1.98
		C		0.000	0.000	22.250	0.000	1.35
L40	60.58-60.33	A	1.806	0.000	0.000	0.716	0.000	0.03
		B		0.000	0.000	2.417	0.000	0.08
		C		0.000	0.000	0.931	0.000	0.04
L41	60.33-55.33	A	1.798	0.000	0.000	19.934	0.000	0.68
		B		0.000	0.000	51.928	0.000	1.49
		C		0.000	0.000	24.218	0.000	0.85
L42	55.33-52.17	A	1.785	0.000	0.000	4.709	0.000	0.06

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	23.831	0.000	0.53
		C		0.000	0.000	7.405	0.000	0.17
L43	52.17-51.92	A	1.779	0.000	0.000	0.356	0.000	0.00
		B		0.000	0.000	1.865	0.000	0.04
		C		0.000	0.000	0.569	0.000	0.01
L44	51.92-46.92	A	1.770	0.000	0.000	15.119	0.000	0.26
		B		0.000	0.000	46.979	0.000	1.05
		C		0.000	0.000	23.230	0.000	0.47
L45	46.92-41.92	A	1.751	0.000	0.000	28.580	0.000	0.65
		B		0.000	0.000	61.080	0.000	1.46
		C		0.000	0.000	38.734	0.000	0.89
L46	41.92-40.23	A	1.738	0.000	0.000	8.589	0.000	0.20
		B		0.000	0.000	19.339	0.000	0.47
		C		0.000	0.000	11.998	0.000	0.28
L47	40.23-39.98	A	1.733	0.000	0.000	0.950	0.000	0.02
		B		0.000	0.000	2.447	0.000	0.06
		C		0.000	0.000	1.455	0.000	0.04
L48	39.98-34.98	A	1.722	0.000	0.000	22.761	0.000	0.53
		B		0.000	0.000	52.661	0.000	1.25
		C		0.000	0.000	30.243	0.000	0.73
L49	34.98-29.98	A	1.697	0.000	0.000	12.296	0.000	0.25
		B		0.000	0.000	42.080	0.000	0.97
		C		0.000	0.000	16.399	0.000	0.41
L50	29.98-28.00	A	1.678	0.000	0.000	4.993	0.000	0.05
		B		0.000	0.000	16.769	0.000	0.34
		C		0.000	0.000	8.948	0.000	0.14
L51	28.00-27.75	A	1.672	0.000	0.000	0.629	0.000	0.01
		B		0.000	0.000	2.112	0.000	0.04
		C		0.000	0.000	1.127	0.000	0.02
L52	27.75-22.75	A	1.655	0.000	0.000	24.816	0.000	0.53
		B		0.000	0.000	54.399	0.000	1.23
		C		0.000	0.000	34.730	0.000	0.75
L53	22.75-20.08	A	1.628	0.000	0.000	12.664	0.000	0.28
		B		0.000	0.000	28.375	0.000	0.65
		C		0.000	0.000	17.916	0.000	0.40
L54	20.08-19.83	A	1.617	0.000	0.000	0.938	0.000	0.02
		B		0.000	0.000	2.408	0.000	0.06
		C		0.000	0.000	1.429	0.000	0.04
L55	19.83-17.00	A	1.604	0.000	0.000	13.258	0.000	0.29
		B		0.000	0.000	29.881	0.000	0.69
		C		0.000	0.000	21.442	0.000	0.44
L56	17.00-16.75	A	1.590	0.000	0.000	0.971	0.000	0.02
		B		0.000	0.000	2.435	0.000	0.06
		C		0.000	0.000	1.494	0.000	0.03
L57	16.75-11.65	A	1.563	0.000	0.000	17.146	0.000	0.39
		B		0.000	0.000	46.871	0.000	1.09
		C		0.000	0.000	29.057	0.000	0.63
L58	11.65-11.42	A	1.530	0.000	0.000	0.304	0.000	0.00
		B		0.000	0.000	1.655	0.000	0.03
		C		0.000	0.000	0.987	0.000	0.01
L59	11.42-9.40	A	1.515	0.000	0.000	3.963	0.000	0.04
		B		0.000	0.000	15.650	0.000	0.31
		C		0.000	0.000	8.530	0.000	0.13
L60	9.40-9.15	A	1.497	0.000	0.000	0.549	0.000	0.01
		B		0.000	0.000	1.991	0.000	0.04
		C		0.000	0.000	1.051	0.000	0.02
L61	9.15-4.83	A	1.456	0.000	0.000	9.421	0.000	0.08
		B		0.000	0.000	34.121	0.000	0.65
		C		0.000	0.000	17.975	0.000	0.26
L62	4.83-4.58	A	1.399	0.000	0.000	0.542	0.000	0.00
		B		0.000	0.000	1.960	0.000	0.04
		C		0.000	0.000	1.029	0.000	0.01
L63	4.58-0.00	A	1.302	0.000	0.000	9.800	0.000	0.08
		B		0.000	0.000	13.054	0.000	0.15
		C		0.000	0.000	13.141	0.000	0.11

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	191.67-186.67	-0.0035	1.2477	-0.0135	2.8109
L2	186.67-181.57	-0.0036	1.2763	-0.0150	3.1143
L3	181.57-176.57	-0.0036	1.2763	-0.0150	3.1097
L4	176.57-171.57	-0.0036	1.2763	-0.0150	3.1050
L5	171.57-166.57	-0.0036	1.2763	-0.0149	3.1002
L6	166.57-161.57	-0.0036	1.2763	-0.0149	3.0953
L7	161.57-156.57	4.5100	-5.4303	3.1400	-2.3432
L8	156.57-151.57	5.1845	-6.4325	3.6978	-3.3062
L9	151.57-146.57	5.1845	-6.4325	3.6986	-3.3103
L10	146.57-141.57	5.1845	-6.4325	3.6996	-3.3145
L11	141.57-141.42	5.1845	-6.4325	3.7000	-3.3167
L12	141.42-136.42	6.6098	-8.1936	4.8096	-4.2893
L13	136.42-131.42	6.6098	-8.1936	4.8103	-4.2947
L14	131.42-126.42	6.3902	-7.7855	4.7292	-4.1647
L15	126.42-121.42	5.5020	-6.1110	4.3594	-3.5402
L16	121.42-121.17	5.5873	-6.2933	4.3744	-3.5820
L17	121.17-116.17	6.3877	-7.3654	4.9600	-4.1662
L18	116.17-111.17	7.6298	-9.6399	5.9386	-6.1018
L19	111.17-110.04	0.6881	-2.7284	1.9694	-2.4843
L20	110.04-109.79	0.6881	-2.7284	1.9692	-2.4846
L21	109.79-105.08	0.5729	-2.2567	1.7713	-2.1826
L22	105.08-104.83	0.3788	-1.4787	1.5073	-1.7995
L23	104.83-100.92	0.8679	-1.8891	1.8737	-2.1127
L24	100.92-100.67	4.7466	-5.7388	5.2660	-5.2577
L25	100.67-95.83	6.5136	-7.9442	5.5744	-5.6253
L26	95.83-95.58	6.6167	-8.1957	5.5826	-5.7227
L27	95.58-90.58	6.3304	-7.8410	5.4351	-5.5739
L28	90.58-89.92	4.2278	-5.2367	4.7927	-4.9173
L29	89.92-89.67	3.7732	-5.0778	4.4030	-4.8081
L30	89.67-84.67	2.9935	-4.8080	3.7090	-4.6168
L31	84.67-80.83	2.8814	-4.6843	3.5872	-4.5125
L32	80.83-80.33	3.9955	-6.3898	4.8684	-6.0675
L33	80.33-80.08	3.9538	-5.9128	4.8005	-5.6794
L34	80.08-75.08	4.6166	-5.7228	5.3480	-5.5055
L35	75.08-70.08	4.5815	-4.8936	5.2565	-4.8783
L36	70.08-69.50	2.0903	-3.5289	2.8986	-3.6788
L37	69.50-69.25	2.0903	-3.5289	2.8984	-3.6790
L38	69.25-64.25	2.1340	-3.4081	2.9299	-3.5098
L39	64.25-60.58	1.4168	-3.0708	2.1938	-3.1050
L40	60.58-60.33	2.7432	-4.8918	3.6208	-4.9291
L41	60.33-55.33	3.4159	-4.2649	4.1712	-4.3950
L42	55.33-52.17	6.5265	-7.6826	5.9037	-5.7974
L43	52.17-51.92	6.5723	-7.7690	5.9244	-5.8335
L44	51.92-46.92	5.2618	-5.8831	6.0480	-5.4371
L45	46.92-41.92	4.7846	-5.3597	5.4857	-5.0064
L46	41.92-40.23	5.0544	-5.8222	5.7400	-5.4917
L47	40.23-39.98	5.5930	-7.0049	6.2046	-6.9018
L48	39.98-34.98	4.7064	-5.8727	5.3237	-5.8378
L49	34.98-29.98	4.8576	-6.0432	5.6319	-5.9578
L50	29.98-28.00	1.1499	-7.1470	2.5080	-6.8920
L51	28.00-27.75	1.1499	-7.1470	2.5061	-6.8941
L52	27.75-22.75	0.7001	-4.6470	1.7741	-4.7771
L53	22.75-20.08	0.7075	-4.7144	1.7980	-4.8581
L54	20.08-19.83	0.7910	-5.2708	1.9990	-5.4123
L55	19.83-17.00	1.4827	-5.0419	2.5250	-5.1828
L56	17.00-16.75	4.4150	-4.2323	5.1829	-4.4976
L57	16.75-11.65	4.4013	-4.4380	5.1686	-4.6696
L58	11.65-11.42	5.1240	-6.1049	5.8515	-6.0249
L59	11.42-9.40	5.6124	-7.8358	6.2622	-7.6520
L60	9.40-9.15	5.7762	-8.4164	6.3994	-8.2064
L61	9.15-4.83	5.7762	-8.4164	6.3938	-8.2237
L62	4.83-4.58	5.7762	-8.4164	6.3861	-8.2475
L63	4.58-0.00	3.8294	-5.5808	4.3227	-6.1767

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	Step Pegs	186.67 - 191.67	1.0000	1.0000
L2	218	Safety Line 3/8	181.57 - 186.67	1.0000	1.0000
L2	219	Step Pegs	181.57 - 186.67	1.0000	1.0000
L3	218	Safety Line 3/8	176.57 - 181.57	1.0000	1.0000
L3	219	Step Pegs	176.57 - 181.57	1.0000	1.0000
L4	218	Safety Line 3/8	171.57 - 176.57	1.0000	1.0000
L4	219	Step Pegs	171.57 - 176.57	1.0000	1.0000
L5	218	Safety Line 3/8	166.57 - 171.57	1.0000	1.0000
L5	219	Step Pegs	166.57 - 171.57	1.0000	1.0000
L6	218	Safety Line 3/8	161.57 - 166.57	1.0000	1.0000
L6	219	Step Pegs	161.57 - 166.57	1.0000	1.0000
L7	191	HB158-1-08U8-S8J18(1-5/8)	156.57 - 160.00	1.0000	1.0000
L7	192	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	Step Pegs	156.57 - 161.57	1.0000	1.0000
L8	191	HB158-1-08U8-S8J18(1-5/8)	151.57 - 156.57	1.0000	1.0000
L8	192	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	Step Pegs	151.57 - 156.57	1.0000	1.0000
L9	191	HB158-1-08U8-S8J18(1-5/8)	146.57 - 151.57	1.0000	1.0000
L9	192	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	Step Pegs	146.57 - 151.57	1.0000	1.0000
L10	191	HB158-1-08U8-S8J18(1-5/8)	141.57 - 146.57	1.0000	1.0000
L10	192	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	Step Pegs	141.57 - 146.57	1.0000	1.0000
L11	191	HB158-1-08U8-S8J18(1-5/8)	141.42 - 141.57	1.0000	1.0000
L11	192	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	Step Pegs	141.42 - 141.57	1.0000	1.0000
L12	191	HB158-1-08U8-S8J18(1-5/8)	136.42 - 141.42	1.0000	1.0000
L12	192	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	Step Pegs	136.42 - 141.42	1.0000	1.0000
L13	191	HB158-1-08U8-S8J18(1-5/8)	131.42 - 136.42	1.0000	1.0000
L13	192	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	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	126.42 - 131.42	1.0000	1.0000
L14	192	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	Step Pegs	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 - 126.42	1.0000	1.0000
L15	153	CCI 4.5" x 1" Plate	124.42 - 126.42	1.0000	1.0000
L15	191	HB158-1-08U8-S8J18(1-5/8)	121.42 - 126.42	1.0000	1.0000
L15	192	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	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	121.17 - 121.42	1.0000	1.0000
L16	192	AL7-50(1-5/8)	121.17 - 121.42	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L16	218	Safety Line 3/8	121.17 - 121.42	1.0000	1.0000
L16	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	116.17 - 121.17	1.0000	1.0000
L17	192	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	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	111.17 - 116.17	1.0000	1.0000
L18	192	AL7-50(1-5/8)	111.17 - 116.17	1.0000	1.0000
L18	200	LDF7-50A(1-5/8)	111.17 - 116.00	1.0000	1.0000
L18	201	Banjo	111.17 - 116.00	1.0000	1.0000
L18	218	Safety Line 3/8	111.17 - 116.17	1.0000	1.0000
L18	219	Step Pegs	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 - 111.17	1.0000	1.0000
L19	58	CCI 4.5" x 1" Plate	110.04 - 111.17	1.0000	1.0000
L19	191	HB158-1-08U8-S8J18(1-5/8)	110.04 - 111.17	1.0000	1.0000
L19	192	AL7-50(1-5/8)	110.04 - 111.17	1.0000	1.0000
L19	200	LDF7-50A(1-5/8)	110.04 - 111.17	1.0000	1.0000
L19	201	Banjo	110.04 - 111.17	1.0000	1.0000
L19	218	Safety Line 3/8	110.04 - 111.17	1.0000	1.0000
L19	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	109.79 - 110.04	1.0000	1.0000
L20	192	AL7-50(1-5/8)	109.79 - 110.04	1.0000	1.0000
L20	200	LDF7-50A(1-5/8)	109.79 - 110.04	1.0000	1.0000
L20	201	Banjo	109.79 - 110.04	1.0000	1.0000
L20	218	Safety Line 3/8	109.79 - 110.04	1.0000	1.0000
L20	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	105.08 - 109.79	1.0000	1.0000
L21	192	AL7-50(1-5/8)	105.08 - 109.79	1.0000	1.0000
L21	200	LDF7-50A(1-5/8)	105.08 - 109.79	1.0000	1.0000
L21	201	Banjo	105.08 - 109.79	1.0000	1.0000
L21	218	Safety Line 3/8	105.08 - 109.79	1.0000	1.0000
L21	219	Step Pegs	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 - 105.08	1.0000	1.0000
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	191	HB158-1-08U8-S8J18(1-5/8)	104.83 - 105.08	1.0000	1.0000
L22	192	AL7-50(1-5/8)	104.83 - 105.08	1.0000	1.0000
L22	200	LDF7-50A(1-5/8)	104.83 - 105.08	1.0000	1.0000
L22	201	Banjo	104.83 - 105.08	1.0000	1.0000
L22	218	Safety Line 3/8	104.83 - 105.08	1.0000	1.0000
L22	219	Step Pegs	104.83 - 105.08	1.0000	1.0000
L23	18	CCI 4" x 0.75" Plate	101.58 - 104.83	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
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	191	HB158-1-08U8-S8J18(1-5/8)	100.92 - 104.83	1.0000	1.0000
L23	192	AL7-50(1-5/8)	100.92 - 104.83	1.0000	1.0000
L23	200	LDF7-50A(1-5/8)	100.92 - 104.83	1.0000	1.0000
L23	201	Banjo	100.92 - 104.83	1.0000	1.0000
L23	218	Safety Line 3/8	100.92 - 104.83	1.0000	1.0000
L23	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	100.67 - 100.92	1.0000	1.0000
L24	192	AL7-50(1-5/8)	100.67 - 100.92	1.0000	1.0000
L24	200	LDF7-50A(1-5/8)	100.67 - 100.92	1.0000	1.0000
L24	201	Banjo	100.67 - 100.92	1.0000	1.0000
L24	218	Safety Line 3/8	100.67 - 100.92	1.0000	1.0000
L24	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	95.83 - 100.67	1.0000	1.0000
L25	192	AL7-50(1-5/8)	95.83 - 100.67	1.0000	1.0000
L25	200	LDF7-50A(1-5/8)	95.83 - 100.67	1.0000	1.0000
L25	201	Banjo	95.83 - 100.67	1.0000	1.0000
L25	218	Safety Line 3/8	95.83 - 100.67	1.0000	1.0000
L25	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	95.58 - 95.83	1.0000	1.0000
L26	192	AL7-50(1-5/8)	95.58 - 95.83	1.0000	1.0000
L26	200	LDF7-50A(1-5/8)	95.58 - 95.83	1.0000	1.0000
L26	201	Banjo	95.58 - 95.83	1.0000	1.0000
L26	218	Safety Line 3/8	95.58 - 95.83	1.0000	1.0000
L26	219	Step Pegs	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

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L27	62	CCI 4.5" x 1" Plate	90.58 - 91.42	1.0000	1.0000
L27	191	HB158-1-08U8-S8J18(1-5/8)	90.58 - 95.58	1.0000	1.0000
L27	192	AL7-50(1-5/8)	90.58 - 95.58	1.0000	1.0000
L27	200	LDF7-50A(1-5/8)	90.58 - 95.58	1.0000	1.0000
L27	201	Banjo	90.58 - 95.58	1.0000	1.0000
L27	218	Safety Line 3/8	90.58 - 95.58	1.0000	1.0000
L27	219	Step Pegs	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
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	191	HB158-1-08U8-S8J18(1-5/8)	89.92 - 90.58	1.0000	1.0000
L28	192	AL7-50(1-5/8)	89.92 - 90.58	1.0000	1.0000
L28	200	LDF7-50A(1-5/8)	89.92 - 90.58	1.0000	1.0000
L28	201	Banjo	89.92 - 90.58	1.0000	1.0000
L28	218	Safety Line 3/8	89.92 - 90.58	1.0000	1.0000
L28	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	89.67 - 89.92	1.0000	1.0000
L29	192	AL7-50(1-5/8)	89.67 - 89.92	1.0000	1.0000
L29	200	LDF7-50A(1-5/8)	89.67 - 89.92	1.0000	1.0000
L29	201	Banjo	89.67 - 89.92	1.0000	1.0000
L29	218	Safety Line 3/8	89.67 - 89.92	1.0000	1.0000
L29	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	84.67 - 89.67	1.0000	1.0000
L30	192	AL7-50(1-5/8)	84.67 - 89.67	1.0000	1.0000
L30	200	LDF7-50A(1-5/8)	84.67 - 89.67	1.0000	1.0000
L30	201	Banjo	84.67 - 89.67	1.0000	1.0000
L30	218	Safety Line 3/8	84.67 - 89.67	1.0000	1.0000
L30	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	80.83 - 84.67	1.0000	1.0000
L31	192	AL7-50(1-5/8)	80.83 - 84.67	1.0000	1.0000
L31	200	LDF7-50A(1-5/8)	80.83 - 84.67	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L31	201	Banjo	80.83 - 84.67	1.0000	1.0000
L31	218	Safety Line 3/8	80.83 - 84.67	1.0000	1.0000
L31	219	Step Pegs	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
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	191	HB158-1-08U8-S8J18(1-5/8)	80.33 - 80.83	1.0000	1.0000
L32	192	AL7-50(1-5/8)	80.33 - 80.83	1.0000	1.0000
L32	200	LDF7-50A(1-5/8)	80.33 - 80.83	1.0000	1.0000
L32	201	Banjo	80.33 - 80.83	1.0000	1.0000
L32	218	Safety Line 3/8	80.33 - 80.83	1.0000	1.0000
L32	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	80.08 - 80.33	1.0000	1.0000
L33	192	AL7-50(1-5/8)	80.08 - 80.33	1.0000	1.0000
L33	200	LDF7-50A(1-5/8)	80.08 - 80.33	1.0000	1.0000
L33	201	Banjo	80.08 - 80.33	1.0000	1.0000
L33	218	Safety Line 3/8	80.08 - 80.33	1.0000	1.0000
L33	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	75.08 - 80.08	1.0000	1.0000
L34	192	AL7-50(1-5/8)	75.08 - 80.08	1.0000	1.0000
L34	200	LDF7-50A(1-5/8)	75.08 - 80.08	1.0000	1.0000
L34	201	Banjo	75.08 - 80.08	1.0000	1.0000
L34	218	Safety Line 3/8	75.08 - 80.08	1.0000	1.0000
L34	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	70.08 - 75.08	1.0000	1.0000
L35	192	AL7-50(1-5/8)	70.08 - 75.08	1.0000	1.0000
L35	200	LDF7-50A(1-5/8)	70.08 - 75.08	1.0000	1.0000
L35	201	Banjo	70.08 - 75.08	1.0000	1.0000
L35	218	Safety Line 3/8	70.08 - 75.08	1.0000	1.0000
L35	219	Step Pegs	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

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
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
L36	191	HB158-1-08U8-S8J18(1-5/8)	69.50 - 70.08	1.0000	1.0000
L36	192	AL7-50(1-5/8)	69.50 - 70.08	1.0000	1.0000
L36	200	LDF7-50A(1-5/8)	69.50 - 70.08	1.0000	1.0000
L36	201	Banjo	69.50 - 70.08	1.0000	1.0000
L36	218	Safety Line 3/8	69.50 - 70.08	1.0000	1.0000
L36	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	69.25 - 69.50	1.0000	1.0000
L37	192	AL7-50(1-5/8)	69.25 - 69.50	1.0000	1.0000
L37	200	LDF7-50A(1-5/8)	69.25 - 69.50	1.0000	1.0000
L37	201	Banjo	69.25 - 69.50	1.0000	1.0000
L37	218	Safety Line 3/8	69.25 - 69.50	1.0000	1.0000
L37	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	64.25 - 69.25	1.0000	1.0000
L38	192	AL7-50(1-5/8)	64.25 - 69.25	1.0000	1.0000
L38	200	LDF7-50A(1-5/8)	64.25 - 69.25	1.0000	1.0000
L38	201	Banjo	64.25 - 69.25	1.0000	1.0000
L38	218	Safety Line 3/8	64.25 - 69.25	1.0000	1.0000
L38	219	Step Pegs	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

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
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
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	191	HB158-1-08U8-S8J18(1-5/8)	60.58 - 64.25	1.0000	1.0000
L39	192	AL7-50(1-5/8)	60.58 - 64.25	1.0000	1.0000
L39	200	LDF7-50A(1-5/8)	60.58 - 64.25	1.0000	1.0000
L39	201	Banjo	60.58 - 64.25	1.0000	1.0000
L39	218	Safety Line 3/8	60.58 - 64.25	1.0000	1.0000
L39	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	60.33 - 60.58	1.0000	1.0000
L40	192	AL7-50(1-5/8)	60.33 - 60.58	1.0000	1.0000
L40	200	LDF7-50A(1-5/8)	60.33 - 60.58	1.0000	1.0000
L40	201	Banjo	60.33 - 60.58	1.0000	1.0000
L40	218	Safety Line 3/8	60.33 - 60.58	1.0000	1.0000
L40	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	55.33 - 60.33	1.0000	1.0000
L41	192	AL7-50(1-5/8)	55.33 - 60.33	1.0000	1.0000
L41	200	LDF7-50A(1-5/8)	55.33 - 60.33	1.0000	1.0000
L41	201	Banjo	55.33 - 60.33	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L41	218	Safety Line 3/8	55.33 - 60.33	1.0000	1.0000
L41	219	Step Pegs	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
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	191	HB158-1-08U8-S8J18(1-5/8)	52.17 - 55.33	1.0000	1.0000
L42	192	AL7-50(1-5/8)	52.17 - 55.33	1.0000	1.0000
L42	200	LDF7-50A(1-5/8)	52.17 - 55.33	1.0000	1.0000
L42	201	Banjo	52.17 - 55.33	1.0000	1.0000
L42	218	Safety Line 3/8	52.17 - 55.33	1.0000	1.0000
L42	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	51.92 - 52.17	1.0000	1.0000
L43	192	AL7-50(1-5/8)	51.92 - 52.17	1.0000	1.0000
L43	200	LDF7-50A(1-5/8)	51.92 - 52.17	1.0000	1.0000
L43	201	Banjo	51.92 - 52.17	1.0000	1.0000
L43	218	Safety Line 3/8	51.92 - 52.17	1.0000	1.0000
L43	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	46.92 - 51.92	1.0000	1.0000
L44	192	AL7-50(1-5/8)	46.92 - 51.92	1.0000	1.0000
L44	200	LDF7-50A(1-5/8)	46.92 - 51.92	1.0000	1.0000
L44	201	Banjo	46.92 - 51.92	1.0000	1.0000
L44	218	Safety Line 3/8	46.92 - 51.92	1.0000	1.0000
L44	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	41.92 - 46.92	1.0000	1.0000
L45	192	AL7-50(1-5/8)	41.92 - 46.92	1.0000	1.0000
L45	200	LDF7-50A(1-5/8)	41.92 - 46.92	1.0000	1.0000
L45	201	Banjo	41.92 - 46.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L45	218	Safety Line 3/8	41.92 - 46.92	1.0000	1.0000
L45	219	Step Pegs	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
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	40.23 - 41.92	1.0000	1.0000
L46	43	CCI 6" x 1" Plate	40.23 - 41.92	1.0000	1.0000
L46	44	CCI 6" x 1" Plate	40.23 - 41.92	1.0000	1.0000
L46	45	CCI 6" x 1" Plate	40.23 - 41.92	1.0000	1.0000
L46	72	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	73	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	74	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	75	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	76	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	77	CCI 6.5" x 1.25" Plate	40.23 - 41.92	1.0000	1.0000
L46	191	HB158-1-08U8-S8J18(1-5/8)	40.23 - 41.92	1.0000	1.0000
L46	192	AL7-50(1-5/8)	40.23 - 41.92	1.0000	1.0000
L46	200	LDF7-50A(1-5/8)	40.23 - 41.92	1.0000	1.0000
L46	201	Banjo	40.23 - 41.92	1.0000	1.0000
L46	218	Safety Line 3/8	40.23 - 41.92	1.0000	1.0000
L46	219	Step Pegs	40.23 - 41.92	1.0000	1.0000
L47	42	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	43	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	44	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	45	CCI 6" x 1" Plate	39.98 - 40.23	1.0000	1.0000
L47	72	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	73	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	74	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	75	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	76	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	77	CCI 6.5" x 1.25" Plate	39.98 - 40.23	1.0000	1.0000
L47	191	HB158-1-08U8-S8J18(1-5/8)	39.98 - 40.23	1.0000	1.0000
L47	192	AL7-50(1-5/8)	39.98 - 40.23	1.0000	1.0000
L47	200	LDF7-50A(1-5/8)	39.98 - 40.23	1.0000	1.0000
L47	201	Banjo	39.98 - 40.23	1.0000	1.0000
L47	218	Safety Line 3/8	39.98 - 40.23	1.0000	1.0000
L47	219	Step Pegs	39.98 - 40.23	1.0000	1.0000
L48	6	CCI 6" x 1" Plate	34.98 - 39.75	1.0000	1.0000
L48	7	CCI 6" x 1" Plate	34.98 - 39.75	1.0000	1.0000
L48	8	CCI 6" x 1" Plate	34.98 - 39.75	1.0000	1.0000
L48	42	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	43	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	44	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	45	CCI 6" x 1" Plate	37.17 - 39.98	1.0000	1.0000
L48	72	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	73	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	74	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	75	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	76	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	77	CCI 6.5" x 1.25" Plate	34.98 - 39.98	1.0000	1.0000
L48	191	HB158-1-08U8-S8J18(1-5/8)	34.98 - 39.98	1.0000	1.0000
L48	192	AL7-50(1-5/8)	34.98 - 39.98	1.0000	1.0000
L48	200	LDF7-50A(1-5/8)	34.98 - 39.98	1.0000	1.0000
L48	201	Banjo	34.98 - 39.98	1.0000	1.0000
L48	218	Safety Line 3/8	34.98 - 39.98	1.0000	1.0000
L48	219	Step Pegs	34.98 - 39.98	1.0000	1.0000
L49	6	CCI 6" x 1" Plate	29.98 - 34.98	1.0000	1.0000
L49	7	CCI 6" x 1" Plate	29.98 - 34.98	1.0000	1.0000
L49	8	CCI 6" x 1" Plate	29.98 - 34.98	1.0000	1.0000
L49	37	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	38	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	39	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	40	CCI 6" x 1" Plate	29.98 - 30.00	1.0000	1.0000
L49	72	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	73	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	74	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L49	75	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	76	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	77	CCI 6.5" x 1.25" Plate	32.83 - 34.98	1.0000	1.0000
L49	191	HB158-1-08U8-S8J18(1-5/8)	29.98 - 34.98	1.0000	1.0000
L49	192	AL7-50(1-5/8)	29.98 - 34.98	1.0000	1.0000
L49	200	LDF7-50A(1-5/8)	29.98 - 34.98	1.0000	1.0000
L49	201	Banjo	29.98 - 34.98	1.0000	1.0000
L49	218	Safety Line 3/8	29.98 - 34.98	1.0000	1.0000
L49	219	Step Pegs	29.98 - 34.98	1.0000	1.0000
L50	6	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	7	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	8	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	37	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	38	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	39	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	40	CCI 6" x 1" Plate	28.00 - 29.98	1.0000	1.0000
L50	191	HB158-1-08U8-S8J18(1-5/8)	28.00 - 29.98	1.0000	1.0000
L50	192	AL7-50(1-5/8)	28.00 - 29.98	1.0000	1.0000
L50	200	LDF7-50A(1-5/8)	28.00 - 29.98	1.0000	1.0000
L50	201	Banjo	28.00 - 29.98	1.0000	1.0000
L50	218	Safety Line 3/8	28.00 - 29.98	1.0000	1.0000
L50	219	Step Pegs	28.00 - 29.98	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	191	HB158-1-08U8-S8J18(1-5/8)	27.75 - 28.00	1.0000	1.0000
L51	192	AL7-50(1-5/8)	27.75 - 28.00	1.0000	1.0000
L51	200	LDF7-50A(1-5/8)	27.75 - 28.00	1.0000	1.0000
L51	201	Banjo	27.75 - 28.00	1.0000	1.0000
L51	218	Safety Line 3/8	27.75 - 28.00	1.0000	1.0000
L51	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	22.75 - 27.75	1.0000	1.0000
L52	192	AL7-50(1-5/8)	22.75 - 27.75	1.0000	1.0000
L52	200	LDF7-50A(1-5/8)	22.75 - 27.75	1.0000	1.0000
L52	201	Banjo	22.75 - 27.75	1.0000	1.0000
L52	218	Safety Line 3/8	22.75 - 27.75	1.0000	1.0000
L52	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	20.08 - 22.75	1.0000	1.0000
L53	192	AL7-50(1-5/8)	20.08 - 22.75	1.0000	1.0000
L53	200	LDF7-50A(1-5/8)	20.08 - 22.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L53	201	Banjo	20.08 - 22.75	1.0000	1.0000
L53	218	Safety Line 3/8	20.08 - 22.75	1.0000	1.0000
L53	219	Step Pegs	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
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	191	HB158-1-08U8-S8J18(1-5/8)	19.83 - 20.08	1.0000	1.0000
L54	192	AL7-50(1-5/8)	19.83 - 20.08	1.0000	1.0000
L54	200	LDF7-50A(1-5/8)	19.83 - 20.08	1.0000	1.0000
L54	201	Banjo	19.83 - 20.08	1.0000	1.0000
L54	218	Safety Line 3/8	19.83 - 20.08	1.0000	1.0000
L54	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	17.00 - 19.83	1.0000	1.0000
L55	192	AL7-50(1-5/8)	17.00 - 19.83	1.0000	1.0000
L55	200	LDF7-50A(1-5/8)	17.00 - 19.83	1.0000	1.0000
L55	201	Banjo	17.00 - 19.83	1.0000	1.0000
L55	218	Safety Line 3/8	17.00 - 19.83	1.0000	1.0000
L55	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	16.75 - 17.00	1.0000	1.0000
L56	192	AL7-50(1-5/8)	16.75 - 17.00	1.0000	1.0000
L56	200	LDF7-50A(1-5/8)	16.75 - 17.00	1.0000	1.0000
L56	201	Banjo	16.75 - 17.00	1.0000	1.0000
L56	218	Safety Line 3/8	16.75 - 17.00	1.0000	1.0000
L56	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	11.65 - 16.75	1.0000	1.0000
L57	192	AL7-50(1-5/8)	11.65 - 16.75	1.0000	1.0000
L57	200	LDF7-50A(1-5/8)	11.65 - 16.75	1.0000	1.0000
L57	201	Banjo	11.65 - 16.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L57	218	Safety Line 3/8	11.65 - 16.75	1.0000	1.0000
L57	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	11.42 - 11.65	1.0000	1.0000
L58	192	AL7-50(1-5/8)	11.42 - 11.65	1.0000	1.0000
L58	200	LDF7-50A(1-5/8)	11.42 - 11.65	1.0000	1.0000
L58	201	Banjo	11.42 - 11.65	1.0000	1.0000
L58	218	Safety Line 3/8	11.42 - 11.65	1.0000	1.0000
L58	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	9.40 - 11.42	1.0000	1.0000
L59	192	AL7-50(1-5/8)	9.40 - 11.42	1.0000	1.0000
L59	200	LDF7-50A(1-5/8)	9.40 - 11.42	1.0000	1.0000
L59	201	Banjo	9.40 - 11.42	1.0000	1.0000
L59	218	Safety Line 3/8	9.40 - 11.42	1.0000	1.0000
L59	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	9.15 - 9.40	1.0000	1.0000
L60	192	AL7-50(1-5/8)	9.15 - 9.40	1.0000	1.0000
L60	200	LDF7-50A(1-5/8)	9.15 - 9.40	1.0000	1.0000
L60	201	Banjo	9.15 - 9.40	1.0000	1.0000
L60	218	Safety Line 3/8	9.15 - 9.40	1.0000	1.0000
L60	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	4.83 - 9.15	1.0000	1.0000
L61	192	AL7-50(1-5/8)	4.83 - 9.15	1.0000	1.0000
L61	200	LDF7-50A(1-5/8)	4.83 - 9.15	1.0000	1.0000
L61	201	Banjo	4.83 - 9.15	1.0000	1.0000
L61	218	Safety Line 3/8	4.83 - 9.15	1.0000	1.0000
L61	219	Step Pegs	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	191	HB158-1-08U8-S8J18(1-5/8)	4.58 - 4.83	1.0000	1.0000
L62	192	AL7-50(1-5/8)	4.58 - 4.83	1.0000	1.0000
L62	200	LDF7-50A(1-5/8)	4.58 - 4.83	1.0000	1.0000
L62	201	Banjo	4.58 - 4.83	1.0000	1.0000
L62	218	Safety Line 3/8	4.58 - 4.83	1.0000	1.0000
L62	219	Step Pegs	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

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
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	191	HB158-1-08U8-S8J18(1-5/8)	4.00 - 4.58	1.0000	1.0000
L63	192	AL7-50(1-5/8)	4.00 - 4.58	1.0000	1.0000
L63	200	LDF7-50A(1-5/8)	4.00 - 4.58	1.0000	1.0000
L63	201	Banjo	4.00 - 4.58	1.0000	1.0000
L63	218	Safety Line 3/8	4.00 - 4.58	1.0000	1.0000
L63	219	Step Pegs	4.00 - 4.58	1.0000	1.0000

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L14	151	CCI 4.5" x 1" Plate	126.42 - 127.17	Auto	1.0000
L14	152	CCI 4.5" x 1" Plate	126.42 - 127.17	Auto	1.0000
L14	153	CCI 4.5" x 1" Plate	126.42 - 127.17	Auto	1.0000
L15	143	CCI 4.5" x 1" Plate	121.42 - 121.67	Auto	1.0000
L15	144	CCI 4.5" x 1" Plate	121.42 - 121.67	Auto	1.0000
L15	145	CCI 4.5" x 1" Plate	121.42 - 121.67	Auto	1.0000
L15	147	CCI 4.5" x 4" Plate	121.67 - 124.42	Auto	1.0000
L15	148	CCI 4.5" x 4" Plate	121.67 - 124.42	Auto	1.0000
L15	149	CCI 4.5" x 4" Plate	121.67 - 124.42	Auto	1.0000
L15	151	CCI 4.5" x 1" Plate	124.42 - 126.42	Auto	1.0000
L15	152	CCI 4.5" x 1" Plate	124.42 - 126.42	Auto	1.0000
L15	153	CCI 4.5" x 1" Plate	124.42 - 126.42	Auto	1.0000
L16	143	CCI 4.5" x 1" Plate	121.17 - 121.42	Auto	1.0000
L16	144	CCI 4.5" x 1" Plate	121.17 - 121.42	Auto	1.0000
L16	145	CCI 4.5" x 1" Plate	121.17 - 121.42	Auto	1.0000
L17	139	CCI 4.5" x 1" Plate	117.92 - 120.67	Auto	1.0000
L17	140	CCI 4.5" x 1" Plate	117.92 - 120.67	Auto	1.0000
L17	141	CCI 4.5" x 1" Plate	117.92 - 120.67	Auto	1.0000
L17	143	CCI 4.5" x 1" Plate	120.67 - 121.17	Auto	1.0000
L17	144	CCI 4.5" x 1" Plate	120.67 - 121.17	Auto	1.0000
L17	145	CCI 4.5" x 1" Plate	120.67 - 121.17	Auto	1.0000
L18	56	CCI 4.5" x 1" Plate	111.17 - 111.54	Auto	1.0000
L18	57	CCI 4.5" x 1" Plate	111.17 - 111.54	Auto	1.0000
L18	58	CCI 4.5" x 1" Plate	111.17 - 111.54	Auto	1.0000
L18	201	Banjo	111.17 - 116.00	Manual	1.0000
L19	56	CCI 4.5" x 1" Plate	110.04 - 111.17	Auto	1.0000
L19	57	CCI 4.5" x 1" Plate	110.04 - 111.17	Auto	1.0000
L19	58	CCI 4.5" x 1" Plate	110.04 - 111.17	Auto	1.0000
L19	201	Banjo	110.04 - 111.17	Manual	1.0000
L20	56	CCI 4.5" x 1" Plate	109.79 - 110.04	Auto	1.0000
L20	57	CCI 4.5" x 1" Plate	109.79 - 110.04	Auto	1.0000
L20	58	CCI 4.5" x 1" Plate	109.79 - 110.04	Auto	1.0000
L20	201	Banjo	109.79 - 110.04	Manual	1.0000
L21	18	CCI 4" x 0.75" Plate	105.08 - 106.58	Auto	1.0000
L21	19	CCI 4" x 0.75" Plate	105.08 - 106.58	Auto	1.0000
L21	20	CCI 4" x 0.75" Plate	105.08 - 106.58	Auto	1.0000
L21	56	CCI 4.5" x 1" Plate	105.08 - 109.79	Auto	1.0000
L21	57	CCI 4.5" x 1" Plate	105.08 - 109.79	Auto	1.0000
L21	58	CCI 4.5" x 1" Plate	105.08 - 109.79	Auto	1.0000
L21	135	CCI 4.5" x 1" Plate	105.08 - 107.17	Auto	1.0000
L21	136	CCI 4.5" x 1" Plate	105.08 - 107.17	Auto	1.0000
L21	137	CCI 4.5" x 1" Plate	105.08 - 107.17	Auto	1.0000
L21	201	Banjo	105.08 - 109.79	Manual	1.0000
L22	18	CCI 4" x 0.75" Plate	104.83 - 105.08	Auto	1.0000
L22	19	CCI 4" x 0.75" Plate	104.83 - 105.08	Auto	1.0000
L22	20	CCI 4" x 0.75" Plate	104.83 - 105.08	Auto	1.0000
L22	56	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	57	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	58	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	135	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	136	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000
L22	137	CCI 4.5" x 1" Plate	104.83 - 105.08	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L22	201	Banjo	104.83 - 105.08	Manual	1.0000
L23	18	CCI 4" x 0.75" Plate	101.58 - 104.83	Auto	1.0000
L23	19	CCI 4" x 0.75" Plate	101.58 - 104.83	Auto	1.0000
L23	20	CCI 4" x 0.75" Plate	101.58 - 104.83	Auto	1.0000
L23	56	CCI 4.5" x 1" Plate	101.54 - 104.83	Auto	1.0000
L23	57	CCI 4.5" x 1" Plate	101.54 - 104.83	Auto	1.0000
L23	58	CCI 4.5" x 1" Plate	101.54 - 104.83	Auto	1.0000
L23	127	CCI 4.5" x 1" Plate	100.92 - 101.42	Auto	1.0000
L23	128	CCI 4.5" x 1" Plate	100.92 - 101.42	Auto	1.0000
L23	129	CCI 4.5" x 1" Plate	100.92 - 101.42	Auto	1.0000
L23	131	CCI 4.5" x 4" Plate	101.42 - 104.42	Auto	1.0000
L23	132	CCI 4.5" x 4" Plate	101.42 - 104.42	Auto	1.0000
L23	133	CCI 4.5" x 4" Plate	101.42 - 104.42	Auto	1.0000
L23	135	CCI 4.5" x 1" Plate	104.42 - 104.83	Auto	1.0000
L23	136	CCI 4.5" x 1" Plate	104.42 - 104.83	Auto	1.0000
L23	137	CCI 4.5" x 1" Plate	104.42 - 104.83	Auto	1.0000
L23	173	CCI 4.5" x 1" Plate	100.92 - 101.79	Auto	1.0000
L23	174	CCI 4.5" x 1" Plate	100.92 - 101.79	Auto	1.0000
L23	175	CCI 4.5" x 1" Plate	100.92 - 101.79	Auto	1.0000
L23	177	CCI 4.5" x 3" Plate	101.79 - 103.29	Auto	1.0000
L23	178	CCI 4.5" x 3" Plate	101.79 - 103.29	Auto	1.0000
L23	179	CCI 4.5" x 3" Plate	101.79 - 103.29	Auto	1.0000
L23	201	Banjo	100.92 - 104.83	Manual	1.0000
L24	127	CCI 4.5" x 1" Plate	100.67 - 100.92	Auto	1.0000
L24	128	CCI 4.5" x 1" Plate	100.67 - 100.92	Auto	1.0000
L24	129	CCI 4.5" x 1" Plate	100.67 - 100.92	Auto	1.0000
L24	173	CCI 4.5" x 1" Plate	100.67 - 100.92	Auto	1.0000
L24	174	CCI 4.5" x 1" Plate	100.67 - 100.92	Auto	1.0000
L24	175	CCI 4.5" x 1" Plate	100.67 - 100.92	Auto	1.0000
L24	201	Banjo	100.67 - 100.92	Manual	1.0000
L25	52	CCI 4.5" x 1" Plate	95.83 - 97.33	Auto	1.0000
L25	53	CCI 4.5" x 1" Plate	95.83 - 97.33	Auto	1.0000
L25	54	CCI 4.5" x 1" Plate	95.83 - 97.33	Auto	1.0000
L25	123	CCI 4.5" x 1" Plate	97.92 - 100.42	Auto	1.0000
L25	124	CCI 4.5" x 1" Plate	97.92 - 100.42	Auto	1.0000
L25	125	CCI 4.5" x 1" Plate	97.92 - 100.42	Auto	1.0000
L25	127	CCI 4.5" x 1" Plate	100.42 - 100.67	Auto	1.0000
L25	128	CCI 4.5" x 1" Plate	100.42 - 100.67	Auto	1.0000
L25	129	CCI 4.5" x 1" Plate	100.42 - 100.67	Auto	1.0000
L25	173	CCI 4.5" x 1" Plate	98.42 - 100.67	Auto	1.0000
L25	174	CCI 4.5" x 1" Plate	98.42 - 100.67	Auto	1.0000
L25	175	CCI 4.5" x 1" Plate	98.42 - 100.67	Auto	1.0000
L25	201	Banjo	95.83 - 100.67	Manual	1.0000
L26	52	CCI 4.5" x 1" Plate	95.58 - 95.83	Auto	1.0000
L26	53	CCI 4.5" x 1" Plate	95.58 - 95.83	Auto	1.0000
L26	54	CCI 4.5" x 1" Plate	95.58 - 95.83	Auto	1.0000
L26	201	Banjo	95.58 - 95.83	Manual	1.0000
L27	52	CCI 4.5" x 1" Plate	90.58 - 95.58	Auto	1.0000
L27	53	CCI 4.5" x 1" Plate	90.58 - 95.58	Auto	1.0000
L27	54	CCI 4.5" x 1" Plate	90.58 - 95.58	Auto	1.0000
L27	60	CCI 4.5" x 1" Plate	90.58 - 91.42	Auto	1.0000
L27	61	CCI 4.5" x 1" Plate	90.58 - 91.42	Auto	1.0000
L27	62	CCI 4.5" x 1" Plate	90.58 - 91.42	Auto	1.0000
L27	201	Banjo	90.58 - 95.58	Manual	1.0000
L28	52	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	53	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	54	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	60	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	61	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	62	CCI 4.5" x 1" Plate	89.92 - 90.58	Auto	1.0000
L28	201	Banjo	89.92 - 90.58	Manual	1.0000
L29	52	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	53	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	54	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	60	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	61	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	62	CCI 4.5" x 1" Plate	89.67 - 89.92	Auto	1.0000
L29	119	CCI 6.5" x 1.25" Plate	89.67 - 89.75	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L29	120	CCI 6.5" x 1.25" Plate	89.67 - 89.75	Auto	1.0000
L29	121	CCI 6.5" x 1.25" Plate	89.67 - 89.75	Auto	1.0000
L29	201	Banjo	89.67 - 89.92	Manual	1.0000
L30	52	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	53	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	54	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	60	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	61	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	62	CCI 4.5" x 1" Plate	84.67 - 89.67	Auto	1.0000
L30	115	CCI 6.5" x 4.25" Plate	84.67 - 85.83	Auto	1.0000
L30	116	CCI 6.5" x 4.25" Plate	84.67 - 85.83	Auto	1.0000
L30	117	CCI 6.5" x 4.25" Plate	84.67 - 85.83	Auto	1.0000
L30	119	CCI 6.5" x 1.25" Plate	85.83 - 89.67	Auto	1.0000
L30	120	CCI 6.5" x 1.25" Plate	85.83 - 89.67	Auto	1.0000
L30	121	CCI 6.5" x 1.25" Plate	85.83 - 89.67	Auto	1.0000
L30	201	Banjo	84.67 - 89.67	Manual	1.0000
L31	52	CCI 4.5" x 1" Plate	81.33 - 84.67	Auto	1.0000
L31	53	CCI 4.5" x 1" Plate	81.33 - 84.67	Auto	1.0000
L31	54	CCI 4.5" x 1" Plate	81.33 - 84.67	Auto	1.0000
L31	60	CCI 4.5" x 1" Plate	81.42 - 84.67	Auto	1.0000
L31	61	CCI 4.5" x 1" Plate	81.42 - 84.67	Auto	1.0000
L31	62	CCI 4.5" x 1" Plate	81.42 - 84.67	Auto	1.0000
L31	115	CCI 6.5" x 4.25" Plate	80.83 - 84.67	Auto	1.0000
L31	116	CCI 6.5" x 4.25" Plate	80.83 - 84.67	Auto	1.0000
L31	117	CCI 6.5" x 4.25" Plate	80.83 - 84.67	Auto	1.0000
L31	165	CCI 4.5" x 1" Plate	80.83 - 81.71	Auto	1.0000
L31	166	CCI 4.5" x 1" Plate	80.83 - 81.71	Auto	1.0000
L31	167	CCI 4.5" x 1" Plate	80.83 - 81.71	Auto	1.0000
L31	169	CCI 4.5" x 3" Plate	81.71 - 83.20	Auto	1.0000
L31	170	CCI 4.5" x 3" Plate	81.71 - 83.20	Auto	1.0000
L31	171	CCI 4.5" x 3" Plate	81.71 - 83.20	Auto	1.0000
L31	201	Banjo	80.83 - 84.67	Manual	1.0000
L32	111	CCI 6.5" x 1.25" Plate	80.33 - 80.50	Auto	1.0000
L32	112	CCI 6.5" x 1.25" Plate	80.33 - 80.50	Auto	1.0000
L32	113	CCI 6.5" x 1.25" Plate	80.33 - 80.50	Auto	1.0000
L32	115	CCI 6.5" x 4.25" Plate	80.50 - 80.83	Auto	1.0000
L32	116	CCI 6.5" x 4.25" Plate	80.50 - 80.83	Auto	1.0000
L32	117	CCI 6.5" x 4.25" Plate	80.50 - 80.83	Auto	1.0000
L32	165	CCI 4.5" x 1" Plate	80.33 - 80.83	Auto	1.0000
L32	166	CCI 4.5" x 1" Plate	80.33 - 80.83	Auto	1.0000
L32	167	CCI 4.5" x 1" Plate	80.33 - 80.83	Auto	1.0000
L32	201	Banjo	80.33 - 80.83	Manual	1.0000
L33	14	CCI 6" x 1" Plate	80.08 - 80.17	Auto	1.0000
L33	15	CCI 6" x 1" Plate	80.08 - 80.17	Auto	1.0000
L33	16	CCI 6" x 1" Plate	80.08 - 80.17	Auto	1.0000
L33	107	CCI 6.5" x 1.25" Plate	80.08 - 80.33	Auto	1.0000
L33	108	CCI 6.5" x 1.25" Plate	80.08 - 80.33	Auto	1.0000
L33	109	CCI 6.5" x 1.25" Plate	80.08 - 80.33	Auto	1.0000
L33	165	CCI 4.5" x 1" Plate	80.08 - 80.33	Auto	1.0000
L33	166	CCI 4.5" x 1" Plate	80.08 - 80.33	Auto	1.0000
L33	167	CCI 4.5" x 1" Plate	80.08 - 80.33	Auto	1.0000
L33	201	Banjo	80.08 - 80.33	Manual	1.0000
L34	14	CCI 6" x 1" Plate	75.08 - 80.08	Auto	1.0000
L34	15	CCI 6" x 1" Plate	75.08 - 80.08	Auto	1.0000
L34	16	CCI 6" x 1" Plate	75.08 - 80.08	Auto	1.0000
L34	107	CCI 6.5" x 1.25" Plate	76.50 - 80.08	Auto	1.0000
L34	108	CCI 6.5" x 1.25" Plate	76.50 - 80.08	Auto	1.0000
L34	109	CCI 6.5" x 1.25" Plate	76.50 - 80.08	Auto	1.0000
L34	165	CCI 4.5" x 1" Plate	78.33 - 80.08	Auto	1.0000
L34	166	CCI 4.5" x 1" Plate	78.33 - 80.08	Auto	1.0000
L34	167	CCI 4.5" x 1" Plate	78.33 - 80.08	Auto	1.0000
L34	201	Banjo	75.08 - 80.08	Manual	1.0000
L35	14	CCI 6" x 1" Plate	70.08 - 75.08	Auto	1.0000
L35	15	CCI 6" x 1" Plate	70.08 - 75.08	Auto	1.0000
L35	16	CCI 6" x 1" Plate	70.08 - 75.08	Auto	1.0000
L35	47	CCI 4.5" x 1" Plate	70.08 - 71.00	Auto	1.0000
L35	48	CCI 4.5" x 1" Plate	70.08 - 71.00	Auto	1.0000
L35	49	CCI 4.5" x 1" Plate	70.08 - 71.00	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L35	50	CCI 4.5" x 1" Plate	70.08 - 71.00	Auto	1.0000
L35	100	CCI 8.5" x 1.25" Plate	70.08 - 73.42	Auto	1.0000
L35	101	CCI 8.5" x 1.25" Plate	70.08 - 73.42	Auto	1.0000
L35	102	CCI 8.5" x 1.25" Plate	70.08 - 73.42	Auto	1.0000
L35	103	CCI 8.5" x 1.25" Plate	70.08 - 73.42	Auto	1.0000
L35	104	CCI 8.5" x 1.25" Plate	70.08 - 73.42	Auto	1.0000
L35	105	CCI 8.5" x 1.25" Plate	70.08 - 73.42	Auto	1.0000
L35	201	Banjo	70.08 - 75.08	Manual	1.0000
L36	14	CCI 6" x 1" Plate	69.50 - 70.08	Auto	1.0000
L36	15	CCI 6" x 1" Plate	69.50 - 70.08	Auto	1.0000
L36	16	CCI 6" x 1" Plate	69.50 - 70.08	Auto	1.0000
L36	47	CCI 4.5" x 1" Plate	69.50 - 70.08	Auto	1.0000
L36	48	CCI 4.5" x 1" Plate	69.50 - 70.08	Auto	1.0000
L36	49	CCI 4.5" x 1" Plate	69.50 - 70.08	Auto	1.0000
L36	50	CCI 4.5" x 1" Plate	69.50 - 70.08	Auto	1.0000
L36	100	CCI 8.5" x 1.25" Plate	69.50 - 70.08	Auto	1.0000
L36	101	CCI 8.5" x 1.25" Plate	69.50 - 70.08	Auto	1.0000
L36	102	CCI 8.5" x 1.25" Plate	69.50 - 70.08	Auto	1.0000
L36	103	CCI 8.5" x 1.25" Plate	69.50 - 70.08	Auto	1.0000
L36	104	CCI 8.5" x 1.25" Plate	69.50 - 70.08	Auto	1.0000
L36	105	CCI 8.5" x 1.25" Plate	69.50 - 70.08	Auto	1.0000
L36	201	Banjo	69.50 - 70.08	Manual	1.0000
L37	14	CCI 6" x 1" Plate	69.25 - 69.50	Auto	1.0000
L37	15	CCI 6" x 1" Plate	69.25 - 69.50	Auto	1.0000
L37	16	CCI 6" x 1" Plate	69.25 - 69.50	Auto	1.0000
L37	47	CCI 4.5" x 1" Plate	69.25 - 69.50	Auto	1.0000
L37	48	CCI 4.5" x 1" Plate	69.25 - 69.50	Auto	1.0000
L37	49	CCI 4.5" x 1" Plate	69.25 - 69.50	Auto	1.0000
L37	50	CCI 4.5" x 1" Plate	69.25 - 69.50	Auto	1.0000
L37	100	CCI 8.5" x 1.25" Plate	69.25 - 69.50	Auto	1.0000
L37	101	CCI 8.5" x 1.25" Plate	69.25 - 69.50	Auto	1.0000
L37	102	CCI 8.5" x 1.25" Plate	69.25 - 69.50	Auto	1.0000
L37	103	CCI 8.5" x 1.25" Plate	69.25 - 69.50	Auto	1.0000
L37	104	CCI 8.5" x 1.25" Plate	69.25 - 69.50	Auto	1.0000
L37	105	CCI 8.5" x 1.25" Plate	69.25 - 69.50	Auto	1.0000
L37	201	Banjo	69.25 - 69.50	Manual	1.0000
L38	14	CCI 6" x 1" Plate	64.25 - 69.25	Auto	1.0000
L38	15	CCI 6" x 1" Plate	64.25 - 69.25	Auto	1.0000
L38	16	CCI 6" x 1" Plate	64.25 - 69.25	Auto	1.0000
L38	27	1" x 2" Plate	64.25 - 66.17	Auto	1.0000
L38	28	1" x 2" Plate	64.25 - 66.17	Auto	1.0000
L38	29	1" x 2" Plate	64.25 - 66.17	Auto	1.0000
L38	30	1" x 2" Plate	64.25 - 66.17	Auto	1.0000
L38	47	CCI 4.5" x 1" Plate	64.25 - 69.25	Auto	1.0000
L38	48	CCI 4.5" x 1" Plate	64.25 - 69.25	Auto	1.0000
L38	49	CCI 4.5" x 1" Plate	64.25 - 69.25	Auto	1.0000
L38	50	CCI 4.5" x 1" Plate	64.25 - 69.25	Auto	1.0000
L38	93	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	94	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	95	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	96	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	97	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	98	CCI 8.5" x 4.25" Plate	64.25 - 68.42	Auto	1.0000
L38	100	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	101	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	102	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	103	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	104	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	105	CCI 8.5" x 1.25" Plate	68.42 - 69.25	Auto	1.0000
L38	201	Banjo	64.25 - 69.25	Manual	1.0000
L39	14	CCI 6" x 1" Plate	61.17 - 64.25	Auto	1.0000
L39	15	CCI 6" x 1" Plate	61.17 - 64.25	Auto	1.0000
L39	16	CCI 6" x 1" Plate	61.17 - 64.25	Auto	1.0000
L39	27	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	28	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	29	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	30	1" x 2" Plate	61.08 - 64.25	Auto	1.0000
L39	47	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L39	48	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000
L39	49	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000
L39	50	CCI 4.5" x 1" Plate	61.00 - 64.25	Auto	1.0000
L39	86	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	87	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	88	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	89	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	90	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	91	CCI 8.5" x 1.25" Plate	60.58 - 61.08	Auto	1.0000
L39	93	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	94	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	95	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	96	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	97	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	98	CCI 8.5" x 4.25" Plate	61.08 - 64.25	Auto	1.0000
L39	155	CCI 4.5" x 1" Plate	60.58 - 61.46	Auto	1.0000
L39	156	CCI 4.5" x 1" Plate	60.58 - 61.46	Auto	1.0000
L39	157	CCI 4.5" x 1" Plate	60.58 - 61.46	Auto	1.0000
L39	158	CCI 4.5" x 1" Plate	60.58 - 61.46	Auto	1.0000
L39	160	CCI 4.5" x 3" Plate	61.55 - 62.96	Auto	1.0000
L39	161	CCI 4.5" x 3" Plate	61.55 - 62.96	Auto	1.0000
L39	162	CCI 4.5" x 3" Plate	61.55 - 62.96	Auto	1.0000
L39	163	CCI 4.5" x 3" Plate	61.55 - 62.96	Auto	1.0000
L39	201	Banjo	60.58 - 64.25	Manual	1.0000
L40	86	CCI 8.5" x 1.25" Plate	60.33 - 60.58	Auto	1.0000
L40	87	CCI 8.5" x 1.25" Plate	60.33 - 60.58	Auto	1.0000
L40	88	CCI 8.5" x 1.25" Plate	60.33 - 60.58	Auto	1.0000
L40	89	CCI 8.5" x 1.25" Plate	60.33 - 60.58	Auto	1.0000
L40	90	CCI 8.5" x 1.25" Plate	60.33 - 60.58	Auto	1.0000
L40	91	CCI 8.5" x 1.25" Plate	60.33 - 60.58	Auto	1.0000
L40	155	CCI 4.5" x 1" Plate	60.33 - 60.58	Auto	1.0000
L40	156	CCI 4.5" x 1" Plate	60.33 - 60.58	Auto	1.0000
L40	157	CCI 4.5" x 1" Plate	60.33 - 60.58	Auto	1.0000
L40	158	CCI 4.5" x 1" Plate	60.33 - 60.58	Auto	1.0000
L40	201	Banjo	60.33 - 60.58	Manual	1.0000
L41	10	CCI 6.5" x 1.25" Plate	55.33 - 59.92	Auto	1.0000
L41	11	CCI 6.5" x 1.25" Plate	55.33 - 59.92	Auto	1.0000
L41	12	CCI 6.5" x 1.25" Plate	55.33 - 59.92	Auto	1.0000
L41	79	CCI 8.5" x 1.25" Plate	55.33 - 60.08	Auto	1.0000
L41	80	CCI 8.5" x 1.25" Plate	55.33 - 60.08	Auto	1.0000
L41	81	CCI 8.5" x 1.25" Plate	55.33 - 60.08	Auto	1.0000
L41	82	CCI 8.5" x 1.25" Plate	55.33 - 60.08	Auto	1.0000
L41	83	CCI 8.5" x 1.25" Plate	55.33 - 60.08	Auto	1.0000
L41	84	CCI 8.5" x 1.25" Plate	55.33 - 60.08	Auto	1.0000
L41	86	CCI 8.5" x 1.25" Plate	60.08 - 60.33	Auto	1.0000
L41	87	CCI 8.5" x 1.25" Plate	60.08 - 60.33	Auto	1.0000
L41	88	CCI 8.5" x 1.25" Plate	60.08 - 60.33	Auto	1.0000
L41	89	CCI 8.5" x 1.25" Plate	60.08 - 60.33	Auto	1.0000
L41	90	CCI 8.5" x 1.25" Plate	60.08 - 60.33	Auto	1.0000
L41	91	CCI 8.5" x 1.25" Plate	60.08 - 60.33	Auto	1.0000
L41	155	CCI 4.5" x 1" Plate	58.00 - 60.33	Auto	1.0000
L41	156	CCI 4.5" x 1" Plate	58.00 - 60.33	Auto	1.0000
L41	157	CCI 4.5" x 1" Plate	58.00 - 60.33	Auto	1.0000
L41	158	CCI 4.5" x 1" Plate	58.00 - 60.33	Auto	1.0000
L41	201	Banjo	55.33 - 60.33	Manual	1.0000
L42	10	CCI 6.5" x 1.25" Plate	52.17 - 55.33	Auto	1.0000
L42	11	CCI 6.5" x 1.25" Plate	52.17 - 55.33	Auto	1.0000
L42	12	CCI 6.5" x 1.25" Plate	52.17 - 55.33	Auto	1.0000
L42	79	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	80	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	81	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	82	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	83	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	84	CCI 8.5" x 1.25" Plate	55.25 - 55.33	Auto	1.0000
L42	201	Banjo	52.17 - 55.33	Manual	1.0000
L43	10	CCI 6.5" x 1.25" Plate	51.92 - 52.17	Auto	1.0000
L43	11	CCI 6.5" x 1.25" Plate	51.92 - 52.17	Auto	1.0000
L43	12	CCI 6.5" x 1.25" Plate	51.92 - 52.17	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L43	201	Banjo	51.92 - 52.17	Manual	1.0000
L44	10	CCI 6.5" x 1.25" Plate	46.92 - 51.92	Auto	1.0000
L44	11	CCI 6.5" x 1.25" Plate	46.92 - 51.92	Auto	1.0000
L44	12	CCI 6.5" x 1.25" Plate	46.92 - 51.92	Auto	1.0000
L44	22	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	23	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	24	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	25	1" x 2" Plate	46.92 - 50.42	Auto	1.0000
L44	42	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	43	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	44	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	45	CCI 6" x 1" Plate	46.92 - 50.17	Auto	1.0000
L44	72	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	73	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	74	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	75	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	76	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	77	CCI 6.5" x 1.25" Plate	46.92 - 47.83	Auto	1.0000
L44	201	Banjo	46.92 - 51.92	Manual	1.0000
L45	10	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	11	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	12	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	22	1" x 2" Plate	41.92 - 46.92	Auto	1.0000
L45	23	1" x 2" Plate	41.92 - 46.92	Auto	1.0000
L45	24	1" x 2" Plate	41.92 - 46.92	Auto	1.0000
L45	25	1" x 2" Plate	41.92 - 46.92	Auto	1.0000
L45	42	CCI 6" x 1" Plate	41.92 - 46.92	Auto	1.0000
L45	43	CCI 6" x 1" Plate	41.92 - 46.92	Auto	1.0000
L45	44	CCI 6" x 1" Plate	41.92 - 46.92	Auto	1.0000
L45	45	CCI 6" x 1" Plate	41.92 - 46.92	Auto	1.0000
L45	72	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	73	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	74	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	75	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	76	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	77	CCI 6.5" x 1.25" Plate	41.92 - 46.92	Auto	1.0000
L45	201	Banjo	41.92 - 46.92	Manual	1.0000
L46	10	CCI 6.5" x 1.25" Plate	40.83 - 41.92	Auto	1.0000
L46	11	CCI 6.5" x 1.25" Plate	40.83 - 41.92	Auto	1.0000
L46	12	CCI 6.5" x 1.25" Plate	40.83 - 41.92	Auto	1.0000
L46	22	1" x 2" Plate	40.58 - 41.92	Auto	1.0000
L46	23	1" x 2" Plate	40.58 - 41.92	Auto	1.0000
L46	24	1" x 2" Plate	40.58 - 41.92	Auto	1.0000
L46	25	1" x 2" Plate	40.58 - 41.92	Auto	1.0000
L46	42	CCI 6" x 1" Plate	40.23 - 41.92	Auto	1.0000
L46	43	CCI 6" x 1" Plate	40.23 - 41.92	Auto	1.0000
L46	44	CCI 6" x 1" Plate	40.23 - 41.92	Auto	1.0000
L46	45	CCI 6" x 1" Plate	40.23 - 41.92	Auto	1.0000
L46	72	CCI 6.5" x 1.25" Plate	40.23 - 41.92	Auto	1.0000
L46	73	CCI 6.5" x 1.25" Plate	40.23 - 41.92	Auto	1.0000
L46	74	CCI 6.5" x 1.25" Plate	40.23 - 41.92	Auto	1.0000
L46	75	CCI 6.5" x 1.25" Plate	40.23 - 41.92	Auto	1.0000
L46	76	CCI 6.5" x 1.25" Plate	40.23 - 41.92	Auto	1.0000
L46	77	CCI 6.5" x 1.25" Plate	40.23 - 41.92	Auto	1.0000
L46	201	Banjo	40.23 - 41.92	Manual	1.0000
L47	42	CCI 6" x 1" Plate	39.98 - 40.23	Auto	1.0000
L47	43	CCI 6" x 1" Plate	39.98 - 40.23	Auto	1.0000
L47	44	CCI 6" x 1" Plate	39.98 - 40.23	Auto	1.0000
L47	45	CCI 6" x 1" Plate	39.98 - 40.23	Auto	1.0000
L47	72	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	73	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	74	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	75	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	76	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	77	CCI 6.5" x 1.25" Plate	39.98 - 40.23	Auto	1.0000
L47	201	Banjo	39.98 - 40.23	Manual	1.0000
L48	6	CCI 6" x 1" Plate	34.98 - 39.75	Auto	1.0000
L48	7	CCI 6" x 1" Plate	34.98 - 39.75	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L48	8	CCI 6" x 1" Plate	34.98 - 39.75	Auto	1.0000
L48	42	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	43	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	44	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	45	CCI 6" x 1" Plate	37.17 - 39.98	Auto	1.0000
L48	72	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	73	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	74	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	75	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	76	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	77	CCI 6.5" x 1.25" Plate	34.98 - 39.98	Auto	1.0000
L48	201	Banjo	34.98 - 39.98	Manual	1.0000
L49	6	CCI 6" x 1" Plate	29.98 - 34.98	Auto	1.0000
L49	7	CCI 6" x 1" Plate	29.98 - 34.98	Auto	1.0000
L49	8	CCI 6" x 1" Plate	29.98 - 34.98	Auto	1.0000
L49	37	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	38	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	39	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	40	CCI 6" x 1" Plate	29.98 - 30.00	Auto	1.0000
L49	72	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	73	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	74	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	75	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	76	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	77	CCI 6.5" x 1.25" Plate	32.83 - 34.98	Auto	1.0000
L49	201	Banjo	29.98 - 34.98	Manual	1.0000
L50	6	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	7	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	8	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	37	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	38	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	39	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	40	CCI 6" x 1" Plate	28.00 - 29.98	Auto	1.0000
L50	201	Banjo	28.00 - 29.98	Manual	1.0000
L51	6	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	7	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	8	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	37	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	38	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	39	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	40	CCI 6" x 1" Plate	27.75 - 28.00	Auto	1.0000
L51	201	Banjo	27.75 - 28.00	Manual	1.0000
L52	6	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	7	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	8	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	37	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	38	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	39	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	40	CCI 6" x 1" Plate	22.75 - 27.75	Auto	1.0000
L52	65	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	66	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	67	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	68	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	69	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	70	CCI 6.5" x 1.25" Plate	22.75 - 27.50	Auto	1.0000
L52	201	Banjo	22.75 - 27.75	Manual	1.0000
L53	6	CCI 6" x 1" Plate	20.75 - 22.75	Auto	1.0000
L53	7	CCI 6" x 1" Plate	20.75 - 22.75	Auto	1.0000
L53	8	CCI 6" x 1" Plate	20.75 - 22.75	Auto	1.0000
L53	37	CCI 6" x 1" Plate	20.08 - 22.75	Auto	1.0000
L53	38	CCI 6" x 1" Plate	20.08 - 22.75	Auto	1.0000
L53	39	CCI 6" x 1" Plate	20.08 - 22.75	Auto	1.0000
L53	40	CCI 6" x 1" Plate	20.08 - 22.75	Auto	1.0000
L53	65	CCI 6.5" x 1.25" Plate	20.08 - 22.75	Auto	1.0000
L53	66	CCI 6.5" x 1.25" Plate	20.08 - 22.75	Auto	1.0000
L53	67	CCI 6.5" x 1.25" Plate	20.08 - 22.75	Auto	1.0000
L53	68	CCI 6.5" x 1.25" Plate	20.08 - 22.75	Auto	1.0000
L53	69	CCI 6.5" x 1.25" Plate	20.08 - 22.75	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L53	70	CCI 6.5" x 1.25" Plate	20.08 - 22.75	Auto	1.0000
L53	201	Banjo	20.08 - 22.75	Manual	1.0000
L54	37	CCI 6" x 1" Plate	19.83 - 20.08	Auto	1.0000
L54	38	CCI 6" x 1" Plate	19.83 - 20.08	Auto	1.0000
L54	39	CCI 6" x 1" Plate	19.83 - 20.08	Auto	1.0000
L54	40	CCI 6" x 1" Plate	19.83 - 20.08	Auto	1.0000
L54	65	CCI 6.5" x 1.25" Plate	19.83 - 20.08	Auto	1.0000
L54	66	CCI 6.5" x 1.25" Plate	19.83 - 20.08	Auto	1.0000
L54	67	CCI 6.5" x 1.25" Plate	19.83 - 20.08	Auto	1.0000
L54	68	CCI 6.5" x 1.25" Plate	19.83 - 20.08	Auto	1.0000
L54	69	CCI 6.5" x 1.25" Plate	19.83 - 20.08	Auto	1.0000
L54	70	CCI 6.5" x 1.25" Plate	19.83 - 20.08	Auto	1.0000
L54	201	Banjo	19.83 - 20.08	Manual	1.0000
L55	32	CCI 6" x 1" Plate	17.00 - 19.00	Auto	1.0000
L55	33	CCI 6" x 1" Plate	17.00 - 19.00	Auto	1.0000
L55	34	CCI 6" x 1" Plate	17.00 - 19.00	Auto	1.0000
L55	35	CCI 6" x 1" Plate	17.00 - 19.00	Auto	1.0000
L55	37	CCI 6" x 1" Plate	17.00 - 19.83	Auto	1.0000
L55	38	CCI 6" x 1" Plate	17.00 - 19.83	Auto	1.0000
L55	39	CCI 6" x 1" Plate	17.00 - 19.83	Auto	1.0000
L55	40	CCI 6" x 1" Plate	17.00 - 19.83	Auto	1.0000
L55	65	CCI 6.5" x 1.25" Plate	17.00 - 19.83	Auto	1.0000
L55	66	CCI 6.5" x 1.25" Plate	17.00 - 19.83	Auto	1.0000
L55	67	CCI 6.5" x 1.25" Plate	17.00 - 19.83	Auto	1.0000
L55	68	CCI 6.5" x 1.25" Plate	17.00 - 19.83	Auto	1.0000
L55	69	CCI 6.5" x 1.25" Plate	17.00 - 19.83	Auto	1.0000
L55	70	CCI 6.5" x 1.25" Plate	17.00 - 19.83	Auto	1.0000
L55	201	Banjo	17.00 - 19.83	Manual	1.0000
L56	32	CCI 6" x 1" Plate	16.75 - 17.00	Auto	1.0000
L56	33	CCI 6" x 1" Plate	16.75 - 17.00	Auto	1.0000
L56	34	CCI 6" x 1" Plate	16.75 - 17.00	Auto	1.0000
L56	35	CCI 6" x 1" Plate	16.75 - 17.00	Auto	1.0000
L56	65	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	66	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	67	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	68	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	69	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	70	CCI 6.5" x 1.25" Plate	16.75 - 17.00	Auto	1.0000
L56	201	Banjo	16.75 - 17.00	Manual	1.0000
L57	4	CCI 4" x 0.75" Plate	11.65 - 13.17	Auto	1.0000
L57	32	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	33	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	34	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	35	CCI 6" x 1" Plate	11.65 - 16.75	Auto	1.0000
L57	65	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	66	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	67	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	68	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	69	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	70	CCI 6.5" x 1.25" Plate	12.67 - 16.75	Auto	1.0000
L57	201	Banjo	11.65 - 16.75	Manual	1.0000
L58	4	CCI 4" x 0.75" Plate	11.42 - 11.65	Auto	1.0000
L58	32	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L58	33	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L58	34	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L58	35	CCI 6" x 1" Plate	11.42 - 11.65	Auto	1.0000
L58	201	Banjo	11.42 - 11.65	Manual	1.0000
L59	2	CCI 4" x 0.75" Plate	9.40 - 10.88	Auto	1.0000
L59	3	CCI 4" x 0.75" Plate	9.40 - 10.88	Auto	1.0000
L59	4	CCI 4" x 0.75" Plate	9.40 - 11.42	Auto	1.0000
L59	32	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L59	33	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L59	34	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L59	35	CCI 6" x 1" Plate	9.40 - 11.42	Auto	1.0000
L59	201	Banjo	9.40 - 11.42	Manual	1.0000
L60	2	CCI 4" x 0.75" Plate	9.15 - 9.40	Auto	1.0000
L60	3	CCI 4" x 0.75" Plate	9.15 - 9.40	Auto	1.0000
L60	4	CCI 4" x 0.75" Plate	9.15 - 9.40	Auto	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L60	32	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L60	33	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L60	34	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L60	35	CCI 6" x 1" Plate	9.15 - 9.40	Auto	1.0000
L60	201	Banjo	9.15 - 9.40	Manual	1.0000
L61	2	CCI 4" x 0.75" Plate	4.83 - 9.15	Auto	1.0000
L61	3	CCI 4" x 0.75" Plate	4.83 - 9.15	Auto	1.0000
L61	4	CCI 4" x 0.75" Plate	4.83 - 9.15	Auto	1.0000
L61	32	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L61	33	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L61	34	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L61	35	CCI 6" x 1" Plate	4.83 - 9.15	Auto	1.0000
L61	201	Banjo	4.83 - 9.15	Manual	1.0000
L62	2	CCI 4" x 0.75" Plate	4.58 - 4.83	Auto	1.0000
L62	3	CCI 4" x 0.75" Plate	4.58 - 4.83	Auto	1.0000
L62	4	CCI 4" x 0.75" Plate	4.58 - 4.83	Auto	1.0000
L62	32	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L62	33	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L62	34	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L62	35	CCI 6" x 1" Plate	4.58 - 4.83	Auto	1.0000
L62	201	Banjo	4.58 - 4.83	Manual	1.0000
L63	2	CCI 4" x 0.75" Plate	0.00 - 4.58	Auto	1.0000
L63	3	CCI 4" x 0.75" Plate	0.00 - 4.58	Auto	1.0000
L63	4	CCI 4" x 0.75" Plate	3.17 - 4.58	Auto	1.0000
L63	32	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000
L63	33	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000
L63	34	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000
L63	35	CCI 6" x 1" Plate	0.00 - 4.58	Auto	1.0000
L63	201	Banjo	4.00 - 4.58	Manual	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	B	From Leg	1.00 0.00 4.00	0.0000	191.67	No Ice 1/2" Ice 1" Ice 2" Ice	1.36 2.13 2.70 3.77	1.36 2.13 2.70 3.77	0.07 0.09 0.11 0.17
*									
4' ICE SHIELDS	A	From Leg	0.50 0.00 0.00	0.0000	178.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.40 1.88 2.38 3.39	0.47 0.64 0.82 1.21	0.03 0.10 0.17 0.33
4' ICE SHIELDS	A	From Leg	0.50 0.00 0.00	0.0000	138.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.40 1.88 2.38 3.39	0.47 0.64 0.82 1.21	0.03 0.10 0.17 0.33
4' ICE SHIELDS	A	From Leg	0.50 0.00 0.00	0.0000	98.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.40 1.88 2.38 3.39	0.47 0.64 0.82 1.21	0.03 0.10 0.17 0.33
4' ICE SHIELDS	B	From Leg	0.50	0.0000	98.00	No Ice	1.40	0.47	0.03

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
			0.00				1/2"	1.88	0.64	0.10
			0.00				Ice	2.38	0.82	0.17
							1" Ice	3.39	1.21	0.33
							2" Ice			
4' ICE SHIELDS	C	From Leg	0.50		0.0000	98.00	No Ice	1.40	0.47	0.03
			0.00				1/2"	1.88	0.64	0.10
			0.00				Ice	2.38	0.82	0.17
							1" Ice	3.39	1.21	0.33
							2" Ice			
RA										
OGB4-900D	C	From Leg	3.00		0.0000	192.00	No Ice	0.79	0.79	0.01
			0.00				1/2"	1.03	1.03	0.02
			4.00				Ice	1.28	1.28	0.03
							1" Ice	1.81	1.81	0.05
							2" Ice			
Side Arm Mount [SO 701-1]	C	From Leg	1.50		0.0000	192.00	No Ice	0.85	1.67	0.07
			0.00				1/2"	1.14	2.34	0.08
			0.00				Ice	1.43	3.01	0.09
							1" Ice	2.01	4.35	0.12
							2" Ice			
***										
DB589-A	B	From Leg	3.00		0.0000	191.00	No Ice	2.76	2.76	0.01
			0.00				1/2"	4.17	4.17	0.03
			5.00				Ice	5.59	5.59	0.06
							1" Ice	8.49	8.49	0.15
							2" Ice			
WB2623 w/ Mount Pipe	B	From Leg	3.00		0.0000	191.00	No Ice	1.93	0.87	0.02
			0.00				1/2"	2.16	1.11	0.04
			-1.00				Ice	2.40	1.37	0.06
							1" Ice	2.91	1.94	0.11
							2" Ice			
Side Arm Mount [SO 701-1]	B	From Leg	1.50		0.0000	191.00	No Ice	0.85	1.67	0.07
			0.00				1/2"	1.14	2.34	0.08
			0.00				Ice	1.43	3.01	0.09
							1" Ice	2.01	4.35	0.12
							2" Ice			
***										
AIR -32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.00		0.0000	181.00	No Ice	3.76	3.15	0.19
			0.00				1/2"	4.12	3.49	0.25
			0.00				Ice	4.48	3.84	0.32
							1" Ice	5.24	4.58	0.48
							2" Ice			
AIR -32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.00		0.0000	181.00	No Ice	3.76	3.15	0.19
			0.00				1/2"	4.12	3.49	0.25
			0.00				Ice	4.48	3.84	0.32
							1" Ice	5.24	4.58	0.48
							2" Ice			
AIR -32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.00		0.0000	181.00	No Ice	3.76	3.15	0.19
			0.00				1/2"	4.12	3.49	0.25
			0.00				Ice	4.48	3.84	0.32
							1" Ice	5.24	4.58	0.48
							2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.00		0.0000	181.00	No Ice	14.69	6.87	0.19
			0.00				1/2"	15.46	7.55	0.31
			0.00				Ice	16.23	8.25	0.46
							1" Ice	17.82	9.67	0.79
							2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.00		0.0000	181.00	No Ice	14.69	6.87	0.19
			0.00				1/2"	15.46	7.55	0.31
			0.00				Ice	16.23	8.25	0.46
							1" Ice	17.82	9.67	0.79
							2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.00		0.0000	181.00	No Ice	14.69	6.87	0.19
			0.00				1/2"	15.46	7.55	0.31
			0.00				Ice	16.23	8.25	0.46

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
						1" Ice	17.82	9.67	0.79
						2" Ice			
ATBT-BOTTOM-24V	A	From Leg	4.00	0.0000	181.00	No Ice	0.10	0.06	0.00
			0.00			1/2"	0.15	0.10	0.00
			0.00			Ice	0.20	0.15	0.01
						1" Ice	0.32	0.26	0.01
						2" Ice			
ATBT-BOTTOM-24V	B	From Leg	4.00	0.0000	181.00	No Ice	0.10	0.06	0.00
			0.00			1/2"	0.15	0.10	0.00
			0.00			Ice	0.20	0.15	0.01
						1" Ice	0.32	0.26	0.01
						2" Ice			
ATBT-BOTTOM-24V	C	From Leg	4.00	0.0000	181.00	No Ice	0.10	0.06	0.00
			0.00			1/2"	0.15	0.10	0.00
			0.00			Ice	0.20	0.15	0.01
						1" Ice	0.32	0.26	0.01
						2" Ice			
Platform Mount [LP 405-1_HR-1]	C	None		0.0000	181.00	No Ice	25.33	25.33	2.06
						1/2"	33.79	33.79	2.63
						Ice	42.16	42.16	3.36
						1" Ice	58.77	58.77	5.25
						2" Ice			
***									
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.00	0.0000	181.00	No Ice	5.87	3.27	0.13
			0.00			1/2"	6.23	3.73	0.18
			0.00			Ice	6.61	4.20	0.23
						1" Ice	7.38	5.20	0.36
						2" Ice			
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.00	0.0000	181.00	No Ice	5.87	3.27	0.13
			0.00			1/2"	6.23	3.73	0.18
			0.00			Ice	6.61	4.20	0.23
						1" Ice	7.38	5.20	0.36
						2" Ice			
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.00	0.0000	181.00	No Ice	5.87	3.27	0.13
			0.00			1/2"	6.23	3.73	0.18
			0.00			Ice	6.61	4.20	0.23
						1" Ice	7.38	5.20	0.36
						2" Ice			
RADIO 4415 B25_TMO	A	From Leg	4.00	0.0000	181.00	No Ice	1.86	0.87	0.05
			0.00			1/2"	2.03	1.00	0.06
			0.00			Ice	2.20	1.13	0.08
						1" Ice	2.58	1.43	0.12
						2" Ice			
RADIO 4415 B25_TMO	B	From Leg	4.00	0.0000	181.00	No Ice	1.86	0.87	0.05
			0.00			1/2"	2.03	1.00	0.06
			0.00			Ice	2.20	1.13	0.08
						1" Ice	2.58	1.43	0.12
						2" Ice			
RADIO 4415 B25_TMO	C	From Leg	4.00	0.0000	181.00	No Ice	1.86	0.87	0.05
			0.00			1/2"	2.03	1.00	0.06
			0.00			Ice	2.20	1.13	0.08
						1" Ice	2.58	1.43	0.12
						2" Ice			
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.00	0.0000	181.00	No Ice	1.97	1.59	0.07
			0.00			1/2"	2.15	1.75	0.09
			0.00			Ice	2.33	1.92	0.12
						1" Ice	2.72	2.28	0.17
						2" Ice			
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.00	0.0000	181.00	No Ice	1.97	1.59	0.07
			0.00			1/2"	2.15	1.75	0.09
			0.00			Ice	2.33	1.92	0.12
						1" Ice	2.72	2.28	0.17
						2" Ice			
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.00	0.0000	181.00	No Ice	1.97	1.59	0.07
			0.00			1/2"	2.15	1.75	0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			Ice	2.33	1.92	0.12
						1" Ice	2.72	2.28	0.17
						2" Ice			
***									
(2) NNHH-65B-R4 w/ Mount Pipe	A	From Leg	4.00	0.0000	160.00	No Ice	7.55	4.23	0.11
			0.00			1/2"	8.04	4.67	0.20
			0.00			Ice	8.53	5.12	0.30
						1" Ice	9.56	6.05	0.53
						2" Ice			
(2) NNHH-65B-R4 w/ Mount Pipe	B	From Leg	4.00	0.0000	160.00	No Ice	7.55	4.23	0.11
			0.00			1/2"	8.04	4.67	0.20
			0.00			Ice	8.53	5.12	0.30
						1" Ice	9.56	6.05	0.53
						2" Ice			
(2) NNHH-65B-R4 w/ Mount Pipe	C	From Leg	4.00	0.0000	160.00	No Ice	7.55	4.23	0.11
			0.00			1/2"	8.04	4.67	0.20
			0.00			Ice	8.53	5.12	0.30
						1" Ice	9.56	6.05	0.53
						2" Ice			
BXA-171085-12BF-2 w/ Mount Pipe	A	From Leg	4.00	0.0000	160.00	No Ice	4.97	5.23	0.04
			0.00			1/2"	5.52	6.39	0.09
			0.00			Ice	6.04	7.26	0.14
						1" Ice	7.09	9.05	0.27
						2" Ice			
BXA-171085-12BF-2 w/ Mount Pipe	B	From Leg	4.00	0.0000	160.00	No Ice	4.97	5.23	0.04
			0.00			1/2"	5.52	6.39	0.09
			0.00			Ice	6.04	7.26	0.14
						1" Ice	7.09	9.05	0.27
						2" Ice			
BXA-171085-12BF-2 w/ Mount Pipe	C	From Leg	4.00	0.0000	160.00	No Ice	4.97	5.23	0.04
			0.00			1/2"	5.52	6.39	0.09
			0.00			Ice	6.04	7.26	0.14
						1" Ice	7.09	9.05	0.27
						2" Ice			
LNX-8513DS-A1M w/ Mount Pipe	A	From Leg	4.00	0.0000	160.00	No Ice	4.09	3.30	0.07
			0.00			1/2"	4.49	3.68	0.13
			0.00			Ice	4.89	4.06	0.20
						1" Ice	5.71	4.87	0.38
						2" Ice			
LNX-6514DS-A1M w/ Mount Pipe	B	From Leg	4.00	0.0000	160.00	No Ice	4.09	3.30	0.06
			0.00			1/2"	4.49	3.68	0.13
			0.00			Ice	4.89	4.06	0.20
						1" Ice	5.71	4.87	0.38
						2" Ice			
LNX-8513DS-A1M w/ Mount Pipe	C	From Leg	4.00	0.0000	160.00	No Ice	4.09	3.30	0.07
			0.00			1/2"	4.49	3.68	0.13
			0.00			Ice	4.89	4.06	0.20
						1" Ice	5.71	4.87	0.38
						2" Ice			
RFV01U-D1A	A	From Leg	4.00	0.0000	160.00	No Ice	1.88	1.25	0.08
			0.00			1/2"	2.05	1.39	0.10
			0.00			Ice	2.22	1.54	0.12
						1" Ice	2.60	1.86	0.18
						2" Ice			
RFV01U-D1A	B	From Leg	4.00	0.0000	160.00	No Ice	1.88	1.25	0.08
			0.00			1/2"	2.05	1.39	0.10
			0.00			Ice	2.22	1.54	0.12
						1" Ice	2.60	1.86	0.18
						2" Ice			
RFV01U-D1A	C	From Leg	4.00	0.0000	160.00	No Ice	1.88	1.25	0.08
			0.00			1/2"	2.05	1.39	0.10
			0.00			Ice	2.22	1.54	0.12
						1" Ice	2.60	1.86	0.18
						2" Ice			
RFV01U-D2A	A	From Leg	4.00	0.0000	160.00	No Ice	1.88	1.01	0.07

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
						2" Ice			
RFV01U-D2A	B	From Leg	4.00	0.0000	160.00	No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
						2" Ice			
RFV01U-D2A	C	From Leg	4.00	0.0000	160.00	No Ice	1.88	1.01	0.07
			0.00			1/2"	2.05	1.14	0.09
			0.00			Ice	2.22	1.28	0.11
						1" Ice	2.60	1.59	0.15
						2" Ice			
DB-T1-6Z-8AB-0Z	B	From Leg	4.00	0.0000	160.00	No Ice	4.80	2.00	0.04
			0.00			1/2"	5.07	2.19	0.08
			0.00			Ice	5.35	2.39	0.12
						1" Ice	5.93	2.81	0.21
						2" Ice			
DB-T1-6Z-8AB-0Z	C	From Leg	4.00	0.0000	160.00	No Ice	4.80	2.00	0.04
			0.00			1/2"	5.07	2.19	0.08
			0.00			Ice	5.35	2.39	0.12
						1" Ice	5.93	2.81	0.21
						2" Ice			
Platform Mount [LP 303-1]	C	None		0.0000	160.00	No Ice	14.69	14.69	1.25
						1/2"	18.01	18.01	1.57
						Ice	21.34	21.34	1.94
						1" Ice	28.08	28.08	2.85
						2" Ice			
***									
SRL-224NM-4	B	From Leg	6.00	0.0000	158.00	No Ice	2.60	2.60	0.04
			0.00			1/2"	4.68	4.68	0.05
			0.00			Ice	6.76	6.76	0.06
						1" Ice	10.92	10.92	0.08
						2" Ice			
DB205-A	C	From Leg	6.00	0.0000	158.00	No Ice	1.20	1.20	0.04
			0.00			1/2"	2.16	2.16	0.05
			0.00			Ice	3.12	3.12	0.06
						1" Ice	5.04	5.04	0.08
						2" Ice			
Side Arm Mount [SO 702-1]	B	From Leg	3.00	0.0000	158.00	No Ice	0.62	1.49	0.03
			0.00			1/2"	0.74	2.07	0.04
			0.00			Ice	0.89	2.54	0.06
						1" Ice	1.25	3.55	0.12
						2" Ice			
Side Arm Mount [SO 702-1]	C	From Leg	3.00	0.0000	158.00	No Ice	0.62	1.49	0.03
			0.00			1/2"	0.74	2.07	0.04
			0.00			Ice	0.89	2.54	0.06
						1" Ice	1.25	3.55	0.12
						2" Ice			
4' x 2" Pipe Mount	B	From Leg	6.00	0.0000	158.00	No Ice	0.79	0.79	0.03
			0.00			1/2"	1.03	1.03	0.04
			0.00			Ice	1.28	1.28	0.04
						1" Ice	1.81	1.81	0.07
						2" Ice			
4' x 2" Pipe Mount	C	From Leg	6.00	0.0000	158.00	No Ice	0.79	0.79	0.03
			0.00			1/2"	1.03	1.03	0.04
			0.00			Ice	1.28	1.28	0.04
						1" Ice	1.81	1.81	0.07
						2" Ice			
***									
SBNH-1D6565C w/ Mount Pipe	A	From Leg	4.00	0.0000	151.00	No Ice	5.56	4.47	0.08
			0.00			1/2"	6.07	4.97	0.17
			0.00			Ice	6.59	5.47	0.26
						1" Ice	7.65	6.52	0.50

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			
SBNH-1D6565C w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.56 6.07 6.59 7.65	4.47 4.97 5.47 6.52	0.08 0.17 0.26 0.50
SBNH-1D6565C w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.56 6.07 6.59 7.65	4.47 4.97 5.47 6.52	0.08 0.17 0.26 0.50
7770.00 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.75 6.18 6.61 7.49	4.25 5.01 5.71 7.16	0.06 0.10 0.16 0.29
7770.00 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.75 6.18 6.61 7.49	4.25 5.01 5.71 7.16	0.06 0.10 0.16 0.29
7770.00 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.75 6.18 6.61 7.49	4.25 5.01 5.71 7.16	0.06 0.10 0.16 0.29
TPA-65R-LCUUUU-H8 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.85 12.77 13.71 15.64	8.99 9.88 10.79 12.66	0.11 0.21 0.32 0.58
TPA-65R-LCUUUU-H8 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.85 12.77 13.71 15.64	8.99 9.88 10.79 12.66	0.11 0.21 0.32 0.58
TPA-65R-LCUUUU-H8 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	11.85 12.77 13.71 15.64	8.99 9.88 10.79 12.66	0.11 0.21 0.32 0.58
DTMABP7819VG12A	A	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.98 1.10 1.23 1.52	0.34 0.42 0.51 0.71	0.02 0.03 0.04 0.06
DTMABP7819VG12A	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.98 1.10 1.23 1.52	0.34 0.42 0.51 0.71	0.02 0.03 0.04 0.06
DTMABP7819VG12A	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.98 1.10 1.23 1.52	0.34 0.42 0.51 0.71	0.02 0.03 0.04 0.06
RRUS 32	A	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.86 3.08 3.32 3.81	1.78 1.97 2.17 2.58	0.06 0.08 0.10 0.16
RRUS 32	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice	2.86 3.08 3.32 3.81	1.78 1.97 2.17 2.58	0.06 0.08 0.10 0.16

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			
RRUS 32	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.86 3.08 3.32 3.81	1.78 1.97 2.17 2.58	0.06 0.08 0.10 0.16
RRUS 32 B2	A	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.73 2.95 3.18 3.66	1.67 1.86 2.05 2.46	0.05 0.07 0.10 0.16
RRUS 32 B2	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.73 2.95 3.18 3.66	1.67 1.86 2.05 2.46	0.05 0.07 0.10 0.16
RRUS 32 B2	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.73 2.95 3.18 3.66	1.67 1.86 2.05 2.46	0.05 0.07 0.10 0.16
DBC0062F3V52-1	A	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.71 0.82 0.93 1.18	0.22 0.29 0.37 0.54	0.01 0.02 0.02 0.04
DBC0062F3V52-1	B	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.71 0.82 0.93 1.18	0.22 0.29 0.37 0.54	0.01 0.02 0.02 0.04
DBC0062F3V52-1	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.71 0.82 0.93 1.18	0.22 0.29 0.37 0.54	0.01 0.02 0.02 0.04
DC6-48-60-18-8F	C	From Leg	4.00 0.00 0.00	0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.92 1.46 1.64 2.04	0.92 1.46 1.64 2.04	0.02 0.04 0.06 0.11
Platform Mount [LP 403-1_KCKR]	C	None		0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	30.16 37.53 45.13 61.01	30.16 37.53 45.13 61.01	1.77 2.32 2.97 4.61
Miscellaneous [NA 510-1]	C	None		0.0000	151.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.36 8.52 10.62 14.64	6.36 8.52 10.62 14.64	0.26 0.34 0.46 0.77
***									
TME_ONLY	A	From Leg	4.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
RRUS 11	B	From Leg	4.00 0.00 2.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.78 2.99 3.21 3.66	1.19 1.33 1.49 1.83	0.05 0.07 0.09 0.15
RRUS 11	C	From Leg	4.00 0.00 2.00	0.0000	150.00	No Ice 1/2" Ice	2.78 2.99 3.21	1.19 1.33 1.49	0.05 0.07 0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice	3.66	1.83	0.15
						2" Ice			
RRUS 12	B	From Leg	4.00	0.0000	150.00	No Ice	3.15	1.29	0.06
			0.00			1/2"	3.36	1.44	0.08
			0.00			Ice	3.59	1.60	0.11
						1" Ice	4.07	1.95	0.17
						2" Ice			
RRUS 12	C	From Leg	4.00	0.0000	150.00	No Ice	3.15	1.29	0.06
			0.00			1/2"	3.36	1.44	0.08
			0.00			Ice	3.59	1.60	0.11
						1" Ice	4.07	1.95	0.17
						2" Ice			
DC6-48-60-18-8F	C	From Leg	4.00	0.0000	150.00	No Ice	0.92	0.92	0.02
			0.00			1/2"	1.46	1.46	0.04
			2.00			Ice	1.64	1.64	0.06
						1" Ice	2.04	2.04	0.11
						2" Ice			
Side Arm Mount [SO 102-3]	C	None		0.0000	150.00	No Ice	3.60	3.60	0.07
						1/2"	4.18	4.18	0.11
						Ice	4.75	4.75	0.14
						1" Ice	5.90	5.90	0.20
						2" Ice			
Pipe Mount [PM 601-3]	C	None		0.0000	150.00	No Ice	3.17	3.17	0.20
						1/2"	3.79	3.79	0.23
						Ice	4.42	4.42	0.28
						1" Ice	5.76	5.76	0.40
						2" Ice			
***									
SRL-235-2	B	From Leg	6.00	0.0000	132.00	No Ice	7.00	7.00	0.08
			0.00			1/2"	9.04	9.04	0.13
			0.00			Ice	11.09	11.09	0.19
						1" Ice	15.25	15.25	0.35
						2" Ice			
Side Arm Mount [SO 702-1]	B	From Leg	3.00	0.0000	132.00	No Ice	0.62	1.49	0.03
			0.00			1/2"	0.74	2.07	0.04
			0.00			Ice	0.89	2.54	0.06
						1" Ice	1.25	3.55	0.12
						2" Ice			
Side Arm Mount [SO 104-3]	C	None		0.0000	132.00	No Ice	2.62	2.62	0.29
						1/2"	3.30	3.30	0.41
						Ice	3.98	3.98	0.53
						1" Ice	5.35	5.35	0.77
						2" Ice			
4' x 2" Pipe Mount	B	From Leg	6.00	0.0000	132.00	No Ice	0.79	0.79	0.03
			0.00			1/2"	1.03	1.03	0.04
			0.00			Ice	1.28	1.28	0.04
						1" Ice	1.81	1.81	0.07
						2" Ice			
***									
PCS 1900 TMA RX	A	From Leg	2.00	0.0000	124.00	No Ice	0.54	0.53	0.02
			0.00			1/2"	0.64	0.63	0.02
			0.00			Ice	0.75	0.73	0.03
						1" Ice	0.98	0.97	0.05
						2" Ice			
Side Arm Mount [SO 104-3]	A	None		0.0000	124.00	No Ice	2.62	2.62	0.29
						1/2"	3.30	3.30	0.41
						Ice	3.98	3.98	0.53
						1" Ice	5.35	5.35	0.77
						2" Ice			
2' x 2" Pipe Mount	A	From Leg	2.00	0.0000	124.00	No Ice	0.02	0.02	0.01
			0.00			1/2"	0.05	0.05	0.01
			0.00			Ice	0.09	0.09	0.01
						1" Ice	0.19	0.19	0.01
						2" Ice			
***									

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
844G65VTZAS w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.49 5.88 6.27 7.09	4.98 5.60 6.23 7.53	0.03 0.09 0.14 0.28
844G65VTZAS w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.49 5.88 6.27 7.09	4.98 5.60 6.23 7.53	0.03 0.09 0.14 0.28
844G65VTZAS w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.49 5.88 6.27 7.09	4.98 5.60 6.23 7.53	0.03 0.09 0.14 0.28
(2) 844G65VTZAS	A	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.25 5.58 5.91 6.60	3.80 4.10 4.42 5.07	0.02 0.05 0.10 0.20
(2) 844G65VTZAS	B	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.25 5.58 5.91 6.60	3.80 4.10 4.42 5.07	0.02 0.05 0.10 0.20
(2) 844G65VTZAS	C	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	5.25 5.58 5.91 6.60	3.80 4.10 4.42 5.07	0.02 0.05 0.10 0.20
Dual Mount Bracket	A	From Leg	4.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.66 2.39 2.83 3.71	1.66 2.39 2.83 3.71	0.03 0.04 0.06 0.10
Dual Mount Bracket	B	From Leg	4.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.66 2.39 2.83 3.71	1.66 2.39 2.83 3.71	0.03 0.04 0.06 0.10
Dual Mount Bracket	C	From Leg	4.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.66 2.39 2.83 3.71	1.66 2.39 2.83 3.71	0.03 0.04 0.06 0.10
***									
LLPX310R	A	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.87 4.30 4.74 5.68	1.49 1.86 2.24 3.06	0.04 0.07 0.10 0.17
LLPX310R	B	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.87 4.30 4.74 5.68	1.49 1.86 2.24 3.06	0.04 0.07 0.10 0.17
LLPX310R	C	From Leg	4.00 0.00 2.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.87 4.30 4.74 5.68	1.49 1.86 2.24 3.06	0.04 0.07 0.10 0.17
WIMAX DAP HEAD	A	From Leg	4.00 0.00 0.00	0.0000	116.00	No Ice 1/2" Ice 1" Ice	1.55 1.70 1.87 2.22	0.68 0.80 0.92 1.19	0.03 0.04 0.06 0.09

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			
WIMAX DAP HEAD	B	From Leg	4.00	0.0000	116.00	No Ice	1.55	0.68	0.03
			0.00			1/2" Ice	1.70	0.80	0.04
			0.00			1" Ice	1.87	0.92	0.06
						2" Ice	2.22	1.19	0.09
WIMAX DAP HEAD	C	From Leg	4.00	0.0000	116.00	No Ice	1.55	0.68	0.03
			0.00			1/2" Ice	1.70	0.80	0.04
			0.00			1" Ice	1.87	0.92	0.06
						2" Ice	2.22	1.19	0.09
HORIZON DUO	A	From Leg	4.00	0.0000	116.00	No Ice	0.17	0.24	0.01
			0.00			1/2" Ice	0.25	0.34	0.02
			0.00			1" Ice	0.34	0.46	0.03
						2" Ice	0.53	0.70	0.06
Platform Mount [LP 405-1_HR-1]	C	None		0.0000	116.00	No Ice	25.33	25.33	2.06
						1/2" Ice	33.79	33.79	2.63
						1" Ice	42.16	42.16	3.36
						2" Ice	58.77	58.77	5.25
Dual Mount Bracket	A	From Leg	4.00	0.0000	116.00	No Ice	1.66	1.66	0.03
			0.00			1/2" Ice	2.39	2.39	0.04
			0.00			1" Ice	2.83	2.83	0.06
						2" Ice	3.71	3.71	0.10
Dual Mount Bracket	B	From Leg	4.00	0.0000	116.00	No Ice	1.66	1.66	0.03
			0.00			1/2" Ice	2.39	2.39	0.04
			0.00			1" Ice	2.83	2.83	0.06
						2" Ice	3.71	3.71	0.10
Dual Mount Bracket	C	From Leg	4.00	0.0000	116.00	No Ice	1.66	1.66	0.03
			0.00			1/2" Ice	2.39	2.39	0.04
			0.00			1" Ice	2.83	2.83	0.06
						2" Ice	3.71	3.71	0.10
***									
NNVV-65B-R4	A	From Leg	4.00	0.0000	116.00	No Ice	7.62	3.01	0.08
			0.00			1/2" Ice	8.12	3.45	0.15
			2.00			1" Ice	8.63	3.90	0.23
						2" Ice	9.68	4.82	0.41
NNVV-65B-R4	B	From Leg	4.00	0.0000	116.00	No Ice	7.62	3.01	0.08
			0.00			1/2" Ice	8.12	3.45	0.15
			2.00			1" Ice	8.63	3.90	0.23
						2" Ice	9.68	4.82	0.41
NNVV-65B-R4	C	From Leg	4.00	0.0000	116.00	No Ice	7.62	3.01	0.08
			0.00			1/2" Ice	8.12	3.45	0.15
			2.00			1" Ice	8.63	3.90	0.23
						2" Ice	9.68	4.82	0.41
AHCC	A	From Leg	4.00	0.0000	116.00	No Ice	1.63	1.14	0.05
			0.00			1/2" Ice	1.79	1.28	0.06
			2.00			1" Ice	1.96	1.43	0.08
						2" Ice	2.32	1.75	0.12
AHCC	B	From Leg	4.00	0.0000	116.00	No Ice	1.63	1.14	0.05
			0.00			1/2" Ice	1.79	1.28	0.06
			2.00			1" Ice	1.96	1.43	0.08
						2" Ice	2.32	1.75	0.12
AHCC	C	From Leg	4.00	0.0000	116.00	No Ice	1.63	1.14	0.05
			0.00			1/2" Ice	1.79	1.28	0.06
			2.00			Ice	1.96	1.43	0.08

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
						1" Ice	2.32	1.75	0.12
						2" Ice			
PCS 1900MHZ 4X45W-65MHZ	A	From Leg	4.00	0.0000	116.00	No Ice	2.32	2.24	0.06
			0.00			1/2"	2.53	2.44	0.08
			2.00			Ice	2.74	2.65	0.11
						1" Ice	3.19	3.09	0.17
						2" Ice			
(2) PCS 1900MHZ 4X45W-65MHZ	B	From Leg	4.00	0.0000	116.00	No Ice	2.32	2.24	0.06
			0.00			1/2"	2.53	2.44	0.08
			2.00			Ice	2.74	2.65	0.11
						1" Ice	3.19	3.09	0.17
						2" Ice			
****									
DB205-A	C	From Leg	6.00	0.0000	90.00	No Ice	1.20	1.20	0.04
			0.00			1/2"	2.16	2.16	0.05
			9.00			Ice	3.12	3.12	0.06
						1" Ice	5.04	5.04	0.08
						2" Ice			
MT-485002	C	From Leg	6.00	0.0000	90.00	No Ice	1.20	0.13	0.00
			0.00			1/2"	1.34	0.21	0.01
			0.00			Ice	1.48	0.29	0.02
						1" Ice	1.79	0.47	0.04
						2" Ice			
Side Arm Mount [SO 702-3]	C	None		0.0000	90.00	No Ice	2.53	2.53	0.08
						1/2"	3.37	3.37	0.13
						Ice	4.12	4.12	0.19
						1" Ice	5.76	5.76	0.36
						2" Ice			
5' x 2" Pipe Mount	C	From Leg	6.00	0.0000	90.00	No Ice	1.19	1.19	0.02
			0.00			1/2"	1.50	1.50	0.03
			0.00			Ice	1.81	1.81	0.04
						1" Ice	2.46	2.46	0.08
						2" Ice			
***									
SRL-235-2	C	From Leg	3.00	0.0000	70.00	No Ice	7.00	7.00	0.08
			0.00			1/2"	9.04	9.04	0.13
			0.00			Ice	11.09	11.09	0.19
						1" Ice	15.25	15.25	0.35
						2" Ice			
Side Arm Mount [SO 701-1]	C	From Leg	1.50	0.0000	70.00	No Ice	0.85	1.67	0.07
			0.00			1/2"	1.14	2.34	0.08
			0.00			Ice	1.43	3.01	0.09
						1" Ice	2.01	4.35	0.12
						2" Ice			
Side Arm Mount [SO 102-3]	C	None		0.0000	70.00	No Ice	3.60	3.60	0.07
						1/2"	4.18	4.18	0.11
						Ice	4.75	4.75	0.14
						1" Ice	5.90	5.90	0.20
						2" Ice			
6' x 2" Mount Pipe	C	From Leg	3.00	0.0000	70.00	No Ice	1.43	1.43	0.02
			0.00			1/2"	1.92	1.92	0.03
			0.00			Ice	2.29	2.29	0.05
						1" Ice	3.06	3.06	0.09
						2" Ice			
***									
DB909XVTE-M	B	From Leg	3.00	0.0000	33.00	No Ice	1.89	1.89	0.02
			0.00			1/2"	2.62	2.62	0.05
			0.00			Ice	2.95	2.95	0.07
						1" Ice	3.64	3.64	0.14
						2" Ice			
Side Arm Mount [SO 701-1]	B	From Leg	1.50	0.0000	33.00	No Ice	0.85	1.67	0.07
			0.00			1/2"	1.14	2.34	0.08
			0.00			Ice	1.43	3.01	0.09
						1" Ice	2.01	4.35	0.12
						2" Ice			

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
Side Arm Mount [SO 102-3]	B	None		0.0000	33.00	No Ice	3.60	3.60	0.07
						1/2" Ice	4.18	4.18	0.11
						1" Ice	4.75	4.75	0.14
						2" Ice	5.90	5.90	0.20
6' x 2" Mount Pipe	B	From Leg	3.00 0.00 0.00	0.0000	33.00	No Ice	1.43	1.43	0.02
						1/2" Ice	1.92	1.92	0.03
						1" Ice	2.29	2.29	0.05
						2" Ice	3.06	3.06	0.09
****									

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
VHLP2-18	B	Paraboloid w/o Radome	From Leg	4.00 0.00 4.00	0.0000		116.00	2.17	No Ice	3.72	0.03
									1/2" Ice	4.01	0.05
									1" Ice	4.30	0.07
									2" Ice	4.88	0.11
*											
KP2F-34	B	Grid	From Leg	6.00 0.00 0.00	5.0000		90.00	2.00	No Ice	3.14	0.01
									1/2" Ice	3.41	0.02
									1" Ice	3.68	0.04
									2" Ice	4.28	0.07

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
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

Comb. No.	Description
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	48	0.00	-0.00	0.00
			Max. Compression	26	-1.58	-1.00	-1.19
			Max. Mx	8	-0.72	-3.77	-0.43
			Max. My	14	-0.72	-0.25	-4.05
			Max. Vy	8	0.67	-3.77	-0.43
			Max. Vx	14	0.68	-0.25	-4.05
			Max. Torque	6			-0.81
L2	186.667 - 181.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-2.64	-1.01	-1.32
			Max. Mx	8	-1.36	-8.01	-0.59
			Max. My	14	-1.36	-0.37	-8.41
			Max. Vy	8	0.99	-8.01	-0.59
			Max. Vx	14	1.01	-0.37	-8.41
			Max. Torque	6			-0.81
L3	181.567 - 176.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-15.97	-1.05	-0.96
			Max. Mx	8	-6.54	-31.18	-0.72
			Max. My	14	-6.54	-0.49	-31.70
			Max. Vy	8	5.25	-31.18	-0.72
			Max. Vx	14	5.31	-0.49	-31.70
			Max. Torque	6			-0.81
L4	176.567 - 171.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-17.02	-1.11	-1.12
			Max. Mx	8	-7.19	-58.24	-0.90
			Max. My	14	-7.19	-0.61	-59.08
			Max. Vy	8	5.57	-58.24	-0.90
			Max. Vx	14	5.62	-0.61	-59.08
			Max. Torque	6			-0.78
L5	171.567 - 166.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-18.07	-1.16	-1.28
			Max. Mx	8	-7.84	-86.84	-1.09
			Max. My	14	-7.84	-0.73	-88.01
			Max. Vy	8	5.88	-86.84	-1.09
			Max. Vx	14	5.93	-0.73	-88.01
			Max. Torque	6			-0.78
L6	166.567 - 161.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-19.12	-1.22	-1.44

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	8	-8.50	-116.97	-1.27
			Max. My	14	-8.50	-0.86	-118.45
			Max. Vy	8	6.18	-116.97	-1.27
			Max. Vx	14	6.23	-0.86	-118.45
			Max. Torque	6			-0.78
L7	161.567 - 156.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-30.91	-1.48	-4.25
			Max. Mx	8	-12.49	-161.64	-2.28
			Max. My	14	-12.50	-0.97	-164.04
			Max. Vy	8	10.45	-161.64	-2.28
			Max. Vx	14	10.44	-0.97	-164.04
			Max. Torque	7			-2.17
L8	156.567 - 151.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-32.31	-1.89	-4.24
			Max. Mx	8	-13.22	-214.64	-2.45
			Max. My	14	-13.23	-1.15	-216.94
			Max. Vy	8	10.73	-214.64	-2.45
			Max. Vx	14	10.72	-1.15	-216.94
			Max. Torque	7			-2.17
L9	151.567 - 146.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-46.59	-1.41	-6.48
			Max. Mx	8	-18.23	-292.06	-3.36
			Max. My	14	-18.24	-1.15	-294.70
			Max. Vy	8	16.31	-292.06	-3.36
			Max. Vx	14	16.17	-1.15	-294.70
			Max. Torque	9			-2.58
L10	146.567 - 141.567	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48.03	-1.86	-6.46
			Max. Mx	8	-19.05	-374.20	-3.52
			Max. My	14	-19.06	-1.34	-376.12
			Max. Vy	8	16.53	-374.20	-3.52
			Max. Vx	14	16.39	-1.34	-376.12
			Max. Torque	9			-2.58
L11	141.567 - 141.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-48.07	-1.87	-6.46
			Max. Mx	8	-19.08	-376.68	-3.53
			Max. My	14	-19.09	-1.34	-378.58
			Max. Vy	8	16.53	-376.68	-3.53
			Max. Vx	14	16.39	-1.34	-378.58
			Max. Torque	9			-2.58
L12	141.417 - 136.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-50.27	-2.47	-5.74
			Max. Mx	8	-20.17	-460.47	-3.63
			Max. My	14	-20.19	-1.55	-461.62
			Max. Vy	8	16.96	-460.47	-3.63
			Max. Vx	14	16.86	-1.55	-461.62
			Max. Torque	9			-2.58
L13	136.417 - 131.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53.51	-6.39	-7.59
			Max. Mx	8	-21.73	-547.60	-4.30
			Max. My	14	-21.74	-2.63	-547.80
			Max. Vy	8	17.86	-547.60	-4.30
			Max. Vx	14	17.77	-2.63	-547.80
			Max. Torque	19			4.86
L14	131.417 - 126.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-55.44	-7.00	-7.53
			Max. Mx	8	-22.85	-637.89	-4.39
			Max. My	14	-22.86	-2.76	-637.63
			Max. Vy	8	18.24	-637.89	-4.39
			Max. Vx	14	18.15	-2.76	-637.63
			Max. Torque	19			4.86
L15	126.417 - 121.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-59.16	-7.67	-7.26
			Max. Mx	8	-25.04	-730.54	-4.40
			Max. My	14	-25.03	-2.95	-730.63
			Max. Vy	20	-19.16	728.50	-1.50
			Max. Vx	14	19.07	-2.95	-730.63
			Max. Torque	19			4.86
L16	121.417 - 121.167	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-59.27	-7.71	-7.26
			Max. Mx	8	-25.11	-735.24	-4.41
			Max. My	14	-25.11	-2.95	-735.40
			Max. Vy	20	-19.17	733.28	-1.50
			Max. Vx	14	19.09	-2.95	-735.40
			Max. Torque	19			4.79
L17	121.167 - 116.167	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-61.77	-8.97	-7.51
			Max. Mx	8	-26.53	-831.08	-4.63
			Max. My	14	-26.53	-3.37	-832.45
			Max. Vy	20	-19.82	830.75	-1.16
			Max. Vx	14	19.62	-3.37	-832.45
			Max. Torque	7			-5.24
L18	116.167 - 111.167	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-75.50	-12.15	-6.59
			Max. Mx	8	-31.64	-955.41	-4.58
			Max. My	14	-31.65	-4.52	-956.67
			Max. Vy	20	-24.51	955.40	-0.34
			Max. Vx	14	24.21	-4.52	-956.67
			Max. Torque	7			-5.57
L19	111.167 - 110.042	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-76.12	-12.37	-6.47
			Max. Mx	20	-31.94	982.96	-0.17
			Max. My	14	-31.96	-4.63	-983.93
			Max. Vy	20	-24.62	982.96	-0.17
			Max. Vx	14	24.31	-4.63	-983.93
			Max. Torque	7			-5.57
L20	110.042 - 109.792	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-76.27	-12.43	-6.44
			Max. Mx	20	-32.03	989.10	-0.13
			Max. My	14	-32.05	-4.65	-990.00
			Max. Vy	20	-24.64	989.10	-0.13
			Max. Vx	14	24.32	-4.65	-990.00
			Max. Torque	7			-5.57
L21	109.792 - 105.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-79.35	-13.36	-5.92
			Max. Mx	20	-33.72	1106.08	0.58
			Max. My	14	-33.74	-5.09	-1105.47
			Max. Vy	20	-25.15	1106.08	0.58
			Max. Vx	14	24.76	-5.09	-1105.47
			Max. Torque	7			-5.57
L22	105.083 - 104.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-79.55	-13.41	-5.89
			Max. Mx	20	-33.83	1112.36	0.61
			Max. My	14	-33.86	-5.11	-1111.66
			Max. Vy	20	-25.20	1112.36	0.61
			Max. Vx	14	24.80	-5.11	-1111.66
			Max. Torque	7			-5.57
L23	104.833 - 100.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-83.45	-14.21	-5.49
			Max. Mx	20	-36.27	1212.73	1.17
			Max. My	14	-36.30	-5.45	-1210.47
			Max. Vy	8	26.18	-1212.33	-4.63
			Max. Vx	14	25.70	-5.45	-1210.47
			Max. Torque	7			-5.57
L24	100.917 - 100.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-83.63	-14.29	-5.46
			Max. Mx	20	-36.38	1219.26	1.21
			Max. My	14	-36.41	-5.48	-1216.89
			Max. Vy	8	26.23	-1218.90	-4.63
			Max. Vx	14	25.74	-5.48	-1216.89
			Max. Torque	7			-5.57
L25	100.667 - 95.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-87.77	-15.80	-4.85
			Max. Mx	8	-38.25	-1347.48	-4.63
			Max. My	14	-38.29	-5.95	-1342.52
			Max. Vy	8	26.88	-1347.48	-4.63
			Max. Vx	14	26.29	-5.95	-1342.52
			Max. Torque	7			-5.57

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L26	95.833 - 95.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-87.93	-15.88	-4.81
			Max. Mx	8	-38.35	-1354.22	-4.63
			Max. My	14	-38.38	-5.98	-1349.08
			Max. Vy	8	26.90	-1354.22	-4.63
			Max. Vx	14	26.31	-5.98	-1349.08
			Max. Torque	7			-5.57
L27	95.583 - 90.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-91.16	-17.44	-4.16
			Max. Mx	8	-40.17	-1490.40	-4.62
			Max. My	14	-40.20	-6.47	-1481.63
			Max. Vy	8	27.46	-1490.40	-4.62
			Max. Vx	12	26.82	-778.96	-1339.08
			Max. Torque	7			-5.57
L28	90.583 - 89.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-92.25	-16.75	-5.17
			Max. Mx	8	-40.58	-1508.72	-4.92
			Max. My	14	-40.62	-6.08	-1500.23
			Max. Vy	20	-27.85	1508.58	2.56
			Max. Vx	12	27.20	-789.15	-1357.67
			Max. Torque	7			-5.83
L29	89.917 - 89.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-92.44	-16.82	-5.14
			Max. Mx	8	-40.70	-1515.70	-4.92
			Max. My	14	-40.73	-6.10	-1507.01
			Max. Vy	20	-27.90	1515.54	2.59
			Max. Vx	12	27.26	-793.11	-1364.47
			Max. Torque	7			-5.83
L30	89.667 - 84.667	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-97.14	-18.20	-4.42
			Max. Mx	8	-43.56	-1658.16	-4.83
			Max. My	14	-43.60	-6.43	-1645.21
			Max. Vy	20	-29.10	1657.83	3.34
			Max. Vx	12	28.51	-874.08	-1503.73
			Max. Torque	7			-5.83
L31	84.667 - 80.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-101.84	-19.13	-3.83
			Max. Mx	8	-46.75	-1771.51	-4.71
			Max. My	14	-46.79	-6.57	-1754.53
			Max. Vy	20	-30.10	1771.28	3.96
			Max. Vx	12	29.55	-938.57	-1614.86
			Max. Torque	7			-5.83
L32	80.833 - 80.333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-102.39	-19.27	-3.75
			Max. Mx	8	-47.13	-1786.58	-4.70
			Max. My	14	-47.18	-6.60	-1769.01
			Max. Vy	20	-30.20	1786.34	4.04
			Max. Vx	12	29.67	-947.16	-1629.64
			Max. Torque	7			-5.83
L33	80.333 - 80.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-102.62	-19.35	-3.71
			Max. Mx	8	-47.28	-1794.14	-4.69
			Max. My	14	-47.32	-6.62	-1776.28
			Max. Vy	20	-30.25	1793.89	4.08
			Max. Vx	12	29.74	-951.47	-1637.06
			Max. Torque	7			-5.83
L34	80.083 - 75.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-106.83	-20.96	-2.99
			Max. Mx	8	-49.78	-1947.98	-4.60
			Max. My	14	-49.82	-7.05	-1924.15
			Max. Vy	20	-31.26	1947.37	4.83
			Max. Vx	12	30.97	-1039.65	-1788.66
			Max. Torque	7			-5.83
L35	75.083 - 70.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-111.62	-22.84	-2.29
			Max. Mx	8	-52.71	-2106.96	-4.54
			Max. My	14	-52.75	-7.67	-2077.04
			Max. Vy	20	-32.28	2105.71	5.55
			Max. Vx	12	32.18	-1131.56	-1946.39

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	7			-5.83
L36	70.083 - 69.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-113.03	-20.71	-3.57
			Max. Mx	20	-53.38	2125.53	5.20
			Max. My	14	-53.42	-6.99	-2095.89
			Max. Vy	20	-32.87	2125.53	5.20
			Max. Vx	12	32.75	-1141.87	-1965.83
			Max. Torque	7			-5.82
L37	69.5 - 69.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-113.33	-20.81	-3.54
			Max. Mx	20	-53.57	2133.73	5.24
			Max. My	14	-53.61	-7.03	-2103.82
			Max. Vy	20	-32.92	2133.73	5.24
			Max. Vx	12	32.81	-1146.65	-1974.02
			Max. Torque	7			-5.82
L38	69.25 - 64.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-122.15	-23.27	-2.82
			Max. Mx	8	-59.96	-2302.30	-4.97
			Max. My	14	-60.00	-8.22	-2265.98
			Max. Vy	20	-34.41	2301.08	6.03
			Max. Vx	12	34.26	-1244.73	-2141.58
			Max. Torque	7			-5.82
L39	64.25 - 60.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-129.25	-25.14	-2.25
			Max. Mx	8	-65.16	-2430.80	-4.93
			Max. My	14	-65.20	-9.13	-2389.37
			Max. Vy	20	-35.54	2428.55	6.65
			Max. Vx	12	35.34	-1319.37	-2269.04
			Max. Torque	7			-5.82
L40	60.583 - 60.333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-129.56	-25.25	-2.21
			Max. Mx	8	-65.36	-2439.68	-4.93
			Max. My	14	-65.40	-9.17	-2397.93
			Max. Vy	20	-35.58	2437.41	6.69
			Max. Vx	12	35.39	-1324.52	-2277.87
			Max. Torque	7			-5.82
L41	60.333 - 55.333	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-135.50	-27.32	-1.41
			Max. Mx	8	-69.18	-2620.08	-4.90
			Max. My	14	-69.21	-9.97	-2571.81
			Max. Vy	20	-36.67	2617.43	7.50
			Max. Vx	12	36.66	-1429.39	-2457.83
			Max. Torque	7			-5.82
L42	55.333 - 52.167	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-137.94	-28.45	-0.92
			Max. Mx	8	-70.69	-2736.34	-4.88
			Max. My	14	-70.73	-10.35	-2684.03
			Max. Vy	22	-37.23	2562.14	1477.55
			Max. Vx	12	37.36	-1497.45	-2574.89
			Max. Torque	7			-5.82
L43	52.167 - 51.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-138.16	-28.54	-0.88
			Max. Mx	8	-70.84	-2745.57	-4.88
			Max. My	14	-70.87	-10.38	-2692.92
			Max. Vy	22	-37.28	2571.44	1482.92
			Max. Vx	12	37.40	-1502.88	-2584.22
			Max. Torque	7			-5.82
L44	51.917 - 46.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-143.14	-30.45	-0.07
			Max. Mx	8	-73.97	-2932.47	-4.78
			Max. My	14	-74.00	-11.03	-2873.23
			Max. Vy	22	-38.42	2760.23	1592.18
			Max. Vx	12	38.57	-1613.27	-2773.94
			Max. Torque	7			-5.82
L45	46.917 - 41.917	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-149.47	-32.41	1.23
			Max. Mx	8	-77.97	-3124.16	-4.30
			Max. My	14	-78.00	-11.71	-3058.06
			Max. Vy	22	-39.64	2954.90	1705.23

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	12	39.80	-1727.14	-2969.26
			Max. Torque	7			-5.82
L46	41.917 - 40.233	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-151.50	-33.05	1.67
			Max. Mx	8	-79.25	-3189.79	-4.14
			Max. My	14	-79.28	-11.93	-3121.43
			Max. Vy	22	-40.04	3021.83	1744.08
			Max. Vx	12	40.20	-1766.27	-3036.40
			Max. Torque	7			-5.82
L47	40.233 - 39.983	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-151.78	-33.14	1.74
			Max. Mx	8	-79.45	-3199.57	-4.11
			Max. My	14	-79.48	-11.95	-3130.88
			Max. Vy	22	-40.08	3031.82	1749.88
			Max. Vx	12	40.24	-1772.10	-3046.42
			Max. Torque	7			-5.82
L48	39.983 - 34.983	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-157.44	-34.85	3.10
			Max. Mx	8	-83.15	-3397.53	-3.62
			Max. My	14	-83.17	-12.52	-3322.30
			Max. Vy	22	-41.15	3234.51	1867.50
			Max. Vx	12	41.30	-1890.43	-3249.65
			Max. Torque	7			-5.82
L49	34.983 - 29.983	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-162.65	-37.94	3.32
			Max. Mx	8	-86.51	-3600.71	-3.65
			Max. My	14	-86.53	-13.56	-3519.10
			Max. Vy	22	-42.25	3442.18	1987.74
			Max. Vx	12	42.42	-2012.43	-3458.97
			Max. Torque	7			-6.44
L50	29.983 - 28	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-164.36	-38.58	3.59
			Max. Mx	8	-87.58	-3682.30	-3.62
			Max. My	14	-87.60	-13.77	-3598.34
			Max. Vy	22	-42.60	3526.12	2036.26
			Max. Vx	12	42.79	-2061.42	-3543.36
			Max. Torque	7			-6.44
L51	28 - 27.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-164.60	-38.66	3.62
			Max. Mx	8	-87.75	-3692.63	-3.62
			Max. My	14	-87.77	-13.79	-3608.37
			Max. Vy	22	-42.62	3536.75	2042.40
			Max. Vx	12	42.80	-2067.63	-3554.05
			Max. Torque	7			-6.44
L52	27.75 - 22.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-170.72	-40.26	4.22
			Max. Mx	8	-91.90	-3901.34	-3.58
			Max. My	14	-91.92	-14.38	-3811.11
			Max. Vy	22	-43.58	3751.78	2166.69
			Max. Vx	12	43.78	-2193.26	-3770.40
			Max. Torque	7			-6.44
L53	22.75 - 20.083	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-173.98	-41.11	4.54
			Max. Mx	8	-94.14	-4014.31	-3.56
			Max. My	14	-94.16	-14.70	-3920.89
			Max. Vy	22	-44.08	3868.40	2234.10
			Max. Vx	12	44.29	-2261.40	-3887.76
			Max. Torque	7			-6.44
L54	20.083 - 19.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-174.26	-41.19	4.57
			Max. Mx	8	-94.34	-4024.96	-3.55
			Max. My	14	-94.36	-14.73	-3931.23
			Max. Vy	22	-44.11	3879.40	2240.46
			Max. Vx	12	44.32	-2267.83	-3898.83
			Max. Torque	7			-6.44
L55	19.833 - 17	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-177.50	-42.12	4.83
			Max. Mx	8	-96.50	-4146.26	-3.53
			Max. My	14	-96.52	-15.06	-4049.13

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	22	-44.65	4004.84	2312.96
			Max. Vx	12	44.86	-2341.12	-4025.06
			Max. Torque	7			-6.44
L56	17 - 16.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-177.80	-42.21	4.85
			Max. Mx	8	-96.73	-4157.02	-3.53
			Max. My	14	-96.74	-15.09	-4059.60
			Max. Vy	22	-44.67	4015.98	2319.40
			Max. Vx	12	44.88	-2347.63	-4036.27
			Max. Torque	7			-6.44
L57	16.75 - 11.65	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-183.70	-43.92	5.31
			Max. Mx	20	-100.99	4379.08	15.27
			Max. My	14	-101.00	-15.67	-4274.96
			Max. Vy	22	-45.60	4245.70	2452.17
			Max. Vx	12	45.78	-2481.74	-4267.31
			Max. Torque	7			-6.44
L58	11.65 - 11.417	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-183.92	-43.99	5.33
			Max. Mx	20	-101.15	4389.32	15.30
			Max. My	14	-101.16	-15.70	-4284.88
			Max. Vy	22	-45.62	4256.30	2458.30
			Max. Vx	12	45.81	-2487.93	-4277.97
			Max. Torque	7			-6.44
L59	11.417 - 9.396	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-185.83	-44.62	5.56
			Max. Mx	20	-102.51	4478.46	15.60
			Max. My	14	-102.52	-15.91	-4371.25
			Max. Vy	22	-45.97	4348.69	2511.70
			Max. Vx	12	46.15	-2541.81	-4370.82
			Max. Torque	7			-6.44
L60	9.396 - 9.146	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-186.08	-44.70	5.59
			Max. Mx	20	-102.70	4489.52	15.64
			Max. My	12	-102.64	-2548.50	-4382.36
			Max. Vy	22	-46.00	4360.16	2518.33
			Max. Vx	12	46.18	-2548.50	-4382.36
			Max. Torque	7			-6.44
L61	9.146 - 4.833	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-190.23	-46.00	6.13
			Max. Mx	20	-105.72	4681.74	16.28
			Max. My	12	-105.68	-2664.88	-4582.93
			Max. Vy	22	-46.73	4559.76	2633.69
			Max. Vx	12	46.90	-2664.88	-4582.93
			Max. Torque	7			-6.44
L62	4.833 - 4.583	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-190.46	-46.07	6.16
			Max. Mx	20	-105.90	4692.96	16.31
			Max. My	12	-105.86	-2671.68	-4594.64
			Max. Vy	22	-46.75	4571.42	2640.43
			Max. Vx	12	46.93	-2671.68	-4594.64
			Max. Torque	7			-6.44
L63	4.583 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-193.99	-46.32	6.26
			Max. Mx	20	-108.75	4900.32	16.89
			Max. My	12	-108.75	-2796.71	-4810.76
			Max. Vy	22	-47.25	4786.74	2764.60
			Max. Vx	12	47.42	-2796.71	-4810.76
			Max. Torque	7			-6.44

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	193.99	-0.00	-0.00
	Max. H_x	23	81.57	47.23	27.23
	Max. H_z	24	108.76	27.27	46.94
	Max. M_x	24	4760.51	27.27	46.94
	Max. M_z	8	4896.20	-44.82	-0.01
	Max. Torsion	13	6.28	-27.41	-47.40
	Min. Vert	17	81.57	21.50	-37.19
	Min. H_x	10	108.76	-46.93	-27.06
	Min. H_z	12	108.76	-27.41	-47.40
	Min. M_x	12	-4810.76	-27.41	-47.40
	Min. M_z	20	-4900.32	45.54	0.12
	Min. Torsion	7	-6.44	-37.23	21.42

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	90.63	0.00	0.00	0.18	-8.93	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	108.76	-0.20	-43.79	-4733.13	16.01	2.68
0.9 Dead+1.0 Wind 0 deg - No Ice	81.57	-0.20	-43.79	-4689.17	18.60	2.69
1.2 Dead+1.0 Wind 30 deg - No Ice	108.76	21.49	-37.15	-4130.60	-2401.62	5.09
0.9 Dead+1.0 Wind 30 deg - No Ice	81.57	21.49	-37.15	-4092.16	-2376.49	5.10
1.2 Dead+1.0 Wind 60 deg - No Ice	108.76	37.23	-21.42	-2384.32	-4161.00	6.43
0.9 Dead+1.0 Wind 60 deg - No Ice	81.57	37.23	-21.42	-2362.18	-4119.43	6.44
1.2 Dead+1.0 Wind 90 deg - No Ice	108.76	44.82	0.01	3.39	-4896.20	5.42
0.9 Dead+1.0 Wind 90 deg - No Ice	81.57	44.82	0.01	3.24	-4848.19	5.43
1.2 Dead+1.0 Wind 120 deg - No Ice	108.76	46.93	27.06	2741.02	-4766.63	-3.42
0.9 Dead+1.0 Wind 120 deg - No Ice	81.57	46.93	27.06	2716.55	-4721.53	-3.42
1.2 Dead+1.0 Wind 150 deg - No Ice	108.76	27.41	47.40	4810.76	-2796.71	-6.27
0.9 Dead+1.0 Wind 150 deg - No Ice	81.57	27.41	47.40	4767.94	-2769.13	-6.28
1.2 Dead+1.0 Wind 180 deg - No Ice	108.76	0.03	44.12	4780.00	-16.59	-2.94
0.9 Dead+1.0 Wind 180 deg - No Ice	81.57	0.03	44.12	4735.44	-13.69	-2.95
1.2 Dead+1.0 Wind 210 deg - No Ice	108.76	-21.50	37.19	4040.35	2325.52	-5.11
0.9 Dead+1.0 Wind 210 deg - No Ice	81.57	-21.50	37.19	4002.47	2306.51	-5.12
1.2 Dead+1.0 Wind 240 deg - No Ice	108.76	-37.61	21.45	2320.70	4070.19	-6.17
0.9 Dead+1.0 Wind 240 deg - No Ice	81.57	-37.61	21.45	2298.92	4034.92	-6.18
1.2 Dead+1.0 Wind 270 deg - No Ice	108.76	-45.54	-0.12	-16.89	4900.32	-5.03
0.9 Dead+1.0 Wind 270 deg - No Ice	81.57	-45.54	-0.12	-16.83	4857.78	-5.04
1.2 Dead+1.0 Wind 300 deg - No Ice	108.76	-47.23	-27.23	-2764.60	4786.74	3.41
0.9 Dead+1.0 Wind 300 deg - No Ice	81.57	-47.23	-27.23	-2740.13	4746.93	3.41
1.2 Dead+1.0 Wind 330 deg - No Ice	108.76	-27.27	-46.94	-4760.51	2762.13	5.88
0.9 Dead+1.0 Wind 330 deg - No Ice	81.57	-27.27	-46.94	-4718.29	2740.30	5.88
1.2 Dead+1.0 Ice+1.0 Temp	193.99	0.00	0.00	-6.26	-46.32	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	193.99	-0.07	-10.85	-1367.16	-38.41	0.87
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	193.99	5.27	-9.17	-1167.14	-713.30	1.81
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	193.99	9.15	-5.29	-676.31	-1204.55	2.33
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	193.99	10.99	-0.00	-6.27	-1419.15	2.07
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	193.99	11.04	6.39	737.91	-1331.05	-0.10
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	193.99	6.45	11.21	1294.61	-795.08	-1.34
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	193.99	0.00	10.83	1352.96	-47.25	-0.98
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	193.99	-5.27	9.16	1153.29	619.82	-1.81
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	193.99	-9.23	5.26	658.80	1117.09	-2.23
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	193.99	-11.05	-0.04	-11.54	1330.08	-1.87
1.2 Dead+1.0 Wind 300 deg+1.0	193.99	-11.05	-6.40	-751.76	1239.40	0.13

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
Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	193.99	-6.48	-11.18	-1304.58	705.88	1.17
Dead+Wind 0 deg - Service	90.63	-0.04	-9.50	-1020.88	-3.31	0.59
Dead+Wind 30 deg - Service	90.63	4.66	-8.06	-890.90	-524.85	1.11
Dead+Wind 60 deg - Service	90.63	8.08	-4.65	-514.18	-904.39	1.40
Dead+Wind 90 deg - Service	90.63	9.73	0.00	0.90	-1063.05	1.18
Dead+Wind 120 deg - Service	90.63	10.18	5.87	591.66	-1035.36	-0.74
Dead+Wind 150 deg - Service	90.63	5.95	10.28	1038.31	-610.28	-1.36
Dead+Wind 180 deg - Service	90.63	0.01	9.57	1031.34	-10.34	-0.64
Dead+Wind 210 deg - Service	90.63	-4.67	8.07	871.74	494.89	-1.11
Dead+Wind 240 deg - Service	90.63	-8.16	4.65	500.79	871.26	-1.34
Dead+Wind 270 deg - Service	90.63	-9.88	-0.03	-3.47	1050.42	-1.10
Dead+Wind 300 deg - Service	90.63	-10.25	-5.91	-596.42	1026.19	0.74
Dead+Wind 330 deg - Service	90.63	-5.92	-10.19	-1027.12	589.28	1.28

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.00	-90.63	0.00	0.00	90.63	-0.00	0.000%
2	-0.20	-108.76	-43.79	0.20	108.76	43.79	0.000%
3	-0.20	-81.57	-43.79	0.20	81.57	43.79	0.000%
4	21.49	-108.76	-37.15	-21.49	108.76	37.15	0.000%
5	21.49	-81.57	-37.15	-21.49	81.57	37.15	0.000%
6	37.23	-108.76	-21.42	-37.23	108.76	21.42	0.000%
7	37.23	-81.57	-21.42	-37.23	81.57	21.42	0.000%
8	44.82	-108.76	0.01	-44.82	108.76	-0.01	0.000%
9	44.82	-81.57	0.01	-44.82	81.57	-0.01	0.000%
10	46.93	-108.76	27.06	-46.93	108.76	-27.06	0.000%
11	46.93	-81.57	27.06	-46.93	81.57	-27.06	0.000%
12	27.41	-108.76	47.40	-27.41	108.76	-47.40	0.000%
13	27.41	-81.57	47.40	-27.41	81.57	-47.40	0.000%
14	0.03	-108.76	44.12	-0.03	108.76	-44.12	0.000%
15	0.03	-81.57	44.12	-0.03	81.57	-44.12	0.000%
16	-21.50	-108.76	37.19	21.50	108.76	-37.19	0.000%
17	-21.50	-81.57	37.19	21.50	81.57	-37.19	0.000%
18	-37.61	-108.76	21.45	37.61	108.76	-21.45	0.000%
19	-37.61	-81.57	21.45	37.61	81.57	-21.45	0.000%
20	-45.54	-108.76	-0.12	45.54	108.76	0.12	0.000%
21	-45.54	-81.57	-0.12	45.54	81.57	0.12	0.000%
22	-47.23	-108.76	-27.23	47.23	108.76	27.23	0.000%
23	-47.23	-81.57	-27.23	47.23	81.57	27.23	0.000%
24	-27.27	-108.76	-46.94	27.27	108.76	46.94	0.000%
25	-27.27	-81.57	-46.94	27.27	81.57	46.94	0.000%
26	0.00	-193.99	0.00	-0.00	193.99	-0.00	0.000%
27	-0.07	-193.99	-10.85	0.07	193.99	10.85	0.000%
28	5.27	-193.99	-9.17	-5.27	193.99	9.17	0.000%
29	9.15	-193.99	-5.29	-9.15	193.99	5.29	0.000%
30	10.99	-193.99	-0.00	-10.99	193.99	0.00	0.000%
31	11.04	-193.99	6.39	-11.04	193.99	-6.39	0.000%
32	6.45	-193.99	11.21	-6.45	193.99	-11.21	0.000%
33	0.00	-193.99	10.83	-0.00	193.99	-10.83	0.000%
34	-5.27	-193.99	9.16	5.27	193.99	-9.16	0.000%
35	-9.23	-193.99	5.26	9.23	193.99	-5.26	0.000%
36	-11.05	-193.99	-0.04	11.05	193.99	0.04	0.000%
37	-11.05	-193.99	-6.40	11.05	193.99	6.40	0.000%
38	-6.48	-193.99	-11.18	6.48	193.99	11.18	0.000%
39	-0.04	-90.63	-9.50	0.04	90.63	9.50	0.000%
40	4.66	-90.63	-8.06	-4.66	90.63	8.06	0.000%
41	8.08	-90.63	-4.65	-8.08	90.63	4.65	0.000%
42	9.73	-90.63	0.00	-9.73	90.63	-0.00	0.000%
43	10.18	-90.63	5.87	-10.18	90.63	-5.87	0.000%
44	5.95	-90.63	10.28	-5.95	90.63	-10.28	0.000%
45	0.01	-90.63	9.57	-0.01	90.63	-9.57	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
46	-4.67	-90.63	8.07	4.67	90.63	-8.07	0.000%
47	-8.16	-90.63	4.65	8.16	90.63	-4.65	0.000%
48	-9.88	-90.63	-0.03	9.88	90.63	0.03	0.000%
49	-10.25	-90.63	-5.91	10.25	90.63	5.91	0.000%
50	-5.92	-90.63	-10.19	5.92	90.63	10.19	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000387
2	Yes	5	0.00000001	0.00044629
3	Yes	5	0.00000001	0.00021976
4	Yes	6	0.00000001	0.00020994
5	Yes	6	0.00000001	0.00007805
6	Yes	6	0.00000001	0.00017288
7	Yes	6	0.00000001	0.00006337
8	Yes	5	0.00000001	0.00074979
9	Yes	5	0.00000001	0.00038253
10	Yes	6	0.00000001	0.00022567
11	Yes	6	0.00000001	0.00008128
12	Yes	6	0.00000001	0.00024944
13	Yes	6	0.00000001	0.00009006
14	Yes	5	0.00000001	0.00053631
15	Yes	5	0.00000001	0.00026721
16	Yes	6	0.00000001	0.00016448
17	Yes	6	0.00000001	0.00006061
18	Yes	6	0.00000001	0.00020360
19	Yes	6	0.00000001	0.00007608
20	Yes	5	0.00000001	0.00065837
21	Yes	5	0.00000001	0.00033471
22	Yes	6	0.00000001	0.00023230
23	Yes	6	0.00000001	0.00008391
24	Yes	6	0.00000001	0.00021790
25	Yes	6	0.00000001	0.00007848
26	Yes	5	0.00000001	0.00024173
27	Yes	6	0.00000001	0.00079748
28	Yes	6	0.00000001	0.00086558
29	Yes	6	0.00000001	0.00086837
30	Yes	6	0.00000001	0.00083379
31	Yes	6	0.00000001	0.00092952
32	Yes	6	0.00000001	0.00093425
33	Yes	6	0.00000001	0.00081236
34	Yes	6	0.00000001	0.00083427
35	Yes	6	0.00000001	0.00083030
36	Yes	6	0.00000001	0.00078002
37	Yes	6	0.00000001	0.00086648
38	Yes	6	0.00000001	0.00087733
39	Yes	4	0.00000001	0.00083018
40	Yes	5	0.00000001	0.00007056
41	Yes	5	0.00000001	0.00005800
42	Yes	5	0.00000001	0.00004272
43	Yes	5	0.00000001	0.00006789
44	Yes	5	0.00000001	0.00007974
45	Yes	4	0.00000001	0.00086841
46	Yes	5	0.00000001	0.00005419
47	Yes	5	0.00000001	0.00007008
48	Yes	4	0.00000001	0.00095500
49	Yes	5	0.00000001	0.00006847
50	Yes	5	0.00000001	0.00006400

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	191.667 - 186.667	18.166	44	0.8529	0.0058
L2	186.667 - 181.567	17.274	44	0.8515	0.0055
L3	181.567 - 176.567	16.365	44	0.8503	0.0053
L4	176.567 - 171.567	15.476	44	0.8471	0.0051
L5	171.567 - 166.567	14.592	44	0.8397	0.0050
L6	166.567 - 161.567	13.719	44	0.8278	0.0048
L7	161.567 - 156.567	12.860	44	0.8113	0.0047
L8	156.567 - 151.567	12.022	44	0.7889	0.0044
L9	151.567 - 146.567	11.211	44	0.7581	0.0040
L10	146.567 - 141.567	10.438	44	0.7170	0.0035
L11	141.567 - 141.417	9.714	44	0.6630	0.0030
L12	141.417 - 136.417	9.693	44	0.6612	0.0029
L13	136.417 - 131.417	9.011	44	0.6414	0.0028
L14	131.417 - 126.417	8.351	44	0.6178	0.0026
L15	126.417 - 121.417	7.719	44	0.5899	0.0023
L16	121.417 - 121.167	7.117	44	0.5578	0.0020
L17	121.167 - 116.167	7.088	44	0.5560	0.0020
L18	116.167 - 111.167	6.518	44	0.5329	0.0018
L19	111.167 - 110.042	5.973	44	0.5065	0.0016
L20	110.042 - 109.792	5.855	44	0.5001	0.0016
L21	109.792 - 105.083	5.828	44	0.4989	0.0016
L22	105.083 - 104.833	5.347	44	0.4763	0.0014
L23	104.833 - 100.917	5.322	44	0.4752	0.0014
L24	100.917 - 100.667	4.940	44	0.4569	0.0013
L25	100.667 - 95.833	4.916	44	0.4557	0.0013
L26	95.833 - 95.583	4.467	44	0.4309	0.0012
L27	95.583 - 90.583	4.445	44	0.4298	0.0012
L28	90.583 - 89.917	4.006	44	0.4072	0.0010
L29	89.917 - 89.667	3.950	44	0.4040	0.0010
L30	89.667 - 84.667	3.929	44	0.4030	0.0010
L31	84.667 - 80.833	3.518	44	0.3817	0.0009
L32	80.833 - 80.333	3.218	44	0.3641	0.0009
L33	80.333 - 80.083	3.180	44	0.3623	0.0009
L34	80.083 - 75.083	3.161	44	0.3613	0.0008
L35	75.083 - 70.083	2.793	44	0.3405	0.0008
L36	70.083 - 69.5	2.449	44	0.3179	0.0007
L37	69.5 - 69.25	2.410	44	0.3151	0.0007
L38	69.25 - 64.25	2.393	44	0.3141	0.0007
L39	64.25 - 60.583	2.075	44	0.2933	0.0006
L40	60.583 - 60.333	1.856	44	0.2769	0.0006
L41	60.333 - 55.333	1.842	44	0.2759	0.0006
L42	55.333 - 52.167	1.563	44	0.2560	0.0005
L43	52.167 - 51.917	1.398	44	0.2426	0.0005
L44	51.917 - 46.917	1.385	44	0.2417	0.0005
L45	46.917 - 41.917	1.142	44	0.2232	0.0004
L46	41.917 - 40.233	0.918	44	0.2033	0.0004
L47	40.233 - 39.983	0.848	44	0.1960	0.0004
L48	39.983 - 34.983	0.837	44	0.1949	0.0004
L49	34.983 - 29.983	0.645	44	0.1722	0.0003
L50	29.983 - 28	0.477	44	0.1480	0.0003
L51	28 - 27.75	0.418	44	0.1380	0.0002
L52	27.75 - 22.75	0.411	44	0.1370	0.0002
L53	22.75 - 20.083	0.279	44	0.1150	0.0002
L54	20.083 - 19.833	0.218	44	0.1027	0.0002
L55	19.833 - 17	0.212	44	0.1014	0.0002
L56	17 - 16.75	0.157	44	0.0858	0.0001
L57	16.75 - 11.65	0.152	44	0.0846	0.0001
L58	11.65 - 11.417	0.075	44	0.0600	0.0001
L59	11.417 - 9.396	0.072	44	0.0589	0.0001
L60	9.396 - 9.146	0.049	44	0.0487	0.0001
L61	9.146 - 4.833	0.047	44	0.0475	0.0001
L62	4.833 - 4.583	0.013	44	0.0264	0.0000
L63	4.583 - 0	0.012	44	0.0251	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
192.00	OGB4-900D	44	18.166	0.8529	0.0058	214314
191.67	Lightning Rod 5/8" x 4' on 4' Pole	44	18.166	0.8529	0.0058	214314
191.00	DB589-A	44	18.047	0.8527	0.0058	214314
181.00	AIR -32 B2A/B66AA w/ Mount Pipe	44	16.264	0.8501	0.0053	131561
178.00	4' ICE SHIELDS	44	15.730	0.8484	0.0052	69666
160.00	(2) NNHH-65B-R4 w/ Mount Pipe	44	12.595	0.8050	0.0046	13474
158.00	SRL-224NM-4	44	12.260	0.7960	0.0045	11825
151.00	SBNH-1D6565C w/ Mount Pipe	44	11.121	0.7540	0.0039	7799
150.00	TME_ONLY	44	10.964	0.7465	0.0038	7349
138.00	4' ICE SHIELDS	44	9.225	0.6436	0.0028	12681
132.00	SRL-235-2	44	8.427	0.6212	0.0026	11344
124.00	PCS 1900 TMA RX	44	7.424	0.5750	0.0022	9290
120.00	VHLP2-18	44	6.953	0.5491	0.0020	10998
116.00	844G65VTZAS w/ Mount Pipe	44	6.499	0.5322	0.0018	11552
98.00	4' ICE SHIELDS	44	4.665	0.4416	0.0012	11534
90.00	KP2F-34	44	3.957	0.4043	0.0010	12960
70.00	SRL-235-2	44	2.443	0.3175	0.0007	13008
33.00	DB909XVTE-M	44	0.576	0.1630	0.0003	11926

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	191.667 - 186.667	83.727	12	3.9228	0.0268
L2	186.667 - 181.567	79.627	12	3.9184	0.0252
L3	181.567 - 176.567	75.449	12	3.9137	0.0245
L4	176.567 - 171.567	71.362	12	3.8997	0.0237
L5	171.567 - 166.567	67.300	12	3.8662	0.0230
L6	166.567 - 161.567	63.283	12	3.8120	0.0222
L7	161.567 - 156.567	59.334	12	3.7359	0.0215
L8	156.567 - 151.567	55.477	12	3.6335	0.0203
L9	151.567 - 146.567	51.746	12	3.4932	0.0182
L10	146.567 - 141.567	48.185	12	3.3055	0.0159
L11	141.567 - 141.417	44.851	12	3.0581	0.0136
L12	141.417 - 136.417	44.755	12	3.0497	0.0135
L13	136.417 - 131.417	41.610	12	2.9592	0.0128
L14	131.417 - 126.417	38.568	12	2.8505	0.0121
L15	126.417 - 121.417	35.651	12	2.7225	0.0107
L16	121.417 - 121.167	32.877	12	2.5749	0.0094
L17	121.167 - 116.167	32.743	12	2.5670	0.0093
L18	116.167 - 111.167	30.110	12	2.4608	0.0085
L19	111.167 - 110.042	27.597	12	2.3393	0.0075
L20	110.042 - 109.792	27.050	12	2.3096	0.0073
L21	109.792 - 105.083	26.929	12	2.3044	0.0072
L22	105.083 - 104.833	24.708	12	2.2001	0.0065
L23	104.833 - 100.917	24.593	12	2.1950	0.0065
L24	100.917 - 100.667	22.827	12	2.1108	0.0060
L25	100.667 - 95.833	22.717	12	2.1052	0.0060
L26	95.833 - 95.583	20.643	12	1.9911	0.0054
L27	95.583 - 90.583	20.539	12	1.9861	0.0053
L28	90.583 - 89.917	18.514	12	1.8815	0.0048
L29	89.917 - 89.667	18.252	12	1.8668	0.0048
L30	89.667 - 84.667	18.155	12	1.8621	0.0047
L31	84.667 - 80.833	16.256	12	1.7642	0.0043
L32	80.833 - 80.333	14.872	12	1.6825	0.0039
L33	80.333 - 80.083	14.696	12	1.6745	0.0039
L34	80.083 - 75.083	14.609	12	1.6699	0.0039
L35	75.083 - 70.083	12.910	12	1.5738	0.0035
L36	70.083 - 69.5	11.316	12	1.4691	0.0032
L37	69.5 - 69.25	11.138	12	1.4563	0.0031

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L38	69.25 - 64.25	11.061	12	1.4517	0.0031
L39	64.25 - 60.583	9.591	12	1.3555	0.0028
L40	60.583 - 60.333	8.579	12	1.2798	0.0026
L41	60.333 - 55.333	8.512	12	1.2754	0.0026
L42	55.333 - 52.167	7.224	12	1.1834	0.0023
L43	52.167 - 51.917	6.460	12	1.1216	0.0022
L44	51.917 - 46.917	6.402	12	1.1174	0.0021
L45	46.917 - 41.917	5.276	12	1.0316	0.0019
L46	41.917 - 40.233	4.243	12	0.9397	0.0017
L47	40.233 - 39.983	3.918	12	0.9060	0.0017
L48	39.983 - 34.983	3.870	12	0.9009	0.0016
L49	34.983 - 29.983	2.981	12	0.7960	0.0014
L50	29.983 - 28	2.206	12	0.6843	0.0012
L51	28 - 27.75	1.931	12	0.6380	0.0011
L52	27.75 - 22.75	1.898	12	0.6331	0.0011
L53	22.75 - 20.083	1.288	12	0.5315	0.0009
L54	20.083 - 19.833	1.007	12	0.4748	0.0008
L55	19.833 - 17	0.982	12	0.4685	0.0008
L56	17 - 16.75	0.725	12	0.3967	0.0006
L57	16.75 - 11.65	0.705	12	0.3911	0.0006
L58	11.65 - 11.417	0.347	12	0.2773	0.0004
L59	11.417 - 9.396	0.334	12	0.2720	0.0004
L60	9.396 - 9.146	0.228	12	0.2250	0.0004
L61	9.146 - 4.833	0.217	12	0.2195	0.0003
L62	4.833 - 4.583	0.062	12	0.1219	0.0002
L63	4.583 - 0	0.056	12	0.1158	0.0002

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
192.00	OGB4-900D	12	83.727	3.9228	0.0268	61530
191.67	Lightning Rod 5/8" x 4' on 4' Pole	12	83.727	3.9228	0.0268	61530
191.00	DB589-A	12	83.180	3.9222	0.0266	61530
181.00	AIR -32 B2A/B66AA w/ Mount Pipe	12	74.985	3.9128	0.0244	31472
178.00	4' ICE SHIELDS	12	72.532	3.9054	0.0239	15900
160.00	(2) NNHH-65B-R4 w/ Mount Pipe	12	58.114	3.7072	0.0212	2968
158.00	SRL-224NM-4	12	56.571	3.6662	0.0207	2612
151.00	SBNH-1D6565C w/ Mount Pipe	12	51.333	3.4745	0.0180	1721
150.00	TME_ONLY	12	50.609	3.4400	0.0175	1622
138.00	4' ICE SHIELDS	12	42.595	2.9691	0.0129	2778
132.00	SRL-235-2	12	38.917	2.8660	0.0122	2485
124.00	PCS 1900 TMA RX	12	34.291	2.6544	0.0101	2033
120.00	VHLP2-18	12	32.118	2.5350	0.0091	2404
116.00	844G65VTZAS w/ Mount Pipe	12	30.024	2.4576	0.0084	2523
98.00	4' ICE SHIELDS	12	21.558	2.0405	0.0056	2509
90.00	KP2F-34	12	18.285	1.8684	0.0048	2816
70.00	SRL-235-2	12	11.291	1.4672	0.0032	2819
33.00	DB909XVTE-M	12	2.660	0.7534	0.0013	2580

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 - 186.667 (1)	P18x0.375	5.00	0.00	0.0	20.7640	-0.72	784.88	0.001

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u	ϕP_n	Ratio $\frac{P_u}{\phi P_n}$
	ft		ft	ft		in^2	K	K	
L2	186.667 - 181.567 (2)	P24x0.375	5.10	0.00	0.0	27.8325	-1.35	1052.07	0.001
L3	181.567 - 176.567 (3)	P24x0.375	5.00	0.00	0.0	27.8325	-6.52	1052.07	0.006
L4	176.567 - 171.567 (4)	P24x0.375	5.00	0.00	0.0	27.8325	-7.17	1052.07	0.007
L5	171.567 - 166.567 (5)	P24x0.375	5.00	0.00	0.0	27.8325	-7.82	1052.07	0.007
L6	166.567 - 161.567 (6)	P24x0.375	5.00	0.00	0.0	27.8325	-8.47	1052.07	0.008
L7	161.567 - 156.567 (7)	P24x0.375	5.00	0.00	0.0	27.8325	-12.46	1052.07	0.012
L8	156.567 - 151.567 (8)	P24x0.375	5.00	0.00	0.0	27.8325	-13.18	1052.07	0.013
L9	151.567 - 146.567 (9)	P24x0.375	5.00	0.00	0.0	27.8325	-18.17	1052.07	0.017
L10	146.567 - 141.567 (10)	P24x0.375	5.00	0.00	0.0	27.8325	-18.99	1052.07	0.018
L11	141.567 - 141.417 (11)	P24x0.375	0.15	0.00	0.0	27.8325	-19.02	1052.07	0.018
L12	141.417 - 136.417 (12)	P36x0.375	5.00	0.00	0.0	41.9697	-20.12	1490.10	0.014
L13	136.417 - 131.417 (13)	P36x0.375	5.00	0.00	0.0	41.9697	-21.67	1490.10	0.015
L14	131.417 - 126.417 (14)	P36x0.375	5.00	0.00	0.0	41.9697	-22.79	1490.10	0.015
L15	126.417 - 121.417 (15)	P36x0.375	5.00	0.00	0.0	41.9697	-24.96	1490.10	0.017
L16	121.417 - 121.167 (16)	P36x0.375	0.25	0.00	0.0	41.9697	-25.03	1490.10	0.017
L17	121.167 - 116.167 (17)	P42x0.375	5.00	0.00	0.0	49.0383	-26.45	1668.87	0.016
L18	116.167 - 111.167 (18)	P42x0.375	5.00	0.00	0.0	49.0383	-31.52	1668.87	0.019
L19	111.167 - 110.042 (19)	P42x0.375	1.13	0.00	0.0	49.0383	-31.83	1668.87	0.019
L20	110.042 - 109.792 (20)	P42x0.4875	0.25	0.00	0.0	63.5775	-31.92	2332.13	0.014
L21	109.792 - 105.083 (21)	P42x0.4875	4.71	0.00	0.0	63.5775	-33.58	2332.13	0.014
L22	105.083 - 104.833 (22)	P42x0.5625	0.25	0.00	0.0	73.2261	-33.69	2767.95	0.012
L23	104.833 - 100.917 (23)	P42x0.5625	3.92	0.00	0.0	73.2261	-36.12	2767.95	0.013
L24	100.917 - 100.667 (24)	P48x0.375	0.25	0.00	0.0	56.1069	-36.23	1847.49	0.020
L25	100.667 - 95.833 (25)	P48x0.375	4.83	0.00	0.0	56.1069	-38.08	1847.49	0.021
L26	95.833 - 95.583 (26)	P48x0.475	0.25	0.00	0.0	70.9195	-38.18	2481.39	0.015
L27	95.583 - 90.583 (27)	P48x0.475	5.00	0.00	0.0	70.9195	-39.98	2481.39	0.016
L28	90.583 - 89.917 (28)	P48x0.475	0.67	0.00	0.0	70.9195	-40.39	2481.39	0.016
L29	89.917 - 89.667 (29)	P48x0.575	0.25	0.00	0.0	85.6693	-40.50	3174.02	0.013
L30	89.667 - 84.667 (30)	P48x0.575	5.00	0.00	0.0	85.6693	-43.36	3174.02	0.014
L31	84.667 - 80.833 (31)	P48x0.575	3.83	0.00	0.0	85.6693	-46.55	3174.02	0.015
L32	80.833 - 80.333 (32)	P54x0.55	0.50	0.00	0.0	92.3550	-46.94	3257.83	0.014
L33	80.333 - 80.083 (33)	P54x0.4875	0.25	0.00	0.0	81.9558	-47.08	2797.17	0.017
L34	80.083 - 75.083 (34)	P54x0.4875	5.00	0.00	0.0	81.9558	-49.58	2797.17	0.018
L35	75.083 - 70.083 (35)	P54x0.4875	5.00	0.00	0.0	81.9558	-52.51	2797.17	0.019
L36	70.083 - 69.5 (36)	P54x0.4875	0.58	0.00	0.0	81.9558	-53.18	2797.17	0.019
L37	69.5 - 69.25 (37)	P54x0.5875	0.25	0.00	0.0	98.5827	-53.37	3545.23	0.015
L38	69.25 - 64.25 (38)	P54x0.5875	5.00	0.00	0.0	98.5827	-59.76	3545.23	0.017
L39	64.25 - 60.583 (39)	P54x0.5875	3.67	0.00	0.0	98.5827	-64.96	3545.23	0.018
L40	60.583 - 60.333 (40)	P60x0.5125	0.25	0.00	0.0	95.7788	-65.17	3222.89	0.020
L41	60.333 - 55.333 (41)	P60x0.5125	5.00	0.00	0.0	95.7788	-68.98	3222.89	0.021
L42	55.333 - 52.167 (42)	P60x0.5125	3.17	0.00	0.0	95.7788	-70.49	3222.89	0.022
L43	52.167 - 51.917 (43)	P60x0.625	0.25	0.00	0.0	116.5830	-70.64	4139.15	0.017
L44	51.917 - 46.917 (44)	P60x0.625	5.00	0.00	0.0	116.5830	-73.78	4139.15	0.018
L45	46.917 - 41.917 (45)	P60x0.625	5.00	0.00	0.0	116.5830	-77.78	4139.15	0.019
L46	41.917 - 40.233 (46)	P60x0.6	1.68	0.00	0.0	111.9660	-79.07	3929.11	0.020
L47	40.233 - 39.983 (47)	P60x0.6	0.25	0.00	0.0	111.9660	-79.27	3929.11	0.020
L48	39.983 - 34.983 (48)	P60x0.6	5.00	0.00	0.0	111.9660	-82.98	3929.11	0.021
L49	34.983 - 29.983 (49)	P60x0.6	5.00	0.00	0.0	111.9660	-86.36	3929.11	0.022
L50	29.983 - 28 (50)	P60x0.6	1.98	0.00	0.0	111.9660	-87.43	3929.11	0.022
L51	28 - 27.75 (51)	P60x0.725	0.25	0.00	0.0	135.0080	-87.61	5015.91	0.017
L52	27.75 - 22.75 (52)	P60x0.725	5.00	0.00	0.0	135.0080	-91.78	5015.91	0.018
L53	22.75 - 20.083 (53)	P60x0.725	2.67	0.00	0.0	135.0080	-94.03	5015.91	0.019
L54	20.083 - 19.833 (54)	P60x0.625	0.25	0.00	0.0	116.5830	-94.23	4139.15	0.023
L55	19.833 - 17 (55)	P60x0.625	2.83	0.00	0.0	116.5830	-96.40	4139.15	0.023
L56	17 - 16.75 (56)	P60x0.725	0.25	0.00	0.0	135.0080	-96.64	5015.91	0.019
L57	16.75 - 11.65 (57)	P60x0.75	5.10	0.00	0.0	139.6050	-100.92	5244.23	0.019
L58	11.65 - 11.417 (58)	P60x0.75	0.23	0.00	0.0	139.6050	-101.08	5244.23	0.019
L59	11.417 - 9.396 (59)	P60x0.75	2.02	0.00	0.0	139.6050	-102.46	5244.23	0.020
L60	9.396 - 9.146 (60)	P60x0.8	0.25	0.00	0.0	148.7860	-102.64	5624.10	0.018
L61	9.146 - 4.833 (61)	P60x0.8	4.31	0.00	0.0	148.7860	-105.68	5624.10	0.019
L62	4.833 - 4.583 (62)	P60x0.75	0.25	0.00	0.0	139.6050	-105.86	5244.23	0.020
L63	4.583 - 0 (63)	P60x0.75	4.58	0.00	0.0	139.6050	-108.75	5244.23	0.021

Pole Bending Design Data

Section No.	Elevation	Size	M_{ux}	ϕM_{nx}	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy}	ϕM_{ny}	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	ft		kip-ft	kip-ft		kip-ft	kip-ft	
L1	191.667 - 186.667 (1)	P18x0.375	4.16	367.00	0.011	0.00	367.00	0.000
L2	186.667 - 181.567 (2)	P24x0.375	8.61	623.72	0.014	0.00	623.72	0.000
L3	181.567 - 176.567 (3)	P24x0.375	32.07	623.72	0.051	0.00	623.72	0.000
L4	176.567 - 171.567 (4)	P24x0.375	59.60	623.72	0.096	0.00	623.72	0.000
L5	171.567 - 166.567 (5)	P24x0.375	88.68	623.72	0.142	0.00	623.72	0.000
L6	166.567 - 161.567 (6)	P24x0.375	119.30	623.72	0.191	0.00	623.72	0.000
L7	161.567 - 156.567 (7)	P24x0.375	165.07	623.72	0.265	0.00	623.72	0.000
L8	156.567 - 151.567 (8)	P24x0.375	218.42	623.72	0.350	0.00	623.72	0.000
L9	151.567 - 146.567 (9)	P24x0.375	296.80	623.72	0.476	0.00	623.72	0.000
L10	146.567 - 141.567 (10)	P24x0.375	379.24	623.72	0.608	0.00	623.72	0.000
L11	141.567 - 141.417 (11)	P24x0.375	381.74	623.72	0.612	0.00	623.72	0.000
L12	141.417 - 136.417 (12)	P36x0.375	465.90	1338.81	0.348	0.00	1338.81	0.000
L13	136.417 - 131.417 (13)	P36x0.375	553.60	1338.81	0.414	0.00	1338.81	0.000
L14	131.417 - 126.417 (14)	P36x0.375	644.47	1338.81	0.481	0.00	1338.81	0.000
L15	126.417 - 121.417 (15)	P36x0.375	738.58	1338.81	0.552	0.00	1338.81	0.000
L16	121.417 - 121.167 (16)	P36x0.375	743.40	1338.81	0.555	0.00	1338.81	0.000
L17	121.167 - 116.167 (17)	P42x0.375	841.77	1796.56	0.469	0.00	1796.56	0.000
L18	116.167 - 111.167 (18)	P42x0.375	969.92	1796.56	0.540	0.00	1796.56	0.000
L19	111.167 - 110.042 (19)	P42x0.375	998.57	1796.56	0.556	0.00	1796.56	0.000
L20	110.042 - 109.792 (20)	P42x0.4875	1004.98	2395.43	0.420	0.00	2395.43	0.000
L21	109.792 - 105.083 (21)	P42x0.4875	1128.71	2395.43	0.471	0.00	2395.43	0.000
L22	105.083 - 104.833 (22)	P42x0.5625	1135.44	2809.31	0.404	0.00	2809.31	0.000
L23	104.833 - 100.917 (23)	P42x0.5625	1243.32	2809.31	0.443	0.00	2809.31	0.000
L24	100.917 - 100.667 (24)	P48x0.375	1250.36	2321.11	0.539	0.00	2321.11	0.000
L25	100.667 - 95.833 (25)	P48x0.375	1390.06	2321.11	0.599	0.00	2321.11	0.000
L26	95.833 - 95.583 (26)	P48x0.475	1397.47	2999.96	0.466	0.00	2999.96	0.000
L27	95.583 - 90.583 (27)	P48x0.475	1549.17	2999.96	0.516	0.00	2999.96	0.000
L28	90.583 - 89.917 (28)	P48x0.475	1570.36	2999.96	0.523	0.00	2999.96	0.000
L29	89.917 - 89.667 (29)	P48x0.575	1578.22	3702.97	0.426	0.00	3702.97	0.000
L30	89.667 - 84.667 (30)	P48x0.575	1739.32	3702.97	0.470	0.00	3702.97	0.000
L31	84.667 - 80.833 (31)	P48x0.575	1867.80	3702.97	0.504	0.00	3702.97	0.000
L32	80.833 - 80.333 (32)	P54x0.55	1884.90	4408.41	0.428	0.00	4408.41	0.000
L33	80.333 - 80.083 (33)	P54x0.4875	1893.47	3864.47	0.490	0.00	3864.47	0.000
L34	80.083 - 75.083 (34)	P54x0.4875	2068.86	3864.47	0.535	0.00	3864.47	0.000
L35	75.083 - 70.083 (35)	P54x0.4875	2251.41	3864.47	0.583	0.00	3864.47	0.000
L36	70.083 - 69.5 (36)	P54x0.4875	2273.40	3864.47	0.588	0.00	3864.47	0.000
L37	69.5 - 69.25 (37)	P54x0.5875	2282.88	4739.87	0.482	0.00	4739.87	0.000
L38	69.25 - 64.25 (38)	P54x0.5875	2477.03	4739.87	0.523	0.00	4739.87	0.000
L39	64.25 - 60.583 (39)	P54x0.5875	2624.74	4739.87	0.554	0.00	4739.87	0.000
L40	60.583 - 60.333 (40)	P60x0.5125	2634.97	4992.04	0.528	0.00	4992.04	0.000
L41	60.333 - 55.333 (41)	P60x0.5125	2843.25	4992.04	0.570	0.00	4992.04	0.000
L42	55.333 - 52.167 (42)	P60x0.5125	2978.66	4992.04	0.597	0.00	4992.04	0.000
L43	52.167 - 51.917 (43)	P60x0.625	2989.46	6198.18	0.482	0.00	6198.18	0.000
L44	51.917 - 46.917 (44)	P60x0.625	3208.96	6198.18	0.518	0.00	6198.18	0.000
L45	46.917 - 41.917 (45)	P60x0.625	3435.04	6198.18	0.554	0.00	6198.18	0.000
L46	41.917 - 40.233 (46)	P60x0.6	3512.75	5926.84	0.593	0.00	5926.84	0.000
L47	40.233 - 39.983 (47)	P60x0.6	3524.35	5926.84	0.595	0.00	5926.84	0.000
L48	39.983 - 34.983 (48)	P60x0.6	3759.52	5926.84	0.634	0.00	5926.84	0.000
L49	34.983 - 29.983 (49)	P60x0.6	4001.79	5926.84	0.675	0.00	5926.84	0.000
L50	29.983 - 28 (50)	P60x0.6	4099.38	5926.84	0.692	0.00	5926.84	0.000
L51	28 - 27.75 (51)	P60x0.725	4111.73	7302.23	0.563	0.00	7302.23	0.000
L52	27.75 - 22.75 (52)	P60x0.725	4361.91	7302.23	0.597	0.00	7302.23	0.000
L53	22.75 - 20.083 (53)	P60x0.725	4497.63	7302.23	0.616	0.00	7302.23	0.000
L54	20.083 - 19.833 (54)	P60x0.625	4510.43	6198.18	0.728	0.00	6198.18	0.000
L55	19.833 - 17 (55)	P60x0.625	4656.38	6198.18	0.751	0.00	6198.18	0.000
L56	17 - 16.75 (56)	P60x0.725	4669.35	7302.23	0.639	0.00	7302.23	0.000
L57	16.75 - 11.65 (57)	P60x0.75	4936.49	7582.87	0.651	0.00	7582.87	0.000
L58	11.65 - 11.417 (58)	P60x0.75	4948.82	7582.87	0.653	0.00	7582.87	0.000
L59	11.417 - 9.396 (59)	P60x0.75	5056.18	7582.87	0.667	0.00	7582.87	0.000
L60	9.396 - 9.146 (60)	P60x0.8	5069.51	8149.65	0.622	0.00	8149.65	0.000
L61	9.146 - 4.833 (61)	P60x0.8	5301.39	8149.65	0.651	0.00	8149.65	0.000
L62	4.833 - 4.583 (62)	P60x0.75	5314.94	7582.87	0.701	0.00	7582.87	0.000
L63	4.583 - 0 (63)	P60x0.75	5564.63	7582.87	0.734	0.00	7582.87	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 - 186.667 (1)	P18x0.375	0.70	235.46	0.003	0.14	364.87	0.000
L2	186.667 - 181.567 (2)	P24x0.375	1.03	315.62	0.003	0.14	655.57	0.000
L3	181.567 - 176.567 (3)	P24x0.375	5.34	315.62	0.017	0.15	655.57	0.000
L4	176.567 - 171.567 (4)	P24x0.375	5.65	315.62	0.018	0.15	655.57	0.000
L5	171.567 - 166.567 (5)	P24x0.375	5.96	315.62	0.019	0.15	655.57	0.000
L6	166.567 - 161.567 (6)	P24x0.375	6.27	315.62	0.020	0.15	655.57	0.000
L7	161.567 - 156.567 (7)	P24x0.375	10.51	315.62	0.033	0.21	655.57	0.000
L8	156.567 - 151.567 (8)	P24x0.375	10.82	315.62	0.034	0.21	655.57	0.000
L9	151.567 - 146.567 (9)	P24x0.375	16.36	315.62	0.052	0.77	655.57	0.001
L10	146.567 - 141.567 (10)	P24x0.375	16.61	315.62	0.053	0.77	655.57	0.001
L11	141.567 - 141.417 (11)	P24x0.375	16.62	315.62	0.053	0.77	655.57	0.001
L12	141.417 - 136.417 (12)	P36x0.375	17.08	454.19	0.038	0.76	1094.28	0.001
L13	136.417 - 131.417 (13)	P36x0.375	17.97	454.19	0.040	0.76	1094.28	0.001
L14	131.417 - 126.417 (14)	P36x0.375	18.36	454.19	0.040	0.61	1094.28	0.001
L15	126.417 - 121.417 (15)	P36x0.375	19.28	454.19	0.042	0.64	1094.28	0.001
L16	121.417 - 121.167 (16)	P36x0.375	19.30	454.19	0.042	0.64	1094.28	0.001
L17	121.167 - 116.167 (17)	P42x0.375	19.87	421.13	0.047	1.02	1185.51	0.001
L18	116.167 - 111.167 (18)	P42x0.375	25.31	421.13	0.060	2.29	1185.51	0.002
L19	111.167 - 110.042 (19)	P42x0.375	25.60	421.13	0.061	2.31	1185.51	0.002
L20	110.042 - 109.792 (20)	P42x0.4875	25.66	720.97	0.036	2.31	2272.02	0.001
L21	109.792 - 105.083 (21)	P42x0.4875	26.89	720.97	0.037	2.38	2272.02	0.001
L22	105.083 - 104.833 (22)	P42x0.5625	26.95	830.38	0.032	2.39	3025.18	0.001
L23	104.833 - 100.917 (23)	P42x0.5625	28.13	830.38	0.034	2.47	3025.18	0.001
L24	100.917 - 100.667 (24)	P48x0.375	28.19	394.37	0.071	2.49	1270.22	0.002
L25	100.667 - 95.833 (25)	P48x0.375	29.61	394.37	0.075	2.95	1270.22	0.002
L26	95.833 - 95.583 (26)	P48x0.475	29.67	710.64	0.042	2.98	2284.06	0.001
L27	95.583 - 90.583 (27)	P48x0.475	31.00	710.64	0.044	3.43	2284.06	0.002
L28	90.583 - 89.917 (28)	P48x0.475	31.44	710.64	0.044	3.43	2284.06	0.002
L29	89.917 - 89.667 (29)	P48x0.575	31.51	971.49	0.032	2.94	3667.03	0.001
L30	89.667 - 84.667 (30)	P48x0.575	32.96	971.49	0.034	3.23	3667.03	0.001
L31	84.667 - 80.833 (31)	P48x0.575	34.15	971.49	0.035	3.48	3667.03	0.001
L32	80.833 - 80.333 (32)	P54x0.55	34.30	966.32	0.035	3.52	3493.03	0.001
L33	80.333 - 80.083 (33)	P54x0.4875	34.37	729.66	0.047	3.54	2639.00	0.001
L34	80.083 - 75.083 (34)	P54x0.4875	35.79	729.66	0.049	3.94	2639.00	0.001
L35	75.083 - 70.083 (35)	P54x0.4875	37.19	729.66	0.051	4.26	2639.00	0.002
L36	70.083 - 69.5 (36)	P54x0.4875	37.85	729.66	0.052	4.26	2639.00	0.002
L37	69.5 - 69.25 (37)	P54x0.5875	37.92	1117.93	0.034	2.50	4113.45	0.001
L38	69.25 - 64.25 (38)	P54x0.5875	39.60	1117.93	0.035	2.71	4113.45	0.001
L39	64.25 - 60.583 (39)	P54x0.5875	40.84	1117.93	0.037	2.83	4113.45	0.001
L40	60.583 - 60.333 (40)	P60x0.5125	40.90	838.76	0.049	2.84	3372.33	0.001
L41	60.333 - 55.333 (41)	P60x0.5125	42.36	838.76	0.051	3.08	3372.33	0.001
L42	55.333 - 52.167 (42)	P60x0.5125	43.17	838.76	0.051	3.34	3372.33	0.001
L43	52.167 - 51.917 (43)	P60x0.625	43.22	1308.39	0.033	3.36	5250.55	0.001
L44	51.917 - 46.917 (44)	P60x0.625	44.57	1308.39	0.034	3.75	5250.55	0.001
L45	46.917 - 41.917 (45)	P60x0.625	45.99	1308.39	0.035	4.07	5250.55	0.001
L46	41.917 - 40.233 (46)	P60x0.6	46.45	1194.07	0.039	4.18	4793.81	0.001
L47	40.233 - 39.983 (47)	P60x0.6	46.49	1194.07	0.039	4.20	4793.81	0.001
L48	39.983 - 34.983 (48)	P60x0.6	47.72	1194.07	0.040	4.49	4793.81	0.001
L49	34.983 - 29.983 (49)	P60x0.6	49.01	1194.07	0.041	5.16	4793.81	0.001
L50	29.983 - 28 (50)	P60x0.6	49.43	1194.07	0.041	5.23	4793.81	0.001
L51	28 - 27.75 (51)	P60x0.725	49.45	1530.99	0.032	5.24	7317.32	0.001
L52	27.75 - 22.75 (52)	P60x0.725	50.58	1530.99	0.033	5.35	7317.32	0.001
L53	22.75 - 20.083 (53)	P60x0.725	51.17	1530.99	0.033	5.41	7317.32	0.001
L54	20.083 - 19.833 (54)	P60x0.625	51.20	1308.39	0.039	5.42	5250.55	0.001
L55	19.833 - 17 (55)	P60x0.625	51.82	1308.39	0.040	5.49	5250.55	0.001
L56	17 - 16.75 (56)	P60x0.725	51.85	1530.99	0.034	5.51	7317.32	0.001
L57	16.75 - 11.65 (57)	P60x0.75	52.89	1583.12	0.033	5.74	7957.82	0.001
L58	11.65 - 11.417 (58)	P60x0.75	52.92	1583.12	0.033	5.76	7957.82	0.001
L59	11.417 - 9.396 (59)	P60x0.75	53.31	1583.12	0.034	5.91	7957.82	0.001
L60	9.396 - 9.146 (60)	P60x0.8	53.35	1687.23	0.032	5.93	8781.67	0.001
L61	9.146 - 4.833 (61)	P60x0.8	54.18	1687.23	0.032	6.26	8781.67	0.001
L62	4.833 - 4.583 (62)	P60x0.75	54.21	1583.12	0.034	6.28	7957.82	0.001
L63	4.583 - 0 (63)	P60x0.75	54.78	1583.12	0.035	6.27	7957.82	0.001

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 - 186.667 (1)	0.001	0.011	0.000	0.003	0.000	0.012	1.050	4.8.2
L2	186.667 - 181.567 (2)	0.001	0.014	0.000	0.003	0.000	0.015	1.050	4.8.2
L3	181.567 - 176.567 (3)	0.006	0.051	0.000	0.017	0.000	0.058	1.050	4.8.2
L4	176.567 - 171.567 (4)	0.007	0.096	0.000	0.018	0.000	0.103	1.050	4.8.2
L5	171.567 - 166.567 (5)	0.007	0.142	0.000	0.019	0.000	0.150	1.050	4.8.2
L6	166.567 - 161.567 (6)	0.008	0.191	0.000	0.020	0.000	0.200	1.050	4.8.2
L7	161.567 - 156.567 (7)	0.012	0.265	0.000	0.033	0.000	0.278	1.050	4.8.2
L8	156.567 - 151.567 (8)	0.013	0.350	0.000	0.034	0.000	0.364	1.050	4.8.2
L9	151.567 - 146.567 (9)	0.017	0.476	0.000	0.052	0.001	0.496	1.050	4.8.2
L10	146.567 - 141.567 (10)	0.018	0.608	0.000	0.053	0.001	0.629	1.050	4.8.2
L11	141.567 - 141.417 (11)	0.018	0.612	0.000	0.053	0.001	0.633	1.050	4.8.2
L12	141.417 - 136.417 (12)	0.014	0.348	0.000	0.038	0.001	0.363	1.050	4.8.2
L13	136.417 - 131.417 (13)	0.015	0.414	0.000	0.040	0.001	0.430	1.050	4.8.2
L14	131.417 - 126.417 (14)	0.015	0.481	0.000	0.040	0.001	0.498	1.050	4.8.2
L15	126.417 - 121.417 (15)	0.017	0.552	0.000	0.042	0.001	0.570	1.050	4.8.2
L16	121.417 - 121.167 (16)	0.017	0.555	0.000	0.042	0.001	0.574	1.050	4.8.2
L17	121.167 - 116.167 (17)	0.016	0.469	0.000	0.047	0.001	0.487	1.050	4.8.2
L18	116.167 - 111.167 (18)	0.019	0.540	0.000	0.060	0.002	0.563	1.050	4.8.2
L19	111.167 - 110.042 (19)	0.019	0.556	0.000	0.061	0.002	0.579	1.050	4.8.2
L20	110.042 - 109.792 (20)	0.014	0.420	0.000	0.036	0.001	0.435	1.050	4.8.2
L21	109.792 - 105.083 (21)	0.014	0.471	0.000	0.037	0.001	0.487	1.050	4.8.2
L22	105.083 - 104.833 (22)	0.012	0.404	0.000	0.032	0.001	0.417	1.050	4.8.2
L23	104.833 - 100.917 (23)	0.013	0.443	0.000	0.034	0.001	0.457	1.050	4.8.2
L24	100.917 - 100.667 (24)	0.020	0.539	0.000	0.071	0.002	0.564	1.050	4.8.2
L25	100.667 - 95.833 (25)	0.021	0.599	0.000	0.075	0.002	0.625	1.050	4.8.2
L26	95.833 - 95.583 (26)	0.015	0.466	0.000	0.042	0.001	0.483	1.050	4.8.2
L27	95.583 - 90.583 (27)	0.016	0.516	0.000	0.044	0.002	0.535	1.050	4.8.2
L28	90.583 - 89.917 (28)	0.016	0.523	0.000	0.044	0.002	0.542	1.050	4.8.2
L29	89.917 - 89.667 (29)	0.013	0.426	0.000	0.032	0.001	0.440	1.050	4.8.2
L30	89.667 - 84.667 (30)	0.014	0.470	0.000	0.034	0.001	0.485	1.050	4.8.2
L31	84.667 - 80.833 (31)	0.015	0.504	0.000	0.035	0.001	0.520	1.050	4.8.2
L32	80.833 - 80.333 (32)	0.014	0.428	0.000	0.035	0.001	0.443	1.050	4.8.2
L33	80.333 - 80.083 (33)	0.017	0.490	0.000	0.047	0.001	0.509	1.050	4.8.2
L34	80.083 - 75.083 (34)	0.018	0.535	0.000	0.049	0.001	0.556	1.050	4.8.2
L35	75.083 - 70.083 (35)	0.019	0.583	0.000	0.051	0.002	0.604	1.050	4.8.2
L36	70.083 - 69.5 (36)	0.019	0.588	0.000	0.052	0.002	0.610	1.050	4.8.2
L37	69.5 - 69.25 (37)	0.015	0.482	0.000	0.034	0.001	0.498	1.050	4.8.2
L38	69.25 - 64.25 (38)	0.017	0.523	0.000	0.035	0.001	0.541	1.050	4.8.2
L39	64.25 - 60.583 (39)	0.018	0.554	0.000	0.037	0.001	0.573	1.050	4.8.2
L40	60.583 - 60.333 (40)	0.020	0.528	0.000	0.049	0.001	0.551	1.050	4.8.2
L41	60.333 - 55.333 (41)	0.021	0.570	0.000	0.051	0.001	0.594	1.050	4.8.2
L42	55.333 - 52.167 (42)	0.022	0.597	0.000	0.051	0.001	0.621	1.050	4.8.2
L43	52.167 - 51.917 (43)	0.017	0.482	0.000	0.033	0.001	0.501	1.050	4.8.2
L44	51.917 - 46.917 (44)	0.018	0.518	0.000	0.034	0.001	0.537	1.050	4.8.2
L45	46.917 - 41.917 (45)	0.019	0.554	0.000	0.035	0.001	0.574	1.050	4.8.2
L46	41.917 - 40.233 (46)	0.020	0.593	0.000	0.039	0.001	0.614	1.050	4.8.2
L47	40.233 - 39.983 (47)	0.020	0.595	0.000	0.039	0.001	0.616	1.050	4.8.2
L48	39.983 - 34.983 (48)	0.021	0.634	0.000	0.040	0.001	0.657	1.050	4.8.2
L49	34.983 - 29.983 (49)	0.022	0.675	0.000	0.041	0.001	0.699	1.050	4.8.2
L50	29.983 - 28 (50)	0.022	0.692	0.000	0.041	0.001	0.716	1.050	4.8.2
L51	28 - 27.75 (51)	0.017	0.563	0.000	0.032	0.001	0.582	1.050	4.8.2
L52	27.75 - 22.75 (52)	0.018	0.597	0.000	0.033	0.001	0.617	1.050	4.8.2
L53	22.75 - 20.083 (53)	0.019	0.616	0.000	0.033	0.001	0.636	1.050	4.8.2
L54	20.083 - 19.833 (54)	0.023	0.728	0.000	0.039	0.001	0.752	1.050	4.8.2
L55	19.833 - 17 (55)	0.023	0.751	0.000	0.040	0.001	0.776	1.050	4.8.2
L56	17 - 16.75 (56)	0.019	0.639	0.000	0.034	0.001	0.660	1.050	4.8.2
L57	16.75 - 11.65 (57)	0.019	0.651	0.000	0.033	0.001	0.671	1.050	4.8.2
L58	11.65 - 11.417 (58)	0.019	0.653	0.000	0.033	0.001	0.673	1.050	4.8.2
L59	11.417 - 9.396 (59)	0.020	0.667	0.000	0.034	0.001	0.688	1.050	4.8.2
L60	9.396 - 9.146 (60)	0.018	0.622	0.000	0.032	0.001	0.641	1.050	4.8.2
L61	9.146 - 4.833 (61)	0.019	0.651	0.000	0.032	0.001	0.670	1.050	4.8.2
L62	4.833 - 4.583 (62)	0.020	0.701	0.000	0.034	0.001	0.722	1.050	4.8.2
L63	4.583 - 0 (63)	0.021	0.734	0.000	0.035	0.001	0.756	1.050	4.8.2

Section Capacity Table

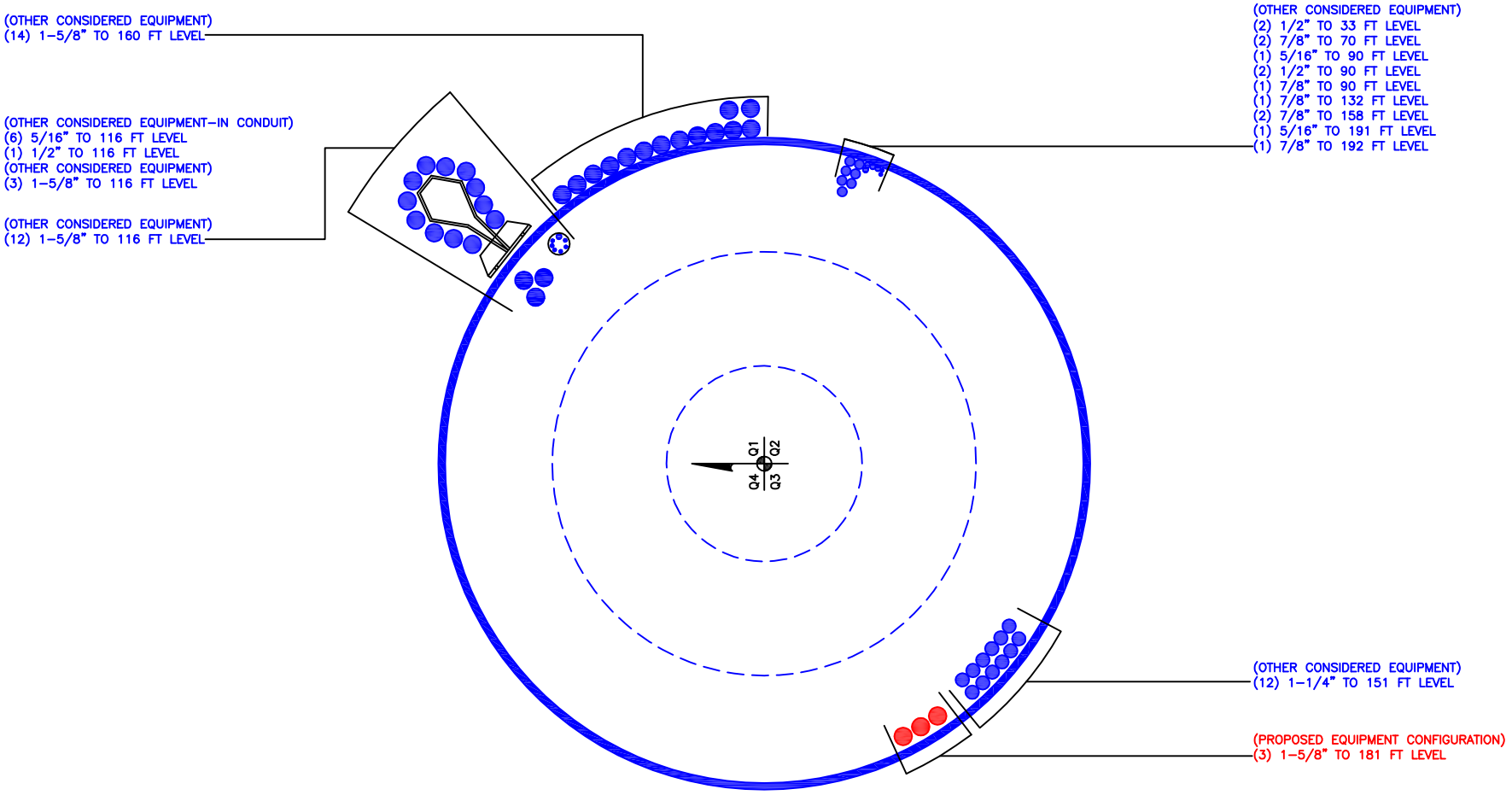
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	191.667 - 186.667	Pole	P18x0.375	1	-0.72	824.12	1.2	Pass
L2	186.667 - 181.567	Pole	P24x0.375	2	-1.35	1104.67	1.4	Pass
L3	181.567 - 176.567	Pole	P24x0.375	3	-6.52	1104.67	5.5	Pass
L4	176.567 - 171.567	Pole	P24x0.375	4	-7.17	1104.67	9.8	Pass
L5	171.567 - 166.567	Pole	P24x0.375	5	-7.82	1104.67	14.3	Pass
L6	166.567 - 161.567	Pole	P24x0.375	6	-8.47	1104.67	19.0	Pass
L7	161.567 - 156.567	Pole	P24x0.375	7	-12.46	1104.67	26.4	Pass
L8	156.567 - 151.567	Pole	P24x0.375	8	-13.18	1104.67	34.7	Pass
L9	151.567 - 146.567	Pole	P24x0.375	9	-18.17	1104.67	47.2	Pass
L10	146.567 - 141.567	Pole	P24x0.375	10	-18.99	1104.67	59.9	Pass
L11	141.567 - 141.417	Pole	P24x0.375	11	-19.02	1104.67	60.3	Pass
L12	141.417 - 136.417	Pole	P36x0.375	12	-20.12	1564.60	34.6	Pass
L13	136.417 - 131.417	Pole	P36x0.375	13	-21.67	1564.60	40.9	Pass
L14	131.417 - 126.417	Pole	P36x0.375	14	-22.79	1564.60	47.5	Pass
L15	126.417 - 121.417	Pole	P36x0.375	15	-24.96	1564.60	54.3	Pass
L16	121.417 - 121.167	Pole	P36x0.375	16	-25.03	1564.60	54.7	Pass
L17	121.167 - 116.167	Pole	P42x0.375	17	-26.45	1752.31	46.4	Pass
L18	116.167 - 111.167	Pole	P42x0.375	18	-31.52	1752.31	53.6	Pass
L19	111.167 - 110.042	Pole	P42x0.375	19	-31.83	1752.31	55.1	Pass
L20	110.042 - 109.792	Pole	P42x0.4875	20	-31.92	2448.74	41.4	Pass
L21	109.792 - 105.083	Pole	P42x0.4875	21	-33.58	2448.74	46.4	Pass
L22	105.083 - 104.833	Pole	P42x0.5625	22	-33.69	2906.35	39.8	Pass
L23	104.833 - 100.917	Pole	P42x0.5625	23	-36.12	2906.35	43.5	Pass
L24	100.917 - 100.667	Pole	P48x0.375	24	-36.23	1939.86	53.7	Pass
L25	100.667 - 95.833	Pole	P48x0.375	25	-38.08	1939.86	59.6	Pass
L26	95.833 - 95.583	Pole	P48x0.475	26	-38.18	2605.46	46.0	Pass
L27	95.583 - 90.583	Pole	P48x0.475	27	-39.98	2605.46	50.9	Pass
L28	90.583 - 89.917	Pole	P48x0.475	28	-40.39	2605.46	51.6	Pass
L29	89.917 - 89.667	Pole	P48x0.575	29	-40.50	3332.72	41.9	Pass
L30	89.667 - 84.667	Pole	P48x0.575	30	-43.36	3332.72	46.2	Pass
L31	84.667 - 80.833	Pole	P48x0.575	31	-46.55	3332.72	49.6	Pass
L32	80.833 - 80.333	Pole	P54x0.55	32	-46.94	3420.72	42.2	Pass
L33	80.333 - 80.083	Pole	P54x0.4875	33	-47.08	2937.03	48.5	Pass
L34	80.083 - 75.083	Pole	P54x0.4875	34	-49.58	2937.03	52.9	Pass
L35	75.083 - 70.083	Pole	P54x0.4875	35	-52.51	2937.03	57.5	Pass
L36	70.083 - 69.5	Pole	P54x0.4875	36	-53.18	2937.03	58.1	Pass
L37	69.5 - 69.25	Pole	P54x0.5875	37	-53.37	3722.49	47.4	Pass
L38	69.25 - 64.25	Pole	P54x0.5875	38	-59.76	3722.49	51.5	Pass
L39	64.25 - 60.583	Pole	P54x0.5875	39	-64.96	3722.49	54.6	Pass
L40	60.583 - 60.333	Pole	P60x0.5125	40	-65.17	3384.03	52.4	Pass
L41	60.333 - 55.333	Pole	P60x0.5125	41	-68.98	3384.03	56.5	Pass
L42	55.333 - 52.167	Pole	P60x0.5125	42	-70.49	3384.03	59.2	Pass
L43	52.167 - 51.917	Pole	P60x0.625	43	-70.64	4346.11	47.7	Pass
L44	51.917 - 46.917	Pole	P60x0.625	44	-73.78	4346.11	51.1	Pass
L45	46.917 - 41.917	Pole	P60x0.625	45	-77.78	4346.11	54.7	Pass
L46	41.917 - 40.233	Pole	P60x0.6	46	-79.07	4125.57	58.5	Pass
L47	40.233 - 39.983	Pole	P60x0.6	47	-79.27	4125.57	58.7	Pass
L48	39.983 - 34.983	Pole	P60x0.6	48	-82.98	4125.57	62.6	Pass
L49	34.983 - 29.983	Pole	P60x0.6	49	-86.36	4125.57	66.6	Pass
L50	29.983 - 28	Pole	P60x0.6	50	-87.43	4125.57	68.2	Pass
L51	28 - 27.75	Pole	P60x0.725	51	-87.61	5266.71	55.4	Pass
L52	27.75 - 22.75	Pole	P60x0.725	52	-91.78	5266.71	58.7	Pass
L53	22.75 - 20.083	Pole	P60x0.725	53	-94.03	5266.71	60.6	Pass
L54	20.083 - 19.833	Pole	P60x0.625	54	-94.23	4346.11	71.6	Pass
L55	19.833 - 17	Pole	P60x0.625	55	-96.40	4346.11	73.9	Pass
L56	17 - 16.75	Pole	P60x0.725	56	-96.64	5266.71	62.8	Pass
L57	16.75 - 11.65	Pole	P60x0.75	57	-100.92	5506.44	63.9	Pass
L58	11.65 - 11.417	Pole	P60x0.75	58	-101.08	5506.44	64.1	Pass
L59	11.417 - 9.396	Pole	P60x0.75	59	-102.46	5506.44	65.5	Pass
L60	9.396 - 9.146	Pole	P60x0.8	60	-102.64	5905.30	61.1	Pass
L61	9.146 - 4.833	Pole	P60x0.8	61	-105.68	5905.30	63.8	Pass
L62	4.833 - 4.583	Pole	P60x0.75	62	-105.86	5506.44	68.8	Pass
L63	4.583 - 0	Pole	P60x0.75	63	-108.75	5506.44	72.0	Pass
							Summary	
						Pole (L55)	73.9	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$øP_{allow}$ K	% Capacity	Pass Fail
						RATING =	**73.9**	**Pass**

***NOTE: Above stress ratios for reinforced sections are approximate. More exact calculations are presented in Appendix C.**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 826217 TOWER ID:C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 826217

Work Order: 1931634

CROWN CASTLE

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	40.33	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 Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in2)	Bolt Hole Size (in)	Reinforcement Material
1	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65
2	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
3	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.000	6.563	1.1875	A572-65
4	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
5	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
6	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65
7	4	0.75	3	0.375	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65
8	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
9	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
10	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.000	4.750	1.1875	A572-65
11	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
12	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
13	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65

TNX Geometry Input

Increment (ft): 5 Export to TNX

	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	0	60.000	60.000	0.625	A53-B-42	1.017
46	41.917 - 40.233	1.684		0	60.000	60.000	0.6	A53-B-42	0.995
47	40.233 - 39.983	0.25		0	60.000	60.000	0.6	A53-B-42	0.995
48	39.983 - 34.983	5		0	60.000	60.000	0.6	A53-B-42	0.995
49	34.983 - 29.983	5		0	60.000	60.000	0.6	A53-B-42	0.995
50	29.983 - 28	1.983		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	0.72	4.16	0.70
2	186.667 - 181.567	1.35	8.61	1.03
3	181.567 - 176.567	6.52	32.07	5.34
4	176.567 - 171.567	7.17	59.60	5.65
5	171.567 - 166.567	7.82	88.68	5.96
6	166.567 - 161.567	8.47	119.30	6.27
7	161.567 - 156.567	12.46	165.07	10.51
8	156.567 - 151.567	13.18	218.42	10.82
9	151.567 - 146.567	18.17	296.80	16.36
10	146.567 - 141.567	18.99	379.24	16.61
11	141.567 - 141.417	19.02	381.74	16.62
12	141.417 - 136.417	20.12	465.90	17.08
13	136.417 - 131.417	21.67	553.60	17.97
14	131.417 - 126.417	22.79	644.47	18.36
15	126.417 - 121.417	24.96	738.58	19.28
16	121.417 - 121.167	25.03	743.40	19.30
17	121.167 - 116.167	26.45	841.76	19.87
18	116.167 - 111.167	31.52	969.93	25.31
19	111.167 - 110.042	31.83	998.56	25.60
20	110.042 - 109.792	31.92	1004.97	25.66
21	109.792 - 105.083	33.58	1128.71	26.89
22	105.083 - 104.833	33.69	1135.44	26.95
23	104.833 - 100.917	36.12	1243.32	28.13
24	100.917 - 100.667	36.23	1250.36	28.19
25	100.667 - 95.833	38.08	1390.06	29.61
26	95.833 - 95.583	38.18	1397.47	29.67
27	95.583 - 90.583	39.98	1549.17	31.00
28	90.583 - 89.917	40.39	1570.36	31.44
29	89.917 - 89.667	40.50	1578.23	31.51
30	89.667 - 84.667	43.36	1739.32	32.96
31	84.667 - 80.833	46.55	1867.80	34.15
32	80.833 - 80.333	46.94	1884.90	34.30
33	80.333 - 80.083	47.08	1893.48	34.37
34	80.083 - 75.083	49.58	2068.86	35.79
35	75.083 - 70.083	52.51	2251.41	37.19
36	70.083 - 69.5	53.18	2273.40	37.85
37	69.5 - 69.25	53.37	2282.88	37.92
38	69.25 - 64.25	59.76	2477.04	39.60
39	64.25 - 60.583	64.96	2624.74	40.84
40	60.583 - 60.333	65.17	2634.97	40.90
41	60.333 - 55.333	68.98	2843.25	42.36
42	55.333 - 52.167	70.49	2978.66	43.17
43	52.167 - 51.917	70.64	2989.46	43.22
44	51.917 - 46.917	73.78	3208.95	44.57
45	46.917 - 41.917	77.78	3435.04	45.99
46	41.917 - 40.233	79.07	3512.75	46.45
47	40.233 - 39.983	79.27	3524.35	46.49
48	39.983 - 34.983	82.98	3759.51	47.72
49	34.983 - 29.983	86.36	4001.79	49.01
50	29.983 - 28	87.43	4099.37	49.43
51	28 - 27.75	87.61	4111.73	49.45
52	27.75 - 22.75	91.78	4361.91	50.58
53	22.75 - 20.083	94.03	4497.62	51.17
54	20.083 - 19.833	94.23	4510.42	51.20
55	19.833 - 17	96.40	4656.39	51.82
56	17 - 16.75	96.64	4669.35	51.85
57	16.75 - 11.65	100.92	4936.50	52.89
58	11.65 - 11.417	101.08	4948.82	52.92
59	11.417 - 9.396	102.46	5056.17	53.31
60	9.396 - 9.146	102.64	5069.51	53.35
61	9.146 - 4.833	105.68	5301.39	54.18
62	4.833 - 4.583	105.86	5314.94	54.21
63	4.583 - 0	108.75	5564.62	54.78

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
191.67 - 186.67	Pole	TP18x18x0.375	Pole	1.2%	Pass
186.67 - 181.57	Pole	TP24x24x0.375	Pole	1.4%	Pass
181.57 - 176.57	Pole	TP24x24x0.375	Pole	5.5%	Pass
176.57 - 171.57	Pole	TP24x24x0.375	Pole	9.8%	Pass
171.57 - 166.57	Pole	TP24x24x0.375	Pole	14.3%	Pass
166.57 - 161.57	Pole	TP24x24x0.375	Pole	19.0%	Pass
161.57 - 156.57	Pole	TP24x24x0.375	Pole	26.4%	Pass
156.57 - 151.57	Pole	TP24x24x0.375	Pole	34.6%	Pass
151.57 - 146.57	Pole	TP24x24x0.375	Pole	47.1%	Pass
146.57 - 141.57	Pole	TP24x24x0.375	Pole	59.7%	Pass
141.57 - 141.42	Pole	TP24x24x0.375	Pole	60.1%	Pass
141.42 - 136.42	Pole	TP36x36x0.375	Pole	34.5%	Pass
136.42 - 131.42	Pole	TP36x36x0.375	Pole	40.8%	Pass
131.42 - 126.42	Pole	TP36x36x0.375	Pole	47.4%	Pass
126.42 - 121.42	Pole	TP36x36x0.375	Pole	54.2%	Pass
121.42 - 121.17	Pole	TP36x36x0.375	Pole	54.5%	Pass
121.17 - 116.17	Pole	TP42x42x0.375	Pole	46.2%	Pass
116.17 - 111.17	Pole	TP42x42x0.375	Pole	53.3%	Pass
111.17 - 110.04	Pole	TP42x42x0.375	Pole	54.8%	Pass
110.04 - 109.79	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	42.8%	Pass
109.79 - 105.08	Pole + Reinf.	TP42x42x0.4875	Reinf. 13 Tension Rupture	48.0%	Pass
105.08 - 104.83	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	43.8%	Pass
104.83 - 100.92	Pole + Reinf.	TP42x42x0.5625	Reinf. 6 Tension Rupture	48.0%	Pass
100.92 - 100.67	Pole	TP48x48x0.375	Pole	53.3%	Pass
100.67 - 95.83	Pole	TP48x48x0.375	Pole	59.1%	Pass
95.83 - 95.58	Pole + Reinf.	TP48x48x0.475	Pole	47.2%	Pass
95.58 - 90.58	Pole + Reinf.	TP48x48x0.475	Pole	52.2%	Pass
90.58 - 89.92	Pole + Reinf.	TP48x48x0.475	Pole	53.0%	Pass
89.92 - 89.67	Pole + Reinf.	TP48x48x0.575	Pole	44.2%	Pass
89.67 - 84.67	Pole + Reinf.	TP48x48x0.575	Pole	48.6%	Pass
84.67 - 80.83	Pole + Reinf.	TP48x48x0.575	Pole	52.2%	Pass
80.83 - 80.33	Pole + Reinf.	TP54x54x0.55	Pole	43.9%	Pass
80.33 - 80.08	Pole + Reinf.	TP54x54x0.4875	Pole	49.6%	Pass
80.08 - 75.08	Pole + Reinf.	TP54x54x0.4875	Pole	54.2%	Pass
75.08 - 70.08	Pole + Reinf.	TP54x54x0.4875	Pole	58.9%	Pass
70.08 - 69.5	Pole + Reinf.	TP54x54x0.4875	Pole	59.5%	Pass
69.5 - 69.25	Pole + Reinf.	TP54x54x0.5875	Pole	49.4%	Pass
69.25 - 64.25	Pole + Reinf.	TP54x54x0.5875	Pole	53.6%	Pass
64.25 - 60.58	Pole + Reinf.	TP54x54x0.5875	Pole	56.9%	Pass
60.58 - 60.33	Pole + Reinf.	TP60x60x0.5125	Pole	53.4%	Pass
60.33 - 55.33	Pole + Reinf.	TP60x60x0.5125	Pole	57.6%	Pass
55.33 - 52.17	Pole + Reinf.	TP60x60x0.5125	Pole	60.3%	Pass
52.17 - 51.92	Pole + Reinf.	TP60x60x0.625	Pole	50.5%	Pass
51.92 - 46.92	Pole + Reinf.	TP60x60x0.625	Pole	54.2%	Pass
46.92 - 41.92	Pole + Reinf.	TP60x60x0.625	Pole	58.0%	Pass
41.92 - 40.23	Pole + Reinf.	TP60x60x0.6	Pole	59.8%	Pass
40.23 - 39.98	Pole + Reinf.	TP60x60x0.6	Pole	60.0%	Pass
39.98 - 34.98	Pole + Reinf.	TP60x60x0.6	Pole	63.9%	Pass
34.98 - 29.98	Pole + Reinf.	TP60x60x0.6	Pole	68.0%	Pass
29.98 - 28	Pole + Reinf.	TP60x60x0.6	Pole	69.6%	Pass
28 - 27.75	Pole + Reinf.	TP60x60x0.725	Pole	58.6%	Pass
27.75 - 22.75	Pole + Reinf.	TP60x60x0.725	Pole	62.2%	Pass
22.75 - 20.08	Pole + Reinf.	TP60x60x0.725	Pole	64.1%	Pass
20.08 - 19.83	Pole	TP60x60x0.625	Pole	71.5%	Pass
19.83 - 17	Pole	TP60x60x0.625	Pole	73.8%	Pass
17 - 16.75	Pole + Reinf.	TP60x60x0.725	Pole	64.0%	Pass
16.75 - 11.65	Pole + Reinf.	TP60x60x0.75	Pole	66.1%	Pass
11.65 - 11.42	Pole + Reinf.	TP60x60x0.75	Pole	66.3%	Pass
11.42 - 9.4	Pole + Reinf.	TP60x60x0.75	Pole	67.7%	Pass
9.4 - 9.15	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	67.4%	Pass
9.15 - 4.83	Pole + Reinf.	TP60x60x0.8	Reinf. 7 Tension Rupture	70.4%	Pass
4.83 - 4.58	Pole + Reinf.	TP60x60x0.75	Pole	72.0%	Pass
4.58 - 0	Pole + Reinf.	TP60x60x0.75	Pole	75.4%	Pass
				Summary	
			Pole	75.4%	Pass
			Reinforcement	73.4%	Pass
			Overall	75.4%	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	1.2%													
186.67 - 181.57	1942	n/a	1942	27.83	n/a	27.83	1.4%													
181.57 - 176.57	1942	n/a	1942	27.83	n/a	27.83	5.5%													
176.57 - 171.57	1942	n/a	1942	27.83	n/a	27.83	9.8%													
171.57 - 166.57	1942	n/a	1942	27.83	n/a	27.83	14.3%													
166.57 - 161.57	1942	n/a	1942	27.83	n/a	27.83	19.0%													
161.57 - 156.57	1942	n/a	1942	27.83	n/a	27.83	26.4%													
156.57 - 151.57	1942	n/a	1942	27.83	n/a	27.83	34.6%													
151.57 - 146.57	1942	n/a	1942	27.83	n/a	27.83	47.1%													
146.57 - 141.57	1942	n/a	1942	27.83	n/a	27.83	59.7%													
141.57 - 141.42	1942	n/a	1942	27.83	n/a	27.83	60.1%													
141.42 - 136.42	6659	n/a	6659	41.97	n/a	41.97	34.5%													
136.42 - 131.42	6659	n/a	6659	41.97	n/a	41.97	40.8%													
131.42 - 126.42	6659	n/a	6659	41.97	n/a	41.97	47.4%													
126.42 - 121.42	6659	n/a	6659	41.97	n/a	41.97	54.2%													
121.42 - 121.17	6659	n/a	6659	41.97	n/a	41.97	54.5%													
121.17 - 116.17	10622	n/a	10622	49.04	n/a	49.04	46.2%													
116.17 - 111.17	10622	n/a	10622	49.04	n/a	49.04	53.3%													
111.17 - 110.04	10622	n/a	10622	49.04	n/a	49.04	54.8%													
110.04 - 109.79	10622	3132	13754	49.04	13.50	62.54	42.5%													42.8%
109.79 - 105.08	10622	3132	13754	49.04	13.50	62.54	47.7%													48.0%
105.08 - 104.83	10622	5106	15728	49.04	22.50	71.54	42.0%						43.8%							42.5%
104.83 - 100.92	10622	5106	15728	49.04	22.50	71.54	46.0%						48.0%							46.5%
100.92 - 100.67	15908	n/a	15908	56.11	n/a	56.11	53.3%													
100.67 - 95.83	15908	n/a	15908	56.11	n/a	56.11	59.1%													
95.83 - 95.58	15908	4064	19972	56.11	13.50	69.61	47.2%												46.7%	
95.58 - 90.58	15908	4064	19972	56.11	13.50	69.61	52.2%												51.7%	
90.58 - 89.92	15908	4064	19972	56.11	13.50	69.61	53.0%												52.4%	
89.92 - 89.67	15908	8127	24036	56.11	27.00	83.11	44.2%					43.7%							43.7%	
89.67 - 84.67	15908	8127	24036	56.11	27.00	83.11	48.6%					48.1%							48.1%	
84.67 - 80.83	15908	8127	24036	56.11	27.00	83.11	52.2%					51.7%							51.7%	
80.83 - 80.33	22710	10233	32943	63.18	27.00	90.18	43.9%					42.9%							42.9%	
80.33 - 80.08	22710	6614	29324	63.18	18.00	81.18	49.6%				44.1%									
80.08 - 75.08	22710	6614	29324	63.18	18.00	81.18	54.2%				48.1%									
75.08 - 70.08	22710	6614	29324	63.18	18.00	81.18	58.9%				52.3%									
70.08 - 69.5	22710	6614	29324	63.18	18.00	81.18	59.5%				52.8%									
69.5 - 69.25	22710	12688	35398	63.18	36.00	99.18	49.4%				43.9%							47.3%		
69.25 - 64.25	22710	12688	35398	63.18	36.00	99.18	53.6%				47.7%							51.4%		
64.25 - 60.58	22710	12688	35398	63.18	36.00	99.18	56.9%				50.6%							54.5%		
60.58 - 60.33	31217	11364	42581	70.24	24.38	94.62	53.4%			46.4%										
60.33 - 55.33	31217	11364	42581	70.24	24.38	94.62	57.6%			50.1%										
55.33 - 52.17	31217	11364	42581	70.24	24.38	94.62	60.3%			52.4%										
52.17 - 51.92	31219	19812	51030	70.24	48.38	118.62	50.5%			43.6%							42.9%			
51.92 - 46.92	31219	19812	51030	70.24	48.38	118.62	54.2%			46.7%							46.0%			
46.92 - 41.92	31219	19812	51030	70.24	48.38	118.62	58.0%			50.0%							49.2%			
41.92 - 40.23	41363	7892	49255	93.46	18.00	111.46	59.8%		53.8%											
40.23 - 39.98	41363	7892	49255	93.46	18.00	111.46	60.0%		54.0%											
39.98 - 34.98	41363	7892	49255	93.46	18.00	111.46	63.9%		57.6%											
34.98 - 29.98	41363	7892	49255	93.46	18.00	111.46	68.0%		61.2%											
29.98 - 28	41363	7892	49255	93.46	18.00	111.46	69.6%		62.7%											
28 - 27.75	41368	17587	58955	93.46	42.00	135.46	58.6%		51.6%							51.8%				
27.75 - 22.75	41368	17587	58955	93.46	42.00	135.46	62.2%		54.7%							54.9%				
22.75 - 20.08	41368	17587	58955	93.46	42.00	135.46	64.1%		56.4%							56.6%				
20.08 - 19.83	51381	n/a	51381	116.58	n/a	116.58	71.5%													
19.83 - 17	51381	n/a	51381	116.58	n/a	116.58	73.8%													
17 - 16.75	51383	8145	59528	116.58	24.00	140.58	64.0%								56.3%					
16.75 - 11.65	51395	9920	61315	116.58	27.00	143.58	66.1%							65.9%	59.1%					
11.65 - 11.42	51395	9920	61315	116.58	27.00	143.58	66.3%							66.0%	59.2%					
11.42 - 9.4	51395	9920	61315	116.58	27.00	143.58	67.7%							67.4%	60.5%					
9.4 - 9.15	51382	13787	65169	116.58	33.00	149.58	63.4%	66.8%						67.4%	57.5%					
9.15 - 4.83	51382	13787	65169	116.58	33.00	149.58	66.3%	69.8%						70.4%	60.2%					
4.83 - 4.58	51446	9839	61284	116.58	30.00	146.58	72.0%	70.2%							62.7%					
4.58 - 0	51446	9839	61284	116.58	30.00	146.58	75.4%	73.4%							65.6%					

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

Monopole Flange Plate Connection

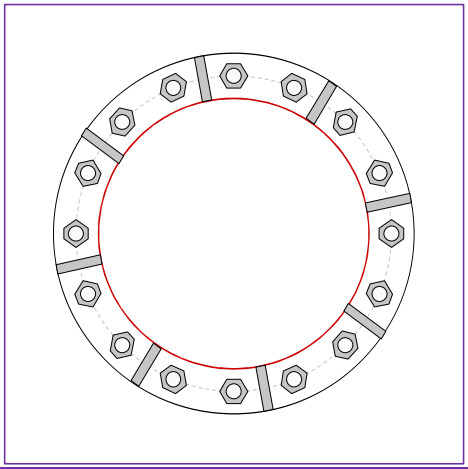
Elevation = 181.583 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

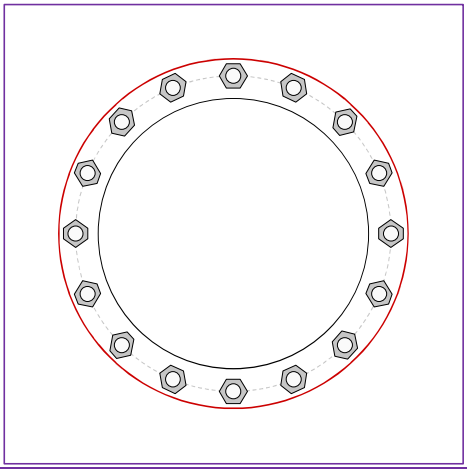
Applied Loads	
Moment (kip-ft)	8.61
Axial Force (kips)	1.35
Shear Force (kips)	1.03

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



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

18" ID 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)	1.14	
Allowable (kips)	54.54	
Stress Rating:	**2.0%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

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:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**N/A**

Monopole Flange Plate Connection

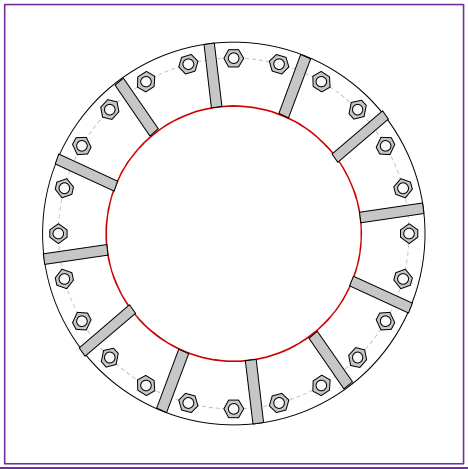
Elevation = 141.417 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

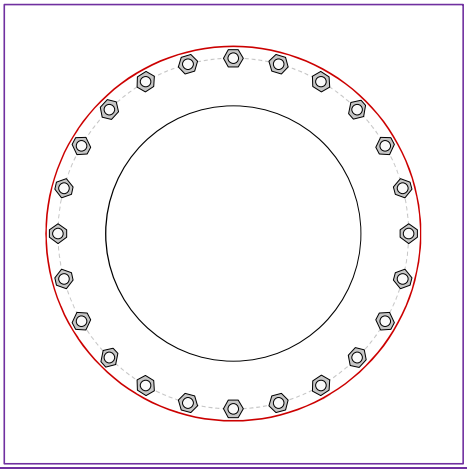
Applied Loads	
Moment (kip-ft)	381.74
Axial Force (kips)	19.02
Shear Force (kips)	16.62

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

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

Top Plate Data

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

Bottom Plate Data

24" ID 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)	22.34	
Allowable (kips)	54.53	
Stress Rating:	**39.0%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

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:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**N/A**

MORRISON HERSHFIELD

Flange Connection Force Distribution

Site Data	
Site ID:	826217
Site Name:	Newington_1
Order ID:	544398 Rev. 0

Reactions		
Mu:	743.4	kips-ft
Axial, Pu:	25.03	kip
Shear, Vu:	19.3	kip
Elevation:	121.2	ft

Flange Connection Data		
Number of Bolts:	28	
Flange Bolt Diameter:	1	in
Bolt Circle:	39.00	in
Areaof Bolt:	0.79	in^2
Moment of Inertia:	4181.07	in^4
Jump Plates (Configuration #1)		
Number of Bridge Stiffeners:	3	
Bridge Stiffener Wdith:	4.5	in
Bridge Stiffener Thickness:	1.00	in
Bolt Circle of Bridge Stiffener:	44.00	in
Area of Stiffener:	4.50	in^2
Moment of Inertia:	3267.00	in^4

Forces on Flange Bolts		
Moment:	417.32	kips-ft
Axial:	15.51	kip
Shear:	19.3	kip

Forces on Bridge Stiffener #1		
Moment:	326.08	kips-ft
Axial:	9.52	kip

Monopole Flange Plate Connection

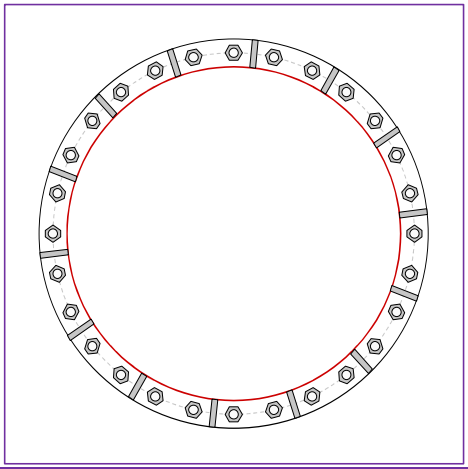
Elevation = 121.167 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

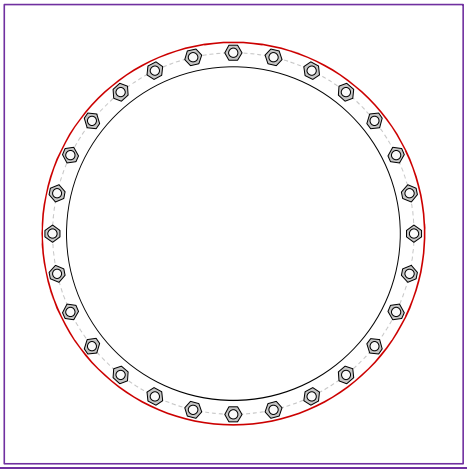
Applied Loads	
Moment (kip-ft)	417.32
Axial Force (kips)	15.51
Shear Force (kips)	19.30

**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)	17.79	
Allowable (kips)	54.53	
Stress Rating:	**31.1%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

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:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**N/A**

MORRISON HERSHFIELD

Flange Connection Force Distribution

Site Data	
Site ID:	826217
Site Name:	Newington_1
Order ID:	544398 Rev. 0

Reactions		
Mu:	1243.32	kips-ft
Axial, Pu:	36.12	kip
Shear, Vu:	28.13	kip
Elevation:	100.9	ft

Flange Connection Data		
Number of Bolts:	32	
Flange Bolt Diameter:	1	in
Bolt Circle:	45.00	in
Areaof Bolt:	0.79	in^2
Moment of Inertia:	6361.73	in^4
Jump Plates (Configuration #1)		
Number of Bridge Stiffeners:	6	
Bridge Stiffener Wdith:	4.5	in
Bridge Stiffener Thickness:	1.00	in
Bolt Circle of Bridge Stiffener:	49.00	in
Area of Stiffener:	4.50	in^2
Moment of Inertia:	8103.38	in^4

Forces on Flange Bolts		
Moment:	546.81	kips-ft
Axial:	17.41	kip
Shear:	28.13	kip

Forces on Bridge Stiffener #1		
Moment:	696.51	kips-ft
Axial:	18.71	kip

Monopole Flange Plate Connection

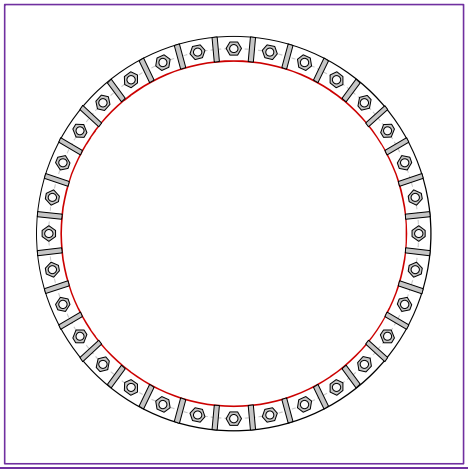
Elevation = 100.917 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

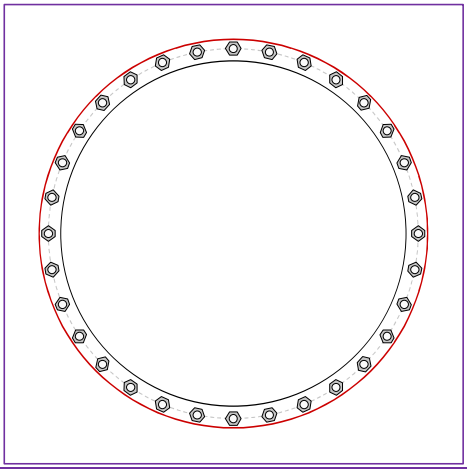
Applied Loads	
Moment (kip-ft)	546.81
Axial Force (kips)	17.41
Shear Force (kips)	28.13

**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)	17.68	
Allowable (kips)	54.52	
Stress Rating:	**30.9%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

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:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**N/A**

MORRISON HERSHFIELD

Flange Connection Force Distribution

Site Data	
Site ID:	826217
Site Name:	Newington_1
Order ID:	544398 Rev. 0

Reactions		
Mu:	1867.8	kips-ft
Axial, Pu:	46.55	kip
Shear, Vu:	34.15	kip
Elevation:	80.83	ft

Flange Connection Data		
Number of Bolts:	36	
Flange Bolt Diameter:	1	in
Bolt Circle:	51.00	in
Areaof Bolt:	0.79	in^2
Moment of Inertia:	9192.69	in^4
Jump Plates (Configuration #1)		
Number of Bridge Stiffeners:	3	
Bridge Stiffener Wdith:	4.5	in
Bridge Stiffener Thickness:	1.00	in
Bolt Circle of Bridge Stiffener:	55.00	in
Area of Stiffener:	4.50	in^2
Moment of Inertia:	5104.69	in^4
Jump Plates (Configuration #2)		
Number of Bridge Stiffeners:	3	
Bridge Stiffener Wdith:	6.5	in
Bridge Stiffener Thickness:	1.25	in
Bolt Circle of Bridge Stiffener:	55.13	in
Area of Stiffener:	8.13	in^2
Moment of Inertia:	9259.07	in^4

Forces on Flange Bolts		
Moment:	728.89	kips-ft
Axial:	19.90	kip
Shear:	34.15	kip

Forces on Bridge Stiffener #1		
Moment:	404.75	kips-ft
Axial:	9.50	kip

Forces on Bridge Stiffener #2		
Moment:	734.16	kips-ft
Axial:	17.15	kip

Monopole Flange Plate Connection

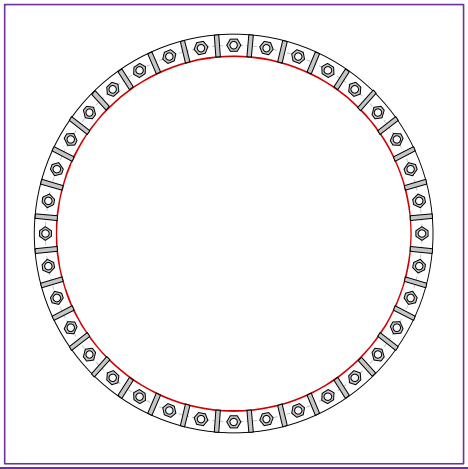
Elevation = 80.833 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

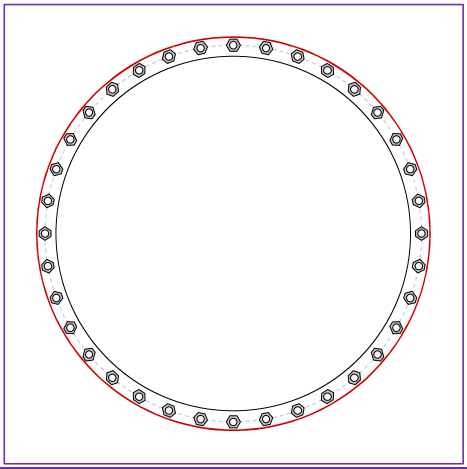
Applied Loads	
Moment (kip-ft)	728.89
Axial Force (kips)	19.90
Shear Force (kips)	34.15

**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):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

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:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**N/A**

MORRISON HERSHFIELD

Flange Connection Force Distribution

Site Data	
Site ID:	826217
Site Name:	Newington_1
Order ID:	544398 Rev. 0

Reactions		
Mu:	2624.75	kips-ft
Axial, Pu:	64.96	kip
Shear, Vu:	40.84	kip
Elevation:	60.58	ft

Flange Connection Data		
Number of Bolts:	48	
Flange Bolt Diameter:	1	in
Bolt Circle:	57.00	in
Areaof Bolt:	0.79	in^2
Moment of Inertia:	15310.55	in^4
Jump Plates (Configuration #1)		
Number of Bridge Stiffeners:	4	
Bridge Stiffener Wdith:	4.5	in
Bridge Stiffener Thickness:	1.00	in
Bolt Circle of Bridge Stiffener:	61.00	in
Area of Stiffener:	4.50	in^2
Moment of Inertia:	8372.25	in^4
Jump Plates (Configuration #2)		
Number of Bridge Stiffeners:	6	
Bridge Stiffener Wdith:	8.5	in
Bridge Stiffener Thickness:	1.25	in
Bolt Circle of Bridge Stiffener:	63.50	in
Area of Stiffener:	10.63	in^2
Moment of Inertia:	32131.99	in^4

Forces on Flange Bolts		
Moment:	719.99	kips-ft
Axial:	20.50	kip
Shear:	40.84	kip

Forces on Bridge Stiffener #1		
Moment:	393.71	kips-ft
Axial:	9.79	kip

Forces on Bridge Stiffener #2		
Moment:	1511.04	kips-ft
Axial:	34.67	kip

Monopole Flange Plate Connection

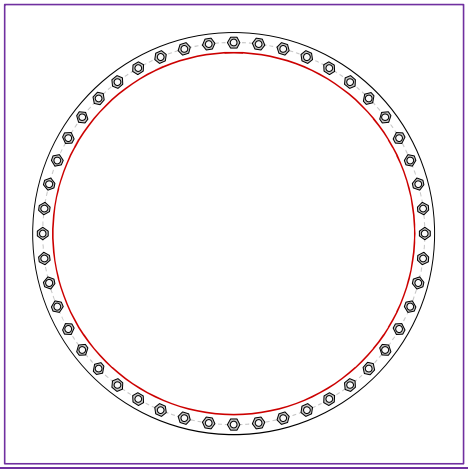
Elevation = 60.583 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

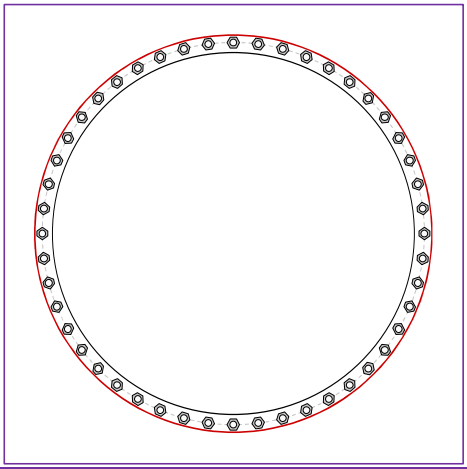
Applied Loads	
Moment (kip-ft)	719.99
Axial Force (kips)	20.50
Shear Force (kips)	40.84

**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)	12.20	
Allowable (kips)	54.52	
Stress Rating:	**21.3%**	Pass

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

MORRISON HERSHFIELD

Flange Connection Force Distribution

Site Data	
Site ID:	826217
Site Name:	Newington_1
Order ID:	544398 Rev. 0

Flange Connection (Bolt Circle 1)		
Number of Bolts:	32	
Flange Bolt Diameter:	1.25	in
Bolt Circle:	47.00	in
Areaof Bolt:	1.23	in^2
Moment of Inertia:	10843.40	in^4
Flange Connection (Bolt Circle 2)		
Number of Bolts:	32	
Flange Bolt Diameter:	1.25	in
Bolt Circle:	53.00	in
Areaof Bolt:	1.23	in
Moment of Inertia:	13788.65	in^2
Jump Plates (Configuration #1)		
Number of Bridge Stiffeners:	6	
Bridge Stiffener Wdith:	1.25	in
Bridge Stiffener Thickness:	6.50	in
Bolt Circle of Bridge Stiffener:	63.75	in
Area of Stiffener:	8.13	in^2
Moment of Inertia:	24765.38	in^4
Jump Plates (Configuration #2)		
Number of Bridge Stiffeners:	4	
Bridge Stiffener Wdith:	1	in
Bridge Stiffener Thickness:	6.00	in
Bolt Circle of Bridge Stiffener:	63.50	in
Area of Stiffener:	6.00	in^2

Reactions		
Mu:	3512.75	kips-ft
Axial, Pu:	79.07	kip
Shear, Vu:	46.45	kip
Elevation:	40.33	ft

Forces on Flange Bolts		
Moment:	619.41	kips-ft
Axial:	20.52	kip
Shear:	46.45	kip

Forces on Bridge Stiffener #1		
Moment:	787.65	kips-ft
Axial:	20.52	kip

Forces on Bridge Stiffener #2		
Moment:	1414.68	kips-ft
Axial:	25.48	kip

Forces on Bridge Stiffener #3		
Moment:	691.01	kips-ft

Monopole Flange Plate Connection

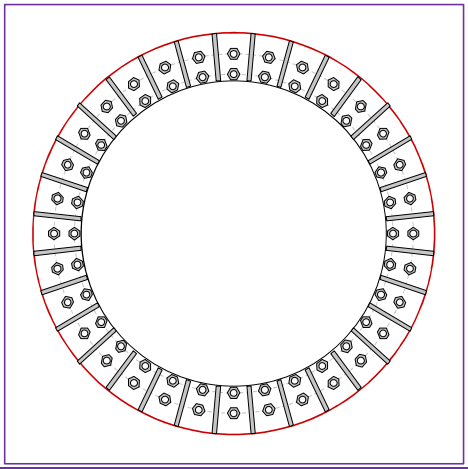
Elevation = 40.333 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

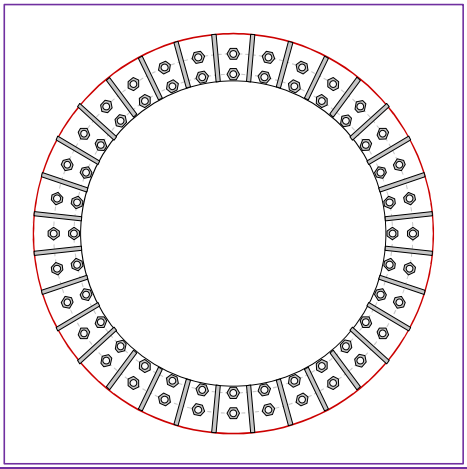
Applied Loads	
Moment (kip-ft)	619.41
Axial Force (kips)	20.52
Shear Force (kips)	46.45

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

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)	9.17	
Allowable (kips)	54.49	
Stress Rating:	**16.0%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**Pirod OK**

CCIplate

Elevation (ft)	40.333	*(Flange)*

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending
1	Yes	Yes	Yes
2	No	No	No

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	I_w (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1	A325	53	0.5	0	N-Included		No
2	1	11.25	1	A325	53	0.5	0	N-Included		No
3	1	22.5	1	A325	53	0.5	0	N-Included		No
4	1	33.75	1	A325	53	0.5	0	N-Included		No
5	1	45	1	A325	53	0.5	0	N-Included		No
6	1	56.25	1	A325	53	0.5	0	N-Included		No
7	1	67.5	1	A325	53	0.5	0	N-Included		No
8	1	78.75	1	A325	53	0.5	0	N-Included		No
9	1	90	1	A325	53	0.5	0	N-Included		No
10	1	101.25	1	A325	53	0.5	0	N-Included		No
11	1	112.5	1	A325	53	0.5	0	N-Included		No
12	1	123.75	1	A325	53	0.5	0	N-Included		No
13	1	135	1	A325	53	0.5	0	N-Included		No
14	1	146.25	1	A325	53	0.5	0	N-Included		No
15	1	157.5	1	A325	53	0.5	0	N-Included		No
16	1	168.75	1	A325	53	0.5	0	N-Included		No
17	1	180	1	A325	53	0.5	0	N-Included		No
18	1	191.25	1	A325	53	0.5	0	N-Included		No
19	1	202.5	1	A325	53	0.5	0	N-Included		No
20	1	213.75	1	A325	53	0.5	0	N-Included		No
21	1	225	1	A325	53	0.5	0	N-Included		No
22	1	236.25	1	A325	53	0.5	0	N-Included		No
23	1	247.5	1	A325	53	0.5	0	N-Included		No
24	1	258.75	1	A325	53	0.5	0	N-Included		No
25	1	270	1	A325	53	0.5	0	N-Included		No
26	1	281.25	1	A325	53	0.5	0	N-Included		No
27	1	292.5	1	A325	53	0.5	0	N-Included		No
28	1	303.75	1	A325	53	0.5	0	N-Included		No
29	1	315	1	A325	53	0.5	0	N-Included		No
30	1	326.25	1	A325	53	0.5	0	N-Included		No
31	1	337.5	1	A325	53	0.5	0	N-Included		No
32	1	348.75	1	A325	53	0.5	0	N-Included		No
33	2	0	1	A325	47	0.5	0	N-Included		No
34	2	11.25	1	A325	47	0.5	0	N-Included		No
35	2	22.5	1	A325	47	0.5	0	N-Included		No
36	2	33.75	1	A325	47	0.5	0	N-Included		No
37	2	45	1	A325	47	0.5	0	N-Included		No
38	2	56.25	1	A325	47	0.5	0	N-Included		No
39	2	67.5	1	A325	47	0.5	0	N-Included		No
40	2	78.75	1	A325	47	0.5	0	N-Included		No
41	2	90	1	A325	47	0.5	0	N-Included		No
42	2	101.25	1	A325	47	0.5	0	N-Included		No
43	2	112.5	1	A325	47	0.5	0	N-Included		No
44	2	123.75	1	A325	47	0.5	0	N-Included		No
45	2	135	1	A325	47	0.5	0	N-Included		No
46	2	146.25	1	A325	47	0.5	0	N-Included		No
47	2	157.5	1	A325	47	0.5	0	N-Included		No
48	2	168.75	1	A325	47	0.5	0	N-Included		No
49	2	180	1	A325	47	0.5	0	N-Included		No
50	2	191.25	1	A325	47	0.5	0	N-Included		No
51	2	202.5	1	A325	47	0.5	0	N-Included		No
52	2	213.75	1	A325	47	0.5	0	N-Included		No
53	2	225	1	A325	47	0.5	0	N-Included		No
54	2	236.25	1	A325	47	0.5	0	N-Included		No
55	2	247.5	1	A325	47	0.5	0	N-Included		No
56	2	258.75	1	A325	47	0.5	0	N-Included		No
57	2	270	1	A325	47	0.5	0	N-Included		No
58	2	281.25	1	A325	47	0.5	0	N-Included		No
59	2	292.5	1	A325	47	0.5	0	N-Included		No
60	2	303.75	1	A325	47	0.5	0	N-Included		No
61	2	315	1	A325	47	0.5	0	N-Included		No
62	2	326.25	1	A325	47	0.5	0	N-Included		No
63	2	337.5	1	A325	47	0.5	0	N-Included		No
64	2	348.75	1	A325	47	0.5	0	N-Included		No

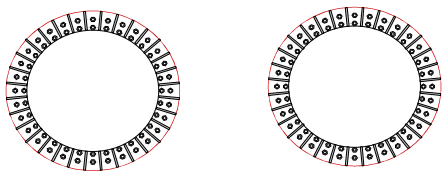
Custom Stiffener Connection - Top Plate

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Custom Stiffener Connection - Bottom Plate

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	38	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	38	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Plot Graphic



MORRISON HERSHFIELD

Flange Connection Force Distribution

Site Data	
Site ID:	826217
Site Name:	Newington_1
Order ID:	544398 Rev. 0

Flange Connection (Bolt Circle 1)		
Number of Bolts:	32	
Flange Bolt Diameter:	1.25	in
Bolt Circle:	47.00	in
Areaof Bolt:	1.23	in^2
Moment of Inertia:	10843.40	in^4
Flange Connection (Bolt Circle 2)		
Number of Bolts:	32	
Flange Bolt Diameter:	1.25	in
Bolt Circle:	53.00	in
Areaof Bolt:	1.23	in
Moment of Inertia:	13788.65	in^2
Jump Plates (Configuration #1)		
Number of Bridge Stiffeners:	6	
Bridge Stiffener Wdith:	1.25	in
Bridge Stiffener Thickness:	6.50	in
Bolt Circle of Bridge Stiffener:	63.75	in
Area of Stiffener:	8.13	in^2
Moment of Inertia:	24765.38	in^4
Jump Plates (Configuration #2)		
Number of Bridge Stiffeners:	4	
Bridge Stiffener Wdith:	1	in
Bridge Stiffener Thickness:	6.00	in
Bolt Circle of Bridge Stiffener:	63.50	in
Area of Stiffener:	6.00	in^2

Reactions		
Mu:	4497.62	kips-ft
Axial, Pu:	94.03	kip
Shear, Vu:	51.17	kip
Elevation:	20.083	ft

Forces on Flange Bolts		
Moment:	793.08	kips-ft
Axial:	24.41	kip
Shear:	51.17	kip

Forces on Bridge Stiffener #1		
Moment:	1008.49	kips-ft
Axial:	24.41	kip

Forces on Bridge Stiffener #2		
Moment:	1811.31	kips-ft
Axial:	30.30	kip

Forces on Bridge Stiffener #3		
Moment:	884.74	kips-ft

Monopole Flange Plate Connection

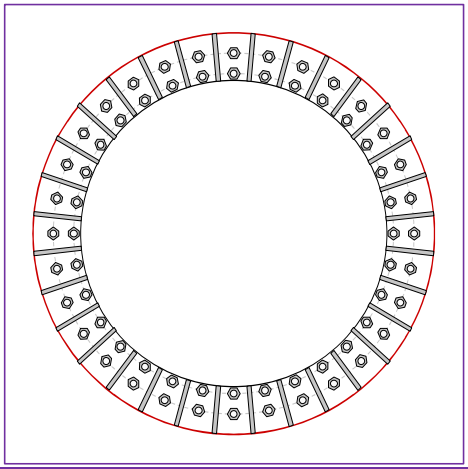
Elevation = 20.083 ft.

BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0
TIA-222 Revision	H

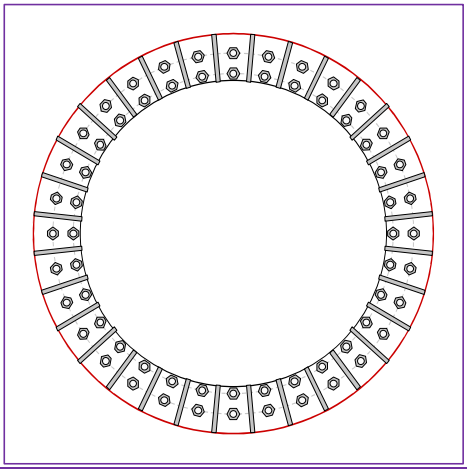
Applied Loads	
Moment (kip-ft)	293.08
Axial Force (kips)	24.41
Shear Force (kips)	51.17

**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)	4.12	
Allowable (kips)	54.54	
Stress Rating:	**7.2%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**
Tension Side Stress Rating:	**Pirod OK**

Top Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Bottom Stiffener Capacity

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Top Pole Capacity

Punching Shear:	**Pirod OK**

Bottom Pole Capacity

Punching Shear:	**Pirod OK**

CCIplate

Elevation (ft)	20.083	*(Flange)*

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending
1	Yes	Yes	Yes
2	No	No	No

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	I_w (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1	A325	53	0.5	0	N-Included		No
2	1	11.25	1	A325	53	0.5	0	N-Included		No
3	1	22.5	1	A325	53	0.5	0	N-Included		No
4	1	33.75	1	A325	53	0.5	0	N-Included		No
5	1	45	1	A325	53	0.5	0	N-Included		No
6	1	56.25	1	A325	53	0.5	0	N-Included		No
7	1	67.5	1	A325	53	0.5	0	N-Included		No
8	1	78.75	1	A325	53	0.5	0	N-Included		No
9	1	90	1	A325	53	0.5	0	N-Included		No
10	1	101.25	1	A325	53	0.5	0	N-Included		No
11	1	112.5	1	A325	53	0.5	0	N-Included		No
12	1	123.75	1	A325	53	0.5	0	N-Included		No
13	1	135	1	A325	53	0.5	0	N-Included		No
14	1	146.25	1	A325	53	0.5	0	N-Included		No
15	1	157.5	1	A325	53	0.5	0	N-Included		No
16	1	168.75	1	A325	53	0.5	0	N-Included		No
17	1	180	1	A325	53	0.5	0	N-Included		No
18	1	191.25	1	A325	53	0.5	0	N-Included		No
19	1	202.5	1	A325	53	0.5	0	N-Included		No
20	1	213.75	1	A325	53	0.5	0	N-Included		No
21	1	225	1	A325	53	0.5	0	N-Included		No
22	1	236.25	1	A325	53	0.5	0	N-Included		No
23	1	247.5	1	A325	53	0.5	0	N-Included		No
24	1	258.75	1	A325	53	0.5	0	N-Included		No
25	1	270	1	A325	53	0.5	0	N-Included		No
26	1	281.25	1	A325	53	0.5	0	N-Included		No
27	1	292.5	1	A325	53	0.5	0	N-Included		No
28	1	303.75	1	A325	53	0.5	0	N-Included		No
29	1	315	1	A325	53	0.5	0	N-Included		No
30	1	326.25	1	A325	53	0.5	0	N-Included		No
31	1	337.5	1	A325	53	0.5	0	N-Included		No
32	1	348.75	1	A325	53	0.5	0	N-Included		No
33	2	0	1	A325	47	0.5	0	N-Included		No
34	2	11.25	1	A325	47	0.5	0	N-Included		No
35	2	22.5	1	A325	47	0.5	0	N-Included		No
36	2	33.75	1	A325	47	0.5	0	N-Included		No
37	2	45	1	A325	47	0.5	0	N-Included		No
38	2	56.25	1	A325	47	0.5	0	N-Included		No
39	2	67.5	1	A325	47	0.5	0	N-Included		No
40	2	78.75	1	A325	47	0.5	0	N-Included		No
41	2	90	1	A325	47	0.5	0	N-Included		No
42	2	101.25	1	A325	47	0.5	0	N-Included		No
43	2	112.5	1	A325	47	0.5	0	N-Included		No
44	2	123.75	1	A325	47	0.5	0	N-Included		No
45	2	135	1	A325	47	0.5	0	N-Included		No
46	2	146.25	1	A325	47	0.5	0	N-Included		No
47	2	157.5	1	A325	47	0.5	0	N-Included		No
48	2	168.75	1	A325	47	0.5	0	N-Included		No
49	2	180	1	A325	47	0.5	0	N-Included		No
50	2	191.25	1	A325	47	0.5	0	N-Included		No
51	2	202.5	1	A325	47	0.5	0	N-Included		No
52	2	213.75	1	A325	47	0.5	0	N-Included		No
53	2	225	1	A325	47	0.5	0	N-Included		No
54	2	236.25	1	A325	47	0.5	0	N-Included		No
55	2	247.5	1	A325	47	0.5	0	N-Included		No
56	2	258.75	1	A325	47	0.5	0	N-Included		No
57	2	270	1	A325	47	0.5	0	N-Included		No
58	2	281.25	1	A325	47	0.5	0	N-Included		No
59	2	292.5	1	A325	47	0.5	0	N-Included		No
60	2	303.75	1	A325	47	0.5	0	N-Included		No
61	2	315	1	A325	47	0.5	0	N-Included		No
62	2	326.25	1	A325	47	0.5	0	N-Included		No
63	2	337.5	1	A325	47	0.5	0	N-Included		No
64	2	348.75	1	A325	47	0.5	0	N-Included		No

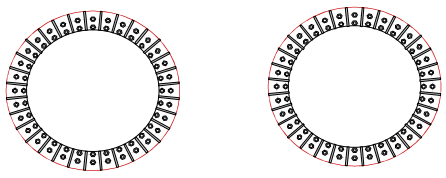
Custom Stiffener Connection - Top Plate

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Custom Stiffener Connection - Bottom Plate

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	5.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	16.875	7	10	0.625	0.5	0.5	38	Fillet			0.3125	0.3125	70
3	1	28.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	39.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	50.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	61.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	73.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	84.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	95.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	106.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	118.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	129.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	140.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	151.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	163.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	174.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	185.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	196.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	208.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	219.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	230.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	241.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	253.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	264.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	275.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	286.875	7	10	0.625	0.5	0.5	38	Fillet			0.3125	0.3125	70
27	1	298.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	309.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	320.625	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	331.875	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	343.125	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	354.375	7	10	0.625	0.5	0.5	36	Fillet			0.3125	0.3125	70

Plot Graphic



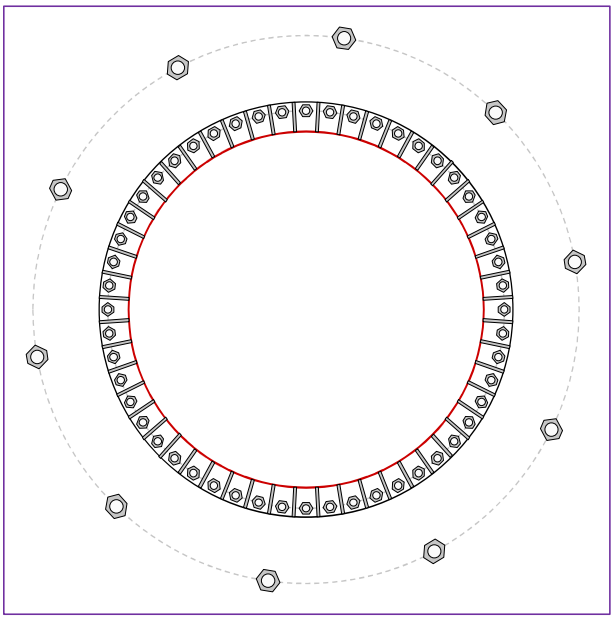
Monopole Base Plate Connection

Site Info	
BU #	826217
Site Name	Newington_1
Order #	544398 Rev. 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	5564.62
Axial Force (kips)	108.75
Shear Force (kips)	54.78

**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 = 35.74	ϕPn_c = 115.97	**Stress Rating**
Vu = 0.64	ϕVn = 52.19	**29.4%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_c = 163.5	ϕPn_c = 375.74	**Stress Rating**
Vu = 2.15	ϕVn = 169.08	**41.5%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	**Pirod OK**

Stiffener Summary

Horizontal Weld:	**Pirod OK**
Vertical Weld:	**Pirod OK**
Plate Flexure+Shear:	**Pirod OK**
Plate Tension+Shear:	**Pirod OK**
Plate Compression:	**Pirod OK**

Pole Summary

Punching Shear:	**Pirod OK**

CCIplate

Elevation (ft)	0	*(Base)*

note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	Yes	No	
2	Yes	Yes	No	No	No	

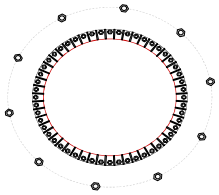
Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	I_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1.25	A687	67	0.55	0	N-Included		No
2	1	6.92307692	1.25	A687	67	0.55	0	N-Included		No
3	1	13.8461538	1.25	A687	67	0.55	0	N-Included		No
4	1	20.7692308	1.25	A687	67	0.55	0	N-Included		No
5	1	27.6923077	1.25	A687	67	0.55	0	N-Included		No
6	1	34.6153846	1.25	A687	67	0.55	0	N-Included		No
7	1	41.5384615	1.25	A687	67	0.55	0	N-Included		No
8	1	48.4615385	1.25	A687	67	0.55	0	N-Included		No
9	1	55.3846154	1.25	A687	67	0.55	0	N-Included		No
10	1	62.3076923	1.25	A687	67	0.55	0	N-Included		No
11	1	69.2307692	1.25	A687	67	0.55	0	N-Included		No
12	1	76.1538462	1.25	A687	67	0.55	0	N-Included		No
13	1	83.0769231	1.25	A687	67	0.55	0	N-Included		No
14	1	90	1.25	A687	67	0.55	0	N-Included		No
15	1	96.9230769	1.25	A687	67	0.55	0	N-Included		No
16	1	103.846154	1.25	A687	67	0.55	0	N-Included		No
17	1	110.769231	1.25	A687	67	0.55	0	N-Included		No
18	1	117.692308	1.25	A687	67	0.55	0	N-Included		No
19	1	124.615385	1.25	A687	67	0.55	0	N-Included		No
20	1	131.538462	1.25	A687	67	0.55	0	N-Included		No
21	1	138.461538	1.25	A687	67	0.55	0	N-Included		No
22	1	145.384615	1.25	A687	67	0.55	0	N-Included		No
23	1	152.307692	1.25	A687	67	0.55	0	N-Included		No
24	1	159.230769	1.25	A687	67	0.55	0	N-Included		No
25	1	166.153846	1.25	A687	67	0.55	0	N-Included		No
26	1	173.076923	1.25	A687	67	0.55	0	N-Included		No
27	1	180	1.25	A687	67	0.55	0	N-Included		No
28	1	186.923077	1.25	A687	67	0.55	0	N-Included		No
29	1	193.846154	1.25	A687	67	0.55	0	N-Included		No
30	1	200.769231	1.25	A687	67	0.55	0	N-Included		No
31	1	207.692308	1.25	A687	67	0.55	0	N-Included		No
32	1	214.615385	1.25	A687	67	0.55	0	N-Included		No
33	1	221.538462	1.25	A687	67	0.55	0	N-Included		No
34	1	228.461538	1.25	A687	67	0.55	0	N-Included		No
35	1	235.384615	1.25	A687	67	0.55	0	N-Included		No
36	1	242.307692	1.25	A687	67	0.55	0	N-Included		No
37	1	249.230769	1.25	A687	67	0.55	0	N-Included		No
38	1	256.153846	1.25	A687	67	0.55	0	N-Included		No
39	1	263.076923	1.25	A687	67	0.55	0	N-Included		No
40	1	270	1.25	A687	67	0.55	0	N-Included		No
41	1	276.923077	1.25	A687	67	0.55	0	N-Included		No
42	1	283.846154	1.25	A687	67	0.55	0	N-Included		No
43	1	290.769231	1.25	A687	67	0.55	0	N-Included		No
44	1	297.692308	1.25	A687	67	0.55	0	N-Included		No
45	1	304.615385	1.25	A687	67	0.55	0	N-Included		No
46	1	311.538462	1.25	A687	67	0.55	0	N-Included		No
47	1	318.461538	1.25	A687	67	0.55	0	N-Included		No
48	1	325.384615	1.25	A687	67	0.55	0	N-Included		No
49	1	332.307692	1.25	A687	67	0.55	0	N-Included		No
50	1	339.230769	1.25	A687	67	0.55	0	N-Included		No
51	1	346.153846	1.25	A687	67	0.55	0	N-Included		No
52	1	353.076923	1.25	A687	67	0.55	0	N-Included		No
53	2	10	2.25	A687	92.3	0.5	0	N-Included		No
54	2	46	2.25	A687	92.3	0.5	0	N-Included		No
55	2	82	2.25	A687	92.3	0.5	0	N-Included		No
56	2	118	2.25	A687	92.3	0.5	0	N-Included		No
57	2	154	2.25	A687	92.3	0.5	0	N-Included		No
58	2	190	2.25	A687	92.3	0.5	0	N-Included		No
59	2	226	2.25	A687	92.3	0.5	0	N-Included		No
60	2	262	2.25	A687	92.3	0.5	0	N-Included		No
61	2	298	2.25	A687	92.3	0.5	0	N-Included		No
62	2	334	2.25	A687	92.3	0.5	0	N-Included		No

Custom Stiffener Connection

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	3.46153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
2	1	10.3846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
3	1	17.3076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
4	1	24.2307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
5	1	31.1538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
6	1	38.0769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
7	1	45	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
8	1	51.9230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
9	1	58.8461538	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
10	1	65.7692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
11	1	72.6923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
12	1	79.6153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
13	1	86.5384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
14	1	93.4615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
15	1	100.384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
16	1	107.307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
17	1	114.230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
18	1	121.153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
19	1	128.076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
20	1	135	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
21	1	141.923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
22	1	148.846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
23	1	155.769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
24	1	162.692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
25	1	169.615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
26	1	176.538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
27	1	183.461538	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
28	1	190.384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
29	1	197.307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
30	1	204.230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
31	1	211.153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
32	1	218.076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
33	1	225	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
34	1	231.923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
35	1	238.846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
36	1	245.769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
37	1	252.692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
38	1	259.615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
39	1	266.538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
40	1	273.461538	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
41	1	280.384615	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
42	1	287.307692	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
43	1	294.230769	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
44	1	301.153846	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
45	1	308.076923	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
46	1	315	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
47	1	321.923077	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
48	1	328.846154	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
49	1	335.769231	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
50	1	342.692308	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
51	1	349.615385	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70
52	1	356.538462	5	6	0.5	0.5	0.5	36	Fillet			0.3125	0.3125	70

Plot Graphic



Pier and Pad Foundation

BU # :	826217
Site Name:	Newington_1
App. Number:	544398 Rev. 0

TIA-222 Revision:	H
Tower Type:	Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp}:	108.75	kips
Base Shear, Vu_comp:	54.78	kips
Moment, M_u:	4364.62	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_1:	20.5	ft
Pad Thickness, **T**:	2.5	ft
Pad Rebar Size (Bottom dir. 2), Sp_2:	11	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	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, δc:	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**:	N/A	ft

<--Toggle between Gross and Net

Foundation Analysis Checks				
	Capacity	**Demand**	**Rating***	**Check**
Lateral (Sliding) (kips)	334.53	54.78	**15.6%**	**Pass**
Bearing Pressure (ksf)	12.00	5.14	**42.9%**	**Pass**
*Overturning (kip*ft)*	6426.71	4896.44	**76.2%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	5685.32	4748.08	**79.5%**	**Pass**
Pier Compression (kip)	24494.62	157.24	**0.6%**	**Pass**
*Pad Flexure (kip*ft)*	4887.26	2458.32	**47.9%**	**Pass**
Pad Shear - 1-way (kips)	580.76	444.84	**72.9%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.000	**0.0%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	6892.45	2848.85	**39.4%**	**Pass**

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

Soil Rating*:	**76.2%**
Structural Rating*:	**79.5%**

Version 4.0.1

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

Ultimate windspeed of 125 mph is used as per Berlin city exception

Data Accessed: Sat Mar 20 2021

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

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

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

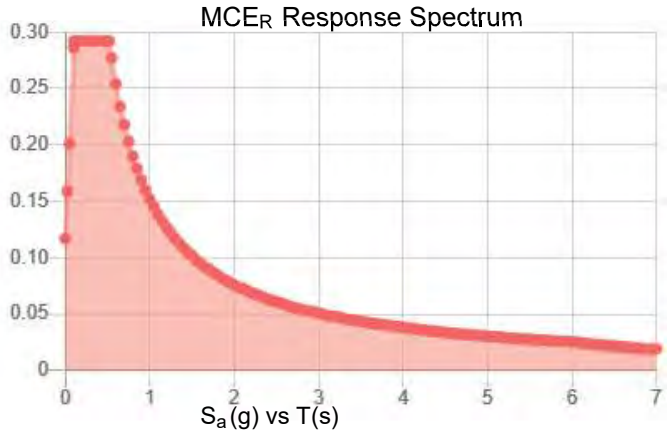
Seismic

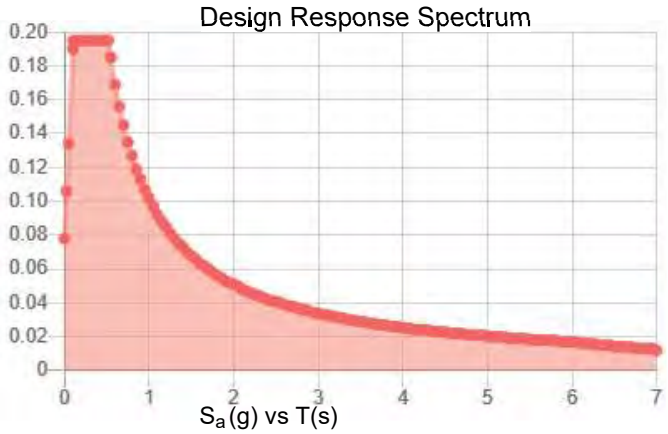
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.183	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: Sat Mar 20 2021

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

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	5 F
Gust Speed:	50 mph

Ice thickness 1"*2=2"

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Sat Mar 20 2021

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

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

Exhibit E

Mount Analysis

Date: March 2, 2021

Darcy Tarr
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277
(704) 405-6589

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

Subject:	**Mount Analysis 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:	634974
	Crown Castle Order Number:	544398, Rev.0
Engineering Firm Designation:	**B+T Group Report Designation:**	87581.027.01
Site Data:	**240 Kensington Road, Berlin, CT, Hartford County, 06037** **Latitude 41° 37' 34.30" Longitude -72° 46' 32.33"**	
Structure Information:	**Tower Height & Type:**	**191.667 ft. Monopole**
	Mount Elevation:	**181 ft.**
	Mount Type:	**16 ft. Platform Mount**

Dear Ms. Tarr,

B+T Group is pleased to submit this **"Mount Analysis 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.

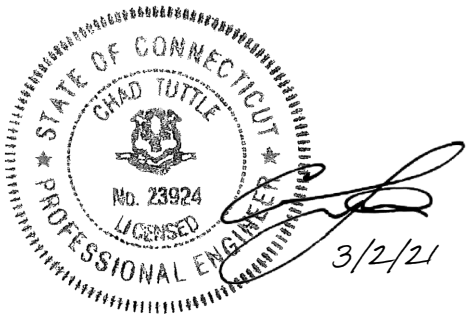
The purpose of the analysis is to determine acceptability of the mount's stress level. Based on our analysis we have determined the stress level to be:

Platform Mount **Sufficient**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code (2015 IBC). Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount structural analysis prepared by: Nitin K Manjunath

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/10/2022



Chad E. Tuttle, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

This is an existing 16' platform mount, analyzed & mapped by B+T Group.

The mount has been modified per reinforcement drawings prepared by B+T Group, in August of 2019. Reinforcement consists of Support Rail Kit.

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.)	Qty.	Manufacturer	Model / Type	Mount / Modification Details
181	181	3	Ericsson	AIR -32 B2A/B66AA	16' Platform Mount
		3	Ericsson	AIR6449 B41_T-Mobile	
		3	RFS/Celwave	APXVAARR24_43-U-NA20	
		3	Commscope	ATBT-BOTTOM-24V	
		3	Ericsson	RADIO 4415 B25_TMO	
		3	Ericsson	RADIO 4449 B71 B85A_T-Mobile	
	181	2	Kathrein	OGB4-900D	

Table 2 - Documents Provided

Document	Remarks	Reference	Source
CCI Order	Existing Loading Proposed Loading	Date: 02/23/2021	Crown Castle
RFDS		Date: 02/17/2021	
Previous MA	B+ T Group	Date: 08/12/2019	On File
Mount Mapping		Date: 06/24/2019	

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 19.0.1), 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 D).

3.2) Assumptions

1. The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design, TIA Standards, and/or 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.
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	Centerline (ft.)	Critical Member	% Capacity	Pass / Fail
1	Main Horizontals	181	3	63.4	Pass
	Supporting Tubes	181	89	66.2	Pass
	Connection Plates	181	91	17.0	Pass
	Solid Rods	181	63	35.6	Pass
	Mount Pipes	181	85	99.5	Pass
	Connection Angles	181	105	36.4	Pass
	Support Rails	181	101	55.6	Pass
2	Connection Bolts	181	-	77.58	Pass

Structure Rating (max from all components) =	**99.5%**

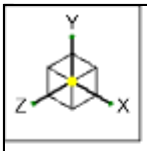
Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) See additional documentation in "Appendix D - Additional Calculations" for calculations supporting the % capacity reported.

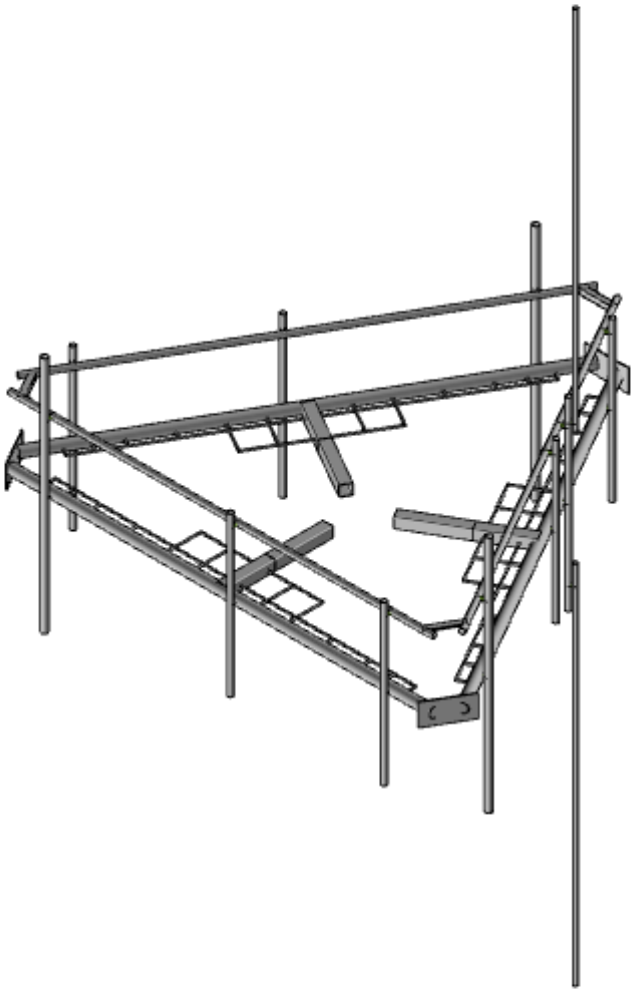
4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

APPENDIX A

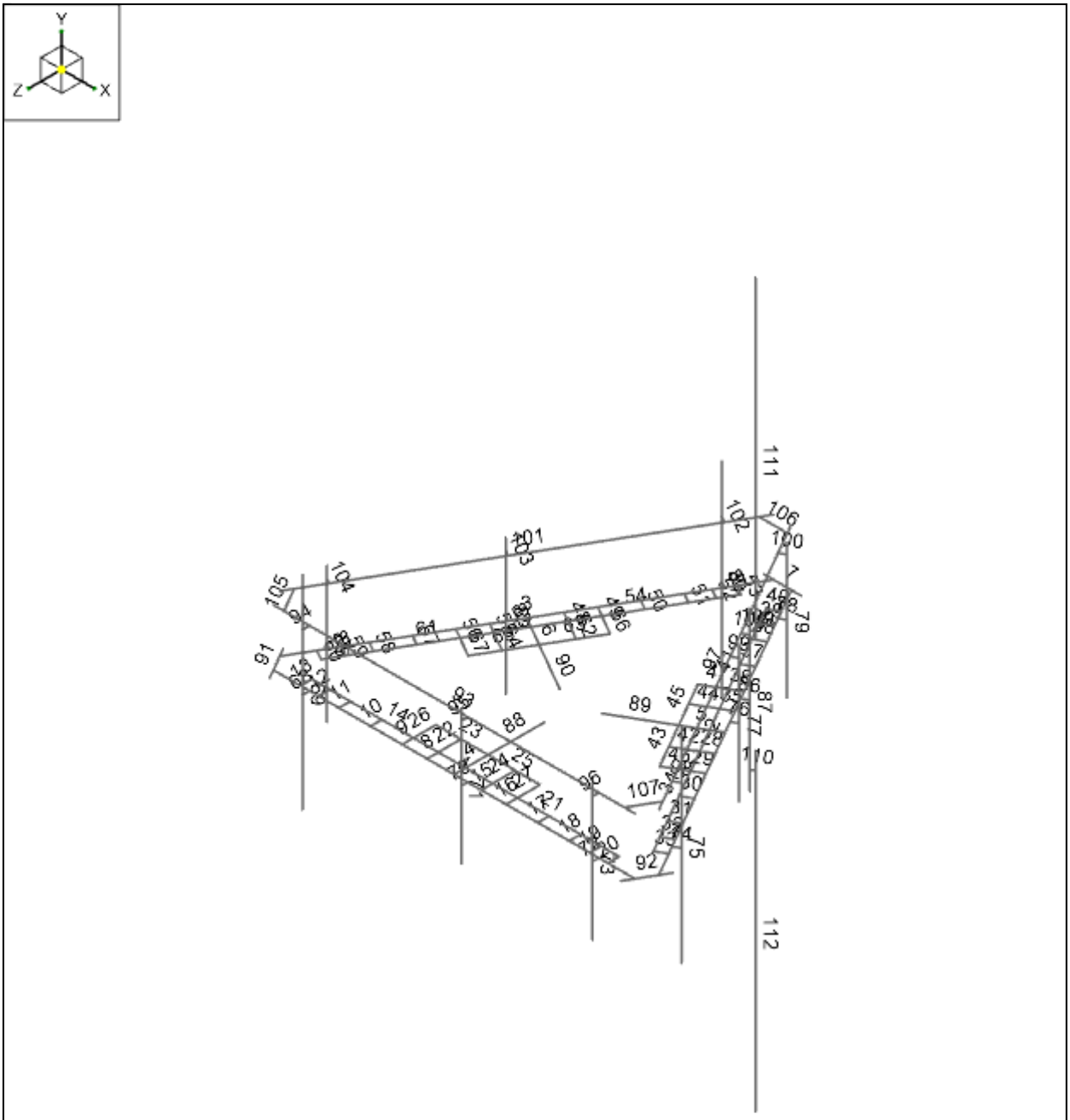
WIRE FRAME AND RENDERED MODELS





Envelope Only Solution

B+T Group	826217 - Newington_1	AA1
AA		Mar 02, 2021
87581.027.01		87581_027_01_Newington_1…



Envelope Only Solution

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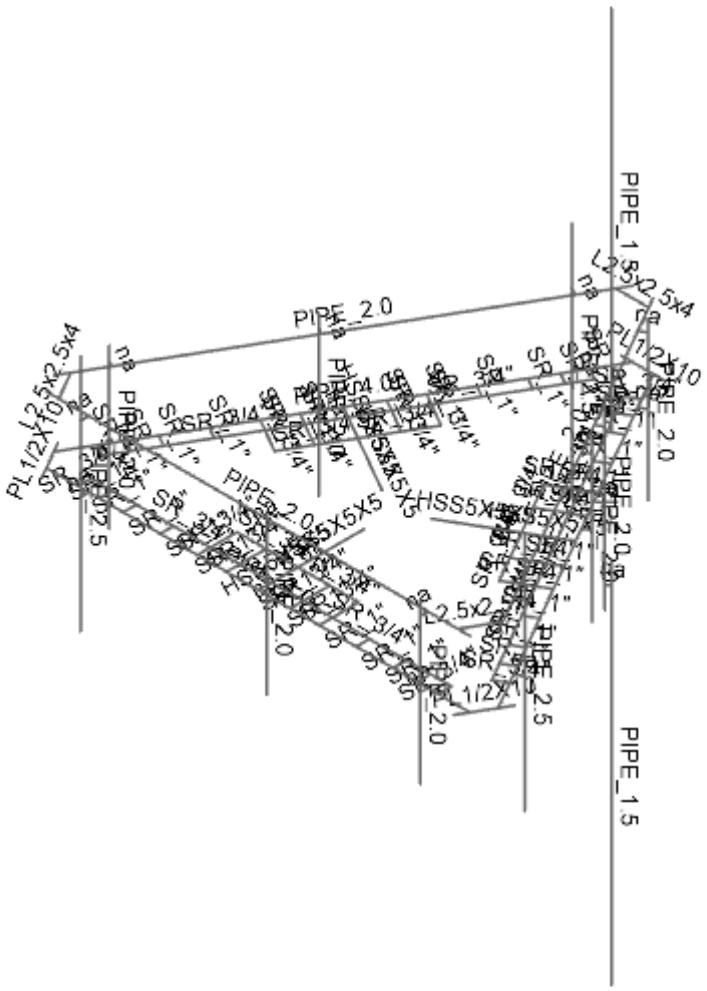

Envelope Only Solution

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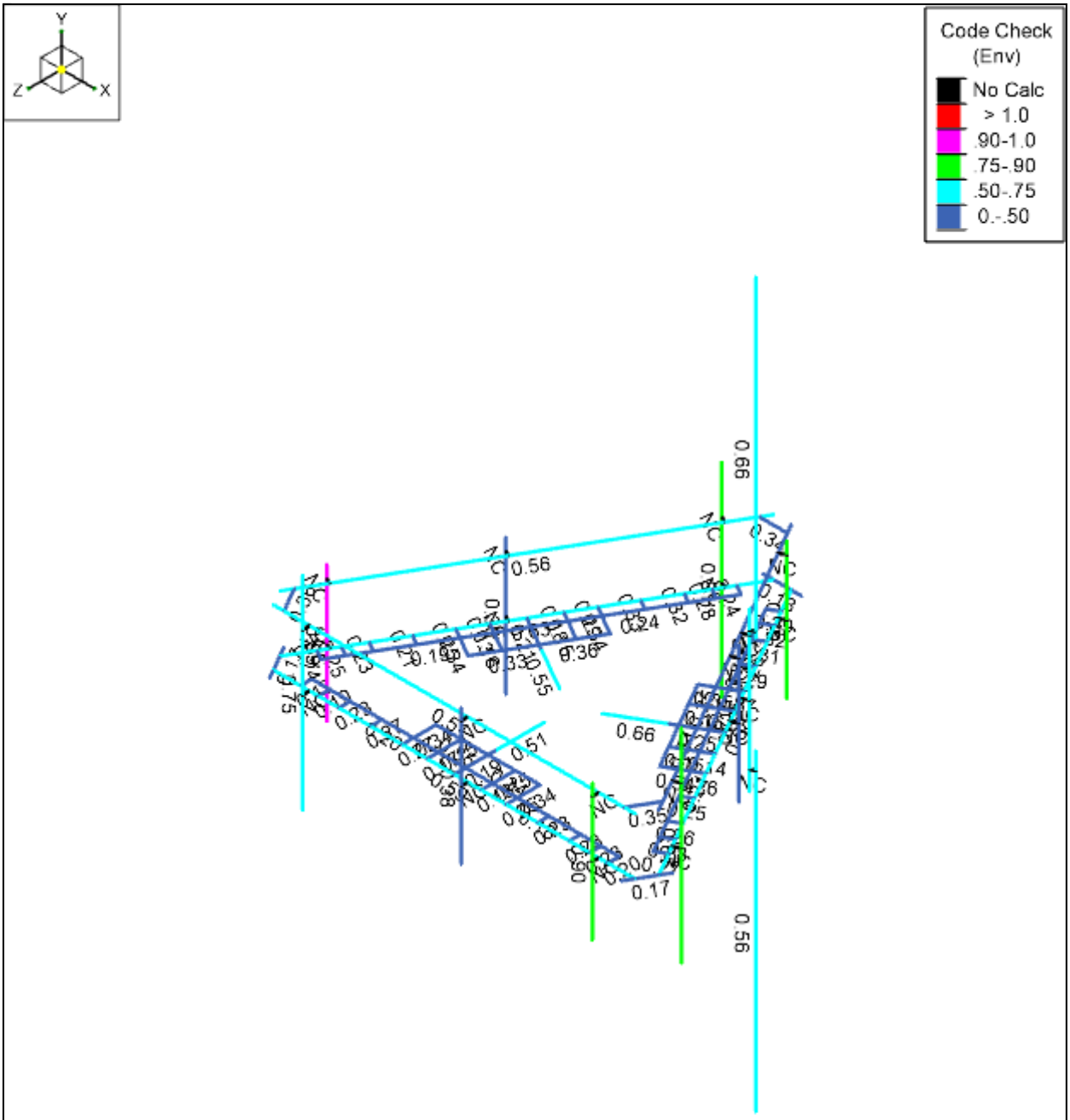

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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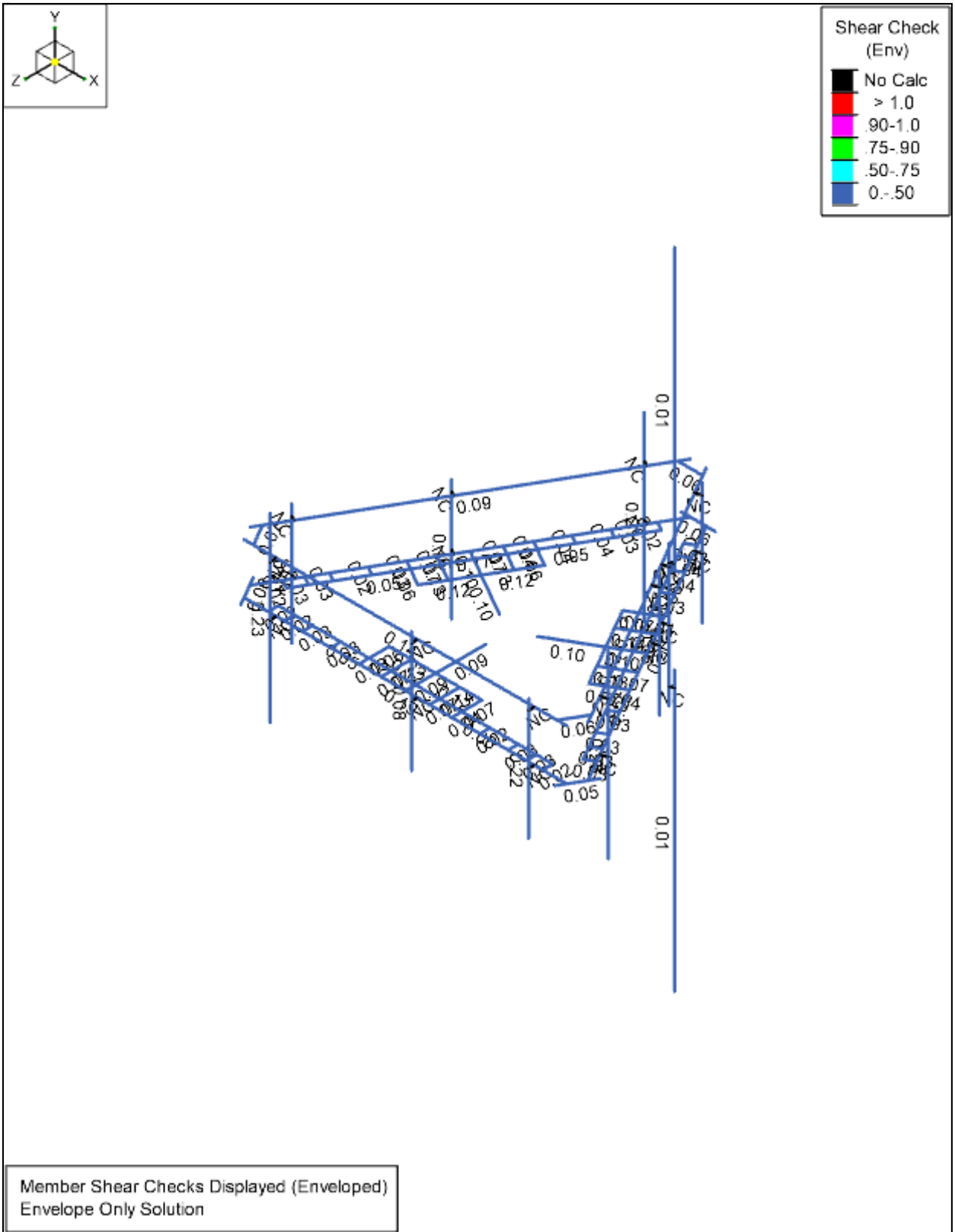
87581.027.01		87581_027_01_Newington_1…



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	826217 - Newington_1	AA5
AA		Mar 02, 2021
87581.027.01		87581_027_01_Newington_1…

APPENDIX B

SOFTWARE INPUT CALCULATIONS

PROJECT	**87581.027.01 - Newington_1,**		**KSC**
SUBJECT	**Platform Mount Mount Analysis**		
DATE	**03/02/21**	PAGE	OF

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74159
(918) 587-4630

Tower Type		:	Monopole		
Ground Elevation	z_s	:	133	ft	[ASCE7 Hazard Tool]
Tower Height		:	191.67	ft	
Mount Elevation		:	181.00	ft	
Antenna Elevation		:	181.00	ft	
Crest Height		:	0	ft	
Risk Category		:	II		[Table 2-1]
Exposure Category		:	B		[Sec. 2.6.5.1.2]
Topography Category		:	1.00		[Sec. 2.6.6.2]
Wind Velocity	V	:	125	mph	[ASCE7 Hazard Tool]
Ice wind Velocity	V_i	:	50	mph	[ASCE7 Hazard Tool]
Service Velocity	V_s	:	30	mph	[ASCE7 Hazard Tool]
Base Ice thickness	t_i	:	2.00	in	[ASCE7 Hazard Tool]
Seismic Design Cat.		:	B		[ASCE7 Hazard Tool]
	S_S	:	0.18		
	S_1	:	0.06		
	S_{DS}	:	0.20		
	S_{D1}	:	0.10		

Gust Factor	G_h	:	1.00		[Sec. 16.6]
Pressure Coefficient	K_z	:	1.17		[Sec. 2.6.5.2]
Topography Factor	K_{zt}	:	1.00		[Sec. 2.6.6]
Elevation Factor	K_e	:	1.00		[Sec. 2.6.8]
Directionality Factor	K_d	:	0.95		[Sec. 16.6]
Shielding Factor	K_a	:	0.90		[Sec. 16.6]
Design Ice Thickness	t_{iz}	:	2.37	in	[Sec. 2.6.10]

Importance Factor	I_e	:	1		[Table 2-3]
Response Coefficient	C_s	:	0.098		[Sec. 2.7.7.1]
Amplification	A_s	:	2.777326		[Sec. 16.7]

	q_z	:	44.28	psf

PROJECT	**87581.027.01 - Newington_1,**		**KSC**
SUBJECT	**Platform Mount Mount Analysis**		
DATE	**03/02/21**	PAGE	OF

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74159
(918) 587-4630

Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	EPA_N (ft^2)	EPA_T (ft^2)	$EPA_{N\text{-}Ice}$ (ft^2)	$EPA_{T\text{-}Ice}$ (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	2.71	2.54	1.71	3.76	2.86	0.09	0.06	0.02	0.01
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.54	1.71	3.76	2.86	0.09	0.06	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.36	0.98	3.32	1.75	0.11	0.05	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.36	0.98	3.32	1.75	0.11	0.05	0.02	0.01
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.99	2.90	10.04	4.70	0.32	0.12	0.06	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.99	2.90	10.04	4.70	0.32	0.12	0.06	0.03
ERICSSON	RADIO 4415 B25_TMO	1	1.22	1.20	1.55	0.72	2.69	1.63	0.07	0.03	0.01	0.01
ERICSSON	ADIO 4449 B71 B85A_T-MOBIL	1	1.36	1.20	1.64	1.32	2.82	2.42	0.08	0.06	0.01	0.01
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.54	1.71	3.76	2.86	0.09	0.06	0.02	0.01
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.54	1.71	3.76	2.86	0.09	0.06	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.36	0.98	3.32	1.75	0.11	0.05	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.36	0.98	3.32	1.75	0.11	0.05	0.02	0.01
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.99	2.90	10.04	4.70	0.32	0.12	0.06	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.99	2.90	10.04	4.70	0.32	0.12	0.06	0.03
ERICSSON	RADIO 4415 B25_TMO	1	1.22	1.20	1.55	0.72	2.69	1.63	0.07	0.03	0.01	0.01
ERICSSON	ADIO 4449 B71 B85A_T-MOBIL	1	1.36	1.20	1.64	1.32	2.82	2.42	0.08	0.06	0.01	0.01

Manufacturer	**Model**	**Qty**	**Aspect Ratio**	**C_a** **flat/round**	**EPA_N (ft^2)**	**EPA_T (ft^2)**	**$EPA_{N\text{-}Ice}$ (ft^2)**	**$EPA_{T\text{-}Ice}$ (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	2.54	1.71	3.76	2.86	0.00	0.06	0.02	0.01
ERICSSON	AIR -32 B2A/B66AA	0.5	4.39	1.28	2.54	1.71	3.76	2.86	0.00	0.06	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.36	0.98	3.32	1.75	0.00	0.05	0.02	0.01
ERICSSON	AIR6449 B41_T-MOBILE	0.5	1.61	1.20	2.36	0.98	3.32	1.75	0.00	0.05	0.02	0.01
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.99	2.90	10.04	4.70	0.00	0.12	0.06	0.03
RFS/CELWAVE	APXVAARR24_43-U-NA20	0.5	4.00	1.27	7.99	2.90	10.04	4.70	0.00	0.12	0.06	0.03
ERICSSON	RADIO 4415 B25_TMO	1	1.22	1.20	1.55	0.72	2.69	1.63	0.00	0.03	0.01	0.01
ERICSSON	ADIO 4449 B71 B85A_T-MOBII	1	1.36	1.20	1.64	1.32	2.82	2.42	0.00	0.06	0.01	0.01
COMMSCOPE	ATBT-BOTTOM-24V	1	2.39	1.20	0.05	0.09	0.41	0.48	0.00	0.00	0.00	0.00
COMMSCOPE	ATBT-BOTTOM-24V	1	2.39	1.20	0.05	0.09	0.41	0.48	0.00	0.00	0.00	0.00
COMMSCOPE	ATBT-BOTTOM-24V	1	2.39	1.20	0.05	0.09	0.41	0.48	0.00	0.00	0.00	0.00

PROJECT	**87581.027.01 - Newington_1,**		**KSC**
SUBJECT	**Platform Mount Mount Analysis**		
DATE	**03/02/21**	PAGE 4	OF

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74159
(918) 587-4630

Manufacturer	Model	Qty	Aspect Ratio	C_a flat/round	EPA_N (ft^2)	EPA_T (ft^2)	$EPA_{N\text{-}Ice}$ (ft^2)	$EPA_{T\text{-}Ice}$ (ft^2)	$F_{A\ No\ Ice\ (N)}$	$F_{A\ No\ Ice\ (T)}$	$F_{A\ Ice\ (N)}$	$F_{A\ Ice\ (T)}$
Andrew	DB589-A	1	82.90	1.20	2.30	2.30	7.98	7.98	0.11	0.11	0.02	0.02
Andrew	DB589-A	1	82.90	1.20	2.30	2.30	7.98	7.98	0.11	0.11	0.02	0.02

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [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 Rect	Typical	5.26	19	19	31.2
3	F1-C1	PL 1/2X10	Beam	RECT	A36 Gr.36	Typical	5	0.104	41.667	0.404
4	F1-SR1	SR_1"	Beam	BAR	A36 Gr.36	Typical	0.785	0.049	0.049	0.098
5	F1-SR2	SR_3/4"	Beam	BAR	A36 Gr.36	Typical	0.442	0.016	0.016	0.031
6	MF-P1	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
7	F1-CA1	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	0.692	0.692	0.026
8	Support Rail	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
9	Omni	PIPE_1.5	Column	Pipe	A53 Gr.B	Typical	0.749	0.293	0.293	0.586
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 Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	1	2	3		MF-H1	Beam	Pipe	A53 Gr.B	Typical
2	2	4	5		MF-H1	Beam	Pipe	A53 Gr.B	Typical
3	3	6	7		MF-H1	Beam	Pipe	A53 Gr.B	Typical
4	4	156	8		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
5	5	158	9		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
6	6	160	10		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
7	7	11	12		F1-C1	Beam	RECT	A36 Gr.36	Typical
8	8	13	34		F1-SR1	Beam	BAR	A36 Gr.36	Typical
9	9	14	39		F1-SR1	Beam	BAR	A36 Gr.36	Typical
10	10	15	16		F1-SR1	Beam	BAR	A36 Gr.36	Typical
11	11	17	18		F1-SR1	Beam	BAR	A36 Gr.36	Typical
12	12	19	20		F1-SR1	Beam	BAR	A36 Gr.36	Typical
13	13	21	22		F1-SR2	Beam	BAR	A36 Gr.36	Typical
14	14	32	22		F1-SR2	Beam	BAR	A36 Gr.36	Typical
15	15	23	36		F1-SR1	Beam	BAR	A36 Gr.36	Typical
16	16	24	41		F1-SR1	Beam	BAR	A36 Gr.36	Typical
17	17	25	26		F1-SR1	Beam	BAR	A36 Gr.36	Typical
18	18	27	28		F1-SR1	Beam	BAR	A36 Gr.36	Typical
19	19	29	30		F1-SR1	Beam	BAR	A36 Gr.36	Typical
20	20	31	33		F1-SR2	Beam	BAR	A36 Gr.36	Typical
21	21	32	33		F1-SR2	Beam	BAR	A36 Gr.36	Typical
22	22	34	35		F1-SR2	Beam	BAR	A36 Gr.36	Typical
23	23	40	38		F1-SR2	Beam	BAR	A36 Gr.36	Typical
24	24	36	37		F1-SR2	Beam	BAR	A36 Gr.36	Typical
25	25	42	38		F1-SR2	Beam	BAR	A36 Gr.36	Typical
26	26	39	40		F1-SR2	Beam	BAR	A36 Gr.36	Typical
27	27	41	42		F1-SR2	Beam	BAR	A36 Gr.36	Typical
28	28	43	64		F1-SR1	Beam	BAR	A36 Gr.36	Typical
29	29	44	69		F1-SR1	Beam	BAR	A36 Gr.36	Typical
30	30	45	46		F1-SR1	Beam	BAR	A36 Gr.36	Typical
31	31	47	48		F1-SR1	Beam	BAR	A36 Gr.36	Typical
32	32	49	50		F1-SR1	Beam	BAR	A36 Gr.36	Typical
33	33	51	52		F1-SR2	Beam	BAR	A36 Gr.36	Typical
34	34	62	52		F1-SR2	Beam	BAR	A36 Gr.36	Typical
35	35	53	66		F1-SR1	Beam	BAR	A36 Gr.36	Typical
36	36	54	71		F1-SR1	Beam	BAR	A36 Gr.36	Typical
37	37	55	56		F1-SR1	Beam	BAR	A36 Gr.36	Typical
38	38	57	58		F1-SR1	Beam	BAR	A36 Gr.36	Typical
39	39	59	60		F1-SR1	Beam	BAR	A36 Gr.36	Typical
40	40	61	63		F1-SR2	Beam	BAR	A36 Gr.36	Typical
41	41	62	63		F1-SR2	Beam	BAR	A36 Gr.36	Typical
42	42	64	65		F1-SR2	Beam	BAR	A36 Gr.36	Typical
43	43	70	68		F1-SR2	Beam	BAR	A36 Gr.36	Typical
44	44	66	67		F1-SR2	Beam	BAR	A36 Gr.36	Typical
45	45	72	68		F1-SR2	Beam	BAR	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
46	46	69	70		F1-SR2	Beam	BAR	A36 Gr.36	Typical
47	47	71	72		F1-SR2	Beam	BAR	A36 Gr.36	Typical
48	48	73	94		F1-SR1	Beam	BAR	A36 Gr.36	Typical
49	49	74	99		F1-SR1	Beam	BAR	A36 Gr.36	Typical
50	50	75	76		F1-SR1	Beam	BAR	A36 Gr.36	Typical
51	51	77	78		F1-SR1	Beam	BAR	A36 Gr.36	Typical
52	52	79	80		F1-SR1	Beam	BAR	A36 Gr.36	Typical
53	53	81	82		F1-SR2	Beam	BAR	A36 Gr.36	Typical
54	54	92	82		F1-SR2	Beam	BAR	A36 Gr.36	Typical
55	55	83	96		F1-SR1	Beam	BAR	A36 Gr.36	Typical
56	56	84	101		F1-SR1	Beam	BAR	A36 Gr.36	Typical
57	57	85	86		F1-SR1	Beam	BAR	A36 Gr.36	Typical
58	58	87	88		F1-SR1	Beam	BAR	A36 Gr.36	Typical
59	59	89	90		F1-SR1	Beam	BAR	A36 Gr.36	Typical
60	60	91	93		F1-SR2	Beam	BAR	A36 Gr.36	Typical
61	61	92	93		F1-SR2	Beam	BAR	A36 Gr.36	Typical
62	62	94	95		F1-SR2	Beam	BAR	A36 Gr.36	Typical
63	63	100	98		F1-SR2	Beam	BAR	A36 Gr.36	Typical
64	64	96	97		F1-SR2	Beam	BAR	A36 Gr.36	Typical
65	65	102	98		F1-SR2	Beam	BAR	A36 Gr.36	Typical
66	66	99	100		F1-SR2	Beam	BAR	A36 Gr.36	Typical
67	67	101	102		F1-SR2	Beam	BAR	A36 Gr.36	Typical
68	68	115	116		RIGID	None	None	RIGID	Typical
69	69	117	118		MF-P2	Column	Pipe	A53 Gr.B	Typical
70	70	119	120		RIGID	None	None	RIGID	Typical
71	71	121	122		MF-P1	Column	Pipe	A53 Gr.B	Typical
72	72	123	124		RIGID	None	None	RIGID	Typical
73	73	125	126		MF-P1	Column	Pipe	A53 Gr.B	Typical
74	74	127	128		RIGID	None	None	RIGID	Typical
75	75	129	130		MF-P2	Column	Pipe	A53 Gr.B	Typical
76	76	131	132		RIGID	None	None	RIGID	Typical
77	77	133	134		MF-P1	Column	Pipe	A53 Gr.B	Typical
78	78	135	136		RIGID	None	None	RIGID	Typical
79	79	137	138		MF-P1	Column	Pipe	A53 Gr.B	Typical
80	80	139	140		RIGID	None	None	RIGID	Typical
81	81	141	142		MF-P2	Column	Pipe	A53 Gr.B	Typical
82	82	143	144		RIGID	None	None	RIGID	Typical
83	83	145	146		MF-P1	Column	Pipe	A53 Gr.B	Typical
84	84	147	148		RIGID	None	None	RIGID	Typical
85	85	149	150		MF-P1	Column	Pipe	A53 Gr.B	Typical
86	86	151	152		RIGID	None	None	RIGID	Typical
87	87	153	154		MF-P1	Column	Pipe	A53 Gr.B	Typical
88	88	155	156		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
89	89	157	158		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
90	90	159	160		F1-S1	Beam	Tube	A500 Gr.B Rect	Typical
91	91	179	180		F1-C1	Beam	RECT	A36 Gr.36	Typical
92	92	181	182		F1-C1	Beam	RECT	A36 Gr.36	Typical
93	93	183	184		Support Rail	Beam	Pipe	A53 Gr.B	Typical
94	94	185	186		RIGID	None	None	RIGID	Typical
95	95	187	188		RIGID	None	None	RIGID	Typical
96	96	189	190		RIGID	None	None	RIGID	Typical
97	97	191	192		Support Rail	Beam	Pipe	A53 Gr.B	Typical
98	98	193	194		RIGID	None	None	RIGID	Typical
99	99	195	196		RIGID	None	None	RIGID	Typical
100	100	197	198		RIGID	None	None	RIGID	Typical
101	101	199	200		Support Rail	Beam	Pipe	A53 Gr.B	Typical
102	102	201	202		RIGID	None	None	RIGID	Typical
103	103	203	204		RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
104	104	205	206		RIGID	None	None	RIGID	Typical
105	105	207	212	180	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
106	106	211	210	180	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
107	107	209	208	180	F1-CA1	Beam	Single Angle	A36 Gr.36	Typical
108	108	213	214		RIGID	None	None	RIGID	Typical
109	109	217	215		RIGID	None	None	RIGID	Typical
110	110	218	216		RIGID	None	None	RIGID	Typical
111	111	219	220		Omni	Column	Pipe	A53 Gr.B	Typical
112	112	221	222		Omni	Column	Pipe	A53 Gr.B	Typical

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Y	-0.066	%10
2	73	Y	-0.066	%75
3	73	Y	0	0
4	73	Y	0	0
5	73	Y	0	0
6	71	Y	-0.057	%5
7	71	Y	-0.057	%45
8	71	Y	0	0
9	71	Y	0	0
10	71	Y	0	0
11	69	Y	-0.064	%5
12	69	Y	-0.064	%85
13	69	Y	-0.047	%70
14	69	Y	-0.073	%30
15	69	Y	0	0
16	85	Y	-0.066	%10
17	85	Y	-0.066	%75
18	85	Y	0	0
19	85	Y	0	0
20	85	Y	0	0
21	83	Y	-0.057	%5
22	83	Y	-0.057	%45
23	83	Y	0	0
24	83	Y	0	0
25	83	Y	0	0
26	81	Y	-0.064	%5
27	81	Y	-0.064	%85
28	81	Y	-0.047	%70
29	81	Y	-0.073	%30
30	81	Y	0	0
31	79	Y	-0.066	%10
32	79	Y	-0.066	%75
33	79	Y	0	0
34	79	Y	0	0
35	79	Y	0	0
36	77	Y	-0.057	%5
37	77	Y	-0.057	%45
38	77	Y	0	0
39	77	Y	0	0
40	77	Y	0	0
41	75	Y	-0.064	%5
42	75	Y	-0.064	%85
43	75	Y	-0.047	%70
44	75	Y	-0.073	%30
45	75	Y	0	0
46	1	Y	-0.003	%45

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
47	1	Y	0	0
48	1	Y	0	0
49	1	Y	0	0
50	1	Y	0	0
51	3	Y	-0.003	%45
52	3	Y	0	0
53	3	Y	0	0
54	3	Y	0	0
55	3	Y	0	0
56	2	Y	-0.003	%45
57	2	Y	0	0
58	2	Y	0	0
59	2	Y	0	0
60	2	Y	0	0
61	111	Y	-0.012	%90
62	111	Y	0	0
63	111	Y	0	0
64	111	Y	0	0
65	111	Y	0	0
66	112	Y	-0.012	%10
67	112	Y	0	0
68	112	Y	0	0
69	112	Y	0	0
70	112	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Z	-0.086	%10
2	73	Z	-0.086	%75
3	73	Z	0	0
4	73	Z	0	0
5	73	Z	0	0
6	71	Z	-0.113	%5
7	71	Z	-0.113	%45
8	71	Z	0	0
9	71	Z	0	0
10	71	Z	0	0
11	69	Z	-0.325	%5
12	69	Z	-0.325	%85
13	69	Z	-0.074	%70
14	69	Z	-0.079	%30
15	69	Z	0	0
16	85	Z	-0.086	%10
17	85	Z	-0.086	%75
18	85	Z	0	0
19	85	Z	0	0
20	85	Z	0	0
21	83	Z	-0.113	%5
22	83	Z	-0.113	%45
23	83	Z	0	0
24	83	Z	0	0
25	83	Z	0	0
26	81	Z	-0.325	%5
27	81	Z	-0.325	%85
28	81	Z	-0.074	%70
29	81	Z	-0.079	%30
30	81	Z	0	0
31	79	Z	-0.086	%10

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
32	79	Z	-0.086	%75
33	79	Z	0	0
34	79	Z	0	0
35	79	Z	0	0
36	77	Z	-0.113	%5
37	77	Z	-0.113	%45
38	77	Z	0	0
39	77	Z	0	0
40	77	Z	0	0
41	75	Z	-0.325	%5
42	75	Z	-0.325	%85
43	75	Z	-0.074	%70
44	75	Z	-0.079	%30
45	75	Z	0	0
46	1	Z	-0.003	%45
47	1	Z	0	0
48	1	Z	0	0
49	1	Z	0	0
50	1	Z	0	0
51	3	Z	-0.003	%45
52	3	Z	0	0
53	3	Z	0	0
54	3	Z	0	0
55	3	Z	0	0
56	2	Z	-0.003	%45
57	2	Z	0	0
58	2	Z	0	0
59	2	Z	0	0
60	2	Z	0	0
61	111	Z	-0.11	%90
62	111	Z	0	0
63	111	Z	0	0
64	111	Z	0	0
65	111	Z	0	0
66	112	Z	-0.11	%10
67	112	Z	0	0
68	112	Z	0	0
69	112	Z	0	0
70	112	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	X	-0.056	%10
2	73	X	-0.056	%75
3	73	X	0	0
4	73	X	0	0
5	73	X	0	0
6	71	X	-0.047	%5
7	71	X	-0.047	%45
8	71	X	0	0
9	71	X	0	0
10	71	X	0	0
11	69	X	-0.118	%5
12	69	X	-0.118	%85
13	69	X	-0.035	%70
14	69	X	-0.063	%30
15	69	X	0	0
16	85	X	-0.056	%10

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
17	85	X	-0.056	%75
18	85	X	0	0
19	85	X	0	0
20	85	X	0	0
21	83	X	-0.047	%5
22	83	X	-0.047	%45
23	83	X	0	0
24	83	X	0	0
25	83	X	0	0
26	81	X	-0.118	%5
27	81	X	-0.118	%85
28	81	X	-0.035	%70
29	81	X	-0.063	%30
30	81	X	0	0
31	79	X	-0.056	%10
32	79	X	-0.056	%75
33	79	X	0	0
34	79	X	0	0
35	79	X	0	0
36	77	X	-0.047	%5
37	77	X	-0.047	%45
38	77	X	0	0
39	77	X	0	0
40	77	X	0	0
41	75	X	-0.118	%5
42	75	X	-0.118	%85
43	75	X	-0.035	%70
44	75	X	-0.063	%30
45	75	X	0	0
46	1	X	-0.004	%45
47	1	X	0	0
48	1	X	0	0
49	1	X	0	0
50	1	X	0	0
51	3	X	-0.004	%45
52	3	X	0	0
53	3	X	0	0
54	3	X	0	0
55	3	X	0	0
56	2	X	-0.004	%45
57	2	X	0	0
58	2	X	0	0
59	2	X	0	0
60	2	X	0	0
61	111	X	-0.11	%90
62	111	X	0	0
63	111	X	0	0
64	111	X	0	0
65	111	X	0	0
66	112	X	-0.11	%10
67	112	X	0	0
68	112	X	0	0
69	112	X	0	0
70	112	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Z	-0.019	%10
2	73	Z	-0.019	%75
3	73	Z	0	0
4	73	Z	0	0
5	73	Z	0	0
6	71	Z	-0.018	%5
7	71	Z	-0.018	%45
8	71	Z	0	0
9	71	Z	0	0
10	71	Z	0	0
11	69	Z	-0.063	%5
12	69	Z	-0.063	%85
13	69	Z	-0.012	%70
14	69	Z	-0.013	%30
15	69	Z	0	0
16	85	Z	-0.019	%10
17	85	Z	-0.019	%75
18	85	Z	0	0
19	85	Z	0	0
20	85	Z	0	0
21	83	Z	-0.018	%5
22	83	Z	-0.018	%45
23	83	Z	0	0
24	83	Z	0	0
25	83	Z	0	0
26	81	Z	-0.063	%5
27	81	Z	-0.063	%85
28	81	Z	-0.012	%70
29	81	Z	-0.013	%30
30	81	Z	0	0
31	79	Z	-0.019	%10
32	79	Z	-0.019	%75
33	79	Z	0	0
34	79	Z	0	0
35	79	Z	0	0
36	77	Z	-0.018	%5
37	77	Z	-0.018	%45
38	77	Z	0	0
39	77	Z	0	0
40	77	Z	0	0
41	75	Z	-0.063	%5
42	75	Z	-0.063	%85
43	75	Z	-0.012	%70
44	75	Z	-0.013	%30
45	75	Z	0	0
46	1	Z	-0.0004	%45
47	1	Z	0	0
48	1	Z	0	0
49	1	Z	0	0
50	1	Z	0	0
51	3	Z	-0.0004	%45
52	3	Z	0	0
53	3	Z	0	0
54	3	Z	0	0
55	3	Z	0	0
56	2	Z	-0.0004	%45
57	2	Z	0	0
58	2	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
59	2	Z	0	0
60	2	Z	0	0
61	111	Z	-0.018	%90
62	111	Z	0	0
63	111	Z	0	0
64	111	Z	0	0
65	111	Z	0	0
66	112	Z	-0.018	%10
67	112	Z	0	0
68	112	Z	0	0
69	112	Z	0	0
70	112	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	X	-0.014	%10
2	73	X	-0.014	%75
3	73	X	0	0
4	73	X	0	0
5	73	X	0	0
6	71	X	-0.008	%5
7	71	X	-0.008	%45
8	71	X	0	0
9	71	X	0	0
10	71	X	0	0
11	69	X	-0.029	%5
12	69	X	-0.029	%85
13	69	X	-0.006	%70
14	69	X	-0.01	%30
15	69	X	0	0
16	85	X	-0.014	%10
17	85	X	-0.014	%75
18	85	X	0	0
19	85	X	0	0
20	85	X	0	0
21	83	X	-0.008	%5
22	83	X	-0.008	%45
23	83	X	0	0
24	83	X	0	0
25	83	X	0	0
26	81	X	-0.029	%5
27	81	X	-0.029	%85
28	81	X	-0.006	%70
29	81	X	-0.01	%30
30	81	X	0	0
31	79	X	-0.014	%10
32	79	X	-0.014	%75
33	79	X	0	0
34	79	X	0	0
35	79	X	0	0
36	77	X	-0.008	%5
37	77	X	-0.008	%45
38	77	X	0	0
39	77	X	0	0
40	77	X	0	0
41	75	X	-0.029	%5
42	75	X	-0.029	%85
43	75	X	-0.006	%70

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
44	75	X	-0.01	%30
45	75	X	0	0
46	1	X	-0.0007	%45
47	1	X	0	0
48	1	X	0	0
49	1	X	0	0
50	1	X	0	0
51	3	X	-0.0007	%45
52	3	X	0	0
53	3	X	0	0
54	3	X	0	0
55	3	X	0	0
56	2	X	-0.0007	%45
57	2	X	0	0
58	2	X	0	0
59	2	X	0	0
60	2	X	0	0
61	111	X	-0.018	%90
62	111	X	0	0
63	111	X	0	0
64	111	X	0	0
65	111	X	0	0
66	112	X	-0.018	%10
67	112	X	0	0
68	112	X	0	0
69	112	X	0	0
70	112	X	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Z	-0.005	%10
2	73	Z	-0.005	%75
3	73	Z	0	0
4	73	Z	0	0
5	73	Z	0	0
6	71	Z	-0.007	%5
7	71	Z	-0.007	%45
8	71	Z	0	0
9	71	Z	0	0
10	71	Z	0	0
11	69	Z	-0.019	%5
12	69	Z	-0.019	%85
13	69	Z	-0.004	%70
14	69	Z	-0.005	%30
15	69	Z	0	0
16	85	Z	-0.005	%10
17	85	Z	-0.005	%75
18	85	Z	0	0
19	85	Z	0	0
20	85	Z	0	0
21	83	Z	-0.007	%5
22	83	Z	-0.007	%45
23	83	Z	0	0
24	83	Z	0	0
25	83	Z	0	0
26	81	Z	-0.019	%5
27	81	Z	-0.019	%85
28	81	Z	-0.004	%70

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
29	81	Z	-0.005	%30
30	81	Z	0	0
31	79	Z	-0.005	%10
32	79	Z	-0.005	%75
33	79	Z	0	0
34	79	Z	0	0
35	79	Z	0	0
36	77	Z	-0.007	%5
37	77	Z	-0.007	%45
38	77	Z	0	0
39	77	Z	0	0
40	77	Z	0	0
41	75	Z	-0.019	%5
42	75	Z	-0.019	%85
43	75	Z	-0.004	%70
44	75	Z	-0.005	%30
45	75	Z	0	0
46	1	Z	-1e-04	%45
47	1	Z	0	0
48	1	Z	0	0
49	1	Z	0	0
50	1	Z	0	0
51	3	Z	-1e-04	%45
52	3	Z	0	0
53	3	Z	0	0
54	3	Z	0	0
55	3	Z	0	0
56	2	Z	-1e-04	%45
57	2	Z	0	0
58	2	Z	0	0
59	2	Z	0	0
60	2	Z	0	0
61	111	Z	-0.006	%90
62	111	Z	0	0
63	111	Z	0	0
64	111	Z	0	0
65	111	Z	0	0
66	112	Z	-0.006	%10
67	112	Z	0	0
68	112	Z	0	0
69	112	Z	0	0
70	112	Z	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	X	-0.003	%10
2	73	X	-0.003	%75
3	73	X	0	0
4	73	X	0	0
5	73	X	0	0
6	71	X	-0.003	%5
7	71	X	-0.003	%45
8	71	X	0	0
9	71	X	0	0
10	71	X	0	0
11	69	X	-0.007	%5
12	69	X	-0.007	%85
13	69	X	-0.002	%70

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
14	69	X	-0.004	%30
15	69	X	0	0
16	85	X	-0.003	%10
17	85	X	-0.003	%75
18	85	X	0	0
19	85	X	0	0
20	85	X	0	0
21	83	X	-0.003	%5
22	83	X	-0.003	%45
23	83	X	0	0
24	83	X	0	0
25	83	X	0	0
26	81	X	-0.007	%5
27	81	X	-0.007	%85
28	81	X	-0.002	%70
29	81	X	-0.004	%30
30	81	X	0	0
31	79	X	-0.003	%10
32	79	X	-0.003	%75
33	79	X	0	0
34	79	X	0	0
35	79	X	0	0
36	77	X	-0.003	%5
37	77	X	-0.003	%45
38	77	X	0	0
39	77	X	0	0
40	77	X	0	0
41	75	X	-0.007	%5
42	75	X	-0.007	%85
43	75	X	-0.002	%70
44	75	X	-0.004	%30
45	75	X	0	0
46	1	X	-0.0002	%45
47	1	X	0	0
48	1	X	0	0
49	1	X	0	0
50	1	X	0	0
51	3	X	-0.0002	%45
52	3	X	0	0
53	3	X	0	0
54	3	X	0	0
55	3	X	0	0
56	2	X	-0.0002	%45
57	2	X	0	0
58	2	X	0	0
59	2	X	0	0
60	2	X	0	0
61	111	X	-0.006	%90
62	111	X	0	0
63	111	X	0	0
64	111	X	0	0
65	111	X	0	0
66	112	X	-0.006	%10
67	112	X	0	0
68	112	X	0	0
69	112	X	0	0
70	112	X	0	0

Member Point Loads (BLC 8 : Ice)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Y	-0.198	%10
2	73	Y	-0.198	%75
3	73	Y	0	0
4	73	Y	0	0
5	73	Y	0	0
6	71	Y	-0.098	%5
7	71	Y	-0.098	%45
8	71	Y	0	0
9	71	Y	0	0
10	71	Y	0	0
11	69	Y	-0.328	%5
12	69	Y	-0.328	%85
13	69	Y	-0.069	%70
14	69	Y	-0.084	%30
15	69	Y	0	0
16	85	Y	-0.198	%10
17	85	Y	-0.198	%75
18	85	Y	0	0
19	85	Y	0	0
20	85	Y	0	0
21	83	Y	-0.098	%5
22	83	Y	-0.098	%45
23	83	Y	0	0
24	83	Y	0	0
25	83	Y	0	0
26	81	Y	-0.328	%5
27	81	Y	-0.328	%85
28	81	Y	-0.069	%70
29	81	Y	-0.084	%30
30	81	Y	0	0
31	79	Y	-0.198	%10
32	79	Y	-0.198	%75
33	79	Y	0	0
34	79	Y	0	0
35	79	Y	0	0
36	77	Y	-0.098	%5
37	77	Y	-0.098	%45
38	77	Y	0	0
39	77	Y	0	0
40	77	Y	0	0
41	75	Y	-0.328	%5
42	75	Y	-0.328	%85
43	75	Y	-0.069	%70
44	75	Y	-0.084	%30
45	75	Y	0	0
46	1	Y	-0.006	%45
47	1	Y	0	0
48	1	Y	0	0
49	1	Y	0	0
50	1	Y	0	0
51	3	Y	-0.006	%45
52	3	Y	0	0
53	3	Y	0	0
54	3	Y	0	0
55	3	Y	0	0
56	2	Y	-0.006	%45
57	2	Y	0	0
58	2	Y	0	0

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
59	2	Y	0	0
60	2	Y	0	0
61	111	Y	-0.175	%90
62	111	Y	0	0
63	111	Y	0	0
64	111	Y	0	0
65	111	Y	0	0
66	112	Y	-0.175	%10
67	112	Y	0	0
68	112	Y	0	0
69	112	Y	0	0
70	112	Y	0	0

Member Point Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Z	-0.036	%10
2	73	Z	-0.036	%75
3	73	Z	0	0
4	73	Z	0	0
5	73	Z	0	0
6	71	Z	-0.031	%5
7	71	Z	-0.031	%45
8	71	Z	0	0
9	71	Z	0	0
10	71	Z	0	0
11	69	Z	-0.035	%5
12	69	Z	-0.035	%85
13	69	Z	-0.013	%70
14	69	Z	-0.02	%30
15	69	Z	0	0
16	85	Z	-0.036	%10
17	85	Z	-0.036	%75
18	85	Z	0	0
19	85	Z	0	0
20	85	Z	0	0
21	83	Z	-0.031	%5
22	83	Z	-0.031	%45
23	83	Z	0	0
24	83	Z	0	0
25	83	Z	0	0
26	81	Z	-0.035	%5
27	81	Z	-0.035	%85
28	81	Z	-0.013	%70
29	81	Z	-0.02	%30
30	81	Z	0	0
31	79	Z	-0.036	%10
32	79	Z	-0.036	%75
33	79	Z	0	0
34	79	Z	0	0
35	79	Z	0	0
36	77	Z	-0.031	%5
37	77	Z	-0.031	%45
38	77	Z	0	0
39	77	Z	0	0
40	77	Z	0	0
41	75	Z	-0.035	%5
42	75	Z	-0.035	%85
43	75	Z	-0.013	%70

Member Point Loads (BLC 9 : 0 Seismic) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
44	75	Z	-0.02	%30
45	75	Z	0	0
46	1	Z	-0.0008	%45
47	1	Z	0	0
48	1	Z	0	0
49	1	Z	0	0
50	1	Z	0	0
51	3	Z	-0.0008	%45
52	3	Z	0	0
53	3	Z	0	0
54	3	Z	0	0
55	3	Z	0	0
56	2	Z	-0.0008	%45
57	2	Z	0	0
58	2	Z	0	0
59	2	Z	0	0
60	2	Z	0	0
61	111	Z	-0.003	%90
62	111	Z	0	0
63	111	Z	0	0
64	111	Z	0	0
65	111	Z	0	0
66	112	Z	-0.003	%10
67	112	Z	0	0
68	112	Z	0	0
69	112	Z	0	0
70	112	Z	0	0

Member Point Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	X	-0.036	%10
2	73	X	-0.036	%75
3	73	X	0	0
4	73	X	0	0
5	73	X	0	0
6	71	X	-0.031	%5
7	71	X	-0.031	%45
8	71	X	0	0
9	71	X	0	0
10	71	X	0	0
11	69	X	-0.035	%5
12	69	X	-0.035	%85
13	69	X	-0.013	%70
14	69	X	-0.02	%30
15	69	X	0	0
16	85	X	-0.036	%10
17	85	X	-0.036	%75
18	85	X	0	0
19	85	X	0	0
20	85	X	0	0
21	83	X	-0.031	%5
22	83	X	-0.031	%45
23	83	X	0	0
24	83	X	0	0
25	83	X	0	0
26	81	X	-0.035	%5
27	81	X	-0.035	%85
28	81	X	-0.013	%70

Member Point Loads (BLC 10 : 90 Seismic) (Continued)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
29	81	X	-0.02	%30
30	81	X	0	0
31	79	X	-0.036	%10
32	79	X	-0.036	%75
33	79	X	0	0
34	79	X	0	0
35	79	X	0	0
36	77	X	-0.031	%5
37	77	X	-0.031	%45
38	77	X	0	0
39	77	X	0	0
40	77	X	0	0
41	75	X	-0.035	%5
42	75	X	-0.035	%85
43	75	X	-0.013	%70
44	75	X	-0.02	%30
45	75	X	0	0
46	1	X	-0.0008	%45
47	1	X	0	0
48	1	X	0	0
49	1	X	0	0
50	1	X	0	0
51	3	X	-0.0008	%45
52	3	X	0	0
53	3	X	0	0
54	3	X	0	0
55	3	X	0	0
56	2	X	-0.0008	%45
57	2	X	0	0
58	2	X	0	0
59	2	X	0	0
60	2	X	0	0
61	111	X	-0.003	%90
62	111	X	0	0
63	111	X	0	0
64	111	X	0	0
65	111	X	0	0
66	112	X	-0.003	%10
67	112	X	0	0
68	112	X	0	0
69	112	X	0	0
70	112	X	0	0

Member Point Loads (BLC 15 : Maint LL 1)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	93	Y	-0.25	%5

Member Point Loads (BLC 16 : Maint LL 2)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	1	Y	-0.25	%5

Member Point Loads (BLC 17 : Maint LL 3)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	93	Y	-0.25	%95

Member Point Loads (BLC 18 : Maint LL 4)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	1	Y	-0.25	%95

Member Point Loads (BLC 19 : Maint LL 5)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	101	Y	-0.25	%95

Member Point Loads (BLC 20 : Maint LL 6)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	3	Y	-0.25	%95

Member Point Loads (BLC 21 : Maint LL 7)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	101	Y	-0.25	%5

Member Point Loads (BLC 22 : Maint LL 8)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	3	Y	-0.25	%5

Member Point Loads (BLC 23 : Maint LL 9)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	97	Y	-0.25	%5

Member Point Loads (BLC 24 : Maint LL 10)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	2	Y	-0.25	%5

Member Point Loads (BLC 25 : Maint LL 11)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	97	Y	-0.25	%95

Member Point Loads (BLC 26 : Maint LL 12)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	2	Y	-0.25	%95

Member Point Loads (BLC 27 : Maint LL 13)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	6	Y	-0.25	%95

Member Point Loads (BLC 28 : Maint LL 14)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	5	Y	-0.25	%95

Member Point Loads (BLC 29 : Maint LL 15)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	4	Y	-0.25	%95

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.014	-0.014	0	%100
2	2	Z	-0.014	-0.014	0	%100
3	3	Z	-0.014	-0.014	0	%100
4	4	Z	-0.021	-0.021	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
5	5	Z	-0.021	-0.021	0	%100
6	6	Z	-0.021	-0.021	0	%100
7	7	Z	-0.04	-0.04	0	%100
8	8	Z	-0.003	-0.003	0	%100
9	9	Z	-0.003	-0.003	0	%100
10	10	Z	-0.003	-0.003	0	%100
11	11	Z	-0.003	-0.003	0	%100
12	12	Z	-0.003	-0.003	0	%100
13	13	Z	-0.002	-0.002	0	%100
14	14	Z	-0.003	-0.003	0	%100
15	15	Z	-0.003	-0.003	0	%100
16	16	Z	-0.003	-0.003	0	%100
17	17	Z	-0.003	-0.003	0	%100
18	18	Z	-0.003	-0.003	0	%100
19	19	Z	-0.003	-0.003	0	%100
20	20	Z	-0.002	-0.002	0	%100
21	21	Z	-0.003	-0.003	0	%100
22	22	Z	-0.003	-0.003	0	%100
23	23	Z	-0.003	-0.003	0	%100
24	24	Z	-0.003	-0.003	0	%100
25	25	Z	-0.003	-0.003	0	%100
26	26	Z	-0.003	-0.003	0	%100
27	27	Z	-0.003	-0.003	0	%100
28	28	Z	-0.003	-0.003	0	%100
29	29	Z	-0.003	-0.003	0	%100
30	30	Z	-0.003	-0.003	0	%100
31	31	Z	-0.003	-0.003	0	%100
32	32	Z	-0.003	-0.003	0	%100
33	33	Z	-0.002	-0.002	0	%100
34	34	Z	-0.003	-0.003	0	%100
35	35	Z	-0.003	-0.003	0	%100
36	36	Z	-0.003	-0.003	0	%100
37	37	Z	-0.003	-0.003	0	%100
38	38	Z	-0.003	-0.003	0	%100
39	39	Z	-0.003	-0.003	0	%100
40	40	Z	-0.002	-0.002	0	%100
41	41	Z	-0.003	-0.003	0	%100
42	42	Z	-0.003	-0.003	0	%100
43	43	Z	-0.003	-0.003	0	%100
44	44	Z	-0.003	-0.003	0	%100
45	45	Z	-0.003	-0.003	0	%100
46	46	Z	-0.003	-0.003	0	%100
47	47	Z	-0.003	-0.003	0	%100
48	48	Z	-0.003	-0.003	0	%100
49	49	Z	-0.003	-0.003	0	%100
50	50	Z	-0.003	-0.003	0	%100
51	51	Z	-0.003	-0.003	0	%100
52	52	Z	-0.003	-0.003	0	%100
53	53	Z	-0.002	-0.002	0	%100
54	54	Z	-0.003	-0.003	0	%100
55	55	Z	-0.003	-0.003	0	%100
56	56	Z	-0.003	-0.003	0	%100
57	57	Z	-0.003	-0.003	0	%100
58	58	Z	-0.003	-0.003	0	%100
59	59	Z	-0.003	-0.003	0	%100
60	60	Z	-0.002	-0.002	0	%100
61	61	Z	-0.003	-0.003	0	%100
62	62	Z	-0.003	-0.003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
63	63	Z	-0.003	-0.003	0	%100
64	64	Z	-0.003	-0.003	0	%100
65	65	Z	-0.003	-0.003	0	%100
66	66	Z	-0.003	-0.003	0	%100
67	67	Z	-0.003	-0.003	0	%100
68	69	Z	-0.012	-0.012	0	%100
69	71	Z	-0.01	-0.01	0	%100
70	73	Z	-0.01	-0.01	0	%100
71	75	Z	-0.012	-0.012	0	%100
72	77	Z	-0.01	-0.01	0	%100
73	79	Z	-0.01	-0.01	0	%100
74	81	Z	-0.012	-0.012	0	%100
75	83	Z	-0.01	-0.01	0	%100
76	85	Z	-0.01	-0.01	0	%100
77	87	Z	-0.01	-0.01	0	%100
78	88	Z	-0.022	-0.022	0	%100
79	89	Z	-0.022	-0.022	0	%100
80	90	Z	-0.022	-0.022	0	%100
81	91	Z	-0.04	-0.04	0	%100
82	92	Z	-0.04	-0.04	0	%100
83	93	Z	-0.01	-0.01	0	%100
84	97	Z	-0.01	-0.01	0	%100
85	101	Z	-0.01	-0.01	0	%100
86	105	Z	-0.011	-0.011	0	%100
87	106	Z	-0.011	-0.011	0	%100
88	107	Z	-0.011	-0.011	0	%100
89	111	Z	-0.008	-0.008	0	%100
90	112	Z	-0.008	-0.008	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.014	-0.014	0	%100
2	2	X	-0.014	-0.014	0	%100
3	3	X	-0.014	-0.014	0	%100
4	4	X	-0.021	-0.021	0	%100
5	5	X	-0.021	-0.021	0	%100
6	6	X	-0.021	-0.021	0	%100
7	7	X	-0.04	-0.04	0	%100
8	8	X	-0.003	-0.003	0	%100
9	9	X	-0.003	-0.003	0	%100
10	10	X	-0.003	-0.003	0	%100
11	11	X	-0.003	-0.003	0	%100
12	12	X	-0.003	-0.003	0	%100
13	13	X	-0.002	-0.002	0	%100
14	14	X	-0.003	-0.003	0	%100
15	15	X	-0.003	-0.003	0	%100
16	16	X	-0.003	-0.003	0	%100
17	17	X	-0.003	-0.003	0	%100
18	18	X	-0.003	-0.003	0	%100
19	19	X	-0.003	-0.003	0	%100
20	20	X	-0.002	-0.002	0	%100
21	21	X	-0.003	-0.003	0	%100
22	22	X	-0.003	-0.003	0	%100
23	23	X	-0.003	-0.003	0	%100
24	24	X	-0.003	-0.003	0	%100
25	25	X	-0.003	-0.003	0	%100
26	26	X	-0.003	-0.003	0	%100
27	27	X	-0.003	-0.003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
28	28	X	-0.003	-0.003	0	%100
29	29	X	-0.003	-0.003	0	%100
30	30	X	-0.003	-0.003	0	%100
31	31	X	-0.003	-0.003	0	%100
32	32	X	-0.003	-0.003	0	%100
33	33	X	-0.002	-0.002	0	%100
34	34	X	-0.003	-0.003	0	%100
35	35	X	-0.003	-0.003	0	%100
36	36	X	-0.003	-0.003	0	%100
37	37	X	-0.003	-0.003	0	%100
38	38	X	-0.003	-0.003	0	%100
39	39	X	-0.003	-0.003	0	%100
40	40	X	-0.002	-0.002	0	%100
41	41	X	-0.003	-0.003	0	%100
42	42	X	-0.003	-0.003	0	%100
43	43	X	-0.003	-0.003	0	%100
44	44	X	-0.003	-0.003	0	%100
45	45	X	-0.003	-0.003	0	%100
46	46	X	-0.003	-0.003	0	%100
47	47	X	-0.003	-0.003	0	%100
48	48	X	-0.003	-0.003	0	%100
49	49	X	-0.003	-0.003	0	%100
50	50	X	-0.003	-0.003	0	%100
51	51	X	-0.003	-0.003	0	%100
52	52	X	-0.003	-0.003	0	%100
53	53	X	-0.002	-0.002	0	%100
54	54	X	-0.003	-0.003	0	%100
55	55	X	-0.003	-0.003	0	%100
56	56	X	-0.003	-0.003	0	%100
57	57	X	-0.003	-0.003	0	%100
58	58	X	-0.003	-0.003	0	%100
59	59	X	-0.003	-0.003	0	%100
60	60	X	-0.002	-0.002	0	%100
61	61	X	-0.003	-0.003	0	%100
62	62	X	-0.003	-0.003	0	%100
63	63	X	-0.003	-0.003	0	%100
64	64	X	-0.003	-0.003	0	%100
65	65	X	-0.003	-0.003	0	%100
66	66	X	-0.003	-0.003	0	%100
67	67	X	-0.003	-0.003	0	%100
68	69	X	-0.012	-0.012	0	%100
69	71	X	-0.01	-0.01	0	%100
70	73	X	-0.01	-0.01	0	%100
71	75	X	-0.012	-0.012	0	%100
72	77	X	-0.01	-0.01	0	%100
73	79	X	-0.01	-0.01	0	%100
74	81	X	-0.012	-0.012	0	%100
75	83	X	-0.01	-0.01	0	%100
76	85	X	-0.01	-0.01	0	%100
77	87	X	-0.01	-0.01	0	%100
78	88	X	-0.022	-0.022	0	%100
79	89	X	-0.022	-0.022	0	%100
80	90	X	-0.022	-0.022	0	%100
81	91	X	-0.04	-0.04	0	%100
82	92	X	-0.04	-0.04	0	%100
83	93	X	-0.01	-0.01	0	%100
84	97	X	-0.01	-0.01	0	%100
85	101	X	-0.01	-0.01	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
86	105	X	-0.011	-0.011	0	%100
87	106	X	-0.011	-0.011	0	%100
88	107	X	-0.011	-0.011	0	%100
89	111	X	-0.008	-0.008	0	%100
90	112	X	-0.008	-0.008	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.003	-0.003	0	%100
2	2	Z	-0.003	-0.003	0	%100
3	3	Z	-0.003	-0.003	0	%100
4	4	Z	-0.008	-0.008	0	%100
5	5	Z	-0.008	-0.008	0	%100
6	6	Z	-0.008	-0.008	0	%100
7	7	Z	-0.012	-0.012	0	%100
8	8	Z	-0.003	-0.003	0	%100
9	9	Z	-0.003	-0.003	0	%100
10	10	Z	-0.003	-0.003	0	%100
11	11	Z	-0.003	-0.003	0	%100
12	12	Z	-0.003	-0.003	0	%100
13	13	Z	-0.004	-0.004	0	%100
14	14	Z	-0.003	-0.003	0	%100
15	15	Z	-0.003	-0.003	0	%100
16	16	Z	-0.003	-0.003	0	%100
17	17	Z	-0.003	-0.003	0	%100
18	18	Z	-0.003	-0.003	0	%100
19	19	Z	-0.003	-0.003	0	%100
20	20	Z	-0.004	-0.004	0	%100
21	21	Z	-0.003	-0.003	0	%100
22	22	Z	-0.002	-0.002	0	%100
23	23	Z	-0.003	-0.003	0	%100
24	24	Z	-0.002	-0.002	0	%100
25	25	Z	-0.003	-0.003	0	%100
26	26	Z	-0.002	-0.002	0	%100
27	27	Z	-0.002	-0.002	0	%100
28	28	Z	-0.003	-0.003	0	%100
29	29	Z	-0.003	-0.003	0	%100
30	30	Z	-0.003	-0.003	0	%100
31	31	Z	-0.003	-0.003	0	%100
32	32	Z	-0.003	-0.003	0	%100
33	33	Z	-0.004	-0.004	0	%100
34	34	Z	-0.003	-0.003	0	%100
35	35	Z	-0.003	-0.003	0	%100
36	36	Z	-0.003	-0.003	0	%100
37	37	Z	-0.003	-0.003	0	%100
38	38	Z	-0.003	-0.003	0	%100
39	39	Z	-0.003	-0.003	0	%100
40	40	Z	-0.004	-0.004	0	%100
41	41	Z	-0.003	-0.003	0	%100
42	42	Z	-0.002	-0.002	0	%100
43	43	Z	-0.003	-0.003	0	%100
44	44	Z	-0.002	-0.002	0	%100
45	45	Z	-0.003	-0.003	0	%100
46	46	Z	-0.002	-0.002	0	%100
47	47	Z	-0.002	-0.002	0	%100
48	48	Z	-0.003	-0.003	0	%100
49	49	Z	-0.003	-0.003	0	%100
50	50	Z	-0.003	-0.003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
51	51	Z	-0.003	-0.003	0	%100
52	52	Z	-0.003	-0.003	0	%100
53	53	Z	-0.004	-0.004	0	%100
54	54	Z	-0.003	-0.003	0	%100
55	55	Z	-0.003	-0.003	0	%100
56	56	Z	-0.003	-0.003	0	%100
57	57	Z	-0.003	-0.003	0	%100
58	58	Z	-0.003	-0.003	0	%100
59	59	Z	-0.003	-0.003	0	%100
60	60	Z	-0.004	-0.004	0	%100
61	61	Z	-0.003	-0.003	0	%100
62	62	Z	-0.002	-0.002	0	%100
63	63	Z	-0.003	-0.003	0	%100
64	64	Z	-0.002	-0.002	0	%100
65	65	Z	-0.003	-0.003	0	%100
66	66	Z	-0.002	-0.002	0	%100
67	67	Z	-0.002	-0.002	0	%100
68	69	Z	-0.003	-0.003	0	%100
69	71	Z	-0.002	-0.002	0	%100
70	73	Z	-0.002	-0.002	0	%100
71	75	Z	-0.003	-0.003	0	%100
72	77	Z	-0.002	-0.002	0	%100
73	79	Z	-0.002	-0.002	0	%100
74	81	Z	-0.003	-0.003	0	%100
75	83	Z	-0.002	-0.002	0	%100
76	85	Z	-0.002	-0.002	0	%100
77	87	Z	-0.002	-0.002	0	%100
78	88	Z	-0.008	-0.008	0	%100
79	89	Z	-0.008	-0.008	0	%100
80	90	Z	-0.008	-0.008	0	%100
81	91	Z	-0.012	-0.012	0	%100
82	92	Z	-0.012	-0.012	0	%100
83	93	Z	-0.002	-0.002	0	%100
84	97	Z	-0.002	-0.002	0	%100
85	101	Z	-0.002	-0.002	0	%100
86	105	Z	-0.007	-0.007	0	%100
87	106	Z	-0.007	-0.007	0	%100
88	107	Z	-0.007	-0.007	0	%100
89	111	Z	-0.002	-0.002	0	%100
90	112	Z	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.003	-0.003	0	%100
2	2	X	-0.003	-0.003	0	%100
3	3	X	-0.003	-0.003	0	%100
4	4	X	-0.008	-0.008	0	%100
5	5	X	-0.008	-0.008	0	%100
6	6	X	-0.008	-0.008	0	%100
7	7	X	-0.012	-0.012	0	%100
8	8	X	-0.003	-0.003	0	%100
9	9	X	-0.003	-0.003	0	%100
10	10	X	-0.003	-0.003	0	%100
11	11	X	-0.003	-0.003	0	%100
12	12	X	-0.003	-0.003	0	%100
13	13	X	-0.004	-0.004	0	%100
14	14	X	-0.003	-0.003	0	%100
15	15	X	-0.003	-0.003	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
16	16	X	-0.003	-0.003	0	%100
17	17	X	-0.003	-0.003	0	%100
18	18	X	-0.003	-0.003	0	%100
19	19	X	-0.003	-0.003	0	%100
20	20	X	-0.004	-0.004	0	%100
21	21	X	-0.003	-0.003	0	%100
22	22	X	-0.002	-0.002	0	%100
23	23	X	-0.003	-0.003	0	%100
24	24	X	-0.002	-0.002	0	%100
25	25	X	-0.003	-0.003	0	%100
26	26	X	-0.002	-0.002	0	%100
27	27	X	-0.002	-0.002	0	%100
28	28	X	-0.003	-0.003	0	%100
29	29	X	-0.003	-0.003	0	%100
30	30	X	-0.003	-0.003	0	%100
31	31	X	-0.003	-0.003	0	%100
32	32	X	-0.003	-0.003	0	%100
33	33	X	-0.004	-0.004	0	%100
34	34	X	-0.003	-0.003	0	%100
35	35	X	-0.003	-0.003	0	%100
36	36	X	-0.003	-0.003	0	%100
37	37	X	-0.003	-0.003	0	%100
38	38	X	-0.003	-0.003	0	%100
39	39	X	-0.003	-0.003	0	%100
40	40	X	-0.004	-0.004	0	%100
41	41	X	-0.003	-0.003	0	%100
42	42	X	-0.002	-0.002	0	%100
43	43	X	-0.003	-0.003	0	%100
44	44	X	-0.002	-0.002	0	%100
45	45	X	-0.003	-0.003	0	%100
46	46	X	-0.002	-0.002	0	%100
47	47	X	-0.002	-0.002	0	%100
48	48	X	-0.003	-0.003	0	%100
49	49	X	-0.003	-0.003	0	%100
50	50	X	-0.003	-0.003	0	%100
51	51	X	-0.003	-0.003	0	%100
52	52	X	-0.003	-0.003	0	%100
53	53	X	-0.004	-0.004	0	%100
54	54	X	-0.003	-0.003	0	%100
55	55	X	-0.003	-0.003	0	%100
56	56	X	-0.003	-0.003	0	%100
57	57	X	-0.003	-0.003	0	%100
58	58	X	-0.003	-0.003	0	%100
59	59	X	-0.003	-0.003	0	%100
60	60	X	-0.004	-0.004	0	%100
61	61	X	-0.003	-0.003	0	%100
62	62	X	-0.002	-0.002	0	%100
63	63	X	-0.003	-0.003	0	%100
64	64	X	-0.002	-0.002	0	%100
65	65	X	-0.003	-0.003	0	%100
66	66	X	-0.002	-0.002	0	%100
67	67	X	-0.002	-0.002	0	%100
68	69	X	-0.003	-0.003	0	%100
69	71	X	-0.002	-0.002	0	%100
70	73	X	-0.002	-0.002	0	%100
71	75	X	-0.003	-0.003	0	%100
72	77	X	-0.002	-0.002	0	%100
73	79	X	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
74	81	X	-0.003	-0.003	0	%100
75	83	X	-0.002	-0.002	0	%100
76	85	X	-0.002	-0.002	0	%100
77	87	X	-0.002	-0.002	0	%100
78	88	X	-0.008	-0.008	0	%100
79	89	X	-0.008	-0.008	0	%100
80	90	X	-0.008	-0.008	0	%100
81	91	X	-0.012	-0.012	0	%100
82	92	X	-0.012	-0.012	0	%100
83	93	X	-0.002	-0.002	0	%100
84	97	X	-0.002	-0.002	0	%100
85	101	X	-0.002	-0.002	0	%100
86	105	X	-0.007	-0.007	0	%100
87	106	X	-0.007	-0.007	0	%100
88	107	X	-0.007	-0.007	0	%100
89	111	X	-0.002	-0.002	0	%100
90	112	X	-0.002	-0.002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.0005	-0.0005	0	%100
2	2	Z	-0.0005	-0.0005	0	%100
3	3	Z	-0.0005	-0.0005	0	%100
4	4	Z	-0.001	-0.001	0	%100
5	5	Z	-0.001	-0.001	0	%100
6	6	Z	-0.001	-0.001	0	%100
7	7	Z	-0.002	-0.002	0	%100
8	8	Z	-1e-04	-1e-04	0	%100
9	9	Z	-1e-04	-1e-04	0	%100
10	10	Z	-1e-04	-1e-04	0	%100
11	11	Z	-1e-04	-1e-04	0	%100
12	12	Z	-1e-04	-1e-04	0	%100
13	13	Z	-1e-04	-1e-04	0	%100
14	14	Z	-1e-04	-1e-04	0	%100
15	15	Z	-1e-04	-1e-04	0	%100
16	16	Z	-1e-04	-1e-04	0	%100
17	17	Z	-1e-04	-1e-04	0	%100
18	18	Z	-1e-04	-1e-04	0	%100
19	19	Z	-1e-04	-1e-04	0	%100
20	20	Z	-1e-04	-1e-04	0	%100
21	21	Z	-1e-04	-1e-04	0	%100
22	22	Z	-1e-04	-1e-04	0	%100
23	23	Z	-1e-04	-1e-04	0	%100
24	24	Z	-1e-04	-1e-04	0	%100
25	25	Z	-1e-04	-1e-04	0	%100
26	26	Z	-1e-04	-1e-04	0	%100
27	27	Z	-1e-04	-1e-04	0	%100
28	28	Z	-1e-04	-1e-04	0	%100
29	29	Z	-1e-04	-1e-04	0	%100
30	30	Z	-1e-04	-1e-04	0	%100
31	31	Z	-1e-04	-1e-04	0	%100
32	32	Z	-1e-04	-1e-04	0	%100
33	33	Z	-1e-04	-1e-04	0	%100
34	34	Z	-1e-04	-1e-04	0	%100
35	35	Z	-1e-04	-1e-04	0	%100
36	36	Z	-1e-04	-1e-04	0	%100
37	37	Z	-1e-04	-1e-04	0	%100
38	38	Z	-1e-04	-1e-04	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
39	39	Z	-1e-04	-1e-04	0	%100
40	40	Z	-1e-04	-1e-04	0	%100
41	41	Z	-1e-04	-1e-04	0	%100
42	42	Z	-1e-04	-1e-04	0	%100
43	43	Z	-1e-04	-1e-04	0	%100
44	44	Z	-1e-04	-1e-04	0	%100
45	45	Z	-1e-04	-1e-04	0	%100
46	46	Z	-1e-04	-1e-04	0	%100
47	47	Z	-1e-04	-1e-04	0	%100
48	48	Z	-1e-04	-1e-04	0	%100
49	49	Z	-1e-04	-1e-04	0	%100
50	50	Z	-1e-04	-1e-04	0	%100
51	51	Z	-1e-04	-1e-04	0	%100
52	52	Z	-1e-04	-1e-04	0	%100
53	53	Z	-1e-04	-1e-04	0	%100
54	54	Z	-1e-04	-1e-04	0	%100
55	55	Z	-1e-04	-1e-04	0	%100
56	56	Z	-1e-04	-1e-04	0	%100
57	57	Z	-1e-04	-1e-04	0	%100
58	58	Z	-1e-04	-1e-04	0	%100
59	59	Z	-1e-04	-1e-04	0	%100
60	60	Z	-1e-04	-1e-04	0	%100
61	61	Z	-1e-04	-1e-04	0	%100
62	62	Z	-1e-04	-1e-04	0	%100
63	63	Z	-1e-04	-1e-04	0	%100
64	64	Z	-1e-04	-1e-04	0	%100
65	65	Z	-1e-04	-1e-04	0	%100
66	66	Z	-1e-04	-1e-04	0	%100
67	67	Z	-1e-04	-1e-04	0	%100
68	69	Z	-0.0003	-0.0003	0	%100
69	71	Z	-0.0003	-0.0003	0	%100
70	73	Z	-0.0003	-0.0003	0	%100
71	75	Z	-0.0003	-0.0003	0	%100
72	77	Z	-0.0003	-0.0003	0	%100
73	79	Z	-0.0003	-0.0003	0	%100
74	81	Z	-0.0003	-0.0003	0	%100
75	83	Z	-0.0003	-0.0003	0	%100
76	85	Z	-0.0003	-0.0003	0	%100
77	87	Z	-0.0003	-0.0003	0	%100
78	88	Z	-0.001	-0.001	0	%100
79	89	Z	-0.001	-0.001	0	%100
80	90	Z	-0.001	-0.001	0	%100
81	91	Z	-0.002	-0.002	0	%100
82	92	Z	-0.002	-0.002	0	%100
83	93	Z	-0.0003	-0.0003	0	%100
84	97	Z	-0.0003	-0.0003	0	%100
85	101	Z	-0.0003	-0.0003	0	%100
86	105	Z	-0.0006	-0.0006	0	%100
87	106	Z	-0.0006	-0.0006	0	%100
88	107	Z	-0.0006	-0.0006	0	%100
89	111	Z	-0.0002	-0.0002	0	%100
90	112	Z	-0.0002	-0.0002	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.0005	-0.0005	0	%100
2	2	X	-0.0005	-0.0005	0	%100
3	3	X	-0.0005	-0.0005	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
4	4	X	-0.001	-0.001	0	%100
5	5	X	-0.001	-0.001	0	%100
6	6	X	-0.001	-0.001	0	%100
7	7	X	-0.002	-0.002	0	%100
8	8	X	-1e-04	-1e-04	0	%100
9	9	X	-1e-04	-1e-04	0	%100
10	10	X	-1e-04	-1e-04	0	%100
11	11	X	-1e-04	-1e-04	0	%100
12	12	X	-1e-04	-1e-04	0	%100
13	13	X	-1e-04	-1e-04	0	%100
14	14	X	-1e-04	-1e-04	0	%100
15	15	X	-1e-04	-1e-04	0	%100
16	16	X	-1e-04	-1e-04	0	%100
17	17	X	-1e-04	-1e-04	0	%100
18	18	X	-1e-04	-1e-04	0	%100
19	19	X	-1e-04	-1e-04	0	%100
20	20	X	-1e-04	-1e-04	0	%100
21	21	X	-1e-04	-1e-04	0	%100
22	22	X	-1e-04	-1e-04	0	%100
23	23	X	-1e-04	-1e-04	0	%100
24	24	X	-1e-04	-1e-04	0	%100
25	25	X	-1e-04	-1e-04	0	%100
26	26	X	-1e-04	-1e-04	0	%100
27	27	X	-1e-04	-1e-04	0	%100
28	28	X	-1e-04	-1e-04	0	%100
29	29	X	-1e-04	-1e-04	0	%100
30	30	X	-1e-04	-1e-04	0	%100
31	31	X	-1e-04	-1e-04	0	%100
32	32	X	-1e-04	-1e-04	0	%100
33	33	X	-1e-04	-1e-04	0	%100
34	34	X	-1e-04	-1e-04	0	%100
35	35	X	-1e-04	-1e-04	0	%100
36	36	X	-1e-04	-1e-04	0	%100
37	37	X	-1e-04	-1e-04	0	%100
38	38	X	-1e-04	-1e-04	0	%100
39	39	X	-1e-04	-1e-04	0	%100
40	40	X	-1e-04	-1e-04	0	%100
41	41	X	-1e-04	-1e-04	0	%100
42	42	X	-1e-04	-1e-04	0	%100
43	43	X	-1e-04	-1e-04	0	%100
44	44	X	-1e-04	-1e-04	0	%100
45	45	X	-1e-04	-1e-04	0	%100
46	46	X	-1e-04	-1e-04	0	%100
47	47	X	-1e-04	-1e-04	0	%100
48	48	X	-1e-04	-1e-04	0	%100
49	49	X	-1e-04	-1e-04	0	%100
50	50	X	-1e-04	-1e-04	0	%100
51	51	X	-1e-04	-1e-04	0	%100
52	52	X	-1e-04	-1e-04	0	%100
53	53	X	-1e-04	-1e-04	0	%100
54	54	X	-1e-04	-1e-04	0	%100
55	55	X	-1e-04	-1e-04	0	%100
56	56	X	-1e-04	-1e-04	0	%100
57	57	X	-1e-04	-1e-04	0	%100
58	58	X	-1e-04	-1e-04	0	%100
59	59	X	-1e-04	-1e-04	0	%100
60	60	X	-1e-04	-1e-04	0	%100
61	61	X	-1e-04	-1e-04	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
62	62	X	-1e-04	-1e-04	0	%100
63	63	X	-1e-04	-1e-04	0	%100
64	64	X	-1e-04	-1e-04	0	%100
65	65	X	-1e-04	-1e-04	0	%100
66	66	X	-1e-04	-1e-04	0	%100
67	67	X	-1e-04	-1e-04	0	%100
68	69	X	-0.0003	-0.0003	0	%100
69	71	X	-0.0003	-0.0003	0	%100
70	73	X	-0.0003	-0.0003	0	%100
71	75	X	-0.0003	-0.0003	0	%100
72	77	X	-0.0003	-0.0003	0	%100
73	79	X	-0.0003	-0.0003	0	%100
74	81	X	-0.0003	-0.0003	0	%100
75	83	X	-0.0003	-0.0003	0	%100
76	85	X	-0.0003	-0.0003	0	%100
77	87	X	-0.0003	-0.0003	0	%100
78	88	X	-0.001	-0.001	0	%100
79	89	X	-0.001	-0.001	0	%100
80	90	X	-0.001	-0.001	0	%100
81	91	X	-0.002	-0.002	0	%100
82	92	X	-0.002	-0.002	0	%100
83	93	X	-0.0003	-0.0003	0	%100
84	97	X	-0.0003	-0.0003	0	%100
85	101	X	-0.0003	-0.0003	0	%100
86	105	X	-0.0006	-0.0006	0	%100
87	106	X	-0.0006	-0.0006	0	%100
88	107	X	-0.0006	-0.0006	0	%100
89	111	X	-0.0002	-0.0002	0	%100
90	112	X	-0.0002	-0.0002	0	%100

Member Distributed Loads (BLC 8 : Ice)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.02	-0.02	0	%100
2	2	Y	-0.02	-0.02	0	%100
3	3	Y	-0.02	-0.02	0	%100
4	4	Y	-0.027	-0.027	0	%100
5	5	Y	-0.027	-0.027	0	%100
6	6	Y	-0.027	-0.027	0	%100
7	7	Y	-0.036	-0.036	0	%100
8	8	Y	-0.01	-0.01	0	%100
9	9	Y	-0.01	-0.01	0	%100
10	10	Y	-0.01	-0.01	0	%100
11	11	Y	-0.01	-0.01	0	%100
12	12	Y	-0.01	-0.01	0	%100
13	13	Y	-0.009	-0.009	0	%100
14	14	Y	-0.009	-0.009	0	%100
15	15	Y	-0.01	-0.01	0	%100
16	16	Y	-0.01	-0.01	0	%100
17	17	Y	-0.01	-0.01	0	%100
18	18	Y	-0.01	-0.01	0	%100
19	19	Y	-0.01	-0.01	0	%100
20	20	Y	-0.009	-0.009	0	%100
21	21	Y	-0.009	-0.009	0	%100
22	22	Y	-0.009	-0.009	0	%100
23	23	Y	-0.009	-0.009	0	%100
24	24	Y	-0.009	-0.009	0	%100
25	25	Y	-0.009	-0.009	0	%100
26	26	Y	-0.009	-0.009	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
27	27	Y	-0.009	-0.009	0	%100
28	28	Y	-0.01	-0.01	0	%100
29	29	Y	-0.01	-0.01	0	%100
30	30	Y	-0.01	-0.01	0	%100
31	31	Y	-0.01	-0.01	0	%100
32	32	Y	-0.01	-0.01	0	%100
33	33	Y	-0.009	-0.009	0	%100
34	34	Y	-0.009	-0.009	0	%100
35	35	Y	-0.01	-0.01	0	%100
36	36	Y	-0.01	-0.01	0	%100
37	37	Y	-0.01	-0.01	0	%100
38	38	Y	-0.01	-0.01	0	%100
39	39	Y	-0.01	-0.01	0	%100
40	40	Y	-0.009	-0.009	0	%100
41	41	Y	-0.009	-0.009	0	%100
42	42	Y	-0.009	-0.009	0	%100
43	43	Y	-0.009	-0.009	0	%100
44	44	Y	-0.009	-0.009	0	%100
45	45	Y	-0.009	-0.009	0	%100
46	46	Y	-0.009	-0.009	0	%100
47	47	Y	-0.009	-0.009	0	%100
48	48	Y	-0.01	-0.01	0	%100
49	49	Y	-0.01	-0.01	0	%100
50	50	Y	-0.01	-0.01	0	%100
51	51	Y	-0.01	-0.01	0	%100
52	52	Y	-0.01	-0.01	0	%100
53	53	Y	-0.009	-0.009	0	%100
54	54	Y	-0.009	-0.009	0	%100
55	55	Y	-0.01	-0.01	0	%100
56	56	Y	-0.01	-0.01	0	%100
57	57	Y	-0.01	-0.01	0	%100
58	58	Y	-0.01	-0.01	0	%100
59	59	Y	-0.01	-0.01	0	%100
60	60	Y	-0.009	-0.009	0	%100
61	61	Y	-0.009	-0.009	0	%100
62	62	Y	-0.009	-0.009	0	%100
63	63	Y	-0.009	-0.009	0	%100
64	64	Y	-0.009	-0.009	0	%100
65	65	Y	-0.009	-0.009	0	%100
66	66	Y	-0.009	-0.009	0	%100
67	67	Y	-0.009	-0.009	0	%100
68	69	Y	-0.015	-0.015	0	%100
69	71	Y	-0.014	-0.014	0	%100
70	73	Y	-0.014	-0.014	0	%100
71	75	Y	-0.015	-0.015	0	%100
72	77	Y	-0.014	-0.014	0	%100
73	79	Y	-0.014	-0.014	0	%100
74	81	Y	-0.015	-0.015	0	%100
75	83	Y	-0.014	-0.014	0	%100
76	85	Y	-0.014	-0.014	0	%100
77	87	Y	-0.014	-0.014	0	%100
78	88	Y	-0.027	-0.027	0	%100
79	89	Y	-0.027	-0.027	0	%100
80	90	Y	-0.027	-0.027	0	%100
81	91	Y	-0.036	-0.036	0	%100
82	92	Y	-0.036	-0.036	0	%100
83	93	Y	-0.014	-0.014	0	%100
84	97	Y	-0.014	-0.014	0	%100

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

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
85	101	Y	-0.014	-0.014	0	%100
86	105	Y	-0.017	-0.017	0	%100
87	106	Y	-0.017	-0.017	0	%100
88	107	Y	-0.017	-0.017	0	%100
89	111	Y	-0.012	-0.012	0	%100
90	112	Y	-0.012	-0.012	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.003	-0.003	0	%100
2	2	Z	-0.003	-0.003	0	%100
3	3	Z	-0.003	-0.003	0	%100
4	4	Z	-0.005	-0.005	0	%100
5	5	Z	-0.005	-0.005	0	%100
6	6	Z	-0.005	-0.005	0	%100
7	7	Z	-0.004	-0.004	0	%100
8	8	Z	-0.0007	-0.0007	0	%100
9	9	Z	-0.0007	-0.0007	0	%100
10	10	Z	-0.0007	-0.0007	0	%100
11	11	Z	-0.0007	-0.0007	0	%100
12	12	Z	-0.0007	-0.0007	0	%100
13	13	Z	-0.0006	-0.0006	0	%100
14	14	Z	-0.0006	-0.0006	0	%100
15	15	Z	-0.0007	-0.0007	0	%100
16	16	Z	-0.0007	-0.0007	0	%100
17	17	Z	-0.0007	-0.0007	0	%100
18	18	Z	-0.0007	-0.0007	0	%100
19	19	Z	-0.0007	-0.0007	0	%100
20	20	Z	-0.0006	-0.0006	0	%100
21	21	Z	-0.0006	-0.0006	0	%100
22	22	Z	-0.0006	-0.0006	0	%100
23	23	Z	-0.0006	-0.0006	0	%100
24	24	Z	-0.0006	-0.0006	0	%100
25	25	Z	-0.0006	-0.0006	0	%100
26	26	Z	-0.0006	-0.0006	0	%100
27	27	Z	-0.0006	-0.0006	0	%100
28	28	Z	-0.0007	-0.0007	0	%100
29	29	Z	-0.0007	-0.0007	0	%100
30	30	Z	-0.0007	-0.0007	0	%100
31	31	Z	-0.0007	-0.0007	0	%100
32	32	Z	-0.0007	-0.0007	0	%100
33	33	Z	-0.0006	-0.0006	0	%100
34	34	Z	-0.0006	-0.0006	0	%100
35	35	Z	-0.0007	-0.0007	0	%100
36	36	Z	-0.0007	-0.0007	0	%100
37	37	Z	-0.0007	-0.0007	0	%100
38	38	Z	-0.0007	-0.0007	0	%100
39	39	Z	-0.0007	-0.0007	0	%100
40	40	Z	-0.0006	-0.0006	0	%100
41	41	Z	-0.0006	-0.0006	0	%100
42	42	Z	-0.0006	-0.0006	0	%100
43	43	Z	-0.0006	-0.0006	0	%100
44	44	Z	-0.0006	-0.0006	0	%100
45	45	Z	-0.0006	-0.0006	0	%100
46	46	Z	-0.0006	-0.0006	0	%100
47	47	Z	-0.0006	-0.0006	0	%100
48	48	Z	-0.0007	-0.0007	0	%100
49	49	Z	-0.0007	-0.0007	0	%100

Member Distributed Loads (BLC 9 : 0 Seismic) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
50	50	Z	-0.0007	-0.0007	0	%100
51	51	Z	-0.0007	-0.0007	0	%100
52	52	Z	-0.0007	-0.0007	0	%100
53	53	Z	-0.0006	-0.0006	0	%100
54	54	Z	-0.0006	-0.0006	0	%100
55	55	Z	-0.0007	-0.0007	0	%100
56	56	Z	-0.0007	-0.0007	0	%100
57	57	Z	-0.0007	-0.0007	0	%100
58	58	Z	-0.0007	-0.0007	0	%100
59	59	Z	-0.0007	-0.0007	0	%100
60	60	Z	-0.0006	-0.0006	0	%100
61	61	Z	-0.0006	-0.0006	0	%100
62	62	Z	-0.0006	-0.0006	0	%100
63	63	Z	-0.0006	-0.0006	0	%100
64	64	Z	-0.0006	-0.0006	0	%100
65	65	Z	-0.0006	-0.0006	0	%100
66	66	Z	-0.0006	-0.0006	0	%100
67	67	Z	-0.0006	-0.0006	0	%100
68	69	Z	-0.002	-0.002	0	%100
69	71	Z	-0.001	-0.001	0	%100
70	73	Z	-0.001	-0.001	0	%100
71	75	Z	-0.002	-0.002	0	%100
72	77	Z	-0.001	-0.001	0	%100
73	79	Z	-0.001	-0.001	0	%100
74	81	Z	-0.002	-0.002	0	%100
75	83	Z	-0.001	-0.001	0	%100
76	85	Z	-0.001	-0.001	0	%100
77	87	Z	-0.001	-0.001	0	%100
78	88	Z	-0.005	-0.005	0	%100
79	89	Z	-0.005	-0.005	0	%100
80	90	Z	-0.005	-0.005	0	%100
81	91	Z	-0.004	-0.004	0	%100
82	92	Z	-0.004	-0.004	0	%100
83	93	Z	-0.001	-0.001	0	%100
84	97	Z	-0.001	-0.001	0	%100
85	101	Z	-0.001	-0.001	0	%100
86	105	Z	-0.001	-0.001	0	%100
87	106	Z	-0.001	-0.001	0	%100
88	107	Z	-0.001	-0.001	0	%100
89	111	Z	-0.0007	-0.0007	0	%100
90	112	Z	-0.0007	-0.0007	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.003	-0.003	0	%100
2	2	X	-0.003	-0.003	0	%100
3	3	X	-0.003	-0.003	0	%100
4	4	X	-0.005	-0.005	0	%100
5	5	X	-0.005	-0.005	0	%100
6	6	X	-0.005	-0.005	0	%100
7	7	X	-0.004	-0.004	0	%100
8	8	X	-0.0007	-0.0007	0	%100
9	9	X	-0.0007	-0.0007	0	%100
10	10	X	-0.0007	-0.0007	0	%100
11	11	X	-0.0007	-0.0007	0	%100
12	12	X	-0.0007	-0.0007	0	%100
13	13	X	-0.0006	-0.0006	0	%100
14	14	X	-0.0006	-0.0006	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
15	15	X	-0.0007	-0.0007	0	%100
16	16	X	-0.0007	-0.0007	0	%100
17	17	X	-0.0007	-0.0007	0	%100
18	18	X	-0.0007	-0.0007	0	%100
19	19	X	-0.0007	-0.0007	0	%100
20	20	X	-0.0006	-0.0006	0	%100
21	21	X	-0.0006	-0.0006	0	%100
22	22	X	-0.0006	-0.0006	0	%100
23	23	X	-0.0006	-0.0006	0	%100
24	24	X	-0.0006	-0.0006	0	%100
25	25	X	-0.0006	-0.0006	0	%100
26	26	X	-0.0006	-0.0006	0	%100
27	27	X	-0.0006	-0.0006	0	%100
28	28	X	-0.0007	-0.0007	0	%100
29	29	X	-0.0007	-0.0007	0	%100
30	30	X	-0.0007	-0.0007	0	%100
31	31	X	-0.0007	-0.0007	0	%100
32	32	X	-0.0007	-0.0007	0	%100
33	33	X	-0.0006	-0.0006	0	%100
34	34	X	-0.0006	-0.0006	0	%100
35	35	X	-0.0007	-0.0007	0	%100
36	36	X	-0.0007	-0.0007	0	%100
37	37	X	-0.0007	-0.0007	0	%100
38	38	X	-0.0007	-0.0007	0	%100
39	39	X	-0.0007	-0.0007	0	%100
40	40	X	-0.0006	-0.0006	0	%100
41	41	X	-0.0006	-0.0006	0	%100
42	42	X	-0.0006	-0.0006	0	%100
43	43	X	-0.0006	-0.0006	0	%100
44	44	X	-0.0006	-0.0006	0	%100
45	45	X	-0.0006	-0.0006	0	%100
46	46	X	-0.0006	-0.0006	0	%100
47	47	X	-0.0006	-0.0006	0	%100
48	48	X	-0.0007	-0.0007	0	%100
49	49	X	-0.0007	-0.0007	0	%100
50	50	X	-0.0007	-0.0007	0	%100
51	51	X	-0.0007	-0.0007	0	%100
52	52	X	-0.0007	-0.0007	0	%100
53	53	X	-0.0006	-0.0006	0	%100
54	54	X	-0.0006	-0.0006	0	%100
55	55	X	-0.0007	-0.0007	0	%100
56	56	X	-0.0007	-0.0007	0	%100
57	57	X	-0.0007	-0.0007	0	%100
58	58	X	-0.0007	-0.0007	0	%100
59	59	X	-0.0007	-0.0007	0	%100
60	60	X	-0.0006	-0.0006	0	%100
61	61	X	-0.0006	-0.0006	0	%100
62	62	X	-0.0006	-0.0006	0	%100
63	63	X	-0.0006	-0.0006	0	%100
64	64	X	-0.0006	-0.0006	0	%100
65	65	X	-0.0006	-0.0006	0	%100
66	66	X	-0.0006	-0.0006	0	%100
67	67	X	-0.0006	-0.0006	0	%100
68	69	X	-0.002	-0.002	0	%100
69	71	X	-0.001	-0.001	0	%100
70	73	X	-0.001	-0.001	0	%100
71	75	X	-0.002	-0.002	0	%100
72	77	X	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 10 : 90 Seismic) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
73	79	X	-0.001	-0.001	0	%100
74	81	X	-0.002	-0.002	0	%100
75	83	X	-0.001	-0.001	0	%100
76	85	X	-0.001	-0.001	0	%100
77	87	X	-0.001	-0.001	0	%100
78	88	X	-0.005	-0.005	0	%100
79	89	X	-0.005	-0.005	0	%100
80	90	X	-0.005	-0.005	0	%100
81	91	X	-0.004	-0.004	0	%100
82	92	X	-0.004	-0.004	0	%100
83	93	X	-0.001	-0.001	0	%100
84	97	X	-0.001	-0.001	0	%100
85	101	X	-0.001	-0.001	0	%100
86	105	X	-0.001	-0.001	0	%100
87	106	X	-0.001	-0.001	0	%100
88	107	X	-0.001	-0.001	0	%100
89	111	X	-0.0007	-0.0007	0	%100
90	112	X	-0.0007	-0.0007	0	%100

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	14	Y	-0.0005343	-0.004	1.36	2.312
2	14	Y	-0.004	-0.009	2.312	3.264
3	14	Y	-0.009	-0.017	3.264	4.216
4	14	Y	-0.017	-0.016	4.216	5.168
5	14	Y	-0.016	-0.007	5.168	6.12
6	23	Y	-0.027	-0.027	0	0.501
7	26	Y	-0.003	-0.004	0	0.333
8	26	Y	-0.004	-0.005	0.333	0.667
9	26	Y	-0.005	-0.005	0.667	1
10	61	Y	-9.972e-05	-0.003	1.36	2.448
11	61	Y	-0.003	-0.013	2.448	3.536
12	61	Y	-0.013	-0.021	3.536	4.624
13	61	Y	-0.021	-0.01	4.624	5.712
14	61	Y	-0.01	-9.972e-05	5.712	6.8
15	65	Y	-0.023	-0.023	0	0.501
16	67	Y	-0.003	-0.003	0	0.333
17	67	Y	-0.003	-0.007	0.333	0.667
18	67	Y	-0.007	-0.014	0.667	1
19	14	Y	-0.0006761	-0.0006761	0.68	2.72
20	22	Y	-0.004	-0.004	0.322	0.608
21	23	Y	-0.076	-0.032	0	0.276
22	23	Y	-0.032	-0.007	0.276	0.552
23	23	Y	-0.007	-0.001	0.552	0.828
24	23	Y	-0.001	0.002	0.828	1.104
25	23	Y	0.002	0.002	1.104	1.38
26	26	Y	-1.656e-05	-0.001	0	0.2
27	26	Y	-0.001	-0.002	0.2	0.4
28	26	Y	-0.002	-0.002	0.4	0.6
29	26	Y	-0.002	-0.003	0.6	0.8
30	26	Y	-0.003	-0.002	0.8	1
31	61	Y	-0.0001497	-0.001	0.68	2.72
32	64	Y	-0.005	-0.005	0.296	0.603
33	65	Y	-0.073	-0.03	0	0.276
34	65	Y	-0.03	-0.007	0.276	0.552
35	65	Y	-0.007	-0.001	0.552	0.828
36	65	Y	-0.001	0.002	0.828	1.104
37	65	Y	0.002	0.002	1.104	1.38

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
38	67	Y	0.0001418	-0.0009169	0	0.2
39	67	Y	-0.0009169	-0.002	0.2	0.4
40	67	Y	-0.002	-0.002	0.4	0.6
41	67	Y	-0.002	-0.004	0.6	0.8
42	67	Y	-0.004	-0.007	0.8	1
43	22	Y	0.0002523	-0.0007569	0	0.5
44	22	Y	-0.0007569	-0.003	0.5	1
45	23	Y	-0.013	-0.015	0	0.414
46	23	Y	-0.015	-0.013	0.414	0.828
47	23	Y	-0.013	-0.006	0.828	1.242
48	23	Y	-0.006	-0.001	1.242	1.656
49	23	Y	-0.001	-9.123e-05	1.656	2.07
50	64	Y	0.000253	-0.000759	0	0.5
51	64	Y	-0.000759	-0.003	0.5	1
52	65	Y	-0.013	-0.015	0	0.414
53	65	Y	-0.015	-0.013	0.414	0.828
54	65	Y	-0.013	-0.006	0.828	1.242
55	65	Y	-0.006	-0.001	1.242	1.656
56	65	Y	-0.001	-9.129e-05	1.656	2.07
57	21	Y	-0.0005139	-0.004	1.36	2.312
58	21	Y	-0.004	-0.009	2.312	3.264
59	21	Y	-0.009	-0.017	3.264	4.216
60	21	Y	-0.017	-0.017	4.216	5.168
61	21	Y	-0.017	-0.007	5.168	6.12
62	25	Y	-0.027	-0.027	0	0.501
63	27	Y	-0.003	-0.004	0	0.333
64	27	Y	-0.004	-0.005	0.333	0.667
65	27	Y	-0.005	-0.005	0.667	1
66	31	Y	-0.012	-0.012	0	0.5
67	34	Y	-0.0004379	-0.003	1.36	2.312
68	34	Y	-0.003	-0.011	2.312	3.264
69	34	Y	-0.011	-0.017	3.264	4.216
70	34	Y	-0.017	-0.014	4.216	5.168
71	34	Y	-0.014	-0.006	5.168	6.12
72	43	Y	-0.023	-0.023	0	0.501
73	46	Y	-0.002	-0.003	0	0.333
74	46	Y	-0.003	-0.007	0.333	0.667
75	46	Y	-0.007	-0.014	0.667	1
76	21	Y	-0.0006777	-0.0006777	0.68	2.72
77	24	Y	-0.004	-0.004	0.322	0.608
78	25	Y	-0.073	-0.031	0	0.276
79	25	Y	-0.031	-0.007	0.276	0.552
80	25	Y	-0.007	-0.001	0.552	0.828
81	25	Y	-0.001	0.002	0.828	1.104
82	25	Y	0.002	0.002	1.104	1.38
83	27	Y	0.0001555	-0.0009476	0	0.2
84	27	Y	-0.0009476	-0.002	0.2	0.4
85	27	Y	-0.002	-0.002	0.4	0.6
86	27	Y	-0.002	-0.004	0.6	0.8
87	27	Y	-0.004	-0.007	0.8	1
88	34	Y	-0.000308	-0.0009476	0.68	2.72
89	42	Y	-0.005	-0.005	0.297	0.599
90	43	Y	-0.077	-0.032	0	0.276
91	43	Y	-0.032	-0.007	0.276	0.552
92	43	Y	-0.007	-0.0009838	0.552	0.828
93	43	Y	-0.0009838	0.002	0.828	1.104
94	43	Y	0.002	0.002	1.104	1.38
95	46	Y	-2.226e-05	-0.001	0	0.2

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
96	46	Y	-0.001	-0.002	0.2	0.4
97	46	Y	-0.002	-0.002	0.4	0.6
98	46	Y	-0.002	-0.003	0.6	0.8
99	46	Y	-0.003	-0.002	0.8	1
100	24	Y	0.000253	-0.0007589	0	0.5
101	24	Y	-0.0007589	-0.003	0.5	1
102	25	Y	-0.013	-0.015	0	0.414
103	25	Y	-0.015	-0.013	0.414	0.828
104	25	Y	-0.013	-0.006	0.828	1.242
105	25	Y	-0.006	-0.001	1.242	1.656
106	25	Y	-0.001	-9.129e-05	1.656	2.07
107	42	Y	-0.001	-0.001	0	1
108	43	Y	-0.013	-0.015	0	0.414
109	43	Y	-0.015	-0.013	0.414	0.828
110	43	Y	-0.013	-0.006	0.828	1.242
111	43	Y	-0.006	-0.001	1.242	1.656
112	43	Y	-0.001	-9.123e-05	1.656	2.07
113	41	Y	-0.0002702	-0.004	1.36	2.448
114	41	Y	-0.004	-0.014	2.448	3.536
115	41	Y	-0.014	-0.017	3.536	4.624
116	41	Y	-0.017	-0.01	4.624	5.712
117	41	Y	-0.01	-0.006	5.712	6.8
118	45	Y	-0.031	-0.031	0	0.501
119	47	Y	-1.77e-06	-0.005	0	0.2
120	47	Y	-0.005	-0.009	0.2	0.4
121	47	Y	-0.009	-0.009	0.4	0.6
122	47	Y	-0.009	-0.01	0.6	0.8
123	47	Y	-0.01	-0.01	0.8	1
124	50	Y	-0.002	-0.002	0	0.5
125	54	Y	-0.0006458	-0.003	1.36	2.312
126	54	Y	-0.003	-0.01	2.312	3.264
127	54	Y	-0.01	-0.017	3.264	4.216
128	54	Y	-0.017	-0.014	4.216	5.168
129	54	Y	-0.014	-0.002	5.168	6.12
130	63	Y	-0.027	-0.027	0	0.501
131	66	Y	-0.0006011	-0.005	0	0.25
132	66	Y	-0.005	-0.007	0.25	0.5
133	66	Y	-0.007	-0.007	0.5	0.75
134	66	Y	-0.007	-0.009	0.75	1
135	41	Y	-0.0006284	-0.0006284	0.68	2.72
136	44	Y	-0.005	-0.005	0.296	0.603
137	45	Y	-0.075	-0.031	0	0.276
138	45	Y	-0.031	-0.007	0.276	0.552
139	45	Y	-0.007	-0.001	0.552	0.828
140	45	Y	-0.001	0.002	0.828	1.104
141	45	Y	0.002	0.002	1.104	1.38
142	54	Y	-0.0002509	-0.001	0.68	2.72
143	62	Y	-0.005	-0.005	0.297	0.599
144	63	Y	-0.075	-0.031	0	0.276
145	63	Y	-0.031	-0.007	0.276	0.552
146	63	Y	-0.007	-0.001	0.552	0.828
147	63	Y	-0.001	0.002	0.828	1.104
148	63	Y	0.002	0.002	1.104	1.38
149	66	Y	4.514e-05	-0.001	0	0.2
150	66	Y	-0.001	-0.002	0.2	0.4
151	66	Y	-0.002	-0.002	0.4	0.6
152	66	Y	-0.002	-0.003	0.6	0.8
153	66	Y	-0.003	-0.004	0.8	1

Member Distributed Loads (BLC 30 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
154	44	Y	0.000253	-0.0007589	0	0.5
155	44	Y	-0.0007589	-0.003	0.5	1
156	45	Y	-0.013	-0.015	0	0.414
157	45	Y	-0.015	-0.013	0.414	0.828
158	45	Y	-0.013	-0.006	0.828	1.242
159	45	Y	-0.006	-0.001	1.242	1.656
160	45	Y	-0.001	-9.129e-05	1.656	2.07
161	62	Y	-0.001	-0.001	0	1
162	63	Y	-0.013	-0.015	0	0.414
163	63	Y	-0.015	-0.013	0.414	0.828
164	63	Y	-0.013	-0.006	0.828	1.242
165	63	Y	-0.006	-0.001	1.242	1.656
166	63	Y	-0.001	-9.123e-05	1.656	2.07

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	14	Y	-0.0005561	-0.004	1.36	2.312
2	14	Y	-0.004	-0.01	2.312	3.264
3	14	Y	-0.01	-0.017	3.264	4.216
4	14	Y	-0.017	-0.017	4.216	5.168
5	14	Y	-0.017	-0.007	5.168	6.12
6	23	Y	-0.028	-0.028	0	0.501
7	26	Y	-0.003	-0.005	0	0.333
8	26	Y	-0.005	-0.005	0.333	0.667
9	26	Y	-0.005	-0.005	0.667	1
10	61	Y	-0.0001038	-0.003	1.36	2.448
11	61	Y	-0.003	-0.014	2.448	3.536
12	61	Y	-0.014	-0.022	3.536	4.624
13	61	Y	-0.022	-0.011	4.624	5.712
14	61	Y	-0.011	-0.0001038	5.712	6.8
15	65	Y	-0.024	-0.024	0	0.501
16	67	Y	-0.003	-0.003	0	0.333
17	67	Y	-0.003	-0.007	0.333	0.667
18	67	Y	-0.007	-0.015	0.667	1
19	14	Y	-0.0006761	-0.0006761	0.68	2.72
20	22	Y	-0.004	-0.004	0.322	0.608
21	23	Y	-0.076	-0.032	0	0.276
22	23	Y	-0.032	-0.007	0.276	0.552
23	23	Y	-0.007	-0.001	0.552	0.828
24	23	Y	-0.001	0.002	0.828	1.104
25	23	Y	0.002	0.002	1.104	1.38
26	26	Y	-1.656e-05	-0.001	0	0.2
27	26	Y	-0.001	-0.002	0.2	0.4
28	26	Y	-0.002	-0.002	0.4	0.6
29	26	Y	-0.002	-0.003	0.6	0.8
30	26	Y	-0.003	-0.002	0.8	1
31	61	Y	-0.0001497	-0.001	0.68	2.72
32	64	Y	-0.005	-0.005	0.296	0.603
33	65	Y	-0.073	-0.03	0	0.276
34	65	Y	-0.03	-0.007	0.276	0.552
35	65	Y	-0.007	-0.001	0.552	0.828
36	65	Y	-0.001	0.002	0.828	1.104
37	65	Y	0.002	0.002	1.104	1.38
38	67	Y	0.0001418	-0.0009169	0	0.2
39	67	Y	-0.0009169	-0.002	0.2	0.4
40	67	Y	-0.002	-0.002	0.4	0.6
41	67	Y	-0.002	-0.004	0.6	0.8
42	67	Y	-0.004	-0.007	0.8	1

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
43	22	Y	0.0002523	-0.0007569	0	0.5
44	22	Y	-0.0007569	-0.003	0.5	1
45	23	Y	-0.013	-0.015	0	0.414
46	23	Y	-0.015	-0.013	0.414	0.828
47	23	Y	-0.013	-0.006	0.828	1.242
48	23	Y	-0.006	-0.001	1.242	1.656
49	23	Y	-0.001	-9.123e-05	1.656	2.07
50	64	Y	0.000253	-0.000759	0	0.5
51	64	Y	-0.000759	-0.003	0.5	1
52	65	Y	-0.013	-0.015	0	0.414
53	65	Y	-0.015	-0.013	0.414	0.828
54	65	Y	-0.013	-0.006	0.828	1.242
55	65	Y	-0.006	-0.001	1.242	1.656
56	65	Y	-0.001	-9.129e-05	1.656	2.07
57	21	Y	-0.0005139	-0.004	1.36	2.312
58	21	Y	-0.004	-0.009	2.312	3.264
59	21	Y	-0.009	-0.017	3.264	4.216
60	21	Y	-0.017	-0.017	4.216	5.168
61	21	Y	-0.017	-0.007	5.168	6.12
62	25	Y	-0.027	-0.027	0	0.501
63	27	Y	-0.003	-0.004	0	0.333
64	27	Y	-0.004	-0.005	0.333	0.667
65	27	Y	-0.005	-0.005	0.667	1
66	31	Y	-0.012	-0.012	0	0.5
67	34	Y	-0.0004379	-0.003	1.36	2.312
68	34	Y	-0.003	-0.011	2.312	3.264
69	34	Y	-0.011	-0.017	3.264	4.216
70	34	Y	-0.017	-0.014	4.216	5.168
71	34	Y	-0.014	-0.006	5.168	6.12
72	43	Y	-0.023	-0.023	0	0.501
73	46	Y	-0.002	-0.003	0	0.333
74	46	Y	-0.003	-0.007	0.333	0.667
75	46	Y	-0.007	-0.014	0.667	1
76	21	Y	-0.0006777	-0.0006777	0.68	2.72
77	24	Y	-0.004	-0.004	0.322	0.608
78	25	Y	-0.073	-0.031	0	0.276
79	25	Y	-0.031	-0.007	0.276	0.552
80	25	Y	-0.007	-0.001	0.552	0.828
81	25	Y	-0.001	0.002	0.828	1.104
82	25	Y	0.002	0.002	1.104	1.38
83	27	Y	0.0001555	-0.0009476	0	0.2
84	27	Y	-0.0009476	-0.002	0.2	0.4
85	27	Y	-0.002	-0.002	0.4	0.6
86	27	Y	-0.002	-0.004	0.6	0.8
87	27	Y	-0.004	-0.007	0.8	1
88	34	Y	-0.000308	-0.0009476	0.68	2.72
89	42	Y	-0.005	-0.005	0.297	0.599
90	43	Y	-0.077	-0.032	0	0.276
91	43	Y	-0.032	-0.007	0.276	0.552
92	43	Y	-0.007	-0.0009838	0.552	0.828
93	43	Y	-0.0009838	0.002	0.828	1.104
94	43	Y	0.002	0.002	1.104	1.38
95	46	Y	-2.226e-05	-0.001	0	0.2
96	46	Y	-0.001	-0.002	0.2	0.4
97	46	Y	-0.002	-0.002	0.4	0.6
98	46	Y	-0.002	-0.003	0.6	0.8
99	46	Y	-0.003	-0.002	0.8	1
100	24	Y	0.000253	-0.0007589	0	0.5

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
101	24	Y	-0.0007589	-0.003	0.5	1
102	25	Y	-0.013	-0.015	0	0.414
103	25	Y	-0.015	-0.013	0.414	0.828
104	25	Y	-0.013	-0.006	0.828	1.242
105	25	Y	-0.006	-0.001	1.242	1.656
106	25	Y	-0.001	-9.129e-05	1.656	2.07
107	42	Y	-0.001	-0.001	0	1
108	43	Y	-0.013	-0.015	0	0.414
109	43	Y	-0.015	-0.013	0.414	0.828
110	43	Y	-0.013	-0.006	0.828	1.242
111	43	Y	-0.006	-0.001	1.242	1.656
112	43	Y	-0.001	-9.123e-05	1.656	2.07
113	41	Y	-0.0002702	-0.004	1.36	2.448
114	41	Y	-0.004	-0.014	2.448	3.536
115	41	Y	-0.014	-0.017	3.536	4.624
116	41	Y	-0.017	-0.01	4.624	5.712
117	41	Y	-0.01	-0.006	5.712	6.8
118	45	Y	-0.031	-0.031	0	0.501
119	47	Y	-1.77e-06	-0.005	0	0.2
120	47	Y	-0.005	-0.009	0.2	0.4
121	47	Y	-0.009	-0.009	0.4	0.6
122	47	Y	-0.009	-0.01	0.6	0.8
123	47	Y	-0.01	-0.01	0.8	1
124	50	Y	-0.002	-0.002	0	0.5
125	54	Y	-0.0006458	-0.003	1.36	2.312
126	54	Y	-0.003	-0.01	2.312	3.264
127	54	Y	-0.01	-0.017	3.264	4.216
128	54	Y	-0.017	-0.014	4.216	5.168
129	54	Y	-0.014	-0.002	5.168	6.12
130	63	Y	-0.027	-0.027	0	0.501
131	66	Y	-0.0006011	-0.005	0	0.25
132	66	Y	-0.005	-0.007	0.25	0.5
133	66	Y	-0.007	-0.007	0.5	0.75
134	66	Y	-0.007	-0.009	0.75	1
135	41	Y	-0.0006284	-0.0006284	0.68	2.72
136	44	Y	-0.005	-0.005	0.296	0.603
137	45	Y	-0.075	-0.031	0	0.276
138	45	Y	-0.031	-0.007	0.276	0.552
139	45	Y	-0.007	-0.001	0.552	0.828
140	45	Y	-0.001	0.002	0.828	1.104
141	45	Y	0.002	0.002	1.104	1.38
142	54	Y	-0.0002509	-0.001	0.68	2.72
143	62	Y	-0.005	-0.005	0.297	0.599
144	63	Y	-0.075	-0.031	0	0.276
145	63	Y	-0.031	-0.007	0.276	0.552
146	63	Y	-0.007	-0.001	0.552	0.828
147	63	Y	-0.001	0.002	0.828	1.104
148	63	Y	0.002	0.002	1.104	1.38
149	66	Y	4.514e-05	-0.001	0	0.2
150	66	Y	-0.001	-0.002	0.2	0.4
151	66	Y	-0.002	-0.002	0.4	0.6
152	66	Y	-0.002	-0.003	0.6	0.8
153	66	Y	-0.003	-0.004	0.8	1
154	44	Y	0.000253	-0.0007589	0	0.5
155	44	Y	-0.0007589	-0.003	0.5	1
156	45	Y	-0.013	-0.015	0	0.414
157	45	Y	-0.015	-0.013	0.414	0.828
158	45	Y	-0.013	-0.006	0.828	1.242

Member Distributed Loads (BLC 31 : BLC 8 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
159	45	Y	-0.006	-0.001	1.242	1.656
160	45	Y	-0.001	-9.129e-05	1.656	2.07
161	62	Y	-0.001	-0.001	0	1
162	63	Y	-0.013	-0.015	0	0.414
163	63	Y	-0.015	-0.013	0.414	0.828
164	63	Y	-0.013	-0.006	0.828	1.242
165	63	Y	-0.006	-0.001	1.242	1.656
166	63	Y	-0.001	-9.123e-05	1.656	2.07

Member Area Loads (BLC 1 : Dead)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	108	110	109	107	Y	Two Way	-0.01
2	109	175	161	110	Y	Two Way	-0.01
3	175	176	162	161	Y	Two Way	-0.01
4	112	114	113	111	Y	Two Way	-0.01
5	113	163	167	114	Y	Two Way	-0.01
6	163	164	168	167	Y	Two Way	-0.01
7	104	106	105	103	Y	Two Way	-0.01
8	105	169	173	106	Y	Two Way	-0.01
9	169	170	174	173	Y	Two Way	-0.01

Member Area Loads (BLC 8 : Ice)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	108	110	109	107	Y	Two Way	-0.01
2	109	175	161	110	Y	Two Way	-0.01
3	175	176	162	161	Y	Two Way	-0.01
4	112	114	113	111	Y	Two Way	-0.01
5	113	163	167	114	Y	Two Way	-0.01
6	163	164	168	167	Y	Two Way	-0.01
7	104	106	105	103	Y	Two Way	-0.01
8	105	169	173	106	Y	Two Way	-0.01
9	169	170	174	173	Y	Two Way	-0.01

Basic Load Cases

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	DL	-1		70		9
2	0 Wind - No Ice	WLZ			70	90	
3	90 Wind - No Ice	WLX			70	90	
4	0 Wind - Ice	WLZ			70	90	
5	90 Wind - Ice	WLX			70	90	
6	0 Wind - Service	WLZ			70	90	
7	90 Wind - Service	WLX			70	90	
8	Ice	OL1			70	90	9
9	0 Seismic	ELZ			70	90	
10	90 Seismic	ELX			70	90	
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		1			
14	Live Load d	LL		3			
15	Maint LL 1	LL			1		
16	Maint LL 2	LL			1		
17	Maint LL 3	LL			1		
18	Maint LL 4	LL			1		
19	Maint LL 5	LL			1		
20	Maint LL 6	LL			1		
21	Maint LL 7	LL			1		
22	Maint LL 8	LL			1		

Basic Load Cases (Continued)

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
23	Maint LL 9	LL			1		
24	Maint LL 10	LL			1		
25	Maint LL 11	LL			1		
26	Maint LL 12	LL			1		
27	Maint LL 13	LL			1		
28	Maint LL 14	LL			1		
29	Maint LL 15	LL			1		
30	BLC 1 Transient Area Loads	None				166	
31	BLC 8 Transient Area Loads	None				166	

Load Combinations

	Description	Solve	PDelta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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	0.866	3	0.5		
4	1.2 D + 1.0 - 60 W	Yes	Y	1	1.2	3	0.866	2	0.5		
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	0.866	2	-0.5		
7	1.2 D + 1.0 - 150 W	Yes	Y	1	1.2	2	-0.866	3	0.5		
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	-0.866	3	-0.5		
10	1.2 D + 1.0 - 240 W	Yes	Y	1	1.2	3	-0.866	2	-0.5		
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	-0.866	2	0.5		
13	1.2 D + 1.0 - 330 W	Yes	Y	1	1.2	2	0.866	3	-0.5		
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	0.866	5	0.5	8	1
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y	1	1.2	5	0.866	4	0.5	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	0.866	4	-0.5	8	1
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y	1	1.2	4	-0.866	5	0.5	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	-0.866	5	-0.5	8	1
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y	1	1.2	5	-0.866	4	-0.5	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	-0.866	4	0.5	8	1
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y	1	1.2	4	0.866	5	-0.5	8	1
26	1.2 D + 1.0 E - 0	Yes	Y	1	1.2	9	1				
27	1.2 D + 1.0 E - 30	Yes	Y	1	1.2	9	0.866	10	0.5		
28	1.2 D + 1.0 E - 60	Yes	Y	1	1.2	10	0.866	9	0.5		
29	1.2 D + 1.0 E - 90	Yes	Y	1	1.2	10	1				
30	1.2 D + 1.0 E - 120	Yes	Y	1	1.2	10	0.866	9	-0.5		
31	1.2 D + 1.0 E - 150	Yes	Y	1	1.2	9	-0.866	10	0.5		
32	1.2 D + 1.0 E - 180	Yes	Y	1	1.2	9	-1				
33	1.2 D + 1.0 E - 210	Yes	Y	1	1.2	9	-0.866	10	-0.5		
34	1.2 D + 1.0 E - 240	Yes	Y	1	1.2	10	-0.866	9	-0.5		
35	1.2 D + 1.0 E - 270	Yes	Y	1	1.2	10	-1				
36	1.2 D + 1.0 E - 300	Yes	Y	1	1.2	10	-0.866	9	0.5		
37	1.2 D + 1.0 E - 330	Yes	Y	1	1.2	9	0.866	10	-0.5		
38	1.2 D + 1.5 LL a + Service - 0 W	Yes	Y	1	1.2	6	1			11	1.5
39	1.2 D + 1.5 LL a + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	11	1.5
40	1.2 D + 1.5 LL a + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	11	1.5
41	1.2 D + 1.5 LL a + Service - 90 W	Yes	Y	1	1.2	7	1			11	1.5
42	1.2 D + 1.5 LL a + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	11	1.5
43	1.2 D + 1.5 LL a + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	11	1.5
44	1.2 D + 1.5 LL a + Service - 180 W	Yes	Y	1	1.2	6	-1			11	1.5
45	1.2 D + 1.5 LL a + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	11	1.5
46	1.2 D + 1.5 LL a + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	11	1.5

Load Combinations (Continued)

	Description	Solve	PDelta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
47	1.2 D + 1.5 LL a + Service - 270 W	Yes	Y	1	1.2	7	-1			11	1.5
48	1.2 D + 1.5 LL a + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	11	1.5
49	1.2 D + 1.5 LL a + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	11	1.5
50	1.2 D + 1.5 LL b + Service - 0 W	Yes	Y	1	1.2	6	1			12	1.5
51	1.2 D + 1.5 LL b + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	12	1.5
52	1.2 D + 1.5 LL b + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	12	1.5
53	1.2 D + 1.5 LL b + Service - 90 W	Yes	Y	1	1.2	7	1			12	1.5
54	1.2 D + 1.5 LL b + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	12	1.5
55	1.2 D + 1.5 LL b + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	12	1.5
56	1.2 D + 1.5 LL b + Service - 180 W	Yes	Y	1	1.2	6	-1			12	1.5
57	1.2 D + 1.5 LL b + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	12	1.5
58	1.2 D + 1.5 LL b + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	12	1.5
59	1.2 D + 1.5 LL b + Service - 270 W	Yes	Y	1	1.2	7	-1			12	1.5
60	1.2 D + 1.5 LL b + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	12	1.5
61	1.2 D + 1.5 LL b + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	12	1.5
62	1.2 D + 1.5 LL c + Service - 0 W	Yes	Y	1	1.2	6	1			13	1.5
63	1.2 D + 1.5 LL c + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	13	1.5
64	1.2 D + 1.5 LL c + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	13	1.5
65	1.2 D + 1.5 LL c + Service - 90 W	Yes	Y	1	1.2	7	1			13	1.5
66	1.2 D + 1.5 LL c + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	13	1.5
67	1.2 D + 1.5 LL c + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	13	1.5
68	1.2 D + 1.5 LL c + Service - 180 W	Yes	Y	1	1.2	6	-1			13	1.5
69	1.2 D + 1.5 LL c + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	13	1.5
70	1.2 D + 1.5 LL c + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	13	1.5
71	1.2 D + 1.5 LL c + Service - 270 W	Yes	Y	1	1.2	7	-1			13	1.5
72	1.2 D + 1.5 LL c + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	13	1.5
73	1.2 D + 1.5 LL c + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	13	1.5
74	1.2 D + 1.5 LL d + Service - 0 W	Yes	Y	1	1.2	6	1			14	1.5
75	1.2 D + 1.5 LL d + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	14	1.5
76	1.2 D + 1.5 LL d + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	14	1.5
77	1.2 D + 1.5 LL d + Service - 90 W	Yes	Y	1	1.2	7	1			14	1.5
78	1.2 D + 1.5 LL d + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	14	1.5
79	1.2 D + 1.5 LL d + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	14	1.5
80	1.2 D + 1.5 LL d + Service - 180 W	Yes	Y	1	1.2	6	-1			14	1.5
81	1.2 D + 1.5 LL d + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	14	1.5
82	1.2 D + 1.5 LL d + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	14	1.5
83	1.2 D + 1.5 LL d + Service - 270 W	Yes	Y	1	1.2	7	-1			14	1.5
84	1.2 D + 1.5 LL d + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	14	1.5
85	1.2 D + 1.5 LL d + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	14	1.5
86	1.2 D + 1.5 LL Maint (1)	Yes	Y	1	1.2					15	1.5
87	1.2 D + 1.5 LL Maint (2)	Yes	Y	1	1.2					16	1.5
88	1.2 D + 1.5 LL Maint (3)	Yes	Y	1	1.2					17	1.5
89	1.2 D + 1.5 LL Maint (4)	Yes	Y	1	1.2					18	1.5
90	1.2 D + 1.5 LL Maint (5)	Yes	Y	1	1.2					19	1.5
91	1.2 D + 1.5 LL Maint (6)	Yes	Y	1	1.2					20	1.5
92	1.2 D + 1.5 LL Maint (7)	Yes	Y	1	1.2					21	1.5
93	1.2 D + 1.5 LL Maint (8)	Yes	Y	1	1.2					22	1.5
94	1.2 D + 1.5 LL Maint (9)	Yes	Y	1	1.2					23	1.5
95	1.2 D + 1.5 LL Maint (10)	Yes	Y	1	1.2					24	1.5
96	1.2 D + 1.5 LL Maint (11)	Yes	Y	1	1.2					25	1.5
97	1.2 D + 1.5 LL Maint (12)	Yes	Y	1	1.2					26	1.5
98	1.2 D + 1.5 LL Maint (13)	Yes	Y	1	1.2					27	1.5
99	1.2 D + 1.5 LL Maint (14)	Yes	Y	1	1.2					28	1.5
100	1.2 D + 1.5 LL Maint (15)	Yes	Y	1	1.2					29	1.5

Envelope Node Reactions

	Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	155	max	1.743	5	4.29	20	1.454	2	-3.185	2	4.371	5	0.51	88
2		min	-1.753	11	1.163	2	-1.324	8	-15.071	20	-4.381	11	-0.777	86
3	159	max	1.274	6	4.495	16	2.404	2	8.636	15	6.557	13	-3.247	10
4		min	-1.375	12	1.24	9	-2.467	8	1.552	9	-6.552	7	-13.604	16
5	157	max	1.805	4	5.321	24	2.75	2	9.922	25	7.864	9	16.703	24
6		min	-1.695	10	1.398	6	-2.818	8	1.88	7	-7.841	3	3.779	6
7	Totals:	max	4.632	5	13.963	16	6.609	2						
8		min	-4.632	11	4.411	10	-6.609	8						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	1	PIPE_4.0	0.586	8	20	0.189	8		14	41.111	93.24	10.631	10.631	1.778	H1-1b
2	2	PIPE_4.0	0.631	8	14	0.202	8		18	41.111	93.24	10.631	10.631	1.785	H1-1b
3	3	PIPE_4.0	0.634	8	15	0.168	8		22	41.111	93.24	10.631	10.631	1.779	H1-1b
4	4	HSS5X5X5	0.187	0	19	0.085	0	y	18	215.88	217.764	31.602	31.602	2.003	H1-1b
5	5	HSS5X5X5	0.256	0	22	0.099	0	y	15	215.88	217.764	31.602	31.602	1.88	H1-1b
6	6	HSS5X5X5	0.206	0	14	0.101	0	y	14	215.88	217.764	31.602	31.602	1.941	H1-1b
7	7	PL 1/2X10	0.137	0.451	4	0.058	1.215	y	24	58.813	162	1.688	33.75	2.563	H1-1b
8	8	SR_1"	0.17	0	13	0.07	0		25	24.687	25.447	0.424	0.424	1.194	H1-1b
9	9	SR_1"	0.266	0	13	0.035	0		25	24.687	25.447	0.424	0.424	1.244	H1-1b
10	10	SR_1"	0.274	0	13	0.03	0.5		13	24.687	25.447	0.424	0.424	1.534	H1-1b
11	11	SR_1"	0.23	0	12	0.027	0.5		12	24.687	25.447	0.424	0.424	1.704	H1-1b
12	12	SR_1"	0.191	0	6	0.023	0.5		6	24.687	25.447	0.424	0.424	1.562	H1-1b
13	13	SR_3/4"	0.17	0	5	0.016	0.5		5	13.563	14.314	0.179	0.179	1.956	H1-1b
14	14	SR_3/4"	0.199	1.204	13	0.053	1.204		25	9.38	14.314	0.179	0.179	2.482	H1-1b
15	15	SR_1"	0.137	0	3	0.074	0		15	24.687	25.447	0.424	0.424	1.181	H1-1b
16	16	SR_1"	0.255	0	15	0.038	0		15	24.687	25.447	0.424	0.424	1.267	H1-1b
17	17	SR_1"	0.238	0	3	0.025	0.5		3	24.687	25.447	0.424	0.424	1.536	H1-1b
18	18	SR_1"	0.235	0	4	0.027	0.5		4	24.687	25.447	0.424	0.424	1.707	H1-1b
19	19	SR_1"	0.231	0	10	0.026	0.5		10	24.687	25.447	0.424	0.424	1.638	H1-1b
20	20	SR_3/4"	0.2	0	10	0.019	0.5		10	13.563	14.314	0.179	0.179	2.529	H1-1b
21	21	SR_3/4"	0.188	5.1	4	0.058	1.204		15	9.38	14.314	0.179	0.179	2.37	H1-1b
22	22	SR_3/4"	0.153	0	24	0.134	0		25	11.538	14.314	0.179	0.179	1.838	H1-1b
23	23	SR_3/4"	0.345	2.3	18	0.119	2.3		25	4.606	14.314	0.179	0.179	2.75	H1-1b
24	24	SR_3/4"	0.152	0	19	0.139	0		14	11.538	14.314	0.179	0.179	1.846	H1-1b
25	25	SR_3/4"	0.339	2.3	24	0.122	2.3		15	4.606	14.314	0.179	0.179	2.801	H1-1b
26	26	SR_3/4"	0.341	0	24	0.064	0		14	11.538	14.314	0.179	0.179	2.132	H1-1b
27	27	SR_3/4"	0.336	0	17	0.067	0		14	11.538	14.314	0.179	0.179	2.15	H1-1b
28	28	SR_1"	0.148	0	4	0.071	0		17	24.687	25.447	0.424	0.424	1.189	H1-1b
29	29	SR_1"	0.258	0	16	0.038	0		17	24.687	25.447	0.424	0.424	1.266	H1-1b
30	30	SR_1"	0.273	0	4	0.029	0.5		4	24.687	25.447	0.424	0.424	1.545	H1-1b
31	31	SR_1"	0.282	0	4	0.032	0.5		4	24.687	25.447	0.424	0.424	1.778	H1-1b
32	32	SR_1"	0.298	0	9	0.035	0.5		3	24.687	25.447	0.424	0.424	1.532	H1-1b
33	33	SR_3/4"	0.291	0	9	0.027	0.5		9	13.563	14.314	0.179	0.179	2.306	H1-1b
34	34	SR_3/4"	0.23	5.1	3	0.055	1.204		17	9.38	14.314	0.179	0.179	2.634	H1-1b
35	35	SR_1"	0.175	0	7	0.074	0		19	24.687	25.447	0.424	0.424	1.188	H1-1b
36	36	SR_1"	0.267	0	20	0.04	0		19	24.687	25.447	0.424	0.424	1.264	H1-1b
37	37	SR_1"	0.302	0	8	0.032	0.5		2	24.687	25.447	0.424	0.424	1.533	H1-1b
38	38	SR_1"	0.324	0	8	0.037	0.5		2	24.687	25.447	0.424	0.424	1.687	H1-1b
39	39	SR_1"	0.336	0	3	0.04	0.5		8	24.687	25.447	0.424	0.424	1.663	H1-1b
40	40	SR_3/4"	0.316	0	3	0.029	0.5		3	13.563	14.314	0.179	0.179	1.955	H1-1b
41	41	SR_3/4"	0.265	5.1	8	0.059	1.204		20	9.38	14.314	0.179	0.179	2.144	H1-1b
42	42	SR_3/4"	0.155	0	15	0.133	0		17	11.538	14.314	0.179	0.179	1.834	H1-1b
43	43	SR_3/4"	0.339	2.3	21	0.115	1.078		18	4.606	14.314	0.179	0.179	2.754	H1-1b
44	44	SR_3/4"	0.159	0	21	0.14	0		20	11.538	14.314	0.179	0.179	1.806	H1-1b
45	45	SR_3/4"	0.348	2.3	15	0.123	0		19	4.606	14.314	0.179	0.179	2.771	H1-1b
46	46	SR_3/4"	0.336	0	15	0.065	0		18	11.538	14.314	0.179	0.179	2.142	H1-1b
47	47	SR_3/4"	0.354	0	20	0.071	0		19	11.538	14.314	0.179	0.179	2.147	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
48	48	SR_1"	0.186	0	8	0.07	0		21	24.687	25.447	0.424	0.424	1.193	H1-1b
49	49	SR_1"	0.293	0	8	0.036	0.5		9	24.687	25.447	0.424	0.424	1.242	H1-1b
50	50	SR_1"	0.332	0	8	0.037	0.5		8	24.687	25.447	0.424	0.424	1.543	H1-1b
51	51	SR_1"	0.321	0	8	0.038	0.5		8	24.687	25.447	0.424	0.424	1.698	H1-1b
52	52	SR_1"	0.287	0	2	0.033	0.5		8	24.687	25.447	0.424	0.424	1.361	H1-1b
53	53	SR_3/4"	0.244	0	13	0.023	0.5		13	13.563	14.314	0.179	0.179	2.276	H1-1b
54	54	SR_3/4"	0.248	5.1	8	0.053	1.204		21	9.38	14.314	0.179	0.179	2.336	H1-1b
55	55	SR_1"	0.132	0	24	0.07	0		23	24.687	25.447	0.424	0.424	1.233	H1-1b
56	56	SR_1"	0.255	0	24	0.035	0		23	24.687	25.447	0.424	0.424	1.263	H1-1b
57	57	SR_1"	0.217	0	12	0.023	0.5		12	24.687	25.447	0.424	0.424	1.546	H1-1b
58	58	SR_1"	0.233	0	12	0.028	0.5		12	24.687	25.447	0.424	0.424	1.702	H1-1b
59	59	SR_1"	0.25	0	7	0.029	0.5		7	24.687	25.447	0.424	0.424	1.651	H1-1b
60	60	SR_3/4"	0.246	0	7	0.023	0.5		7	13.563	14.314	0.179	0.179	1.69	H1-1b
61	61	SR_3/4"	0.192	5.1	12	0.054	0		23	9.38	14.314	0.179	0.179	2.135	H1-1b
62	62	SR_3/4"	0.154	0	20	0.134	0		22	11.538	14.314	0.179	0.179	1.836	H1-1b
63	63	SR_3/4"	0.356	2.3	25	0.117	1.078		22	4.606	14.314	0.179	0.179	2.726	H1-1b
64	64	SR_3/4"	0.158	0	14	0.135	0		23	11.538	14.314	0.179	0.179	1.852	H1-1b
65	65	SR_3/4"	0.33	2.3	20	0.119	2.3		23	4.606	14.314	0.179	0.179	2.777	H1-1b
66	66	SR_3/4"	0.344	0	19	0.064	0		22	11.538	14.314	0.179	0.179	2.143	H1-1b
67	67	SR_3/4"	0.343	0	25	0.065	0		22	11.538	14.314	0.179	0.179	2.142	H1-1b
68	69	PIPE_2.5	0.752	4.594	24	0.231	2.156		20	26.137	50.715	3.596	3.596	1.821	H1-1b
69	71	PIPE_2.0	0.378	3	2	0.079	3		7	20.867	32.13	1.872	1.872	1.783	H1-1b
70	73	PIPE_2.0	0.901	3	17	0.218	3		19	20.867	32.13	1.872	1.872	1.839	H1-1b
71	75	PIPE_2.5	0.876	4.594	15	0.262	2.156		24	26.137	50.715	3.596	3.596	1.839	H1-1b
72	77	PIPE_2.0	0.476	3	6	0.069	3		8	20.867	32.13	1.872	1.872	1.526	H1-1b
73	79	PIPE_2.0	0.793	3	20	0.232	3		23	20.867	32.13	1.872	1.872	1.783	H1-1b
74	81	PIPE_2.5	0.813	4.594	19	0.213	2.156		16	26.137	50.715	3.596	3.596	1.597	H1-1b
75	83	PIPE_2.0	0.363	3	2	0.1	3		2	20.867	32.13	1.872	1.872	2.126	H1-1b
76	85	PIPE_2.0	0.995	3	14	0.213	3		15	20.867	32.13	1.872	1.872	1.811	H1-1b
77	87	PIPE_2.0	0.747	3.5	5	0.122	1.021		24	17.855	32.13	1.872	1.872	1.289	H1-1b
78	88	HSS5X5X5	0.506	0	18	0.087	0	y	18	214.998	217.764	31.602	31.602	1.33	H1-1b
79	89	HSS5X5X5	0.665	0	21	0.101	0	y	15	214.998	217.764	31.602	31.602	1.317	H1-1b
80	90	HSS5X5X5	0.552	0	25	0.103	0	y	14	214.998	217.764	31.602	31.602	1.324	H1-1b
81	91	PL 1/2X10	0.169	1.215	3	0.056	1.215	y	16	58.813	162	1.688	33.75	1.991	H1-1b
82	92	PL 1/2X10	0.168	1.215	8	0.046	1.215	y	43	58.813	162	1.688	33.75	2.041	H1-1b
83	93	PIPE_2.0	0.506	8.667	18	0.14	0.5		2	3.842	32.13	1.872	1.872	1.935	H1-1b
84	97	PIPE_2.0	0.493	8.5	15	0.199	8.667		10	3.842	32.13	1.872	1.872	1.77	H1-1b
85	101	PIPE_2.0	0.557	8.667	14	0.086	14.5		90	3.842	32.13	1.872	1.872	2.051	H1-1b
86	105	L2.5x2.5x4	0.364	1.245	20	0.075	1.245	y	2	36.654	38.556	1.114	2.537	1.198	H2-1
87	106	L2.5x2.5x4	0.342	0	23	0.065	1.245	y	11	36.654	38.556	1.114	2.537	1.018	H2-1
88	107	L2.5x2.5x4	0.353	1.245	25	0.065	1.245	y	7	36.654	38.556	1.114	2.537	1.202	H2-1
89	111	PIPE_1.5	0.775	13.529	12	0.03	13.529		12	2.408	23.593	1.105	1.105	2.433	H1-1b
90	112	PIPE_1.5	0.609	0.864	13	0.029	0.864		13	2.408	23.593	1.105	1.105	2.305	H1-1b

Envelope NONE Member Cold Formed Steel Code Checks

No Data to Print...

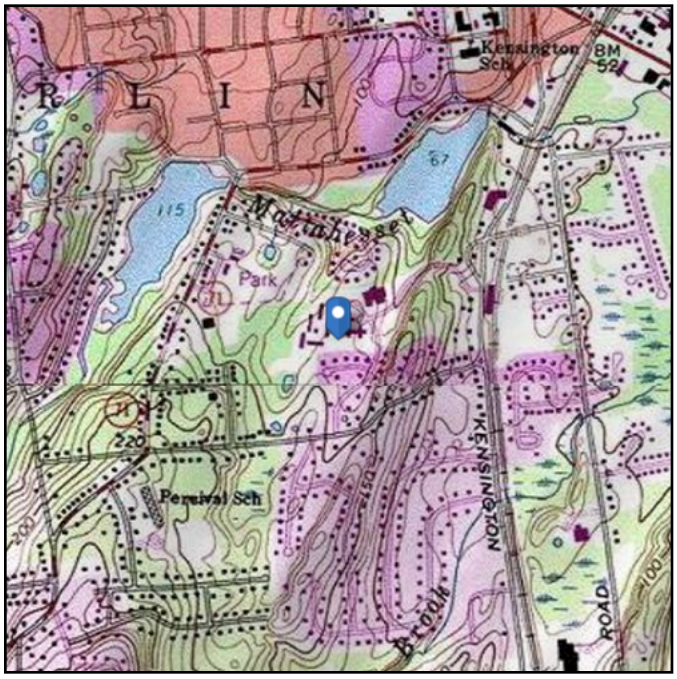
APPENDIX D

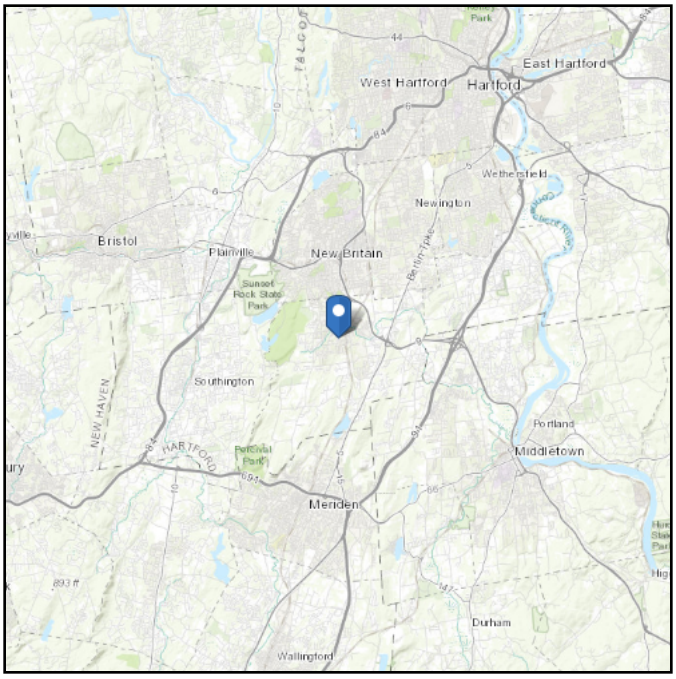
ADDITIONAL CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-10	**Elevation:**	133.49 ft (NAVD 88)
Risk Category:	II	**Latitude:**	41.626194
Soil Class:	D - Stiff Soil	**Longitude:**	-72.775647





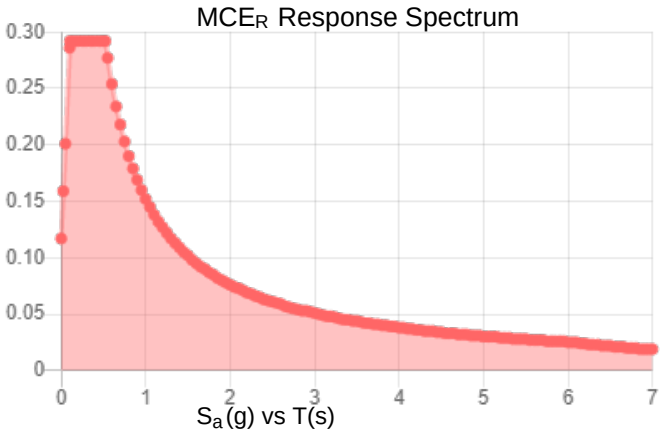
Seismic

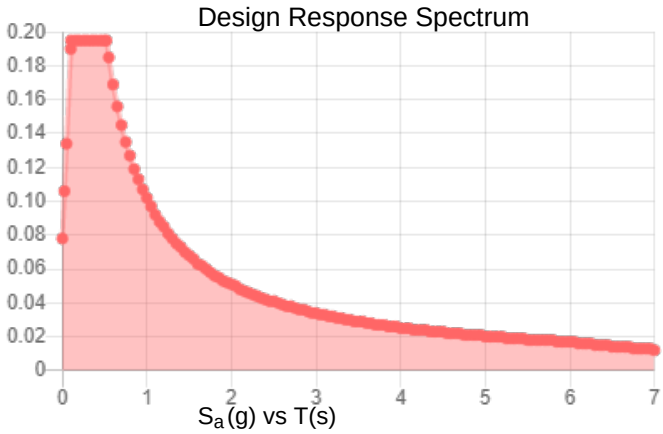
Site Soil Class: D - Stiff Soil

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 Feb 26 2021

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

Ice

Results:

Ice Thickness:	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 Feb 26 2021

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

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

PROJECT	**87581.027.01 - Newington_1, CT**				**KSC**
SUBJECT	**Platform Mount Mount Analysis**				
DATE	**03/02/21**	PAGE	1	OF	1

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

[REF: AISC 360-05]

Reactions at Bolted Connection

Tension	:	2.75	k
Vertical Shear	:	5.321	k
Horizontal Shear	:	1.805	k
Torsion	:	16.703	k.ft
Moment from Horizontal Forces	:	7.864	k.ft
Moment from Vertical Forces	:	9.922	k.ft

Bolt Parameters

Bolt Grade	:	A325	
Bolt Diameter	:	0.625	in
Nominal Bolt Area	:	0.307	in^2
Bolt spacing, Horizontal	:	6	in
Bolt spacing, Vertical	:	6	in
Bolt edge distance, plate height	:	1.5	in
Bolt edge distance, plate width	:	1.5	in
Total Number of Bolts	:	4	bolts

Summary of Forces

Shear Resultant Force	:	5.62	k
Force from Horz. Moment	:	14.24	k
Force from Vert. Moment	:	17.97	k
Shear Load / Bolt	:	1.40	k
Tension Load / Bolt	:	0.69	k
Resultant from Moments / Bolt	:	11.47	k

Bolt Checks

Nominal Tensile Stress, F_{nt}	:	90.00	ksi	[AISC Table J3.2]
Available Tensile Stress, ΦR_{nt}	:	20.72	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	**58.65%**		**OKAY**
Nominal Shear Stress, F_{nv}	:	48.00	ksi	[AISC Table J3.2]
Available Shear Stress, ΦR_{nv}	:	11.05	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	**18.93%**		**OKAY**
Unity Check, Combined	:	**77.58%**		**OKAY**
Available Bearing Strength, ΦR_n	:	34.66	k/bolt	
Unity Check, Bolt Bearing	:	**4.05%**		**OKAY**

PROJECT	**87581.027.01 - Newington_1, CT**				**KSC**
SUBJECT	**Platform Mount Mount Analysis**				
DATE	**03/02/21**	PAGE	1	OF	1

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

[REF: AISC 360-05]

Connecting Member Parameters

Plate Yield Strength, F_y	:	36.00	ksi	[AISC Table 2-5]
Plate Tensile Strength, F_u	:	58.00	ksi	[AISC Table 2-5]
Plate Height	:	9.00	in	
Plate Width	:	9.00	in	
Plate Thickness	:	0.50	in	
Edge Distance	:	1.06	in	
Gross Tension Area, A_{gt}	:	4.50	in^2	
Gross Shear Area, A_{gv}	:	0.75	in^2	
Net Area for tension, A_{nv}	:	4.16	in^2	
Net Area for shear, A_{nt}	:	3.00	in^2	

Plate Check

Available Tensile Yield	:	145.80	k	[Eq. J4-1]
Available Tensile Rupture	:	180.80	k	[Eq. J4-2]
Unity Check, Plate Tension	:	**8.34%**		**OKAY**
Available Shear Yield	:	16.20	k	[Eq. J4-3]
Available Shear Rupture	:	104.40	k	[Eq. J4-4]
Unity Check, Plate Shear	:	**34.68%**		**OKAY**
Available Block Shear, ΦRn	:	77.40	k	[Eq. J4-5]
Unity Check, Block Shear	:	**7.26%**		**OKAY**

Exhibit F

Power Density/RF Emissions Report

INFINIGY

Non-Ionizing Radiation Report

Compiled For: Northeast Site Solutions on behalf of T-Mobile

Site Name: CT11004B

Site ID: CT11004B

240 Kensington Road, Berlin, CT 06037

Latitude: 41.6262000; Longitude: -72.775600

Structure Type: Monopole

Report Date: March 24, 2021

Report Written By: Tim Harris

Status: T-Mobile will be compliant with FCC rules on RF Exposure.

Table of Contents

1. Executive Summary:

Northeast Site Solutions on behalf of T-Mobile has contracted Infinigy Solutions, LLC to determine whether the site CT11004B located at 240 Kensington Road in Berlin, CT Will Be Compliant with all Federal Communications Commission (FCC) rules and regulations for radio frequency (RF) exposure as indicated in **47CFR§1.1310**.

The report incorporates a theoretical RF field analysis in accordance with the FCC Rules and Regulations for all individuals classified as "Occupational or Controlled" and "General Public or Uncontrolled" (see Appendix A and B).

This document and the conclusions herein are based on information provided by Northeast Site Solutions on behalf of T-Mobile.

As a result of the analysis, **T-Mobile Will Be Compliant with FCC rules.**

T-Mobile, All Bands Cumulative Exposure %		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0129
	% Exposure	1.57 %
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0129
	% Exposure	0.32 %

2. Site Summary:

Site Information	
Site Name: CT11004B	
Site Address: 240 Kensington Road, Berlin, CT 06037	
Site Type: Monopole	
Compliance Status	Will Be Compliant
Mitigation Required	No
Signage Required	Yes
Barriers Required	No
Access Locked	No
Area Controlled or Uncontrolled	Uncontrolled

3. Site Compliance

This report also incorporates overview of the site information:

- Antenna Inventory Table
- Calculation Tables showing exposure for each carrier transmit frequency
- Total exposure for all carriers existing and proposed at ground level considering the centerline of all antennas and horizontal distance from the tower.
- Maximum Effective Radiated Power Assumed as Worst Case for Calculations used in this study
- Calculations based on flat ground around base of the structure

4. Site Compliance Recommendations

Infinigy recommends the following upon the installation of antennas at the site:

Base of tower

Install an RF caution sign. Note: The recommendation for alerting signage is moot if there is an RF caution, or greater already installed.

5. Antenna Inventory Table

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency/Technology	Rad Ctr (Ft)	Az (Deg)	Total ERP Power (Watts)
1a	Alpha	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	2100 MHz LTE	181	25	4308
1b	Alpha	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900 MHz LTE	181	25	4070
1c	Alpha	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900 MHz GSM	181	25	2034
2a	Alpha	T-Mobile	Ericsson	AIR6449 B41	2500 MHz LTE	181	25	3591
2b	Alpha	T-Mobile	Ericsson	AIR6449 B41	2500 MHz 5G	181	25	3590
3a	Alpha	T-Mobile	RFS	APXVARR24_43-C-NA20	700 MHz LTE	181	25	2256
3b	Alpha	T-Mobile	RFS	APXVARR24_43-C-NA20	600 MHz LTE	181	25	1128
3c	Alpha	T-Mobile	RFS	APXVARR24_43-C-NA20	600 MHz LTE	181	25	1128
3d	Alpha	T-Mobile	RFS	APXVARR24_43-C-NA20	1900 MHz LTE	181	25	3166
4a	Beta	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	2100 MHz LTE	181	125	4308
4b	Beta	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900 MHz LTE	181	125	4070
4c	Beta	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900 MHz GSM	181	125	2034
5a	Beta	T-Mobile	Ericsson	AIR6449 B41	2500 MHz LTE	181	125	3591
5b	Beta	T-Mobile	Ericsson	AIR6449 B41	2500 MHz 5G	181	125	3590
6a	Beta	T-Mobile	RFS	APXVARR24_43-C-NA20	700 MHz LTE	181	125	2256
6b	Beta	T-Mobile	RFS	APXVARR24_43-C-NA20	600 MHz LTE	181	125	1128
6c	Beta	T-Mobile	RFS	APXVARR24_43-C-NA20	600 MHz LTE	181	125	1128
6d	Beta	T-Mobile	RFS	APXVARR24_43-C-NA20	1900 MHz LTE	181	125	3166
7a	Gamma	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	2100 MHz LTE	181	245	4308
7b	Gamma	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900 MHz LTE	181	245	4070
7c	Gamma	T-Mobile	Ericsson	AIR32 KRD901146-1_B66A_B2A	1900 MHz GSM	181	245	2034
8a	Gamma	T-Mobile	Ericsson	AIR6449 B41	2500 MHz LTE	181	245	3591
8b	Gamma	T-Mobile	Ericsson	AIR6449 B41	2500 MHz 5G	181	245	3590
9a	Gamma	T-Mobile	RFS	APXVARR24_43-C-NA20	700 MHz LTE	181	245	2256

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency/Technology	Rad Ctr (Ft)	Az (Deg)	Total ERP Power (Watts)
9b	Gamma	T-Mobile	RFS	APXVARR24_43-C-NA20	600 MHz LTE	181	245	1128
9c	Gamma	T-Mobile	RFS	APXVARR24_43-C-NA20	600 MHz LTE	181	245	1128
9d	Gamma	T-Mobile	RFS	APXVARR24_43-C-NA20	1900 MHz LTE	181	245	3166

6. RF Guidelines

To ensure safety of company workers, the following points need to be taken into consideration and implemented at wireless sites in accordance with the Carriers policies:

a) Worksite: Any employee at the site should avoid working directly in front of the antenna or in areas predicted to exceed general population exposure limits by 100%. Workers should insist that the transmitters be switched off during the work period.

b) RF Safety Training and Awareness: All employees working in areas exceeding the general population limits should have a basic awareness of RF safety measures. Videos, classroom lectures and online courses are all appropriate training methods on these topics.

c) Site Access: Restricting access to transmitting antenna locations is one of the most important elements of RF safety. This can be done with:

- Locked doors/gates/ladder access
- Alarmed doors
- Restrictive barriers

d) Three-foot Buffer: There is an inverse relationship between the strength of the field and the distance from the antenna. The RF field diminishes with distance from the antenna. Workers should maintain a three-foot distance from the antennas.

e) Antennas: Workers should always assume that the antenna is transmitting and should never stop right in front of the antenna. If someone must pass by an antenna, he/she should move quickly, thus reducing RF exposure.

7. T-Mobile Exposure Analysis By Band and Technology

T-Mobile 600 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.4**
	Exposure values at the site (mW/cm^2)	**0.0011**
	% Exposure	**0.29%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.0**
	Exposure values at the site (mW/cm^2)	**0.0011**
	% Exposure	**0.06%**

T-Mobile 600 MHz 5G		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.4**
	Exposure values at the site (mW/cm^2)	**0.0011**
	% Exposure	**0.29%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.0**
	Exposure values at the site (mW/cm^2)	**0.0011**
	% Exposure	**0.06%**

T-Mobile 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.5**
	Exposure values at the site (mW/cm^2)	**0.0011**
	% Exposure	**0.23%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.3**
	Exposure values at the site (mW/cm^2)	**0.0011**
	% Exposure	**0.05%**

T-Mobile 1900 MHz GSM		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0010**
	% Exposure	**0.10%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0010**
	% Exposure	**0.02%**

T-Mobile 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0037**
	% Exposure	**0.37%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0037**
	% Exposure	**0.07%**

T-Mobile 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0022**
	% Exposure	**0.22%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0022**
	% Exposure	**0.04%**

T-Mobile 2500 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0018**
	% Exposure	**0.18%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0018**
	% Exposure	**0.04%**

T-Mobile 2500 MHz 5G		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0018**
	% Exposure	**0.18%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0018**
	% Exposure	**0.04%**

8. Appendix A: FCC Guidelines

FCC Policies

The Federal Communications Commission (FCC) in 1996 implemented regulations and policies for analysis of RF propagation to evaluate RF emissions. All the analysis and results of this report are compared with FCC's (Federal Communications Commission) rules to determine whether a site is compliant for Occupational/Controlled or General Public/Uncontrolled exposure. All the analysis of RF propagation is done in terms of a percentage. The limits primarily indicate the power density and are generally expressed in terms of milliwatts per centimeter square, mW/cm^2.

FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the scenario/ situation in which that exposure takes place or the status of the individuals who are subjected to that exposure. The decision as to which tier is applied to a scenario is based on the following definitions:

Occupational / Controlled

These limits apply in situations when someone is exposed to RF energy through his/her occupation, is fully aware of the harmful effects of the RF exposure and has an ability to exercise control over this exposure. Occupational / controlled exposure limits also apply when 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. limits for Occupational/Controlled exposure can be found on Table 1(A).

General Population / Uncontrolled

These limits apply to situations in which the general public may be exposed or in which persons who are exposed because of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure to RF. Therefore, members of the general public would always be considered under this category, for example, in the case of a telecommunications tower that exposes people in a nearby residential area. Exposure limits for General Population/Uncontrolled can be found on Table 1(B).

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

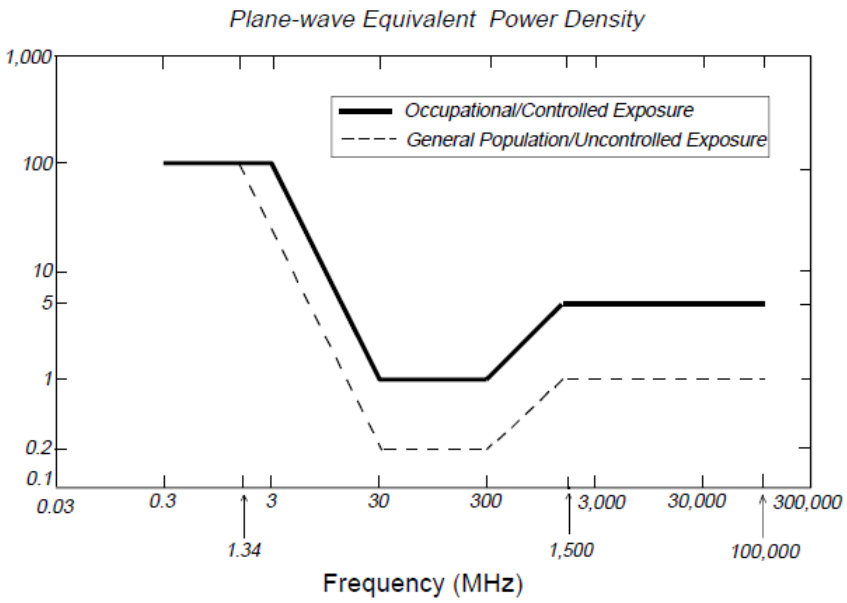
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

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

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

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



OSHA Statement:

The objective of the OSHA Act is to ensure the safety and health of the working men and women by enforcing certain standards. The act also assists and encourages the states in their efforts to ensure safe and healthy working conditions through means of research, information, education and training in the field of occupational safety and health and for other purposes.

According to OSHA Act section 5, important duties to be considered are:

(a) Each employer

1) Shall furnish to each of his employees' employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious harm to his employees
2) Shall comply with occupational safety and health standards promulgated under this act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

9. Preparer Certification

I, Tim Harris, preparer of this report, certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commission and the Occupational Safety and Heath Administration regarding Human Exposure to Radio Frequency Radiation. In addition, I have been trained in RF safety practices, rules, and regulations.

I certify that the information contained in this report is true and correct to the best of my knowledge.

Timothy A. Harris *3/24/2021*

Signature Date