NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

Northeast Site Solutions
Denise Sabo
4 Angela's Way, Burlington CT 06013
203-435-3640
denise@northeastsitesolutions.com

March 17, 2022

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Tower Share Application
150 Mattatuck Heights, Waterbury, CT 06705
Latitude: 41.537908
Longitude: -72.985002
Site #: 876317_Crown_Dish

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of Dish Wireless LLC. Dish Wireless LLC plans to install antennas and related equipment to the tower site located at 150 Mattatuck Heights, Waterbury, Connecticut.

Dish Wireless LLC proposes to install three (3) 600/1900 MHz 5G antennas and six (6) RRUs, at the 120-foot level of the existing 143-foot monopole, one (1) Fiber cable will also be installed. Dish Wireless LLC equipment cabinets will be placed within a 7' x 5' lease area within the existing fenced compound. Included are plans by Kimley Horn, dated March 3, 2022, Exhibit C. Also included is a structural analysis prepared by Crown Castle, dated October 4, 2021, confirming that the existing tower is structurally capable of supporting the proposed equipment. Attached as Exhibit D. The facility was approved by the City of Waterbury, however the City has been unable to locate a copy of the approval. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Dish Wireless LLC intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to Mayor Neil O'Leary, and Robert Nerney, City Planner for the City of Waterbury, as well as the tower owner (Crown Castle) and property owner (Waterbury Twin LLC & 150 MH LLC).

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89.

1. The proposed modification will not result in an increase in the height of the existing structure. The top of the existing tower is 143-feet and the Dish Wireless LLC antennas will be located at a centerline height of 120-feet.

2. The proposed modifications will not result in an increase of the site boundary as depicted on the attached site plan.

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

4. The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. The combined site operations will result in a total power density of 27.88% as evidenced by Exhibit F.

Connecticut General Statutes 16-50aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, Dish Wireless LLC respectfully submits that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing monopole has been deemed structurally capable of supporting Dish Wireless LLC proposed loading. The structural analysis is included as Exhibit D.

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this monopole in Waterbury. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit Dish Wireless LLC to obtain a building permit for the proposed installation. Further, a Letter of Authorization is included as Exhibit G, authorizing Dish Wireless LLC to file this application for shared use.

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Dish Wireless LLC equipment at the 120-foot level of the existing 143-foot tower would have an insignificant visual impact on the area around the tower. Dish Wireless LLC ground equipment would be installed within the existing facility compound. Dish Wireless LLC shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by Exhibit F, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. Dish Wireless LLC will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist Dish Wireless LLC with this tower sharing application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Dish Wireless LLC proposed loading. Dish Wireless LLC is not aware of any public safety concerns relative to the proposed sharing of the existing tower. Dish Wireless LLC intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Waterbury.

Sincerely,

Denise Sabo

Denise Sabo
Mobile: 203-435-3640
Fax: 413-521-0558
Office: 4 Angela's Way, Burlington CT 06013
Email: denise@northeastsitesolutions.com

NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

Attachments

Cc: Mayor Neil O'Leary
City Hall Building
235 Grand Street, 2nd floor
Waterbury, CT 06702

Robert Nerney, City Planner
185 South Main Street, 5th floor
Waterbury, CT 06706

Waterbury Twin LLC & 150 MH LLC – Property Owner
12 Iselin Terrace
Larchmont, NY 10538

Crown Castle – Tower Owner

Exhibit A

Original Facility Approval

Myl, Kimberly

From: Myl, Kimberly
Sent: Tuesday, May 17, 2016 3:38 PM
To: 'siting.council@ct.gov'
Subject: 150 Mattatuck Heights - Existing Telecommunications Tower Original Zoning Approval

To Whom It May Concern:

Please be advised both the township (email below) and Crown Castle as the tower owner, do not have the original zoning resolution on file. Please use this email as notification to waive this requirement as we will include this and the email from the township within our submission.

Please let me know if you have any questions or need additional information. Thank you in advance.

KIMBERLY MYL
Real Estate Specialist
T: (201) 236-9069 | M: (201) 993-3697

CROWN CASTLE
1200 MacArthur Blvd, Suite 200
Mahwah, NJ 07430

From: Margaret Rice [mailto:mrice@waterburyct.org]
Sent: Tuesday, May 17, 2016 1:03 PM
To: Myl, Kimberly
Subject: RE: 150 Mattatuck Heights - Existing Telecommunications Tower Original Zoning Approval

Hi Kimberly,

I checked our records and City Clerk's office and could not find anything. I then contacted the Town Clerk and I was told that there might be something on the Land Records and that you would need to contact the Town Clerk for them to do a Title Search. They're phone number is (203) 574-6806.

Cissie
Administrative Support Specialist III
203)574-6817 Ext.7296

Exhibit B

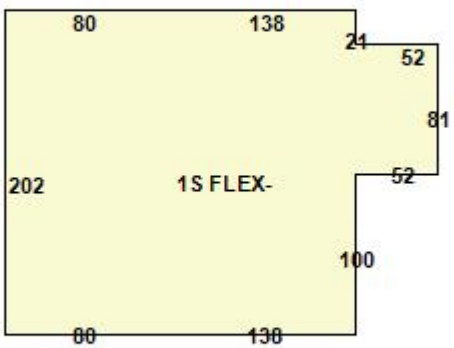
Property Card

	Appraised Value	Assessed Value
Total	1,900,000	1,330,000

Owner's Information

Owner's Data
WATERBURY TWIN LLC & 150 MH LLC % LEONARD LINSBKER 12 ISELIN TERRACE LARCHMONT, NY 10538

Building 1



Category:	Industrial	Use:	Industrial - Flex	GLA:	48,248
Stories:	1.00	Construction:	Average	Year Built:	1988
Heating:	Space Heater	Fuel:		Cooling Percent:	0%
Siding:	Brick, Solid	Roof Material:		Beds/Units:	0

Special Features

Sprinklers	48248

Attached Components

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Asphalt Paving	1988			46,096
Concrete Paving	1988			40
Concrete Paving	1988			40
Concrete Paving	1996			390
Tanks Tanks	1996			1

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
WATERBURY TWIN LLC & 150 MH LLC	4647	0071	05/15/2003	Warranty Sale	$2,315,000

Building Permits

Permit Number	Permit Type	Date Opened	Reason
2020.0581	Plumbing	03/05/2020	remove old power vent water heater install new water heater
2019.3185	Electrical	11/06/2019	att new walk in cabinet for att equipment. third party for inspection.
2019.1540	Electrical	06/07/2019	install 25kw generator for cell site.
2019.0880	Electrical	04/29/2019	AT&T to install (9) antennaes (12) remote radio units - (3) DC6s (2) fiber cables on existing teleco
2019.0374	Electrical	02/21/2019	Sprint to remove and replace 3 antennas and remove 3 remote radio heads (non-Antenna)
2019.0375	Electrical	02/21/2019	Verizon to remove 9 remote radio heads (non-Antenna) and replace with 6 new remote radio heads.
2018.3410	Electrical	12/05/2018	replace 3 exising antennas & 3 RRU's - repace 1 coax line with 1 hybrid fiber line
2017.1945	Electrical	07/26/2017	VERIZON WIRELESS ANTENNA SWAP
2017.0766	Electrical	03/30/2017	REPLACE 3 ANTENNAS
2016.1412	Electrical	06/13/2016	REMOVE AND REPLACE ANTENNA MOUNT
2015.1784	Electrical	08/31/2015	ADD OUTLET FOR CABLE BOX POWER
2014.0494	Electrical	03/13/2014	UPGRADE TELECOMM CABINETS AT CELL SITE
2014.0271	Electrical	02/10/2014	VERIZON WIRELESS UPGRADE AND ANTENNAE
2013.0461	Comm Renovations	02/23/2013	


MATTATUCK HEIGHTS RD
0424-0141-0001
150 MATTATUCK HEIGHTS
WATERBURY TWIN LLC & 150 MH LLC
0424-0141-7112
STONEFIELD DR
SNP WATERBURY LLC
0424-0141-0003
MATTATUCK HEIGHTS
RE REALTY LLC
0424-0141-0041
MATTATUCK HEIGHTS
D LLC
0447-0141-0002
MATTATUCK HEIGHTS
DESOMMA ANTHONY
0447-0141-0031
86 STONEFIELD DR
P R SCOTT LLC

Exhibit C

Construction Drawings

DISH Wireless L.L.C. SITE ID:

BOHVN00165A

DISH Wireless L.L.C. SITE ADDRESS:

150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

CONNECTICUT CODE OF COMPLIANCE

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

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

SHEET INDEX

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

TOWER SCOPE OF WORK:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (1) PROPOSED ANTENNA PLATFORM MOUNT
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE

GROUND SCOPE OF WORK:
- INSTALL (1) PROPOSED METAL PLATFORM
- INSTALL (1) PROPOSED ICE BRIDGE
- INSTALL (1) PROPOSED PPC CABINET
- INSTALL (1) PROPOSED EQUIPMENT CABINET
- INSTALL (1) PROPOSED POWER CONDUIT
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED TELCO-FIBER BOX
- INSTALL (1) PROPOSED GPS UNIT
- INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)
- DISH Wireless L.L.C. TO UTILIZE EXISTING ABANDONED METER "89 177 738" & DISCONNECT

SITE PHOTO

UNDERGROUND SERVICE ALERT CBYD 811
UTILITY NOTIFICATION CENTER OF CONNECTICUT
(800) 922-4455
WWW.CBYD.COM

CALL 2 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

SITE INFORMATION

PROPERTY OWNER:	GLOBAL SIGNAL ACQUISITION
ADDRESS:	PO BOX 277455 ATLANTA, GA 30384
TOWER TYPE:	MONOPOLE
CROWN CASTLE SITE ID:	876317
CROWN CASTLE APP NUMBER:	553382
COUNTY:	NEW HAVEN
LATITUDE (NAD 83):	41° 32' 16.30" N 41.537861° N
LONGITUDE (NAD 83):	72° 59' 6.10" W 72.985028° W
ZONING JURISDICTION:	CONNECTICUT SITING COUNCIL
ZONING DISTRICT:	LIGHT INDUSTRY
PARCEL NUMBER:	0424-0141-001
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	II-B
POWER COMPANY:	EVERSOURCE
TELEPHONE COMPANY:	TBD

PROJECT DIRECTORY

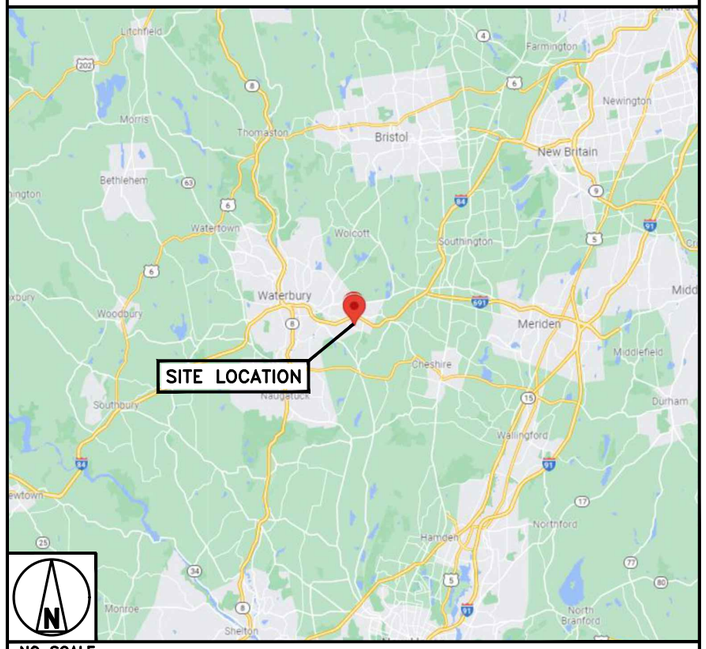
APPLICANT:	DISH WIRELESS, LLC. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317 (877) 486-9377
SITE DESIGNER:	KIMLEY-HORN & ASSOCIATES 3875 EMBASSY PKWY, SUITE 280 AKRON, OH 44333 (216) 505-7771 COA #: PEC.0000738
SITE ACQUISITION:	VICTOR NUNEZ (917) 563-3682
CONSTRUCTION MANAGER:	JAVIER SOTO JAVIER.SOTO@DISH.COM
RF ENGINEER:	SYED ZAIDI SYED.ZAIDI@DISH.COM

DIRECTIONS

DIRECTIONS FROM BRADLEY INTERNATIONAL AIRPORT:

x CONTINUE TO BRADLEY INTERNATIONAL AIRPORT CON (0.9 MI)
x TAKE I-91 S AND I-84 TO AUSTIN RD IN WATERBURY. TAKE EXIT 25A FROM I-84 (39.3 MI)
x TAKE MATTATUCK HEIGHTS RD TO YOUR DESTINATION (0.9 MI)

VICINITY MAP



NO SCALE

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Kimley»Horn

COA #: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED PROFESSIONAL ENGINEER

DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

DRAWN BY:	CHECKED BY:	APPROVED BY:
SEW	MCK	MCK

RFDS REV #: ---

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	09/30/2021	ISSUED FOR REVIEW
0	03/03/2022	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

KHCLE-16438

DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE

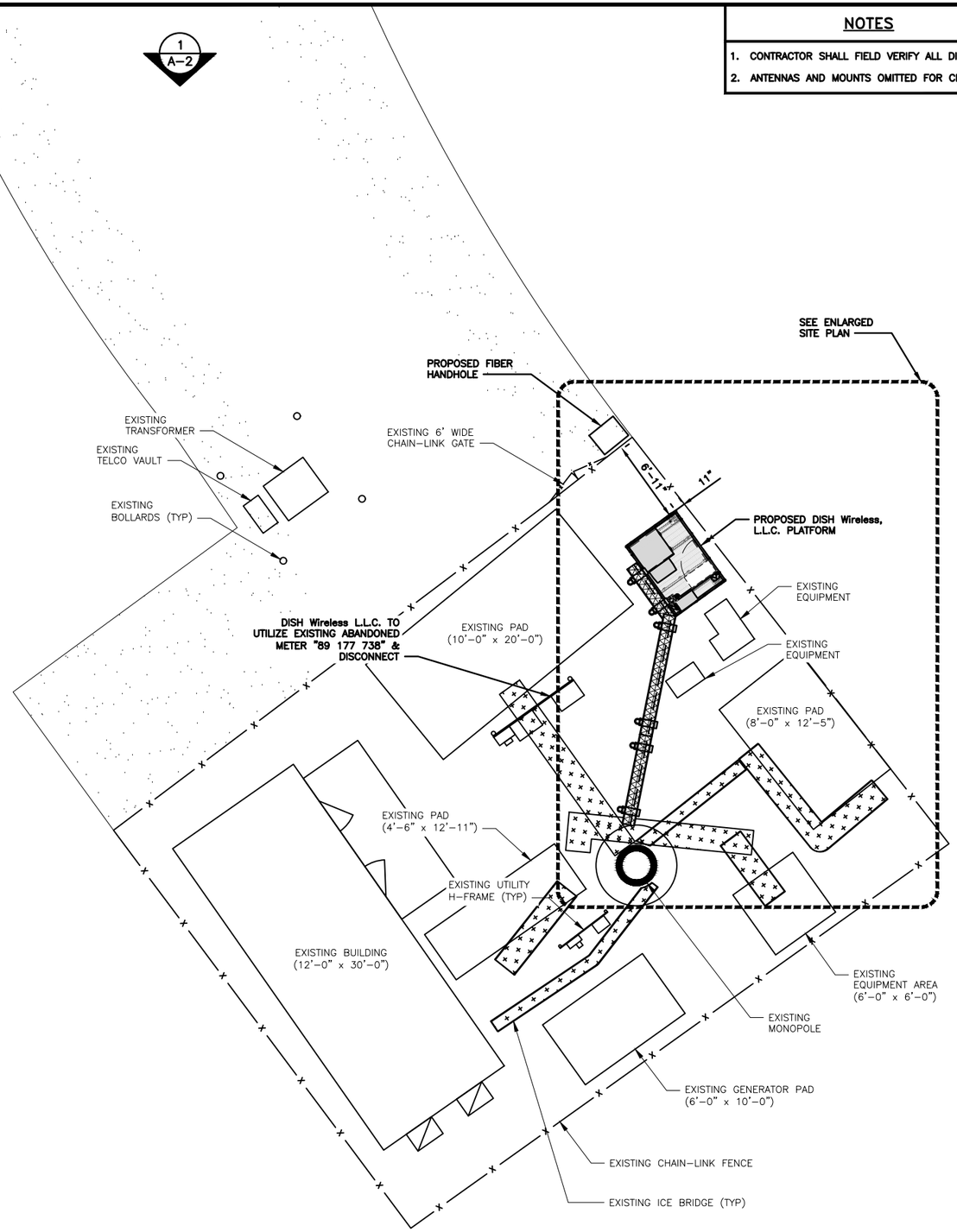
TITLE SHEET

SHEET NUMBER

T-1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



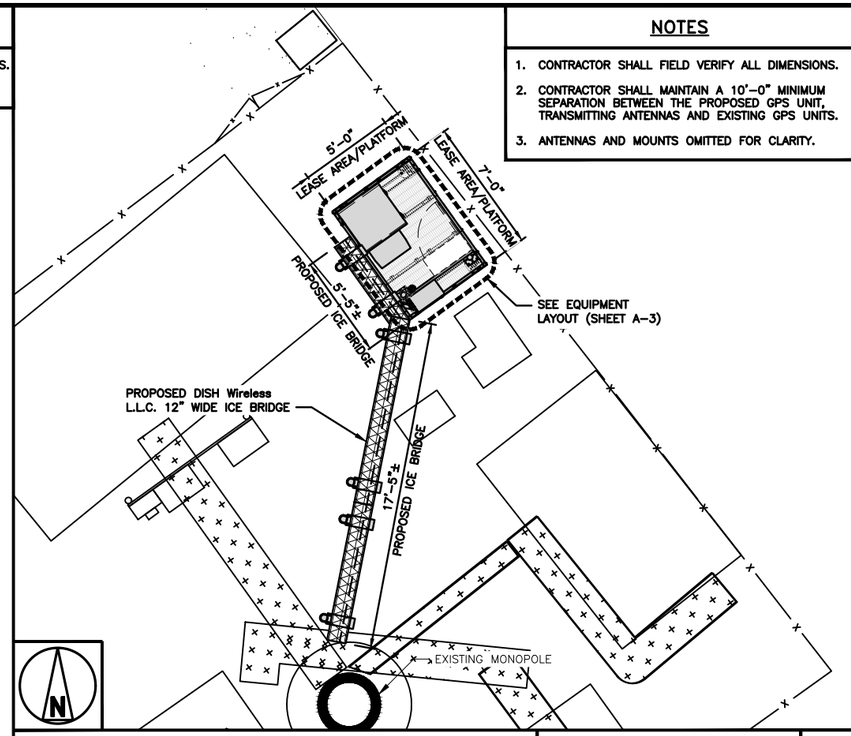
OVERALL SITE PLAN

6' 4' 2' 0 5' 10'
3/16"=1'-0"

1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



ENLARGED SITE PLAN

4' 2' 0 4' 8'
1/4"=1'-0"

2

OVERALL UTILITY ROUTE PLAN

NO SCALE

3

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Kimley»Horn

COA #: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
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DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE

OVERALL AND ENLARGED SITE PLAN

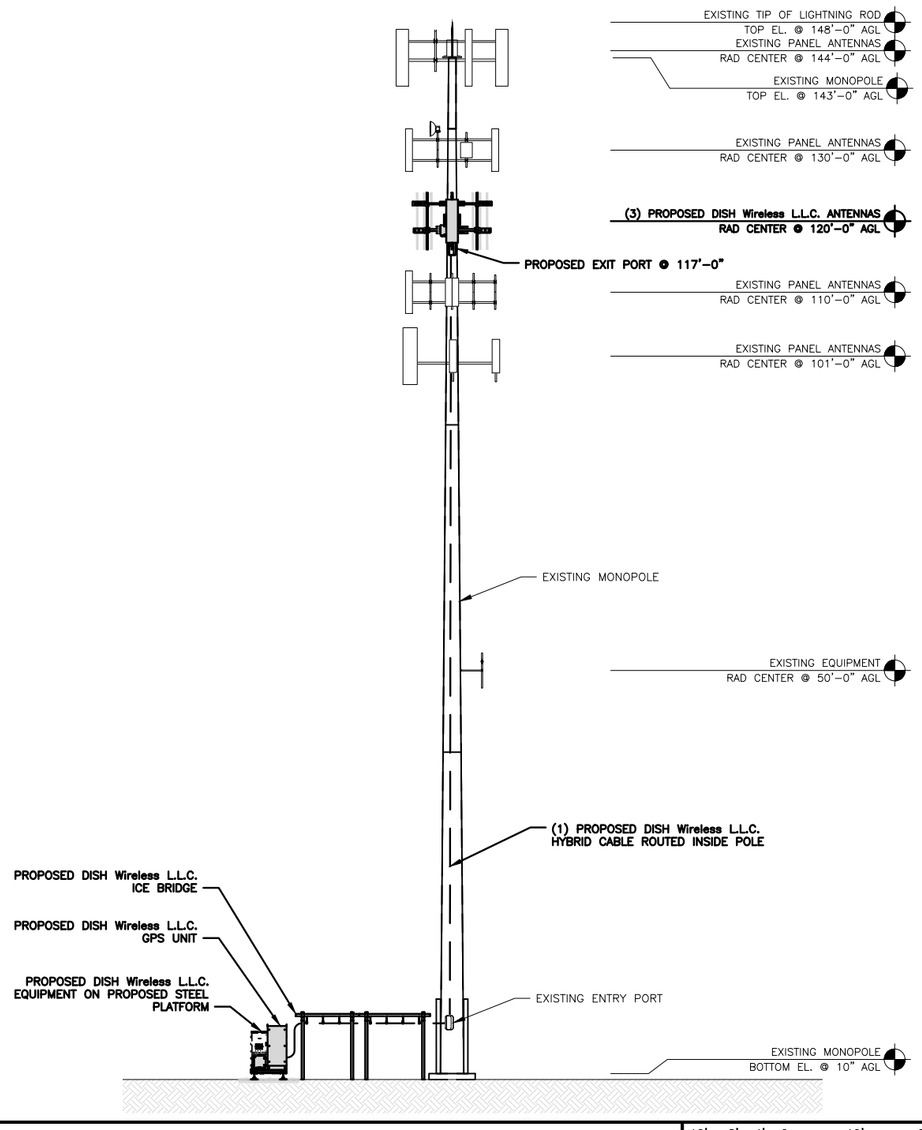
SHEET NUMBER

A-1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.

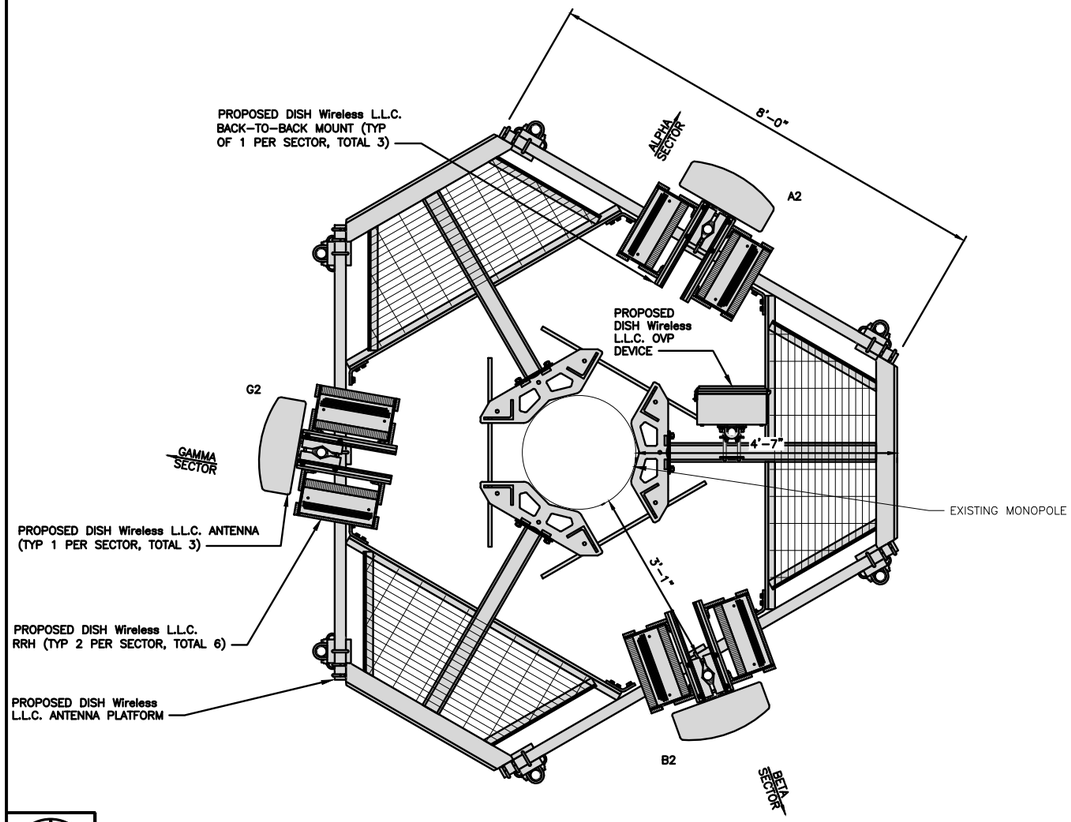
KIMLEY–HORN HAS NOT ANALYZED THE PROPOSED ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING. MOUNT ANALYSIS TO BE DONE BY OTHERS.



PROPOSED NORTH ELEVATION

12' 8' 4' 0 10' 20'
3/32"=1'–0"

1



ANTENNA LAYOUT

12" 6" 0 1' 2' 3'
3/4"=1'–0"

2

SECTOR	POSITION	ANTENNA						TRANSMISSION CABLE
		EXISTING OR PROPOSED	MANUFACTURER – MODEL NUMBER	TECHNOLOGY	SIZE (HxW)	AZIMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH
ALPHA	A2	PROPOSED	JMA – MX08FRO665–21	5G	72.0" x 20.0"	30°	120'–0"	(1) HIGH–CAPACITY HYBRID CABLE (170'–0" LONG)
BETA	B2	PROPOSED	JMA – MX08FRO665–21	5G	72.0" x 20.0"	160°	120'–0"	
GAMMA	G2	PROPOSED	JMA – MX08FRO665–21	5G	72.0" x 20.0"	280°	120'–0"	

SECTOR	POSITION	RRH	
		MANUFACTURER – MODEL NUMBER	TECHNOLOGY
ALPHA	A1	FUJITSU – TA08025–B604	5G
	A1	FUJITSU – TA08025–B605	5G
BETA	B1	FUJITSU – TA08025–B604	5G
	B1	FUJITSU – TA08025–B605	5G
GAMMA	G1	FUJITSU – TA08025–B604	5G
	G1	FUJITSU – TA08025–B605	5G

NOTES

1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.

ANTENNA SCHEDULE

NO SCALE

3

dish wireless.
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Kimley»Horn
COA #: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
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STATE OF CONNECTICUT
KYLE JENSEN FREEHART
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SEW	MCK	MCK

RFDS REV #: ---

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DISH Wireless L.L.C.
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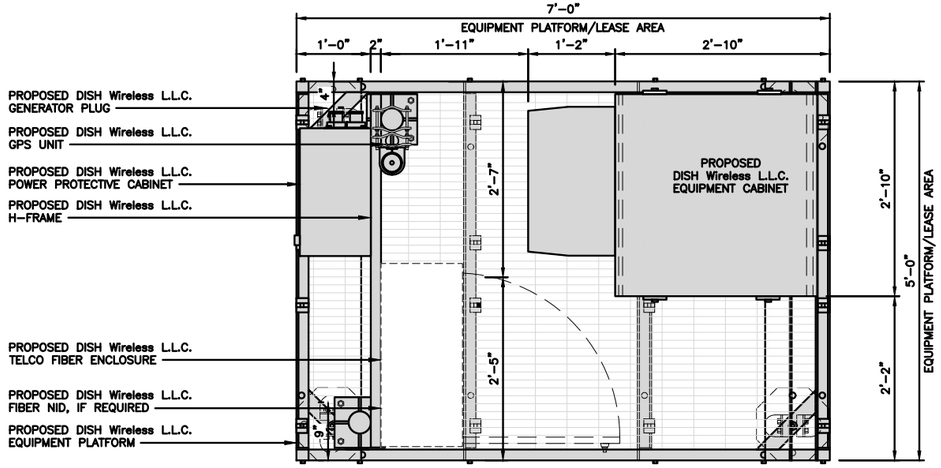
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE
ELEVATION, ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER
A-2



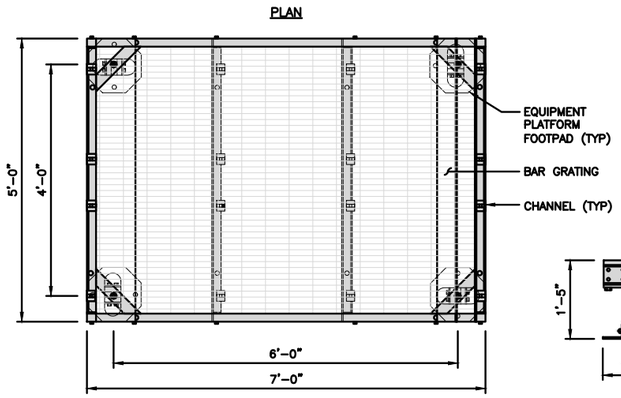
PLATFORM EQUIPMENT PLAN

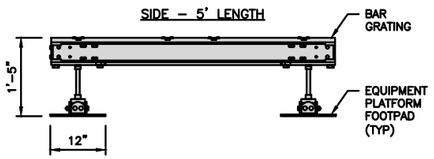
12" 9" 6" 3" 0 1' 2'
1"=1'-0"

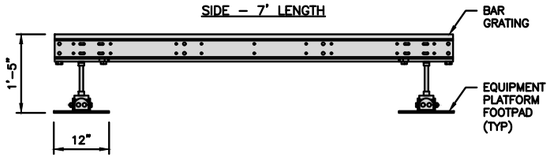
1

COMMSCOPE MTC4045LP 5X7 PLATFORM	
DIMENSIONS (HxWxD)	16"x84"x60"
TOTAL WEIGHT	423 LBS

NOTE:
1. GC TO PROVIDE EXTENDED THREAD FOR PLATFORM IF REQUIRED HEIGHT EXCEEDS 17"
2. PLATFORM TO BE LEVEL WITHIN 1"

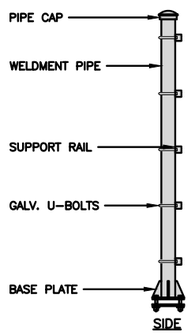




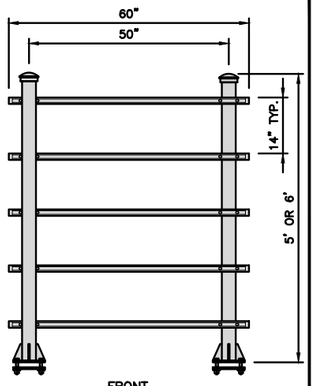


PLATFORM DETAIL | NO SCALE | 2

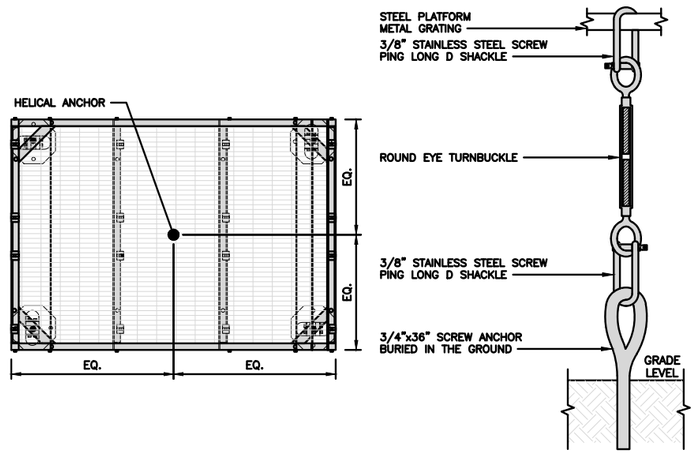
COMMSCOPE MTC4045HFLD H-FRAME	
UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs



NOTE:
OR DISH Wireless L.L.C. APPROVED EQUIVALENT



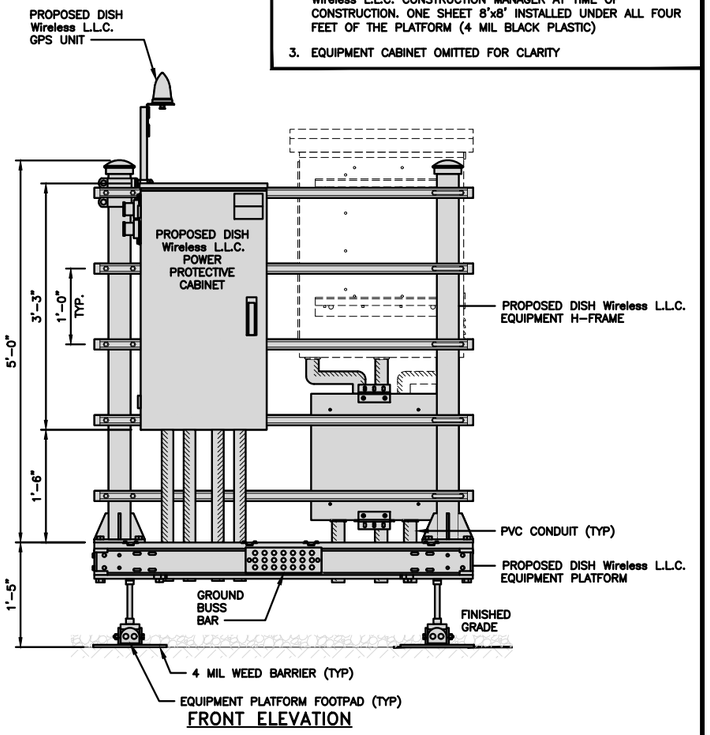
H-FRAME DETAIL | NO SCALE | 3



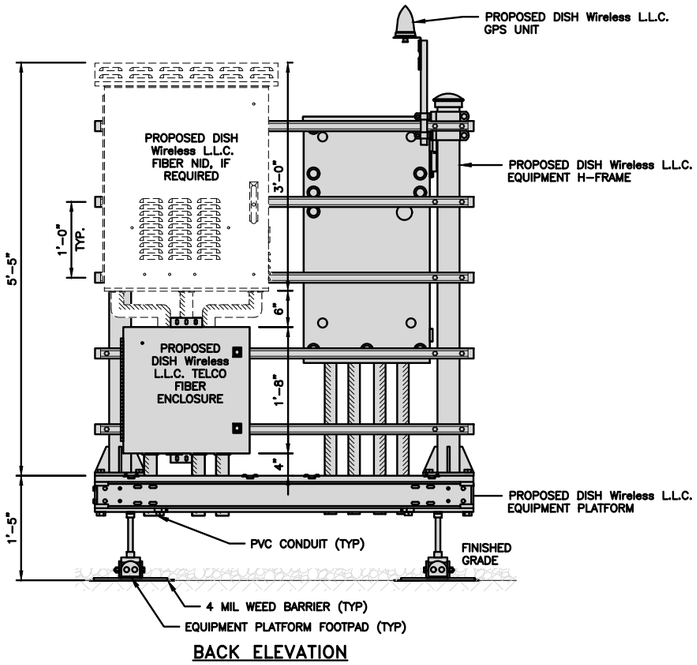
PLATFORM ANCHORAGE DETAIL | NO SCALE | 4

NOTES

1. CONTRACTOR TO BURY PLATFORM FEET WITH A MINIMUM OF 2" OF FILL PER EXISTING SITE SURFACE
2. WEED BARRIER FABRIC TO BE ADDED AT DISCRETION OF DISH Wireless L.L.C. CONSTRUCTION MANAGER AT TIME OF CONSTRUCTION. ONE SHEET 8'x8' INSTALLED UNDER ALL FOUR FEET OF THE PLATFORM (4 MIL BLACK PLASTIC)
3. EQUIPMENT CABINET OMITTED FOR CLARITY



FRONT ELEVATION



BACK ELEVATION

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

H-FRAME EQUIPMENT ELEVATION | 5

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RALEIGH, NC 27601

STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED PROFESSIONAL ENGINEER
DocuSigned by: Kyle Freehart
D8BEE252A3804C1...

DRAWN BY:	CHECKED BY:	APPROVED BY:
SEW	MCK	MCK

RFDS REV #: ---

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	09/30/2021	ISSUED FOR REVIEW
0	03/03/2022	ISSUED FOR CONSTRUCTION

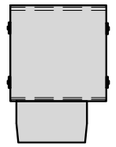
A&E PROJECT NUMBER
KHCLE-16438

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

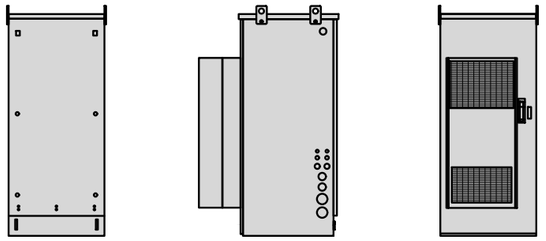
SHEET TITLE
EQUIPMENT PLATFORM AND H-FRAME DETAILS

SHEET NUMBER
A-3

CHARLES INDUSTRY HEX CUBE–PM639155N4	
DIMENSIONS (HxWxD)	74"x32"x32"
POWER PLANT	–48VDC ABB/600W
TOTAL WEIGHT (EMPTY)	408 lbs



PLAN

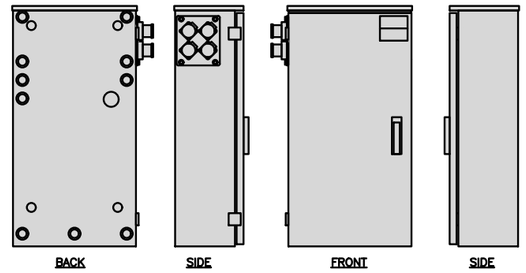


BACK SIDE FRONT

CABINET DETAIL — NO SCALE — 1

RAYCAP PPC RDIAC–2465–P–240–MTS	
ENCLOSURE DIMENSIONS (HxWxD):	39"x22.855"x12.593
WEIGHT:	80 lbs
OPERATING AC VOLTAGE	240/120 1 PHASE 3W+G

TOP

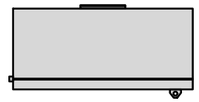


BACK SIDE FRONT SIDE

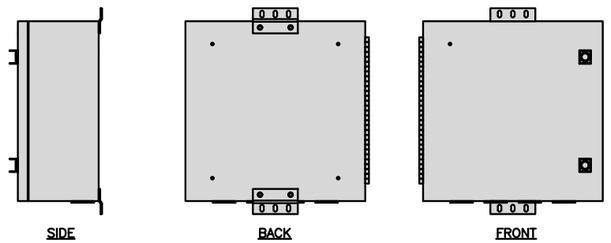
POWER PROTECTION CABINET (PPC) DETAIL — NO SCALE — 2

NOT USED — NO SCALE — 3

CHARLES CFIT–PF2020DSH1 FIBER TELCO ENCLOSURE	
ENCLOSURE DIMS (HxWxD)	20"x20"x9"
ENCLOSURE WEIGHT	20 lbs
MOUNTING	WALL
COMPLIANCE	TYPE 4



FRONT



SIDE BACK FRONT

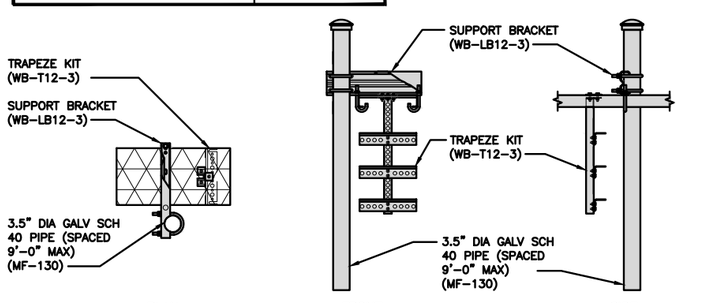
FIBER TELCO ENCLOSURE DETAIL — NO SCALE — 6

NOT USED — NO SCALE — 4

NOT USED — NO SCALE — 5

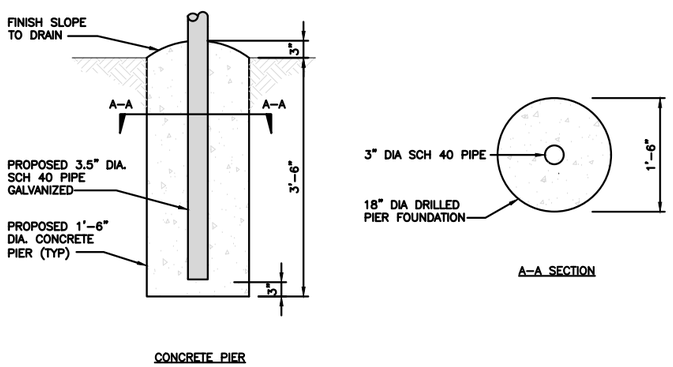
COMMSCOPE WB–K110–B WAVEGUIDE BRIDGE KIT	
DIMENSIONS (HxL)	160"x10'
WEIGHT/ VOLUME	325.0 LBS
CABLE RUN (QTY)	12

INCLUDED PRODUCTS:	
	WB–T12–3 TRAPEZE KIT, 3 RUNGS
	WB–LB12–3 SUPPORT BRACKET
	MF–130 DIRECT BURIAL PIPE COLUMN, 13'–4"



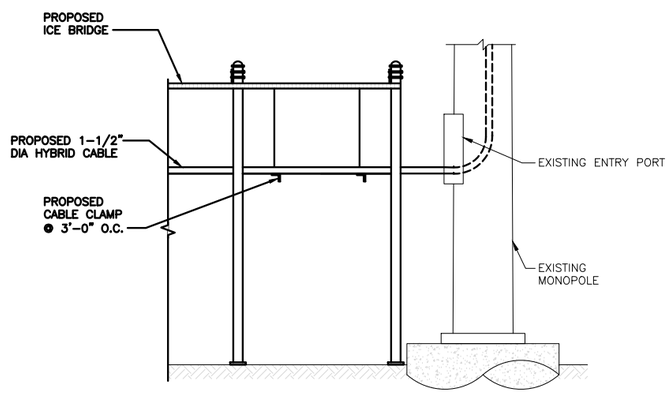
PLAN FRONT SIDE

ICE BRIDGE DETAIL — NO SCALE — 7



CONCRETE PIER A–A SECTION

TYPICAL ICE BRIDGE CONCRETE PIER DETAIL — NO SCALE — 8



HYBRID CABLE RUN — NO SCALE — 9

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DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

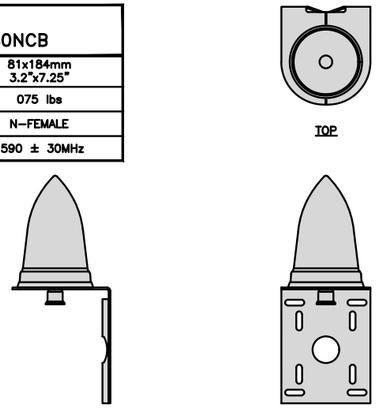
SHEET TITLE

EQUIPMENT DETAILS

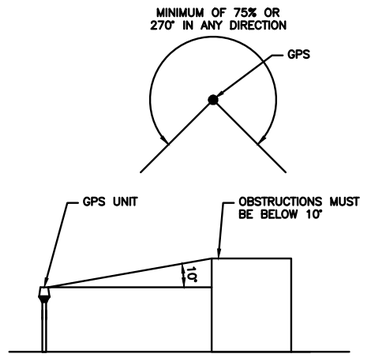
SHEET NUMBER

A-4

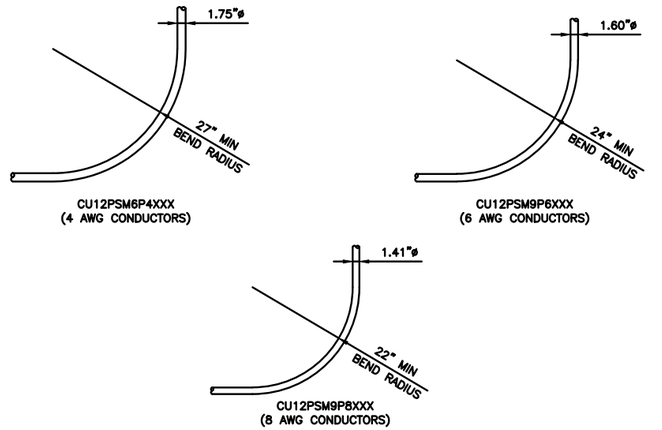
PCTEL GPSGL-TMG-SPI-40NCB	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



GPS DETAIL | NO SCALE | 1



GPS MINIMUM SKY VIEW REQUIREMENTS | NO SCALE | 2



CABLES UNLIMITED HYBRID CABLE MINIMUM BEND RADIUSES | NO SCALE | 3

NOT USED | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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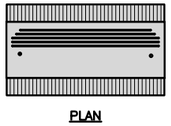
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE
EQUIPMENT DETAILS

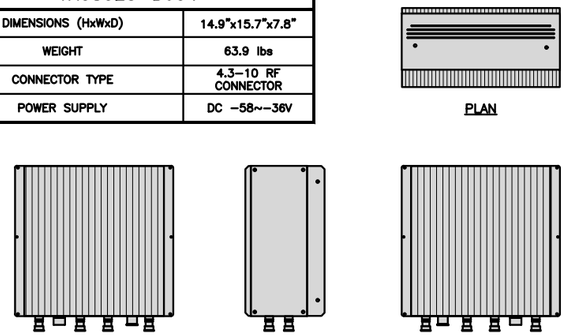
SHEET NUMBER
A-5

FUJITSU TRIPLE BAND TA08025-B605	
DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



RRH DETAIL | NO SCALE | 1

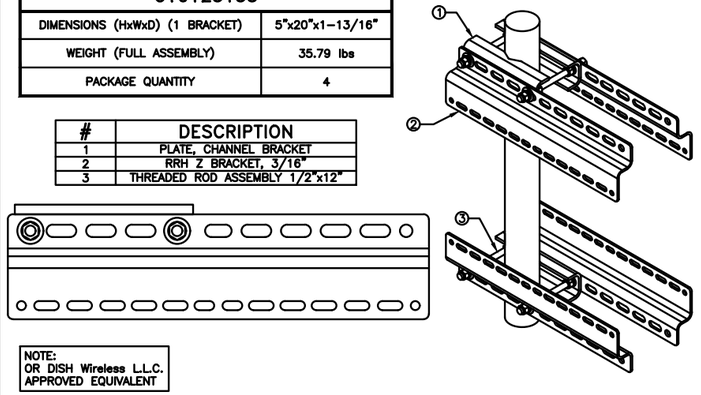
FUJITSU DUAL BAND TA08025-B604	
DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



RRH DETAIL | NO SCALE | 2

SABRE DOUBLE Z-BRACKET C10123155	
DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1-13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

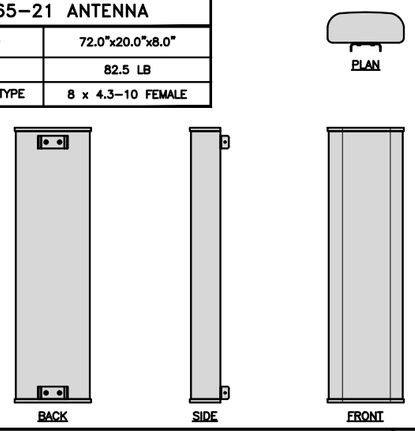
#	DESCRIPTION
1	PLATE, CHANNEL BRACKET
2	RRH Z BRACKET, 3/16"
3	THREADED ROD ASSEMBLY 1/2"x12"



NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT

RRH MOUNT DETAIL | NO SCALE | 3

JMA WIRELESS MX08FRO665-21 ANTENNA	
DIMENSIONS (HxWxD)	72.0"x20.0"x8.0"
TOTAL WEIGHT	82.5 LB
RF PORTS, CONNECTOR TYPE	8 x 4.3-10 FEMALE



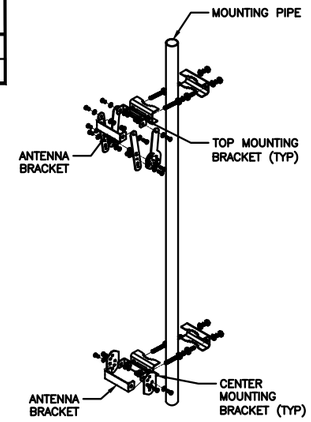
ANTENNA DETAIL | NO SCALE | 4

NOT USED | NO SCALE | 5

JMA ANTENNA MOUNTING BRACKET #91900318	
TOTAL WEIGHT (WITH BRACKETS)	18 lbs (8.18 Kg)
POLE DIAMETER RANGE	2.5 TO 4.5 INCHES

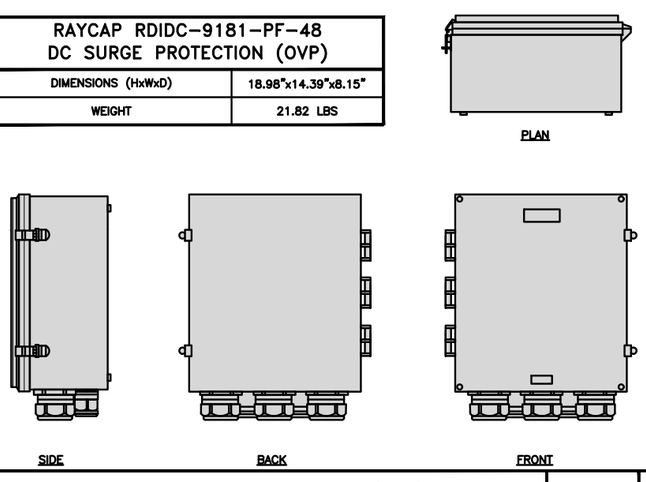
NOTE:
KIT #91900318: TOP AND BOTTOM BRACKETS FOR 4-,6-, AND 8-FOOT ANTENNAS

ANTENNA BRACKET NOT PART OF KIT



ANTENNA BRACKET DETAIL | NO SCALE | 6

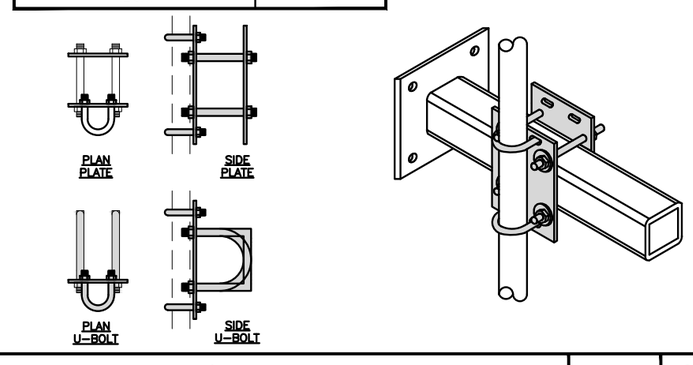
RAYCAP RDIDC-9181-PF-48 DC SURGE PROTECTION (OVP)	
DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS



SURGE SUPPRESSION DETAIL (OVP) | NO SCALE | 7

COMMSCOPE XP-2040 CROSSOVER PLATE	
DIMENSIONS (HxW)	10"x12"
WEIGHT	11 lbs

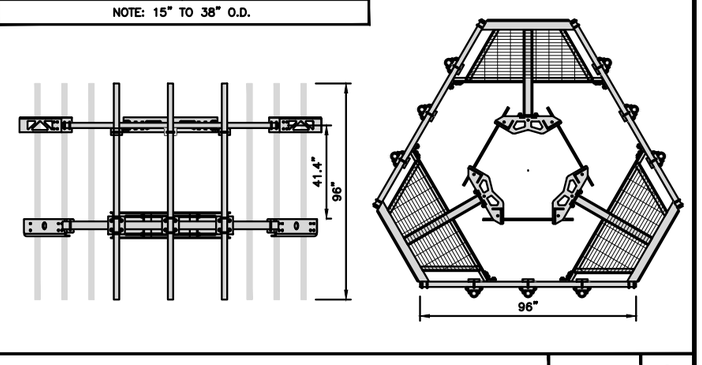
NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT



RRH/OVP MOUNT DETAIL | NO SCALE | 8

COMMSCOPE MC-PK8-DSH	
FACE WIDTH	96"
WEIGHT	1373.08 lbs
NOTE: 15" TO 38" O.D.	

NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT



ANTENNA PLATFORM DETAIL | NO SCALE | 9

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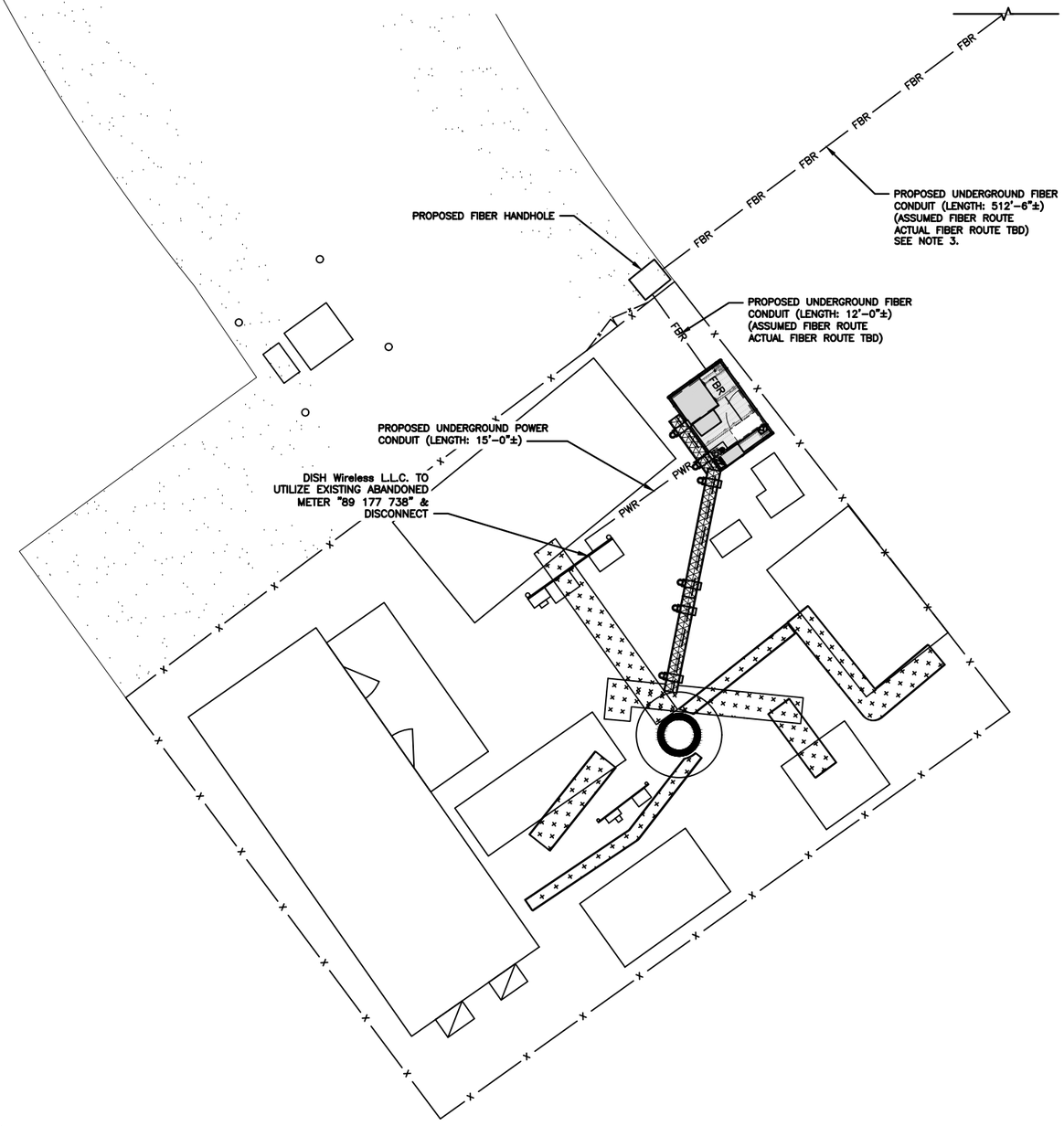
PROJECT INFORMATION
BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-6

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.
3. DUE TO UTILITY EASEMENT RIGHTS SPECIFIED IN THE GROUND LEASE, CUSTOMER MAY INSTALL EQUIPMENT WITHIN SPECIFIED UTILITY EASEMENT AREA. "PWR" AND "FBR" PATH DEPICTED ON A-1 AND E-1 REPRESENT PLANNED ROUTING BASED ON BEST AVAILABLE INFORMATION INCLUDING BUT NOT LIMITED TO A SURVEY, EXHIBITS, METES AND BOUNDS OF THE UTILITY EASEMENT, FIELD VERIFICATION, PRIOR PROJECT DOCUMENTATION AND OTHER REAL PROPETY RIGHTS DOCUMENTS. WHEN INSTALLING THE UTILITIES PLEASE LOCATE AND FOLLOW EXISTING PATH. IF EXISTING PATH IS MATERIALLY INCONSISTENT WITH "PWR" AND "FBR" PATH DEPICTED ON A-1 AND E-1 AND SAID VARIANCE IS NOT NOTED ON CDs, PLEASE NOTIFY TOWER OWNER AS FURTHER COORDINATION MAY BE NEEDED.



UTILITY ROUTE PLAN

6' 4' 2' 0 5' 10'
3/16"=1'-0"

1

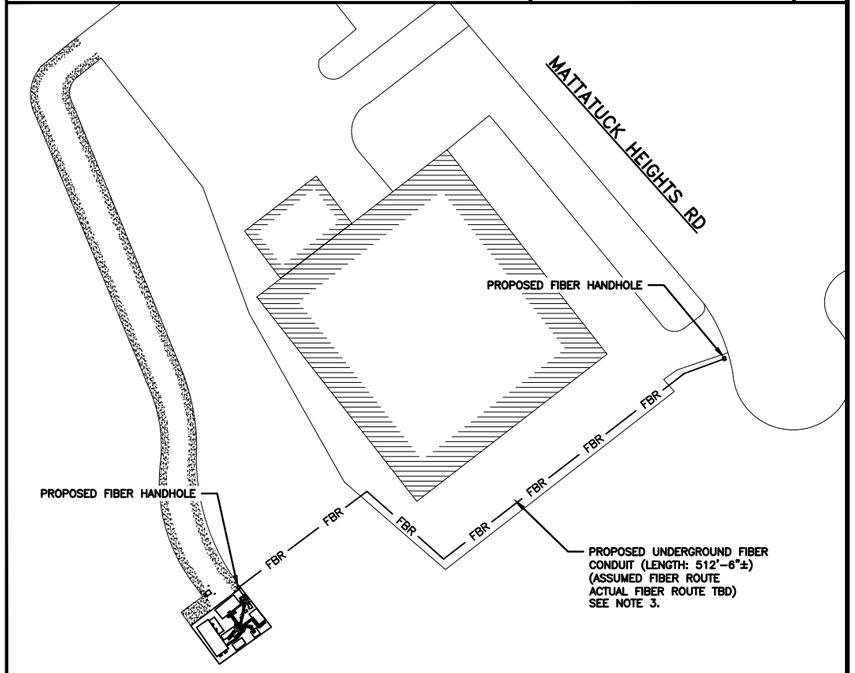
DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V.

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
3. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
4. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
6. CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
7. CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
10. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
11. PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST-CONSTRUCTION EQUIPMENT.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT PANEL SCHEDULE AND SITE DRAWINGS.
13. ALL TRENCHES IN COMPOUND TO BE HAND DUG

ELECTRICAL NOTES

NO SCALE

2



OVERALL UTILITY ROUTE PLAN

64' 32' 0 64' 128'
1/64"=1'-0"

3

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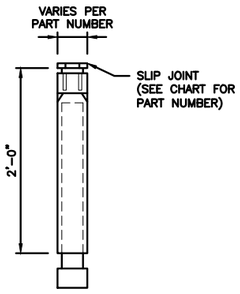
SHEET TITLE
ELECTRICAL/FIBER ROUTE PLAN AND NOTES

SHEET NUMBER
E-1

CARLON EXPANSION FITTINGS

COUPLING END PART#	MALE TERMINAL ADAPTER END PART#	SIZE	STD CTN QTY.	TRAVEL LENGTH
E945D	E945DX	1/2"	20	4"
E945E	E945EX	3/4"	15	4"
E945F	E945FX	1"	10	4"
E945G	E945GX	1 1/4"	5	4"
E945H	E945HX	1 1/2"	5	4"
E945J	E945JX	2"	15	8"
E945K	E945KX	2 1/2"	10	8"
E945L	E945LX	3"	10	8"
E945M	E945MX	3 1/2"	5	8"
E945N	E945NX	4"	5	8"
E945P	E945PX	5"	1	8"
E945R	E945RX	6"	1	8"

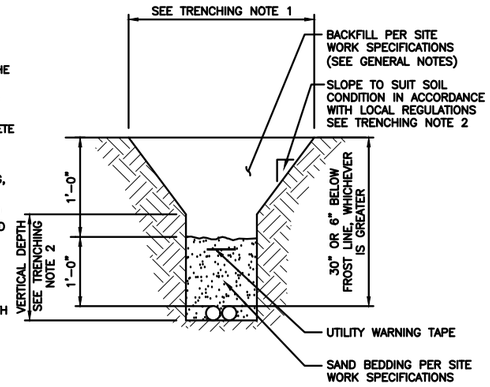


NOTE:
CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT.

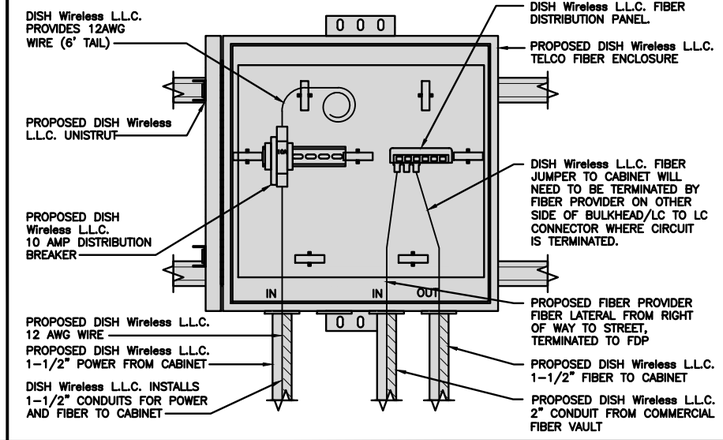
EXPANSION JOINT DETAIL | NO SCALE | 1

TRENCHING NOTES

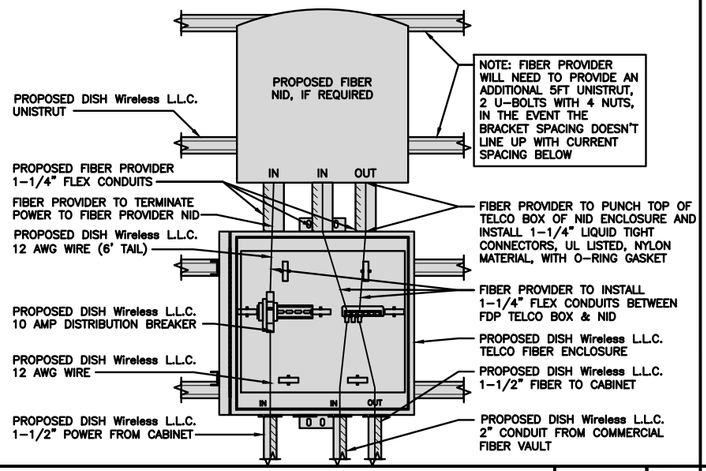
1. CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
2. TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
3. ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC) OR AS REQUIRED BY THE LOCAL JURISDICTION, WHICHEVER IS THE MOST STRINGENT.



TYPICAL UNDERGROUND TRENCH DETAIL | NO SCALE | 2



DARK TELCO BOX – INTERIOR WIRING LAYOUT | NO SCALE | 3



LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL) | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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DRAWN BY:	CHECKED BY:	APPROVED BY:
SEW	MCK	MCK

RFDS REV #: ---

CONSTRUCTION DOCUMENTS

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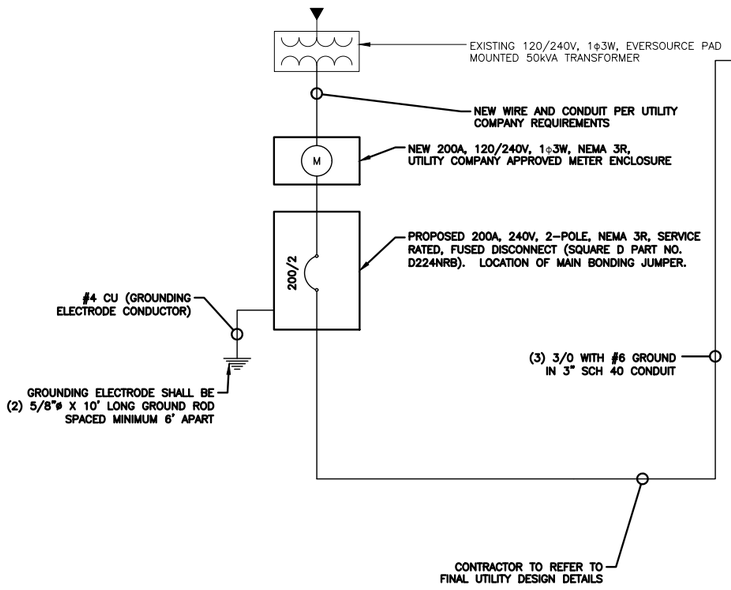
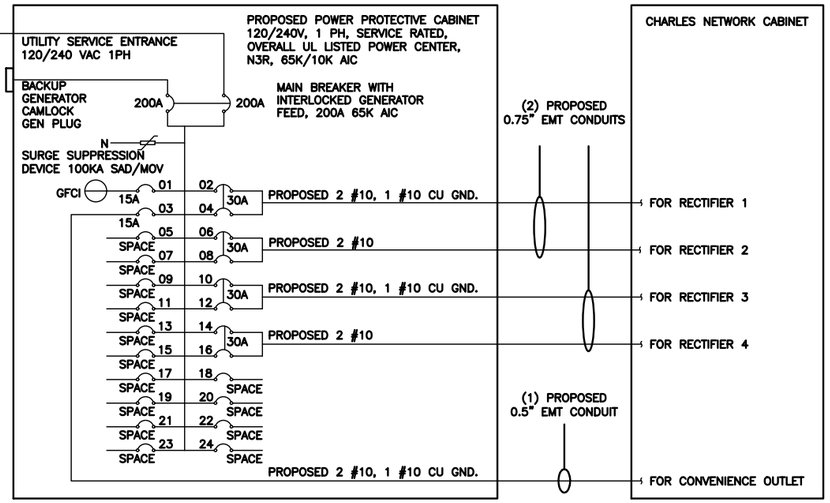
A&E PROJECT NUMBER
KHCLE-16438

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E-2





NOTE:
BRANCH CIRCUIT WIRING SUPPLYING RECTIFIERS ARE TO BE RATED UL1015, 105°C, 600V, AND PVC INSULATED, IN THE SIZES SHOWN IN THE ONE-LINE DIAGRAM. CONTRACTOR MAY SUBSTITUTE UL1015 WIRE FOR THWN-2 FOR CONVENIENCE OUTLET BRANCH CIRCUIT.

BREAKERS REQUIRED:
(4) 30A, 2P BREAKER - SQUARE D P/N:QO230
(1) 15A, 1P BREAKER - SQUARE D P/N:QO115

NOTES

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM.

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED VOLTAGE DROP CALCULATIONS AND ALL BRANCH CIRCUIT AND FEEDERS COMPLY WITH THE NEC (LISTED ON T-1) ARTICLE 210.19(A)(1) FPN NO. 4.

THE (2) CONDUITS WITH (4) CURRENT CARRYING CONDUCTORS EACH, SHALL APPLY THE ADJUSTMENT FACTOR OF 80% PER 2014/17 NEC TABLE 310.15(B)(3)(a) OR 2020 NEC TABLE 310.15(C)(1) FOR UL1015 WIRE.

#12 FOR 15A-20A/1P BREAKER: 0.8 x 30A = 24.0A
#10 FOR 25A-30A/2P BREAKER: 0.8 x 40A = 32.0A
#8 FOR 35A-40A/2P BREAKER: 0.8 x 55A = 44.0A
#6 FOR 45A-60A/2P BREAKER: 0.8 x 75A = 60.0A

CONDUIT SIZING: AT 40% FILL PER NEC CHAPTER 9, TABLE 4, ARTICLE 358.
0.5" CONDUIT - 0.122 SQ. IN AREA
0.75" CONDUIT - 0.213 SQ. IN AREA
2.0" CONDUIT - 1.316 SQ. IN AREA
3.0" CONDUIT - 2.907 SQ. IN AREA

CABINET CONVENIENCE OUTLET CONDUCTORS (1 CONDUIT): USING THWN-2, CU.

#10 - 0.0211 SQ. IN X 2 = 0.0422 SQ. IN
#10 - 0.0211 SQ. IN X 1 = 0.0211 SQ. IN <GROUND
TOTAL = 0.0633 SQ. IN

0.5" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (3) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

RECTIFIER CONDUCTORS (2 CONDUITS): USING UL1015, CU.

#10 - 0.0266 SQ. IN X 4 = 0.1064 SQ. IN
#10 - 0.0082 SQ. IN X 1 = 0.0082 SQ. IN <BARE GROUND
TOTAL = 0.1146 SQ. IN

0.75" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (5) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC FEED CONDUCTORS (1 CONDUIT): USING THWN, CU.

3/0 - 0.2679 SQ. IN X 3 = 0.8037 SQ. IN
#6 - 0.0507 SQ. IN X 1 = 0.0507 SQ. IN <GROUND
TOTAL = 0.8544 SQ. IN

3.0" SCH 40 PVC CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (4) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC ONE-LINE DIAGRAM

NO SCALE | 1

PROPOSED CHARLES PANEL SCHEDULE

LOAD SERVED	VOLT AMPS (WATTS) L1	VOLT AMPS (WATTS) L2	TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPS (WATTS) L1	VOLT AMPS (WATTS) L2	LOAD SERVED
PPC GFCI OUTLET	180		15A	1	A	2	30A	2880		ABB/GE INFINITY RECTIFIER 1
CHARLES GFCI OUTLET		180	15A	3	B	4			2880	
-SPACE-				5	A	6	30A	2880		ABB/GE INFINITY RECTIFIER 2
-SPACE-				7	B	8			2880	
-SPACE-				9	A	10	30A	2880		ABB/GE INFINITY RECTIFIER 3
-SPACE-				11	B	12			2880	
-SPACE-				13	A	14	30A	2880		ABB/GE INFINITY RECTIFIER 4
-SPACE-				15	B	16			2880	
-SPACE-				17	A	18				-SPACE-
-SPACE-				19	B	20				-SPACE-
-SPACE-				21	A	22				-SPACE-
-SPACE-				23	B	24				-SPACE-
VOLTAGE AMPS	180	180						11520	11520	
200A MCB, 1ϕ, 24 SPACE, 120/240V			L1		L2					
MB RATING: 65,000 AIC			11700		11700		VOLTAGE AMPS			
			98		98		AMPS			
			98				MAX AMPS			
			123				MAX 125%			

PANEL SCHEDULE | NO SCALE | 2

NOT USED | NO SCALE | 3

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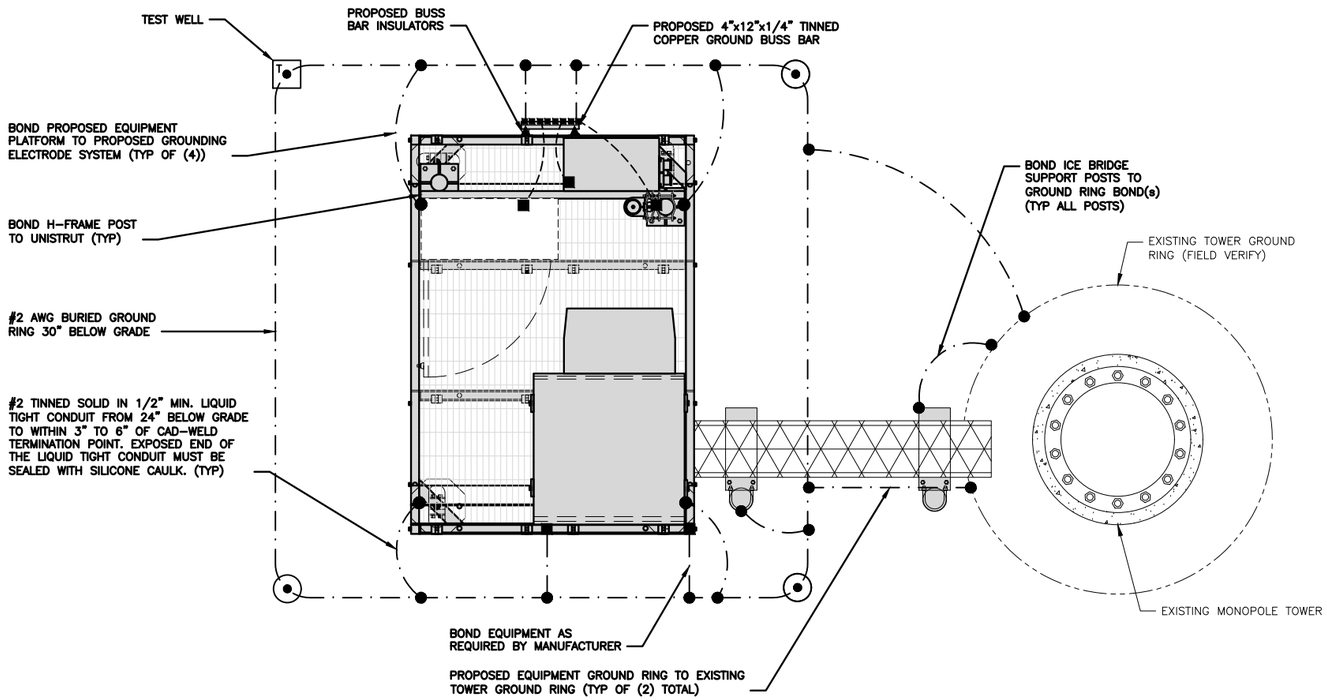
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE
ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE

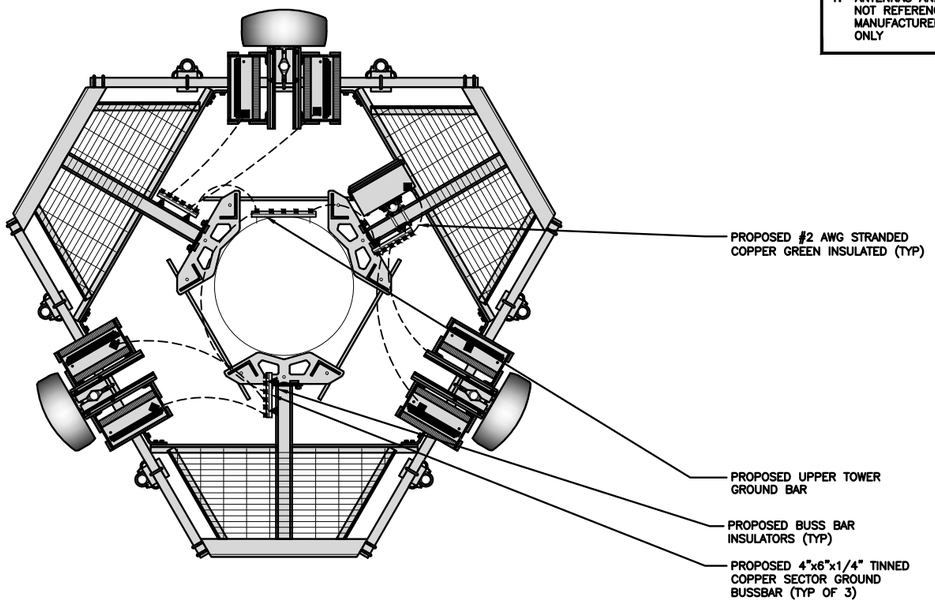
SHEET NUMBER
E-3



TYPICAL EQUIPMENT GROUNDING PLAN | NO SCALE | 1

NOTES

1. ANTENNAS AND OVP SHOWN ARE GENERIC AND NOT REFERENCING TO A SPECIFIC MANUFACTURER. THIS LAYOUT IS FOR REFERENCE ONLY



TYPICAL ANTENNA GROUNDING PLAN | NO SCALE | 2

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- GROUND BUS BAR
- GROUND ROD
- TEST GROUND ROD WITH INSPECTION SLEEVE
- #6 AWG STRANDED & INSULATED
- #2 AWG SOLID COPPER TINNED
- BUSS BAR INSULATOR

GROUNDING LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH Wireless L.L.C. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.
3. ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.

GROUNDING KEY NOTES

(A) EXTERIOR GROUND RING: #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.

(B) TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.

(C) INTERIOR GROUND RING: #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.

(D) BOND TO INTERIOR GROUND RING: #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.

(E) GROUND ROD: UL LISTED COPPER CLAD STEEL. MINIMUM 1/2" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.

(F) CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.

(G) HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.

(H) EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.

(I) TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.

(J) FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.

(K) INTERIOR UNIT BONDS: METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.

(L) FENCE AND GATE GROUNDING: METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.

(M) EXTERIOR UNIT BONDS: METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. USING #2 TINNED SOLID COPPER WIRE

(N) ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.

(O) DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICE CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR

(P) TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR.

REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES | NO SCALE | 3

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KYLE JENSEN FREEHART
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RFDS REV #: ---

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KHCLE-16438

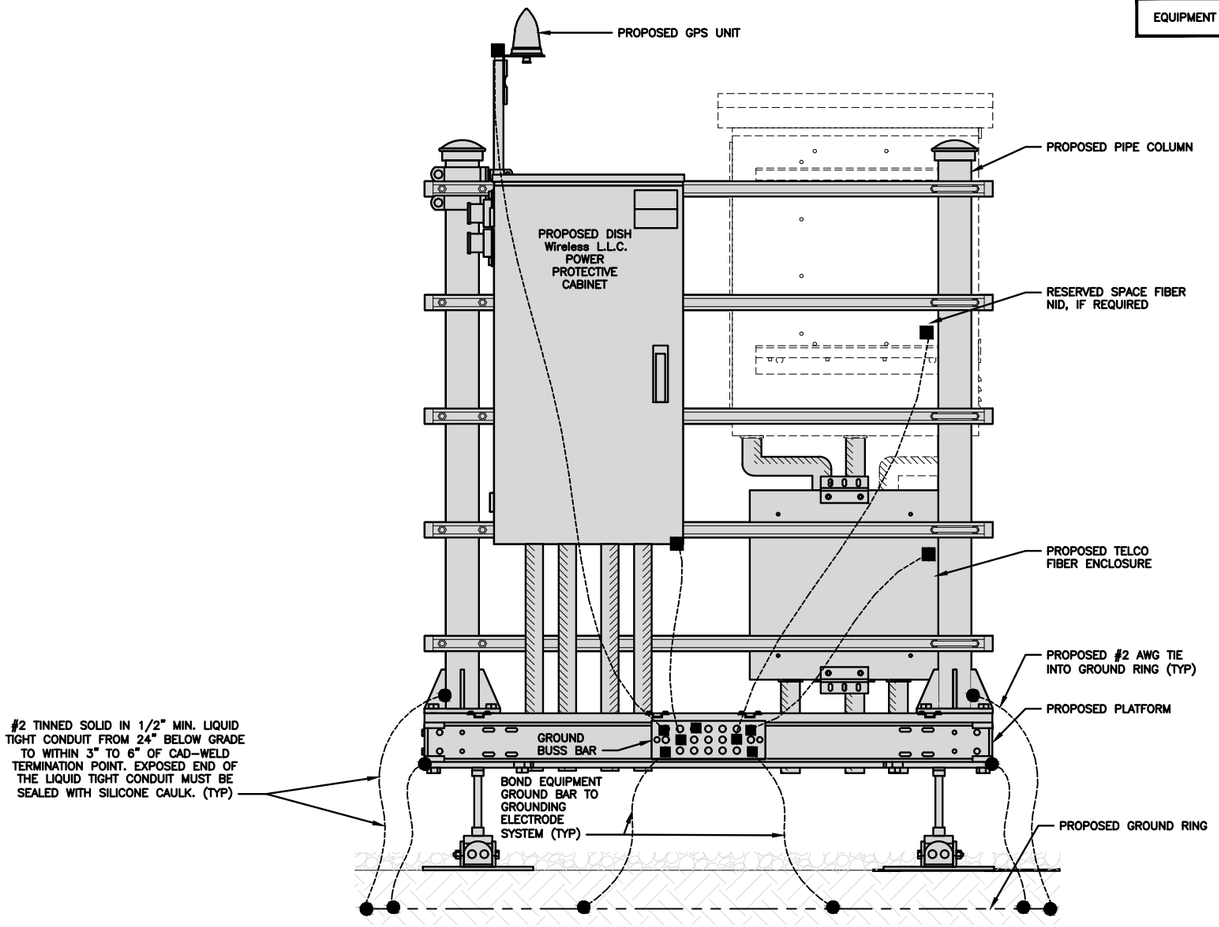
DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE
GROUNDING PLANS AND NOTES

SHEET NUMBER
G-1

NOTES

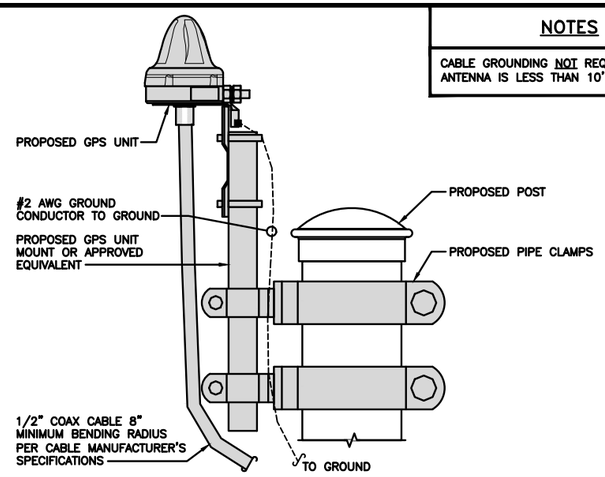
EQUIPMENT CABINET OMITTED FOR CLARITY



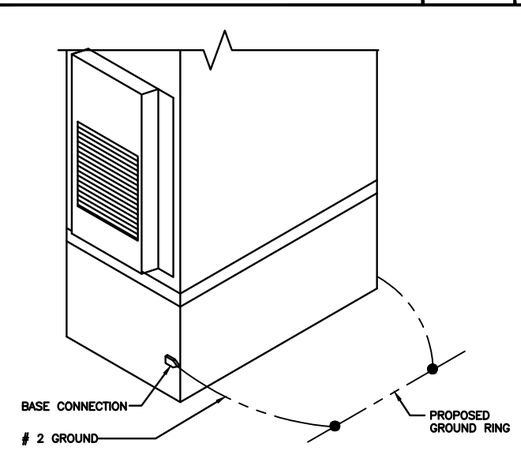
H-FRAME GROUNDING DETAIL | NO SCALE | 1

NOTES

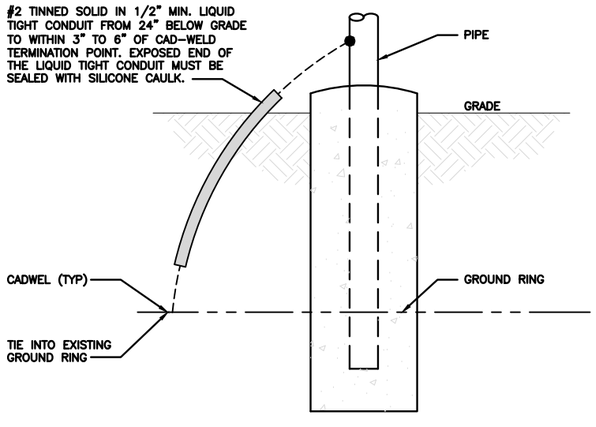
CABLE GROUNDING NOT REQUIRED WHEN ANTENNA IS LESS THAN 10' FROM CABINET



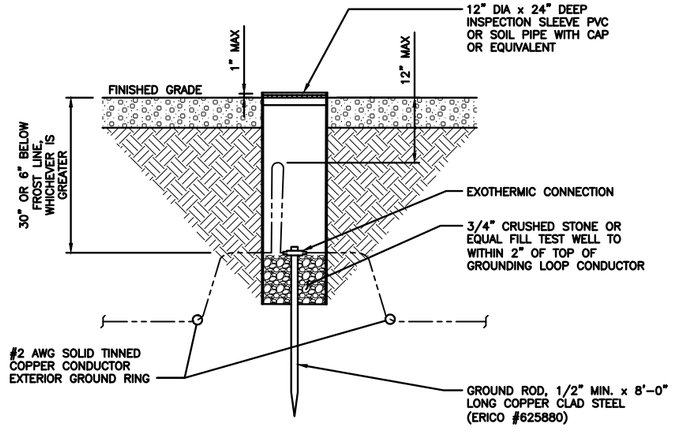
TYPICAL GPS UNIT GROUNDING | NO SCALE | 2



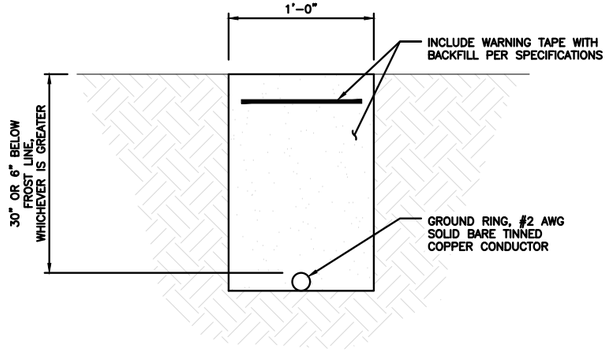
OUTDOOR CABINET GROUNDING | NO SCALE | 3



TRANSITIONING GROUND DETAIL | NO SCALE | 4



TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE | NO SCALE | 5



TYPICAL GROUND RING TRENCH | NO SCALE | 6

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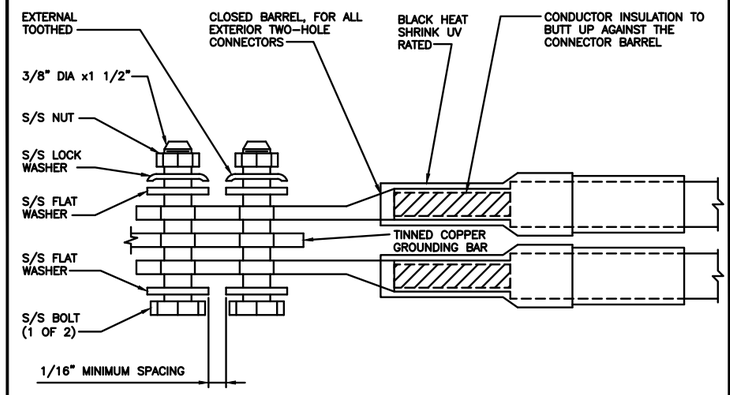
SHEET TITLE
GROUNDING DETAILS

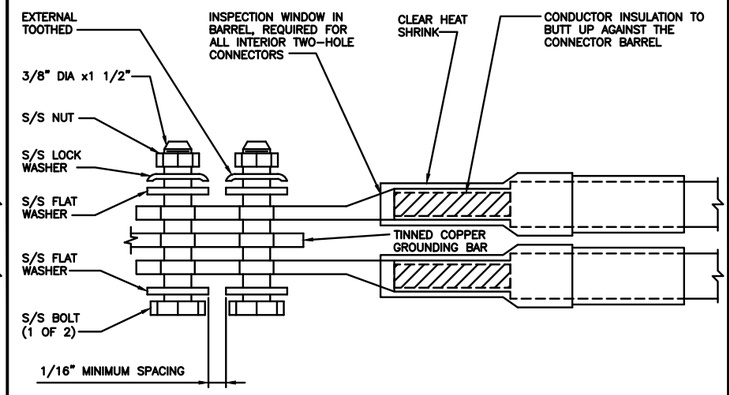
SHEET NUMBER
G-2

1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR, ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. ALL EXTERIOR GROUNDING HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE.
6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED.
8. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).

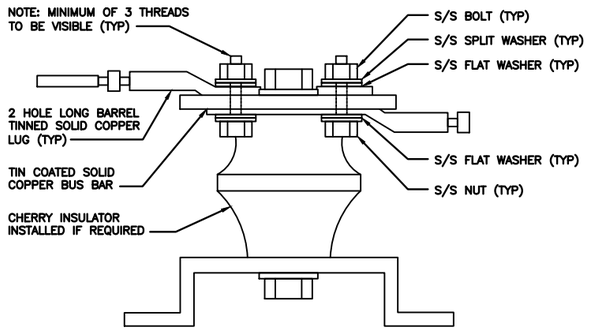
TYPICAL GROUNDING NOTES | NO SCALE | 1



TYPICAL EXTERIOR TWO HOLE LUG | NO SCALE | 2



TYPICAL INTERIOR TWO HOLE LUG | NO SCALE | 3



LUG DETAIL | NO SCALE | 4

NOT USED | NO SCALE | 5

NOT USED | NO SCALE | 6

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 9

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SHEET TITLE
GROUNDING DETAILS

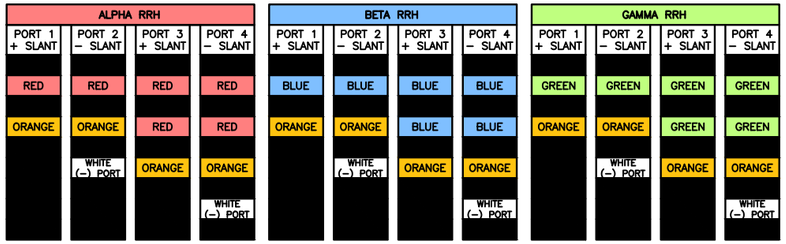
SHEET NUMBER
G-3

RF JUMPER COLOR CODING

3/4" TAPE WIDTHS WITH 3/4" SPACING

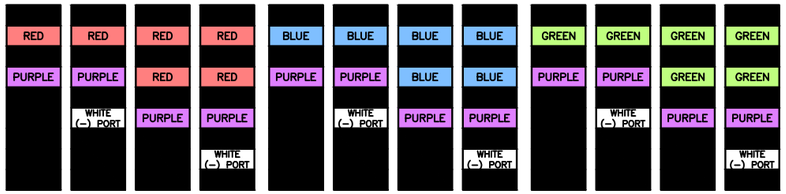
LOW-BAND RRH –
(600MHz N71 BASEBAND) +
(850MHz N26 BAND) +
(700MHz N29 BAND) – OPTIONAL PER MARKET

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BANDS)



MID-BAND RRH –
(AWS BANDS N66+N70)

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BANDS)

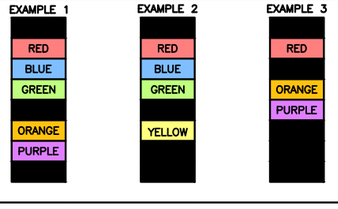


HYBRID/DISCREET CABLES

INCLUDE SECTOR BANDS BEING SUPPORTED
ALONG WITH FREQUENCY BANDS

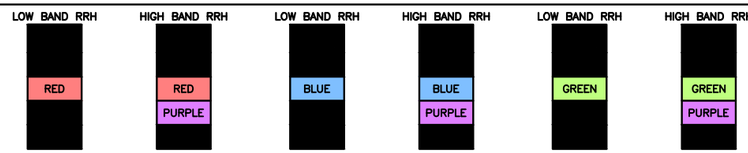
EXAMPLE 1 – HYBRID, OR DISCREET, SUPPORTS
ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS

EXAMPLE 2 – HYBRID, OR DISCREET, SUPPORTS
CBRS ONLY, ALL SECTORS



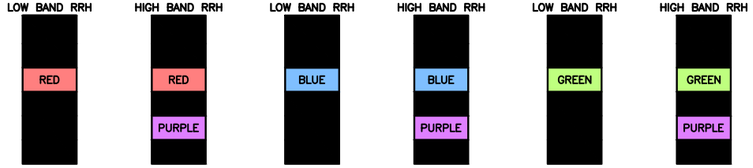
FIBER JUMPERS TO RRHs

LOW-BAND RRH FIBER CABLES HAVE SECTOR
STRIPE ONLY

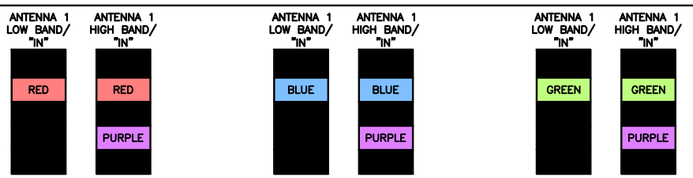


POWER CABLES TO RRHs

LOW-BAND RRH POWER CABLES HAVE SECTOR
STRIPE ONLY



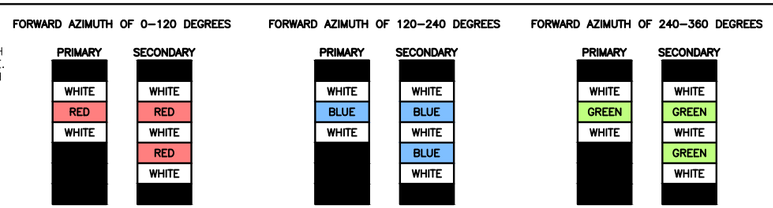
RET MOTORS AT ANTENNAS



MICROWAVE RADIO LINKS

LINKS WILL HAVE A 1.5-2 INCH WHITE WRAP WITH
THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE.
ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH
ADDITIONAL MW RADIO.

MICROWAVE CABLES WILL REQUIRE P-TOUCH
LABELS INSIDE THE CABINET TO IDENTIFY THE
LOCAL AND REMOTE SITE ID'S



LOW BANDS (N71+N26)
OPTIONAL – (N29)
ORANGE

AWS
(N66+N70+H-BLOCK)
PURPLE

CBRS TECH
(3 GHz)
YELLOW

NEGATIVE SLANT PORT
ON ANT/RRH
WHITE

ALPHA SECTOR
RED

BETA SECTOR
BLUE

GAMMA SECTOR
GREEN

COLOR IDENTIFIER	NO SCALE	2

NOT USED	NO SCALE	3

RF CABLE COLOR CODES	NO SCALE	1

NOT USED	NO SCALE	4

dish wireless.
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LITTLETON, CO 80120

Kimley»Horn
COA #: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED PROFESSIONAL ENGINEER
DocuSigned by: Kyle Freehart
D8BEE252A3804C1...

DRAWN BY:	CHECKED BY:	APPROVED BY:
SEW	MCK	MCK

RFDS REV #: ---

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
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A&E PROJECT NUMBER
KHCLE-16438

DISH Wireless L.L.C.
PROJECT INFORMATION
BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE
RF
CABLE COLOR CODES

SHEET NUMBER
RF-1

LEGEND

EXOTHERMIC CONNECTION

MECHANICAL CONNECTION

BUSS BAR INSULATOR

CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM — T

EXOTHERMIC WITH INSPECTION SLEEVE

GROUNDING BAR

GROUND ROD

TEST GROUND ROD WITH INSPECTION SLEEVE — T

SINGLE POLE SWITCH — $

DUPLEX RECEPTACLE

DUPLEX GFCI RECEPTACLE — GFCI

FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS 48–T8 — F

SMOKE DETECTION (DC) — SD

EMERGENCY LIGHTING (DC)

SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW LED–1–25A400/51K–SR4–120–PE–DDBTXD

CHAIN LINK FENCE — X X X X

WOOD/WROUGHT IRON FENCE

WALL STRUCTURE

LEASE AREA

PROPERTY LINE (PL)

SETBACKS

ICE BRIDGE

CABLE TRAY

WATER LINE — W W W W W

UNDERGROUND POWER — UGP UGP UGP UGP UGP

UNDERGROUND TELCO — UGT UGT UGT UGT UGT

OVERHEAD POWER — OHP OHP OHP OHP

OVERHEAD TELCO — OHT OHT OHT OHT

UNDERGROUND TELCO/POWER — UGT/P UGT/P UGT/P UGT/P

ABOVE GROUND POWER — AGP AGP AGP AGP AGP

ABOVE GROUND TELCO — AGT AGT AGT AGT AGT

ABOVE GROUND TELCO/POWER — AGT/P AGT/P AGT/P AGT/P

WORKPOINT — W.P.

SECTION REFERENCE — XX / X–X

DETAIL REFERENCE — XX / X–X

ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
AC	ALTERNATING CURRENT
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGL	ABOVE GROUND LEVEL
AIC	AMPERAGE INTERRUPTION CAPACITY
ALUM	ALUMINUM
ALT	ALTERNATE
ANT	ANTENNA
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BTC	BARE TINNED COPPER CONDUCTOR
BOF	BOTTOM OF FOOTING
CAB	CABINET
CANT	CANTILEVERED
CHG	CHARGING
CLG	CEILING
CLR	CLEAR
COL	COLUMN
COMM	COMMON
CONC	CONCRETE
CONSTR	CONSTRUCTION
DBL	DOUBLE
DC	DIRECT CURRENT
DEPT	DEPARTMENT
DF	DOUGLAS FIR
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWG	DRAWING
DWL	DOWEL
EA	EACH
EC	ELECTRICAL CONDUCTOR
EL.	ELEVATION
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ENG	ENGINEER
EQ	EQUAL
EXP	EXPANSION
EXT	EXTERIOR
EW	EACH WAY
FAB	FABRICATION
FF	FINISH FLOOR
FG	FINISH GRADE
FIF	FACILITY INTERFACE FRAME
FIN	FINISH(ED)
FLR	FLOOR
FDN	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
FS	FINISH SURFACE
FT	FOOT
FTG	FOOTING
GA	GAUGE
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GLB	GLUE LAMINATED BEAM
GLV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
GSM	GLOBAL SYSTEM FOR MOBILE
HDG	HOT DIPPED GALVANIZED
HDR	HEADER
HGR	HANGER
HVAC	HEAT/VENTILATION/AIR CONDITIONING
HT	HEIGHT
IGR	INTERIOR GROUND RING
IN	INCH
INT	INTERIOR
LB(S)	POUND(S)
LF	LINEAR FEET
LTE	LONG TERM EVOLUTION
MAS	MASONRY
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
MTS	MANUAL TRANSFER SWITCH
MW	MICROWAVE
NEC	NATIONAL ELECTRIC CODE
NM	NEWTON METERS
NO.	NUMBER
#	NUMBER
NTS	NOT TO SCALE
OC	ON–CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OPNG	OPENING
P/C	PRECAST CONCRETE
PCS	PERSONAL COMMUNICATION SERVICES
PCU	PRIMARY CONTROL UNIT
PRC	PRIMARY RADIO CABINET
PP	POLARIZING PRESERVING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PWR	POWER CABINET
QTY	QUANTITY
RAD	RADIUS
RECT	RECTIFIER
REF	REFERENCE
REINF	REINFORCEMENT
REQ'D	REQUIRED
RET	REMOTE ELECTRIC TILT
RF	RADIO FREQUENCY
RMC	RIGID METALLIC CONDUIT
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
RWY	RACEWAY
SCH	SCHEDULE
SHT	SHEET
SIAD	SMART INTEGRATED ACCESS DEVICE
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
TEMP	TEMPORARY
THK	THICKNESS
TMA	TOWER MOUNTED AMPLIFIER
TN	TOE NAIL
TOA	TOP OF ANTENNA
TOC	TOP OF CURB
TOF	TOP OF FOUNDATION
TOP	TOP OF PLATE (PARAPET)
TOS	TOP OF STEEL
TOW	TOP OF WALL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
UPS	UNITERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
VIF	VERIFIED IN FIELD
W	WIDE
W/	WITH
WD	WOOD
WP	WEATHERPROOF
WT	WEIGHT

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DocuSigned by: Kyle Freehart
198BE252A380AC1...

DRAWN BY:	CHECKED BY:	APPROVED BY:
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A&E PROJECT NUMBER

KHCLE–16438

DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE

LEGEND AND ABBREVIATIONS

SHEET NUMBER

GN-1

SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH Wireless L.L.C. AND TOWER OWNER NOC & THE DISH Wireless L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.

2. "LOOK UP" – DISH Wireless L.L.C. AND TOWER OWNER 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 DISH Wireless L.L.C. AND DISH Wireless L.L.C. AND TOWER OWNER 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 DISH Wireless L.L.C. AND TOWER OWNER STANDARDS, 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 DISH Wireless L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH Wireless L.L.C. AND TOWER OWNER 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 DISH Wireless L.L.C. AND TOWER OWNER 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 INCLUDING PRIVATE LOCATES 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 DISH 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 DISH Wireless L.L.C. AND TOWER OWNER, 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 AND RADIOS 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:DISH Wireless L.L.C.

TOWER OWNER:TOWER OWNER

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 CARRIER POC AND TOWER OWNER.

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 TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.

11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, 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 DISH Wireless L.L.C. AND TOWER OWNER

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.

dish wireless.

5701 SOUTH SANTA FE DRIVE
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Kimley»Horn

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421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED
PROFESSIONAL ENGINEER

DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

DRAWN BY:	CHECKED BY:	APPROVED BY:
SEW	MCK	MCK

RFDS REV #: ---

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KHCLE–16438

DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-2

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.

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. VERIFY 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. TIE WRAPS ARE NOT ALLOWED.

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 3 (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 DISH Wireless L.L.C. AND TOWER OWNER 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 "DISH Wireless L.L.C.".

30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

dish wireless.

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LITTLETON, CO 80120

Kimley»Horn

COA #: PEC.0000738
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, NC 27601

STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED PROFESSIONAL ENGINEER

DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

DRAWN BY:	CHECKED BY:	APPROVED BY:
SEW	MCK	MCK

RFDS REV #: ---

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	09/30/2021	ISSUED FOR REVIEW
0	03/03/2022	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

KHCLE-16438

DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-3

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-POTENTIAL 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). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.

dish wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Kimley»Horn

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STATE OF CONNECTICUT
KYLE JENSEN FREEHART
34906
LICENSED PROFESSIONAL ENGINEER

DocuSigned by:
Kyle Freehart
D8BEE252A3804C1...

DRAWN BY:	CHECKED BY:	APPROVED BY:
SEW	MCK	MCK

RFDS REV #: ---

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
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0	03/03/2022	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

KHCLE-16438

DISH Wireless L.L.C.
PROJECT INFORMATION

BOHVN00165A
150 MATTATUCK HEIGHTS RD
WATERBURY, CT 06705

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-4

DocuSign

Certificate Of Completion

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Envelope Summary Events	Status	Timestamps
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Certified Delivered	Security Checked	3/7/2022 11:15:25 AM
Signing Complete	Security Checked	3/7/2022 11:16:16 AM
Completed	Security Checked	3/7/2022 11:16:16 AM

Payment Events	Status	Timestamps

Exhibit D

Structural Analysis Report

Date: **October 04, 2021**

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

Subject:	**Structural Analysis Report**	
Carrier Designation:	***DISH Network* Co-Locate**	
	Site Number:	BOHVN00165A
	Site Name:	CT-CCI-T-876317
Crown Castle Designation:	**BU Number:**	876317
	Site Name:	Waterbury
	JDE Job Number:	645174
	Work Order Number:	2028458
	Order Number:	553382 Rev. 2
Engineering Firm Designation:	**B+T Group Project Number:**	79982.004.01
Site Data:	**150 Mattatuck Heights, Waterbury, New Haven County, CT** **Latitude *41° 32' 16.3"*, Longitude *-72° 59' 6.1"*** **144.25 Foot - Monopole Tower**	

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

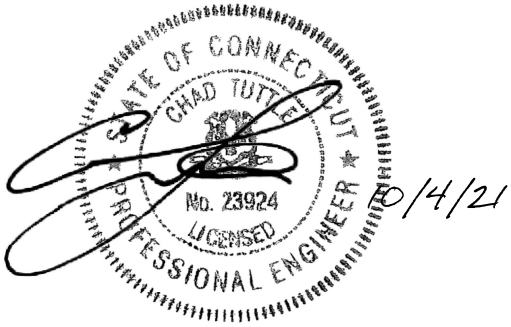
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity – 93.8%**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Erik Perez

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



10/4/21

Chad E. Tuttle, P.E.

tnxTower Report - version 8.1.1.0

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 134.25 ft. Monopole tower designed by Valmont. A 10-ft tower extension has been considered in this analysis, bringing the total tower height to 144.25 ft.

The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	118 mph
Exposure Category:	B
Topographic Factor:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
120.0	120.0	3	Fujitsu	TA08025-B604	1	1-1/2
		3	Fujitsu	TA08025-B605		
		3	JMA Wireless	MX08FRO665-21		
		1	Raycap	RDIDC-9181-PF-48		
		1	--	Commscope MC-PK8-DSH (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)
144.0	144.0	1	Site Pro 1	F3P-12W	6 2	3/4 3/8
		1	--	Miscellaneous [NA 507-1]		
	143.0	3	CCI Antennas	HPA65R-BU8A		
		3	Ericsson	RADIO 4415 B30		
		3	Ericsson	RRUS 4449 B5/B12		
		3	Ericsson	RRUS 4478 B14		
		3	Ericsson	RRUS 8843 B2/B66A		
		6	KMW Comm.	EPBQ-654L8H8-L2		
		3	Raycap	DC6-48-60-18-8F		
130.0	133.0	1	Andrew	VHLP2-18	3 3 1	1-1/4 Elliptical 1-1/2
		2	Andrew	VHLP2-23		
	130.0	3	Alcatel Lucent	1900MHZ RRH (65MHZ)		
		3	Alcatel Lucent	800 EXTERNAL NOTCH FILTER		
		3	Alcatel Lucent	800MHZ RRH		
		3	Nokia	AAHC		
		4	RFS Celwave	APXVSPP18-C-A20		
		4	RFS Celwave	IBC1900HB-2		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		2	RFS Celwave	PD2DE-700/2700		
		1	--	Pipe Mount [PM 601-3]		
		1	--	Platform Mount [LP 602-1]		
	128.0	3	Alcatel Lucent	1900MHZ RRH (65MHZ)		
110.0	113.0	1	Trimble	BULLET III	6 2 1	1-5/8 1-1/4 1/2
	110.0	3	Andrew	SBNHH-1D65B		
		3	Antel	BXA-80063/4CF		
		1	Raycap	RVZDC-6627-PF-48		
		3	Samsung Telecom.	RFV01U-D1A		
		3	Samsung Telecom.	RFV01U-D2A		
		1	--	PLK5 Kicker Kit		
		1	--	Platform Mount [LP 602-1]		
		3	Vzw	Sub6 Antenna - VZS01		
100.0	103.0	3	Ericsson	RADIO 4449 B12/B71	6 5 2 1	1-1/4 7/8 1-1/2 1-5/8
	101.0	3	Ericsson	AIR -32 B2A/B66AA		
		3	Ericsson	AIR 21 B2A/B4P		
		3	RFS Celwave	APXVAARR24_43-U-NA20		
		3	RFS Celwave	ATMAA1412D-1A20		
	100.0	1	--	Platform Mount [LP 303-1]		
50.0	51.0	1	Lucent	KS24019-L112A	1	1/2
	50.0	1	--	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower Manufacturer Drawing	1530953	CCI Sites
Mount Analysis Report	9974866	CCI Sites
Tower Modification Drawing	2381113	CCI Sites
Post Modification Inspection	2381112	CCI Sites
Tower Modification Drawing	3315244	CCI Sites
Post Modification Inspection	3770745	CCI Sites
Tower Modification Drawing	8142142	CCI Sites
Post Modification Inspection	8624542	CCI Sites
Foundation Drawing	1630930	CCI Sites
Geotech Report	1529737	CCI Sites
Crown CAD Package	Date: 09/30/2021	CCI Sites

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

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

3.2) Assumptions

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

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	144.25 - 139.25	Pole	TP12.75x12.75x0.375	1	-4.510	--	12.5	Pass
L2	139.25 - 134.75	Pole	TP12.75x12.75x0.375	2	-4.793	--	25.8	Pass
L3	134.75 - 134.25	Pole	TP13.48x13.48x0.375	3	-4.828	--	24.4	Pass
L4	134.25 - 129.25	Pole	TP14.466x13.48x0.1875	4	-8.608	--	49.1	Pass
L5	129.25 - 124.25	Pole	TP15.452x14.466x0.1875	5	-8.883	--	67.9	Pass
L6	124.25 - 123.42	Pole	TP15.616x15.452x0.1875	6	-8.944	--	70.7	Pass
L7	123.42 - 123.17	Pole + Reinf.	TP15.665x15.616x0.5375	7	-8.982	--	46.1	Pass
L8	123.17 - 118.17	Pole + Reinf.	TP16.651x15.665x0.5125	8	-12.422	--	59.2	Pass
L9	118.17 - 113.17	Pole + Reinf.	TP17.637x16.651x0.4875	9	-13.025	--	72.5	Pass
L10	113.17 - 109.5	Pole + Reinf.	TP18.36x17.637x0.475	10	-16.653	--	81.9	Pass
L11	109.5 - 109.25	Pole + Reinf.	TP18.409x18.36x0.5875	11	-16.708	--	69.0	Pass
L12	109.25 - 104.75	Pole + Reinf.	TP19.296x18.409x0.5625	12	-17.438	--	80.1	Pass
L13	104.75 - 104.5	Pole + Reinf.	TP19.346x19.296x0.775	13	-17.503	--	64.6	Pass
L14	104.5 - 102.42	Pole + Reinf.	TP19.756x19.346x0.7625	14	-17.935	--	68.5	Pass
L15	102.42 - 102.17	Pole + Reinf.	TP19.806x19.756x0.5625	15	-17.994	--	85.5	Pass
L16	102.17 - 98.75	Pole + Reinf.	TP20.479x19.806x0.55	16	-22.016	--	93.8	Pass
L17	98.75 - 98.5	Pole + Reinf.	TP20.528x20.479x0.8375	17	-22.098	--	82.0	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L18	98.5 - 97.5	Pole + Reinf.	TP20.726x20.528x0.8375	18	-22.351	--	71.3	Pass
L19	97.5 - 97.25	Pole + Reinf.	TP20.775x20.726x0.75	19	-22.422	--	83.0	Pass
L20	97.25 - 95.55	Pole + Reinf.	TP21.81x20.775x0.7375	20	-22.837	--	86.5	Pass
L21	95.55 - 90.55	Pole + Reinf.	TP21.73x20.735x0.8	21	-24.893	--	89.8	Pass
L22	90.55 - 89.25	Pole + Reinf.	TP21.989x21.73x0.775	22	-25.253	--	91.9	Pass
L23	89.25 - 89	Pole + Reinf.	TP22.039x21.989x1	23	-25.346	--	79.4	Pass
L24	89 - 88.25	Pole + Reinf.	TP22.189x22.039x0.975	24	-25.575	--	66.4	Pass
L25	88.25 - 88	Pole + Reinf.	TP22.238x22.189x0.7625	25	-25.647	--	76.0	Pass
L26	88 - 87.83	Pole + Reinf.	TP22.272x22.238x0.7625	26	-25.694	--	76.2	Pass
L27	87.83 - 87.58	Pole + Reinf.	TP22.321x22.272x0.675	27	-25.754	--	80.8	Pass
L28	87.58 - 82.58	Pole + Reinf.	TP23.317x22.321x0.65	28	-26.997	--	87.0	Pass
L29	82.58 - 77.58	Pole + Reinf.	TP24.312x23.317x0.625	29	-28.278	--	92.6	Pass
L30	77.58 - 77	Pole + Reinf.	TP24.428x24.312x0.625	30	-28.437	--	93.2	Pass
L31	77 - 76.75	Pole + Reinf.	TP24.478x24.428x0.825	31	-28.520	--	87.4	Pass
L32	76.75 - 76.33	Pole + Reinf.	TP24.561x24.478x0.825	32	-28.644	--	87.8	Pass
L33	76.33 - 76.08	Pole + Reinf.	TP24.611x24.561x0.825	33	-28.718	--	88.9	Pass
L34	76.08 - 74.25	Pole + Reinf.	TP24.976x24.611x0.8	34	-29.230	--	90.7	Pass
L35	74.25 - 74	Pole + Reinf.	TP25.026x24.976x0.8875	35	-29.327	--	80.1	Pass
L36	74 - 73.75	Pole + Reinf.	TP25.076x25.026x0.8875	36	-29.403	--	80.3	Pass
L37	73.75 - 73.5	Pole + Reinf.	TP25.125x25.076x0.9125	37	-29.482	--	79.6	Pass
L38	73.5 - 68.5	Pole + Reinf.	TP26.121x25.125x0.875	38	-31.044	--	83.8	Pass
L39	68.5 - 63.5	Pole + Reinf.	TP27.116x26.121x0.85	39	-32.637	--	87.8	Pass
L40	63.5 - 60.5	Pole + Reinf.	TP27.714x27.116x0.825	40	-33.607	--	90.0	Pass
L41	60.5 - 60.25	Pole + Reinf.	TP27.763x27.714x0.825	41	-33.698	--	90.1	Pass
L42	60.25 - 59.5	Pole + Reinf.	TP27.913x27.763x0.825	42	-33.935	--	90.7	Pass
L43	59.5 - 59.25	Pole + Reinf.	TP27.962x27.913x0.8875	43	-34.027	--	84.9	Pass
L44	59.25 - 54.25	Pole + Reinf.	TP28.958x27.962x0.85	44	-35.723	--	88.1	Pass
L45	54.25 - 50	Pole + Reinf.	TP30.64x28.958x0.8375	45	-37.194	--	90.7	Pass
L46	50 - 44.8	Pole + Reinf.	TP30.333x29.304x0.8375	46	-40.327	--	92.4	Pass
L47	44.8 - 43.58	Pole + Reinf.	TP30.574x30.333x0.8375	47	-40.762	--	93.0	Pass
L48	43.58 - 43.33	Pole + Reinf.	TP30.624x30.574x0.85	48	-40.869	--	92.1	Pass
L49	43.33 - 43.17	Pole + Reinf.	TP30.657x30.624x0.85	49	-40.934	--	92.2	Pass
L50	43.17 - 42.92	Pole + Reinf.	TP30.706x30.657x0.9375	50	-41.032	--	87.3	Pass
L51	42.92 - 39	Pole + Reinf.	TP31.481x30.706x0.9125	51	-42.568	--	89.1	Pass
L52	39 - 38.75	Pole + Reinf.	TP31.531x31.481x0.95	52	-42.586	--	84.2	Pass
L53	38.75 - 37.17	Pole + Reinf.	TP31.844x31.531x0.9375	53	-42.704	--	84.9	Pass
L54	37.17 - 36.92	Pole + Reinf.	TP31.894x31.844x0.8875	54	-43.346	--	88.2	Pass
L55	36.92 - 34	Pole + Reinf.	TP32.471x31.894x0.8875	55	-43.462	--	89.4	Pass
L56	34 - 33.75	Pole + Reinf.	TP32.52x32.471x0.875	56	-44.629	--	89.4	Pass
L57	33.75 - 29.75	Pole + Reinf.	TP33.312x32.52x0.8625	57	-44.736	--	91.0	Pass
L58	29.75 - 29.5	Pole + Reinf.	TP33.361x33.312x0.8625	58	-46.295	--	90.0	Pass
L59	29.5 - 24.5	Pole + Reinf.	TP34.351x33.361x0.85	59	-46.404	--	91.7	Pass
L60	24.5 - 23	Pole + Reinf.	TP34.648x34.351x0.8375	60	-48.406	--	92.2	Pass
L61	23 - 22.75	Pole + Reinf.	TP34.697x34.648x0.9625	61	-48.997	--	85.5	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L62	22.75 - 21.58	Pole + Reinf.	TP34.928x34.697x0.9625	62	-49.116	--	85.9	Pass
L63	21.58 - 21.33	Pole + Reinf.	TP34.978x34.928x0.85	63	-49.620	--	90.7	Pass
L64	21.33 - 16.33	Pole + Reinf.	TP35.967x34.978x0.8375	64	-49.735	--	92.1	Pass
L65	16.33 - 12.92	Pole + Reinf.	TP36.644x35.967x0.825	65	-51.856	--	93.1	Pass
L66	12.92 - 12.67	Pole + Reinf.	TP36.693x36.644x0.9125	66	-53.310	--	84.4	Pass
L67	12.67 - 12.5	Pole + Reinf.	TP36.726x36.693x0.9125	67	-53.426	--	84.4	Pass
L68	12.5 - 12.25	Pole + Reinf.	TP36.776x36.726x0.7625	68	-53.505	--	87.6	Pass
L69	12.25 - 12	Pole + Reinf.	TP36.825x36.776x0.7625	69	-53.610	--	87.6	Pass
L70	12 - 11.75	Pole + Reinf.	TP36.874x36.825x0.6625	70	-53.715	--	89.6	Pass
L71	11.75 - 8.5	Pole + Reinf.	TP37.518x36.874x0.65	71	-53.827	--	90.3	Pass
L72	8.5 - 8.25	Pole + Reinf.	TP37.567x37.518x0.925	72	-55.112	--	74.1	Pass
L73	8.25 - 7	Pole + Reinf.	TP37.815x37.567x0.9125	73	-55.242	--	74.3	Pass
L74	7 - 6.75	Pole + Reinf.	TP37.864x37.815x0.8125	74	-55.832	--	86.1	Pass
L75	6.75 - 1.75	Pole + Reinf.	TP38.854x37.864x0.7875	75	-55.950	--	87.2	Pass
L76	1.75 - 0	Pole + Reinf.	TP39.2x38.854x0.7875	76	-58.133	--	87.6	Pass
							Summary	
						Pole (L6)	80.2	Pass
						Reinforcement	93.8	Pass
						Rating =	93.8	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Flange Connection	134.25	38.5	Pass
1,2	Anchor Rods	Base	87.1	Pass
1,2	Base Plate	Base	60.5	Pass
1,2	Base Foundation (Structure)	Base	19.8	Pass
1,2	Base Foundation (Soil Interaction)	Base	85.2	Pass

Structure Rating (max from all components) =	93.8%

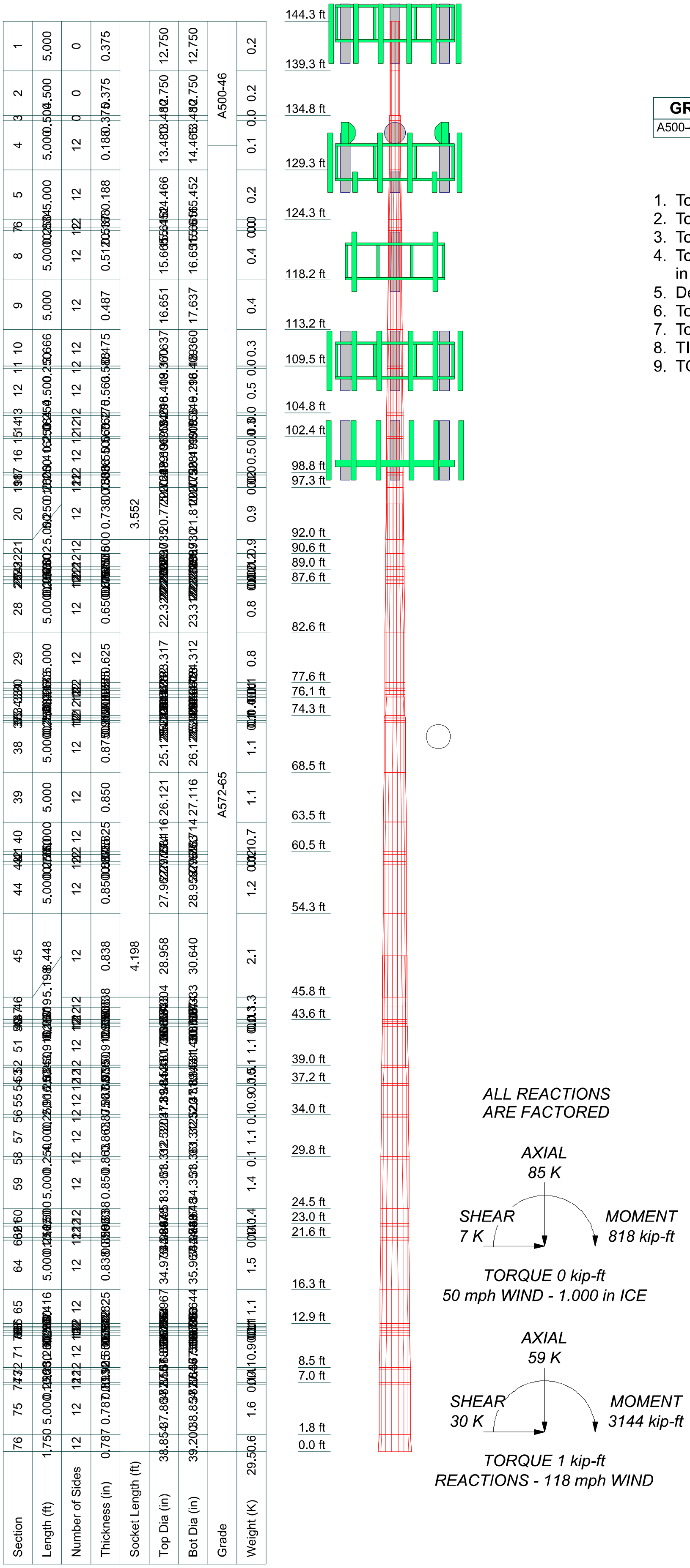
Notes:
1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.
2) Rating per TIA-222-H Section 15.5.

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



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A500-46	46 ksi	62 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING:93.8%

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

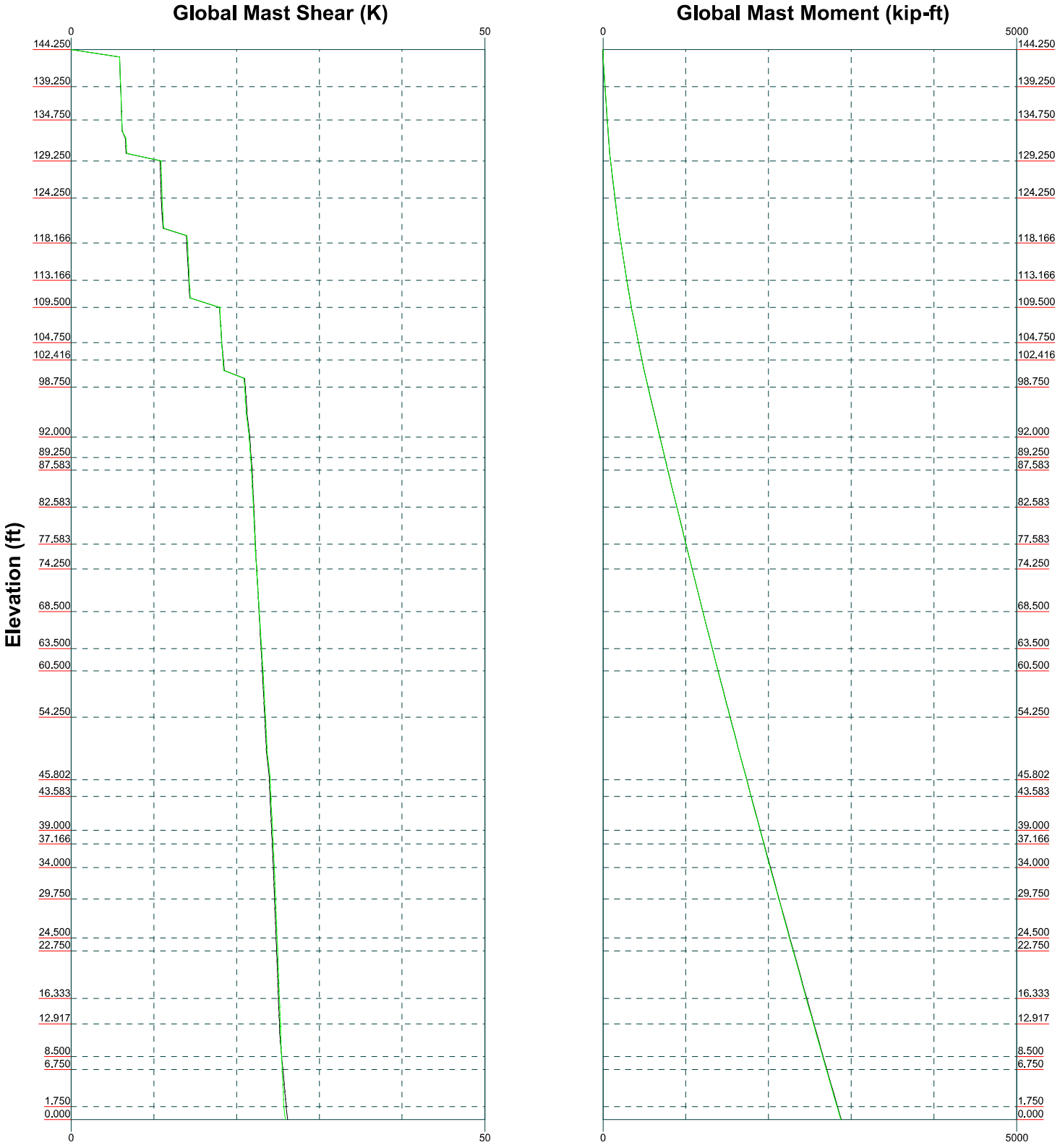
Job: **79982.004.01 - WATERBURY,CT (BU# 876317**		
Project:		
Client: Crown Castle	Drawn by: Jayaraj B	App'd:
Code: TIA-222-H	Date: 10/04/21	Scale: NTS
Path:		Dwg No. E-1

TIA-222-H - 118 mph/50 mph 1.000 in Ice Exposure B

Vx Vz

Maximum Values

Mx Mz



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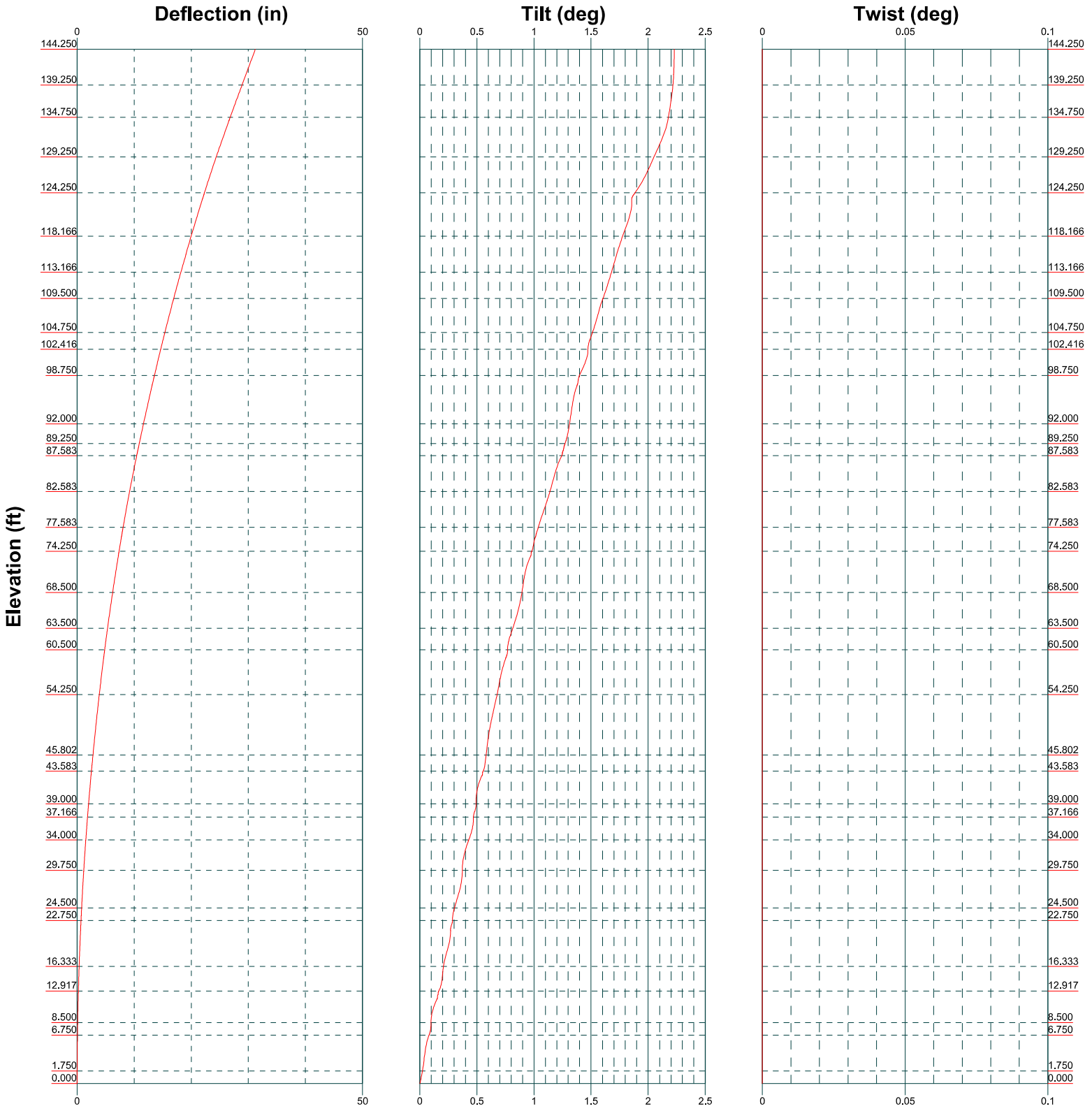
Job: 79982.004.01 - WATERBURY,CT (BU# 876317			
Project:			
Client: Crown Castle	Drawn by: Jayaraj B	App'd:	
Code: TIA-222-H	Date: 10/04/21	Scale: NTS	
Path:		Dwg No. E-4	

TIA-222-H - Service - 60 mph

Maximum Values



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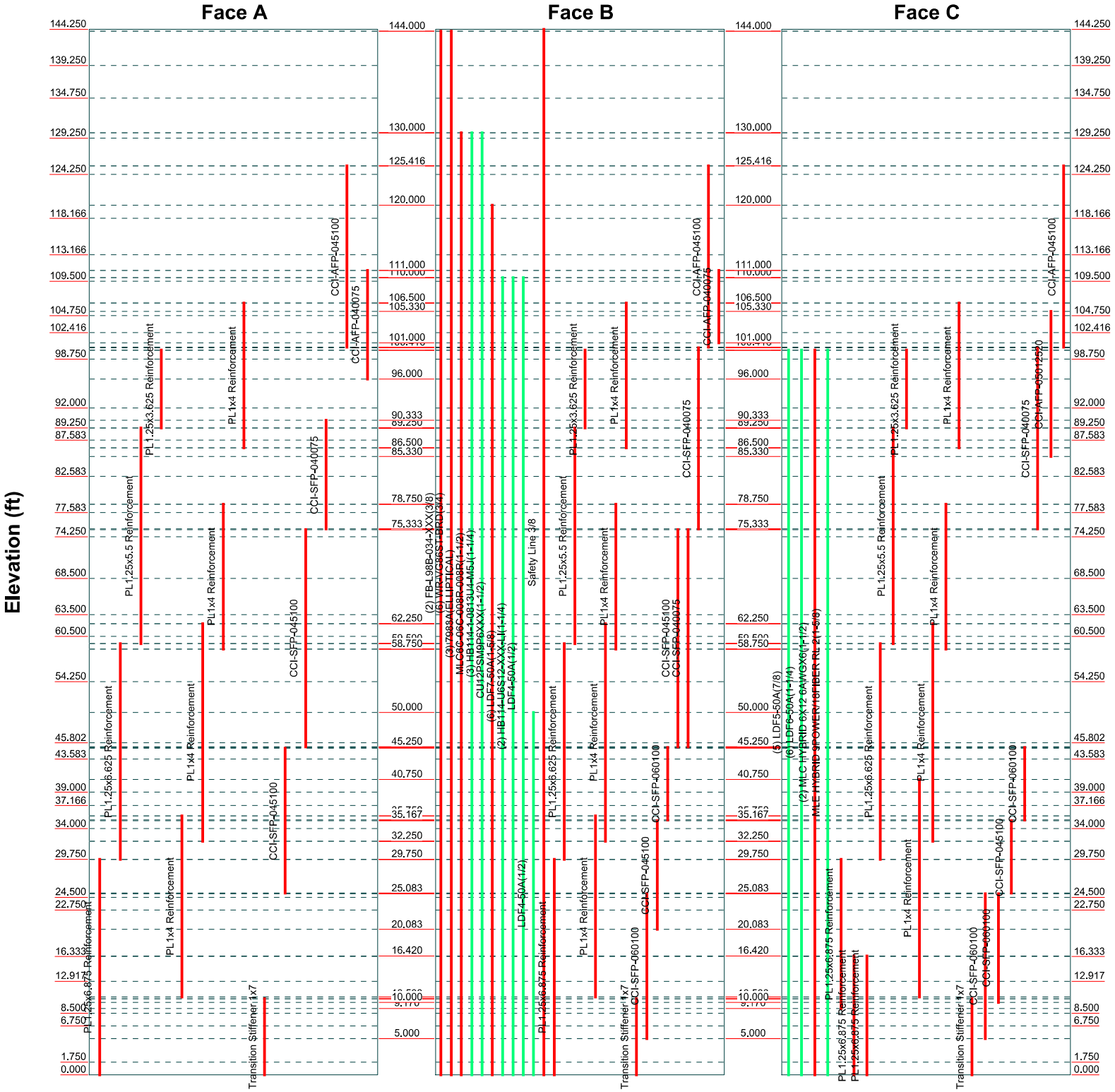
Job: 79982.004.01 - WATERBURY,CT (BU# 876317			
Project:			
Client: Crown Castle	Drawn by: Jayaraj B	App'd:	
Code: TIA-222-H	Date: 10/04/21	Scale: NTS	
Path:		Dwg No. E-5	

Feed Line Distribution Chart
0' - 144'3"

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



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FAX: (918) 295-0265

Job: 79982.004.01 - WATERBURY,CT (BU# 876317			
Project:			
Client: Crown Castle	Drawn by: Jayaraj B	App'd:	
Code: TIA-222-H	Date: 10/04/21	Scale: NTS	
Path:		Dwg No. E-7	

Tower Input Data

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

Tower is located in New Haven County, Connecticut.
Tower base elevation above sea level: 660.000 ft.
Basic wind speed of 118 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.000 ft.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
TIA-222-H Annex S.
TOWER RATING:93.8%.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Maximum demand-capacity ratio is: 1.05.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	144.250-139.250	5.000	0.000	Round	12.750	12.750	0.375		A500-46 (46 ksi)
L2	139.250-134.750	4.500	0.000	Round	12.750	12.750	0.375		A500-46 (46 ksi)
L3	134.750-134.250	0.500	0.000	Round	13.480	13.480	0.375		A500-46 (46 ksi)
L4	134.250-129.250	5.000	0.000	12	13.480	14.466	0.188	0.750	A572-65 (65 ksi)
L5	129.250-124.250	5.000	0.000	12	14.466	15.452	0.188	0.750	A572-65 (65 ksi)
L6	124.250-123.416	0.834	0.000	12	15.452	15.616	0.188	0.750	A572-65 (65 ksi)
L7	123.416-123.166	0.250	0.000	12	15.616	15.665	0.537	2.150	A572-65 (65 ksi)
L8	123.166-118.166	5.000	0.000	12	15.665	16.651	0.512	2.050	A572-65 (65 ksi)
L9	118.166-113.166	5.000	0.000	12	16.651	17.637	0.487	1.950	A572-65 (65 ksi)
L10	113.166-109.500	3.666	0.000	12	17.637	18.360	0.475	1.900	A572-65 (65 ksi)
L11	109.500-109.250	0.250	0.000	12	18.360	18.409	0.588	2.350	A572-65 (65 ksi)
L12	109.250-104.750	4.500	0.000	12	18.409	19.296	0.563	2.250	A572-65 (65 ksi)
L13	104.750-104.500	0.250	0.000	12	19.296	19.346	0.775	3.100	A572-65 (65 ksi)
L14	104.500-102.416	2.084	0.000	12	19.346	19.756	0.762	3.050	A572-65 (65 ksi)
L15	102.416-102.166	0.250	0.000	12	19.756	19.806	0.563	2.250	A572-65 (65 ksi)
L16	102.166-98.750	3.416	0.000	12	19.806	20.479	0.550	2.200	A572-65 (65 ksi)
L17	98.750-98.500	0.250	0.000	12	20.479	20.528	0.838	3.350	A572-65 (65 ksi)
L18	98.500-97.500	1.000	0.000	12	20.528	20.726	0.838	3.350	A572-65 (65 ksi)
L19	97.500-97.250	0.250	0.000	12	20.726	20.775	0.750	3.000	A572-65 (65 ksi)
L20	97.250-92.000	5.250	3.552	12	20.775	21.810	0.738	2.950	A572-65 (65 ksi)
L21	92.000-90.552	5.000	0.000	12	20.735	21.730	0.800	3.200	A572-65 (65 ksi)
L22	90.552-89.250	1.302	0.000	12	21.730	21.989	0.775	3.100	A572-65 (65 ksi)
L23	89.250-89.000	0.250	0.000	12	21.989	22.039	1.000	4.000	A572-65 (65 ksi)
L24	89.000-88.250	0.750	0.000	12	22.039	22.189	0.975	3.900	A572-65 (65 ksi)
L25	88.250-88.000	0.250	0.000	12	22.189	22.238	0.762	3.050	A572-65 (65 ksi)
L26	88.000-87.833	0.167	0.000	12	22.238	22.272	0.762	3.050	A572-65 (65 ksi)
L27	87.833-87.583	0.250	0.000	12	22.272	22.321	0.675	2.700	A572-65 (65 ksi)
L28	87.583-82.583	5.000	0.000	12	22.321	23.317	0.650	2.600	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L29	82.583-77.583	5.000	0.000	12	23.317	24.312	0.625	2.500	A572-65 (65 ksi)
L30	77.583-77.000	0.583	0.000	12	24.312	24.428	0.625	2.500	A572-65 (65 ksi)
L31	77.000-76.750	0.250	0.000	12	24.428	24.478	0.825	3.300	A572-65 (65 ksi)
L32	76.750-76.333	0.417	0.000	12	24.478	24.561	0.825	3.300	A572-65 (65 ksi)
L33	76.333-76.083	0.250	0.000	12	24.561	24.611	0.825	3.300	A572-65 (65 ksi)
L34	76.083-74.250	1.833	0.000	12	24.611	24.976	0.800	3.200	A572-65 (65 ksi)
L35	74.250-74.000	0.250	0.000	12	24.976	25.026	0.887	3.550	A572-65 (65 ksi)
L36	74.000-73.750	0.250	0.000	12	25.026	25.076	0.887	3.550	A572-65 (65 ksi)
L37	73.750-73.500	0.250	0.000	12	25.076	25.125	0.912	3.650	A572-65 (65 ksi)
L38	73.500-68.500	5.000	0.000	12	25.125	26.121	0.875	3.500	A572-65 (65 ksi)
L39	68.500-63.500	5.000	0.000	12	26.121	27.116	0.850	3.400	A572-65 (65 ksi)
L40	63.500-60.500	3.000	0.000	12	27.116	27.714	0.825	3.300	A572-65 (65 ksi)
L41	60.500-60.250	0.250	0.000	12	27.714	27.763	0.825	3.300	A572-65 (65 ksi)
L42	60.250-59.500	0.750	0.000	12	27.763	27.913	0.825	3.300	A572-65 (65 ksi)
L43	59.500-59.250	0.250	0.000	12	27.913	27.962	0.887	3.550	A572-65 (65 ksi)
L44	59.250-54.250	5.000	0.000	12	27.962	28.958	0.850	3.400	A572-65 (65 ksi)
L45	54.250-45.802	8.448	4.198	12	28.958	30.640	0.838	3.350	A572-65 (65 ksi)
L46	45.802-44.802	5.198	0.000	12	29.304	30.333	0.838	3.350	A572-65 (65 ksi)
L47	44.802-43.583	1.219	0.000	12	30.333	30.574	0.838	3.350	A572-65 (65 ksi)
L48	43.583-43.333	0.250	0.000	12	30.574	30.624	0.850	3.400	A572-65 (65 ksi)
L49	43.333-43.166	0.167	0.000	12	30.624	30.657	0.850	3.400	A572-65 (65 ksi)
L50	43.166-42.916	0.250	0.000	12	30.657	30.706	0.938	3.750	A572-65 (65 ksi)
L51	42.916-39.000	3.916	0.000	12	30.706	31.481	0.912	3.650	A572-65 (65 ksi)
L52	39.000-38.750	0.250	0.000	12	31.481	31.531	0.950	3.800	A572-65 (65 ksi)
L53	38.750-37.166	1.584	0.000	12	31.531	31.844	0.938	3.750	A572-65 (65 ksi)
L54	37.166-36.916	0.250	0.000	12	31.844	31.894	0.887	3.550	A572-65 (65 ksi)
L55	36.916-34.000	2.916	0.000	12	31.894	32.471	0.887	3.550	A572-65 (65 ksi)
L56	34.000-33.750	0.250	0.000	12	32.471	32.520	0.875	3.500	A572-65 (65 ksi)
L57	33.750-29.750	4.000	0.000	12	32.520	33.312	0.863	3.450	A572-65 (65 ksi)
L58	29.750-29.500	0.250	0.000	12	33.312	33.361	0.863	3.450	A572-65 (65 ksi)
L59	29.500-24.500	5.000	0.000	12	33.361	34.351	0.850	3.400	A572-65

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L60	24.500-23.000	1.500	0.000	12	34.351	34.648	0.838	3.350	(65 ksi) A572-65 (65 ksi)
L61	23.000-22.750	0.250	0.000	12	34.648	34.697	0.963	3.850	A572-65 (65 ksi)
L62	22.750-21.583	1.167	0.000	12	34.697	34.928	0.963	3.850	A572-65 (65 ksi)
L63	21.583-21.333	0.250	0.000	12	34.928	34.978	0.850	3.400	A572-65 (65 ksi)
L64	21.333-16.333	5.000	0.000	12	34.978	35.967	0.838	3.350	A572-65 (65 ksi)
L65	16.333-12.917	3.416	0.000	12	35.967	36.644	0.825	3.300	A572-65 (65 ksi)
L66	12.917-12.667	0.250	0.000	12	36.644	36.693	0.912	3.650	A572-65 (65 ksi)
L67	12.667-12.500	0.167	0.000	12	36.693	36.726	0.912	3.650	A572-65 (65 ksi)
L68	12.500-12.250	0.250	0.000	12	36.726	36.776	0.762	3.050	A572-65 (65 ksi)
L69	12.250-12.000	0.250	0.000	12	36.776	36.825	0.762	3.050	A572-65 (65 ksi)
L70	12.000-11.750	0.250	0.000	12	36.825	36.874	0.662	2.650	A572-65 (65 ksi)
L71	11.750-8.500	3.250	0.000	12	36.874	37.518	0.650	2.600	A572-65 (65 ksi)
L72	8.500-8.250	0.250	0.000	12	37.518	37.567	0.925	3.700	A572-65 (65 ksi)
L73	8.250-7.000	1.250	0.000	12	37.567	37.815	0.912	3.650	A572-65 (65 ksi)
L74	7.000-6.750	0.250	0.000	12	37.815	37.864	0.813	3.250	A572-65 (65 ksi)
L75	6.750-1.750	5.000	0.000	12	37.864	38.854	0.787	3.150	A572-65 (65 ksi)
L76	1.750-0.000	1.750		12	38.854	39.200	0.787	3.150	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
L2	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
	12.750	14.579	279.335	4.377	6.375	43.817	558.670	7.285	0.000	0
L3	13.480	15.439	331.709	4.635	6.740	49.215	663.419	7.715	0.000	0
	13.480	15.439	331.709	4.635	6.740	49.215	663.419	7.715	0.000	0
L4	13.889	8.025	180.994	4.759	6.983	25.921	366.742	3.950	3.110	16.587
	14.910	8.621	224.322	5.112	7.493	29.936	454.538	4.243	3.374	17.996
L5	14.910	8.621	224.322	5.112	7.493	29.936	454.538	4.243	3.374	17.996
	15.931	9.216	274.067	5.465	8.004	34.242	555.334	4.536	3.639	19.405
L6	15.931	9.216	274.067	5.465	8.004	34.242	555.334	4.536	3.639	19.405
	16.101	9.315	283.020	5.523	8.089	34.988	573.475	4.585	3.683	19.641
L7	15.977	26.097	757.351	5.398	8.089	93.626	1534.599	12.844	2.745	5.106
	16.028	26.182	764.802	5.416	8.115	94.250	1549.697	12.886	2.758	5.131
L8	16.037	25.006	732.852	5.425	8.115	90.312	1484.956	12.307	2.825	5.512
	17.058	26.633	885.390	5.778	8.625	102.651	1794.041	13.108	3.089	6.027

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L9	17.067	25.373	846.120	5.787	8.625	98.098	1714.469	12.488	3.156	6.474
	18.087	26.920	1010.565	6.139	9.136	110.614	2047.680	13.249	3.420	7.016
L10	18.092	26.249	986.808	6.144	9.136	108.014	1999.541	12.919	3.454	7.271
	18.840	27.355	1116.814	6.403	9.510	117.432	2262.967	13.463	3.647	7.679
L11	18.800	33.621	1355.419	6.362	9.510	142.521	2746.446	16.547	3.346	5.695
	18.851	33.714	1366.728	6.380	9.536	143.325	2769.361	16.593	3.359	5.718
L12	18.860	32.324	1314.084	6.389	9.536	137.804	2662.690	15.909	3.426	6.091
	19.778	33.931	1519.973	6.707	9.995	152.067	3079.878	16.700	3.664	6.514
L13	19.704	46.220	2023.726	6.631	9.995	202.465	4100.618	22.748	3.094	3.993
	19.755	46.343	2039.927	6.648	10.021	203.566	4133.444	22.808	3.108	4.01
L14	19.759	45.626	2011.080	6.653	10.021	200.687	4074.993	22.456	3.141	4.119
	20.184	46.635	2147.450	6.800	10.234	209.839	4351.315	22.952	3.251	4.264
L15	20.255	34.765	1634.756	6.871	10.234	159.741	3312.459	17.110	3.787	6.733
	20.306	34.854	1647.383	6.889	10.259	160.574	3338.044	17.154	3.800	6.756
L16	20.310	34.102	1613.915	6.894	10.259	157.312	3270.230	16.784	3.834	6.971
	21.008	35.295	1789.255	7.135	10.608	168.667	3625.516	17.371	4.014	7.299
L17	20.906	52.969	2608.327	7.032	10.608	245.878	5285.177	26.070	3.244	3.873
	20.957	53.102	2628.012	7.049	10.634	247.139	5325.065	26.135	3.257	3.889
L18	20.957	53.102	2628.012	7.049	10.634	247.139	5325.065	26.135	3.257	3.889
	21.161	53.633	2707.746	7.120	10.736	252.215	5486.627	26.397	3.310	3.952
L19	21.192	48.241	2456.993	7.151	10.736	228.858	4978.534	23.743	3.544	4.726
	21.243	48.360	2475.226	7.169	10.761	230.010	5015.479	23.801	3.558	4.744
L20	21.248	47.584	2438.533	7.173	10.761	226.600	4941.129	23.419	3.591	4.869
	22.319	50.042	2836.299	7.544	11.298	251.054	5747.111	24.629	3.869	5.246
L21	21.916	51.352	2604.715	7.137	10.741	242.512	5277.859	25.274	3.413	4.266
	22.215	53.916	3014.753	7.493	11.256	267.829	6108.707	26.536	3.680	4.6
L22	22.223	52.294	2931.020	7.502	11.256	260.391	5939.041	25.737	3.747	4.834
	22.492	52.941	3041.148	7.595	11.391	266.989	6162.190	26.056	3.816	4.924
L23	22.412	67.586	3800.525	7.514	11.391	333.657	7700.895	33.264	3.213	3.213
	22.464	67.746	3827.628	7.532	11.416	335.277	7755.811	33.343	3.227	3.227
L24	22.473	66.131	3745.256	7.541	11.416	328.062	7588.904	32.548	3.294	3.378
	22.627	66.600	3825.474	7.594	11.494	332.833	7751.447	32.778	3.334	3.419
L25	22.702	52.606	3082.526	7.671	11.494	268.194	6246.033	25.891	3.903	5.119
	22.754	52.728	3104.059	7.688	11.519	269.463	6289.666	25.951	3.916	5.136
L26	22.754	52.728	3104.059	7.688	11.519	269.463	6289.666	25.951	3.916	5.136
	22.788	52.810	3118.499	7.700	11.537	270.312	6318.925	25.992	3.925	5.148
L27	22.819	46.940	2794.467	7.732	11.537	242.225	5662.348	23.102	4.160	6.163
	22.871	47.048	2813.834	7.749	11.562	243.360	5701.590	23.156	4.173	6.182
L28	22.879	45.358	2719.017	7.758	11.562	235.159	5509.465	22.324	4.240	6.523
	23.910	47.442	3111.201	8.115	12.078	257.590	6304.137	23.349	4.507	6.934
L29	23.919	45.667	3001.449	8.124	12.078	248.503	6081.749	22.476	4.574	7.318
	24.950	47.671	3414.060	8.480	12.594	271.091	6917.811	23.462	4.841	7.745
L30	24.950	47.671	3414.060	8.480	12.594	271.091	6917.811	23.462	4.841	7.745
	25.070	47.904	3464.497	8.522	12.654	273.788	7020.009	23.577	4.872	7.795
L31	24.999	62.702	4458.829	8.450	12.654	352.367	9034.796	30.860	4.336	5.256
	25.051	62.835	4487.097	8.468	12.680	353.880	9092.074	30.925	4.349	5.272
L32	25.051	62.835	4487.097	8.468	12.680	353.880	9092.074	30.925	4.349	5.272
	25.137	63.055	4534.514	8.498	12.723	356.411	9188.154	31.034	4.371	5.299
L33	25.137	63.055	4534.514	8.498	12.723	356.411	9188.154	31.034	4.371	5.299
	25.188	63.188	4563.100	8.515	12.748	357.932	9246.078	31.099	4.385	5.315
L34	25.197	61.337	4438.791	8.524	12.748	348.182	8994.194	30.188	4.452	5.565
	25.575	62.277	4646.037	8.655	12.938	359.113	9414.131	30.651	4.550	5.687
L35	25.544	68.839	5098.436	8.624	12.938	394.081	10330.813	33.880	4.315	4.862
	25.595	68.981	5130.107	8.641	12.963	395.740	10394.987	33.950	4.328	4.877
L36	25.595	68.981	5130.107	8.641	12.963	395.740	10394.987	33.950	4.328	4.877
	25.647	69.123	5161.909	8.659	12.989	397.403	10459.427	34.020	4.342	4.892
L37	25.638	70.997	5290.875	8.650	12.989	407.332	10720.748	34.943	4.275	4.685
	25.690	71.143	5323.640	8.668	13.015	409.042	10787.138	35.015	4.288	4.699
L38	25.703	68.325	5128.616	8.682	13.015	394.057	10391.966	33.628	4.389	5.016
	26.734	71.130	5786.510	9.038	13.531	427.662	11725.038	35.008	4.655	5.32
L39	26.742	69.166	5637.897	9.047	13.531	416.679	11423.908	34.041	4.722	5.556
	27.773	71.891	6330.781	9.403	14.046	450.710	12827.879	35.382	4.989	5.87

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L40	27.782	69.843	6162.143	9.412	14.046	438.704	12486.173	34.375	5.056	6.129
	28.400	71.430	6591.746	9.626	14.356	459.174	13356.665	35.155	5.216	6.323
L41	28.400	71.430	6591.746	9.626	14.356	459.174	13356.665	35.155	5.216	6.323
	28.452	71.562	6628.421	9.644	14.381	460.901	13430.978	35.221	5.230	6.339
L42	28.452	71.562	6628.421	9.644	14.381	460.901	13430.978	35.221	5.230	6.339
	28.606	71.958	6739.262	9.697	14.459	466.102	13655.572	35.416	5.270	6.387
L43	28.584	77.231	7199.745	9.675	14.459	497.950	14588.636	38.011	5.102	5.749
	28.636	77.374	7239.601	9.693	14.485	499.815	14669.394	38.081	5.115	5.764
L44	28.649	74.207	6962.552	9.706	14.485	480.688	14108.019	36.522	5.216	6.136
	29.680	76.932	7758.004	10.063	15.000	517.192	15719.820	37.863	5.483	6.45
L45	29.684	75.834	7654.119	10.067	15.000	510.266	15509.320	37.323	5.516	6.587
	31.425	80.370	9111.392	10.669	15.872	574.072	18462.150	39.556	5.967	7.125
L46	30.903	76.767	7940.296	10.191	15.180	523.091	16089.192	37.783	5.609	6.697
	31.108	79.542	8832.656	10.559	15.712	562.143	17897.356	39.148	5.885	7.027
L47	31.108	79.542	8832.656	10.559	15.712	562.143	17897.356	39.148	5.885	7.027
	31.357	80.192	9051.177	10.646	15.837	571.505	18340.138	39.468	5.949	7.104
L48	31.353	81.355	9174.689	10.641	15.837	579.304	18590.408	40.041	5.916	6.96
	31.404	81.491	9220.582	10.659	15.863	581.261	18683.399	40.107	5.929	6.975
L49	31.404	81.491	9220.582	10.659	15.863	581.261	18683.399	40.107	5.929	6.975
	31.438	81.581	9251.324	10.671	15.880	582.570	18745.690	40.152	5.938	6.986
L50	31.407	89.715	10114.068	10.639	15.880	636.899	20493.845	44.155	5.704	6.084
	31.459	89.864	10164.669	10.657	15.906	639.054	20596.375	44.228	5.717	6.098
L51	31.468	87.541	9918.558	10.666	15.906	623.581	20097.688	43.085	5.784	6.338
	32.270	89.819	10712.920	10.944	16.307	656.941	21707.280	44.206	5.991	6.566
L52	32.257	93.395	11112.181	10.930	16.307	681.424	22516.292	45.966	5.891	6.201
	32.308	93.546	11166.294	10.948	16.333	683.668	22625.939	46.041	5.904	6.215
L53	32.312	92.353	11032.887	10.952	16.333	675.500	22355.621	45.453	5.938	6.334
	32.637	93.300	11375.549	11.065	16.495	689.623	23049.946	45.919	6.022	6.423
L54	32.654	88.467	10821.202	11.083	16.495	656.017	21926.689	43.541	6.156	6.936
	32.706	88.608	10873.172	11.100	16.521	658.145	22031.995	43.610	6.169	6.951
L55	32.706	88.608	10873.172	11.100	16.521	658.145	22031.995	43.610	6.169	6.951
	33.303	90.257	11491.697	11.307	16.820	683.221	23285.295	44.422	6.324	7.125
L56	33.308	89.021	11343.300	11.311	16.820	674.398	22984.602	43.814	6.357	7.265
	33.359	89.161	11396.674	11.329	16.846	676.540	23092.752	43.882	6.370	7.281
L57	33.363	87.922	11247.182	11.333	16.846	667.666	22789.841	43.272	6.404	7.425
	34.183	90.120	12112.233	11.617	17.256	701.930	24542.669	44.354	6.616	7.671
L58	34.183	90.120	12112.233	11.617	17.256	701.930	24542.669	44.354	6.616	7.671
	34.234	90.258	12167.724	11.635	17.281	704.100	24655.108	44.422	6.629	7.686
L59	34.238	88.984	12005.222	11.639	17.281	694.697	24325.835	43.795	6.663	7.839
	35.263	91.692	13135.172	11.993	17.794	738.186	26615.420	45.128	6.928	8.151
L60	35.267	90.378	12956.500	11.998	17.794	728.145	26253.382	44.481	6.962	8.312
	35.575	91.178	13303.879	12.104	17.948	741.261	26957.266	44.875	7.041	8.407
L61	35.531	104.400	15120.579	12.059	17.948	842.484	30638.392	51.382	6.706	6.967
	35.582	104.553	15187.307	12.077	17.973	844.995	30773.601	51.458	6.719	6.981
L62	35.582	104.553	15187.307	12.077	17.973	844.995	30773.601	51.458	6.719	6.981
	35.821	105.269	15501.390	12.160	18.093	856.767	31410.018	51.810	6.781	7.046
L63	35.861	93.272	13826.015	12.200	18.093	764.168	28015.256	45.906	7.083	8.333
	35.912	93.408	13886.327	12.218	18.119	766.416	28137.463	45.973	7.096	8.348
L64	35.916	92.068	13697.156	12.222	18.119	755.975	27754.151	45.313	7.130	8.513
	36.941	94.737	14923.078	12.577	18.631	800.976	30238.202	46.626	7.395	8.83
L65	36.945	93.356	14716.043	12.581	18.631	789.863	29818.694	45.947	7.428	9.004
	37.645	95.152	15581.827	12.823	18.981	820.902	31573.007	46.831	7.609	9.224
L66	37.614	104.987	17108.449	12.792	18.981	901.330	34666.356	51.671	7.375	8.082
	37.665	105.132	17179.621	12.809	19.007	903.859	34810.570	51.743	7.388	8.097
L67	37.665	105.132	17179.621	12.809	19.007	903.859	34810.570	51.743	7.388	8.097
	37.700	105.229	17227.274	12.821	19.024	905.550	34907.127	51.791	7.397	8.106
L68	37.753	88.299	14577.031	12.875	19.024	766.241	29537.017	43.458	7.799	10.228
	37.804	88.421	14637.280	12.893	19.050	768.372	29659.097	43.518	7.812	10.246
L69	37.804	88.421	14637.280	12.893	19.050	768.372	29659.097	43.518	7.812	10.246
	37.855	88.542	14697.694	12.910	19.075	770.507	29781.513	43.578	7.826	10.263
L70	37.890	77.144	12876.656	12.946	19.075	675.042	26091.595	37.968	8.094	12.217
	37.942	77.249	12929.583	12.964	19.101	676.907	26198.841	38.020	8.107	12.237

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L71	37.946	75.818	12698.770	12.968	19.101	664.823	25731.151	37.315	8.140	12.524
	38.612	77.164	13387.320	13.199	19.434	688.855	27126.339	37.978	8.313	12.789
L72	38.515	108.991	18628.043	13.100	19.434	958.520	37745.466	53.642	7.576	8.19
	38.566	109.139	18703.710	13.118	19.460	961.146	37898.786	53.715	7.589	8.204
L73	38.571	107.701	18469.846	13.122	19.460	949.128	37424.916	53.007	7.623	8.353
	38.827	108.428	18846.355	13.211	19.588	962.140	38187.825	53.365	7.689	8.426
L74	38.862	96.807	16917.795	13.247	19.588	863.684	34280.038	47.645	7.957	9.793
	38.913	96.936	16985.752	13.264	19.614	866.020	34417.740	47.709	7.970	9.809
L75	38.922	94.017	16496.461	13.273	19.614	841.073	33426.303	46.272	8.037	10.206
	39.946	96.526	17852.914	13.628	20.126	887.049	36174.844	47.507	8.302	10.543
L76	39.946	96.526	17852.914	13.628	20.126	887.049	36174.844	47.507	8.302	10.543
	40.305	97.404	18344.678	13.752	20.306	903.430	37171.292	47.940	8.395	10.66

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 144.250-139.250				1	1	1			
L2 139.250-134.750				1	1	1			
L3 134.750-134.250				1	1	1			
L4 134.250-129.250				1	1	1			
L5 129.250-124.250				1	1	1			
L6 124.250-123.416				1	1	1			
L7 123.416-123.166				1	1	0.873259			
L8 123.166-118.166				1	1	0.880843			
L9 118.166-113.166				1	1	0.893543			
L10 113.166-109.500				1	1	0.895307			
L11 109.500-109.250				1	1	0.905539			
L12 109.250-104.750				1	1	0.915518			
L13 104.750-104.500				1	1	0.930283			
L14 104.500-102.416				1	1	0.929776			
L15				1	1	1.12278			

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
102.416-102.166									
L16				1	1	1.12029			
102.166-98.750									
L17				1	1	1.00154			
98.750-98.500									
L18				1	1	0.993827			
98.500-97.500									
L19				1	1	1.04068			
97.500-97.250									
L20				1	1	1.04446			
97.250-92.000									
L21				1	1	1.02362			
92.000-90.552									
L22				1	1	1.04642			
90.552-89.250									
L23				1	1	0.966606			
89.250-89.000									
L24				1	1	0.985049			
89.000-88.250									
L25				1	1	1.01704			
88.250-88.000									
L26				1	1	1.01598			
88.000-87.833									
L27				1	1	1.00822			
87.833-87.583									
L28				1	1	1.01675			
87.583-82.583									
L29				1	1	1.02867			
82.583-77.583									
L30				1	1	1.02561			
77.583-77.000									
L31				1	1	0.973799			
77.000-76.750									
L32				1	1	0.971453			
76.750-76.333									
L33				1	1	0.922508			
76.333-76.083									
L34				1	1	0.940709			
76.083-74.250									
L35				1	1	0.893422			
74.250-74.000									
L36				1	1	0.892163			
74.000-73.750									
L37				1	1	0.909624			
73.750-73.500									
L38				1	1	0.921059			
73.500-68.500									
L39				1	1	0.922459			
68.500-63.500									
L40				1	1	0.935147			
63.500-60.500									
L41				1	1	0.933979			
60.500-60.250									
L42				1	1	0.930501			
60.250-59.500									
L43				1	1	0.9205			
59.500-59.250									

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
L44 59.250-54.250				1	1	0.936205			
L45 54.250-45.802				1	1	0.930731			
L46 45.802-44.802				1	1	0.938065			
L47 44.802-43.583				1	1	0.933481			
L48 43.583-43.333				1	1	0.974523			
L49 43.333-43.166				1	1	0.97385			
L50 43.166-42.916				1	1	0.934786			
L51 42.916-39.000				1	1	0.943944			
L52 39.000-38.750				1	1	0.949681			
L53 38.750-37.166				1	1	0.955574			
L54 37.166-36.916				1	1	0.972827			
L55 36.916-34.000				1	1	0.961485			
L56 34.000-33.750				1	1	0.928941			
L57 33.750-29.750				1	1	0.927889			
L58 29.750-29.500				1	1	0.93743			
L59 29.500-24.500				1	1	0.933623			
L60 24.500-23.000				1	1	0.942163			
L61 23.000-22.750				1	1	0.90832			
L62 22.750-21.583				1	1	0.904351			
L63 21.583-21.333				1	1	0.971473			
L64 21.333-16.333				1	1	0.968358			
L65 16.333-12.917				1	1	0.971282			
L66 12.917-12.667				1	1	0.961412			
L67 12.667-12.500				1	1	0.96084			
L68 12.500-12.250				1	1	1.00814			
L69 12.250-12.000				1	1	1.00732			
L70 12.000-11.750				1	1	1.07745			
L71 11.750-8.500				1	1	1.08702			
L72 8.500-8.250				1	1	0.961703			
L73				1	1	0.970307			

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
8.250-7.000 L74 7.000-6.750 L75 6.750-1.750 L76 1.750-0.000				1 1 1	1 1 1	0.961877 0.976278 0.971053			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
FB-L98B-034-XXX(3/8)	B	No	Surface Ar (CaAa)	144.000 - 0.000	2	2	0.000 0.020	0.394		0.000
WR-VG86ST-BRD(3/4) *	B	No	Surface Ar (CaAa)	144.000 - 0.000	6	3	0.000 0.170	0.795		0.001
7983A(ELLIPTICAL) *	B	No	Surface Ar (CaAa)	130.000 - 0.000	3	1	-0.380 -0.300	0.573		0.000
CU12PSM9P6XXX(1-1/2)	B	No	Surface Ar (CaAa)	120.000 - 0.000	1	1	-0.100 -0.080	1.600		0.002
MLC HYBRID 6X12 6AWGX6(1-1/2) *	C	No	Surface Ar (CaAa)	100.000 - 0.000	2	2	0.370 0.400	1.530		0.001
Safety Line 3/8 *	B	No	Surface Ar (CaAa)	144.250 - 0.000	1	1	-0.400 -0.370	0.375		0.000
PL1.25x6.875 Reinforcement	A	No	Surface Af (CaAa)	29.750 - 0.000	1	1	0.250 0.250	6.875	16.250	0.000
PL1.25x6.875 Reinforcement	B	No	Surface Af (CaAa)	29.750 - 0.000	1	1	0.250 0.250	6.875	16.250	0.000
PL1.25x6.875 Reinforcement	C	No	Surface Af (CaAa)	29.750 - 9.170	1	1	0.250 0.250	6.875	16.250	0.000
PL1.25x6.875 Reinforcement	C	No	Surface Af (CaAa)	16.420 - 0.000	1	1	0.000 0.000	6.875	16.250	0.000
PL1.25x6.875 Reinforcement ***	C	No	Surface Af (CaAa)	16.420 - 0.000	1	1	0.500 0.500	6.875	16.250	0.000
PL1.25x6.625 Reinforcement	A	No	Surface Af (CaAa)	59.500 - 29.750	1	1	0.250 0.250	6.625	15.750	0.000
PL1.25x6.625 Reinforcement	B	No	Surface Af (CaAa)	59.500 - 29.750	1	1	0.250 0.250	6.625	15.750	0.000
PL1.25x6.625 Reinforcement ***	C	No	Surface Af (CaAa)	59.500 - 29.750	1	1	0.250 0.250	6.625	15.750	0.000
PL1.25x5.5 Reinforcement	A	No	Surface Af (CaAa)	89.250 - 59.500	1	1	0.250 0.250	5.500	13.500	0.000
PL1.25x5.5 Reinforcement	B	No	Surface Af (CaAa)	89.250 - 59.500	1	1	0.250 0.250	5.500	13.500	0.000
PL1.25x5.5 Reinforcement ***	C	No	Surface Af (CaAa)	89.250 - 59.500	1	1	0.250 0.250	5.500	13.500	0.000
PL1.25x3.625	A	No	Surface Af	100.000 -	1	1	0.250	3.625	9.750	0.000

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
Reinforcement			(CaAa)	89.250			0.250			
PL1.25x3.625	B	No	Surface Af	100.000 -	1	1	0.250	3.625	9.750	0.000
Reinforcement			(CaAa)	89.250			0.250			
PL1.25x3.625	C	No	Surface Af	100.000 -	1	1	0.250	3.625	9.750	0.000
Reinforcement			(CaAa)	89.250			0.250			
***										
PL1x4 Reinforcement	A	No	Surface Af	35.750 -	1	1	0.000	4.000	10.000	0.000
			(CaAa)	10.750			0.000			
PL1x4 Reinforcement	B	No	Surface Af	35.750 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	10.750			-0.250			
PL1x4 Reinforcement	C	No	Surface Af	40.750 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	10.750			-0.250			
***										
PL1x4 Reinforcement	A	No	Surface Af	62.250 -	1	1	0.500	4.000	10.000	0.000
			(CaAa)	32.250			0.500			
PL1x4 Reinforcement	B	No	Surface Af	62.250 -	1	1	0.500	4.000	10.000	0.000
			(CaAa)	32.250			0.500			
PL1x4 Reinforcement	C	No	Surface Af	62.250 -	1	1	0.500	4.000	10.000	0.000
			(CaAa)	32.250			0.500			
***										
PL1x4 Reinforcement	A	No	Surface Af	78.750 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	58.750			-0.250			
PL1x4 Reinforcement	B	No	Surface Af	78.750 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	58.750			-0.250			
PL1x4 Reinforcement	C	No	Surface Af	78.750 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	58.750			-0.250			
***										
PL1x4 Reinforcement	A	No	Surface Af	106.500 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	86.500			-0.250			
PL1x4 Reinforcement	B	No	Surface Af	106.500 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	86.500			-0.250			
PL1x4 Reinforcement	C	No	Surface Af	106.500 -	1	1	-0.250	4.000	10.000	0.000
			(CaAa)	86.500			-0.250			
***										
Transition Stiffener 1x7	A	No	Surface Af	10.500 -	1	1	-0.500	1.000	16.000	0.000
			(CaAa)	0.000			-0.500			
Transition Stiffener 1x7	B	No	Surface Af	10.500 -	1	1	-0.250	1.000	16.000	0.000
			(CaAa)	0.000			-0.250			
Transition Stiffener 1x7	C	No	Surface Af	10.500 -	1	1	-0.250	1.000	16.000	0.000
			(CaAa)	0.000			-0.250			
*										
CCI-SFP-060100	B	No	Surface Af	25.000 -	1	1	-0.500	6.000	14.000	0.000
			(CaAa)	5.000			-0.500			
CCI-SFP-060100	C	No	Surface Af	25.000 -	1	1	0.000	6.000	14.000	0.000
			(CaAa)	5.000			0.000			
*										
CCI-SFP-060100	C	No	Surface Af	25.000 -	1	1	-0.250	6.000	14.000	0.000
			(CaAa)	10.000			-0.250			
*										
CCI-SFP-045100	B	No	Surface Af	35.083 -	1	1	0.000	4.500	11.000	0.000
			(CaAa)	20.083			0.000			
*										
CCI-SFP-045100	C	No	Surface Af	35.083 -	1	1	0.000	4.500	11.000	0.000
			(CaAa)	25.083			0.000			
*										
CCI-SFP-045100	A	No	Surface Af	45.080 -	1	1	-0.250	4.500	11.000	0.000
			(CaAa)	25.083			-0.250			
*										
CCI-SFP-060100	B	No	Surface Af	45.167 -	1	1	0.000	6.000	14.000	0.000
			(CaAa)	35.167			0.000			

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight klf
CCI-SFP-060100	C	No	Surface Af (CaAa)	45.167 - 35.167	1	1	0.000 0.000	6.000	14.000	0.000
*										
CCI-SFP-045100	A	No	Surface Af (CaAa)	75.250 - 45.250	1	1	0.000 0.000	4.500	11.000	0.000
CCI-SFP-045100	B	No	Surface Af (CaAa)	75.250 - 45.250	1	1	0.000 0.000	4.500	11.000	0.000
*										
CCI-SFP-040075	B	No	Surface Af (CaAa)	75.250 - 45.250	1	1	0.000 0.000	4.000	9.500	0.000
*										
CCI-SFP-040075	B	No	Surface Af (CaAa)	100.330 - 75.330	1	1	0.000 0.000	4.000	9.500	0.000
CCI-SFP-040075	C	No	Surface Af (CaAa)	100.330 - 75.330	1	1	0.000 0.000	4.000	9.500	0.000
*										
CCI-SFP-040075	A	No	Surface Af (CaAa)	90.333 - 75.333	1	1	-0.500 -0.500	4.000	9.500	0.000
*										
CCI-AFP-05012520	C	No	Surface Af (CaAa)	105.330 - 85.330	1	1	0.000 0.000	5.000	12.500	0.000
*										
CCI-AFP-045100	A	No	Surface Af (CaAa)	125.416 - 100.416	1	1	0.000 0.000	4.500	11.000	0.000
CCI-AFP-045100	B	No	Surface Af (CaAa)	125.416 - 100.416	1	1	0.000 0.000	4.500	11.000	0.000
CCI-AFP-045100	C	No	Surface Af (CaAa)	125.416 - 100.416	1	1	0.000 0.000	4.500	11.000	0.000
*										
CCI-AFP-040075	A	No	Surface Af (CaAa)	111.000 - 96.000	1	1	-0.500 -0.500	4.000	9.500	0.000
*										
CCI-AFP-040075	B	No	Surface Af (CaAa)	111.000 - 101.000	1	1	-0.500 -0.500	4.000	9.500	0.000
*										
*										
*										
*										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
MLC6C-06C-008R-008R(1-1/2)	B	No	No	Inside Pole	130.000 - 0.000	1	No Ice	0.000	0.002
							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002
HB114-1-0813U4-M5J(1-1/4)	B	No	No	Inside Pole	130.000 - 0.000	3	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
*									
*									
LDF7-50A(1-5/8)	B	No	No	Inside Pole	110.000 - 0.000	6	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
HB114-U6S12-XXX	B	No	No	Inside Pole	110.000 - 0.000	2	No Ice	0.000	0.002

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight klf
-LI(1-1/4)							1/2" Ice	0.000	0.002
							1" Ice	0.000	0.002
LDF4-50A(1/2)	B	No	No	Inside Pole	110.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
*									
LDF5-50A(7/8)	C	No	No	Inside Pole	100.000 - 0.000	5	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
LDF6-50A(1-1/4)	C	No	No	Inside Pole	100.000 - 0.000	6	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	C	No	No	Inside Pole	100.000 - 0.000	1	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
*									
LDF4-50A(1/2)	B	No	No	Inside Pole	50.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000
*									
*									
*									
*									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	144.250-139.250	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	1.694	0.000	0.018
		C	0.000	0.000	0.000	0.000	0.000
L2	139.250-134.750	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	1.596	0.000	0.017
		C	0.000	0.000	0.000	0.000	0.000
L3	134.750-134.250	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.177	0.000	0.002
		C	0.000	0.000	0.000	0.000	0.000
L4	134.250-129.250	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	1.817	0.000	0.023
		C	0.000	0.000	0.000	0.000	0.000
L5	129.250-124.250	A	0.000	0.000	0.875	0.000	0.000
		B	0.000	0.000	2.935	0.000	0.046
		C	0.000	0.000	0.875	0.000	0.000
L6	124.250-123.416	A	0.000	0.000	0.625	0.000	0.000
		B	0.000	0.000	0.969	0.000	0.008
		C	0.000	0.000	0.625	0.000	0.000
L7	123.416-123.166	A	0.000	0.000	0.188	0.000	0.000
		B	0.000	0.000	0.291	0.000	0.002
		C	0.000	0.000	0.188	0.000	0.000
L8	123.166-118.166	A	0.000	0.000	3.750	0.000	0.000
		B	0.000	0.000	6.104	0.000	0.050
		C	0.000	0.000	3.750	0.000	0.000
L9	118.166-113.166	A	0.000	0.000	3.750	0.000	0.000

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	6.610	0.000	0.058
		C	0.000	0.000	3.750	0.000	0.000
L10	113.166-109.500	A	0.000	0.000	3.749	0.000	0.000
		B	0.000	0.000	5.847	0.000	0.047
		C	0.000	0.000	2.749	0.000	0.000
L11	109.500-109.250	A	0.000	0.000	0.354	0.000	0.000
		B	0.000	0.000	0.497	0.000	0.005
		C	0.000	0.000	0.188	0.000	0.000
L12	109.250-104.750	A	0.000	0.000	7.542	0.000	0.000
		B	0.000	0.000	10.116	0.000	0.090
		C	0.000	0.000	5.025	0.000	0.000
L13	104.750-104.500	A	0.000	0.000	0.521	0.000	0.000
		B	0.000	0.000	0.664	0.000	0.005
		C	0.000	0.000	0.563	0.000	0.000
L14	104.500-102.416	A	0.000	0.000	4.342	0.000	0.000
		B	0.000	0.000	5.534	0.000	0.042
		C	0.000	0.000	4.689	0.000	0.000
L15	102.416-102.166	A	0.000	0.000	0.521	0.000	0.000
		B	0.000	0.000	0.664	0.000	0.005
		C	0.000	0.000	0.563	0.000	0.000
L16	102.166-98.750	A	0.000	0.000	6.622	0.000	0.000
		B	0.000	0.000	8.130	0.000	0.068
		C	0.000	0.000	8.628	0.000	0.009
L17	98.750-98.500	A	0.000	0.000	0.484	0.000	0.000
		B	0.000	0.000	0.627	0.000	0.005
		C	0.000	0.000	0.769	0.000	0.002
L18	98.500-97.500	A	0.000	0.000	1.938	0.000	0.000
		B	0.000	0.000	2.510	0.000	0.020
		C	0.000	0.000	3.077	0.000	0.007
L19	97.500-97.250	A	0.000	0.000	0.484	0.000	0.000
		B	0.000	0.000	0.627	0.000	0.005
		C	0.000	0.000	0.769	0.000	0.002
L20	97.250-92.000	A	0.000	0.000	7.505	0.000	0.000
		B	0.000	0.000	13.175	0.000	0.105
		C	0.000	0.000	16.153	0.000	0.039
L21	92.000-90.552	A	0.000	0.000	1.840	0.000	0.000
		B	0.000	0.000	3.634	0.000	0.029
		C	0.000	0.000	4.455	0.000	0.011
L22	90.552-89.250	A	0.000	0.000	2.377	0.000	0.000
		B	0.000	0.000	3.267	0.000	0.026
		C	0.000	0.000	4.006	0.000	0.010
L23	89.250-89.000	A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.706	0.000	0.005
		C	0.000	0.000	0.847	0.000	0.002
L24	89.000-88.250	A	0.000	0.000	1.688	0.000	0.000
		B	0.000	0.000	2.117	0.000	0.015
		C	0.000	0.000	2.542	0.000	0.006
L25	88.250-88.000	A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.706	0.000	0.005
		C	0.000	0.000	0.847	0.000	0.002
L26	88.000-87.833	A	0.000	0.000	0.376	0.000	0.000
		B	0.000	0.000	0.471	0.000	0.003
		C	0.000	0.000	0.566	0.000	0.001
L27	87.833-87.583	A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.706	0.000	0.005
		C	0.000	0.000	0.847	0.000	0.002
L28	87.583-82.583	A	0.000	0.000	8.639	0.000	0.000
		B	0.000	0.000	11.499	0.000	0.100
		C	0.000	0.000	12.046	0.000	0.037
L29	82.583-77.583	A	0.000	0.000	8.695	0.000	0.000
		B	0.000	0.000	11.555	0.000	0.100

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	10.225	0.000	0.037
L30	77.583-77.000	A	0.000	0.000	1.312	0.000	0.000
		B	0.000	0.000	1.645	0.000	0.012
		C	0.000	0.000	1.490	0.000	0.004
L31	77.000-76.750	A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.706	0.000	0.005
		C	0.000	0.000	0.639	0.000	0.002
L32	76.750-76.333	A	0.000	0.000	0.938	0.000	0.000
		B	0.000	0.000	1.177	0.000	0.008
		C	0.000	0.000	1.066	0.000	0.003
L33	76.333-76.083	A	0.000	0.000	0.563	0.000	0.000
		B	0.000	0.000	0.706	0.000	0.005
		C	0.000	0.000	0.639	0.000	0.002
L34	76.083-74.250	A	0.000	0.000	4.152	0.000	0.000
		B	0.000	0.000	5.869	0.000	0.037
		C	0.000	0.000	3.965	0.000	0.014
L35	74.250-74.000	A	0.000	0.000	0.583	0.000	0.000
		B	0.000	0.000	0.893	0.000	0.005
		C	0.000	0.000	0.472	0.000	0.002
L36	74.000-73.750	A	0.000	0.000	0.583	0.000	0.000
		B	0.000	0.000	0.893	0.000	0.005
		C	0.000	0.000	0.472	0.000	0.002
L37	73.750-73.500	A	0.000	0.000	0.583	0.000	0.000
		B	0.000	0.000	0.893	0.000	0.005
		C	0.000	0.000	0.472	0.000	0.002
L38	73.500-68.500	A	0.000	0.000	11.667	0.000	0.000
		B	0.000	0.000	17.860	0.000	0.100
		C	0.000	0.000	9.447	0.000	0.037
L39	68.500-63.500	A	0.000	0.000	11.667	0.000	0.000
		B	0.000	0.000	17.860	0.000	0.100
		C	0.000	0.000	9.447	0.000	0.037
L40	63.500-60.500	A	0.000	0.000	8.167	0.000	0.000
		B	0.000	0.000	11.883	0.000	0.060
		C	0.000	0.000	6.835	0.000	0.022
L41	60.500-60.250	A	0.000	0.000	0.750	0.000	0.000
		B	0.000	0.000	1.060	0.000	0.005
		C	0.000	0.000	0.639	0.000	0.002
L42	60.250-59.500	A	0.000	0.000	2.250	0.000	0.000
		B	0.000	0.000	3.179	0.000	0.015
		C	0.000	0.000	1.917	0.000	0.006
L43	59.500-59.250	A	0.000	0.000	0.797	0.000	0.000
		B	0.000	0.000	1.107	0.000	0.005
		C	0.000	0.000	0.686	0.000	0.002
L44	59.250-54.250	A	0.000	0.000	12.938	0.000	0.000
		B	0.000	0.000	19.131	0.000	0.100
		C	0.000	0.000	10.717	0.000	0.037
L45	54.250-45.802	A	0.000	0.000	21.296	0.000	0.000
		B	0.000	0.000	31.761	0.000	0.170
		C	0.000	0.000	17.545	0.000	0.063
L46	45.802-44.802	A	0.000	0.000	2.393	0.000	0.000
		B	0.000	0.000	3.458	0.000	0.020
		C	0.000	0.000	2.410	0.000	0.007
L47	44.802-43.583	A	0.000	0.000	3.073	0.000	0.000
		B	0.000	0.000	3.968	0.000	0.025
		C	0.000	0.000	3.644	0.000	0.009
L48	43.583-43.333	A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.814	0.000	0.005
		C	0.000	0.000	0.747	0.000	0.002
L49	43.333-43.166	A	0.000	0.000	0.421	0.000	0.000
		B	0.000	0.000	0.544	0.000	0.003
		C	0.000	0.000	0.499	0.000	0.001

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
L50	43.166-42.916	A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.814	0.000	0.005
		C	0.000	0.000	0.747	0.000	0.002
L51	42.916-39.000	A	0.000	0.000	9.872	0.000	0.000
		B	0.000	0.000	12.747	0.000	0.079
		C	0.000	0.000	12.871	0.000	0.029
L52	39.000-38.750	A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.814	0.000	0.005
		C	0.000	0.000	0.914	0.000	0.002
L53	38.750-37.166	A	0.000	0.000	3.993	0.000	0.000
		B	0.000	0.000	5.156	0.000	0.032
		C	0.000	0.000	5.791	0.000	0.012
L54	37.166-36.916	A	0.000	0.000	0.630	0.000	0.000
		B	0.000	0.000	0.814	0.000	0.005
		C	0.000	0.000	0.914	0.000	0.002
L55	36.916-34.000	A	0.000	0.000	8.517	0.000	0.000
		B	0.000	0.000	10.406	0.000	0.059
		C	0.000	0.000	10.408	0.000	0.022
L56	34.000-33.750	A	0.000	0.000	0.797	0.000	0.000
		B	0.000	0.000	0.940	0.000	0.005
		C	0.000	0.000	0.873	0.000	0.002
L57	33.750-29.750	A	0.000	0.000	11.083	0.000	0.000
		B	0.000	0.000	13.371	0.000	0.081
		C	0.000	0.000	12.307	0.000	0.030
L58	29.750-29.500	A	0.000	0.000	0.641	0.000	0.000
		B	0.000	0.000	0.784	0.000	0.005
		C	0.000	0.000	0.717	0.000	0.002
L59	29.500-24.500	A	0.000	0.000	12.375	0.000	0.000
		B	0.000	0.000	16.173	0.000	0.101
		C	0.000	0.000	14.905	0.000	0.037
L60	24.500-23.000	A	0.000	0.000	2.719	0.000	0.000
		B	0.000	0.000	6.202	0.000	0.030
		C	0.000	0.000	6.178	0.000	0.011
L61	23.000-22.750	A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	1.034	0.000	0.005
		C	0.000	0.000	1.030	0.000	0.002
L62	22.750-21.583	A	0.000	0.000	2.115	0.000	0.000
		B	0.000	0.000	4.825	0.000	0.024
		C	0.000	0.000	4.806	0.000	0.009
L63	21.583-21.333	A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	1.034	0.000	0.005
		C	0.000	0.000	1.030	0.000	0.002
L64	21.333-16.333	A	0.000	0.000	9.063	0.000	0.000
		B	0.000	0.000	17.860	0.000	0.101
		C	0.000	0.000	20.792	0.000	0.037
L65	16.333-12.917	A	0.000	0.000	6.191	0.000	0.000
		B	0.000	0.000	11.562	0.000	0.069
		C	0.000	0.000	21.897	0.000	0.026
L66	12.917-12.667	A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	0.846	0.000	0.005
		C	0.000	0.000	1.603	0.000	0.002
L67	12.667-12.500	A	0.000	0.000	0.303	0.000	0.000
		B	0.000	0.000	0.565	0.000	0.003
		C	0.000	0.000	1.070	0.000	0.001
L68	12.500-12.250	A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	0.846	0.000	0.005
		C	0.000	0.000	1.603	0.000	0.002
L69	12.250-12.000	A	0.000	0.000	0.453	0.000	0.000
		B	0.000	0.000	0.846	0.000	0.005
		C	0.000	0.000	1.603	0.000	0.002
L70	12.000-11.750	A	0.000	0.000	0.453	0.000	0.000

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	0.846	0.000	0.005
		C	0.000	0.000	1.603	0.000	0.002
L71	11.750-8.500	A	0.000	0.000	4.684	0.000	0.000
		B	0.000	0.000	9.793	0.000	0.066
		C	0.000	0.000	17.359	0.000	0.024
L72	8.500-8.250	A	0.000	0.000	0.323	0.000	0.000
		B	0.000	0.000	0.716	0.000	0.005
		C	0.000	0.000	0.936	0.000	0.002
L73	8.250-7.000	A	0.000	0.000	1.616	0.000	0.000
		B	0.000	0.000	3.581	0.000	0.025
		C	0.000	0.000	4.680	0.000	0.009
L74	7.000-6.750	A	0.000	0.000	0.323	0.000	0.000
		B	0.000	0.000	0.716	0.000	0.005
		C	0.000	0.000	0.936	0.000	0.002
L75	6.750-1.750	A	0.000	0.000	6.463	0.000	0.000
		B	0.000	0.000	11.073	0.000	0.101
		C	0.000	0.000	15.472	0.000	0.037
L76	1.750-0.000	A	0.000	0.000	2.262	0.000	0.000
		B	0.000	0.000	3.263	0.000	0.035
		C	0.000	0.000	4.803	0.000	0.013

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	144.250-139.250	A	0.983	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	5.390	0.000	0.056
		C		0.000	0.000	0.000	0.000	0.000
L2	139.250-134.750	A	0.980	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	5.040	0.000	0.052
		C		0.000	0.000	0.000	0.000	0.000
L3	134.750-134.250	A	0.978	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.559	0.000	0.006
		C		0.000	0.000	0.000	0.000	0.000
L4	134.250-129.250	A	0.976	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	5.776	0.000	0.066
		C		0.000	0.000	0.000	0.000	0.000
L5	129.250-124.250	A	0.972	0.000	0.000	1.101	0.000	0.006
		B		0.000	0.000	7.934	0.000	0.119
		C		0.000	0.000	1.101	0.000	0.006
L6	124.250-123.416	A	0.970	0.000	0.000	0.787	0.000	0.005
		B		0.000	0.000	1.925	0.000	0.023
		C		0.000	0.000	0.787	0.000	0.005
L7	123.416-123.166	A	0.970	0.000	0.000	0.236	0.000	0.001
		B		0.000	0.000	0.577	0.000	0.007
		C		0.000	0.000	0.236	0.000	0.001
L8	123.166-118.166	A	0.968	0.000	0.000	4.718	0.000	0.028
		B		0.000	0.000	12.177	0.000	0.149
		C		0.000	0.000	4.718	0.000	0.028
L9	118.166-113.166	A	0.964	0.000	0.000	4.714	0.000	0.027
		B		0.000	0.000	13.270	0.000	0.165
		C		0.000	0.000	4.714	0.000	0.027
L10	113.166-109.500	A	0.960	0.000	0.000	4.741	0.000	0.027
		B		0.000	0.000	10.936	0.000	0.132
		C		0.000	0.000	3.453	0.000	0.020
L11	109.500-109.250	A	0.958	0.000	0.000	0.450	0.000	0.003
		B		0.000	0.000	0.866	0.000	0.012

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	0.235	0.000	0.001
L12	109.250-104.750	A	0.956	0.000	0.000	9.597	0.000	0.055
		B		0.000	0.000	17.072	0.000	0.217
		C		0.000	0.000	6.331	0.000	0.037
L13	104.750-104.500	A	0.954	0.000	0.000	0.664	0.000	0.004
		B		0.000	0.000	1.079	0.000	0.013
		C		0.000	0.000	0.706	0.000	0.004
L14	104.500-102.416	A	0.953	0.000	0.000	5.533	0.000	0.032
		B		0.000	0.000	8.988	0.000	0.107
		C		0.000	0.000	5.880	0.000	0.034
L15	102.416-102.166	A	0.952	0.000	0.000	0.664	0.000	0.004
		B		0.000	0.000	1.078	0.000	0.013
		C		0.000	0.000	0.705	0.000	0.004
L16	102.166-98.750	A	0.950	0.000	0.000	8.481	0.000	0.049
		B		0.000	0.000	13.654	0.000	0.168
		C		0.000	0.000	11.179	0.000	0.075
L17	98.750-98.500	A	0.948	0.000	0.000	0.625	0.000	0.004
		B		0.000	0.000	1.048	0.000	0.013
		C		0.000	0.000	1.035	0.000	0.008
L18	98.500-97.500	A	0.948	0.000	0.000	2.499	0.000	0.015
		B		0.000	0.000	4.192	0.000	0.050
		C		0.000	0.000	4.141	0.000	0.032
L19	97.500-97.250	A	0.947	0.000	0.000	0.625	0.000	0.004
		B		0.000	0.000	1.048	0.000	0.013
		C		0.000	0.000	1.035	0.000	0.008
L20	97.250-92.000	A	0.944	0.000	0.000	9.685	0.000	0.058
		B		0.000	0.000	21.981	0.000	0.264
		C		0.000	0.000	21.722	0.000	0.169
L21	92.000-90.552	A	0.941	0.000	0.000	2.377	0.000	0.014
		B		0.000	0.000	6.063	0.000	0.073
		C		0.000	0.000	5.991	0.000	0.047
L22	90.552-89.250	A	0.940	0.000	0.000	3.060	0.000	0.018
		B		0.000	0.000	5.441	0.000	0.065
		C		0.000	0.000	5.381	0.000	0.042
L23	89.250-89.000	A	0.939	0.000	0.000	0.703	0.000	0.004
		B		0.000	0.000	1.124	0.000	0.013
		C		0.000	0.000	1.113	0.000	0.008
L24	89.000-88.250	A	0.938	0.000	0.000	2.110	0.000	0.012
		B		0.000	0.000	3.372	0.000	0.039
		C		0.000	0.000	3.338	0.000	0.025
L25	88.250-88.000	A	0.938	0.000	0.000	0.703	0.000	0.004
		B		0.000	0.000	1.124	0.000	0.013
		C		0.000	0.000	1.113	0.000	0.008
L26	88.000-87.833	A	0.938	0.000	0.000	0.470	0.000	0.003
		B		0.000	0.000	0.751	0.000	0.009
		C		0.000	0.000	0.743	0.000	0.006
L27	87.833-87.583	A	0.937	0.000	0.000	0.703	0.000	0.004
		B		0.000	0.000	1.124	0.000	0.013
		C		0.000	0.000	1.112	0.000	0.008
L28	87.583-82.583	A	0.934	0.000	0.000	10.710	0.000	0.060
		B		0.000	0.000	19.106	0.000	0.237
		C		0.000	0.000	16.089	0.000	0.131
L29	82.583-77.583	A	0.929	0.000	0.000	10.769	0.000	0.060
		B		0.000	0.000	19.134	0.000	0.236
		C		0.000	0.000	13.842	0.000	0.118
L30	77.583-77.000	A	0.926	0.000	0.000	1.635	0.000	0.009
		B		0.000	0.000	2.609	0.000	0.030
		C		0.000	0.000	1.993	0.000	0.016
L31	77.000-76.750	A	0.925	0.000	0.000	0.701	0.000	0.004
		B		0.000	0.000	1.118	0.000	0.013
		C		0.000	0.000	0.855	0.000	0.007

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
L32	76.750-76.333	A	0.925	0.000	0.000	1.170	0.000	0.007
		B		0.000	0.000	1.865	0.000	0.021
		C		0.000	0.000	1.425	0.000	0.011
L33	76.333-76.083	A	0.924	0.000	0.000	0.701	0.000	0.004
		B		0.000	0.000	1.118	0.000	0.013
		C		0.000	0.000	0.855	0.000	0.007
L34	76.083-74.250	A	0.923	0.000	0.000	5.152	0.000	0.029
		B		0.000	0.000	9.061	0.000	0.098
		C		0.000	0.000	5.344	0.000	0.045
L35	74.250-74.000	A	0.922	0.000	0.000	0.722	0.000	0.004
		B		0.000	0.000	1.351	0.000	0.014
		C		0.000	0.000	0.641	0.000	0.006
L36	74.000-73.750	A	0.921	0.000	0.000	0.722	0.000	0.004
		B		0.000	0.000	1.350	0.000	0.014
		C		0.000	0.000	0.641	0.000	0.006
L37	73.750-73.500	A	0.921	0.000	0.000	0.721	0.000	0.004
		B		0.000	0.000	1.350	0.000	0.014
		C		0.000	0.000	0.641	0.000	0.006
L38	73.500-68.500	A	0.918	0.000	0.000	14.420	0.000	0.080
		B		0.000	0.000	26.975	0.000	0.278
		C		0.000	0.000	12.812	0.000	0.112
L39	68.500-63.500	A	0.911	0.000	0.000	14.400	0.000	0.079
		B		0.000	0.000	26.911	0.000	0.276
		C		0.000	0.000	12.790	0.000	0.111
L40	63.500-60.500	A	0.905	0.000	0.000	10.113	0.000	0.056
		B		0.000	0.000	17.598	0.000	0.173
		C		0.000	0.000	9.146	0.000	0.075
L41	60.500-60.250	A	0.903	0.000	0.000	0.931	0.000	0.005
		B		0.000	0.000	1.554	0.000	0.015
		C		0.000	0.000	0.850	0.000	0.007
L42	60.250-59.500	A	0.902	0.000	0.000	2.791	0.000	0.015
		B		0.000	0.000	4.659	0.000	0.045
		C		0.000	0.000	2.550	0.000	0.020
L43	59.500-59.250	A	0.901	0.000	0.000	0.977	0.000	0.005
		B		0.000	0.000	1.600	0.000	0.015
		C		0.000	0.000	0.897	0.000	0.007
L44	59.250-54.250	A	0.897	0.000	0.000	15.719	0.000	0.084
		B		0.000	0.000	28.142	0.000	0.279
		C		0.000	0.000	14.106	0.000	0.116
L45	54.250-45.802	A	0.886	0.000	0.000	25.787	0.000	0.136
		B		0.000	0.000	46.653	0.000	0.463
		C		0.000	0.000	23.057	0.000	0.190
L46	45.802-44.802	A	0.877	0.000	0.000	2.895	0.000	0.015
		B		0.000	0.000	5.097	0.000	0.053
		C		0.000	0.000	3.097	0.000	0.025
L47	44.802-43.583	A	0.875	0.000	0.000	3.713	0.000	0.019
		B		0.000	0.000	5.780	0.000	0.062
		C		0.000	0.000	4.545	0.000	0.034
L48	43.583-43.333	A	0.874	0.000	0.000	0.761	0.000	0.004
		B		0.000	0.000	1.185	0.000	0.013
		C		0.000	0.000	0.932	0.000	0.007
L49	43.333-43.166	A	0.873	0.000	0.000	0.508	0.000	0.003
		B		0.000	0.000	0.791	0.000	0.009
		C		0.000	0.000	0.622	0.000	0.005
L50	43.166-42.916	A	0.873	0.000	0.000	0.761	0.000	0.004
		B		0.000	0.000	1.184	0.000	0.013
		C		0.000	0.000	0.932	0.000	0.007
L51	42.916-39.000	A	0.869	0.000	0.000	11.912	0.000	0.062
		B		0.000	0.000	18.525	0.000	0.199
		C		0.000	0.000	16.052	0.000	0.118
L52	39.000-38.750	A	0.864	0.000	0.000	0.760	0.000	0.004

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	1.181	0.000	0.013
		C		0.000	0.000	1.140	0.000	0.008
L53	38.750-37.166	A	0.862	0.000	0.000	4.812	0.000	0.025
		B		0.000	0.000	7.477	0.000	0.080
		C		0.000	0.000	7.219	0.000	0.051
L54	37.166-36.916	A	0.860	0.000	0.000	0.759	0.000	0.004
		B		0.000	0.000	1.179	0.000	0.013
		C		0.000	0.000	1.139	0.000	0.008
L55	36.916-34.000	A	0.856	0.000	0.000	10.315	0.000	0.053
		B		0.000	0.000	15.028	0.000	0.152
		C		0.000	0.000	13.026	0.000	0.092
L56	34.000-33.750	A	0.852	0.000	0.000	0.967	0.000	0.005
		B		0.000	0.000	1.365	0.000	0.013
		C		0.000	0.000	1.099	0.000	0.008
L57	33.750-29.750	A	0.847	0.000	0.000	13.369	0.000	0.068
		B		0.000	0.000	19.700	0.000	0.201
		C		0.000	0.000	15.480	0.000	0.112
L58	29.750-29.500	A	0.841	0.000	0.000	0.767	0.000	0.004
		B		0.000	0.000	1.161	0.000	0.012
		C		0.000	0.000	0.898	0.000	0.007
L59	29.500-24.500	A	0.833	0.000	0.000	14.777	0.000	0.073
		B		0.000	0.000	23.734	0.000	0.244
		C		0.000	0.000	18.607	0.000	0.134
L60	24.500-23.000	A	0.822	0.000	0.000	3.212	0.000	0.016
		B		0.000	0.000	8.665	0.000	0.080
		C		0.000	0.000	7.581	0.000	0.049
L61	23.000-22.750	A	0.819	0.000	0.000	0.535	0.000	0.003
		B		0.000	0.000	1.443	0.000	0.013
		C		0.000	0.000	1.263	0.000	0.008
L62	22.750-21.583	A	0.817	0.000	0.000	2.496	0.000	0.012
		B		0.000	0.000	6.729	0.000	0.062
		C		0.000	0.000	5.891	0.000	0.038
L63	21.583-21.333	A	0.814	0.000	0.000	0.535	0.000	0.003
		B		0.000	0.000	1.440	0.000	0.013
		C		0.000	0.000	1.261	0.000	0.008
L64	21.333-16.333	A	0.804	0.000	0.000	10.670	0.000	0.051
		B		0.000	0.000	25.288	0.000	0.245
		C		0.000	0.000	25.398	0.000	0.160
L65	16.333-12.917	A	0.784	0.000	0.000	7.262	0.000	0.033
		B		0.000	0.000	16.383	0.000	0.161
		C		0.000	0.000	25.947	0.000	0.146
L66	12.917-12.667	A	0.773	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.195	0.000	0.012
		C		0.000	0.000	1.896	0.000	0.011
L67	12.667-12.500	A	0.772	0.000	0.000	0.354	0.000	0.002
		B		0.000	0.000	0.798	0.000	0.008
		C		0.000	0.000	1.266	0.000	0.007
L68	12.500-12.250	A	0.771	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.193	0.000	0.012
		C		0.000	0.000	1.895	0.000	0.011
L69	12.250-12.000	A	0.769	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.193	0.000	0.012
		C		0.000	0.000	1.894	0.000	0.010
L70	12.000-11.750	A	0.767	0.000	0.000	0.530	0.000	0.002
		B		0.000	0.000	1.192	0.000	0.012
		C		0.000	0.000	1.894	0.000	0.010
L71	11.750-8.500	A	0.755	0.000	0.000	5.560	0.000	0.033
		B		0.000	0.000	14.118	0.000	0.151
		C		0.000	0.000	20.669	0.000	0.125
L72	8.500-8.250	A	0.741	0.000	0.000	0.389	0.000	0.003
		B		0.000	0.000	1.043	0.000	0.012

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C		0.000	0.000	1.138	0.000	0.008
L73	8.250-7.000	A	0.734	0.000	0.000	1.941	0.000	0.013
		B		0.000	0.000	5.199	0.000	0.058
		C		0.000	0.000	5.681	0.000	0.040
L74	7.000-6.750	A	0.727	0.000	0.000	0.388	0.000	0.003
		B		0.000	0.000	1.037	0.000	0.012
		C		0.000	0.000	1.135	0.000	0.008
L75	6.750-1.750	A	0.692	0.000	0.000	7.693	0.000	0.050
		B		0.000	0.000	16.750	0.000	0.209
		C		0.000	0.000	18.851	0.000	0.136
L76	1.750-0.000	A	0.591	0.000	0.000	2.631	0.000	0.015
		B		0.000	0.000	4.909	0.000	0.064
		C		0.000	0.000	5.765	0.000	0.040

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	144.250-139.250	2.053	-1.044	1.816	-1.198
L2	139.250-134.750	2.101	-1.058	1.860	-1.206
L3	134.750-134.250	2.156	-1.086	1.914	-1.242
L4	134.250-129.250	1.549	-0.817	1.933	-1.320
L5	129.250-124.250	1.211	-0.783	1.734	-1.475
L6	124.250-123.416	0.688	-0.445	1.190	-1.013
L7	123.416-123.166	0.693	-0.448	1.198	-1.020
L8	123.166-118.166	0.795	-0.536	1.331	-1.134
L9	118.166-113.166	0.973	-0.688	1.561	-1.333
L10	113.166-109.500	0.167	-0.450	0.923	-1.095
L11	109.500-109.250	-0.747	-0.173	0.130	-0.782
L12	109.250-104.750	-0.658	0.017	0.116	-0.571
L13	104.750-104.500	-0.493	0.842	0.093	0.260
L14	104.500-102.416	-0.499	0.850	0.093	0.263
L15	102.416-102.166	-0.523	0.892	0.093	0.267
L16	102.166-98.750	0.202	1.727	0.660	1.007
L17	98.750-98.500	0.610	2.197	0.882	1.514
L18	98.500-97.500	0.613	2.208	0.886	1.521
L19	97.500-97.250	0.616	2.219	0.890	1.529
L20	97.250-92.000	0.902	1.566	1.155	0.926
L21	92.000-90.552	1.004	1.352	1.250	0.728
L22	90.552-89.250	0.702	2.168	0.980	1.462
L23	89.250-89.000	0.581	2.089	0.871	1.502
L24	89.000-88.250	0.583	2.099	0.874	1.509
L25	88.250-88.000	0.595	2.141	0.879	1.518
L26	88.000-87.833	0.596	2.144	0.881	1.521
L27	87.833-87.583	0.597	2.147	0.882	1.523
L28	87.583-82.583	0.769	2.104	1.079	1.332
L29	82.583-77.583	0.829	1.697	1.151	0.968
L30	77.583-77.000	0.698	1.429	1.012	0.853
L31	77.000-76.750	0.701	1.434	1.015	0.856
L32	76.750-76.333	0.702	1.437	1.017	0.858
L33	76.333-76.083	0.704	1.441	1.019	0.860
L34	76.083-74.250	0.870	-0.257	1.168	-0.617
L35	74.250-74.000	1.026	-1.525	1.305	-1.720
L36	74.000-73.750	1.028	-1.527	1.307	-1.723
L37	73.750-73.500	1.030	-1.530	1.309	-1.726
L38	73.500-68.500	1.047	-1.556	1.330	-1.753

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L39	68.500-63.500	1.080	-1.605	1.368	-1.804
L40	63.500-60.500	0.993	-1.475	1.271	-1.676
L41	60.500-60.250	0.935	-1.388	1.204	-1.588
L42	60.250-59.500	0.937	-1.393	1.207	-1.592
L43	59.500-59.250	0.899	-1.336	1.172	-1.547
L44	59.250-54.250	1.079	-1.603	1.362	-1.797
L45	54.250-45.802	1.137	-1.690	1.431	-1.889
L46	45.802-44.802	0.902	-0.626	1.199	-1.009
L47	44.802-43.583	0.364	0.993	0.656	0.394
L48	43.583-43.333	0.366	0.997	0.658	0.396
L49	43.333-43.166	0.366	0.998	0.659	0.397
L50	43.166-42.916	0.366	1.000	0.659	0.398
L51	42.916-39.000	0.740	1.242	0.993	0.628
L52	39.000-38.750	1.178	1.525	1.388	0.899
L53	38.750-37.166	1.184	1.532	1.393	0.904
L54	37.166-36.916	1.189	1.539	1.399	0.909
L55	36.916-34.000	0.632	0.578	0.917	0.056
L56	34.000-33.750	0.270	-0.025	0.634	-0.485
L57	33.750-29.750	0.301	-0.028	0.699	-0.533
L58	29.750-29.500	0.321	-0.030	0.739	-0.563
L59	29.500-24.500	0.449	-0.134	0.849	-0.647
L60	24.500-23.000	1.256	-0.705	1.534	-1.087
L61	23.000-22.750	1.261	-0.708	1.539	-1.090
L62	22.750-21.583	1.265	-0.710	1.543	-1.093
L63	21.583-21.333	1.268	-0.712	1.546	-1.095
L64	21.333-16.333	0.578	-0.317	0.949	-0.760
L65	16.333-12.917	-1.660	0.804	-1.007	0.253
L66	12.917-12.667	-1.674	0.810	-1.021	0.260
L67	12.667-12.500	-1.675	0.811	-1.023	0.261
L68	12.500-12.250	-1.676	0.811	-1.024	0.262
L69	12.250-12.000	-1.678	0.812	-1.026	0.263
L70	12.000-11.750	-1.679	0.812	-1.028	0.264
L71	11.750-8.500	-2.206	1.068	-1.400	0.539
L72	8.500-8.250	-1.934	0.132	-1.094	-0.246
L73	8.250-7.000	-1.940	0.132	-1.103	-0.243
L74	7.000-6.750	-1.946	0.133	-1.113	-0.240
L75	6.750-1.750	-0.995	0.150	-0.232	-0.249
L76	1.750-0.000	-0.376	0.162	0.267	-0.210

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	1	FB-L98B-034-XXX(3/8)	139.25 - 144.00	1.0000	1.0000
L1	2	WR-VG86ST-BRD(3/4)	139.25 - 144.00	1.0000	1.0000
L1	23	Safety Line 3/8	139.25 - 144.25	1.0000	1.0000
L2	1	FB-L98B-034-XXX(3/8)	134.75 - 139.25	1.0000	1.0000
L2	2	WR-VG86ST-BRD(3/4)	134.75 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L2	23	Safety Line 3/8	134.75 - 139.25	1.0000	1.0000
L3	1	FB-L98B-034-XXX(3/8)	134.25 - 134.75	1.0000	1.0000
L3	2	WR-VG86ST-BRD(3/4)	134.25 - 134.75	1.0000	1.0000
L3	23	Safety Line 3/8	134.25 - 134.75	1.0000	1.0000
L4	1	FB-L98B-034-XXX(3/8)	129.25 - 134.25	1.0000	1.0000
L4	2	WR-VG86ST-BRD(3/4)	129.25 - 134.25	1.0000	1.0000
L4	4	7983A(ELLIPTICAL)	129.25 - 130.00	1.0000	1.0000
L4	23	Safety Line 3/8	129.25 - 134.25	1.0000	1.0000
L5	1	FB-L98B-034-XXX(3/8)	124.25 - 129.25	1.0000	1.0000
L5	2	WR-VG86ST-BRD(3/4)	124.25 - 129.25	1.0000	1.0000
L5	4	7983A(ELLIPTICAL)	124.25 - 129.25	1.0000	1.0000
L5	23	Safety Line 3/8	124.25 - 129.25	1.0000	1.0000
L5	89	CCI-AFP-045100	124.25 - 125.42	1.0000	1.0000
L5	90	CCI-AFP-045100	124.25 - 125.42	1.0000	1.0000
L5	91	CCI-AFP-045100	124.25 - 125.42	1.0000	1.0000
L6	1	FB-L98B-034-XXX(3/8)	123.42 - 124.25	1.0000	1.0000
L6	2	WR-VG86ST-BRD(3/4)	123.42 - 124.25	1.0000	1.0000
L6	4	7983A(ELLIPTICAL)	123.42 - 124.25	1.0000	1.0000
L6	23	Safety Line 3/8	123.42 - 124.25	1.0000	1.0000
L6	89	CCI-AFP-045100	123.42 - 124.25	1.0000	1.0000
L6	90	CCI-AFP-045100	123.42 - 124.25	1.0000	1.0000
L6	91	CCI-AFP-045100	123.42 - 124.25	1.0000	1.0000
L7	1	FB-L98B-034-XXX(3/8)	123.17 - 123.42	1.0000	1.0000
L7	2	WR-VG86ST-BRD(3/4)	123.17 - 123.42	1.0000	1.0000
L7	4	7983A(ELLIPTICAL)	123.17 - 123.42	1.0000	1.0000
L7	23	Safety Line 3/8	123.17 - 123.42	1.0000	1.0000
L7	89	CCI-AFP-045100	123.17 - 123.42	1.0000	1.0000
L7	90	CCI-AFP-045100	123.17 - 123.42	1.0000	1.0000
L7	91	CCI-AFP-045100	123.17 - 123.42	1.0000	1.0000
L8	1	FB-L98B-034-XXX(3/8)	118.17 - 123.17	1.0000	1.0000
L8	2	WR-VG86ST-BRD(3/4)	118.17 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L8	4	7983A(ELLIPTICAL)	123.17 118.17 - 123.17	1.0000	1.0000
L8	9	CU12PSM9P6XXX(1-1/2)	118.17 - 120.00	1.0000	1.0000
L8	23	Safety Line 3/8	118.17 - 123.17	1.0000	1.0000
L8	89	CCI-AFP-045100	118.17 - 123.17	1.0000	1.0000
L8	90	CCI-AFP-045100	118.17 - 123.17	1.0000	1.0000
L8	91	CCI-AFP-045100	118.17 - 123.17	1.0000	1.0000
L9	1	FB-L98B-034-XXX(3/8)	113.17 - 118.17	1.0000	1.0000
L9	2	WR-VG86ST-BRD(3/4)	113.17 - 118.17	1.0000	1.0000
L9	4	7983A(ELLIPTICAL)	113.17 - 118.17	1.0000	1.0000
L9	9	CU12PSM9P6XXX(1-1/2)	113.17 - 118.17	1.0000	1.0000
L9	23	Safety Line 3/8	113.17 - 118.17	1.0000	1.0000
L9	89	CCI-AFP-045100	113.17 - 118.17	1.0000	1.0000
L9	90	CCI-AFP-045100	113.17 - 118.17	1.0000	1.0000
L9	91	CCI-AFP-045100	113.17 - 118.17	1.0000	1.0000
L10	1	FB-L98B-034-XXX(3/8)	109.50 - 113.17	1.0000	1.0000
L10	2	WR-VG86ST-BRD(3/4)	109.50 - 113.17	1.0000	1.0000
L10	4	7983A(ELLIPTICAL)	109.50 - 113.17	1.0000	1.0000
L10	9	CU12PSM9P6XXX(1-1/2)	109.50 - 113.17	1.0000	1.0000
L10	23	Safety Line 3/8	109.50 - 113.17	1.0000	1.0000
L10	89	CCI-AFP-045100	109.50 - 113.17	1.0000	1.0000
L10	90	CCI-AFP-045100	109.50 - 113.17	1.0000	1.0000
L10	91	CCI-AFP-045100	109.50 - 113.17	1.0000	1.0000
L10	93	CCI-AFP-040075	109.50 - 111.00	1.0000	1.0000
L10	95	CCI-AFP-040075	109.50 - 111.00	1.0000	1.0000
L11	1	FB-L98B-034-XXX(3/8)	109.25 - 109.50	1.0000	1.0000
L11	2	WR-VG86ST-BRD(3/4)	109.25 - 109.50	1.0000	1.0000
L11	4	7983A(ELLIPTICAL)	109.25 - 109.50	1.0000	1.0000
L11	9	CU12PSM9P6XXX(1-1/2)	109.25 - 109.50	1.0000	1.0000
L11	23	Safety Line 3/8	109.25 - 109.50	1.0000	1.0000
L11	89	CCI-AFP-045100	109.25 - 109.50	1.0000	1.0000
L11	90	CCI-AFP-045100	109.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			109.50		
L11	91	CCI-AFP-045100	109.25 - 109.50	1.0000	1.0000
L11	93	CCI-AFP-040075	109.25 - 109.50	1.0000	1.0000
L11	95	CCI-AFP-040075	109.25 - 109.50	1.0000	1.0000
L12	1	FB-L98B-034-XXX(3/8)	104.75 - 109.25	1.0000	1.0000
L12	2	WR-VG86ST-BRD(3/4)	104.75 - 109.25	1.0000	1.0000
L12	4	7983A(ELLIPTICAL)	104.75 - 109.25	1.0000	1.0000
L12	9	CU12PSM9P6XXX(1-1/2)	104.75 - 109.25	1.0000	1.0000
L12	23	Safety Line 3/8	104.75 - 109.25	1.0000	1.0000
L12	55	PL1x4 Reinforcement	104.75 - 106.50	1.0000	1.0000
L12	56	PL1x4 Reinforcement	104.75 - 106.50	1.0000	1.0000
L12	57	PL1x4 Reinforcement	104.75 - 106.50	1.0000	1.0000
L12	87	CCI-AFP-05012520	104.75 - 105.33	1.0000	1.0000
L12	89	CCI-AFP-045100	104.75 - 109.25	1.0000	1.0000
L12	90	CCI-AFP-045100	104.75 - 109.25	1.0000	1.0000
L12	91	CCI-AFP-045100	104.75 - 109.25	1.0000	1.0000
L12	93	CCI-AFP-040075	104.75 - 109.25	1.0000	1.0000
L12	95	CCI-AFP-040075	104.75 - 109.25	1.0000	1.0000
L13	1	FB-L98B-034-XXX(3/8)	104.50 - 104.75	1.0000	1.0000
L13	2	WR-VG86ST-BRD(3/4)	104.50 - 104.75	1.0000	1.0000
L13	4	7983A(ELLIPTICAL)	104.50 - 104.75	1.0000	1.0000
L13	9	CU12PSM9P6XXX(1-1/2)	104.50 - 104.75	1.0000	1.0000
L13	23	Safety Line 3/8	104.50 - 104.75	1.0000	1.0000
L13	55	PL1x4 Reinforcement	104.50 - 104.75	1.0000	1.0000
L13	56	PL1x4 Reinforcement	104.50 - 104.75	1.0000	1.0000
L13	57	PL1x4 Reinforcement	104.50 - 104.75	1.0000	1.0000
L13	87	CCI-AFP-05012520	104.50 - 104.75	1.0000	1.0000
L13	89	CCI-AFP-045100	104.50 - 104.75	1.0000	1.0000
L13	90	CCI-AFP-045100	104.50 - 104.75	1.0000	1.0000
L13	91	CCI-AFP-045100	104.50 - 104.75	1.0000	1.0000
L13	93	CCI-AFP-040075	104.50 - 104.75	1.0000	1.0000
L13	95	CCI-AFP-040075	104.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L14	1	FB-L98B-034-XXX(3/8)	104.75 - 102.42	1.0000	1.0000
L14	2	WR-VG86ST-BRD(3/4)	104.50 - 102.42	1.0000	1.0000
L14	4	7983A(ELLIPTICAL)	104.50 - 102.42	1.0000	1.0000
L14	9	CU12PSM9P6XXX(1-1/2)	104.50 - 102.42	1.0000	1.0000
L14	23	Safety Line 3/8	104.50 - 102.42	1.0000	1.0000
L14	55	PL1x4 Reinforcement	104.50 - 102.42	1.0000	1.0000
L14	56	PL1x4 Reinforcement	104.50 - 102.42	1.0000	1.0000
L14	57	PL1x4 Reinforcement	104.50 - 102.42	1.0000	1.0000
L14	87	CCI-AFP-05012520	104.50 - 102.42	1.0000	1.0000
L14	89	CCI-AFP-045100	104.50 - 102.42	1.0000	1.0000
L14	90	CCI-AFP-045100	104.50 - 102.42	1.0000	1.0000
L14	91	CCI-AFP-045100	104.50 - 102.42	1.0000	1.0000
L14	93	CCI-AFP-040075	104.50 - 102.42	1.0000	1.0000
L14	95	CCI-AFP-040075	104.50 - 102.42	1.0000	1.0000
L15	1	FB-L98B-034-XXX(3/8)	104.50 - 102.17	1.0000	1.0000
L15	2	WR-VG86ST-BRD(3/4)	102.42 - 102.17	1.0000	1.0000
L15	4	7983A(ELLIPTICAL)	102.42 - 102.17	1.0000	1.0000
L15	9	CU12PSM9P6XXX(1-1/2)	102.42 - 102.17	1.0000	1.0000
L15	23	Safety Line 3/8	102.42 - 102.17	1.0000	1.0000
L15	55	PL1x4 Reinforcement	102.42 - 102.17	1.0000	1.0000
L15	56	PL1x4 Reinforcement	102.42 - 102.17	1.0000	1.0000
L15	57	PL1x4 Reinforcement	102.42 - 102.17	1.0000	1.0000
L15	87	CCI-AFP-05012520	102.42 - 102.17	1.0000	1.0000
L15	89	CCI-AFP-045100	102.42 - 102.17	1.0000	1.0000
L15	90	CCI-AFP-045100	102.42 - 102.17	1.0000	1.0000
L15	91	CCI-AFP-045100	102.42 - 102.17	1.0000	1.0000
L15	93	CCI-AFP-040075	102.42 - 102.17	1.0000	1.0000
L15	95	CCI-AFP-040075	102.42 - 102.17	1.0000	1.0000
L16	1	FB-L98B-034-XXX(3/8)	98.75 - 102.17	1.0000	1.0000
L16	2	WR-VG86ST-BRD(3/4)	98.75 - 102.17	1.0000	1.0000
L16	4	7983A(ELLIPTICAL)	98.75 - 102.17	1.0000	1.0000
L16	9	CU12PSM9P6XXX(1-1/2)	98.75 - 102.17	1.0000	1.0000
L16	18	MLC HYBRID 6X12	98.75 - 100.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		6AWGX6(1-1/2)			
L16	23	Safety Line 3/8	98.75 - 102.17	1.0000	1.0000
L16	39	PL1.25x3.625 Reinforcement	98.75 - 100.00	1.0000	1.0000
L16	40	PL1.25x3.625 Reinforcement	98.75 - 100.00	1.0000	1.0000
L16	41	PL1.25x3.625 Reinforcement	98.75 - 100.00	1.0000	1.0000
L16	55	PL1x4 Reinforcement	98.75 - 102.17	1.0000	1.0000
L16	56	PL1x4 Reinforcement	98.75 - 102.17	1.0000	1.0000
L16	57	PL1x4 Reinforcement	98.75 - 102.17	1.0000	1.0000
L16	82	CCI-SFP-040075	98.75 - 100.33	1.0000	1.0000
L16	83	CCI-SFP-040075	98.75 - 100.33	1.0000	1.0000
L16	87	CCI-AFP-05012520	98.75 - 102.17	1.0000	1.0000
L16	89	CCI-AFP-045100	100.42 - 102.17	1.0000	1.0000
L16	90	CCI-AFP-045100	100.42 - 102.17	1.0000	1.0000
L16	91	CCI-AFP-045100	100.42 - 102.17	1.0000	1.0000
L16	93	CCI-AFP-040075	98.75 - 102.17	1.0000	1.0000
L16	95	CCI-AFP-040075	101.00 - 102.17	1.0000	1.0000
L17	1	FB-L98B-034-XXX(3/8)	98.50 - 98.75	1.0000	1.0000
L17	2	WR-VG86ST-BRD(3/4)	98.50 - 98.75	1.0000	1.0000
L17	4	7983A(ELLIPTICAL)	98.50 - 98.75	1.0000	1.0000
L17	9	CU12PSM9P6XXX(1-1/2)	98.50 - 98.75	1.0000	1.0000
L17	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	98.50 - 98.75	1.0000	1.0000
L17	23	Safety Line 3/8	98.50 - 98.75	1.0000	1.0000
L17	39	PL1.25x3.625 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	40	PL1.25x3.625 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	41	PL1.25x3.625 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	55	PL1x4 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	56	PL1x4 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	57	PL1x4 Reinforcement	98.50 - 98.75	1.0000	1.0000
L17	82	CCI-SFP-040075	98.50 - 98.75	1.0000	1.0000
L17	83	CCI-SFP-040075	98.50 - 98.75	1.0000	1.0000
L17	87	CCI-AFP-05012520	98.50 - 98.75	1.0000	1.0000
L17	93	CCI-AFP-040075	98.50 - 98.75	1.0000	1.0000
L18	1	FB-L98B-034-XXX(3/8)	97.50 - 98.50	1.0000	1.0000
L18	2	WR-VG86ST-BRD(3/4)	97.50 - 98.50	1.0000	1.0000
L18	4	7983A(ELLIPTICAL)	97.50 - 98.50	1.0000	1.0000
L18	9	CU12PSM9P6XXX(1-1/2)	97.50 - 98.50	1.0000	1.0000
L18	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	97.50 - 98.50	1.0000	1.0000
L18	23	Safety Line 3/8	97.50 - 98.50	1.0000	1.0000
L18	39	PL1.25x3.625 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	40	PL1.25x3.625 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	41	PL1.25x3.625 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	55	PL1x4 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	56	PL1x4 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	57	PL1x4 Reinforcement	97.50 - 98.50	1.0000	1.0000
L18	82	CCI-SFP-040075	97.50 - 98.50	1.0000	1.0000
L18	83	CCI-SFP-040075	97.50 - 98.50	1.0000	1.0000
L18	87	CCI-AFP-05012520	97.50 - 98.50	1.0000	1.0000
L18	93	CCI-AFP-040075	97.50 - 98.50	1.0000	1.0000
L19	1	FB-L98B-034-XXX(3/8)	97.25 - 97.50	1.0000	1.0000
L19	2	WR-VG86ST-BRD(3/4)	97.25 - 97.50	1.0000	1.0000
L19	4	7983A(ELLIPTICAL)	97.25 - 97.50	1.0000	1.0000
L19	9	CU12PSM9P6XXX(1-1/2)	97.25 - 97.50	1.0000	1.0000
L19	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	97.25 - 97.50	1.0000	1.0000
L19	23	Safety Line 3/8	97.25 - 97.50	1.0000	1.0000
L19	39	PL1.25x3.625 Reinforcement	97.25 - 97.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L19	40	PL1.25x3.625 Reinforcement	97.25 - 97.50	1.0000	1.0000
L19	41	PL1.25x3.625 Reinforcement	97.25 - 97.50	1.0000	1.0000
L19	55	PL1x4 Reinforcement	97.25 - 97.50	1.0000	1.0000
L19	56	PL1x4 Reinforcement	97.25 - 97.50	1.0000	1.0000
L19	57	PL1x4 Reinforcement	97.25 - 97.50	1.0000	1.0000
L19	82	CCI-SFP-040075	97.25 - 97.50	1.0000	1.0000
L19	83	CCI-SFP-040075	97.25 - 97.50	1.0000	1.0000
L19	87	CCI-AFP-05012520	97.25 - 97.50	1.0000	1.0000
L19	93	CCI-AFP-040075	97.25 - 97.50	1.0000	1.0000
L20	1	FB-L98B-034-XXX(3/8)	92.00 - 97.25	1.0000	1.0000
L20	2	WR-VG86ST-BRD(3/4)	92.00 - 97.25	1.0000	1.0000
L20	4	7983A(ELLIPTICAL)	92.00 - 97.25	1.0000	1.0000
L20	9	CU12PSM9P6XXX(1-1/2)	92.00 - 97.25	1.0000	1.0000
L20	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	92.00 - 97.25	1.0000	1.0000
L20	23	Safety Line 3/8	92.00 - 97.25	1.0000	1.0000
L20	39	PL1.25x3.625 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	40	PL1.25x3.625 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	41	PL1.25x3.625 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	55	PL1x4 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	56	PL1x4 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	57	PL1x4 Reinforcement	92.00 - 97.25	1.0000	1.0000
L20	82	CCI-SFP-040075	92.00 - 97.25	1.0000	1.0000
L20	83	CCI-SFP-040075	92.00 - 97.25	1.0000	1.0000
L20	87	CCI-AFP-05012520	92.00 - 97.25	1.0000	1.0000
L20	93	CCI-AFP-040075	96.00 - 97.25	1.0000	1.0000
L21	1	FB-L98B-034-XXX(3/8)	90.55 - 92.00	1.0000	1.0000
L21	2	WR-VG86ST-BRD(3/4)	90.55 - 92.00	1.0000	1.0000
L21	4	7983A(ELLIPTICAL)	90.55 - 92.00	1.0000	1.0000
L21	9	CU12PSM9P6XXX(1-1/2)	90.55 - 92.00	1.0000	1.0000
L21	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	90.55 - 92.00	1.0000	1.0000
L21	23	Safety Line 3/8	90.55 - 92.00	1.0000	1.0000
L21	39	PL1.25x3.625 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	40	PL1.25x3.625 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	41	PL1.25x3.625 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	55	PL1x4 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	56	PL1x4 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	57	PL1x4 Reinforcement	90.55 - 92.00	1.0000	1.0000
L21	82	CCI-SFP-040075	90.55 - 92.00	1.0000	1.0000
L21	83	CCI-SFP-040075	90.55 - 92.00	1.0000	1.0000
L21	87	CCI-AFP-05012520	90.55 - 92.00	1.0000	1.0000
L22	1	FB-L98B-034-XXX(3/8)	89.25 - 90.55	1.0000	1.0000
L22	2	WR-VG86ST-BRD(3/4)	89.25 - 90.55	1.0000	1.0000
L22	4	7983A(ELLIPTICAL)	89.25 - 90.55	1.0000	1.0000
L22	9	CU12PSM9P6XXX(1-1/2)	89.25 - 90.55	1.0000	1.0000
L22	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	89.25 - 90.55	1.0000	1.0000
L22	23	Safety Line 3/8	89.25 - 90.55	1.0000	1.0000
L22	39	PL1.25x3.625 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	40	PL1.25x3.625 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	41	PL1.25x3.625 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	55	PL1x4 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	56	PL1x4 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	57	PL1x4 Reinforcement	89.25 - 90.55	1.0000	1.0000
L22	82	CCI-SFP-040075	89.25 - 90.55	1.0000	1.0000
L22	83	CCI-SFP-040075	89.25 - 90.55	1.0000	1.0000
L22	85	CCI-SFP-040075	89.25 - 90.33	1.0000	1.0000
L22	87	CCI-AFP-05012520	89.25 - 90.55	1.0000	1.0000
L23	1	FB-L98B-034-XXX(3/8)	89.00 - 89.25	1.0000	1.0000
L23	2	WR-VG86ST-BRD(3/4)	89.00 - 89.25	1.0000	1.0000
L23	4	7983A(ELLIPTICAL)	89.00 - 89.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L23	9	CU12PSM9P6XXX(1-1/2)	89.00 - 89.25	1.0000	1.0000
L23	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	89.00 - 89.25	1.0000	1.0000
L23	23	Safety Line 3/8	89.00 - 89.25	1.0000	1.0000
L23	35	PL1.25x5.5 Reinforcement	89.00 - 89.25	1.0000	1.0000
L23	36	PL1.25x5.5 Reinforcement	89.00 - 89.25	1.0000	1.0000
L23	37	PL1.25x5.5 Reinforcement	89.00 - 89.25	1.0000	1.0000
L23	55	PL1x4 Reinforcement	89.00 - 89.25	1.0000	1.0000
L23	56	PL1x4 Reinforcement	89.00 - 89.25	1.0000	1.0000
L23	57	PL1x4 Reinforcement	89.00 - 89.25	1.0000	1.0000
L23	82	CCI-SFP-040075	89.00 - 89.25	1.0000	1.0000
L23	83	CCI-SFP-040075	89.00 - 89.25	1.0000	1.0000
L23	85	CCI-SFP-040075	89.00 - 89.25	1.0000	1.0000
L23	87	CCI-AFP-05012520	89.00 - 89.25	1.0000	1.0000
L24	1	FB-L98B-034-XXX(3/8)	88.25 - 89.00	1.0000	1.0000
L24	2	WR-VG86ST-BRD(3/4)	88.25 - 89.00	1.0000	1.0000
L24	4	7983A(ELLIPTICAL)	88.25 - 89.00	1.0000	1.0000
L24	9	CU12PSM9P6XXX(1-1/2)	88.25 - 89.00	1.0000	1.0000
L24	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	88.25 - 89.00	1.0000	1.0000
L24	23	Safety Line 3/8	88.25 - 89.00	1.0000	1.0000
L24	35	PL1.25x5.5 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	36	PL1.25x5.5 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	37	PL1.25x5.5 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	55	PL1x4 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	56	PL1x4 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	57	PL1x4 Reinforcement	88.25 - 89.00	1.0000	1.0000
L24	82	CCI-SFP-040075	88.25 - 89.00	1.0000	1.0000
L24	83	CCI-SFP-040075	88.25 - 89.00	1.0000	1.0000
L24	85	CCI-SFP-040075	88.25 - 89.00	1.0000	1.0000
L24	87	CCI-AFP-05012520	88.25 - 89.00	1.0000	1.0000
L25	1	FB-L98B-034-XXX(3/8)	88.00 - 88.25	1.0000	1.0000
L25	2	WR-VG86ST-BRD(3/4)	88.00 - 88.25	1.0000	1.0000
L25	4	7983A(ELLIPTICAL)	88.00 - 88.25	1.0000	1.0000
L25	9	CU12PSM9P6XXX(1-1/2)	88.00 - 88.25	1.0000	1.0000
L25	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	88.00 - 88.25	1.0000	1.0000
L25	23	Safety Line 3/8	88.00 - 88.25	1.0000	1.0000
L25	35	PL1.25x5.5 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	36	PL1.25x5.5 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	37	PL1.25x5.5 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	55	PL1x4 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	56	PL1x4 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	57	PL1x4 Reinforcement	88.00 - 88.25	1.0000	1.0000
L25	82	CCI-SFP-040075	88.00 - 88.25	1.0000	1.0000
L25	83	CCI-SFP-040075	88.00 - 88.25	1.0000	1.0000
L25	85	CCI-SFP-040075	88.00 - 88.25	1.0000	1.0000
L25	87	CCI-AFP-05012520	88.00 - 88.25	1.0000	1.0000
L26	1	FB-L98B-034-XXX(3/8)	87.83 - 88.00	1.0000	1.0000
L26	2	WR-VG86ST-BRD(3/4)	87.83 - 88.00	1.0000	1.0000
L26	4	7983A(ELLIPTICAL)	87.83 - 88.00	1.0000	1.0000
L26	9	CU12PSM9P6XXX(1-1/2)	87.83 - 88.00	1.0000	1.0000
L26	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	87.83 - 88.00	1.0000	1.0000
L26	23	Safety Line 3/8	87.83 - 88.00	1.0000	1.0000
L26	35	PL1.25x5.5 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	36	PL1.25x5.5 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	37	PL1.25x5.5 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	55	PL1x4 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	56	PL1x4 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	57	PL1x4 Reinforcement	87.83 - 88.00	1.0000	1.0000
L26	82	CCI-SFP-040075	87.83 - 88.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L26	83	CCI-SFP-040075	87.83 - 88.00	1.0000	1.0000
L26	85	CCI-SFP-040075	87.83 - 88.00	1.0000	1.0000
L26	87	CCI-AFP-05012520	87.83 - 88.00	1.0000	1.0000
L27	1	FB-L98B-034-XXX(3/8)	87.58 - 87.83	1.0000	1.0000
L27	2	WR-VG86ST-BRD(3/4)	87.58 - 87.83	1.0000	1.0000
L27	4	7983A(ELLIPTICAL)	87.58 - 87.83	1.0000	1.0000
L27	9	CU12PSM9P6XXX(1-1/2)	87.58 - 87.83	1.0000	1.0000
L27	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	87.58 - 87.83	1.0000	1.0000
L27	23	Safety Line 3/8	87.58 - 87.83	1.0000	1.0000
L27	35	PL1.25x5.5 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	36	PL1.25x5.5 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	37	PL1.25x5.5 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	55	PL1x4 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	56	PL1x4 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	57	PL1x4 Reinforcement	87.58 - 87.83	1.0000	1.0000
L27	82	CCI-SFP-040075	87.58 - 87.83	1.0000	1.0000
L27	83	CCI-SFP-040075	87.58 - 87.83	1.0000	1.0000
L27	85	CCI-SFP-040075	87.58 - 87.83	1.0000	1.0000
L27	87	CCI-AFP-05012520	87.58 - 87.83	1.0000	1.0000
L28	1	FB-L98B-034-XXX(3/8)	82.58 - 87.58	1.0000	1.0000
L28	2	WR-VG86ST-BRD(3/4)	82.58 - 87.58	1.0000	1.0000
L28	4	7983A(ELLIPTICAL)	82.58 - 87.58	1.0000	1.0000
L28	9	CU12PSM9P6XXX(1-1/2)	82.58 - 87.58	1.0000	1.0000
L28	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	82.58 - 87.58	1.0000	1.0000
L28	23	Safety Line 3/8	82.58 - 87.58	1.0000	1.0000
L28	35	PL1.25x5.5 Reinforcement	82.58 - 87.58	1.0000	1.0000
L28	36	PL1.25x5.5 Reinforcement	82.58 - 87.58	1.0000	1.0000
L28	37	PL1.25x5.5 Reinforcement	82.58 - 87.58	1.0000	1.0000
L28	55	PL1x4 Reinforcement	86.50 - 87.58	1.0000	1.0000
L28	56	PL1x4 Reinforcement	86.50 - 87.58	1.0000	1.0000
L28	57	PL1x4 Reinforcement	86.50 - 87.58	1.0000	1.0000
L28	82	CCI-SFP-040075	82.58 - 87.58	1.0000	1.0000
L28	83	CCI-SFP-040075	82.58 - 87.58	1.0000	1.0000
L28	85	CCI-SFP-040075	82.58 - 87.58	1.0000	1.0000
L28	87	CCI-AFP-05012520	85.33 - 87.58	1.0000	1.0000
L29	1	FB-L98B-034-XXX(3/8)	77.58 - 82.58	1.0000	1.0000
L29	2	WR-VG86ST-BRD(3/4)	77.58 - 82.58	1.0000	1.0000
L29	4	7983A(ELLIPTICAL)	77.58 - 82.58	1.0000	1.0000
L29	9	CU12PSM9P6XXX(1-1/2)	77.58 - 82.58	1.0000	1.0000
L29	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	77.58 - 82.58	1.0000	1.0000
L29	23	Safety Line 3/8	77.58 - 82.58	1.0000	1.0000
L29	35	PL1.25x5.5 Reinforcement	77.58 - 82.58	1.0000	1.0000
L29	36	PL1.25x5.5 Reinforcement	77.58 - 82.58	1.0000	1.0000
L29	37	PL1.25x5.5 Reinforcement	77.58 - 82.58	1.0000	1.0000
L29	51	PL1x4 Reinforcement	77.58 - 78.75	1.0000	1.0000
L29	52	PL1x4 Reinforcement	77.58 - 78.75	1.0000	1.0000
L29	53	PL1x4 Reinforcement	77.58 - 78.75	1.0000	1.0000
L29	82	CCI-SFP-040075	77.58 - 82.58	1.0000	1.0000
L29	83	CCI-SFP-040075	77.58 - 82.58	1.0000	1.0000
L29	85	CCI-SFP-040075	77.58 - 82.58	1.0000	1.0000
L30	1	FB-L98B-034-XXX(3/8)	77.00 - 77.58	1.0000	1.0000
L30	2	WR-VG86ST-BRD(3/4)	77.00 - 77.58	1.0000	1.0000
L30	4	7983A(ELLIPTICAL)	77.00 - 77.58	1.0000	1.0000
L30	9	CU12PSM9P6XXX(1-1/2)	77.00 - 77.58	1.0000	1.0000
L30	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	77.00 - 77.58	1.0000	1.0000
L30	23	Safety Line 3/8	77.00 - 77.58	1.0000	1.0000
L30	35	PL1.25x5.5 Reinforcement	77.00 - 77.58	1.0000	1.0000
L30	36	PL1.25x5.5 Reinforcement	77.00 - 77.58	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L30	37	PL1.25x5.5 Reinforcement	77.00 - 77.58	1.0000	1.0000
L30	51	PL1x4 Reinforcement	77.00 - 77.58	1.0000	1.0000
L30	52	PL1x4 Reinforcement	77.00 - 77.58	1.0000	1.0000
L30	53	PL1x4 Reinforcement	77.00 - 77.58	1.0000	1.0000
L30	82	CCI-SFP-040075	77.00 - 77.58	1.0000	1.0000
L30	83	CCI-SFP-040075	77.00 - 77.58	1.0000	1.0000
L30	85	CCI-SFP-040075	77.00 - 77.58	1.0000	1.0000
L31	1	FB-L98B-034-XXX(3/8)	76.75 - 77.00	1.0000	1.0000
L31	2	WR-VG86ST-BRD(3/4)	76.75 - 77.00	1.0000	1.0000
L31	4	7983A(ELLIPTICAL)	76.75 - 77.00	1.0000	1.0000
L31	9	CU12PSM9P6XXX(1-1/2)	76.75 - 77.00	1.0000	1.0000
L31	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	76.75 - 77.00	1.0000	1.0000
L31	23	Safety Line 3/8	76.75 - 77.00	1.0000	1.0000
L31	35	PL1.25x5.5 Reinforcement	76.75 - 77.00	1.0000	1.0000
L31	36	PL1.25x5.5 Reinforcement	76.75 - 77.00	1.0000	1.0000
L31	37	PL1.25x5.5 Reinforcement	76.75 - 77.00	1.0000	1.0000
L31	51	PL1x4 Reinforcement	76.75 - 77.00	1.0000	1.0000
L31	52	PL1x4 Reinforcement	76.75 - 77.00	1.0000	1.0000
L31	53	PL1x4 Reinforcement	76.75 - 77.00	1.0000	1.0000
L31	82	CCI-SFP-040075	76.75 - 77.00	1.0000	1.0000
L31	83	CCI-SFP-040075	76.75 - 77.00	1.0000	1.0000
L31	85	CCI-SFP-040075	76.75 - 77.00	1.0000	1.0000
L32	1	FB-L98B-034-XXX(3/8)	76.33 - 76.75	1.0000	1.0000
L32	2	WR-VG86ST-BRD(3/4)	76.33 - 76.75	1.0000	1.0000
L32	4	7983A(ELLIPTICAL)	76.33 - 76.75	1.0000	1.0000
L32	9	CU12PSM9P6XXX(1-1/2)	76.33 - 76.75	1.0000	1.0000
L32	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	76.33 - 76.75	1.0000	1.0000
L32	23	Safety Line 3/8	76.33 - 76.75	1.0000	1.0000
L32	35	PL1.25x5.5 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	36	PL1.25x5.5 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	37	PL1.25x5.5 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	51	PL1x4 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	52	PL1x4 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	53	PL1x4 Reinforcement	76.33 - 76.75	1.0000	1.0000
L32	82	CCI-SFP-040075	76.33 - 76.75	1.0000	1.0000
L32	83	CCI-SFP-040075	76.33 - 76.75	1.0000	1.0000
L32	85	CCI-SFP-040075	76.33 - 76.75	1.0000	1.0000
L33	1	FB-L98B-034-XXX(3/8)	76.08 - 76.33	1.0000	1.0000
L33	2	WR-VG86ST-BRD(3/4)	76.08 - 76.33	1.0000	1.0000
L33	4	7983A(ELLIPTICAL)	76.08 - 76.33	1.0000	1.0000
L33	9	CU12PSM9P6XXX(1-1/2)	76.08 - 76.33	1.0000	1.0000
L33	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	76.08 - 76.33	1.0000	1.0000
L33	23	Safety Line 3/8	76.08 - 76.33	1.0000	1.0000
L33	35	PL1.25x5.5 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	36	PL1.25x5.5 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	37	PL1.25x5.5 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	51	PL1x4 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	52	PL1x4 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	53	PL1x4 Reinforcement	76.08 - 76.33	1.0000	1.0000
L33	82	CCI-SFP-040075	76.08 - 76.33	1.0000	1.0000
L33	83	CCI-SFP-040075	76.08 - 76.33	1.0000	1.0000
L33	85	CCI-SFP-040075	76.08 - 76.33	1.0000	1.0000
L34	1	FB-L98B-034-XXX(3/8)	74.25 - 76.08	1.0000	1.0000
L34	2	WR-VG86ST-BRD(3/4)	74.25 - 76.08	1.0000	1.0000
L34	4	7983A(ELLIPTICAL)	74.25 - 76.08	1.0000	1.0000
L34	9	CU12PSM9P6XXX(1-1/2)	74.25 - 76.08	1.0000	1.0000
L34	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	74.25 - 76.08	1.0000	1.0000
L34	23	Safety Line 3/8	74.25 - 76.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L34	35	PL1.25x5.5 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	36	PL1.25x5.5 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	37	PL1.25x5.5 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	51	PL1x4 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	52	PL1x4 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	53	PL1x4 Reinforcement	74.25 - 76.08	1.0000	1.0000
L34	77	CCI-SFP-045100	74.25 - 75.25	1.0000	1.0000
L34	78	CCI-SFP-045100	74.25 - 75.25	1.0000	1.0000
L34	80	CCI-SFP-040075	74.25 - 75.25	1.0000	1.0000
L34	82	CCI-SFP-040075	75.33 - 76.08	1.0000	1.0000
L34	83	CCI-SFP-040075	75.33 - 76.08	1.0000	1.0000
L34	85	CCI-SFP-040075	75.33 - 76.08	1.0000	1.0000
L35	1	FB-L98B-034-XXX(3/8)	74.00 - 74.25	1.0000	1.0000
L35	2	WR-VG86ST-BRD(3/4)	74.00 - 74.25	1.0000	1.0000
L35	4	7983A(ELLIPTICAL)	74.00 - 74.25	1.0000	1.0000
L35	9	CU12PSM9P6XXX(1-1/2)	74.00 - 74.25	1.0000	1.0000
L35	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	74.00 - 74.25	1.0000	1.0000
L35	23	Safety Line 3/8	74.00 - 74.25	1.0000	1.0000
L35	35	PL1.25x5.5 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	36	PL1.25x5.5 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	37	PL1.25x5.5 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	51	PL1x4 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	52	PL1x4 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	53	PL1x4 Reinforcement	74.00 - 74.25	1.0000	1.0000
L35	77	CCI-SFP-045100	74.00 - 74.25	1.0000	1.0000
L35	78	CCI-SFP-045100	74.00 - 74.25	1.0000	1.0000
L35	80	CCI-SFP-040075	74.00 - 74.25	1.0000	1.0000
L36	1	FB-L98B-034-XXX(3/8)	73.75 - 74.00	1.0000	1.0000
L36	2	WR-VG86ST-BRD(3/4)	73.75 - 74.00	1.0000	1.0000
L36	4	7983A(ELLIPTICAL)	73.75 - 74.00	1.0000	1.0000
L36	9	CU12PSM9P6XXX(1-1/2)	73.75 - 74.00	1.0000	1.0000
L36	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	73.75 - 74.00	1.0000	1.0000
L36	23	Safety Line 3/8	73.75 - 74.00	1.0000	1.0000
L36	35	PL1.25x5.5 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	36	PL1.25x5.5 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	37	PL1.25x5.5 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	51	PL1x4 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	52	PL1x4 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	53	PL1x4 Reinforcement	73.75 - 74.00	1.0000	1.0000
L36	77	CCI-SFP-045100	73.75 - 74.00	1.0000	1.0000
L36	78	CCI-SFP-045100	73.75 - 74.00	1.0000	1.0000
L36	80	CCI-SFP-040075	73.75 - 74.00	1.0000	1.0000
L37	1	FB-L98B-034-XXX(3/8)	73.50 - 73.75	1.0000	1.0000
L37	2	WR-VG86ST-BRD(3/4)	73.50 - 73.75	1.0000	1.0000
L37	4	7983A(ELLIPTICAL)	73.50 - 73.75	1.0000	1.0000
L37	9	CU12PSM9P6XXX(1-1/2)	73.50 - 73.75	1.0000	1.0000
L37	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	73.50 - 73.75	1.0000	1.0000
L37	23	Safety Line 3/8	73.50 - 73.75	1.0000	1.0000
L37	35	PL1.25x5.5 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	36	PL1.25x5.5 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	37	PL1.25x5.5 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	51	PL1x4 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	52	PL1x4 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	53	PL1x4 Reinforcement	73.50 - 73.75	1.0000	1.0000
L37	77	CCI-SFP-045100	73.50 - 73.75	1.0000	1.0000
L37	78	CCI-SFP-045100	73.50 - 73.75	1.0000	1.0000
L37	80	CCI-SFP-040075	73.50 - 73.75	1.0000	1.0000
L38	1	FB-L98B-034-XXX(3/8)	68.50 - 73.50	1.0000	1.0000
L38	2	WR-VG86ST-BRD(3/4)	68.50 - 73.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L38	4	7983A(ELLIPTICAL)	68.50 - 73.50	1.0000	1.0000
L38	9	CU12PSM9P6XXX(1-1/2)	68.50 - 73.50	1.0000	1.0000
L38	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	68.50 - 73.50	1.0000	1.0000
L38	23	Safety Line 3/8	68.50 - 73.50	1.0000	1.0000
L38	35	PL1.25x5.5 Reinforcement	68.50 - 73.50	1.0000	1.0000
L38	36	PL1.25x5.5 Reinforcement	68.50 - 73.50	1.0000	1.0000
L38	37	PL1.25x5.5 Reinforcement	68.50 - 73.50	1.0000	1.0000
L38	51	PL1x4 Reinforcement	68.50 - 73.50	1.0000	1.0000
L38	52	PL1x4 Reinforcement	68.50 - 73.50	1.0000	1.0000
L38	53	PL1x4 Reinforcement	68.50 - 73.50	1.0000	1.0000
L38	77	CCI-SFP-045100	68.50 - 73.50	1.0000	1.0000
L38	78	CCI-SFP-045100	68.50 - 73.50	1.0000	1.0000
L38	80	CCI-SFP-040075	68.50 - 73.50	1.0000	1.0000
L39	1	FB-L98B-034-XXX(3/8)	63.50 - 68.50	1.0000	1.0000
L39	2	WR-VG86ST-BRD(3/4)	63.50 - 68.50	1.0000	1.0000
L39	4	7983A(ELLIPTICAL)	63.50 - 68.50	1.0000	1.0000
L39	9	CU12PSM9P6XXX(1-1/2)	63.50 - 68.50	1.0000	1.0000
L39	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	63.50 - 68.50	1.0000	1.0000
L39	23	Safety Line 3/8	63.50 - 68.50	1.0000	1.0000
L39	35	PL1.25x5.5 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	36	PL1.25x5.5 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	37	PL1.25x5.5 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	51	PL1x4 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	52	PL1x4 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	53	PL1x4 Reinforcement	63.50 - 68.50	1.0000	1.0000
L39	77	CCI-SFP-045100	63.50 - 68.50	1.0000	1.0000
L39	78	CCI-SFP-045100	63.50 - 68.50	1.0000	1.0000
L39	80	CCI-SFP-040075	63.50 - 68.50	1.0000	1.0000
L40	1	FB-L98B-034-XXX(3/8)	60.50 - 63.50	1.0000	1.0000
L40	2	WR-VG86ST-BRD(3/4)	60.50 - 63.50	1.0000	1.0000
L40	4	7983A(ELLIPTICAL)	60.50 - 63.50	1.0000	1.0000
L40	9	CU12PSM9P6XXX(1-1/2)	60.50 - 63.50	1.0000	1.0000
L40	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	60.50 - 63.50	1.0000	1.0000
L40	23	Safety Line 3/8	60.50 - 63.50	1.0000	1.0000
L40	35	PL1.25x5.5 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	36	PL1.25x5.5 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	37	PL1.25x5.5 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	47	PL1x4 Reinforcement	60.50 - 62.25	1.0000	1.0000
L40	48	PL1x4 Reinforcement	60.50 - 62.25	1.0000	1.0000
L40	49	PL1x4 Reinforcement	60.50 - 62.25	1.0000	1.0000
L40	51	PL1x4 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	52	PL1x4 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	53	PL1x4 Reinforcement	60.50 - 63.50	1.0000	1.0000
L40	77	CCI-SFP-045100	60.50 - 63.50	1.0000	1.0000
L40	78	CCI-SFP-045100	60.50 - 63.50	1.0000	1.0000
L40	80	CCI-SFP-040075	60.50 - 63.50	1.0000	1.0000
L41	1	FB-L98B-034-XXX(3/8)	60.25 - 60.50	1.0000	1.0000
L41	2	WR-VG86ST-BRD(3/4)	60.25 - 60.50	1.0000	1.0000
L41	4	7983A(ELLIPTICAL)	60.25 - 60.50	1.0000	1.0000
L41	9	CU12PSM9P6XXX(1-1/2)	60.25 - 60.50	1.0000	1.0000
L41	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	60.25 - 60.50	1.0000	1.0000
L41	23	Safety Line 3/8	60.25 - 60.50	1.0000	1.0000
L41	35	PL1.25x5.5 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	36	PL1.25x5.5 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	37	PL1.25x5.5 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	47	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	48	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	49	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L41	51	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	52	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	53	PL1x4 Reinforcement	60.25 - 60.50	1.0000	1.0000
L41	77	CCI-SFP-045100	60.25 - 60.50	1.0000	1.0000
L41	78	CCI-SFP-045100	60.25 - 60.50	1.0000	1.0000
L41	80	CCI-SFP-040075	60.25 - 60.50	1.0000	1.0000
L42	1	FB-L98B-034-XXX(3/8)	59.50 - 60.25	1.0000	1.0000
L42	2	WR-VG86ST-BRD(3/4)	59.50 - 60.25	1.0000	1.0000
L42	4	7983A(ELLIPTICAL)	59.50 - 60.25	1.0000	1.0000
L42	9	CU12PSM9P6XXX(1-1/2)	59.50 - 60.25	1.0000	1.0000
L42	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	59.50 - 60.25	1.0000	1.0000
L42	23	Safety Line 3/8	59.50 - 60.25	1.0000	1.0000
L42	35	PL1.25x5.5 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	36	PL1.25x5.5 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	37	PL1.25x5.5 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	47	PL1x4 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	48	PL1x4 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	49	PL1x4 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	51	PL1x4 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	52	PL1x4 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	53	PL1x4 Reinforcement	59.50 - 60.25	1.0000	1.0000
L42	77	CCI-SFP-045100	59.50 - 60.25	1.0000	1.0000
L42	78	CCI-SFP-045100	59.50 - 60.25	1.0000	1.0000
L42	80	CCI-SFP-040075	59.50 - 60.25	1.0000	1.0000
L43	1	FB-L98B-034-XXX(3/8)	59.25 - 59.50	1.0000	1.0000
L43	2	WR-VG86ST-BRD(3/4)	59.25 - 59.50	1.0000	1.0000
L43	4	7983A(ELLIPTICAL)	59.25 - 59.50	1.0000	1.0000
L43	9	CU12PSM9P6XXX(1-1/2)	59.25 - 59.50	1.0000	1.0000
L43	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	59.25 - 59.50	1.0000	1.0000
L43	23	Safety Line 3/8	59.25 - 59.50	1.0000	1.0000
L43	31	PL1.25x6.625 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	32	PL1.25x6.625 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	33	PL1.25x6.625 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	47	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	48	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	49	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	51	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	52	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	53	PL1x4 Reinforcement	59.25 - 59.50	1.0000	1.0000
L43	77	CCI-SFP-045100	59.25 - 59.50	1.0000	1.0000
L43	78	CCI-SFP-045100	59.25 - 59.50	1.0000	1.0000
L43	80	CCI-SFP-040075	59.25 - 59.50	1.0000	1.0000
L44	1	FB-L98B-034-XXX(3/8)	54.25 - 59.25	1.0000	1.0000
L44	2	WR-VG86ST-BRD(3/4)	54.25 - 59.25	1.0000	1.0000
L44	4	7983A(ELLIPTICAL)	54.25 - 59.25	1.0000	1.0000
L44	9	CU12PSM9P6XXX(1-1/2)	54.25 - 59.25	1.0000	1.0000
L44	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	54.25 - 59.25	1.0000	1.0000
L44	23	Safety Line 3/8	54.25 - 59.25	1.0000	1.0000
L44	31	PL1.25x6.625 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	32	PL1.25x6.625 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	33	PL1.25x6.625 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	47	PL1x4 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	48	PL1x4 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	49	PL1x4 Reinforcement	54.25 - 59.25	1.0000	1.0000
L44	51	PL1x4 Reinforcement	58.75 - 59.25	1.0000	1.0000
L44	52	PL1x4 Reinforcement	58.75 - 59.25	1.0000	1.0000
L44	53	PL1x4 Reinforcement	58.75 - 59.25	1.0000	1.0000
L44	77	CCI-SFP-045100	54.25 - 59.25	1.0000	1.0000
L44	78	CCI-SFP-045100	54.25 - 59.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L44	80	CCI-SFP-040075	54.25 - 59.25	1.0000	1.0000
L45	1	FB-L98B-034-XXX(3/8)	45.80 - 54.25	1.0000	1.0000
L45	2	WR-VG86ST-BRD(3/4)	45.80 - 54.25	1.0000	1.0000
L45	4	7983A(ELLIPTICAL)	45.80 - 54.25	1.0000	1.0000
L45	9	CU12PSM9P6XXX(1-1/2)	45.80 - 54.25	1.0000	1.0000
L45	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	45.80 - 54.25	1.0000	1.0000
L45	23	Safety Line 3/8	45.80 - 54.25	1.0000	1.0000
L45	31	PL1.25x6.625 Reinforcement	45.80 - 54.25	1.0000	1.0000
L45	32	PL1.25x6.625 Reinforcement	45.80 - 54.25	1.0000	1.0000
L45	33	PL1.25x6.625 Reinforcement	45.80 - 54.25	1.0000	1.0000
L45	47	PL1x4 Reinforcement	45.80 - 54.25	1.0000	1.0000
L45	48	PL1x4 Reinforcement	45.80 - 54.25	1.0000	1.0000
L45	49	PL1x4 Reinforcement	45.80 - 54.25	1.0000	1.0000
L45	77	CCI-SFP-045100	45.80 - 54.25	1.0000	1.0000
L45	78	CCI-SFP-045100	45.80 - 54.25	1.0000	1.0000
L45	80	CCI-SFP-040075	45.80 - 54.25	1.0000	1.0000
L46	1	FB-L98B-034-XXX(3/8)	44.80 - 45.80	1.0000	1.0000
L46	2	WR-VG86ST-BRD(3/4)	44.80 - 45.80	1.0000	1.0000
L46	4	7983A(ELLIPTICAL)	44.80 - 45.80	1.0000	1.0000
L46	9	CU12PSM9P6XXX(1-1/2)	44.80 - 45.80	1.0000	1.0000
L46	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	44.80 - 45.80	1.0000	1.0000
L46	23	Safety Line 3/8	44.80 - 45.80	1.0000	1.0000
L46	31	PL1.25x6.625 Reinforcement	44.80 - 45.80	1.0000	1.0000
L46	32	PL1.25x6.625 Reinforcement	44.80 - 45.80	1.0000	1.0000
L46	33	PL1.25x6.625 Reinforcement	44.80 - 45.80	1.0000	1.0000
L46	47	PL1x4 Reinforcement	44.80 - 45.80	1.0000	1.0000
L46	48	PL1x4 Reinforcement	44.80 - 45.80	1.0000	1.0000
L46	49	PL1x4 Reinforcement	44.80 - 45.80	1.0000	1.0000
L46	72	CCI-SFP-045100	44.80 - 45.08	1.0000	1.0000
L46	74	CCI-SFP-060100	44.80 - 45.17	1.0000	1.0000
L46	75	CCI-SFP-060100	44.80 - 45.17	1.0000	1.0000
L46	77	CCI-SFP-045100	45.25 - 45.80	1.0000	1.0000
L46	78	CCI-SFP-045100	45.25 - 45.80	1.0000	1.0000
L46	80	CCI-SFP-040075	45.25 - 45.80	1.0000	1.0000
L47	1	FB-L98B-034-XXX(3/8)	43.58 - 44.80	1.0000	1.0000
L47	2	WR-VG86ST-BRD(3/4)	43.58 - 44.80	1.0000	1.0000
L47	4	7983A(ELLIPTICAL)	43.58 - 44.80	1.0000	1.0000
L47	9	CU12PSM9P6XXX(1-1/2)	43.58 - 44.80	1.0000	1.0000
L47	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	43.58 - 44.80	1.0000	1.0000
L47	23	Safety Line 3/8	43.58 - 44.80	1.0000	1.0000
L47	31	PL1.25x6.625 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	32	PL1.25x6.625 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	33	PL1.25x6.625 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	47	PL1x4 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	48	PL1x4 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	49	PL1x4 Reinforcement	43.58 - 44.80	1.0000	1.0000
L47	72	CCI-SFP-045100	43.58 - 44.80	1.0000	1.0000
L47	74	CCI-SFP-060100	43.58 - 44.80	1.0000	1.0000
L47	75	CCI-SFP-060100	43.58 - 44.80	1.0000	1.0000
L48	1	FB-L98B-034-XXX(3/8)	43.33 - 43.58	1.0000	1.0000
L48	2	WR-VG86ST-BRD(3/4)	43.33 - 43.58	1.0000	1.0000
L48	4	7983A(ELLIPTICAL)	43.33 - 43.58	1.0000	1.0000
L48	9	CU12PSM9P6XXX(1-1/2)	43.33 - 43.58	1.0000	1.0000
L48	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	43.33 - 43.58	1.0000	1.0000
L48	23	Safety Line 3/8	43.33 - 43.58	1.0000	1.0000
L48	31	PL1.25x6.625 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	32	PL1.25x6.625 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	33	PL1.25x6.625 Reinforcement	43.33 - 43.58	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L48	47	PL1x4 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	48	PL1x4 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	49	PL1x4 Reinforcement	43.33 - 43.58	1.0000	1.0000
L48	72	CCI-SFP-045100	43.33 - 43.58	1.0000	1.0000
L48	74	CCI-SFP-060100	43.33 - 43.58	1.0000	1.0000
L48	75	CCI-SFP-060100	43.33 - 43.58	1.0000	1.0000
L49	1	FB-L98B-034-XXX(3/8)	43.17 - 43.33	1.0000	1.0000
L49	2	WR-VG86ST-BRD(3/4)	43.17 - 43.33	1.0000	1.0000
L49	4	7983A(ELLIPTICAL)	43.17 - 43.33	1.0000	1.0000
L49	9	CU12PSM9P6XXX(1-1/2)	43.17 - 43.33	1.0000	1.0000
L49	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	43.17 - 43.33	1.0000	1.0000
L49	23	Safety Line 3/8	43.17 - 43.33	1.0000	1.0000
L49	31	PL1.25x6.625 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	32	PL1.25x6.625 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	33	PL1.25x6.625 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	47	PL1x4 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	48	PL1x4 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	49	PL1x4 Reinforcement	43.17 - 43.33	1.0000	1.0000
L49	72	CCI-SFP-045100	43.17 - 43.33	1.0000	1.0000
L49	74	CCI-SFP-060100	43.17 - 43.33	1.0000	1.0000
L49	75	CCI-SFP-060100	43.17 - 43.33	1.0000	1.0000
L50	1	FB-L98B-034-XXX(3/8)	42.92 - 43.17	1.0000	1.0000
L50	2	WR-VG86ST-BRD(3/4)	42.92 - 43.17	1.0000	1.0000
L50	4	7983A(ELLIPTICAL)	42.92 - 43.17	1.0000	1.0000
L50	9	CU12PSM9P6XXX(1-1/2)	42.92 - 43.17	1.0000	1.0000
L50	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	42.92 - 43.17	1.0000	1.0000
L50	23	Safety Line 3/8	42.92 - 43.17	1.0000	1.0000
L50	31	PL1.25x6.625 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	32	PL1.25x6.625 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	33	PL1.25x6.625 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	47	PL1x4 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	48	PL1x4 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	49	PL1x4 Reinforcement	42.92 - 43.17	1.0000	1.0000
L50	72	CCI-SFP-045100	42.92 - 43.17	1.0000	1.0000
L50	74	CCI-SFP-060100	42.92 - 43.17	1.0000	1.0000
L50	75	CCI-SFP-060100	42.92 - 43.17	1.0000	1.0000
L51	1	FB-L98B-034-XXX(3/8)	39.00 - 42.92	1.0000	1.0000
L51	2	WR-VG86ST-BRD(3/4)	39.00 - 42.92	1.0000	1.0000
L51	4	7983A(ELLIPTICAL)	39.00 - 42.92	1.0000	1.0000
L51	9	CU12PSM9P6XXX(1-1/2)	39.00 - 42.92	1.0000	1.0000
L51	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	39.00 - 42.92	1.0000	1.0000
L51	23	Safety Line 3/8	39.00 - 42.92	1.0000	1.0000
L51	31	PL1.25x6.625 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	32	PL1.25x6.625 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	33	PL1.25x6.625 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	45	PL1x4 Reinforcement	39.00 - 40.75	1.0000	1.0000
L51	47	PL1x4 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	48	PL1x4 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	49	PL1x4 Reinforcement	39.00 - 42.92	1.0000	1.0000
L51	72	CCI-SFP-045100	39.00 - 42.92	1.0000	1.0000
L51	74	CCI-SFP-060100	39.00 - 42.92	1.0000	1.0000
L51	75	CCI-SFP-060100	39.00 - 42.92	1.0000	1.0000
L52	1	FB-L98B-034-XXX(3/8)	38.75 - 39.00	1.0000	1.0000
L52	2	WR-VG86ST-BRD(3/4)	38.75 - 39.00	1.0000	1.0000
L52	4	7983A(ELLIPTICAL)	38.75 - 39.00	1.0000	1.0000
L52	9	CU12PSM9P6XXX(1-1/2)	38.75 - 39.00	1.0000	1.0000
L52	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	38.75 - 39.00	1.0000	1.0000
L52	23	Safety Line 3/8	38.75 - 39.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L52	31	PL1.25x6.625 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	32	PL1.25x6.625 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	33	PL1.25x6.625 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	45	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	47	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	48	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	49	PL1x4 Reinforcement	38.75 - 39.00	1.0000	1.0000
L52	72	CCI-SFP-045100	38.75 - 39.00	1.0000	1.0000
L52	74	CCI-SFP-060100	38.75 - 39.00	1.0000	1.0000
L52	75	CCI-SFP-060100	38.75 - 39.00	1.0000	1.0000
L53	1	FB-L98B-034-XXX(3/8)	37.17 - 38.75	1.0000	1.0000
L53	2	WR-VG86ST-BRD(3/4)	37.17 - 38.75	1.0000	1.0000
L53	4	7983A(ELLIPTICAL)	37.17 - 38.75	1.0000	1.0000
L53	9	CU12PSM9P6XXX(1-1/2)	37.17 - 38.75	1.0000	1.0000
L53	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	37.17 - 38.75	1.0000	1.0000
L53	23	Safety Line 3/8	37.17 - 38.75	1.0000	1.0000
L53	31	PL1.25x6.625 Reinforcement	37.17 - 38.75	1.0000	1.0000
L53	32	PL1.25x6.625 Reinforcement	37.17 - 38.75	1.0000	1.0000
L53	33	PL1.25x6.625 Reinforcement	37.17 - 38.75	1.0000	1.0000
L53	45	PL1x4 Reinforcement	37.17 - 38.75	1.0000	1.0000
L53	47	PL1x4 Reinforcement	37.17 - 38.75	1.0000	1.0000
L53	48	PL1x4 Reinforcement	37.17 - 38.75	1.0000	1.0000
L53	49	PL1x4 Reinforcement	37.17 - 38.75	1.0000	1.0000
L53	72	CCI-SFP-045100	37.17 - 38.75	1.0000	1.0000
L53	74	CCI-SFP-060100	37.17 - 38.75	1.0000	1.0000
L53	75	CCI-SFP-060100	37.17 - 38.75	1.0000	1.0000
L54	1	FB-L98B-034-XXX(3/8)	36.92 - 37.17	1.0000	1.0000
L54	2	WR-VG86ST-BRD(3/4)	36.92 - 37.17	1.0000	1.0000
L54	4	7983A(ELLIPTICAL)	36.92 - 37.17	1.0000	1.0000
L54	9	CU12PSM9P6XXX(1-1/2)	36.92 - 37.17	1.0000	1.0000
L54	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	36.92 - 37.17	1.0000	1.0000
L54	23	Safety Line 3/8	36.92 - 37.17	1.0000	1.0000
L54	31	PL1.25x6.625 Reinforcement	36.92 - 37.17	1.0000	1.0000
L54	32	PL1.25x6.625 Reinforcement	36.92 - 37.17	1.0000	1.0000
L54	33	PL1.25x6.625 Reinforcement	36.92 - 37.17	1.0000	1.0000
L54	45	PL1x4 Reinforcement	36.92 - 37.17	1.0000	1.0000
L54	47	PL1x4 Reinforcement	36.92 - 37.17	1.0000	1.0000
L54	48	PL1x4 Reinforcement	36.92 - 37.17	1.0000	1.0000
L54	49	PL1x4 Reinforcement	36.92 - 37.17	1.0000	1.0000
L54	72	CCI-SFP-045100	36.92 - 37.17	1.0000	1.0000
L54	74	CCI-SFP-060100	36.92 - 37.17	1.0000	1.0000
L54	75	CCI-SFP-060100	36.92 - 37.17	1.0000	1.0000
L55	1	FB-L98B-034-XXX(3/8)	34.00 - 36.92	1.0000	1.0000
L55	2	WR-VG86ST-BRD(3/4)	34.00 - 36.92	1.0000	1.0000
L55	4	7983A(ELLIPTICAL)	34.00 - 36.92	1.0000	1.0000
L55	9	CU12PSM9P6XXX(1-1/2)	34.00 - 36.92	1.0000	1.0000
L55	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	34.00 - 36.92	1.0000	1.0000
L55	23	Safety Line 3/8	34.00 - 36.92	1.0000	1.0000
L55	31	PL1.25x6.625 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	32	PL1.25x6.625 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	33	PL1.25x6.625 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	43	PL1x4 Reinforcement	34.00 - 35.75	1.0000	1.0000
L55	44	PL1x4 Reinforcement	34.00 - 35.75	1.0000	1.0000
L55	45	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	47	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	48	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	49	PL1x4 Reinforcement	34.00 - 36.92	1.0000	1.0000
L55	68	CCI-SFP-045100	34.00 - 35.08	1.0000	1.0000
L55	70	CCI-SFP-045100	34.00 - 35.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L55	72	CCI-SFP-045100	34.00 - 36.92	1.0000	1.0000
L55	74	CCI-SFP-060100	35.17 - 36.92	1.0000	1.0000
L55	75	CCI-SFP-060100	35.17 - 36.92	1.0000	1.0000
L56	1	FB-L98B-034-XXX(3/8)	33.75 - 34.00	1.0000	1.0000
L56	2	WR-VG86ST-BRD(3/4)	33.75 - 34.00	1.0000	1.0000
L56	4	7983A(ELLIPTICAL)	33.75 - 34.00	1.0000	1.0000
L56	9	CU12PSM9P6XXX(1-1/2)	33.75 - 34.00	1.0000	1.0000
L56	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	33.75 - 34.00	1.0000	1.0000
L56	23	Safety Line 3/8	33.75 - 34.00	1.0000	1.0000
L56	31	PL1.25x6.625 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	32	PL1.25x6.625 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	33	PL1.25x6.625 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	43	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	44	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	45	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	47	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	48	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	49	PL1x4 Reinforcement	33.75 - 34.00	1.0000	1.0000
L56	68	CCI-SFP-045100	33.75 - 34.00	1.0000	1.0000
L56	70	CCI-SFP-045100	33.75 - 34.00	1.0000	1.0000
L56	72	CCI-SFP-045100	33.75 - 34.00	1.0000	1.0000
L57	1	FB-L98B-034-XXX(3/8)	29.75 - 33.75	1.0000	1.0000
L57	2	WR-VG86ST-BRD(3/4)	29.75 - 33.75	1.0000	1.0000
L57	4	7983A(ELLIPTICAL)	29.75 - 33.75	1.0000	1.0000
L57	9	CU12PSM9P6XXX(1-1/2)	29.75 - 33.75	1.0000	1.0000
L57	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	29.75 - 33.75	1.0000	1.0000
L57	23	Safety Line 3/8	29.75 - 33.75	1.0000	1.0000
L57	31	PL1.25x6.625 Reinforcement	29.75 - 33.75	1.0000	1.0000
L57	32	PL1.25x6.625 Reinforcement	29.75 - 33.75	1.0000	1.0000
L57	33	PL1.25x6.625 Reinforcement	29.75 - 33.75	1.0000	1.0000
L57	43	PL1x4 Reinforcement	29.75 - 33.75	1.0000	1.0000
L57	44	PL1x4 Reinforcement	29.75 - 33.75	1.0000	1.0000
L57	45	PL1x4 Reinforcement	29.75 - 33.75	1.0000	1.0000
L57	47	PL1x4 Reinforcement	32.25 - 33.75	1.0000	1.0000
L57	48	PL1x4 Reinforcement	32.25 - 33.75	1.0000	1.0000
L57	49	PL1x4 Reinforcement	32.25 - 33.75	1.0000	1.0000
L57	68	CCI-SFP-045100	29.75 - 33.75	1.0000	1.0000
L57	70	CCI-SFP-045100	29.75 - 33.75	1.0000	1.0000
L57	72	CCI-SFP-045100	29.75 - 33.75	1.0000	1.0000
L58	1	FB-L98B-034-XXX(3/8)	29.50 - 29.75	1.0000	1.0000
L58	2	WR-VG86ST-BRD(3/4)	29.50 - 29.75	1.0000	1.0000
L58	4	7983A(ELLIPTICAL)	29.50 - 29.75	1.0000	1.0000
L58	9	CU12PSM9P6XXX(1-1/2)	29.50 - 29.75	1.0000	1.0000
L58	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	29.50 - 29.75	1.0000	1.0000
L58	23	Safety Line 3/8	29.50 - 29.75	1.0000	1.0000
L58	25	PL1.25x6.875 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	26	PL1.25x6.875 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	27	PL1.25x6.875 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	43	PL1x4 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	44	PL1x4 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	45	PL1x4 Reinforcement	29.50 - 29.75	1.0000	1.0000
L58	68	CCI-SFP-045100	29.50 - 29.75	1.0000	1.0000
L58	70	CCI-SFP-045100	29.50 - 29.75	1.0000	1.0000
L58	72	CCI-SFP-045100	29.50 - 29.75	1.0000	1.0000
L59	1	FB-L98B-034-XXX(3/8)	24.50 - 29.50	1.0000	1.0000
L59	2	WR-VG86ST-BRD(3/4)	24.50 - 29.50	1.0000	1.0000
L59	4	7983A(ELLIPTICAL)	24.50 - 29.50	1.0000	1.0000
L59	9	CU12PSM9P6XXX(1-1/2)	24.50 - 29.50	1.0000	1.0000
L59	18	MLC HYBRID 6X12	24.50 - 29.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		6AWGX6(1-1/2)			
L59	23	Safety Line 3/8	24.50 - 29.50	1.0000	1.0000
L59	25	PL1.25x6.875 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	26	PL1.25x6.875 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	27	PL1.25x6.875 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	43	PL1x4 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	44	PL1x4 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	45	PL1x4 Reinforcement	24.50 - 29.50	1.0000	1.0000
L59	63	CCI-SFP-060100	24.50 - 25.00	1.0000	1.0000
L59	64	CCI-SFP-060100	24.50 - 25.00	1.0000	1.0000
L59	66	CCI-SFP-060100	24.50 - 25.00	1.0000	1.0000
L59	68	CCI-SFP-045100	24.50 - 29.50	1.0000	1.0000
L59	70	CCI-SFP-045100	25.08 - 29.50	1.0000	1.0000
L59	72	CCI-SFP-045100	25.08 - 29.50	1.0000	1.0000
L60	1	FB-L98B-034-XXX(3/8)	23.00 - 24.50	1.0000	1.0000
L60	2	WR-VG86ST-BRD(3/4)	23.00 - 24.50	1.0000	1.0000
L60	4	7983A(ELLIPTICAL)	23.00 - 24.50	1.0000	1.0000
L60	9	CU12PSM9P6XXX(1-1/2)	23.00 - 24.50	1.0000	1.0000
L60	18	MLC HYBRID 6X12	23.00 - 24.50	1.0000	1.0000
		6AWGX6(1-1/2)			
L60	23	Safety Line 3/8	23.00 - 24.50	1.0000	1.0000
L60	25	PL1.25x6.875 Reinforcement	23.00 - 24.50	1.0000	1.0000
L60	26	PL1.25x6.875 Reinforcement	23.00 - 24.50	1.0000	1.0000
L60	27	PL1.25x6.875 Reinforcement	23.00 - 24.50	1.0000	1.0000
L60	43	PL1x4 Reinforcement	23.00 - 24.50	1.0000	1.0000
L60	44	PL1x4 Reinforcement	23.00 - 24.50	1.0000	1.0000
L60	45	PL1x4 Reinforcement	23.00 - 24.50	1.0000	1.0000
L60	63	CCI-SFP-060100	23.00 - 24.50	1.0000	1.0000
L60	64	CCI-SFP-060100	23.00 - 24.50	1.0000	1.0000
L60	66	CCI-SFP-060100	23.00 - 24.50	1.0000	1.0000
L60	68	CCI-SFP-045100	23.00 - 24.50	1.0000	1.0000
L61	1	FB-L98B-034-XXX(3/8)	22.75 - 23.00	1.0000	1.0000
L61	2	WR-VG86ST-BRD(3/4)	22.75 - 23.00	1.0000	1.0000
L61	4	7983A(ELLIPTICAL)	22.75 - 23.00	1.0000	1.0000
L61	9	CU12PSM9P6XXX(1-1/2)	22.75 - 23.00	1.0000	1.0000
L61	18	MLC HYBRID 6X12	22.75 - 23.00	1.0000	1.0000
		6AWGX6(1-1/2)			
L61	23	Safety Line 3/8	22.75 - 23.00	1.0000	1.0000
L61	25	PL1.25x6.875 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	26	PL1.25x6.875 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	27	PL1.25x6.875 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	43	PL1x4 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	44	PL1x4 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	45	PL1x4 Reinforcement	22.75 - 23.00	1.0000	1.0000
L61	63	CCI-SFP-060100	22.75 - 23.00	1.0000	1.0000
L61	64	CCI-SFP-060100	22.75 - 23.00	1.0000	1.0000
L61	66	CCI-SFP-060100	22.75 - 23.00	1.0000	1.0000
L61	68	CCI-SFP-045100	22.75 - 23.00	1.0000	1.0000
L62	1	FB-L98B-034-XXX(3/8)	21.58 - 22.75	1.0000	1.0000
L62	2	WR-VG86ST-BRD(3/4)	21.58 - 22.75	1.0000	1.0000
L62	4	7983A(ELLIPTICAL)	21.58 - 22.75	1.0000	1.0000
L62	9	CU12PSM9P6XXX(1-1/2)	21.58 - 22.75	1.0000	1.0000
L62	18	MLC HYBRID 6X12	21.58 - 22.75	1.0000	1.0000
		6AWGX6(1-1/2)			
L62	23	Safety Line 3/8	21.58 - 22.75	1.0000	1.0000
L62	25	PL1.25x6.875 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	26	PL1.25x6.875 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	27	PL1.25x6.875 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	43	PL1x4 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	44	PL1x4 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	45	PL1x4 Reinforcement	21.58 - 22.75	1.0000	1.0000
L62	63	CCI-SFP-060100	21.58 - 22.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L62	64	CCI-SFP-060100	21.58 - 22.75	1.0000	1.0000
L62	66	CCI-SFP-060100	21.58 - 22.75	1.0000	1.0000
L62	68	CCI-SFP-045100	21.58 - 22.75	1.0000	1.0000
L63	1	FB-L98B-034-XXX(3/8)	21.33 - 21.58	1.0000	1.0000
L63	2	WR-VG86ST-BRD(3/4)	21.33 - 21.58	1.0000	1.0000
L63	4	7983A(ELLIPTICAL)	21.33 - 21.58	1.0000	1.0000
L63	9	CU12PSM9P6XXX(1-1/2)	21.33 - 21.58	1.0000	1.0000
L63	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	21.33 - 21.58	1.0000	1.0000
L63	23	Safety Line 3/8	21.33 - 21.58	1.0000	1.0000
L63	25	PL1.25x6.875 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	26	PL1.25x6.875 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	27	PL1.25x6.875 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	43	PL1x4 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	44	PL1x4 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	45	PL1x4 Reinforcement	21.33 - 21.58	1.0000	1.0000
L63	63	CCI-SFP-060100	21.33 - 21.58	1.0000	1.0000
L63	64	CCI-SFP-060100	21.33 - 21.58	1.0000	1.0000
L63	66	CCI-SFP-060100	21.33 - 21.58	1.0000	1.0000
L63	68	CCI-SFP-045100	21.33 - 21.58	1.0000	1.0000
L64	1	FB-L98B-034-XXX(3/8)	16.33 - 21.33	1.0000	1.0000
L64	2	WR-VG86ST-BRD(3/4)	16.33 - 21.33	1.0000	1.0000
L64	4	7983A(ELLIPTICAL)	16.33 - 21.33	1.0000	1.0000
L64	9	CU12PSM9P6XXX(1-1/2)	16.33 - 21.33	1.0000	1.0000
L64	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	16.33 - 21.33	1.0000	1.0000
L64	23	Safety Line 3/8	16.33 - 21.33	1.0000	1.0000
L64	25	PL1.25x6.875 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	26	PL1.25x6.875 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	27	PL1.25x6.875 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	28	PL1.25x6.875 Reinforcement	16.33 - 16.42	1.0000	1.0000
L64	29	PL1.25x6.875 Reinforcement	16.33 - 16.42	1.0000	1.0000
L64	43	PL1x4 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	44	PL1x4 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	45	PL1x4 Reinforcement	16.33 - 21.33	1.0000	1.0000
L64	63	CCI-SFP-060100	16.33 - 21.33	1.0000	1.0000
L64	64	CCI-SFP-060100	16.33 - 21.33	1.0000	1.0000
L64	66	CCI-SFP-060100	16.33 - 21.33	1.0000	1.0000
L64	68	CCI-SFP-045100	20.08 - 21.33	1.0000	1.0000
L65	1	FB-L98B-034-XXX(3/8)	12.92 - 16.33	1.0000	1.0000
L65	2	WR-VG86ST-BRD(3/4)	12.92 - 16.33	1.0000	1.0000
L65	4	7983A(ELLIPTICAL)	12.92 - 16.33	1.0000	1.0000
L65	9	CU12PSM9P6XXX(1-1/2)	12.92 - 16.33	1.0000	1.0000
L65	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.92 - 16.33	1.0000	1.0000
L65	23	Safety Line 3/8	12.92 - 16.33	1.0000	1.0000
L65	25	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	26	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	27	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	28	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	29	PL1.25x6.875 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	43	PL1x4 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	44	PL1x4 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	45	PL1x4 Reinforcement	12.92 - 16.33	1.0000	1.0000
L65	63	CCI-SFP-060100	12.92 - 16.33	1.0000	1.0000
L65	64	CCI-SFP-060100	12.92 - 16.33	1.0000	1.0000
L65	66	CCI-SFP-060100	12.92 - 16.33	1.0000	1.0000
L66	1	FB-L98B-034-XXX(3/8)	12.67 - 12.92	1.0000	1.0000
L66	2	WR-VG86ST-BRD(3/4)	12.67 - 12.92	1.0000	1.0000
L66	4	7983A(ELLIPTICAL)	12.67 - 12.92	1.0000	1.0000
L66	9	CU12PSM9P6XXX(1-1/2)	12.67 - 12.92	1.0000	1.0000
L66	18	MLC HYBRID 6X12	12.67 - 12.92	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		6AWGX6(1-1/2)			
L66	23	Safety Line 3/8	12.67 - 12.92	1.0000	1.0000
L66	25	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	26	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	27	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	28	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	29	PL1.25x6.875 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	43	PL1x4 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	44	PL1x4 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	45	PL1x4 Reinforcement	12.67 - 12.92	1.0000	1.0000
L66	63	CCI-SFP-060100	12.67 - 12.92	1.0000	1.0000
L66	64	CCI-SFP-060100	12.67 - 12.92	1.0000	1.0000
L66	66	CCI-SFP-060100	12.67 - 12.92	1.0000	1.0000
L67	1	FB-L98B-034-XXX(3/8)	12.50 - 12.67	1.0000	1.0000
L67	2	WR-VG86ST-BRD(3/4)	12.50 - 12.67	1.0000	1.0000
L67	4	7983A(ELLIPTICAL)	12.50 - 12.67	1.0000	1.0000
L67	9	CU12PSM9P6XXX(1-1/2)	12.50 - 12.67	1.0000	1.0000
L67	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.50 - 12.67	1.0000	1.0000
L67	23	Safety Line 3/8	12.50 - 12.67	1.0000	1.0000
L67	25	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	26	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	27	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	28	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	29	PL1.25x6.875 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	43	PL1x4 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	44	PL1x4 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	45	PL1x4 Reinforcement	12.50 - 12.67	1.0000	1.0000
L67	63	CCI-SFP-060100	12.50 - 12.67	1.0000	1.0000
L67	64	CCI-SFP-060100	12.50 - 12.67	1.0000	1.0000
L67	66	CCI-SFP-060100	12.50 - 12.67	1.0000	1.0000
L68	1	FB-L98B-034-XXX(3/8)	12.25 - 12.50	1.0000	1.0000
L68	2	WR-VG86ST-BRD(3/4)	12.25 - 12.50	1.0000	1.0000
L68	4	7983A(ELLIPTICAL)	12.25 - 12.50	1.0000	1.0000
L68	9	CU12PSM9P6XXX(1-1/2)	12.25 - 12.50	1.0000	1.0000
L68	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.25 - 12.50	1.0000	1.0000
L68	23	Safety Line 3/8	12.25 - 12.50	1.0000	1.0000
L68	25	PL1.25x6.875 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	26	PL1.25x6.875 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	27	PL1.25x6.875 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	28	PL1.25x6.875 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	29	PL1.25x6.875 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	43	PL1x4 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	44	PL1x4 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	45	PL1x4 Reinforcement	12.25 - 12.50	1.0000	1.0000
L68	63	CCI-SFP-060100	12.25 - 12.50	1.0000	1.0000
L68	64	CCI-SFP-060100	12.25 - 12.50	1.0000	1.0000
L68	66	CCI-SFP-060100	12.25 - 12.50	1.0000	1.0000
L69	1	FB-L98B-034-XXX(3/8)	12.00 - 12.25	1.0000	1.0000
L69	2	WR-VG86ST-BRD(3/4)	12.00 - 12.25	1.0000	1.0000
L69	4	7983A(ELLIPTICAL)	12.00 - 12.25	1.0000	1.0000
L69	9	CU12PSM9P6XXX(1-1/2)	12.00 - 12.25	1.0000	1.0000
L69	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	12.00 - 12.25	1.0000	1.0000
L69	23	Safety Line 3/8	12.00 - 12.25	1.0000	1.0000
L69	25	PL1.25x6.875 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	26	PL1.25x6.875 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	27	PL1.25x6.875 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	28	PL1.25x6.875 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	29	PL1.25x6.875 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	43	PL1x4 Reinforcement	12.00 - 12.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L69	44	PL1x4 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	45	PL1x4 Reinforcement	12.00 - 12.25	1.0000	1.0000
L69	63	CCI-SFP-060100	12.00 - 12.25	1.0000	1.0000
L69	64	CCI-SFP-060100	12.00 - 12.25	1.0000	1.0000
L69	66	CCI-SFP-060100	12.00 - 12.25	1.0000	1.0000
L70	1	FB-L98B-034-XXX(3/8)	11.75 - 12.00	1.0000	1.0000
L70	2	WR-VG86ST-BRD(3/4)	11.75 - 12.00	1.0000	1.0000
L70	4	7983A(ELLIPTICAL)	11.75 - 12.00	1.0000	1.0000
L70	9	CU12PSM9P6XXX(1-1/2)	11.75 - 12.00	1.0000	1.0000
L70	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	11.75 - 12.00	1.0000	1.0000
L70	23	Safety Line 3/8	11.75 - 12.00	1.0000	1.0000
L70	25	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	26	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	27	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	28	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	29	PL1.25x6.875 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	43	PL1x4 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	44	PL1x4 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	45	PL1x4 Reinforcement	11.75 - 12.00	1.0000	1.0000
L70	63	CCI-SFP-060100	11.75 - 12.00	1.0000	1.0000
L70	64	CCI-SFP-060100	11.75 - 12.00	1.0000	1.0000
L70	66	CCI-SFP-060100	11.75 - 12.00	1.0000	1.0000
L71	1	FB-L98B-034-XXX(3/8)	8.50 - 11.75	1.0000	1.0000
L71	2	WR-VG86ST-BRD(3/4)	8.50 - 11.75	1.0000	1.0000
L71	4	7983A(ELLIPTICAL)	8.50 - 11.75	1.0000	1.0000
L71	9	CU12PSM9P6XXX(1-1/2)	8.50 - 11.75	1.0000	1.0000
L71	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	8.50 - 11.75	1.0000	1.0000
L71	23	Safety Line 3/8	8.50 - 11.75	1.0000	1.0000
L71	25	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000
L71	26	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000
L71	27	PL1.25x6.875 Reinforcement	9.17 - 11.75	1.0000	1.0000
L71	28	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000
L71	29	PL1.25x6.875 Reinforcement	8.50 - 11.75	1.0000	1.0000
L71	43	PL1x4 Reinforcement	10.75 - 11.75	1.0000	1.0000
L71	44	PL1x4 Reinforcement	10.75 - 11.75	1.0000	1.0000
L71	45	PL1x4 Reinforcement	10.75 - 11.75	1.0000	1.0000
L71	59	Transition Stiffener 1x7	8.50 - 10.50	1.0000	1.0000
L71	60	Transition Stiffener 1x7	8.50 - 10.50	1.0000	1.0000
L71	61	Transition Stiffener 1x7	8.50 - 10.50	1.0000	1.0000
L71	63	CCI-SFP-060100	8.50 - 11.75	1.0000	1.0000
L71	64	CCI-SFP-060100	8.50 - 11.75	1.0000	1.0000
L71	66	CCI-SFP-060100	10.00 - 11.75	1.0000	1.0000
L72	1	FB-L98B-034-XXX(3/8)	8.25 - 8.50	1.0000	1.0000
L72	2	WR-VG86ST-BRD(3/4)	8.25 - 8.50	1.0000	1.0000
L72	4	7983A(ELLIPTICAL)	8.25 - 8.50	1.0000	1.0000
L72	9	CU12PSM9P6XXX(1-1/2)	8.25 - 8.50	1.0000	1.0000
L72	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	8.25 - 8.50	1.0000	1.0000
L72	23	Safety Line 3/8	8.25 - 8.50	1.0000	1.0000
L72	25	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	26	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	28	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	29	PL1.25x6.875 Reinforcement	8.25 - 8.50	1.0000	1.0000
L72	59	Transition Stiffener 1x7	8.25 - 8.50	1.0000	1.0000
L72	60	Transition Stiffener 1x7	8.25 - 8.50	1.0000	1.0000
L72	61	Transition Stiffener 1x7	8.25 - 8.50	1.0000	1.0000
L72	63	CCI-SFP-060100	8.25 - 8.50	1.0000	1.0000
L72	64	CCI-SFP-060100	8.25 - 8.50	1.0000	1.0000
L73	1	FB-L98B-034-XXX(3/8)	7.00 - 8.25	1.0000	1.0000
L73	2	WR-VG86ST-BRD(3/4)	7.00 - 8.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L73	4	7983A(ELLIPTICAL)	7.00 - 8.25	1.0000	1.0000
L73	9	CU12PSM9P6XXX(1-1/2)	7.00 - 8.25	1.0000	1.0000
L73	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	7.00 - 8.25	1.0000	1.0000
L73	23	Safety Line 3/8	7.00 - 8.25	1.0000	1.0000
L73	25	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	26	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	28	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	29	PL1.25x6.875 Reinforcement	7.00 - 8.25	1.0000	1.0000
L73	59	Transition Stiffener 1x7	7.00 - 8.25	1.0000	1.0000
L73	60	Transition Stiffener 1x7	7.00 - 8.25	1.0000	1.0000
L73	61	Transition Stiffener 1x7	7.00 - 8.25	1.0000	1.0000
L73	63	CCI-SFP-060100	7.00 - 8.25	1.0000	1.0000
L73	64	CCI-SFP-060100	7.00 - 8.25	1.0000	1.0000
L74	1	FB-L98B-034-XXX(3/8)	6.75 - 7.00	1.0000	1.0000
L74	2	WR-VG86ST-BRD(3/4)	6.75 - 7.00	1.0000	1.0000
L74	4	7983A(ELLIPTICAL)	6.75 - 7.00	1.0000	1.0000
L74	9	CU12PSM9P6XXX(1-1/2)	6.75 - 7.00	1.0000	1.0000
L74	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	6.75 - 7.00	1.0000	1.0000
L74	23	Safety Line 3/8	6.75 - 7.00	1.0000	1.0000
L74	25	PL1.25x6.875 Reinforcement	6.75 - 7.00	1.0000	1.0000
L74	26	PL1.25x6.875 Reinforcement	6.75 - 7.00	1.0000	1.0000
L74	28	PL1.25x6.875 Reinforcement	6.75 - 7.00	1.0000	1.0000
L74	29	PL1.25x6.875 Reinforcement	6.75 - 7.00	1.0000	1.0000
L74	59	Transition Stiffener 1x7	6.75 - 7.00	1.0000	1.0000
L74	60	Transition Stiffener 1x7	6.75 - 7.00	1.0000	1.0000
L74	61	Transition Stiffener 1x7	6.75 - 7.00	1.0000	1.0000
L74	63	CCI-SFP-060100	6.75 - 7.00	1.0000	1.0000
L74	64	CCI-SFP-060100	6.75 - 7.00	1.0000	1.0000
L75	1	FB-L98B-034-XXX(3/8)	1.75 - 6.75	1.0000	1.0000
L75	2	WR-VG86ST-BRD(3/4)	1.75 - 6.75	1.0000	1.0000
L75	4	7983A(ELLIPTICAL)	1.75 - 6.75	1.0000	1.0000
L75	9	CU12PSM9P6XXX(1-1/2)	1.75 - 6.75	1.0000	1.0000
L75	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	1.75 - 6.75	1.0000	1.0000
L75	23	Safety Line 3/8	1.75 - 6.75	1.0000	1.0000
L75	25	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	26	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	28	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	29	PL1.25x6.875 Reinforcement	1.75 - 6.75	1.0000	1.0000
L75	59	Transition Stiffener 1x7	1.75 - 6.75	1.0000	1.0000
L75	60	Transition Stiffener 1x7	1.75 - 6.75	1.0000	1.0000
L75	61	Transition Stiffener 1x7	1.75 - 6.75	1.0000	1.0000
L75	63	CCI-SFP-060100	5.00 - 6.75	1.0000	1.0000
L75	64	CCI-SFP-060100	5.00 - 6.75	1.0000	1.0000
L76	1	FB-L98B-034-XXX(3/8)	0.00 - 1.75	1.0000	1.0000
L76	2	WR-VG86ST-BRD(3/4)	0.00 - 1.75	1.0000	1.0000
L76	4	7983A(ELLIPTICAL)	0.00 - 1.75	1.0000	1.0000
L76	9	CU12PSM9P6XXX(1-1/2)	0.00 - 1.75	1.0000	1.0000
L76	18	MLC HYBRID 6X12 6AWGX6(1-1/2)	0.00 - 1.75	1.0000	1.0000
L76	23	Safety Line 3/8	0.00 - 1.75	1.0000	1.0000
L76	25	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	26	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	28	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	29	PL1.25x6.875 Reinforcement	0.00 - 1.75	1.0000	1.0000
L76	59	Transition Stiffener 1x7	0.00 - 1.75	1.0000	1.0000
L76	60	Transition Stiffener 1x7	0.00 - 1.75	1.0000	1.0000
L76	61	Transition Stiffener 1x7	0.00 - 1.75	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
L5	89	CCI-AFP-045100	124.25 - 125.42	Auto	0.1983
L5	90	CCI-AFP-045100	124.25 - 125.42	Auto	0.1983
L5	91	CCI-AFP-045100	124.25 - 125.42	Auto	0.1983
L6	89	CCI-AFP-045100	123.42 - 124.25	Auto	0.1865
L6	90	CCI-AFP-045100	123.42 - 124.25	Auto	0.1865
L6	91	CCI-AFP-045100	123.42 - 124.25	Auto	0.1865
L7	89	CCI-AFP-045100	123.17 - 123.42	Auto	0.3886
L7	90	CCI-AFP-045100	123.17 - 123.42	Auto	0.3886
L7	91	CCI-AFP-045100	123.17 - 123.42	Auto	0.3886
L8	89	CCI-AFP-045100	118.17 - 123.17	Auto	0.3429
L8	90	CCI-AFP-045100	118.17 - 123.17	Auto	0.3429
L8	91	CCI-AFP-045100	118.17 - 123.17	Auto	0.3429
L9	89	CCI-AFP-045100	113.17 - 118.17	Auto	0.2693
L9	90	CCI-AFP-045100	113.17 - 118.17	Auto	0.2693
L9	91	CCI-AFP-045100	113.17 - 118.17	Auto	0.2693
L10	89	CCI-AFP-045100	109.50 - 113.17	Auto	0.2110
L10	90	CCI-AFP-045100	109.50 - 113.17	Auto	0.2110
L10	91	CCI-AFP-045100	109.50 - 113.17	Auto	0.2110
L10	93	CCI-AFP-040075	109.50 - 111.00	Auto	0.0981
L10	95	CCI-AFP-040075	109.50 - 111.00	Auto	0.0981
L11	89	CCI-AFP-045100	109.25 - 109.50	Auto	0.2550
L11	90	CCI-AFP-045100	109.25 - 109.50	Auto	0.2550
L11	91	CCI-AFP-045100	109.25 - 109.50	Auto	0.2550
L11	93	CCI-AFP-040075	109.25 - 109.50	Auto	0.1619
L11	95	CCI-AFP-040075	109.25 - 109.50	Auto	0.1619
L12	55	PL1x4 Reinforcement	104.75 -	Auto	0.0956

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L12	56	PL1x4 Reinforcement	104.75 - 106.50	Auto	0.0956
L12	57	PL1x4 Reinforcement	104.75 - 106.50	Auto	0.0956
L12	87	CCI-AFP-05012520	104.75 - 105.33	Auto	0.2703
L12	89	CCI-AFP-045100	104.75 - 109.25	Auto	0.2122
L12	90	CCI-AFP-045100	104.75 - 109.25	Auto	0.2122
L12	91	CCI-AFP-045100	104.75 - 109.25	Auto	0.2122
L12	93	CCI-AFP-040075	104.75 - 109.25	Auto	0.1138
L12	95	CCI-AFP-040075	104.75 - 109.25	Auto	0.1138
L13	55	PL1x4 Reinforcement	104.50 - 104.75	Auto	0.2248
L13	56	PL1x4 Reinforcement	104.50 - 104.75	Auto	0.2248
L13	57	PL1x4 Reinforcement	104.50 - 104.75	Auto	0.2248
L13	87	CCI-AFP-05012520	104.50 - 104.75	Auto	0.3798
L13	89	CCI-AFP-045100	104.50 - 104.75	Auto	0.3109
L13	90	CCI-AFP-045100	104.50 - 104.75	Auto	0.3109
L13	91	CCI-AFP-045100	104.50 - 104.75	Auto	0.3109
L13	93	CCI-AFP-040075	104.50 - 104.75	Auto	0.2248
L13	95	CCI-AFP-040075	104.50 - 104.75	Auto	0.2248
L14	55	PL1x4 Reinforcement	102.42 - 104.50	Auto	0.2010
L14	56	PL1x4 Reinforcement	102.42 - 104.50	Auto	0.2010
L14	57	PL1x4 Reinforcement	102.42 - 104.50	Auto	0.2010
L14	87	CCI-AFP-05012520	102.42 - 104.50	Auto	0.3608
L14	89	CCI-AFP-045100	102.42 - 104.50	Auto	0.2897
L14	90	CCI-AFP-045100	102.42 - 104.50	Auto	0.2897
L14	91	CCI-AFP-045100	102.42 - 104.50	Auto	0.2897
L14	93	CCI-AFP-040075	102.42 - 104.50	Auto	0.2010
L14	95	CCI-AFP-040075	102.42 - 104.50	Auto	0.2010
L15	55	PL1x4 Reinforcement	102.17 - 102.42	Auto	0.0515
L15	56	PL1x4 Reinforcement	102.17 - 102.42	Auto	0.0515
L15	57	PL1x4 Reinforcement	102.17 - 102.42	Auto	0.0515
L15	87	CCI-AFP-05012520	102.17 - 102.42	Auto	0.2412

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L15	89	CCI-AFP-045100	102.17 - 102.42	Auto	0.1569
L15	90	CCI-AFP-045100	102.17 - 102.42	Auto	0.1569
L15	91	CCI-AFP-045100	102.17 - 102.42	Auto	0.1569
L15	93	CCI-AFP-040075	102.17 - 102.42	Auto	0.0515
L15	95	CCI-AFP-040075	102.17 - 102.42	Auto	0.0515
L16	39	PL1.25x3.625 Reinforcement	98.75 - 100.00	Auto	0.0000
L16	40	PL1.25x3.625 Reinforcement	98.75 - 100.00	Auto	0.0000
L16	41	PL1.25x3.625 Reinforcement	98.75 - 100.00	Auto	0.0000
L16	55	PL1x4 Reinforcement	98.75 - 102.17	Auto	0.0191
L16	56	PL1x4 Reinforcement	98.75 - 102.17	Auto	0.0191
L16	57	PL1x4 Reinforcement	98.75 - 102.17	Auto	0.0191
L16	82	CCI-SFP-040075	98.75 - 100.33	Auto	0.0071
L16	83	CCI-SFP-040075	98.75 - 100.33	Auto	0.0071
L16	87	CCI-AFP-05012520	98.75 - 102.17	Auto	0.2152
L16	89	CCI-AFP-045100	100.42 - 102.17	Auto	0.1377
L16	90	CCI-AFP-045100	100.42 - 102.17	Auto	0.1377
L16	91	CCI-AFP-045100	100.42 - 102.17	Auto	0.1377
L16	93	CCI-AFP-040075	98.75 - 102.17	Auto	0.0191
L16	95	CCI-AFP-040075	101.00 - 102.17	Auto	0.0338
L17	39	PL1.25x3.625 Reinforcement	98.50 - 98.75	Auto	0.1033
L17	40	PL1.25x3.625 Reinforcement	98.50 - 98.75	Auto	0.1033
L17	41	PL1.25x3.625 Reinforcement	98.50 - 98.75	Auto	0.1033
L17	55	PL1x4 Reinforcement	98.50 - 98.75	Auto	0.1874
L17	56	PL1x4 Reinforcement	98.50 - 98.75	Auto	0.1874
L17	57	PL1x4 Reinforcement	98.50 - 98.75	Auto	0.1874
L17	82	CCI-SFP-040075	98.50 - 98.75	Auto	0.1874
L17	83	CCI-SFP-040075	98.50 - 98.75	Auto	0.1874
L17	87	CCI-AFP-05012520	98.50 - 98.75	Auto	0.3499
L17	93	CCI-AFP-040075	98.50 - 98.75	Auto	0.1874
L18	39	PL1.25x3.625 Reinforcement	97.50 - 98.50	Auto	0.0942
L18	40	PL1.25x3.625 Reinforcement	97.50 - 98.50	Auto	0.0942
L18	41	PL1.25x3.625 Reinforcement	97.50 - 98.50	Auto	0.0942
L18	55	PL1x4 Reinforcement	97.50 - 98.50	Auto	0.1791
L18	56	PL1x4 Reinforcement	97.50 - 98.50	Auto	0.1791
L18	57	PL1x4 Reinforcement	97.50 - 98.50	Auto	0.1791
L18	82	CCI-SFP-040075	97.50 - 98.50	Auto	0.1791
L18	83	CCI-SFP-040075	97.50 - 98.50	Auto	0.1791
L18	87	CCI-AFP-05012520	97.50 - 98.50	Auto	0.3433
L18	93	CCI-AFP-040075	97.50 - 98.50	Auto	0.1791
L19	39	PL1.25x3.625 Reinforcement	97.25 - 97.50	Auto	0.0204
L19	40	PL1.25x3.625 Reinforcement	97.25 - 97.50	Auto	0.0204
L19	41	PL1.25x3.625 Reinforcement	97.25 - 97.50	Auto	0.0204
L19	55	PL1x4 Reinforcement	97.25 - 97.50	Auto	0.1122
L19	56	PL1x4 Reinforcement	97.25 - 97.50	Auto	0.1122
L19	57	PL1x4 Reinforcement	97.25 - 97.50	Auto	0.1122
L19	82	CCI-SFP-040075	97.25 - 97.50	Auto	0.1122
L19	83	CCI-SFP-040075	97.25 - 97.50	Auto	0.1122
L19	87	CCI-AFP-05012520	97.25 - 97.50	Auto	0.2898
L19	93	CCI-AFP-040075	97.25 - 97.50	Auto	0.1122
L20	39	PL1.25x3.625 Reinforcement	92.00 - 97.25	Auto	0.0006
L20	40	PL1.25x3.625 Reinforcement	92.00 - 97.25	Auto	0.0006
L20	41	PL1.25x3.625 Reinforcement	92.00 - 97.25	Auto	0.0006

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L20	55	PL1x4 Reinforcement	92.00 - 97.25	Auto	0.0675
L20	56	PL1x4 Reinforcement	92.00 - 97.25	Auto	0.0675
L20	57	PL1x4 Reinforcement	92.00 - 97.25	Auto	0.0675
L20	82	CCI-SFP-040075	92.00 - 97.25	Auto	0.0675
L20	83	CCI-SFP-040075	92.00 - 97.25	Auto	0.0675
L20	87	CCI-AFP-05012520	92.00 - 97.25	Auto	0.2540
L20	93	CCI-AFP-040075	96.00 - 97.25	Auto	0.0939
L21	39	PL1.25x3.625 Reinforcement	90.55 - 92.00	Auto	0.0009
L21	40	PL1.25x3.625 Reinforcement	90.55 - 92.00	Auto	0.0009
L21	41	PL1.25x3.625 Reinforcement	90.55 - 92.00	Auto	0.0009
L21	55	PL1x4 Reinforcement	90.55 - 92.00	Auto	0.0897
L21	56	PL1x4 Reinforcement	90.55 - 92.00	Auto	0.0897
L21	57	PL1x4 Reinforcement	90.55 - 92.00	Auto	0.0897
L21	82	CCI-SFP-040075	90.55 - 92.00	Auto	0.0897
L21	83	CCI-SFP-040075	90.55 - 92.00	Auto	0.0897
L21	87	CCI-AFP-05012520	90.55 - 92.00	Auto	0.2718
L22	39	PL1.25x3.625 Reinforcement	89.25 - 90.55	Auto	0.0000
L22	40	PL1.25x3.625 Reinforcement	89.25 - 90.55	Auto	0.0000
L22	41	PL1.25x3.625 Reinforcement	89.25 - 90.55	Auto	0.0000
L22	55	PL1x4 Reinforcement	89.25 - 90.55	Auto	0.0546
L22	56	PL1x4 Reinforcement	89.25 - 90.55	Auto	0.0546
L22	57	PL1x4 Reinforcement	89.25 - 90.55	Auto	0.0546
L22	82	CCI-SFP-040075	89.25 - 90.55	Auto	0.0546
L22	83	CCI-SFP-040075	89.25 - 90.55	Auto	0.0546
L22	85	CCI-SFP-040075	89.25 - 90.33	Auto	0.0532
L22	87	CCI-AFP-05012520	89.25 - 90.55	Auto	0.2437
L23	35	PL1.25x5.5 Reinforcement	89.00 - 89.25	Auto	0.4146
L23	36	PL1.25x5.5 Reinforcement	89.00 - 89.25	Auto	0.4146
L23	37	PL1.25x5.5 Reinforcement	89.00 - 89.25	Auto	0.4146
L23	55	PL1x4 Reinforcement	89.00 - 89.25	Auto	0.1950
L23	56	PL1x4 Reinforcement	89.00 - 89.25	Auto	0.1950
L23	57	PL1x4 Reinforcement	89.00 - 89.25	Auto	0.1950
L23	82	CCI-SFP-040075	89.00 - 89.25	Auto	0.1950
L23	83	CCI-SFP-040075	89.00 - 89.25	Auto	0.1950
L23	85	CCI-SFP-040075	89.00 - 89.25	Auto	0.1950
L23	87	CCI-AFP-05012520	89.00 - 89.25	Auto	0.3560
L24	35	PL1.25x5.5 Reinforcement	88.25 - 89.00	Auto	0.3975
L24	36	PL1.25x5.5 Reinforcement	88.25 - 89.00	Auto	0.3975
L24	37	PL1.25x5.5 Reinforcement	88.25 - 89.00	Auto	0.3975
L24	55	PL1x4 Reinforcement	88.25 - 89.00	Auto	0.1716
L24	56	PL1x4 Reinforcement	88.25 - 89.00	Auto	0.1716
L24	57	PL1x4 Reinforcement	88.25 - 89.00	Auto	0.1716
L24	82	CCI-SFP-040075	88.25 - 89.00	Auto	0.1716
L24	83	CCI-SFP-040075	88.25 - 89.00	Auto	0.1716
L24	85	CCI-SFP-040075	88.25 - 89.00	Auto	0.1716
L24	87	CCI-AFP-05012520	88.25 - 89.00	Auto	0.3373
L25	35	PL1.25x5.5 Reinforcement	88.00 - 88.25	Auto	0.2891
L25	36	PL1.25x5.5 Reinforcement	88.00 - 88.25	Auto	0.2891
L25	37	PL1.25x5.5 Reinforcement	88.00 - 88.25	Auto	0.2891
L25	55	PL1x4 Reinforcement	88.00 - 88.25	Auto	0.0226
L25	56	PL1x4 Reinforcement	88.00 - 88.25	Auto	0.0226
L25	57	PL1x4 Reinforcement	88.00 - 88.25	Auto	0.0226
L25	82	CCI-SFP-040075	88.00 - 88.25	Auto	0.0226
L25	83	CCI-SFP-040075	88.00 - 88.25	Auto	0.0226
L25	85	CCI-SFP-040075	88.00 - 88.25	Auto	0.0226
L25	87	CCI-AFP-05012520	88.00 - 88.25	Auto	0.2181
L26	35	PL1.25x5.5 Reinforcement	87.83 - 88.00	Auto	0.2871
L26	36	PL1.25x5.5 Reinforcement	87.83 - 88.00	Auto	0.2871
L26	37	PL1.25x5.5 Reinforcement	87.83 - 88.00	Auto	0.2871
L26	55	PL1x4 Reinforcement	87.83 - 88.00	Auto	0.0198
L26	56	PL1x4 Reinforcement	87.83 - 88.00	Auto	0.0198

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L26	57	PL1x4 Reinforcement	87.83 - 88.00	Auto	0.0198
L26	82	CCI-SFP-040075	87.83 - 88.00	Auto	0.0198
L26	83	CCI-SFP-040075	87.83 - 88.00	Auto	0.0198
L26	85	CCI-SFP-040075	87.83 - 88.00	Auto	0.0198
L26	87	CCI-AFP-05012520	87.83 - 88.00	Auto	0.2158
L27	35	PL1.25x5.5 Reinforcement	87.58 - 87.83	Auto	0.2425
L27	36	PL1.25x5.5 Reinforcement	87.58 - 87.83	Auto	0.2425
L27	37	PL1.25x5.5 Reinforcement	87.58 - 87.83	Auto	0.2425
L27	55	PL1x4 Reinforcement	87.58 - 87.83	Auto	0.0000
L27	56	PL1x4 Reinforcement	87.58 - 87.83	Auto	0.0000
L27	57	PL1x4 Reinforcement	87.58 - 87.83	Auto	0.0000
L27	82	CCI-SFP-040075	87.58 - 87.83	Auto	0.0000
L27	83	CCI-SFP-040075	87.58 - 87.83	Auto	0.0000
L27	85	CCI-SFP-040075	87.58 - 87.83	Auto	0.0000
L27	87	CCI-AFP-05012520	87.58 - 87.83	Auto	0.1667
L28	35	PL1.25x5.5 Reinforcement	82.58 - 87.58	Auto	0.2048
L28	36	PL1.25x5.5 Reinforcement	82.58 - 87.58	Auto	0.2048
L28	37	PL1.25x5.5 Reinforcement	82.58 - 87.58	Auto	0.2048
L28	55	PL1x4 Reinforcement	86.50 - 87.58	Auto	0.0000
L28	56	PL1x4 Reinforcement	86.50 - 87.58	Auto	0.0000
L28	57	PL1x4 Reinforcement	86.50 - 87.58	Auto	0.0000
L28	82	CCI-SFP-040075	82.58 - 87.58	Auto	0.0000
L28	83	CCI-SFP-040075	82.58 - 87.58	Auto	0.0000
L28	85	CCI-SFP-040075	82.58 - 87.58	Auto	0.0000
L28	87	CCI-AFP-05012520	85.33 - 87.58	Auto	0.1400
L29	35	PL1.25x5.5 Reinforcement	77.58 - 82.58	Auto	0.1441
L29	36	PL1.25x5.5 Reinforcement	77.58 - 82.58	Auto	0.1441
L29	37	PL1.25x5.5 Reinforcement	77.58 - 82.58	Auto	0.1441
L29	51	PL1x4 Reinforcement	77.58 - 78.75	Auto	0.0000
L29	52	PL1x4 Reinforcement	77.58 - 78.75	Auto	0.0000
L29	53	PL1x4 Reinforcement	77.58 - 78.75	Auto	0.0000
L29	82	CCI-SFP-040075	77.58 - 82.58	Auto	0.0000
L29	83	CCI-SFP-040075	77.58 - 82.58	Auto	0.0000
L29	85	CCI-SFP-040075	77.58 - 82.58	Auto	0.0000
L30	35	PL1.25x5.5 Reinforcement	77.00 - 77.58	Auto	0.1170
L30	36	PL1.25x5.5 Reinforcement	77.00 - 77.58	Auto	0.1170
L30	37	PL1.25x5.5 Reinforcement	77.00 - 77.58	Auto	0.1170
L30	51	PL1x4 Reinforcement	77.00 - 77.58	Auto	0.0000
L30	52	PL1x4 Reinforcement	77.00 - 77.58	Auto	0.0000
L30	53	PL1x4 Reinforcement	77.00 - 77.58	Auto	0.0000
L30	82	CCI-SFP-040075	77.00 - 77.58	Auto	0.0000
L30	83	CCI-SFP-040075	77.00 - 77.58	Auto	0.0000
L30	85	CCI-SFP-040075	77.00 - 77.58	Auto	0.0000
L31	35	PL1.25x5.5 Reinforcement	76.75 - 77.00	Auto	0.2105
L31	36	PL1.25x5.5 Reinforcement	76.75 - 77.00	Auto	0.2105
L31	37	PL1.25x5.5 Reinforcement	76.75 - 77.00	Auto	0.2105
L31	51	PL1x4 Reinforcement	76.75 - 77.00	Auto	0.0000
L31	52	PL1x4 Reinforcement	76.75 - 77.00	Auto	0.0000
L31	53	PL1x4 Reinforcement	76.75 - 77.00	Auto	0.0000
L31	82	CCI-SFP-040075	76.75 - 77.00	Auto	0.0000
L31	83	CCI-SFP-040075	76.75 - 77.00	Auto	0.0000
L31	85	CCI-SFP-040075	76.75 - 77.00	Auto	0.0000
L32	35	PL1.25x5.5 Reinforcement	76.33 - 76.75	Auto	0.2072
L32	36	PL1.25x5.5 Reinforcement	76.33 - 76.75	Auto	0.2072
L32	37	PL1.25x5.5 Reinforcement	76.33 - 76.75	Auto	0.2072
L32	51	PL1x4 Reinforcement	76.33 - 76.75	Auto	0.0000
L32	52	PL1x4 Reinforcement	76.33 - 76.75	Auto	0.0000
L32	53	PL1x4 Reinforcement	76.33 - 76.75	Auto	0.0000
L32	82	CCI-SFP-040075	76.33 - 76.75	Auto	0.0000
L32	83	CCI-SFP-040075	76.33 - 76.75	Auto	0.0000
L32	85	CCI-SFP-040075	76.33 - 76.75	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L33	35	PL1.25x5.5 Reinforcement	76.08 - 76.33	Auto	0.2040
L33	36	PL1.25x5.5 Reinforcement	76.08 - 76.33	Auto	0.2040
L33	37	PL1.25x5.5 Reinforcement	76.08 - 76.33	Auto	0.2040
L33	51	PL1x4 Reinforcement	76.08 - 76.33	Auto	0.0000
L33	52	PL1x4 Reinforcement	76.08 - 76.33	Auto	0.0000
L33	53	PL1x4 Reinforcement	76.08 - 76.33	Auto	0.0000
L33	82	CCI-SFP-040075	76.08 - 76.33	Auto	0.0000
L33	83	CCI-SFP-040075	76.08 - 76.33	Auto	0.0000
L33	85	CCI-SFP-040075	76.08 - 76.33	Auto	0.0000
L34	35	PL1.25x5.5 Reinforcement	74.25 - 76.08	Auto	0.1817
L34	36	PL1.25x5.5 Reinforcement	74.25 - 76.08	Auto	0.1817
L34	37	PL1.25x5.5 Reinforcement	74.25 - 76.08	Auto	0.1817
L34	51	PL1x4 Reinforcement	74.25 - 76.08	Auto	0.0000
L34	52	PL1x4 Reinforcement	74.25 - 76.08	Auto	0.0000
L34	53	PL1x4 Reinforcement	74.25 - 76.08	Auto	0.0000
L34	77	CCI-SFP-045100	74.25 - 75.25	Auto	0.0000
L34	78	CCI-SFP-045100	74.25 - 75.25	Auto	0.0000
L34	80	CCI-SFP-040075	74.25 - 75.25	Auto	0.0000
L34	82	CCI-SFP-040075	75.33 - 76.08	Auto	0.0000
L34	83	CCI-SFP-040075	75.33 - 76.08	Auto	0.0000
L34	85	CCI-SFP-040075	75.33 - 76.08	Auto	0.0000
L35	35	PL1.25x5.5 Reinforcement	74.00 - 74.25	Auto	0.2142
L35	36	PL1.25x5.5 Reinforcement	74.00 - 74.25	Auto	0.2142
L35	37	PL1.25x5.5 Reinforcement	74.00 - 74.25	Auto	0.2142
L35	51	PL1x4 Reinforcement	74.00 - 74.25	Auto	0.0000
L35	52	PL1x4 Reinforcement	74.00 - 74.25	Auto	0.0000
L35	53	PL1x4 Reinforcement	74.00 - 74.25	Auto	0.0000
L35	77	CCI-SFP-045100	74.00 - 74.25	Auto	0.0396
L35	78	CCI-SFP-045100	74.00 - 74.25	Auto	0.0396
L35	80	CCI-SFP-040075	74.00 - 74.25	Auto	0.0000
L36	35	PL1.25x5.5 Reinforcement	73.75 - 74.00	Auto	0.2118
L36	36	PL1.25x5.5 Reinforcement	73.75 - 74.00	Auto	0.2118
L36	37	PL1.25x5.5 Reinforcement	73.75 - 74.00	Auto	0.2118
L36	51	PL1x4 Reinforcement	73.75 - 74.00	Auto	0.0000
L36	52	PL1x4 Reinforcement	73.75 - 74.00	Auto	0.0000
L36	53	PL1x4 Reinforcement	73.75 - 74.00	Auto	0.0000
L36	77	CCI-SFP-045100	73.75 - 74.00	Auto	0.0367
L36	78	CCI-SFP-045100	73.75 - 74.00	Auto	0.0367
L36	80	CCI-SFP-040075	73.75 - 74.00	Auto	0.0000
L37	35	PL1.25x5.5 Reinforcement	73.50 - 73.75	Auto	0.2216
L37	36	PL1.25x5.5 Reinforcement	73.50 - 73.75	Auto	0.2216
L37	37	PL1.25x5.5 Reinforcement	73.50 - 73.75	Auto	0.2216
L37	51	PL1x4 Reinforcement	73.50 - 73.75	Auto	0.0000
L37	52	PL1x4 Reinforcement	73.50 - 73.75	Auto	0.0000
L37	53	PL1x4 Reinforcement	73.50 - 73.75	Auto	0.0000
L37	77	CCI-SFP-045100	73.50 - 73.75	Auto	0.0486
L37	78	CCI-SFP-045100	73.50 - 73.75	Auto	0.0486
L37	80	CCI-SFP-040075	73.50 - 73.75	Auto	0.0000
L38	35	PL1.25x5.5 Reinforcement	68.50 - 73.50	Auto	0.1778
L38	36	PL1.25x5.5 Reinforcement	68.50 - 73.50	Auto	0.1778
L38	37	PL1.25x5.5 Reinforcement	68.50 - 73.50	Auto	0.1778
L38	51	PL1x4 Reinforcement	68.50 - 73.50	Auto	0.0000
L38	52	PL1x4 Reinforcement	68.50 - 73.50	Auto	0.0000
L38	53	PL1x4 Reinforcement	68.50 - 73.50	Auto	0.0000
L38	77	CCI-SFP-045100	68.50 - 73.50	Auto	0.0052
L38	78	CCI-SFP-045100	68.50 - 73.50	Auto	0.0052
L38	80	CCI-SFP-040075	68.50 - 73.50	Auto	0.0000
L39	35	PL1.25x5.5 Reinforcement	63.50 - 68.50	Auto	0.1171
L39	36	PL1.25x5.5 Reinforcement	63.50 - 68.50	Auto	0.1171
L39	37	PL1.25x5.5 Reinforcement	63.50 - 68.50	Auto	0.1171
L39	51	PL1x4 Reinforcement	63.50 - 68.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L39	52	PL1x4 Reinforcement	63.50 - 68.50	Auto	0.0000
L39	53	PL1x4 Reinforcement	63.50 - 68.50	Auto	0.0000
L39	77	CCI-SFP-045100	63.50 - 68.50	Auto	0.0000
L39	78	CCI-SFP-045100	63.50 - 68.50	Auto	0.0000
L39	80	CCI-SFP-040075	63.50 - 68.50	Auto	0.0000
L40	35	PL1.25x5.5 Reinforcement	60.50 - 63.50	Auto	0.0661
L40	36	PL1.25x5.5 Reinforcement	60.50 - 63.50	Auto	0.0661
L40	37	PL1.25x5.5 Reinforcement	60.50 - 63.50	Auto	0.0661
L40	47	PL1x4 Reinforcement	60.50 - 62.25	Auto	0.0000
L40	48	PL1x4 Reinforcement	60.50 - 62.25	Auto	0.0000
L40	49	PL1x4 Reinforcement	60.50 - 62.25	Auto	0.0000
L40	51	PL1x4 Reinforcement	60.50 - 63.50	Auto	0.0000
L40	52	PL1x4 Reinforcement	60.50 - 63.50	Auto	0.0000
L40	53	PL1x4 Reinforcement	60.50 - 63.50	Auto	0.0000
L40	77	CCI-SFP-045100	60.50 - 63.50	Auto	0.0000
L40	78	CCI-SFP-045100	60.50 - 63.50	Auto	0.0000
L40	80	CCI-SFP-040075	60.50 - 63.50	Auto	0.0000
L41	35	PL1.25x5.5 Reinforcement	60.25 - 60.50	Auto	0.0504
L41	36	PL1.25x5.5 Reinforcement	60.25 - 60.50	Auto	0.0504
L41	37	PL1.25x5.5 Reinforcement	60.25 - 60.50	Auto	0.0504
L41	47	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	48	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	49	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	51	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	52	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	53	PL1x4 Reinforcement	60.25 - 60.50	Auto	0.0000
L41	77	CCI-SFP-045100	60.25 - 60.50	Auto	0.0000
L41	78	CCI-SFP-045100	60.25 - 60.50	Auto	0.0000
L41	80	CCI-SFP-040075	60.25 - 60.50	Auto	0.0000
L42	35	PL1.25x5.5 Reinforcement	59.50 - 60.25	Auto	0.0455
L42	36	PL1.25x5.5 Reinforcement	59.50 - 60.25	Auto	0.0455
L42	37	PL1.25x5.5 Reinforcement	59.50 - 60.25	Auto	0.0455
L42	47	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	48	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	49	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	51	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	52	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	53	PL1x4 Reinforcement	59.50 - 60.25	Auto	0.0000
L42	77	CCI-SFP-045100	59.50 - 60.25	Auto	0.0000
L42	78	CCI-SFP-045100	59.50 - 60.25	Auto	0.0000
L42	80	CCI-SFP-040075	59.50 - 60.25	Auto	0.0000
L43	31	PL1.25x6.625 Reinforcement	59.25 - 59.50	Auto	0.2289
L43	32	PL1.25x6.625 Reinforcement	59.25 - 59.50	Auto	0.2289
L43	33	PL1.25x6.625 Reinforcement	59.25 - 59.50	Auto	0.2289
L43	47	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	48	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	49	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	51	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	52	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	53	PL1x4 Reinforcement	59.25 - 59.50	Auto	0.0000
L43	77	CCI-SFP-045100	59.25 - 59.50	Auto	0.0000
L43	78	CCI-SFP-045100	59.25 - 59.50	Auto	0.0000
L43	80	CCI-SFP-040075	59.25 - 59.50	Auto	0.0000
L44	31	PL1.25x6.625 Reinforcement	54.25 - 59.25	Auto	0.1926
L44	32	PL1.25x6.625 Reinforcement	54.25 - 59.25	Auto	0.1926
L44	33	PL1.25x6.625 Reinforcement	54.25 - 59.25	Auto	0.1926
L44	47	PL1x4 Reinforcement	54.25 - 59.25	Auto	0.0000
L44	48	PL1x4 Reinforcement	54.25 - 59.25	Auto	0.0000
L44	49	PL1x4 Reinforcement	54.25 - 59.25	Auto	0.0000
L44	51	PL1x4 Reinforcement	58.75 - 59.25	Auto	0.0000
L44	52	PL1x4 Reinforcement	58.75 - 59.25	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L44	53	PL1x4 Reinforcement	58.75 - 59.25	Auto	0.0000
L44	77	CCI-SFP-045100	54.25 - 59.25	Auto	0.0000
L44	78	CCI-SFP-045100	54.25 - 59.25	Auto	0.0000
L44	80	CCI-SFP-040075	54.25 - 59.25	Auto	0.0000
L45	31	PL1.25x6.625 Reinforcement	45.80 - 54.25	Auto	0.1333
L45	32	PL1.25x6.625 Reinforcement	45.80 - 54.25	Auto	0.1333
L45	33	PL1.25x6.625 Reinforcement	45.80 - 54.25	Auto	0.1333
L45	47	PL1x4 Reinforcement	45.80 - 54.25	Auto	0.0000
L45	48	PL1x4 Reinforcement	45.80 - 54.25	Auto	0.0000
L45	49	PL1x4 Reinforcement	45.80 - 54.25	Auto	0.0000
L45	77	CCI-SFP-045100	45.80 - 54.25	Auto	0.0000
L45	78	CCI-SFP-045100	45.80 - 54.25	Auto	0.0000
L45	80	CCI-SFP-040075	45.80 - 54.25	Auto	0.0000
L46	31	PL1.25x6.625 Reinforcement	44.80 - 45.80	Auto	0.1157
L46	32	PL1.25x6.625 Reinforcement	44.80 - 45.80	Auto	0.1157
L46	33	PL1.25x6.625 Reinforcement	44.80 - 45.80	Auto	0.1157
L46	47	PL1x4 Reinforcement	44.80 - 45.80	Auto	0.0000
L46	48	PL1x4 Reinforcement	44.80 - 45.80	Auto	0.0000
L46	49	PL1x4 Reinforcement	44.80 - 45.80	Auto	0.0000
L46	72	CCI-SFP-045100	44.80 - 45.08	Auto	0.0000
L46	74	CCI-SFP-060100	44.80 - 45.17	Auto	0.0208
L46	75	CCI-SFP-060100	44.80 - 45.17	Auto	0.0208
L46	77	CCI-SFP-045100	45.25 - 45.80	Auto	0.0000
L46	78	CCI-SFP-045100	45.25 - 45.80	Auto	0.0000
L46	80	CCI-SFP-040075	45.25 - 45.80	Auto	0.0000
L47	31	PL1.25x6.625 Reinforcement	43.58 - 44.80	Auto	0.1069
L47	32	PL1.25x6.625 Reinforcement	43.58 - 44.80	Auto	0.1069
L47	33	PL1.25x6.625 Reinforcement	43.58 - 44.80	Auto	0.1069
L47	47	PL1x4 Reinforcement	43.58 - 44.80	Auto	0.0000
L47	48	PL1x4 Reinforcement	43.58 - 44.80	Auto	0.0000
L47	49	PL1x4 Reinforcement	43.58 - 44.80	Auto	0.0000
L47	72	CCI-SFP-045100	43.58 - 44.80	Auto	0.0000
L47	74	CCI-SFP-060100	43.58 - 44.80	Auto	0.0138
L47	75	CCI-SFP-060100	43.58 - 44.80	Auto	0.0138
L48	31	PL1.25x6.625 Reinforcement	43.33 - 43.58	Auto	0.1060
L48	32	PL1.25x6.625 Reinforcement	43.33 - 43.58	Auto	0.1060
L48	33	PL1.25x6.625 Reinforcement	43.33 - 43.58	Auto	0.1060
L48	47	PL1x4 Reinforcement	43.33 - 43.58	Auto	0.0000
L48	48	PL1x4 Reinforcement	43.33 - 43.58	Auto	0.0000
L48	49	PL1x4 Reinforcement	43.33 - 43.58	Auto	0.0000
L48	72	CCI-SFP-045100	43.33 - 43.58	Auto	0.0000
L48	74	CCI-SFP-060100	43.33 - 43.58	Auto	0.0129
L48	75	CCI-SFP-060100	43.33 - 43.58	Auto	0.0129
L49	31	PL1.25x6.625 Reinforcement	43.17 - 43.33	Auto	0.1044
L49	32	PL1.25x6.625 Reinforcement	43.17 - 43.33	Auto	0.1044
L49	33	PL1.25x6.625 Reinforcement	43.17 - 43.33	Auto	0.1044
L49	47	PL1x4 Reinforcement	43.17 - 43.33	Auto	0.0000
L49	48	PL1x4 Reinforcement	43.17 - 43.33	Auto	0.0000
L49	49	PL1x4 Reinforcement	43.17 - 43.33	Auto	0.0000
L49	72	CCI-SFP-045100	43.17 - 43.33	Auto	0.0000
L49	74	CCI-SFP-060100	43.17 - 43.33	Auto	0.0111
L49	75	CCI-SFP-060100	43.17 - 43.33	Auto	0.0111
L50	31	PL1.25x6.625 Reinforcement	42.92 - 43.17	Auto	0.1381
L50	32	PL1.25x6.625 Reinforcement	42.92 - 43.17	Auto	0.1381
L50	33	PL1.25x6.625 Reinforcement	42.92 - 43.17	Auto	0.1381
L50	47	PL1x4 Reinforcement	42.92 - 43.17	Auto	0.0000
L50	48	PL1x4 Reinforcement	42.92 - 43.17	Auto	0.0000
L50	49	PL1x4 Reinforcement	42.92 - 43.17	Auto	0.0000
L50	72	CCI-SFP-045100	42.92 - 43.17	Auto	0.0000
L50	74	CCI-SFP-060100	42.92 - 43.17	Auto	0.0483
L50	75	CCI-SFP-060100	42.92 - 43.17	Auto	0.0483

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L51	31	PL1.25x6.625 Reinforcement	39.00 - 42.92	Auto	0.1113
L51	32	PL1.25x6.625 Reinforcement	39.00 - 42.92	Auto	0.1113
L51	33	PL1.25x6.625 Reinforcement	39.00 - 42.92	Auto	0.1113
L51	45	PL1x4 Reinforcement	39.00 - 40.75	Auto	0.0000
L51	47	PL1x4 Reinforcement	39.00 - 42.92	Auto	0.0000
L51	48	PL1x4 Reinforcement	39.00 - 42.92	Auto	0.0000
L51	49	PL1x4 Reinforcement	39.00 - 42.92	Auto	0.0000
L51	72	CCI-SFP-045100	39.00 - 42.92	Auto	0.0000
L51	74	CCI-SFP-060100	39.00 - 42.92	Auto	0.0187
L51	75	CCI-SFP-060100	39.00 - 42.92	Auto	0.0187
L52	31	PL1.25x6.625 Reinforcement	38.75 - 39.00	Auto	0.1098
L52	32	PL1.25x6.625 Reinforcement	38.75 - 39.00	Auto	0.1098
L52	33	PL1.25x6.625 Reinforcement	38.75 - 39.00	Auto	0.1098
L52	45	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	47	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	48	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	49	PL1x4 Reinforcement	38.75 - 39.00	Auto	0.0000
L52	72	CCI-SFP-045100	38.75 - 39.00	Auto	0.0000
L52	74	CCI-SFP-060100	38.75 - 39.00	Auto	0.0171
L52	75	CCI-SFP-060100	38.75 - 39.00	Auto	0.0171
L53	31	PL1.25x6.625 Reinforcement	37.17 - 38.75	Auto	0.0974
L53	32	PL1.25x6.625 Reinforcement	37.17 - 38.75	Auto	0.0974
L53	33	PL1.25x6.625 Reinforcement	37.17 - 38.75	Auto	0.0974
L53	45	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	47	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	48	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	49	PL1x4 Reinforcement	37.17 - 38.75	Auto	0.0000
L53	72	CCI-SFP-045100	37.17 - 38.75	Auto	0.0000
L53	74	CCI-SFP-060100	37.17 - 38.75	Auto	0.0038
L53	75	CCI-SFP-060100	37.17 - 38.75	Auto	0.0038
L54	31	PL1.25x6.625 Reinforcement	36.92 - 37.17	Auto	0.0698
L54	32	PL1.25x6.625 Reinforcement	36.92 - 37.17	Auto	0.0698
L54	33	PL1.25x6.625 Reinforcement	36.92 - 37.17	Auto	0.0698
L54	45	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	47	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	48	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	49	PL1x4 Reinforcement	36.92 - 37.17	Auto	0.0000
L54	72	CCI-SFP-045100	36.92 - 37.17	Auto	0.0000
L54	74	CCI-SFP-060100	36.92 - 37.17	Auto	0.0000
L54	75	CCI-SFP-060100	36.92 - 37.17	Auto	0.0000
L55	31	PL1.25x6.625 Reinforcement	34.00 - 36.92	Auto	0.0572
L55	32	PL1.25x6.625 Reinforcement	34.00 - 36.92	Auto	0.0572
L55	33	PL1.25x6.625 Reinforcement	34.00 - 36.92	Auto	0.0572
L55	43	PL1x4 Reinforcement	34.00 - 35.75	Auto	0.0000
L55	44	PL1x4 Reinforcement	34.00 - 35.75	Auto	0.0000
L55	45	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	47	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	48	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	49	PL1x4 Reinforcement	34.00 - 36.92	Auto	0.0000
L55	68	CCI-SFP-045100	34.00 - 35.08	Auto	0.0000
L55	70	CCI-SFP-045100	34.00 - 35.08	Auto	0.0000
L55	72	CCI-SFP-045100	34.00 - 36.92	Auto	0.0000
L55	74	CCI-SFP-060100	35.17 - 36.92	Auto	0.0000
L55	75	CCI-SFP-060100	35.17 - 36.92	Auto	0.0000
L56	31	PL1.25x6.625 Reinforcement	33.75 - 34.00	Auto	0.0394
L56	32	PL1.25x6.625 Reinforcement	33.75 - 34.00	Auto	0.0394
L56	33	PL1.25x6.625 Reinforcement	33.75 - 34.00	Auto	0.0394
L56	43	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	44	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	45	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	47	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L56	48	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	49	PL1x4 Reinforcement	33.75 - 34.00	Auto	0.0000
L56	68	CCI-SFP-045100	33.75 - 34.00	Auto	0.0000
L56	70	CCI-SFP-045100	33.75 - 34.00	Auto	0.0000
L56	72	CCI-SFP-045100	33.75 - 34.00	Auto	0.0000
L57	31	PL1.25x6.625 Reinforcement	29.75 - 33.75	Auto	0.0174
L57	32	PL1.25x6.625 Reinforcement	29.75 - 33.75	Auto	0.0174
L57	33	PL1.25x6.625 Reinforcement	29.75 - 33.75	Auto	0.0174
L57	43	PL1x4 Reinforcement	29.75 - 33.75	Auto	0.0000
L57	44	PL1x4 Reinforcement	29.75 - 33.75	Auto	0.0000
L57	45	PL1x4 Reinforcement	29.75 - 33.75	Auto	0.0000
L57	47	PL1x4 Reinforcement	32.25 - 33.75	Auto	0.0000
L57	48	PL1x4 Reinforcement	32.25 - 33.75	Auto	0.0000
L57	49	PL1x4 Reinforcement	32.25 - 33.75	Auto	0.0000
L57	68	CCI-SFP-045100	29.75 - 33.75	Auto	0.0000
L57	70	CCI-SFP-045100	29.75 - 33.75	Auto	0.0000
L57	72	CCI-SFP-045100	29.75 - 33.75	Auto	0.0000
L58	25	PL1.25x6.875 Reinforcement	29.50 - 29.75	Auto	0.0367
L58	26	PL1.25x6.875 Reinforcement	29.50 - 29.75	Auto	0.0367
L58	27	PL1.25x6.875 Reinforcement	29.50 - 29.75	Auto	0.0367
L58	43	PL1x4 Reinforcement	29.50 - 29.75	Auto	0.0000
L58	44	PL1x4 Reinforcement	29.50 - 29.75	Auto	0.0000
L58	45	PL1x4 Reinforcement	29.50 - 29.75	Auto	0.0000
L58	68	CCI-SFP-045100	29.50 - 29.75	Auto	0.0000
L58	70	CCI-SFP-045100	29.50 - 29.75	Auto	0.0000
L58	72	CCI-SFP-045100	29.50 - 29.75	Auto	0.0000
L59	25	PL1.25x6.875 Reinforcement	24.50 - 29.50	Auto	0.0123
L59	26	PL1.25x6.875 Reinforcement	24.50 - 29.50	Auto	0.0123
L59	27	PL1.25x6.875 Reinforcement	24.50 - 29.50	Auto	0.0123
L59	43	PL1x4 Reinforcement	24.50 - 29.50	Auto	0.0000
L59	44	PL1x4 Reinforcement	24.50 - 29.50	Auto	0.0000
L59	45	PL1x4 Reinforcement	24.50 - 29.50	Auto	0.0000
L59	63	CCI-SFP-060100	24.50 - 25.00	Auto	0.0000
L59	64	CCI-SFP-060100	24.50 - 25.00	Auto	0.0000
L59	66	CCI-SFP-060100	24.50 - 25.00	Auto	0.0000
L59	68	CCI-SFP-045100	24.50 - 29.50	Auto	0.0000
L59	70	CCI-SFP-045100	25.08 - 29.50	Auto	0.0000
L59	72	CCI-SFP-045100	25.08 - 29.50	Auto	0.0000
L60	25	PL1.25x6.875 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	26	PL1.25x6.875 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	27	PL1.25x6.875 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	43	PL1x4 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	44	PL1x4 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	45	PL1x4 Reinforcement	23.00 - 24.50	Auto	0.0000
L60	63	CCI-SFP-060100	23.00 - 24.50	Auto	0.0000
L60	64	CCI-SFP-060100	23.00 - 24.50	Auto	0.0000
L60	66	CCI-SFP-060100	23.00 - 24.50	Auto	0.0000
L60	68	CCI-SFP-045100	23.00 - 24.50	Auto	0.0000
L61	25	PL1.25x6.875 Reinforcement	22.75 - 23.00	Auto	0.0236
L61	26	PL1.25x6.875 Reinforcement	22.75 - 23.00	Auto	0.0236
L61	27	PL1.25x6.875 Reinforcement	22.75 - 23.00	Auto	0.0236
L61	43	PL1x4 Reinforcement	22.75 - 23.00	Auto	0.0000
L61	44	PL1x4 Reinforcement	22.75 - 23.00	Auto	0.0000
L61	45	PL1x4 Reinforcement	22.75 - 23.00	Auto	0.0000
L61	63	CCI-SFP-060100	22.75 - 23.00	Auto	0.0000
L61	64	CCI-SFP-060100	22.75 - 23.00	Auto	0.0000
L61	66	CCI-SFP-060100	22.75 - 23.00	Auto	0.0000
L61	68	CCI-SFP-045100	22.75 - 23.00	Auto	0.0000
L62	25	PL1.25x6.875 Reinforcement	21.58 - 22.75	Auto	0.0181
L62	26	PL1.25x6.875 Reinforcement	21.58 - 22.75	Auto	0.0181
L62	27	PL1.25x6.875 Reinforcement	21.58 - 22.75	Auto	0.0181

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L62	43	PL1x4 Reinforcement	21.58 - 22.75	Auto	0.0000
L62	44	PL1x4 Reinforcement	21.58 - 22.75	Auto	0.0000
L62	45	PL1x4 Reinforcement	21.58 - 22.75	Auto	0.0000
L62	63	CCI-SFP-060100	21.58 - 22.75	Auto	0.0000
L62	64	CCI-SFP-060100	21.58 - 22.75	Auto	0.0000
L62	66	CCI-SFP-060100	21.58 - 22.75	Auto	0.0000
L62	68	CCI-SFP-045100	21.58 - 22.75	Auto	0.0000
L63	25	PL1.25x6.875 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	26	PL1.25x6.875 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	27	PL1.25x6.875 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	43	PL1x4 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	44	PL1x4 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	45	PL1x4 Reinforcement	21.33 - 21.58	Auto	0.0000
L63	63	CCI-SFP-060100	21.33 - 21.58	Auto	0.0000
L63	64	CCI-SFP-060100	21.33 - 21.58	Auto	0.0000
L63	66	CCI-SFP-060100	21.33 - 21.58	Auto	0.0000
L63	68	CCI-SFP-045100	21.33 - 21.58	Auto	0.0000
L64	25	PL1.25x6.875 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	26	PL1.25x6.875 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	27	PL1.25x6.875 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	28	PL1.25x6.875 Reinforcement	16.33 - 16.42	Auto	0.0000
L64	29	PL1.25x6.875 Reinforcement	16.33 - 16.42	Auto	0.0000
L64	43	PL1x4 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	44	PL1x4 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	45	PL1x4 Reinforcement	16.33 - 21.33	Auto	0.0000
L64	63	CCI-SFP-060100	16.33 - 21.33	Auto	0.0000
L64	64	CCI-SFP-060100	16.33 - 21.33	Auto	0.0000
L64	66	CCI-SFP-060100	16.33 - 21.33	Auto	0.0000
L64	68	CCI-SFP-045100	20.08 - 21.33	Auto	0.0000
L65	25	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	26	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	27	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	28	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	29	PL1.25x6.875 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	43	PL1x4 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	44	PL1x4 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	45	PL1x4 Reinforcement	12.92 - 16.33	Auto	0.0000
L65	63	CCI-SFP-060100	12.92 - 16.33	Auto	0.0000
L65	64	CCI-SFP-060100	12.92 - 16.33	Auto	0.0000
L65	66	CCI-SFP-060100	12.92 - 16.33	Auto	0.0000
L66	25	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	26	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	27	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	28	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	29	PL1.25x6.875 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	43	PL1x4 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	44	PL1x4 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	45	PL1x4 Reinforcement	12.67 - 12.92	Auto	0.0000
L66	63	CCI-SFP-060100	12.67 - 12.92	Auto	0.0000
L66	64	CCI-SFP-060100	12.67 - 12.92	Auto	0.0000
L66	66	CCI-SFP-060100	12.67 - 12.92	Auto	0.0000
L67	25	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	26	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	27	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	28	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	29	PL1.25x6.875 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	43	PL1x4 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	44	PL1x4 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	45	PL1x4 Reinforcement	12.50 - 12.67	Auto	0.0000
L67	63	CCI-SFP-060100	12.50 - 12.67	Auto	0.0000
L67	64	CCI-SFP-060100	12.50 - 12.67	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L67	66	CCI-SFP-060100	12.50 - 12.67	Auto	0.0000
L68	25	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	26	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	27	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	28	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	29	PL1.25x6.875 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	43	PL1x4 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	44	PL1x4 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	45	PL1x4 Reinforcement	12.25 - 12.50	Auto	0.0000
L68	63	CCI-SFP-060100	12.25 - 12.50	Auto	0.0000
L68	64	CCI-SFP-060100	12.25 - 12.50	Auto	0.0000
L68	66	CCI-SFP-060100	12.25 - 12.50	Auto	0.0000
L69	25	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	26	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	27	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	28	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	29	PL1.25x6.875 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	43	PL1x4 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	44	PL1x4 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	45	PL1x4 Reinforcement	12.00 - 12.25	Auto	0.0000
L69	63	CCI-SFP-060100	12.00 - 12.25	Auto	0.0000
L69	64	CCI-SFP-060100	12.00 - 12.25	Auto	0.0000
L69	66	CCI-SFP-060100	12.00 - 12.25	Auto	0.0000
L70	25	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	26	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	27	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	28	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	29	PL1.25x6.875 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	43	PL1x4 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	44	PL1x4 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	45	PL1x4 Reinforcement	11.75 - 12.00	Auto	0.0000
L70	63	CCI-SFP-060100	11.75 - 12.00	Auto	0.0000
L70	64	CCI-SFP-060100	11.75 - 12.00	Auto	0.0000
L70	66	CCI-SFP-060100	11.75 - 12.00	Auto	0.0000
L71	25	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	26	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	27	PL1.25x6.875 Reinforcement	9.17 - 11.75	Auto	0.0000
L71	28	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	29	PL1.25x6.875 Reinforcement	8.50 - 11.75	Auto	0.0000
L71	43	PL1x4 Reinforcement	10.75 - 11.75	Auto	0.0000
L71	44	PL1x4 Reinforcement	10.75 - 11.75	Auto	0.0000
L71	45	PL1x4 Reinforcement	10.75 - 11.75	Auto	0.0000
L71	59	Transition Stiffener 1x7	8.50 - 10.50	Auto	0.0000
L71	60	Transition Stiffener 1x7	8.50 - 10.50	Auto	0.0000
L71	61	Transition Stiffener 1x7	8.50 - 10.50	Auto	0.0000
L71	63	CCI-SFP-060100	8.50 - 11.75	Auto	0.0000
L71	64	CCI-SFP-060100	8.50 - 11.75	Auto	0.0000
L71	66	CCI-SFP-060100	10.00 - 11.75	Auto	0.0000
L72	25	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	26	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	28	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	29	PL1.25x6.875 Reinforcement	8.25 - 8.50	Auto	0.0000
L72	59	Transition Stiffener 1x7	8.25 - 8.50	Auto	0.0000
L72	60	Transition Stiffener 1x7	8.25 - 8.50	Auto	0.0000
L72	61	Transition Stiffener 1x7	8.25 - 8.50	Auto	0.0000
L72	63	CCI-SFP-060100	8.25 - 8.50	Auto	0.0000
L72	64	CCI-SFP-060100	8.25 - 8.50	Auto	0.0000
L73	25	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000
L73	26	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000
L73	28	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000
L73	29	PL1.25x6.875 Reinforcement	7.00 - 8.25	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L73	59	Transition Stiffener 1x7	7.00 - 8.25	Auto	0.0000
L73	60	Transition Stiffener 1x7	7.00 - 8.25	Auto	0.0000
L73	61	Transition Stiffener 1x7	7.00 - 8.25	Auto	0.0000
L73	63	CCI-SFP-060100	7.00 - 8.25	Auto	0.0000
L73	64	CCI-SFP-060100	7.00 - 8.25	Auto	0.0000
L74	25	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	26	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	28	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	29	PL1.25x6.875 Reinforcement	6.75 - 7.00	Auto	0.0000
L74	59	Transition Stiffener 1x7	6.75 - 7.00	Auto	0.0000
L74	60	Transition Stiffener 1x7	6.75 - 7.00	Auto	0.0000
L74	61	Transition Stiffener 1x7	6.75 - 7.00	Auto	0.0000
L74	63	CCI-SFP-060100	6.75 - 7.00	Auto	0.0000
L74	64	CCI-SFP-060100	6.75 - 7.00	Auto	0.0000
L75	25	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	26	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	28	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	29	PL1.25x6.875 Reinforcement	1.75 - 6.75	Auto	0.0000
L75	59	Transition Stiffener 1x7	1.75 - 6.75	Auto	0.0000
L75	60	Transition Stiffener 1x7	1.75 - 6.75	Auto	0.0000
L75	61	Transition Stiffener 1x7	1.75 - 6.75	Auto	0.0000
L75	63	CCI-SFP-060100	5.00 - 6.75	Auto	0.0000
L75	64	CCI-SFP-060100	5.00 - 6.75	Auto	0.0000
L76	25	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	26	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	28	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	29	PL1.25x6.875 Reinforcement	0.00 - 1.75	Auto	0.0000
L76	59	Transition Stiffener 1x7	0.00 - 1.75	Auto	0.0000
L76	60	Transition Stiffener 1x7	0.00 - 1.75	Auto	0.0000
L76	61	Transition Stiffener 1x7	0.00 - 1.75	Auto	0.0000

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
(2) EPBQ-654L8H8-L2 w/ Mount Pipe	A	From Leg	4.000 0.000 -1.000	0.000	144.000	No Ice 1/2" Ice 1" Ice	14.860 15.720 16.590	6.250 7.020 7.800	0.119 0.228 0.351
(2) EPBQ-654L8H8-L2 w/ Mount Pipe	B	From Leg	4.000 0.000 -1.000	0.000	144.000	No Ice 1/2" Ice 1" Ice	14.860 15.720 16.590	6.250 7.020 7.800	0.119 0.228 0.351
(2) EPBQ-654L8H8-L2 w/ Mount Pipe	C	From Leg	4.000 0.000 -1.000	0.000	144.000	No Ice 1/2" Ice 1" Ice	14.860 15.720 16.590	6.250 7.020 7.800	0.119 0.228 0.351
HPA65R-BU8A w/ Mount Pipe	A	From Leg	4.000 0.000 -1.000	0.000	144.000	No Ice 1/2" Ice 1" Ice	8.100 8.860 9.640	6.940 7.690 8.450	0.087 0.170 0.266
HPA65R-BU8A w/ Mount Pipe	B	From Leg	4.000 0.000	0.000	144.000	No Ice 1/2" Ice	8.100 8.860	6.940 7.690	0.087 0.170

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
			-1.000			1" Ice	9.640	8.450	0.266
HPA65R-BU8A w/ Mount Pipe	C	From Leg	4.000	0.000	144.000	No Ice	8.100	6.940	0.087
			0.000			1/2" Ice	8.860	7.690	0.170
			-1.000			1" Ice	9.640	8.450	0.266
RRUS 4478 B14	A	From Leg	4.000	0.000	144.000	No Ice	1.843	1.059	0.060
			0.000			1/2" Ice	2.012	1.197	0.076
			-1.000			1" Ice	2.190	1.342	0.094
RRUS 4478 B14	B	From Leg	4.000	0.000	144.000	No Ice	1.843	1.059	0.060
			0.000			1/2" Ice	2.012	1.197	0.076
			-1.000			1" Ice	2.190	1.342	0.094
RRUS 4478 B14	C	From Leg	4.000	0.000	144.000	No Ice	1.843	1.059	0.060
			0.000			1/2" Ice	2.012	1.197	0.076
			-1.000			1" Ice	2.190	1.342	0.094
RADIO 4415 B30	A	From Leg	4.000	0.000	144.000	No Ice	1.643	0.639	0.043
			0.000			1/2" Ice	1.803	0.750	0.055
			-1.000			1" Ice	1.971	0.867	0.069
RADIO 4415 B30	B	From Leg	4.000	0.000	144.000	No Ice	1.643	0.639	0.043
			0.000			1/2" Ice	1.803	0.750	0.055
			-1.000			1" Ice	1.971	0.867	0.069
RADIO 4415 B30	C	From Leg	4.000	0.000	144.000	No Ice	1.643	0.639	0.043
			0.000			1/2" Ice	1.803	0.750	0.055
			-1.000			1" Ice	1.971	0.867	0.069
RRUS 4449 B5/B12	A	From Leg	4.000	0.000	144.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			-1.000			1" Ice	2.328	1.727	0.111
RRUS 4449 B5/B12	B	From Leg	4.000	0.000	144.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			-1.000			1" Ice	2.328	1.727	0.111
RRUS 4449 B5/B12	C	From Leg	4.000	0.000	144.000	No Ice	1.968	1.408	0.071
			0.000			1/2" Ice	2.144	1.564	0.090
			-1.000			1" Ice	2.328	1.727	0.111
RRUS 8843 B2/B66A	A	From Leg	4.000	0.000	144.000	No Ice	1.639	1.353	0.072
			0.000			1/2" Ice	1.799	1.500	0.090
			-1.000			1" Ice	1.966	1.655	0.110
RRUS 8843 B2/B66A	B	From Leg	4.000	0.000	144.000	No Ice	1.639	1.353	0.072
			0.000			1/2" Ice	1.799	1.500	0.090
			-1.000			1" Ice	1.966	1.655	0.110
RRUS 8843 B2/B66A	C	From Leg	4.000	0.000	144.000	No Ice	1.639	1.353	0.072
			0.000			1/2" Ice	1.799	1.500	0.090
			-1.000			1" Ice	1.966	1.655	0.110
DC6-48-60-18-8F	A	From Leg	4.000	0.000	144.000	No Ice	1.212	1.212	0.033
			0.000			1/2" Ice	1.892	1.892	0.055
			-1.000			1" Ice	2.105	2.105	0.080
DC6-48-60-18-8F	B	From Leg	4.000	0.000	144.000	No Ice	1.212	1.212	0.033
			0.000			1/2" Ice	1.892	1.892	0.055
			-1.000			1" Ice	2.105	2.105	0.080
DC6-48-60-18-8F	C	From Leg	4.000	0.000	144.000	No Ice	1.212	1.212	0.033
			0.000			1/2" Ice	1.892	1.892	0.055
			-1.000			1" Ice	2.105	2.105	0.080
(2) 8' x 2" Mount Pipe	A	From Leg	4.000	0.000	144.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044
			-1.000			1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000	0.000	144.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044
			-1.000			1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000	0.000	144.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			-1.000			1" Ice	3.401	3.401	0.063
F3P-12W	C	None		0.000	144.000	No Ice	25.520	25.520	1.999
						1/2" Ice	31.740	31.740	2.599
						1" Ice	40.100	40.100	3.414
Miscellaneous [NA 507-1]	C	None		0.000	144.000	No Ice	4.560	4.560	0.245
						1/2" Ice	6.390	6.390	0.311
						1" Ice	8.180	8.180	0.402
*									
(2) APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.000	0.000	130.000	No Ice	4.600	4.010	0.095
			0.000			1/2" Ice	5.050	4.450	0.160
			0.000			1" Ice	5.500	4.890	0.235
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.000	0.000	130.000	No Ice	4.600	4.010	0.095
			0.000			1/2" Ice	5.050	4.450	0.160
			0.000			1" Ice	5.500	4.890	0.235
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.000	0.000	130.000	No Ice	4.600	4.010	0.095
			0.000			1/2" Ice	5.050	4.450	0.160
			0.000			1" Ice	5.500	4.890	0.235
AAHC w/ Mount Pipe	A	From Leg	4.000	0.000	130.000	No Ice	4.409	2.691	0.115
			0.000			1/2" Ice	4.727	3.079	0.156
			0.000			1" Ice	5.055	3.486	0.202
(2) AAHC w/ Mount Pipe	B	From Leg	4.000	0.000	130.000	No Ice	4.409	2.691	0.115
			0.000			1/2" Ice	4.727	3.079	0.156
			0.000			1" Ice	5.055	3.486	0.202
(2) IBC1900HB-2	A	From Leg	4.000	0.000	130.000	No Ice	1.125	0.713	0.040
			0.000			1/2" Ice	1.270	0.837	0.049
			0.000			1" Ice	1.423	0.968	0.060
IBC1900HB-2	B	From Leg	4.000	0.000	130.000	No Ice	1.125	0.713	0.040
			0.000			1/2" Ice	1.270	0.837	0.049
			0.000			1" Ice	1.423	0.968	0.060
IBC1900HB-2	C	From Leg	4.000	0.000	130.000	No Ice	1.125	0.713	0.040
			0.000			1/2" Ice	1.270	0.837	0.049
			0.000			1" Ice	1.423	0.968	0.060
800 EXTERNAL NOTCH FILTER	A	From Leg	4.000	0.000	130.000	No Ice	0.660	0.321	0.011
			0.000			1/2" Ice	0.763	0.398	0.017
			0.000			1" Ice	0.873	0.483	0.024
800 EXTERNAL NOTCH FILTER	B	From Leg	4.000	0.000	130.000	No Ice	0.660	0.321	0.011
			0.000			1/2" Ice	0.763	0.398	0.017
			0.000			1" Ice	0.873	0.483	0.024
800 EXTERNAL NOTCH FILTER	C	From Leg	4.000	0.000	130.000	No Ice	0.660	0.321	0.011
			0.000			1/2" Ice	0.763	0.398	0.017
			0.000			1" Ice	0.873	0.483	0.024
1900MHZ RRH (65MHZ)	A	From Leg	4.000	0.000	130.000	No Ice	2.313	2.375	0.060
			0.000			1/2" Ice	2.517	2.581	0.084
			0.000			1" Ice	2.728	2.794	0.111
1900MHZ RRH (65MHZ)	B	From Leg	4.000	0.000	130.000	No Ice	2.313	2.375	0.060
			0.000			1/2" Ice	2.517	2.581	0.084
			0.000			1" Ice	2.728	2.794	0.111
1900MHZ RRH (65MHZ)	C	From Leg	4.000	0.000	130.000	No Ice	2.313	2.375	0.060
			0.000			1/2" Ice	2.517	2.581	0.084
			0.000			1" Ice	2.728	2.794	0.111
1900MHZ RRH (65MHZ)	A	From Leg	4.000	0.000	130.000	No Ice	2.313	2.375	0.060
			0.000			1/2" Ice	2.517	2.581	0.084
			-2.000			1" Ice	2.728	2.794	0.111
1900MHZ RRH (65MHZ)	B	From Leg	4.000	0.000	130.000	No Ice	2.313	2.375	0.060
			0.000			1/2" Ice	2.517	2.581	0.084
			-2.000			1" Ice	2.728	2.794	0.111
1900MHZ RRH (65MHZ)	C	From Leg	4.000	0.000	130.000	No Ice	2.313	2.375	0.060

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000			1/2" Ice	2.517	2.581	0.084
			-2.000			1" Ice	2.728	2.794	0.111
800MHZ RRH	A	From Leg	4.000	0.000	130.000	No Ice	2.134	1.773	0.053
			0.000			1/2" Ice	2.320	1.946	0.074
			0.000			1" Ice	2.512	2.127	0.098
800MHZ RRH	B	From Leg	4.000	0.000	130.000	No Ice	2.134	1.773	0.053
			0.000			1/2" Ice	2.320	1.946	0.074
			0.000			1" Ice	2.512	2.127	0.098
800MHZ RRH	C	From Leg	4.000	0.000	130.000	No Ice	2.134	1.773	0.053
			0.000			1/2" Ice	2.320	1.946	0.074
			0.000			1" Ice	2.512	2.127	0.098
(2) PD2DE-700/2700	A	From Leg	4.000	0.000	130.000	No Ice	0.114	0.114	0.001
			0.000			1/2" Ice	0.179	0.179	0.002
			0.000			1" Ice	0.250	0.250	0.004
(3) 6' x 2" Mount Pipe	A	From Leg	4.000	0.000	130.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
(3) 6' x 2" Mount Pipe	B	From Leg	4.000	0.000	130.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
(3) 6' x 2" Mount Pipe	C	From Leg	4.000	0.000	130.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
(3) 5' x 2" Pipe Mount	A	From Leg	4.000	0.000	130.000	No Ice	1.188	1.188	0.018
			0.000			1/2" Ice	1.496	1.496	0.027
			0.000			1" Ice	1.807	1.807	0.040
(3) 5' x 2" Pipe Mount	B	From Leg	4.000	0.000	130.000	No Ice	1.188	1.188	0.018
			0.000			1/2" Ice	1.496	1.496	0.027
			0.000			1" Ice	1.807	1.807	0.040
(4) 5' x 2" Pipe Mount	C	From Leg	4.000	0.000	130.000	No Ice	1.188	1.188	0.018
			0.000			1/2" Ice	1.496	1.496	0.027
			0.000			1" Ice	1.807	1.807	0.040
Pipe Mount [PM 601-3]	C	None		0.000	130.000	No Ice	3.170	3.170	0.195
						1/2" Ice	3.790	3.790	0.232
						1" Ice	4.420	4.420	0.279
Platform Mount [LP 602-1]	C	None		0.000	130.000	No Ice	31.070	31.070	1.343
						1/2" Ice	34.820	34.820	1.967
						1" Ice	38.480	38.480	2.669
*									
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000	0.000	120.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000	0.000	120.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000	0.000	120.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
TA08025-B604	A	From Leg	4.000	0.000	120.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100
TA08025-B604	B	From Leg	4.000	0.000	120.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100
TA08025-B604	C	From Leg	4.000	0.000	120.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100

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
TA08025-B605	A	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	B	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
TA08025-B605	C	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	1.964 2.138 2.320	1.129 1.267 1.411	0.075 0.093 0.114
RDIDC-9181-PF-48	A	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	2.012 2.189 2.373	1.168 1.311 1.461	0.022 0.040 0.060
(2) 8' x 2" Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	120.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
Commscope MC-PK8-DSH	C	None		0.000	120.000	No Ice 1/2" Ice 1" Ice	34.240 62.950 91.660	34.240 62.950 91.660	1.749 2.099 2.450
*									
SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	4.090 4.490 4.890	3.300 3.680 4.070	0.066 0.130 0.204
SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	4.090 4.490 4.890	3.300 3.680 4.070	0.066 0.130 0.204
SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	4.090 4.490 4.890	3.300 3.680 4.070	0.066 0.130 0.204
BXA-80063/4CF w/ Mount Pipe	A	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	4.830 5.350 5.880	3.650 4.140 4.640	0.028 0.065 0.109
BXA-80063/4CF w/ Mount Pipe	B	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	4.830 5.350 5.880	3.650 4.140 4.640	0.028 0.065 0.109
BXA-80063/4CF w/ Mount Pipe	C	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	4.830 5.350 5.880	3.650 4.140 4.640	0.028 0.065 0.109
BULLET III	C	From Leg	4.000 0.000 3.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	0.066 0.101 0.144	0.066 0.101 0.144	0.000 0.002 0.003
RFV01U-D1A	A	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	1.875 2.045 2.223	1.250 1.393 1.543	0.084 0.103 0.124
RFV01U-D1A	B	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	1.875 2.045 2.223	1.250 1.393 1.543	0.084 0.103 0.124
RFV01U-D1A	C	From Leg	4.000 0.000 0.000	0.000	110.000	No Ice 1/2" Ice 1" Ice	1.875 2.045 2.223	1.250 1.393 1.543	0.084 0.103 0.124
RFV01U-D2A	A	From Leg	4.000 0.000	0.000	110.000	No Ice 1/2" Ice	1.875 2.045	1.013 1.145	0.070 0.087

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.000			1" Ice	2.223	1.284	0.106
RFV01U-D2A	B	From Leg	4.000	0.000	110.000	No Ice	1.875	1.013	0.070
			0.000			1/2" Ice	2.045	1.145	0.087
			0.000			1" Ice	2.223	1.284	0.106
RFV01U-D2A	C	From Leg	4.000	0.000	110.000	No Ice	1.875	1.013	0.070
			0.000			1/2" Ice	2.045	1.145	0.087
			0.000			1" Ice	2.223	1.284	0.106
RVZDC-6627-PF-48	C	From Leg	4.000	0.000	110.000	No Ice	3.792	2.514	0.032
			0.000			1/2" Ice	4.044	2.727	0.063
			0.000			1" Ice	4.303	2.947	0.099
Sub6 Antenna - VZS01 w/ Mount Pipe	A	From Leg	4.000	0.000	110.000	No Ice	4.915	2.687	0.101
			0.000			1/2" Ice	5.264	3.151	0.141
			0.000			1" Ice	5.623	3.631	0.186
Sub6 Antenna - VZS01 w/ Mount Pipe	B	From Leg	4.000	0.000	110.000	No Ice	4.915	2.687	0.101
			0.000			1/2" Ice	5.264	3.151	0.141
			0.000			1" Ice	5.623	3.631	0.186
Sub6 Antenna - VZS01 w/ Mount Pipe	C	From Leg	4.000	0.000	110.000	No Ice	4.915	2.687	0.101
			0.000			1/2" Ice	5.264	3.151	0.141
			0.000			1" Ice	5.623	3.631	0.186
4' x 2" Pipe Mount	A	From Leg	4.000	0.000	110.000	No Ice	0.785	0.785	0.029
			0.000			1/2" Ice	1.028	1.028	0.035
			0.000			1" Ice	1.281	1.281	0.044
4' x 2" Pipe Mount	B	From Leg	4.000	0.000	110.000	No Ice	0.785	0.785	0.029
			0.000			1/2" Ice	1.028	1.028	0.035
			0.000			1" Ice	1.281	1.281	0.044
4' x 2" Pipe Mount	C	From Leg	4.000	0.000	110.000	No Ice	0.785	0.785	0.029
			0.000			1/2" Ice	1.028	1.028	0.035
			0.000			1" Ice	1.281	1.281	0.044
(3) 3' x 2" Pipe Mount	A	From Leg	4.000	0.000	110.000	No Ice	0.583	0.583	0.011
			0.000			1/2" Ice	0.770	0.770	0.017
			0.000			1" Ice	0.967	0.967	0.024
(3) 3' x 2" Pipe Mount	B	From Leg	4.000	0.000	110.000	No Ice	0.583	0.583	0.011
			0.000			1/2" Ice	0.770	0.770	0.017
			0.000			1" Ice	0.967	0.967	0.024
(3) 3' x 2" Pipe Mount	C	From Leg	4.000	0.000	110.000	No Ice	0.583	0.583	0.011
			0.000			1/2" Ice	0.770	0.770	0.017
			0.000			1" Ice	0.967	0.967	0.024
6' x 2" Mount Pipe	A	From Leg	4.000	0.000	110.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	B	From Leg	4.000	0.000	110.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
6' x 2" Mount Pipe	C	From Leg	4.000	0.000	110.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
Platform Mount [LP 602-1_KCKR]	C	None		0.000	110.000	No Ice	42.300	42.300	1.618
						1/2" Ice	49.040	49.040	2.384
						1" Ice	55.870	55.870	3.267
*									
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.000	0.000	100.000	No Ice	14.690	6.870	0.186
			0.000			1/2" Ice	15.460	7.550	0.315
			1.000			1" Ice	16.230	8.250	0.458
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.000	0.000	100.000	No Ice	14.690	6.870	0.186
			0.000			1/2" Ice	15.460	7.550	0.315
			1.000			1" Ice	16.230	8.250	0.458
APXVAARR24_43-U-NA20	C	From Leg	4.000	0.000	100.000	No Ice	14.690	6.870	0.186

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
w/ Mount Pipe			0.000			1/2" Ice	15.460	7.550	0.315
			1.000			1" Ice	16.230	8.250	0.458
AIR 21 B2A/B4P w/ Mount Pipe	A	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	3.140 3.450	2.580 2.880	0.103 0.154
			1.000			1" Ice	3.760	3.180	0.214
AIR 21 B2A/B4P w/ Mount Pipe	B	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	3.140 3.450	2.580 2.880	0.103 0.154
			1.000			1" Ice	3.760	3.180	0.214
AIR 21 B2A/B4P w/ Mount Pipe	C	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	3.140 3.450	2.580 2.880	0.103 0.154
			1.000			1" Ice	3.760	3.180	0.214
AIR -32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	3.760 4.120	3.150 3.490	0.194 0.252
			1.000			1" Ice	4.480	3.840	0.320
AIR -32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	3.760 4.120	3.150 3.490	0.194 0.252
			1.000			1" Ice	4.480	3.840	0.320
AIR -32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	3.760 4.120	3.150 3.490	0.194 0.252
			1.000			1" Ice	4.480	3.840	0.320
ATMAA1412D-1A20	A	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	0.407 0.497	1.000 1.126	0.013 0.021
			1.000			1" Ice	0.593	1.259	0.030
ATMAA1412D-1A20	B	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	0.407 0.497	1.000 1.126	0.013 0.021
			1.000			1" Ice	0.593	1.259	0.030
ATMAA1412D-1A20	C	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	0.407 0.497	1.000 1.126	0.013 0.021
			1.000			1" Ice	0.593	1.259	0.030
RADIO 4449 B12/B71	A	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	1.650 1.810	1.163 1.301	0.074 0.090
			3.000			1" Ice	1.978	1.447	0.109
RADIO 4449 B12/B71	B	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	1.650 1.810	1.163 1.301	0.074 0.090
			3.000			1" Ice	1.978	1.447	0.109
RADIO 4449 B12/B71	C	From Leg	4.000 0.000	0.000	100.000	No Ice 1/2" Ice	1.650 1.810	1.163 1.301	0.074 0.090
			3.000			1" Ice	1.978	1.447	0.109
Platform Mount [LP 303-1]	C	None		0.000	100.000	No Ice 1/2" Ice	14.690 18.010	14.690 18.010	1.250 1.569
						1" Ice	21.340	21.340	1.942
*									
KS24019-L112A	C	From Leg	4.000 0.000	0.000	50.000	No Ice 1/2" Ice	0.141 0.198	0.141 0.198	0.005 0.007
			1.000			1" Ice	0.262	0.262	0.009
Side Arm Mount [SO 701-1]	C	From Leg	0.500 0.000	0.000	50.000	No Ice 1/2" Ice	0.850 1.140	1.670 2.340	0.065 0.079
			0.000			1" Ice	1.430	3.010	0.093
*									
*									
*									

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 ft²	Weight K
VHLP2-23	A	Paraboloid w/Shroud (HP)	From Leg	4.000 0.000 3.000	0.000		130.000	2.175	No Ice 1/2" Ice 1" Ice	3.715 4.006 4.296	0.031 0.052 0.072
VHLP2-23	B	Paraboloid w/Shroud (HP)	From Leg	4.000 0.000 3.000	-50.000		130.000	2.175	No Ice 1/2" Ice 1" Ice	3.715 4.006 4.296	0.031 0.052 0.072
VHLP2-18	C	Paraboloid w/Shroud (HP)	From Leg	4.000 0.000 3.000	-60.000		130.000	2.175	No Ice 1/2" Ice 1" Ice	3.715 4.006 4.296	0.031 0.052 0.072

*

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
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

Comb. No.	Description
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	144.25 - 139.25	Pole	Max Tension	21	0.000	-0.000	-0.000
			Max. Compression	26	-9.706	-0.062	0.045
			Max. Mx	8	-4.532	-24.155	0.014
			Max. My	2	-4.528	-0.023	24.166
			Max. Vy	8	5.984	-24.155	0.014
			Max. Vx	2	-5.988	-0.023	24.166
			Max. Torque	6			-0.000
L2	139.25 - 134.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-10.103	-0.122	0.089
			Max. Mx	8	-4.817	-51.399	0.027
			Max. My	2	-4.813	-0.046	51.430
			Max. Vy	8	6.121	-51.399	0.027
			Max. Vx	2	-6.128	-0.046	51.430
			Max. Torque	6			-0.000
L3	134.75 - 134.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-10.150	-0.128	0.094
			Max. Mx	8	-4.853	-54.464	0.029
			Max. My	2	-4.849	-0.049	54.497
			Max. Vy	8	6.135	-54.464	0.029
			Max. Vx	2	-6.142	-0.049	54.497
			Max. Torque	6			-0.000
L4	134.25 - 129.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-17.901	-1.803	1.551
			Max. Mx	8	-8.618	-90.469	0.773
			Max. My	2	-8.592	-1.183	90.632
			Max. Vy	20	-10.757	88.503	0.608
			Max. Vx	2	-10.864	-1.183	90.632
			Max. Torque	23			0.724
L5	129.25 - 124.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-18.320	-1.907	1.626
			Max. Mx	8	-8.945	-144.447	0.707
			Max. My	2	-8.921	-1.222	145.301
			Max. Vy	20	-10.914	142.623	0.667
			Max. Vx	2	-11.017	-1.222	145.301
			Max. Torque	15			0.445
L6	124.25 -	Pole	Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
	123.416						
			Max. Compression	26	-18.403	-1.923	1.638
			Max. Mx	8	-9.005	-153.524	0.695
			Max. My	2	-8.983	-1.228	154.491
			Max. Vy	20	-10.941	151.725	0.677
			Max. Vx	2	-11.039	-1.228	154.491
			Max. Torque	15			0.444
L7	123.416 - 123.166	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-18.441	-1.929	1.642
			Max. Mx	8	-9.043	-156.251	0.692
			Max. My	2	-9.021	-1.230	157.251
			Max. Vy	20	-10.947	154.459	0.680
			Max. Vx	2	-11.043	-1.230	157.251
			Max. Torque	15			0.444
L8	123.166 - 118.166	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-24.108	-2.034	2.010
			Max. Mx	8	-12.497	-216.563	0.730
			Max. My	2	-12.475	-1.270	218.313
			Max. Vy	20	-13.984	214.912	0.844
			Max. Vx	2	-14.077	-1.270	218.313
			Max. Torque	7			0.575
L9	118.166 - 113.166	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-24.926	-2.156	2.093
			Max. Mx	8	-13.100	-286.915	0.667
			Max. My	2	-13.083	-1.318	289.236
			Max. Vy	20	-14.235	285.391	0.907
			Max. Vx	2	-14.303	-1.318	289.236
			Max. Torque	7			0.575
L10	113.166 - 109.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-32.060	-1.805	1.908
			Max. Mx	8	-16.735	-340.907	0.554
			Max. My	2	-16.722	-1.233	343.615
			Max. Vy	20	-17.954	339.793	0.871
			Max. Vx	2	-17.980	-1.233	343.615
			Max. Torque	7			0.575
L11	109.5 - 109.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-32.114	-1.811	1.913
			Max. Mx	8	-16.789	-345.386	0.555
			Max. My	2	-16.777	-1.239	348.109
			Max. Vy	20	-17.956	344.278	0.871
			Max. Vx	2	-17.980	-1.239	348.109
			Max. Torque	7			0.574
L12	109.25 - 104.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.105	-1.910	2.005
			Max. Mx	8	-17.519	-426.603	0.569
			Max. My	2	-17.512	-1.355	429.477
			Max. Vy	20	-18.219	425.609	0.858
			Max. Vx	2	-18.194	-1.355	429.477
			Max. Torque	7			0.574
L13	104.75 - 104.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.176	-1.916	2.010
			Max. Mx	8	-17.583	-431.150	0.570
			Max. My	2	-17.577	-1.362	434.026
			Max. Vy	20	-18.231	430.162	0.858
			Max. Vx	2	-18.201	-1.362	434.026
			Max. Torque	7			0.574

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L14	104.5 - 102.416	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.773	-1.961	2.043
			Max. Mx	8	-18.010	-469.264	0.576
			Max. My	2	-18.008	-1.416	472.109
			Max. Vy	20	-18.422	468.328	0.852
			Max. Vx	2	-18.354	-1.416	472.109
			Max. Torque	7			0.574
L15	102.416 - 102.166	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.841	-1.967	2.047
			Max. Mx	8	-18.067	-473.861	0.577
			Max. My	2	-18.066	-1.422	476.698
			Max. Vy	20	-18.436	472.932	0.851
			Max. Vx	2	-18.361	-1.422	476.698
			Max. Torque	7			0.574
L16	102.166 - 98.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-40.577	-2.046	2.079
			Max. Mx	8	-22.094	-541.892	0.586
			Max. My	2	-22.095	-1.511	544.547
			Max. Vy	20	-21.064	541.047	0.840
			Max. Vx	2	-20.966	-1.511	544.547
			Max. Torque	7			0.574
L17	98.75 - 98.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-40.663	-2.053	2.081
			Max. Mx	8	-22.176	-547.148	0.587
			Max. My	2	-22.177	-1.518	549.787
			Max. Vy	20	-21.066	546.309	0.839
			Max. Vx	2	-20.968	-1.518	549.787
			Max. Torque	7			0.573
L18	98.5 - 97.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-41.009	-2.078	2.084
			Max. Mx	8	-22.431	-568.213	0.589
			Max. My	2	-22.432	-1.544	570.788
			Max. Vy	20	-21.141	567.398	0.835
			Max. Vx	2	-21.045	-1.544	570.788
			Max. Torque	7			0.573
L19	97.5 - 97.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-41.092	-2.084	2.085
			Max. Mx	8	-22.503	-573.489	0.589
			Max. My	2	-22.504	-1.551	576.049
			Max. Vy	20	-21.149	572.681	0.834
			Max. Vx	2	-21.054	-1.551	576.049
			Max. Torque	7			0.573
L20	97.25 - 92	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-41.653	-2.135	2.092
			Max. Mx	8	-22.918	-609.429	0.593
			Max. My	2	-22.919	-1.596	611.887
			Max. Vy	20	-21.272	608.662	0.827
			Max. Vx	2	-21.181	-1.596	611.887
			Max. Torque	7			0.572
L21	92 - 90.552	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-44.218	-2.288	2.114
			Max. Mx	8	-24.975	-716.673	0.602
			Max. My	2	-24.974	-1.730	718.873
			Max. Vy	20	-21.695	716.028	0.807
			Max. Vx	2	-21.617	-1.730	718.873
			Max. Torque	7			0.572
L22	90.552 - 89.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-44.678	-2.323	2.119

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	-25.337	-744.904	0.605
			Max. My	2	-25.336	-1.765	747.046
			Max. Vy	20	-21.771	744.290	0.802
			Max. Vx	2	-21.696	-1.765	747.046
			Max. Torque	7			0.572
L23	89.25 - 89	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-44.778	-2.331	2.120
			Max. Mx	8	-25.430	-750.336	0.606
			Max. My	2	-25.429	-1.772	752.468
			Max. Vy	20	-21.773	749.728	0.801
			Max. Vx	2	-21.699	-1.772	752.468
			Max. Torque	7			0.572
L24	89 - 88.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-45.078	-2.349	2.121
			Max. Mx	8	-25.660	-766.660	0.607
			Max. My	2	-25.658	-1.792	768.762
			Max. Vy	20	-21.829	766.068	0.798
			Max. Vx	2	-21.761	-1.792	768.762
			Max. Torque	7			0.572
L25	88.25 - 88	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-45.166	-2.356	2.123
			Max. Mx	8	-25.733	-772.109	0.608
			Max. My	2	-25.731	-1.799	774.202
			Max. Vy	20	-21.839	771.523	0.797
			Max. Vx	2	-21.772	-1.799	774.202
			Max. Torque	7			0.572
L26	88 - 87.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-45.225	-2.361	2.123
			Max. Mx	8	-25.779	-775.752	0.608
			Max. My	2	-25.778	-1.803	777.839
			Max. Vy	20	-21.848	775.169	0.797
			Max. Vx	2	-21.782	-1.803	777.839
			Max. Torque	7			0.572
L27	87.833 - 87.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-45.307	-2.367	2.124
			Max. Mx	8	-25.840	-781.207	0.608
			Max. My	2	-25.839	-1.810	783.285
			Max. Vy	20	-21.861	780.630	0.796
			Max. Vx	2	-21.796	-1.810	783.285
			Max. Torque	7			0.572
L28	87.583 - 82.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-46.864	-2.496	2.151
			Max. Mx	8	-27.084	-890.881	0.618
			Max. My	2	-27.082	-1.944	892.805
			Max. Vy	20	-22.091	890.413	0.775
			Max. Vx	2	-22.033	-1.944	892.805
			Max. Torque	7			0.572
L29	82.583 - 77.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.430	-2.625	2.189
			Max. Mx	8	-28.365	-1001.570	0.627
			Max. My	2	-28.362	-2.079	1003.399
			Max. Vy	20	-22.282	1001.210	0.754
			Max. Vx	2	-22.240	-2.079	1003.399
			Max. Torque	7			0.571
L30	77.583 - 77	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.621	-2.640	2.193
			Max. Mx	8	-28.524	-1014.538	0.628
			Max. My	2	-28.520	-2.095	1016.363

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-22.296	1014.191	0.752
			Max. Vx	2	-22.259	-2.095	1016.363
			Max. Torque	7			0.571
L31	77 - 76.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.716	-2.647	2.195
			Max. Mx	8	-28.606	-1020.103	0.628
			Max. My	2	-28.602	-2.101	1021.927
			Max. Vy	20	-22.301	1019.761	0.751
			Max. Vx	2	-22.266	-2.101	1021.927
			Max. Torque	7			0.571
L32	76.75 - 76.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.874	-2.657	2.198
			Max. Mx	8	-28.730	-1029.393	0.629
			Max. My	2	-28.726	-2.113	1031.216
			Max. Vy	20	-22.324	1029.060	0.749
			Max. Vx	2	-22.293	-2.113	1031.216
			Max. Torque	7			0.571
L33	76.333 - 76.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-48.965	-2.664	2.200
			Max. Mx	8	-28.805	-1034.967	0.630
			Max. My	2	-28.800	-2.119	1036.790
			Max. Vy	20	-22.334	1034.639	0.748
			Max. Vx	2	-22.305	-2.119	1036.790
			Max. Torque	7			0.571
L34	76.083 - 74.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.636	-2.717	2.225
			Max. Mx	8	-29.317	-1075.926	0.633
			Max. My	2	-29.312	-2.169	1077.766
			Max. Vy	20	-22.448	1075.637	0.740
			Max. Vx	2	-22.434	-2.169	1077.766
			Max. Torque	7			0.571
L35	74.25 - 74	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.731	-2.726	2.231
			Max. Mx	8	-29.414	-1081.525	0.633
			Max. My	2	-29.408	-2.175	1083.369
			Max. Vy	20	-22.436	1081.241	0.739
			Max. Vx	2	-22.423	-2.175	1083.369
			Max. Torque	7			0.571
L36	74 - 73.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.827	-2.735	2.236
			Max. Mx	8	-29.489	-1087.127	0.634
			Max. My	2	-29.484	-2.182	1088.976
			Max. Vy	20	-22.449	1086.848	0.738
			Max. Vx	2	-22.438	-2.182	1088.976
			Max. Torque	7			0.571
L37	73.75 - 73.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.925	-2.743	2.241
			Max. Mx	8	-29.568	-1092.732	0.634
			Max. My	2	-29.563	-2.189	1094.587
			Max. Vy	20	-22.462	1092.459	0.737
			Max. Vx	2	-22.453	-2.189	1094.587
			Max. Torque	7			0.571
L38	73.5 - 68.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-51.887	-2.906	2.337
			Max. Mx	8	-31.131	-1205.510	0.643
			Max. My	2	-31.123	-2.324	1207.571
			Max. Vy	20	-22.727	1205.340	0.716
			Max. Vx	2	-22.756	-2.324	1207.571
			Max. Torque	7			0.571
L39	68.5 - 63.5	Pole	Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-53.867	-3.072	2.435
			Max. Mx	8	-32.722	-1319.537	0.652
			Max. My	2	-32.713	-2.460	1321.979
			Max. Vy	20	-22.973	1319.468	0.695
			Max. Vx	2	-23.035	-2.460	1321.979
			Max. Torque	7			0.570
L40	63.5 - 60.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-55.092	-3.172	2.493
			Max. Mx	8	-33.691	-1388.535	0.658
			Max. My	2	-33.682	-2.541	1391.281
			Max. Vy	20	-23.116	1388.525	0.683
			Max. Vx	2	-23.195	-2.541	1391.281
			Max. Torque	7			0.570
L41	60.5 - 60.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-55.197	-3.181	2.499
			Max. Mx	8	-33.782	-1394.304	0.658
			Max. My	2	-33.772	-2.548	1397.078
			Max. Vy	20	-23.115	1394.300	0.682
			Max. Vx	2	-23.196	-2.548	1397.078
			Max. Torque	7			0.570
L42	60.25 - 59.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-55.510	-3.206	2.513
			Max. Mx	20	-34.018	1411.639	0.679
			Max. My	2	-34.011	-2.568	1414.488
			Max. Vy	20	-23.158	1411.639	0.679
			Max. Vx	2	-23.243	-2.568	1414.488
			Max. Torque	7			0.570
L43	59.5 - 59.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-55.619	-3.215	2.518
			Max. Mx	20	-34.110	1417.425	0.678
			Max. My	2	-34.102	-2.575	1420.298
			Max. Vy	20	-23.163	1417.425	0.678
			Max. Vx	2	-23.249	-2.575	1420.298
			Max. Torque	7			0.570
L44	59.25 - 54.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-57.736	-3.383	2.615
			Max. Mx	20	-35.808	1533.764	0.657
			Max. My	2	-35.802	-2.711	1537.125
			Max. Vy	20	-23.413	1533.764	0.657
			Max. Vx	2	-23.499	-2.711	1537.125
			Max. Torque	7			0.570
L45	54.25 - 45.802	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.545	-3.508	2.686
			Max. Mx	20	-37.276	1633.562	0.639
			Max. My	2	-37.270	-2.828	1637.339
			Max. Vy	20	-23.606	1633.562	0.639
			Max. Vx	2	-23.692	-2.828	1637.339
			Max. Torque	7			0.570
L46	45.802 - 44.802	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-63.312	-3.462	2.652
			Max. Mx	20	-40.408	1757.460	0.588
			Max. My	2	-40.402	-2.777	1761.578
			Max. Vy	20	-23.999	1757.460	0.588
			Max. Vx	2	-24.096	-2.777	1761.578
			Max. Torque	7			0.569
L47	44.802 - 43.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-63.848	-3.492	2.657
			Max. Mx	20	-40.842	1786.710	0.596
			Max. My	2	-40.836	-2.799	1790.963

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-24.053	1786.710	0.596
			Max. Vx	2	-24.153	-2.799	1790.963
			Max. Torque	7			0.569
L48	43.583 - 43.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-63.963	-3.499	2.658
			Max. Mx	20	-40.948	1792.716	0.597
			Max. My	2	-40.942	-2.803	1796.997
			Max. Vy	20	-24.046	1792.716	0.597
			Max. Vx	2	-24.146	-2.803	1796.997
			Max. Torque	7			0.569
L49	43.333 - 43.166	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-64.039	-3.504	2.659
			Max. Mx	20	-41.012	1796.730	0.598
			Max. My	2	-41.006	-2.806	1801.030
			Max. Vy	20	-24.052	1796.730	0.598
			Max. Vx	2	-24.153	-2.806	1801.030
			Max. Torque	7			0.569
L50	43.166 - 42.916	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-64.159	-3.509	2.660
			Max. Mx	20	-41.110	1802.741	0.600
			Max. My	2	-41.104	-2.811	1807.069
			Max. Vy	20	-24.064	1802.741	0.600
			Max. Vx	2	-24.165	-2.811	1807.069
			Max. Torque	7			0.569
L51	42.916 - 39	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.033	-3.611	2.665
			Max. Mx	20	-42.641	1897.248	0.623
			Max. My	2	-42.635	-2.880	1902.034
			Max. Vy	20	-24.252	1897.248	0.623
			Max. Vx	2	-24.361	-2.880	1902.034
			Max. Torque	7			0.569
L52	39 - 38.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.158	-3.619	2.665
			Max. Mx	20	-42.756	1903.304	0.624
			Max. My	2	-42.750	-2.884	1908.121
			Max. Vy	20	-24.244	1903.304	0.624
			Max. Vx	2	-24.353	-2.884	1908.121
			Max. Torque	7			0.569
L53	38.75 - 37.166	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-66.952	-3.663	2.662
			Max. Mx	20	-43.397	1941.737	0.634
			Max. My	2	-43.392	-2.912	1946.749
			Max. Vy	20	-24.336	1941.737	0.634
			Max. Vx	2	-24.448	-2.912	1946.749
			Max. Torque	7			0.569
L54	37.166 - 36.916	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-67.075	-3.670	2.662
			Max. Mx	20	-43.512	1947.813	0.635
			Max. My	2	-43.506	-2.916	1952.856
			Max. Vy	20	-24.324	1947.813	0.635
			Max. Vx	2	-24.436	-2.916	1952.856
			Max. Torque	7			0.569
L55	36.916 - 34	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-68.515	-3.748	2.672
			Max. Mx	20	-44.676	2018.862	0.653
			Max. My	2	-44.671	-2.968	2024.278
			Max. Vy	20	-24.460	2018.862	0.653

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	2	-24.578	-2.968	2024.278
			Max. Torque	7			0.569
L56	34 - 33.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-68.636	-3.755	2.675
			Max. Mx	20	-44.787	2024.968	0.654
			Max. My	2	-44.781	-2.972	2030.417
			Max. Vy	20	-24.447	2024.968	0.654
			Max. Vx	2	-24.565	-2.972	2030.417
			Max. Torque	7			0.569
L57	33.75 - 29.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-70.532	-3.858	2.704
			Max. Mx	20	-46.340	2122.975	0.678
			Max. My	2	-46.335	-3.043	2128.962
			Max. Vy	20	-24.602	2122.975	0.678
			Max. Vx	2	-24.727	-3.043	2128.962
			Max. Torque	7			0.569
L58	29.75 - 29.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-70.651	-3.865	2.707
			Max. Mx	20	-46.447	2129.119	0.680
			Max. My	2	-46.442	-3.048	2135.140
			Max. Vy	20	-24.597	2129.119	0.680
			Max. Vx	2	-24.721	-3.048	2135.140
			Max. Torque	7			0.569
L59	29.5 - 24.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.033	-4.004	2.745
			Max. Mx	20	-48.426	2252.447	0.710
			Max. My	2	-48.422	-3.137	2259.161
			Max. Vy	20	-24.781	2252.447	0.710
			Max. Vx	2	-24.907	-3.137	2259.161
			Max. Torque	7			0.569
L60	24.5 - 23	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.764	-4.065	2.758
			Max. Mx	20	-49.024	2289.611	0.719
			Max. My	2	-49.020	-3.163	2296.534
			Max. Vy	20	-24.843	2289.611	0.719
			Max. Vx	2	-24.968	-3.163	2296.534
			Max. Torque	7			0.569
L61	23 - 22.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.895	-4.076	2.761
			Max. Mx	20	-49.147	2295.813	0.721
			Max. My	2	-49.143	-3.168	2302.770
			Max. Vy	20	-24.827	2295.813	0.721
			Max. Vx	2	-24.952	-3.168	2302.770
			Max. Torque	7			0.569
L62	22.75 - 21.583	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-74.508	-4.123	2.770
			Max. Mx	20	-49.649	2324.794	0.728
			Max. My	2	-49.646	-3.189	2331.914
			Max. Vy	20	-24.889	2324.794	0.728
			Max. Vx	2	-25.014	-3.189	2331.914
			Max. Torque	7			0.569
L63	21.583 - 21.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-74.635	-4.134	2.773
			Max. Mx	20	-49.763	2331.010	0.729
			Max. My	2	-49.760	-3.193	2338.164
			Max. Vy	20	-24.882	2331.010	0.729
			Max. Vx	2	-25.007	-3.193	2338.164
			Max. Torque	7			0.569
L64	21.333 - 16.333	Pole	Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-77.147	-4.316	2.801
			Max. Mx	20	-51.866	2455.761	0.760
			Max. My	2	-51.863	-3.283	2463.610
			Max. Vy	20	-25.066	2455.761	0.760
			Max. Vx	2	-25.191	-3.283	2463.610
			Max. Torque	7			0.569
L65	16.333 - 12.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-78.907	-4.406	2.756
			Max. Mx	20	-53.322	2541.501	0.781
			Max. My	2	-53.320	-3.344	2549.797
			Max. Vy	20	-25.200	2541.501	0.781
			Max. Vx	2	-25.308	-3.344	2549.797
			Max. Torque	7			0.569
L66	12.917 - 12.667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.045	-4.412	2.753
			Max. Mx	20	-53.447	2547.794	0.782
			Max. My	2	-53.446	-3.348	2556.120
			Max. Vy	20	-25.192	2547.794	0.782
			Max. Vx	2	-25.298	-3.348	2556.120
			Max. Torque	7			0.569
L67	12.667 - 12.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.137	-4.417	2.751
			Max. Mx	20	-53.526	2551.999	0.783
			Max. My	2	-53.524	-3.351	2560.345
			Max. Vy	20	-25.198	2551.999	0.783
			Max. Vx	2	-25.303	-3.351	2560.345
			Max. Torque	7			0.569
L68	12.5 - 12.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.263	-4.423	2.748
			Max. Mx	20	-53.629	2558.296	0.785
			Max. My	2	-53.627	-3.356	2566.671
			Max. Vy	20	-25.208	2558.296	0.785
			Max. Vx	2	-25.312	-3.356	2566.671
			Max. Torque	7			0.569
L69	12.25 - 12	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.389	-4.430	2.745
			Max. Mx	20	-53.734	2564.594	0.786
			Max. My	2	-53.732	-3.360	2573.000
			Max. Vy	20	-25.217	2564.594	0.786
			Max. Vx	2	-25.320	-3.360	2573.000
			Max. Torque	7			0.569
L70	12 - 11.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-79.509	-4.436	2.741
			Max. Mx	20	-53.832	2570.895	0.788
			Max. My	2	-53.831	-3.365	2579.330
			Max. Vy	20	-25.225	2570.895	0.788
			Max. Vx	2	-25.327	-3.365	2579.330
			Max. Torque	7			0.569
L71	11.75 - 8.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.057	-4.511	2.704
			Max. Mx	20	-55.112	2653.177	0.808
			Max. My	2	-55.112	-3.423	2661.776
			Max. Vy	20	-25.469	2653.177	0.808
			Max. Vx	2	-25.439	-3.423	2661.776
			Max. Torque	7			0.569
L72	8.5 - 8.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.197	-4.516	2.704
			Max. Mx	20	-55.243	2659.537	0.810
			Max. My	2	-55.243	-3.427	2668.131

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-25.468	2659.537	0.810
			Max. Vx	2	-25.427	-3.427	2668.131
			Max. Torque	7			0.569
L73	8.25 - 7	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.894	-4.545	2.701
			Max. Mx	20	-55.832	2691.424	0.817
			Max. My	2	-55.832	-3.450	2699.953
			Max. Vy	20	-25.603	2691.424	0.817
			Max. Vx	2	-25.510	-3.450	2699.953
			Max. Torque	7			0.572
L74	7 - 6.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-82.022	-4.551	2.701
			Max. Mx	20	-55.949	2697.819	0.819
			Max. My	2	-55.949	-3.454	2706.327
			Max. Vy	20	-25.606	2697.819	0.819
			Max. Vx	2	-25.502	-3.454	2706.327
			Max. Torque	7			0.573
L75	6.75 - 1.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-84.513	-4.652	2.684
			Max. Mx	20	-58.107	2826.788	0.850
			Max. My	2	-58.108	-3.543	2834.376
			Max. Vy	20	-26.034	2826.788	0.850
			Max. Vx	2	-25.739	-3.543	2834.376
			Max. Torque	7			0.579
L76	1.75 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-85.365	-4.684	2.678
			Max. Mx	20	-58.866	2872.413	0.861
			Max. My	2	-58.866	-3.575	2879.453
			Max. Vy	20	-26.193	2872.413	0.861
			Max. Vx	24	-25.878	1560.330	2729.650
			Max. Torque	7			0.579

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	30	85.365	-6.377	-0.002
	Max. H_x	21	44.163	26.153	0.002
	Max. H_z	25	44.163	14.828	25.840
	Max. M_x	2	2879.453	-0.007	25.793
	Max. M_z	8	2871.144	-26.118	-0.012
	Max. Torsion	7	0.579	-22.127	12.928
	Min. Vert	5	44.163	-12.577	21.947
	Min. H_x	9	44.163	-26.118	-0.012
	Min. H_z	13	44.163	-14.837	-25.838
	Min. M_x	14	-2873.371	0.026	-25.759
	Min. M_z	20	-2872.413	26.153	0.002
	Min. Torsion	19	-0.218	22.117	-12.915

Tower Mast Reaction Summary

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
Dead Only	49.070	0.000	-0.000	-0.949	-1.534	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	58.884	0.007	-25.793	-2879.453	-3.575	-0.091
0.9 Dead+1.0 Wind 0 deg - No Ice	44.163	0.007	-25.793	-2822.278	-2.996	-0.087
1.2 Dead+1.0 Wind 30 deg - No Ice	58.884	12.577	-21.947	-2470.821	-1415.096	-0.337
0.9 Dead+1.0 Wind 30 deg - No Ice	44.163	12.577	-21.947	-2421.560	-1386.583	-0.335
1.2 Dead+1.0 Wind 60 deg - No Ice	58.884	22.127	-12.928	-1435.008	-2447.236	-0.579
0.9 Dead+1.0 Wind 60 deg - No Ice	44.163	22.127	-12.928	-1406.264	-2398.328	-0.579
1.2 Dead+1.0 Wind 90 deg - No Ice	58.884	26.118	0.012	-0.205	-2871.144	-0.229
0.9 Dead+1.0 Wind 90 deg - No Ice	44.163	26.118	0.012	0.114	-2813.964	-0.232
1.2 Dead+1.0 Wind 120 deg - No Ice	58.884	24.369	14.206	1517.254	-2599.347	0.155
0.9 Dead+1.0 Wind 120 deg - No Ice	44.163	24.369	14.206	1488.106	-2548.441	0.151
1.2 Dead+1.0 Wind 150 deg - No Ice	58.884	14.837	25.838	2726.941	-1565.631	-0.029
0.9 Dead+1.0 Wind 150 deg - No Ice	44.163	14.837	25.838	2674.746	-1535.010	-0.034
1.2 Dead+1.0 Wind 180 deg - No Ice	58.884	-0.026	25.759	2873.371	2.492	-0.054
0.9 Dead+1.0 Wind 180 deg - No Ice	44.163	-0.026	25.759	2816.929	2.929	-0.058
1.2 Dead+1.0 Wind 210 deg - No Ice	58.884	-12.569	21.905	2464.620	1411.375	0.105
0.9 Dead+1.0 Wind 210 deg - No Ice	44.163	-12.569	21.905	2416.076	1383.913	0.102
1.2 Dead+1.0 Wind 240 deg - No Ice	58.884	-22.117	12.915	1431.681	2443.575	0.218
0.9 Dead+1.0 Wind 240 deg - No Ice	44.163	-22.117	12.915	1403.610	2395.706	0.218
1.2 Dead+1.0 Wind 270 deg - No Ice	58.884	-26.153	-0.002	-0.861	2872.413	0.200
0.9 Dead+1.0 Wind 270 deg - No Ice	44.163	-26.153	-0.002	-0.533	2816.186	0.202
1.2 Dead+1.0 Wind 300 deg - No Ice	58.884	-24.399	-14.195	-1518.088	2599.681	-0.297
0.9 Dead+1.0 Wind 300 deg - No Ice	44.163	-24.399	-14.195	-1488.289	2549.758	-0.294
1.2 Dead+1.0 Wind 330 deg - No Ice	58.884	-14.828	-25.840	-2729.650	1560.330	-0.081
0.9 Dead+1.0 Wind 330 deg - No Ice	44.163	-14.828	-25.840	-2676.770	1530.820	-0.077
1.2 Dead+1.0 Ice+1.0 Temp	85.365	0.000	-0.000	-2.678	-4.684	0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	85.365	0.002	-6.301	-759.665	-5.379	-0.024
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	85.365	3.131	-5.457	-658.475	-380.716	-0.078
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	85.365	5.458	-3.184	-383.222	-655.195	-0.129
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	85.365	6.377	0.002	-2.739	-759.900	-0.058
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	85.365	5.827	3.393	393.066	-683.436	0.003
1.2 Dead+1.0 Wind 150	85.365	3.548	6.176	706.507	-411.716	-0.073

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
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180	85.365	-0.006	6.300	754.035	-3.668	-0.007
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	85.365	-3.136	5.460	653.381	371.833	0.029
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	85.365	-5.465	3.186	378.041	646.568	0.052
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	85.365	-6.385	-0.000	-2.512	751.413	0.052
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	85.365	-5.833	-3.391	-398.258	674.694	-0.033
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	85.365	-3.547	-6.177	-712.116	401.737	0.050
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	49.070	0.002	-6.298	-696.698	-2.004	-0.021
Dead+Wind 30 deg - Service	49.070	3.071	-5.359	-597.888	-343.171	-0.083
Dead+Wind 60 deg - Service	49.070	5.403	-3.156	-347.528	-592.635	-0.144
Dead+Wind 90 deg - Service	49.070	6.377	0.003	-0.762	-695.091	-0.058
Dead+Wind 120 deg - Service	49.070	5.948	3.468	366.031	-629.475	0.037
Dead+Wind 150 deg - Service	49.070	3.622	6.308	658.734	-379.766	-0.009
Dead+Wind 180 deg - Service	49.070	-0.006	6.289	693.801	-0.546	-0.015
Dead+Wind 210 deg - Service	49.070	-3.069	5.348	594.961	339.982	0.025
Dead+Wind 240 deg - Service	49.070	-5.400	3.153	345.296	589.459	0.054
Dead+Wind 270 deg - Service	49.070	-6.385	-0.001	-0.920	693.107	0.051
Dead+Wind 300 deg - Service	49.070	-5.956	-3.465	-367.653	627.268	-0.073
Dead+Wind 330 deg - Service	49.070	-3.620	-6.308	-660.810	376.201	-0.019

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.000	-49.070	0.000	-0.000	49.070	0.000	0.000%
2	0.007	-58.884	-25.793	-0.007	58.884	25.793	0.000%
3	0.007	-44.163	-25.793	-0.007	44.163	25.793	0.000%
4	12.577	-58.884	-21.947	-12.577	58.884	21.947	0.000%
5	12.577	-44.163	-21.947	-12.577	44.163	21.947	0.000%
6	22.127	-58.884	-12.928	-22.127	58.884	12.928	0.000%
7	22.127	-44.163	-12.928	-22.127	44.163	12.928	0.000%
8	26.118	-58.884	0.012	-26.118	58.884	-0.012	0.000%
9	26.118	-44.163	0.012	-26.118	44.163	-0.012	0.000%
10	24.369	-58.884	14.206	-24.369	58.884	-14.206	0.000%
11	24.369	-44.163	14.206	-24.369	44.163	-14.206	0.000%
12	14.837	-58.884	25.838	-14.837	58.884	-25.838	0.000%
13	14.837	-44.163	25.838	-14.837	44.163	-25.838	0.000%
14	-0.026	-58.884	25.759	0.026	58.884	-25.759	0.000%
15	-0.026	-44.163	25.759	0.026	44.163	-25.759	0.000%
16	-12.569	-58.884	21.905	12.569	58.884	-21.905	0.000%
17	-12.569	-44.163	21.905	12.569	44.163	-21.905	0.000%
18	-22.117	-58.884	12.915	22.117	58.884	-12.915	0.000%
19	-22.117	-44.163	12.915	22.117	44.163	-12.915	0.000%
20	-26.153	-58.884	-0.002	26.153	58.884	0.002	0.000%
21	-26.153	-44.163	-0.002	26.153	44.163	0.002	0.000%
22	-24.399	-58.884	-14.195	24.399	58.884	14.195	0.000%
23	-24.399	-44.163	-14.195	24.399	44.163	14.195	0.000%
24	-14.828	-58.884	-25.840	14.828	58.884	25.840	0.000%
25	-14.828	-44.163	-25.840	14.828	44.163	25.840	0.000%
26	0.000	-85.365	0.000	-0.000	85.365	0.000	0.000%
27	0.002	-85.365	-6.301	-0.002	85.365	6.301	0.000%

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
28	3.131	-85.365	-5.457	-3.131	85.365	5.457	0.000%
29	5.458	-85.365	-3.184	-5.458	85.365	3.184	0.000%
30	6.377	-85.365	0.002	-6.377	85.365	-0.002	0.000%
31	5.827	-85.365	3.393	-5.827	85.365	-3.393	0.000%
32	3.548	-85.365	6.176	-3.548	85.365	-6.176	0.000%
33	-0.006	-85.365	6.300	0.006	85.365	-6.300	0.000%
34	-3.136	-85.365	5.460	3.136	85.365	-5.460	0.000%
35	-5.465	-85.365	3.186	5.465	85.365	-3.186	0.000%
36	-6.385	-85.365	-0.000	6.385	85.365	0.000	0.000%
37	-5.833	-85.365	-3.391	5.833	85.365	3.391	0.000%
38	-3.547	-85.365	-6.177	3.547	85.365	6.177	0.000%
39	0.002	-49.070	-6.298	-0.002	49.070	6.298	0.000%
40	3.071	-49.070	-5.359	-3.071	49.070	5.359	0.000%
41	5.403	-49.070	-3.156	-5.403	49.070	3.156	0.000%
42	6.377	-49.070	0.003	-6.377	49.070	-0.003	0.000%
43	5.948	-49.070	3.468	-5.948	49.070	-3.468	0.000%
44	3.622	-49.070	6.308	-3.622	49.070	-6.308	0.000%
45	-0.006	-49.070	6.289	0.006	49.070	-6.289	0.000%
46	-3.069	-49.070	5.348	3.069	49.070	-5.348	0.000%
47	-5.400	-49.070	3.153	5.400	49.070	-3.153	0.000%
48	-6.385	-49.070	-0.001	6.385	49.070	0.001	0.000%
49	-5.956	-49.070	-3.465	5.956	49.070	3.465	0.000%
50	-3.620	-49.070	-6.308	3.620	49.070	6.308	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000956
2	Yes	6	0.00000001	0.00014337
3	Yes	5	0.00000001	0.00059060
4	Yes	8	0.00000001	0.00012499
5	Yes	7	0.00000001	0.00033964
6	Yes	8	0.00000001	0.00012696
7	Yes	7	0.00000001	0.00034556
8	Yes	6	0.00000001	0.00019013
9	Yes	5	0.00000001	0.00089252
10	Yes	8	0.00000001	0.00013318
11	Yes	7	0.00000001	0.00035883
12	Yes	8	0.00000001	0.00013974
13	Yes	7	0.00000001	0.00037370
14	Yes	6	0.00000001	0.00013459
15	Yes	5	0.00000001	0.00055076
16	Yes	8	0.00000001	0.00012548
17	Yes	7	0.00000001	0.00034142
18	Yes	8	0.00000001	0.00012497
19	Yes	7	0.00000001	0.00033995
20	Yes	6	0.00000001	0.00018431
21	Yes	5	0.00000001	0.00085578
22	Yes	8	0.00000001	0.00013265
23	Yes	7	0.00000001	0.00035730
24	Yes	8	0.00000001	0.00013935
25	Yes	7	0.00000001	0.00037257
26	Yes	5	0.00000001	0.00042028
27	Yes	7	0.00000001	0.00085259
28	Yes	8	0.00000001	0.00019906

29	Yes	8	0.00000001	0.00019965
30	Yes	7	0.00000001	0.00085060
31	Yes	8	0.00000001	0.00020338
32	Yes	8	0.00000001	0.00021292
33	Yes	7	0.00000001	0.00083849
34	Yes	8	0.00000001	0.00019215
35	Yes	8	0.00000001	0.00019188
36	Yes	7	0.00000001	0.00083503
37	Yes	8	0.00000001	0.00020299
38	Yes	8	0.00000001	0.00021102
39	Yes	5	0.00000001	0.00028075
40	Yes	6	0.00000001	0.00022419
41	Yes	6	0.00000001	0.00023329
42	Yes	5	0.00000001	0.00029314
43	Yes	6	0.00000001	0.00024800
44	Yes	6	0.00000001	0.00027253
45	Yes	5	0.00000001	0.00028135
46	Yes	6	0.00000001	0.00022148
47	Yes	6	0.00000001	0.00021899
48	Yes	5	0.00000001	0.00028894
49	Yes	6	0.00000001	0.00024495
50	Yes	6	0.00000001	0.00026934

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	144.25 - 139.25	31.211	50	2.231	0.001
L2	139.25 - 134.75	28.879	50	2.220	0.001
L3	134.75 - 134.25	26.805	50	2.178	0.001
L4	134.25 - 129.25	26.577	50	2.172	0.001
L5	129.25 - 124.25	24.364	50	2.051	0.001
L6	124.25 - 123.416	22.298	50	1.888	0.001
L7	123.416 - 123.166	21.971	50	1.857	0.001
L8	123.166 - 118.166	21.874	50	1.854	0.001
L9	118.166 - 113.166	19.975	50	1.774	0.001
L10	113.166 - 109.5	18.167	50	1.678	0.001
L11	109.5 - 109.25	16.907	50	1.602	0.000
L12	109.25 - 104.75	16.824	50	1.597	0.000
L13	104.75 - 104.5	15.359	50	1.511	0.000
L14	104.5 - 102.416	15.280	50	1.507	0.000
L15	102.416 - 102.166	14.629	50	1.475	0.000
L16	102.166 - 98.75	14.552	50	1.470	0.000
L17	98.75 - 98.5	13.527	50	1.398	0.000
L18	98.5 - 97.5	13.454	50	1.394	0.000
L19	97.5 - 97.25	13.163	50	1.379	0.000
L20	97.25 - 92	13.091	50	1.375	0.000
L21	95.552 - 90.552	12.607	50	1.347	0.000
L22	90.552 - 89.25	11.221	50	1.292	0.000
L23	89.25 - 89	10.871	50	1.270	0.000
L24	89 - 88.25	10.805	50	1.267	0.000
L25	88.25 - 88	10.607	50	1.256	0.000
L26	88 - 87.833	10.541	50	1.252	0.000
L27	87.833 - 87.583	10.497	50	1.249	0.000
L28	87.583 - 82.583	10.432	50	1.244	0.000
L29	82.583 - 77.583	9.183	50	1.142	0.000
L30	77.583 - 77	8.043	50	1.036	0.000
L31	77 - 76.75	7.917	50	1.024	0.000
L32	76.75 - 76.333	7.864	50	1.020	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L33	76.333 - 76.083	7.775	50	1.013	0.000
L34	76.083 - 74.25	7.722	50	1.009	0.000
L35	74.25 - 74	7.340	50	0.979	0.000
L36	74 - 73.75	7.289	50	0.975	0.000
L37	73.75 - 73.5	7.238	50	0.972	0.000
L38	73.5 - 68.5	7.187	50	0.968	0.000
L39	68.5 - 63.5	6.214	50	0.892	0.000
L40	63.5 - 60.5	5.319	50	0.816	0.000
L41	60.5 - 60.25	4.821	50	0.770	0.000
L42	60.25 - 59.5	4.781	50	0.766	0.000
L43	59.5 - 59.25	4.661	50	0.755	0.000
L44	59.25 - 54.25	4.622	50	0.751	0.000
L45	54.25 - 45.802	3.873	50	0.679	0.000
L46	50 - 44.802	3.296	50	0.617	0.000
L47	44.802 - 43.583	2.645	50	0.572	0.000
L48	43.583 - 43.333	2.502	50	0.555	0.000
L49	43.333 - 43.166	2.473	50	0.551	0.000
L50	43.166 - 42.916	2.453	50	0.549	0.000
L51	42.916 - 39	2.425	50	0.546	0.000
L52	39 - 38.75	1.998	50	0.494	0.000
L53	38.75 - 37.166	1.973	50	0.491	0.000
L54	37.166 - 36.916	1.813	50	0.471	0.000
L55	36.916 - 34	1.788	50	0.468	0.000
L56	34 - 33.75	1.514	50	0.430	0.000
L57	33.75 - 29.75	1.492	50	0.427	0.000
L58	29.75 - 29.5	1.157	50	0.374	0.000
L59	29.5 - 24.5	1.137	50	0.371	0.000
L60	24.5 - 23	0.783	50	0.306	0.000
L61	23 - 22.75	0.690	50	0.287	0.000
L62	22.75 - 21.583	0.675	50	0.284	0.000
L63	21.583 - 21.333	0.607	50	0.271	0.000
L64	21.333 - 16.333	0.593	50	0.268	0.000
L65	16.333 - 12.917	0.345	50	0.206	0.000
L66	12.917 - 12.667	0.213	50	0.164	0.000
L67	12.667 - 12.5	0.204	50	0.161	0.000
L68	12.5 - 12.25	0.199	50	0.159	0.000
L69	12.25 - 12	0.190	50	0.156	0.000
L70	12 - 11.75	0.182	50	0.152	0.000
L71	11.75 - 8.5	0.174	50	0.149	0.000
L72	8.5 - 8.25	0.090	50	0.100	0.000
L73	8.25 - 7	0.085	50	0.097	0.000
L74	7 - 6.75	0.061	50	0.084	0.000
L75	6.75 - 1.75	0.057	50	0.081	0.000
L76	1.75 - 0	0.004	50	0.020	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
144.000	(2) EPBQ-654L8H8-L2 w/ Mount Pipe	50	31.094	2.231	0.003	9621
133.000	VHLP2-23	50	26.013	2.151	0.003	2844
130.000	(2) APXVSPP18-C-A20 w/ Mount Pipe	50	24.688	2.073	0.003	2111
120.000	MX08FRO665-21 w/ Mount Pipe	50	20.662	1.806	0.002	3258
110.000	SBNHH-1D65B w/ Mount Pipe	50	17.076	1.611	0.001	2858

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
100.000	APXVAARR24_43-U-NA20 w/ Mount Pipe	50	13.896	1.421	0.001	3084
50.000	KS24019-L112A	50	3.296	0.617	0.000	5297

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	144.25 - 139.25	128.805	24	9.236	0.005
L2	139.25 - 134.75	119.218	24	9.187	0.005
L3	134.75 - 134.25	110.694	24	9.012	0.005
L4	134.25 - 129.25	109.758	24	8.990	0.005
L5	129.25 - 124.25	100.656	24	8.490	0.006
L6	124.25 - 123.416	92.152	24	7.816	0.004
L7	123.416 - 123.166	90.805	24	7.690	0.004
L8	123.166 - 118.166	90.405	24	7.675	0.004
L9	118.166 - 113.166	82.575	24	7.346	0.003
L10	113.166 - 109.5	75.118	24	6.953	0.002
L11	109.5 - 109.25	69.922	24	6.635	0.002
L12	109.25 - 104.75	69.576	24	6.617	0.002
L13	104.75 - 104.5	63.529	24	6.258	0.002
L14	104.5 - 102.416	63.203	24	6.243	0.002
L15	102.416 - 102.166	60.516	24	6.111	0.002
L16	102.166 - 98.75	60.197	24	6.090	0.002
L17	98.75 - 98.5	55.960	12	5.792	0.001
L18	98.5 - 97.5	55.658	12	5.777	0.001
L19	97.5 - 97.25	54.458	12	5.716	0.001
L20	97.25 - 92	54.160	12	5.699	0.001
L21	95.552 - 90.552	52.159	12	5.581	0.001
L22	90.552 - 89.25	46.429	12	5.356	0.001
L23	89.25 - 89	44.984	12	5.264	0.001
L24	89 - 88.25	44.710	12	5.249	0.001
L25	88.25 - 88	43.891	12	5.206	0.001
L26	88 - 87.833	43.619	12	5.187	0.001
L27	87.833 - 87.583	43.438	12	5.175	0.001
L28	87.583 - 82.583	43.169	12	5.155	0.001
L29	82.583 - 77.583	38.004	12	4.731	0.001
L30	77.583 - 77	33.288	12	4.293	0.001
L31	77 - 76.75	32.768	12	4.243	0.001
L32	76.75 - 76.333	32.546	12	4.226	0.001
L33	76.333 - 76.083	32.179	12	4.198	0.001
L34	76.083 - 74.25	31.960	12	4.181	0.001
L35	74.25 - 74	30.381	12	4.058	0.001
L36	74 - 73.75	30.169	12	4.042	0.001
L37	73.75 - 73.5	29.958	12	4.026	0.001
L38	73.5 - 68.5	29.748	12	4.011	0.001
L39	68.5 - 63.5	25.718	12	3.697	0.001
L40	63.5 - 60.5	22.016	12	3.381	0.000
L41	60.5 - 60.25	19.954	12	3.190	0.000
L42	60.25 - 59.5	19.787	12	3.174	0.000
L43	59.5 - 59.25	19.293	12	3.128	0.000
L44	59.25 - 54.25	19.129	12	3.113	0.000
L45	54.25 - 45.802	16.031	12	2.811	0.000
L46	50 - 44.802	13.644	12	2.557	0.000
L47	44.802 - 43.583	10.949	12	2.371	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L48	43.583 - 43.333	10.353	12	2.298	0.000
L49	43.333 - 43.166	10.233	12	2.283	0.000
L50	43.166 - 42.916	10.154	12	2.274	0.000
L51	42.916 - 39	10.035	12	2.260	0.000
L52	39 - 38.75	8.270	12	2.046	0.000
L53	38.75 - 37.166	8.163	12	2.033	0.000
L54	37.166 - 36.916	7.503	12	1.951	0.000
L55	36.916 - 34	7.401	12	1.938	0.000
L56	34 - 33.75	6.266	12	1.780	0.000
L57	33.75 - 29.75	6.173	12	1.766	0.000
L58	29.75 - 29.5	4.786	12	1.548	0.000
L59	29.5 - 24.5	4.705	12	1.535	0.000
L60	24.5 - 23	3.239	12	1.267	0.000
L61	23 - 22.75	2.853	12	1.188	0.000
L62	22.75 - 21.583	2.792	12	1.176	0.000
L63	21.583 - 21.333	2.511	12	1.123	0.000
L64	21.333 - 16.333	2.452	12	1.110	0.000
L65	16.333 - 12.917	1.426	12	0.851	0.000
L66	12.917 - 12.667	0.880	12	0.677	0.000
L67	12.667 - 12.5	0.845	12	0.665	0.000
L68	12.5 - 12.25	0.822	12	0.658	0.000
L69	12.25 - 12	0.788	12	0.644	0.000
L70	12 - 11.75	0.754	12	0.631	0.000
L71	11.75 - 8.5	0.722	12	0.615	0.000
L72	8.5 - 8.25	0.372	12	0.413	0.000
L73	8.25 - 7	0.351	12	0.402	0.000
L74	7 - 6.75	0.252	12	0.347	0.000
L75	6.75 - 1.75	0.235	12	0.335	0.000
L76	1.75 - 0	0.016	12	0.085	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
144.000	(2) EPBQ-654L8H8-L2 w/ Mount Pipe	24	128.325	9.235	0.013	2435
133.000	VHLP2-23	24	107.437	8.903	0.012	721
130.000	(2) APXVSPP18-C-A20 w/ Mount Pipe	24	101.988	8.579	0.011	540
120.000	MX08FRO665-21 w/ Mount Pipe	24	85.407	7.481	0.006	823
110.000	SBNHH-1D65B w/ Mount Pipe	24	70.616	6.673	0.004	713
100.000	APXVAARR24_43-U-NA20 w/ Mount Pipe	24	57.486	5.889	0.003	763
50.000	KS24019-L112A	12	13.644	2.557	0.001	1283

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	144.25 - 139.25 (1)	TP12.75x12.75x0.375	5.000	0.000	0.0	14.579	-4.488	603.569	0.007
L2	139.25 - 134.75 (2)	TP12.75x12.75x0.375	4.500	0.000	0.0	14.579	-4.770	603.569	0.008
L3	134.75 - 134.25 (3)	TP13.48x13.48x0.375	0.500	0.000	0.0	15.439	-4.806	639.173	0.008
L4	134.25 - 129.25 (4)	TP14.466x13.48x0.188	5.000	0.000	0.0	8.621	-8.607	504.301	0.017
L5	129.25 - 124.25 (5)	TP15.452x14.466x0.188	5.000	0.000	0.0	9.216	-8.843	539.118	0.016
L6	124.25 - 123.416 (6)	TP15.616x15.452x0.188	0.834	0.000	0.0	9.315	-8.904	544.926	0.016
L7	123.416 - 123.166 (7)	TP15.665x15.616x0.538	0.250	0.000	0.0	26.183	-8.941	1531.670	0.006
L8	123.166 - 118.166 (8)	TP16.651x15.665x0.513	5.000	0.000	0.0	26.633	-12.361	1558.020	0.008
L9	118.166 - 113.166 (9)	TP17.637x16.651x0.488	5.000	0.000	0.0	26.920	-12.950	1574.840	0.008
L10	113.166 - 109.5 (10)	TP18.36x17.637x0.475	3.666	0.000	0.0	27.355	-16.556	1600.250	0.010
L11	109.5 - 109.25 (11)	TP18.409x18.36x0.588	0.250	0.000	0.0	33.714	-16.611	1972.260	0.008
L12	109.25 - 104.75 (12)	TP19.296x18.409x0.563	4.500	0.000	0.0	33.931	-17.332	1984.990	0.009
L13	104.75 - 104.5 (13)	TP19.346x19.296x0.775	0.250	0.000	0.0	46.343	-17.397	2711.050	0.006
L14	104.5 - 102.416 (14)	TP19.756x19.346x0.763	2.084	0.000	0.0	46.635	-17.825	2728.130	0.007
L15	102.416 - 102.166 (15)	TP19.806x19.756x0.563	0.250	0.000	0.0	34.854	-17.883	2038.970	0.009
L16	102.166 - 98.75 (16)	TP20.479x19.806x0.55	3.416	0.000	0.0	35.295	-21.892	2064.730	0.011
L17	98.75 - 98.5 (17)	TP20.528x20.479x0.838	0.250	0.000	0.0	53.102	-21.974	3106.440	0.007
L18	98.5 - 97.5 (18)	TP20.726x20.528x0.838	1.000	0.000	0.0	53.633	-22.227	3137.550	0.007
L19	97.5 - 97.25 (19)	TP20.775x20.726x0.75	0.250	0.000	0.0	48.360	-22.299	2829.070	0.008
L20	97.25 - 92 (20)	TP21.81x20.775x0.738	5.250	0.000	0.0	48.379	-22.710	2830.160	0.008
L21	92 - 90.552 (21)	TP21.73x20.735x0.8	5.000	0.000	0.0	53.916	-24.757	3154.100	0.008
L22	90.552 - 89.25 (22)	TP21.989x21.73x0.775	1.302	0.000	0.0	52.941	-25.118	3097.030	0.008
L23	89.25 - 89 (23)	TP22.039x21.989x1	0.250	0.000	0.0	67.746	-25.212	3963.150	0.006
L24	89 - 88.25 (24)	TP22.189x22.039x0.975	0.750	0.000	0.0	66.600	-25.440	3896.090	0.007
L25	88.25 - 88 (25)	TP22.238x22.189x0.763	0.250	0.000	0.0	52.729	-25.513	3084.620	0.008
L26	88 - 87.833 (26)	TP22.272x22.238x0.763	0.167	0.000	0.0	52.810	-25.560	3089.390	0.008
L27	87.833 - 87.583 (27)	TP22.321x22.272x0.675	0.250	0.000	0.0	47.048	-25.621	2752.330	0.009
L28	87.583 - 82.583 (28)	TP23.317x22.321x0.65	5.000	0.000	0.0	47.442	-26.860	2775.340	0.010
L29	82.583 - 77.583 (29)	TP24.312x23.317x0.625	5.000	0.000	0.0	47.671	-28.142	2788.740	0.010
L30	77.583 - 77 (30)	TP24.428x24.312x0.625	0.583	0.000	0.0	47.904	-28.301	2802.410	0.010
L31	77 - 76.75 (31)	TP24.478x24.428x0.825	0.250	0.000	0.0	62.835	-28.384	3675.830	0.008
L32	76.75 - 76.333 (32)	TP24.561x24.478x0.825	0.417	0.000	0.0	63.055	-28.508	3688.730	0.008
L33	76.333 - 76.083 (33)	TP24.611x24.561x0.825	0.250	0.000	0.0	63.188	-28.583	3696.470	0.008

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L34	76.083 - 74.25 (34)	TP24.976x24.611x0.8	1.833	0.000	0.0	62.277	-29.093	3643.220	0.008
L35	74.25 - 74 (35)	TP25.026x24.976x0.888	0.250	0.000	0.0	68.981	-29.191	4035.390	0.007
L36	74 - 73.75 (36)	TP25.076x25.026x0.888	0.250	0.000	0.0	69.123	-29.267	4043.710	0.007
L37	73.75 - 73.5 (37)	TP25.125x25.076x0.913	0.250	0.000	0.0	71.143	-29.346	4161.880	0.007
L38	73.5 - 68.5 (38)	TP26.121x25.125x0.875	5.000	0.000	0.0	71.130	-30.907	4161.110	0.007
L39	68.5 - 63.5 (39)	TP27.116x26.121x0.85	5.000	0.000	0.0	71.891	-32.502	4205.620	0.008
L40	63.5 - 60.5 (40)	TP27.714x27.116x0.825	3.000	0.000	0.0	71.430	-33.474	4178.630	0.008
L41	60.5 - 60.25 (41)	TP27.763x27.714x0.825	0.250	0.000	0.0	71.562	-33.566	4186.370	0.008
L42	60.25 - 59.5 (42)	TP27.913x27.763x0.825	0.750	0.000	0.0	71.959	-33.804	4209.570	0.008
L43	59.5 - 59.25 (43)	TP27.962x27.913x0.888	0.250	0.000	0.0	77.373	-33.898	4526.350	0.007
L44	59.25 - 54.25 (44)	TP28.958x27.962x0.85	5.000	0.000	0.0	76.932	-35.602	4500.500	0.008
L45	54.25 - 45.802 (45)	TP30.64x28.958x0.838	8.448	0.000	0.0	78.116	-37.077	4569.780	0.008
L46	45.802 - 44.802 (46)	TP30.333x29.304x0.838	5.198	0.000	0.0	79.542	-40.211	4653.200	0.009
L47	44.802 - 43.583 (47)	TP30.574x30.333x0.838	1.219	0.000	0.0	80.192	-40.648	4691.260	0.009
L48	43.583 - 43.333 (48)	TP30.624x30.574x0.85	0.250	0.000	0.0	81.491	-40.757	4767.200	0.009
L49	43.333 - 43.166 (49)	TP30.657x30.624x0.85	0.167	0.000	0.0	81.581	-40.822	4772.490	0.009
L50	43.166 - 42.916 (50)	TP30.706x30.657x0.938	0.250	0.000	0.0	89.864	-40.920	5257.060	0.008
L51	42.916 - 39 (51)	TP31.481x30.706x0.913	3.916	0.000	0.0	89.819	-42.460	5254.390	0.008
L52	39 - 38.75 (52)	TP31.531x31.481x0.95	0.250	0.000	0.0	93.547	-42.578	5472.470	0.008
L53	38.75 - 37.166 (53)	TP31.844x31.531x0.938	1.584	0.000	0.0	93.300	-43.221	5458.030	0.008
L54	37.166 - 36.916 (54)	TP31.894x31.844x0.888	0.250	0.000	0.0	88.608	-43.339	5183.570	0.008
L55	36.916 - 34 (55)	TP32.471x31.894x0.888	2.916	0.000	0.0	90.257	-44.512	5280.050	0.008
L56	34 - 33.75 (56)	TP32.52x32.471x0.875	0.250	0.000	0.0	89.161	-44.627	5215.900	0.009
L57	33.75 - 29.75 (57)	TP33.312x32.52x0.863	4.000	0.000	0.0	89.021	-45.428	5207.730	0.009
L58	29.75 - 29.5 (58)	TP33.361x33.312x0.863	0.250	0.000	0.0	90.120	-46.211	5272.040	0.009
L59	29.5 - 24.5 (59)	TP34.351x33.361x0.85	5.000	0.000	0.0	88.984	-46.322	5205.560	0.009
L60	24.5 - 23 (60)	TP34.648x34.351x0.838	1.500	0.000	0.0	90.378	-48.337	5287.090	0.009
L61	23 - 22.75 (61)	TP34.697x34.648x0.963	0.250	0.000	0.0	104.400	-48.931	6107.370	0.008
L62	22.75 - 21.583 (62)	TP34.928x34.697x0.963	1.167	0.000	0.0	104.553	-49.051	6116.340	0.008
L63	21.583 - 21.333 (63)	TP34.978x34.928x0.85	0.250	0.000	0.0	93.272	-49.557	5456.440	0.009
L64	21.333 - 16.333 (64)	TP35.967x34.978x0.838	5.000	0.000	0.0	92.068	-49.673	5385.980	0.009
L65	16.333 - 12.917 (65)	TP36.644x35.967x0.825	3.416	0.000	0.0	93.356	-51.809	5461.320	0.009
L66	12.917 - 12.667 (66)	TP36.693x36.644x0.913	0.250	0.000	0.0	104.987	-53.271	6141.720	0.009
L67	12.667 - 12.5 (67)	TP36.726x36.693x0.913	0.167	0.000	0.0	105.132	-53.387	6150.220	0.009
L68	12.5 - 12.25 (68)	TP36.776x36.726x0.763	0.250	0.000	0.0	88.299	-53.467	5165.520	0.010

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L69	12.25 - 12 (69)	TP36.825x36.776x0.763	0.250	0.000	0.0	88.421	-53.572	5172.630	0.010
L70	12 - 11.75 (70)	TP36.874x36.825x0.663	0.250	0.000	0.0	77.144	-53.679	4512.900	0.012
L71	11.75 - 8.5 (71)	TP37.518x36.874x0.65	3.250	0.000	0.0	75.818	-53.792	4435.340	0.012
L72	8.5 - 8.25 (72)	TP37.567x37.518x0.925	0.250	0.000	0.0	108.991	-55.087	6376.000	0.009
L73	8.25 - 7 (73)	TP37.815x37.567x0.913	1.250	0.000	0.0	107.701	-55.219	6300.490	0.009
L74	7 - 6.75 (74)	TP37.864x37.815x0.813	0.250	0.000	0.0	96.807	-55.812	5663.190	0.010
L75	6.75 - 1.75 (75)	TP38.854x37.864x0.788	5.000	0.000	0.0	94.017	-55.931	5499.990	0.010
L76	1.75 - 0 (76)	TP39.2x38.854x0.788	1.750	0.000	0.0	96.526	-58.131	5646.780	0.010

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	144.25 - 139.25 (1)	TP12.75x12.75x0.375	24.331	198.187	0.123	0.000	198.187	0.000
L2	139.25 - 134.75 (2)	TP12.75x12.75x0.375	51.824	198.187	0.261	0.000	198.187	0.000
L3	134.75 - 134.25 (3)	TP13.48x13.48x0.375	54.921	222.251	0.247	0.000	222.251	0.000
L4	134.25 - 129.25 (4)	TP14.466x13.48x0.188	90.922	183.885	0.494	0.000	183.885	0.000
L5	129.25 - 124.25 (5)	TP15.452x14.466x0.188	146.002	210.328	0.694	0.000	210.328	0.000
L6	124.25 - 123.416 (6)	TP15.616x15.452x0.188	155.307	214.735	0.723	0.000	214.735	0.000
L7	123.416 - 123.166 (7)	TP15.665x15.616x0.538	158.102	578.929	0.273	0.000	578.929	0.000
L8	123.166 - 118.166 (8)	TP16.651x15.665x0.513	220.250	630.532	0.349	0.000	630.532	0.000
L9	118.166 - 113.166 (9)	TP17.637x16.651x0.488	293.073	679.449	0.431	0.000	679.449	0.000
L10	113.166 - 109.5 (10)	TP18.36x17.637x0.475	349.473	721.324	0.484	0.000	721.324	0.000
L11	109.5 - 109.25 (11)	TP18.409x18.36x0.588	354.118	880.375	0.402	0.000	880.375	0.000
L12	109.25 - 104.75 (12)	TP19.296x18.409x0.563	438.588	934.067	0.470	0.000	934.067	0.000
L13	104.75 - 104.5 (13)	TP19.346x19.296x0.775	443.330	1250.400	0.355	0.000	1250.400	0.000
L14	104.5 - 102.416 (14)	TP19.756x19.346x0.763	483.083	1288.933	0.375	0.000	1288.933	0.000
L15	102.416 - 102.166 (15)	TP19.806x19.756x0.563	487.879	986.325	0.495	0.000	986.325	0.000
L16	102.166 - 98.75 (16)	TP20.479x19.806x0.55	558.782	1036.033	0.539	0.000	1036.033	0.000
L17	98.75 - 98.5 (17)	TP20.528x20.479x0.838	564.262	1518.050	0.372	0.000	1518.050	0.000
L18	98.5 - 97.5 (18)	TP20.726x20.528x0.838	586.245	1549.233	0.378	0.000	1549.233	0.000
L19	97.5 - 97.25 (19)	TP20.775x20.726x0.75	591.757	1412.833	0.419	0.000	1412.833	0.000
L20	97.25 - 92 (20)	TP21.81x20.775x0.738	629.337	1439.625	0.437	0.000	1439.625	0.000
L21	92 - 90.552 (21)	TP21.73x20.735x0.8	741.925	1645.142	0.451	0.000	1645.142	0.000
L22	90.552 - 89.25 (22)	TP21.989x21.73x0.775	771.672	1639.983	0.471	0.000	1639.983	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L23	89.25 - 89 (23)	TP22.039x21.989x1	777.402	2059.442	0.377	0.000	2059.442	0.000
L24	89 - 88.25 (24)	TP22.189x22.039x0.975	794.629	2044.433	0.389	0.000	2044.433	0.000
L25	88.25 - 88 (25)	TP22.238x22.189x0.763	800.384	1655.175	0.484	0.000	1655.175	0.000
L26	88 - 87.833 (26)	TP22.272x22.238x0.763	804.232	1660.392	0.484	0.000	1660.392	0.000
L27	87.833 - 87.583 (27)	TP22.321x22.272x0.675	809.996	1494.833	0.542	0.000	1494.833	0.000
L28	87.583 - 82.583 (28)	TP23.317x22.321x0.65	926.342	1582.242	0.585	0.000	1582.242	0.000
L29	82.583 - 77.583 (29)	TP24.312x23.317x0.625	1044.675	1665.175	0.627	0.000	1665.175	0.000
L30	77.583 - 77 (30)	TP24.428x24.312x0.625	1058.600	1681.742	0.629	0.000	1681.742	0.000
L31	77 - 76.75 (31)	TP24.478x24.428x0.825	1064.575	2173.708	0.490	0.000	2173.708	0.000
L32	76.75 - 76.333 (32)	TP24.561x24.478x0.825	1074.567	2189.250	0.491	0.000	2189.250	0.000
L33	76.333 - 76.083 (33)	TP24.611x24.561x0.825	1080.558	2198.600	0.491	0.000	2198.600	0.000
L34	76.083 - 74.25 (34)	TP24.976x24.611x0.8	1124.683	2205.850	0.510	0.000	2205.850	0.000
L35	74.25 - 74 (35)	TP25.026x24.976x0.888	1130.725	2430.833	0.465	0.000	2430.833	0.000
L36	74 - 73.75 (36)	TP25.076x25.026x0.888	1136.775	2441.050	0.466	0.000	2441.050	0.000
L37	73.75 - 73.5 (37)	TP25.125x25.076x0.913	1142.825	2512.542	0.455	0.000	2512.542	0.000
L38	73.5 - 68.5 (38)	TP26.121x25.125x0.875	1265.092	2626.917	0.482	0.000	2626.917	0.000
L39	68.5 - 63.5 (39)	TP27.116x26.121x0.85	1389.633	2768.483	0.502	0.000	2768.483	0.000
L40	63.5 - 60.5 (40)	TP27.714x27.116x0.825	1465.433	2820.483	0.520	0.000	2820.483	0.000
L41	60.5 - 60.25 (41)	TP27.763x27.714x0.825	1471.792	2831.083	0.520	0.000	2831.083	0.000
L42	60.25 - 59.5 (42)	TP27.913x27.763x0.825	1490.883	2863.033	0.521	0.000	2863.033	0.000
L43	59.5 - 59.25 (43)	TP27.962x27.913x0.888	1497.258	3070.117	0.488	0.000	3070.117	0.000
L44	59.25 - 54.25 (44)	TP28.958x27.962x0.85	1625.975	3176.850	0.512	0.000	3176.850	0.000
L45	54.25 - 45.802 (45)	TP30.64x28.958x0.838	1737.133	3328.592	0.522	0.000	3328.592	0.000
L46	45.802 - 44.802 (46)	TP30.333x29.304x0.838	1875.942	3452.967	0.543	0.000	3452.967	0.000
L47	44.802 - 43.583 (47)	TP30.574x30.333x0.838	1908.892	3510.467	0.544	0.000	3510.467	0.000
L48	43.583 - 43.333 (48)	TP30.624x30.574x0.85	1915.667	3570.392	0.537	0.000	3570.392	0.000
L49	43.333 - 43.166 (49)	TP30.657x30.624x0.85	1920.192	3578.433	0.537	0.000	3578.433	0.000
L50	43.166 - 42.916 (50)	TP30.706x30.657x0.938	1926.975	3925.383	0.491	0.000	3925.383	0.000
L51	42.916 - 39 (51)	TP31.481x30.706x0.913	2033.833	4035.258	0.504	0.000	4035.258	0.000
L52	39 - 38.75 (52)	TP31.531x31.481x0.95	2040.700	4199.433	0.486	0.000	4199.433	0.000
L53	38.75 - 37.166 (53)	TP31.844x31.531x0.938	2084.308	4236.008	0.492	0.000	4236.008	0.000
L54	37.166 - 36.916 (54)	TP31.894x31.844x0.888	2091.208	4042.658	0.517	0.000	4042.658	0.000
L55	36.916 - 34 (55)	TP32.471x31.894x0.888	2171.958	4196.683	0.518	0.000	4196.683	0.000
L56	34 - 33.75 (56)	TP32.52x32.471x0.875	2178.908	4155.650	0.524	0.000	4155.650	0.000
L57	33.75 - 29.75 (57)	TP33.312x32.52x0.863	2234.575	4205.717	0.531	0.000	4205.717	0.000
L58	29.75 - 29.5	TP33.361x33.312x0.863	2290.433	4311.608	0.531	0.000	4311.608	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
	(58)							
L59	29.5 - 24.5 (59)	TP34.351x33.361x0.85	2297.425	4267.175	0.538	0.000	4267.175	0.000
L60	24.5 - 23 (60)	TP34.648x34.351x0.838	2437.908	4472.633	0.545	0.000	4472.633	0.000
L61	23 - 22.75 (61)	TP34.697x34.648x0.963	2480.267	5174.958	0.479	0.000	5174.958	0.000
L62	22.75 - 21.583 (62)	TP34.928x34.697x0.963	2487.333	5190.383	0.479	0.000	5190.383	0.000
L63	21.583 - 21.333 (63)	TP34.978x34.928x0.85	2520.375	4693.900	0.537	0.000	4693.900	0.000
L64	21.333 - 16.333 (64)	TP35.967x34.978x0.838	2527.458	4643.575	0.544	0.000	4643.575	0.000
L65	16.333 - 12.917 (65)	TP36.644x35.967x0.825	2669.675	4851.733	0.550	0.000	4851.733	0.000
L66	12.917 - 12.667 (66)	TP36.693x36.644x0.913	2767.400	5536.417	0.500	0.000	5536.417	0.000
L67	12.667 - 12.5 (67)	TP36.726x36.693x0.913	2774.575	5551.958	0.500	0.000	5551.958	0.000
L68	12.5 - 12.25 (68)	TP36.776x36.726x0.763	2779.367	4706.633	0.591	0.000	4706.633	0.000
L69	12.25 - 12 (69)	TP36.825x36.776x0.763	2786.542	4719.725	0.590	0.000	4719.725	0.000
L70	12 - 11.75 (70)	TP36.874x36.825x0.663	2793.725	4146.442	0.674	0.000	4146.442	0.000
L71	11.75 - 8.5 (71)	TP37.518x36.874x0.65	2800.900	4083.675	0.686	0.000	4083.675	0.000
L72	8.5 - 8.25 (72)	TP37.567x37.518x0.925	2894.650	5887.708	0.492	0.000	5887.708	0.000
L73	8.25 - 7 (73)	TP37.815x37.567x0.913	2901.900	5830.017	0.498	0.000	5830.017	0.000
L74	7 - 6.75 (74)	TP37.864x37.815x0.813	2938.217	5305.175	0.554	0.000	5305.175	0.000
L75	6.75 - 1.75 (75)	TP38.854x37.864x0.788	2945.500	5166.292	0.570	0.000	5166.292	0.000
L76	1.75 - 0 (76)	TP39.2x38.854x0.788	3092.425	5448.700	0.568	0.000	5448.700	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	144.25 - 139.25 (1)	TP12.75x12.75x0.375	6.032	181.071	0.033	0.000	197.003	0.000
L2	139.25 - 134.75 (2)	TP12.75x12.75x0.375	6.188	181.071	0.034	0.000	197.003	0.000
L3	134.75 - 134.25 (3)	TP13.48x13.48x0.375	6.205	191.752	0.032	0.000	220.931	0.000
L4	134.25 - 129.25 (4)	TP14.466x13.48x0.188	10.807	151.290	0.071	0.161	190.015	0.001
L5	129.25 - 124.25 (5)	TP15.452x14.466x0.188	11.152	161.736	0.069	0.231	217.158	0.001
L6	124.25 - 123.416 (6)	TP15.616x15.452x0.188	11.184	163.478	0.068	0.231	221.863	0.001
L7	123.416 - 123.166 (7)	TP15.665x15.616x0.538	11.192	459.502	0.024	0.231	611.454	0.000
L8	123.166 - 118.166 (8)	TP16.651x15.665x0.513	14.379	467.405	0.031	0.319	663.528	0.000
L9	118.166 - 113.166 (9)	TP17.637x16.651x0.488	14.769	472.451	0.031	0.334	712.699	0.000
L10	113.166 - 109.5 (10)	TP18.36x17.637x0.475	18.582	480.074	0.039	0.336	755.248	0.000
L11	109.5 - 109.25 (11)	TP18.409x18.36x0.588	18.591	591.677	0.031	0.004	927.533	0.000
L12	109.25 - 104.75 (12)	TP19.296x18.409x0.563	18.970	595.497	0.032	0.003	981.300	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L13	104.75 - 104.5 (13)	TP19.346x19.296x0.775	18.983	813.314	0.023	0.003	1328.558	0.000
L14	104.5 - 102.416 (14)	TP19.756x19.346x0.763	19.182	818.440	0.023	0.007	1367.417	0.000
L15	102.416 - 102.166 (15)	TP19.806x19.756x0.563	19.197	611.691	0.031	0.008	1035.400	0.000
L16	102.166 - 98.75 (16)	TP20.479x19.806x0.55	21.930	619.420	0.035	0.014	1085.858	0.000
L17	98.75 - 98.5 (17)	TP20.528x20.479x0.838	21.940	931.933	0.024	0.014	1614.175	0.000
L18	98.5 - 97.5 (18)	TP20.726x20.528x0.838	22.046	941.264	0.023	0.016	1646.667	0.000
L19	97.5 - 97.25 (19)	TP20.775x20.726x0.75	22.062	848.721	0.026	0.016	1494.983	0.000
L20	97.25 - 92 (20)	TP21.81x20.775x0.738	22.234	849.049	0.026	0.016	1521.492	0.000
L21	92 - 90.552 (21)	TP21.73x20.735x0.8	22.811	946.229	0.024	0.016	1742.083	0.000
L22	90.552 - 89.25 (22)	TP21.989x21.73x0.775	22.928	929.108	0.025	0.017	1733.792	0.000
L23	89.25 - 89 (23)	TP22.039x21.989x1	22.938	1188.950	0.019	0.017	2200.350	0.000
L24	89 - 88.25 (24)	TP22.189x22.039x0.975	23.020	1168.830	0.020	0.018	2181.042	0.000
L25	88.25 - 88 (25)	TP22.238x22.189x0.763	23.037	925.385	0.025	0.019	1748.125	0.000
L26	88 - 87.833 (26)	TP22.272x22.238x0.763	23.052	926.817	0.025	0.019	1753.542	0.000
L27	87.833 - 87.583 (27)	TP22.321x22.272x0.675	23.073	825.698	0.028	0.019	1572.192	0.000
L28	87.583 - 82.583 (28)	TP23.317x22.321x0.65	23.493	832.602	0.028	0.024	1660.075	0.000
L29	82.583 - 77.583 (29)	TP24.312x23.317x0.625	23.886	836.622	0.029	0.026	1743.192	0.000
L30	77.583 - 77 (30)	TP24.428x24.312x0.625	23.922	840.722	0.028	0.026	1760.317	0.000
L31	77 - 76.75 (31)	TP24.478x24.428x0.825	23.937	1102.750	0.022	0.026	2294.383	0.000
L32	76.75 - 76.333 (32)	TP24.561x24.478x0.825	23.977	1106.620	0.022	0.026	2310.525	0.000
L33	76.333 - 76.083 (33)	TP24.611x24.561x0.825	23.997	1108.940	0.022	0.027	2320.225	0.000
L34	76.083 - 74.25 (34)	TP24.976x24.611x0.8	24.187	1092.970	0.022	0.027	2324.292	0.000
L35	74.25 - 74 (35)	TP25.026x24.976x0.888	24.183	1210.620	0.020	0.022	2570.467	0.000
L36	74 - 73.75 (36)	TP25.076x25.026x0.888	24.207	1213.110	0.020	0.021	2581.075	0.000
L37	73.75 - 73.5 (37)	TP25.125x25.076x0.913	24.230	1248.560	0.019	0.020	2659.225	0.000
L38	73.5 - 68.5 (38)	TP26.121x25.125x0.875	24.703	1248.330	0.020	0.003	2772.167	0.000
L39	68.5 - 63.5 (39)	TP27.116x26.121x0.85	25.152	1261.680	0.020	0.026	2915.075	0.000
L40	63.5 - 60.5 (40)	TP27.714x27.116x0.825	25.422	1253.590	0.020	0.039	2964.992	0.000
L41	60.5 - 60.25 (41)	TP27.763x27.714x0.825	25.432	1255.910	0.020	0.040	2975.975	0.000
L42	60.25 - 59.5 (42)	TP27.913x27.763x0.825	25.508	1262.870	0.020	0.043	3009.058	0.000
L43	59.5 - 59.25 (43)	TP27.962x27.913x0.888	25.523	1357.910	0.019	0.044	3233.983	0.000
L44	59.25 - 54.25 (44)	TP28.958x27.962x0.85	25.991	1350.150	0.019	0.068	3338.192	0.000
L45	54.25 - 45.802 (45)	TP30.64x28.958x0.838	26.362	1370.930	0.019	0.089	3493.133	0.000
L46	45.802 - 44.802 (46)	TP30.333x29.304x0.838	27.003	1395.960	0.019	0.115	3621.825	0.000
L47	44.802 - 43.583 (47)	TP30.574x30.333x0.838	27.103	1407.380	0.019	0.115	3681.317	0.000
L48	43.583 -	TP30.624x30.574x0.85	27.102	1430.160	0.019	0.114	3745.558	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L49	43.333 (48) 43.333 - 43.166 (49)	TP30.657x30.624x0.85	27.114	1431.750	0.019	0.114	3753.883	0.000
L50	43.166 - 42.916 (50)	TP30.706x30.657x0.938	27.136	1577.120	0.017	0.114	4129.758	0.000
L51	42.916 - 39 (51)	TP31.481x30.706x0.913	27.471	1576.320	0.017	0.114	4238.592	0.000
L52	39 - 38.75 (52)	TP31.531x31.481x0.95	27.470	1641.740	0.017	0.114	4416.233	0.000
L53	38.75 - 37.166 (53)	TP31.844x31.531x0.938	27.623	1637.410	0.017	0.115	4451.542	0.000
L54	37.166 - 36.916 (54)	TP31.894x31.844x0.888	27.616	1555.070	0.018	0.115	4241.300	0.000
L55	36.916 - 34 (55)	TP32.471x31.894x0.888	27.801	1584.020	0.018	0.115	4400.650	0.000
L56	34 - 33.75 (56)	TP32.52x32.471x0.875	27.789	1564.770	0.018	0.115	4355.717	0.000
L57	33.75 - 29.75 (57)	TP33.312x32.52x0.863	27.950	1571.970	0.018	0.115	4405.008	0.000
L58	29.75 - 29.5 (58)	TP33.361x33.312x0.863	27.993	1584.020	0.018	0.115	4514.475	0.000
L59	29.5 - 24.5 (59)	TP34.351x33.361x0.85	28.052	1571.170	0.018	0.115	4466.058	0.000
L60	24.5 - 23 (60)	TP34.648x34.351x0.838	28.302	1600.180	0.018	0.115	4675.825	0.000
L61	23 - 22.75 (61)	TP34.697x34.648x0.963	28.285	1834.900	0.015	0.115	5428.967	0.000
L62	22.75 - 21.583 (62)	TP34.928x34.697x0.963	28.360	1847.470	0.015	0.115	5444.933	0.000
L63	21.583 - 21.333 (63)	TP34.978x34.928x0.85	28.353	1639.310	0.017	0.115	4906.925	0.000
L64	21.333 - 16.333 (64)	TP35.967x34.978x0.838	28.408	1625.160	0.017	0.115	4852.367	0.000
L65	16.333 - 12.917 (65)	TP36.644x35.967x0.825	28.610	1648.900	0.017	0.115	5064.658	0.000
L66	12.917 - 12.667 (66)	TP36.693x36.644x0.913	28.695	1845.070	0.016	0.115	5791.033	0.000
L67	12.667 - 12.5 (67)	TP36.726x36.693x0.913	28.701	1846.770	0.016	0.115	5807.083	0.000
L68	12.5 - 12.25 (68)	TP36.776x36.726x0.763	28.713	1551.790	0.019	0.115	4902.275	0.000
L69	12.25 - 12 (69)	TP36.825x36.776x0.763	28.723	1553.920	0.018	0.115	4915.775	0.000
L70	12 - 11.75 (70)	TP36.874x36.825x0.663	28.731	1355.720	0.021	0.115	4306.608	0.000
L71	11.75 - 8.5 (71)	TP37.518x36.874x0.65	28.836	1338.480	0.022	0.115	4239.850	0.000
L72	8.5 - 8.25 (72)	TP37.567x37.518x0.925	28.995	1915.390	0.015	0.082	6156.925	0.000
L73	8.25 - 7 (73)	TP37.815x37.567x0.913	29.146	1902.900	0.015	0.080	6094.317	0.000
L74	7 - 6.75 (74)	TP37.864x37.815x0.813	29.149	1701.230	0.017	0.067	5529.792	0.000
L75	6.75 - 1.75 (75)	TP38.854x37.864x0.788	29.264	1658.800	0.018	0.064	5381.242	0.000
L76	1.75 - 0 (76)	TP39.2x38.854x0.788	29.839	1709.450	0.017	0.034	5672.325	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	144.25 - 139.25 (1)	0.007	0.123	0.000	0.033	0.000	0.131 ✔	1.050	4.8.2 ✔
L2	139.25 - 134.75 (2)	0.008	0.261	0.000	0.034	0.000	0.271 ✔	1.050	4.8.2 ✔

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
L3	134.75 - 134.25 (3)	0.008	0.247	0.000	0.032	0.000	0.256 ✔	1.050	4.8.2 ✔
L4	134.25 - 129.25 (4)	0.017	0.494	0.000	0.071	0.001	0.517 ✔	1.050	4.8.2 ✔
L5	129.25 - 124.25 (5)	0.016	0.694	0.000	0.069	0.001	0.715 ✔	1.050	4.8.2 ✔
L6	124.25 - 123.416 (6)	0.016	0.723	0.000	0.068	0.001	0.744 ✔	1.050	4.8.2 ✔
L7	123.416 - 123.166 (7)	0.006	0.273	0.000	0.024	0.000	0.280 ✔	1.050	4.8.2 ✔
L8	123.166 - 118.166 (8)	0.008	0.349	0.000	0.031	0.000	0.358 ✔	1.050	4.8.2 ✔
L9	118.166 - 113.166 (9)	0.008	0.431	0.000	0.031	0.000	0.441 ✔	1.050	4.8.2 ✔
L10	113.166 - 109.5 (10)	0.010	0.484	0.000	0.039	0.000	0.496 ✔	1.050	4.8.2 ✔
L11	109.5 - 109.25 (11)	0.008	0.402	0.000	0.031	0.000	0.412 ✔	1.050	4.8.2 ✔
L12	109.25 - 104.75 (12)	0.009	0.470	0.000	0.032	0.000	0.479 ✔	1.050	4.8.2 ✔
L13	104.75 - 104.5 (13)	0.006	0.355	0.000	0.023	0.000	0.362 ✔	1.050	4.8.2 ✔
L14	104.5 - 102.416 (14)	0.007	0.375	0.000	0.023	0.000	0.382 ✔	1.050	4.8.2 ✔
L15	102.416 - 102.166 (15)	0.009	0.495	0.000	0.031	0.000	0.504 ✔	1.050	4.8.2 ✔
L16	102.166 - 98.75 (16)	0.011	0.539	0.000	0.035	0.000	0.551 ✔	1.050	4.8.2 ✔
L17	98.75 - 98.5 (17)	0.007	0.372	0.000	0.024	0.000	0.379 ✔	1.050	4.8.2 ✔
L18	98.5 - 97.5 (18)	0.007	0.378	0.000	0.023	0.000	0.386 ✔	1.050	4.8.2 ✔
L19	97.5 - 97.25 (19)	0.008	0.419	0.000	0.026	0.000	0.427 ✔	1.050	4.8.2 ✔
L20	97.25 - 92 (20)	0.008	0.437	0.000	0.026	0.000	0.446 ✔	1.050	4.8.2 ✔
L21	92 - 90.552 (21)	0.008	0.451	0.000	0.024	0.000	0.459 ✔	1.050	4.8.2 ✔
L22	90.552 - 89.25 (22)	0.008	0.471	0.000	0.025	0.000	0.479 ✔	1.050	4.8.2 ✔
L23	89.25 - 89 (23)	0.006	0.377	0.000	0.019	0.000	0.384 ✔	1.050	4.8.2 ✔
L24	89 - 88.25 (24)	0.007	0.389	0.000	0.020	0.000	0.396 ✔	1.050	4.8.2 ✔
L25	88.25 - 88 (25)	0.008	0.484	0.000	0.025	0.000	0.492 ✔	1.050	4.8.2 ✔
L26	88 - 87.833 (26)	0.008	0.484	0.000	0.025	0.000	0.493 ✔	1.050	4.8.2 ✔
L27	87.833 - 87.583 (27)	0.009	0.542	0.000	0.028	0.000	0.552 ✔	1.050	4.8.2 ✔
L28	87.583 - 82.583 (28)	0.010	0.585	0.000	0.028	0.000	0.596 ✔	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L29	82.583 - 77.583 (29)	0.010	0.627	0.000	0.029	0.000	0.638 ✔	1.050	4.8.2 ✔
L30	77.583 - 77 (30)	0.010	0.629	0.000	0.028	0.000	0.640 ✔	1.050	4.8.2 ✔
L31	77 - 76.75 (31)	0.008	0.490	0.000	0.022	0.000	0.498 ✔	1.050	4.8.2 ✔
L32	76.75 - 76.333 (32)	0.008	0.491	0.000	0.022	0.000	0.499 ✔	1.050	4.8.2 ✔
L33	76.333 - 76.083 (33)	0.008	0.491	0.000	0.022	0.000	0.500 ✔	1.050	4.8.2 ✔
L34	76.083 - 74.25 (34)	0.008	0.510	0.000	0.022	0.000	0.518 ✔	1.050	4.8.2 ✔
L35	74.25 - 74 (35)	0.007	0.465	0.000	0.020	0.000	0.473 ✔	1.050	4.8.2 ✔
L36	74 - 73.75 (36)	0.007	0.466	0.000	0.020	0.000	0.473 ✔	1.050	4.8.2 ✔
L37	73.75 - 73.5 (37)	0.007	0.455	0.000	0.019	0.000	0.462 ✔	1.050	4.8.2 ✔
L38	73.5 - 68.5 (38)	0.007	0.482	0.000	0.020	0.000	0.489 ✔	1.050	4.8.2 ✔
L39	68.5 - 63.5 (39)	0.008	0.502	0.000	0.020	0.000	0.510 ✔	1.050	4.8.2 ✔
L40	63.5 - 60.5 (40)	0.008	0.520	0.000	0.020	0.000	0.528 ✔	1.050	4.8.2 ✔
L41	60.5 - 60.25 (41)	0.008	0.520	0.000	0.020	0.000	0.528 ✔	1.050	4.8.2 ✔
L42	60.25 - 59.5 (42)	0.008	0.521	0.000	0.020	0.000	0.529 ✔	1.050	4.8.2 ✔
L43	59.5 - 59.25 (43)	0.007	0.488	0.000	0.019	0.000	0.496 ✔	1.050	4.8.2 ✔
L44	59.25 - 54.25 (44)	0.008	0.512	0.000	0.019	0.000	0.520 ✔	1.050	4.8.2 ✔
L45	54.25 - 45.802 (45)	0.008	0.522	0.000	0.019	0.000	0.530 ✔	1.050	4.8.2 ✔
L46	45.802 - 44.802 (46)	0.009	0.543	0.000	0.019	0.000	0.552 ✔	1.050	4.8.2 ✔
L47	44.802 - 43.583 (47)	0.009	0.544	0.000	0.019	0.000	0.553 ✔	1.050	4.8.2 ✔
L48	43.583 - 43.333 (48)	0.009	0.537	0.000	0.019	0.000	0.545 ✔	1.050	4.8.2 ✔
L49	43.333 - 43.166 (49)	0.009	0.537	0.000	0.019	0.000	0.546 ✔	1.050	4.8.2 ✔
L50	43.166 - 42.916 (50)	0.008	0.491	0.000	0.017	0.000	0.499 ✔	1.050	4.8.2 ✔
L51	42.916 - 39 (51)	0.008	0.504	0.000	0.017	0.000	0.512 ✔	1.050	4.8.2 ✔
L52	39 - 38.75 (52)	0.008	0.486	0.000	0.017	0.000	0.494 ✔	1.050	4.8.2 ✔
L53	38.75 - 37.166 (53)	0.008	0.492	0.000	0.017	0.000	0.500 ✔	1.050	4.8.2 ✔
L54	37.166 - 36.916 (54)	0.008	0.517	0.000	0.018	0.000	0.526 ✔	1.050	4.8.2 ✔

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L55	36.916 - 34 (55)	0.008	0.518	0.000	0.018	0.000	0.526 ✔	1.050	4.8.2 ✔
L56	34 - 33.75 (56)	0.009	0.524	0.000	0.018	0.000	0.533 ✔	1.050	4.8.2 ✔
L57	33.75 - 29.75 (57)	0.009	0.531	0.000	0.018	0.000	0.540 ✔	1.050	4.8.2 ✔
L58	29.75 - 29.5 (58)	0.009	0.531	0.000	0.018	0.000	0.540 ✔	1.050	4.8.2 ✔
L59	29.5 - 24.5 (59)	0.009	0.538	0.000	0.018	0.000	0.548 ✔	1.050	4.8.2 ✔
L60	24.5 - 23 (60)	0.009	0.545	0.000	0.018	0.000	0.555 ✔	1.050	4.8.2 ✔
L61	23 - 22.75 (61)	0.008	0.479	0.000	0.015	0.000	0.488 ✔	1.050	4.8.2 ✔
L62	22.75 - 21.583 (62)	0.008	0.479	0.000	0.015	0.000	0.487 ✔	1.050	4.8.2 ✔
L63	21.583 - 21.333 (63)	0.009	0.537	0.000	0.017	0.000	0.546 ✔	1.050	4.8.2 ✔
L64	21.333 - 16.333 (64)	0.009	0.544	0.000	0.017	0.000	0.554 ✔	1.050	4.8.2 ✔
L65	16.333 - 12.917 (65)	0.009	0.550	0.000	0.017	0.000	0.560 ✔	1.050	4.8.2 ✔
L66	12.917 - 12.667 (66)	0.009	0.500	0.000	0.016	0.000	0.509 ✔	1.050	4.8.2 ✔
L67	12.667 - 12.5 (67)	0.009	0.500	0.000	0.016	0.000	0.509 ✔	1.050	4.8.2 ✔
L68	12.5 - 12.25 (68)	0.010	0.591	0.000	0.019	0.000	0.601 ✔	1.050	4.8.2 ✔
L69	12.25 - 12 (69)	0.010	0.590	0.000	0.018	0.000	0.601 ✔	1.050	4.8.2 ✔
L70	12 - 11.75 (70)	0.012	0.674	0.000	0.021	0.000	0.686 ✔	1.050	4.8.2 ✔
L71	11.75 - 8.5 (71)	0.012	0.686	0.000	0.022	0.000	0.698 ✔	1.050	4.8.2 ✔
L72	8.5 - 8.25 (72)	0.009	0.492	0.000	0.015	0.000	0.501 ✔	1.050	4.8.2 ✔
L73	8.25 - 7 (73)	0.009	0.498	0.000	0.015	0.000	0.507 ✔	1.050	4.8.2 ✔
L74	7 - 6.75 (74)	0.010	0.554	0.000	0.017	0.000	0.564 ✔	1.050	4.8.2 ✔
L75	6.75 - 1.75 (75)	0.010	0.570	0.000	0.018	0.000	0.581 ✔	1.050	4.8.2 ✔
L76	1.75 - 0 (76)	0.010	0.568	0.000	0.017	0.000	0.578 ✔	1.050	4.8.2 ✔

Section Capacity Table

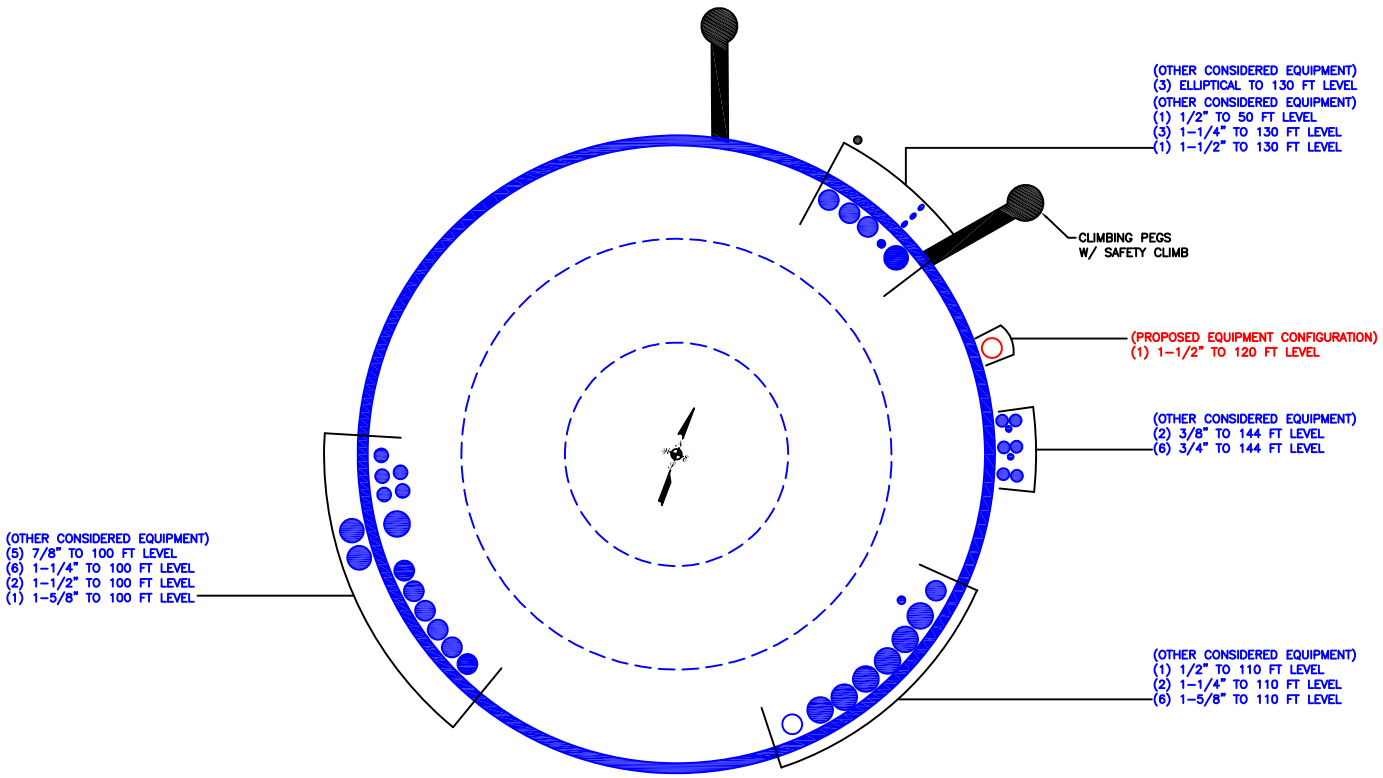
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	144.25 - 139.25	Pole	TP12.75x12.75x0.375	1	-4.488	633.747	**	**
L2	139.25 - 134.75	Pole	TP12.75x12.75x0.375	2	-4.770	633.747	**	**
L3	134.75 - 134.25	Pole	TP13.48x13.48x0.375	3	-4.806	671.132	**	**
L4	134.25 - 129.25	Pole	TP14.466x13.48x0.188	4	-8.607	529.516	**	**
L5	129.25 - 124.25	Pole	TP15.452x14.466x0.188	5	-8.843	566.074	**	**
L6	124.25 - 123.416	Pole	TP15.616x15.452x0.188	6	-8.904	572.172	**	**
L7	123.416 - 123.166	Pole	TP15.665x15.616x0.538	7	-8.941	1608.253	**	**
L8	123.166 - 118.166	Pole	TP16.651x15.665x0.513	8	-12.361	1635.921	**	**
L9	118.166 - 113.166	Pole	TP17.637x16.651x0.488	9	-12.950	1653.582	**	**
L10	113.166 - 109.5	Pole	TP18.36x17.637x0.475	10	-16.556	1680.262	**	**
L11	109.5 - 109.25	Pole	TP18.409x18.36x0.588	11	-16.611	2070.873	**	**
L12	109.25 - 104.75	Pole	TP19.296x18.409x0.563	12	-17.332	2084.239	**	**
L13	104.75 - 104.5	Pole	TP19.346x19.296x0.775	13	-17.397	2846.602	**	**
L14	104.5 - 102.416	Pole	TP19.756x19.346x0.763	14	-17.825	2864.536	**	**
L15	102.416 - 102.166	Pole	TP19.806x19.756x0.563	15	-17.883	2140.918	**	**
L16	102.166 - 98.75	Pole	TP20.479x19.806x0.55	16	-21.892	2167.966	**	**
L17	98.75 - 98.5	Pole	TP20.528x20.479x0.838	17	-21.974	3261.762	**	**
L18	98.5 - 97.5	Pole	TP20.726x20.528x0.838	18	-22.227	3294.427	**	**
L19	97.5 - 97.25	Pole	TP20.775x20.726x0.75	19	-22.299	2970.523	**	**
L20	97.25 - 92	Pole	TP21.81x20.775x0.738	20	-22.710	2971.668	**	**
L21	92 - 90.552	Pole	TP21.73x20.735x0.8	21	-24.757	3311.805	**	**
L22	90.552 - 89.25	Pole	TP21.989x21.73x0.775	22	-25.118	3251.881	**	**
L23	89.25 - 89	Pole	TP22.039x21.989x1	23	-25.212	4161.307	**	**
L24	89 - 88.25	Pole	TP22.189x22.039x0.975	24	-25.440	4090.894	**	**
L25	88.25 - 88	Pole	TP22.238x22.189x0.763	25	-25.513	3238.851	**	**
L26	88 - 87.833	Pole	TP22.272x22.238x0.763	26	-25.560	3243.859	**	**
L27	87.833 - 87.583	Pole	TP22.321x22.272x0.675	27	-25.621	2889.946	**	**
L28	87.583 - 82.583	Pole	TP23.317x22.321x0.65	28	-26.860	2914.107	**	**
L29	82.583 - 77.583	Pole	TP24.312x23.317x0.625	29	-28.142	2928.177	**	**
L30	77.583 - 77	Pole	TP24.428x24.312x0.625	30	-28.301	2942.530	**	**
L31	77 - 76.75	Pole	TP24.478x24.428x0.825	31	-28.384	3859.621	**	**
L32	76.75 - 76.333	Pole	TP24.561x24.478x0.825	32	-28.508	3873.166	**	**
L33	76.333 - 76.083	Pole	TP24.611x24.561x0.825	33	-28.583	3881.293	**	**
L34	76.083 - 74.25	Pole	TP24.976x24.611x0.8	34	-29.093	3825.381	**	**
L35	74.25 - 74	Pole	TP25.026x24.976x0.888	35	-29.191	4237.159	**	**
L36	74 - 73.75	Pole	TP25.076x25.026x0.888	36	-29.267	4245.895	**	**
L37	73.75 - 73.5	Pole	TP25.125x25.076x0.913	37	-29.346	4369.974	**	**
L38	73.5 - 68.5	Pole	TP26.121x25.125x0.875	38	-30.907	4369.165	**	**
L39	68.5 - 63.5	Pole	TP27.116x26.121x0.85	39	-32.502	4415.901	**	**
L40	63.5 - 60.5	Pole	TP27.714x27.116x0.825	40	-33.474	4387.561	**	**
L41	60.5 - 60.25	Pole	TP27.763x27.714x0.825	41	-33.566	4395.688	**	**
L42	60.25 - 59.5	Pole	TP27.913x27.763x0.825	42	-33.804	4420.048	**	**
L43	59.5 - 59.25	Pole	TP27.962x27.913x0.888	43	-33.898	4752.667	**	**
L44	59.25 - 54.25	Pole	TP28.958x27.962x0.85	44	-35.602	4725.525	**	**
L45	54.25 - 45.802	Pole	TP30.64x28.958x0.838	45	-37.077	4798.269	**	**
L46	45.802 - 44.802	Pole	TP30.333x29.304x0.838	46	-40.211	4885.860	**	**
L47	44.802 - 43.583	Pole	TP30.574x30.333x0.838	47	-40.648	4925.823	**	**
L48	43.583 - 43.333	Pole	TP30.624x30.574x0.85	48	-40.757	5005.560	**	**
L49	43.333 - 43.166	Pole	TP30.657x30.624x0.85	49	-40.822	5011.114	**	**
L50	43.166 - 42.916	Pole	TP30.706x30.657x0.938	50	-40.920	5519.913	**	**
L51	42.916 - 39	Pole	TP31.481x30.706x0.913	51	-42.460	5517.109	**	**
L52	39 - 38.75	Pole	TP31.531x31.481x0.95	52	-42.578	5746.093	**	**
L53	38.75 - 37.166	Pole	TP31.844x31.531x0.938	53	-43.221	5730.931	**	**
L54	37.166 - 36.916	Pole	TP31.894x31.844x0.888	54	-43.339	5442.748	**	**

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L55	36.916 - 34	Pole	TP32.471x31.894x0.888	55	-44.512	5544.052	**	**
L56	34 - 33.75	Pole	TP32.52x32.471x0.875	56	-44.627	5476.695	**	**
L57	33.75 - 29.75	Pole	TP33.312x32.52x0.863	57	-45.428	5468.116	**	**
L58	29.75 - 29.5	Pole	TP33.361x33.312x0.863	58	-46.211	5535.642	**	**
L59	29.5 - 24.5	Pole	TP34.351x33.361x0.85	59	-46.322	5465.838	**	**
L60	24.5 - 23	Pole	TP34.648x34.351x0.838	60	-48.337	5551.444	**	**
L61	23 - 22.75	Pole	TP34.697x34.648x0.963	61	-48.931	6412.738	**	**
L62	22.75 - 21.583	Pole	TP34.928x34.697x0.963	62	-49.051	6422.157	**	**
L63	21.583 - 21.333	Pole	TP34.978x34.928x0.85	63	-49.557	5729.262	**	**
L64	21.333 - 16.333	Pole	TP35.967x34.978x0.838	64	-49.673	5655.279	**	**
L65	16.333 - 12.917	Pole	TP36.644x35.967x0.825	65	-51.809	5734.386	**	**
L66	12.917 - 12.667	Pole	TP36.693x36.644x0.913	66	-53.271	6448.806	**	**
L67	12.667 - 12.5	Pole	TP36.726x36.693x0.913	67	-53.387	6457.731	**	**
L68	12.5 - 12.25	Pole	TP36.776x36.726x0.763	68	-53.467	5423.796	**	**
L69	12.25 - 12	Pole	TP36.825x36.776x0.763	69	-53.572	5431.261	**	**
L70	12 - 11.75	Pole	TP36.874x36.825x0.663	70	-53.679	4738.545	**	**
L71	11.75 - 8.5	Pole	TP37.518x36.874x0.65	71	-53.792	4657.107	**	**
L72	8.5 - 8.25	Pole	TP37.567x37.518x0.925	72	-55.087	6694.800	**	**
L73	8.25 - 7	Pole	TP37.815x37.567x0.913	73	-55.219	6615.514	**	**
L74	7 - 6.75	Pole	TP37.864x37.815x0.813	74	-55.812	5946.349	**	**
L75	6.75 - 1.75	Pole	TP38.854x37.864x0.788	75	-55.931	5774.989	**	**
L76	1.75 - 0	Pole	TP39.2x38.854x0.788	76	-58.131	5929.119	**	**
							Summary	
						Pole (L6)	**	**
						RATING =	**	**

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

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876317

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 876317

Work Order: 2028458

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	144.25	9.5	0	0	12.75	12.75	0.375		A500-46
2	134.75	0.5	0	0	13.48	13.48	0.375		A500-46
3	134.25	42.25	3.552	12	13.48	21.81	0.1875	Auto	A572-65
4	95.552	49.75	4.198	12	20.73	30.64	0.25	Auto	A572-65
5	50	50	0	12	29.30	39.2	0.3125	Auto	A572-65

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
1	0	29.75	plate	PL 6.875x1.25 BW	2				E1								E1
2	0	12.917	plate	PL 6.875x1.25 (14)	2							E1		E1			
3	12.917	29.75	plate	PL 6.875x1.25	1								E1				
4	29.75	59.5	plate	PL 6.625x1.25	3				E1				E1				E1
5	59.5	89.25	plate	PL 5.5x1.25	3				E1				E1				E1
6	89.25	98.75	plate	PL 3.625x1.25	3				E1				E1				E1
7	12.5	39	plate	PL 4x1	1	E2											
8	12.5	34	plate	PL 4x1	2						E2				E2		
9	34	60.5	plate	PL 4x1	3			E2				E2				E2	
10	60.5	77	plate	PL 4x1	3		E2				E2				E2		
11	88.25	104.75	plate	PL 4x1	3		E2				E2				E2		
12	0	8.5	plate	TS 1x7	3			3			3				3		
13	7	23	plate	CCI-SFP-060100	2					E3						E3	
14	12	23	plate	CCI-SFP-060100	1		E3										
15	21.583	37.166	plate	CCI-SFP-045100	1									E3			
16	23	37.166	plate	CCI-SFP-045100	1					E3							
17	23	43.583	plate	CCI-SFP-045100	1		E3										
18	37.166	43.166	plate	CCI-SFP-060100	2					E3				E3			
19	43.166	73.75	plate	CCI-SFP-045100	1									E3			
20	46.75	73.75	plate	CCI-SFP-045100	1	E3											
21	43.166	74.25	plate	CCI-SFP-040075	1					E3							
22	73.75	102.416	plate	CCI-SFP-040075	2	E3								E3			
23	76.333	89.25	plate	CCI-SFP-040075	1			E3									
24	87.833	102.416	plate	CCI-AFP-050125	1							E3					
25	102.416	123.416	plate	CCI-AFP-045100	2	E3								E3			
26	102.416	123.416	plate	CCI-AFP-045100	1					E3							
27	97.5	109.5	plate	CCI-AFP-040075	1			E3									
28	102.416	109.5	plate	CCI-AFP-040075	1											E3	
29																	

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	6.875	1.25	8.59375	0.625	Welded	n/a	PC 8.8 - M20 (100)	36.000	15.000	6.953	1.2500	A572-65
2	6.875	1.25	8.59375	0.625	Welded	n/a	PC 8.8 - M20 (100)	42.000	15.000	6.953	1.2500	A572-65
3	6.875	1.25	8.59375	0.625	PC 8.8 - M20 (100)	42	PC 8.8 - M20 (100)	36.000	15.000	6.953	1.2500	A572-65
4	6.625	1.25	8.28125	0.625	None	n/a	PC 8.8 - M20 (100)	30.000	18.000	6.641	1.2500	A572-65
5	5.5	1.25	6.875	0.625	None	n/a	PC 8.8 - M20 (100)	18.000	18.000	5.234	1.2500	A572-65
6	3.625	1.25	4.53125	0.625	None	n/a	PC 8.8 - M20 (100)	15.000	24.000	2.891	1.2500	A572-65
7	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
8	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
9	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
10	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
11	4	1	4	0.5	PC 8.8 - M20 (100)	21	PC 8.8 - M20 (100)	21.000	20.000	2.750	1.1875	A572-65
12	1	7	7	3.5	Welded	n/a	Welded	0.000	0.750	7.000	0.0000	A572-65
13	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
14	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
15	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
16	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
17	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
18	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
19	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
20	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
21	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
22	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
23	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
24	5	1.25	6.25	0.625	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	23.000	4.688	1.1875	A572-65
25	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	20.000	3.250	1.1875	A572-65
26	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	20.000	3.250	1.1875	A572-65
27	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
28	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

Connection Details for Custom Reinforcements

Reinforcement	End	# Bolts	N or X	Bolt Spacing (in)	Edge Dist (in)	Weld Grade (ksi)	Transverse (Horiz.) Weld Type	Horiz. Weld Length (in)	Horiz. Groove Depth (in)	Horiz. Groove Angle (deg)	Horiz. Fillet Size (in)	Vertical Weld Length (in)	Vertical Fillet Size (in)	Rev H Connection Capacity (kip)
PL 6.875x1.25 BW	Top	12	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 6.875x1.25 (14)	Top	14	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 6.875x1.25	Top	12	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	14	N	3	3	0	-	-	-	-	-	-	-	-
PL 6.625x1.25	Top	10	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 5.5x1.25	Top	6	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 3.625x1.25	Top	5	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
PL 4x1	Top	7	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	7	N	3	3	0	-	-	-	-	-	-	-	-
TS 1x7	Top	0	-	0	0	80	None	-	-	-	-	125.25	0.313	-
	Bottom	-	-	-	-	80	CJP Groove	12.5	0.5	45	0.3125	-	-	-

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	144.25 - 139.25	5		0	12.750	12.750	0.375	A500-46	1.000
2	139.25 - 134.75	4.5	0	0	12.750	12.750	0.375	A500-46	1.000
3	134.75 - 134.25	0.5	0	0	13.480	13.480	0.375	A500-46	1.000
4	134.25 - 129.25	5		12	13.480	14.466	0.1875	A572-65	1.000
5	129.25 - 124.25	5		12	14.466	15.452	0.1875	A572-65	1.000
6	124.25 - 123.416	0.834		12	15.452	15.616	0.1875	A572-65	1.000
7	123.416 - 123.166	0.25		12	15.616	15.665	0.5375	A572-65	0.873
8	123.166 - 118.166	5		12	15.665	16.651	0.5125	A572-65	0.881
9	118.166 - 113.166	5		12	16.651	17.637	0.4875	A572-65	0.894
10	113.166 - 109.5	3.666		12	17.637	18.360	0.475	A572-65	0.895
11	109.5 - 109.25	0.25		12	18.360	18.409	0.5875	A572-65	0.906
12	109.25 - 104.75	4.5		12	18.409	19.296	0.5625	A572-65	0.916
13	104.75 - 104.5	0.25		12	19.296	19.346	0.775	A572-65	0.930
14	104.5 - 102.416	2.084		12	19.346	19.756	0.7625	A572-65	0.930
15	102.416 - 102.166	0.25		12	19.756	19.806	0.5625	A572-65	1.123
16	102.166 - 98.75	3.416		12	19.806	20.479	0.55	A572-65	1.120
17	98.75 - 98.5	0.25		12	20.479	20.528	0.8375	A572-65	1.002
18	98.5 - 97.5	1		12	20.528	20.726	0.8375	A572-65	0.994
19	97.5 - 97.25	0.25		12	20.726	20.775	0.75	A572-65	1.041
20	97.25 - 95.552	5.25	3.552	12	20.775	21.810	0.7375	A572-65	1.044
21	95.552 - 90.552	5		12	20.735	21.730	0.8	A572-65	1.024
22	90.552 - 89.25	1.302		12	21.730	21.989	0.775	A572-65	1.046
23	89.25 - 89	0.25		12	21.989	22.039	1	A572-65	0.967
24	89 - 88.25	0.75		12	22.039	22.189	0.975	A572-65	0.985
25	88.25 - 88	0.25		12	22.189	22.238	0.7625	A572-65	1.017
26	88 - 87.833	0.167		12	22.238	22.272	0.7625	A572-65	1.016
27	87.833 - 87.583	0.25		12	22.272	22.321	0.675	A572-65	1.008
28	87.583 - 82.583	5		12	22.321	23.317	0.65	A572-65	1.017
29	82.583 - 77.583	5		12	23.317	24.312	0.625	A572-65	1.029
30	77.583 - 77	0.583		12	24.312	24.428	0.625	A572-65	1.026
31	77 - 76.75	0.25		12	24.428	24.478	0.825	A572-65	0.974
32	76.75 - 76.333	0.417		12	24.478	24.561	0.825	A572-65	0.971
33	76.333 - 76.083	0.25		12	24.561	24.611	0.825	A572-65	0.923
34	76.083 - 74.25	1.833		12	24.611	24.976	0.8	A572-65	0.941
35	74.25 - 74	0.25		12	24.976	25.026	0.8875	A572-65	0.893
36	74 - 73.75	0.25		12	25.026	25.076	0.8875	A572-65	0.892
37	73.75 - 73.5	0.25		12	25.076	25.125	0.9125	A572-65	0.910
38	73.5 - 68.5	5		12	25.125	26.121	0.875	A572-65	0.921
39	68.5 - 63.5	5		12	26.121	27.116	0.85	A572-65	0.922
40	63.5 - 60.5	3		12	27.116	27.714	0.825	A572-65	0.935
41	60.5 - 60.25	0.25		12	27.714	27.763	0.825	A572-65	0.934
42	60.25 - 59.5	0.75		12	27.763	27.913	0.825	A572-65	0.931
43	59.5 - 59.25	0.25		12	27.913	27.962	0.8875	A572-65	0.920
44	59.25 - 54.25	5		12	27.962	28.958	0.85	A572-65	0.936
45	54.25 - 50	8.448	4.198	12	28.958	30.640	0.8375	A572-65	0.931
46	50 - 44.802	5.198		12	29.304	30.333	0.8375	A572-65	0.938
47	44.802 - 43.583	1.219		12	30.333	30.574	0.8375	A572-65	0.933
48	43.583 - 43.333	0.25		12	30.574	30.624	0.85	A572-65	0.975
49	43.333 - 43.166	0.167		12	30.624	30.657	0.85	A572-65	0.974
50	43.166 - 42.916	0.25		12	30.657	30.706	0.9375	A572-65	0.935
51	42.916 - 39	3.916		12	30.706	31.481	0.9125	A572-65	0.944
52	39 - 38.75	0.25		12	31.481	31.531	0.95	A572-65	0.950
53	38.75 - 37.166	1.584		12	31.531	31.844	0.9375	A572-65	0.956
54	37.166 - 36.916	0.25		12	31.844	31.894	0.8875	A572-65	0.973
55	36.916 - 34	2.916		12	31.894	32.471	0.8875	A572-65	0.961
56	34 - 33.75	0.25		12	32.471	32.520	0.875	A572-65	0.929
57	33.75 - 29.75	4		12	32.520	33.312	0.8625	A572-65	0.928
58	29.75 - 29.5	0.25		12	33.312	33.361	0.8625	A572-65	0.937
59	29.5 - 24.5	5		12	33.361	34.351	0.85	A572-65	0.934
60	24.5 - 23	1.5		12	34.351	34.648	0.8375	A572-65	0.942
61	23 - 22.75	0.25		12	34.648	34.697	0.9625	A572-65	0.908
62	22.75 - 21.583	1.167		12	34.697	34.928	0.9625	A572-65	0.904
63	21.583 - 21.333	0.25		12	34.928	34.978	0.85	A572-65	0.971
64	21.333 - 16.333	5		12	34.978	35.967	0.8375	A572-65	0.968
65	16.333 - 12.917	3.416		12	35.967	36.644	0.825	A572-65	0.971
66	12.917 - 12.667	0.25		12	36.644	36.693	0.9125	A572-65	0.961
67	12.667 - 12.5	0.167		12	36.693	36.726	0.9125	A572-65	0.961
68	12.5 - 12.25	0.25		12	36.726	36.776	0.7625	A572-65	1.008
69	12.25 - 12	0.25		12	36.776	36.825	0.7625	A572-65	1.007
70	12 - 11.75	0.25		12	36.825	36.874	0.6625	A572-65	1.077
71	11.75 - 8.5	3.25		12	36.874	37.518	0.65	A572-65	1.087
72	8.5 - 8.25	0.25		12	37.518	37.567	0.925	A572-65	0.962
73	8.25 - 7	1.25		12	37.567	37.815	0.9125	A572-65	0.970
74	7 - 6.75	0.25		12	37.815	37.864	0.8125	A572-65	0.962
75	6.75 - 1.75	5		12	37.864	38.854	0.7875	A572-65	0.976
76	1.75 - 0	1.75		12	38.854	39.200	0.7875	A572-65	0.971

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	144.25 - 139.25	4.49	24.33	6.03
2	139.25 - 134.75	4.77	51.82	6.19
3	134.75 - 134.25	4.81	54.92	6.20
4	134.25 - 129.25	8.61	90.92	10.81
5	129.25 - 124.25	8.84	146.00	11.15
6	124.25 - 123.416	8.90	155.31	11.18
7	123.416 - 123.166	8.94	158.10	11.19
8	123.166 - 118.166	12.36	220.25	14.38
9	118.166 - 113.166	12.95	293.07	14.77
10	113.166 - 109.5	16.56	349.47	18.58
11	109.5 - 109.25	16.61	354.12	18.59
12	109.25 - 104.75	17.33	438.59	18.97
13	104.75 - 104.5	17.40	443.33	18.98
14	104.5 - 102.416	17.83	483.08	19.18
15	102.416 - 102.166	17.88	487.88	19.20
16	102.166 - 98.75	21.89	558.78	21.93
17	98.75 - 98.5	21.97	564.26	21.94
18	98.5 - 97.5	22.23	586.25	22.05
19	97.5 - 97.25	22.30	591.76	22.06
20	97.25 - 95.552	22.71	629.34	22.23
21	95.552 - 90.552	24.76	741.93	22.81
22	90.552 - 89.25	25.12	771.67	22.93
23	89.25 - 89	25.21	777.40	22.94
24	89 - 88.25	25.44	794.63	23.02
25	88.25 - 88	25.51	800.38	23.04
26	88 - 87.833	25.56	804.23	23.05
27	87.833 - 87.583	25.62	810.00	23.07
28	87.583 - 82.583	26.86	926.34	23.49
29	82.583 - 77.583	28.14	1044.67	23.89
30	77.583 - 77	28.30	1058.60	23.92
31	77 - 76.75	28.38	1064.58	23.94
32	76.75 - 76.333	28.51	1074.57	23.98
33	76.333 - 76.083	28.58	1080.56	24.00
34	76.083 - 74.25	29.09	1124.68	24.19
35	74.25 - 74	29.19	1130.73	24.18
36	74 - 73.75	29.27	1136.77	24.21
37	73.75 - 73.5	29.35	1142.83	24.23
38	73.5 - 68.5	30.91	1265.09	24.70
39	68.5 - 63.5	32.50	1389.63	25.15
40	63.5 - 60.5	33.47	1465.43	25.42
41	60.5 - 60.25	33.57	1471.79	25.43
42	60.25 - 59.5	33.80	1490.88	25.51
43	59.5 - 59.25	33.90	1497.26	25.52
44	59.25 - 54.25	35.60	1625.97	25.99
45	54.25 - 50	37.08	1737.13	26.36
46	50 - 44.802	40.21	1875.94	27.00
47	44.802 - 43.583	40.65	1908.89	27.10
48	43.583 - 43.333	40.76	1915.67	27.10
49	43.333 - 43.166	40.82	1920.19	27.11
50	43.166 - 42.916	40.92	1926.97	27.14
51	42.916 - 39	42.46	2033.84	27.47
52	39 - 38.75	42.58	2040.70	27.47
53	38.75 - 37.166	43.22	2084.31	27.62
54	37.166 - 36.916	43.34	2091.21	27.62
55	36.916 - 34	44.51	2171.96	27.80
56	34 - 33.75	44.63	2178.90	27.79
57	33.75 - 29.75	46.19	2290.43	28.00
58	29.75 - 29.5	46.31	2297.43	27.99
59	29.5 - 24.5	48.30	2437.91	28.23
60	24.5 - 23	48.91	2480.27	28.30
61	23 - 22.75	49.04	2487.34	28.28
62	22.75 - 21.583	49.54	2520.37	28.36
63	21.583 - 21.333	49.66	2527.46	28.35
64	21.333 - 16.333	51.78	2669.68	28.56
65	16.333 - 12.917	53.25	2767.40	28.70
66	12.917 - 12.667	53.38	2774.58	28.69
67	12.667 - 12.5	53.46	2779.37	28.70
68	12.5 - 12.25	53.57	2786.54	28.71
69	12.25 - 12	53.67	2793.72	28.72
70	12 - 11.75	53.77	2800.90	28.73
71	11.75 - 8.5	55.07	2894.65	29.00
72	8.5 - 8.25	55.20	2901.90	29.00
73	8.25 - 7	55.79	2938.22	29.15
74	7 - 6.75	55.92	2945.50	29.15
75	6.75 - 1.75	58.10	3092.43	29.65
76	1.75 - 0	58.86	3144.43	29.84

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
144.25 - 139.25	Pole	TP12.75x12.75x0.375	Pole	12.5%	Pass
139.25 - 134.75	Pole	TP12.75x12.75x0.375	Pole	25.8%	Pass
134.75 - 134.25	Pole	TP13.48x13.48x0.375	Pole	24.4%	Pass
134.25 - 129.25	Pole	TP14.466x13.48x0.1875	Pole	49.1%	Pass
129.25 - 124.25	Pole	TP15.452x14.466x0.1875	Pole	67.9%	Pass
124.25 - 123.42	Pole	TP15.616x15.452x0.1875	Pole	70.7%	Pass
123.42 - 123.17	Pole + Reinf.	TP15.665x15.616x0.5375	Reinf. 25 Tension Rupture	46.1%	Pass
123.17 - 118.17	Pole + Reinf.	TP16.651x15.665x0.5125	Reinf. 25 Tension Rupture	59.2%	Pass
118.17 - 113.17	Pole + Reinf.	TP17.637x16.651x0.4875	Reinf. 25 Tension Rupture	72.5%	Pass
113.17 - 109.5	Pole + Reinf.	TP18.36x17.637x0.475	Reinf. 25 Tension Rupture	81.9%	Pass
109.5 - 109.25	Pole + Reinf.	TP18.409x18.36x0.5875	Reinf. 25 Tension Rupture	69.0%	Pass
109.25 - 104.75	Pole + Reinf.	TP19.296x18.409x0.5625	Reinf. 25 Tension Rupture	80.1%	Pass
104.75 - 104.5	Pole + Reinf.	TP19.346x19.296x0.775	Reinf. 11 Tension Rupture	64.6%	Pass
104.5 - 102.42	Pole + Reinf.	TP19.756x19.346x0.7625	Reinf. 11 Tension Rupture	68.5%	Pass
102.42 - 102.17	Pole + Reinf.	TP19.806x19.756x0.5625	Reinf. 11 Tension Rupture	85.5%	Pass
102.17 - 98.75	Pole + Reinf.	TP20.479x19.806x0.55	Reinf. 11 Tension Rupture	93.8%	Pass
98.75 - 98.5	Pole + Reinf.	TP20.528x20.479x0.8375	Reinf. 6 Bolt-Shaft Bearing	82.0%	Pass
98.5 - 97.5	Pole + Reinf.	TP20.726x20.528x0.8375	Reinf. 6 Tension Rupture	71.3%	Pass
97.5 - 97.25	Pole + Reinf.	TP20.775x20.726x0.75	Reinf. 6 Tension Rupture	83.0%	Pass
97.25 - 95.55	Pole + Reinf.	TP21.81x20.775x0.7375	Reinf. 6 Tension Rupture	86.5%	Pass
95.55 - 90.55	Pole + Reinf.	TP21.73x20.735x0.8	Reinf. 6 Tension Rupture	89.8%	Pass
90.55 - 89.25	Pole + Reinf.	TP21.989x21.73x0.775	Reinf. 6 Tension Rupture	91.9%	Pass
89.25 - 89	Pole + Reinf.	TP22.039x21.989x1	Reinf. 5 Bolt-Shaft Bearing	79.4%	Pass
89 - 88.25	Pole + Reinf.	TP22.189x22.039x0.975	Reinf. 11 Tension Rupture	66.4%	Pass
88.25 - 88	Pole + Reinf.	TP22.238x22.189x0.7625	Reinf. 5 Tension Rupture	76.0%	Pass
88 - 87.83	Pole + Reinf.	TP22.272x22.238x0.7625	Reinf. 5 Tension Rupture	76.2%	Pass
87.83 - 87.58	Pole + Reinf.	TP22.321x22.272x0.675	Reinf. 5 Tension Rupture	80.8%	Pass
87.58 - 82.58	Pole + Reinf.	TP23.317x22.321x0.65	Reinf. 5 Tension Rupture	87.0%	Pass
82.58 - 77.58	Pole + Reinf.	TP24.312x23.317x0.625	Reinf. 5 Tension Rupture	92.6%	Pass
77.58 - 77	Pole + Reinf.	TP24.428x24.312x0.625	Reinf. 5 Tension Rupture	93.2%	Pass
77 - 76.75	Pole + Reinf.	TP24.478x24.428x0.825	Reinf. 10 Tension Rupture	87.4%	Pass
76.75 - 76.33	Pole + Reinf.	TP24.561x24.478x0.825	Reinf. 10 Tension Rupture	87.8%	Pass
76.33 - 76.08	Pole + Reinf.	TP24.611x24.561x0.825	Reinf. 10 Tension Rupture	88.9%	Pass
76.08 - 74.25	Pole + Reinf.	TP24.976x24.611x0.8	Reinf. 10 Tension Rupture	90.7%	Pass
74.25 - 74	Pole + Reinf.	TP25.026x24.976x0.8875	Reinf. 10 Tension Rupture	80.1%	Pass
74 - 73.75	Pole + Reinf.	TP25.076x25.026x0.8875	Reinf. 10 Tension Rupture	80.3%	Pass
73.75 - 73.5	Pole + Reinf.	TP25.125x25.076x0.9125	Reinf. 21 Tension Rupture	79.6%	Pass
73.5 - 68.5	Pole + Reinf.	TP26.121x25.125x0.875	Reinf. 21 Tension Rupture	83.8%	Pass
68.5 - 63.5	Pole + Reinf.	TP27.116x26.121x0.85	Reinf. 21 Tension Rupture	87.8%	Pass
63.5 - 60.5	Pole + Reinf.	TP27.714x27.116x0.825	Reinf. 21 Tension Rupture	90.0%	Pass
60.5 - 60.25	Pole + Reinf.	TP27.763x27.714x0.825	Reinf. 21 Tension Rupture	90.1%	Pass
60.25 - 59.5	Pole + Reinf.	TP27.913x27.763x0.825	Reinf. 21 Tension Rupture	90.7%	Pass
59.5 - 59.25	Pole + Reinf.	TP27.962x27.913x0.8875	Reinf. 21 Tension Rupture	84.9%	Pass
59.25 - 54.25	Pole + Reinf.	TP28.958x27.962x0.85	Reinf. 21 Tension Rupture	88.1%	Pass
54.25 - 50	Pole + Reinf.	TP30.64x28.958x0.8375	Reinf. 21 Tension Rupture	90.7%	Pass
50 - 44.8	Pole + Reinf.	TP30.333x29.304x0.8375	Reinf. 9 Tension Rupture	92.4%	Pass
44.8 - 43.58	Pole + Reinf.	TP30.574x30.333x0.8375	Reinf. 9 Tension Rupture	93.0%	Pass
43.58 - 43.33	Pole + Reinf.	TP30.624x30.574x0.85	Reinf. 9 Tension Rupture	92.1%	Pass
43.33 - 43.17	Pole + Reinf.	TP30.657x30.624x0.85	Reinf. 9 Tension Rupture	92.2%	Pass
43.17 - 42.92	Pole + Reinf.	TP30.706x30.657x0.9375	Reinf. 9 Tension Rupture	87.3%	Pass
42.92 - 39	Pole + Reinf.	TP31.481x30.706x0.9125	Reinf. 9 Tension Rupture	89.1%	Pass
39 - 38.75	Pole + Reinf.	TP31.531x31.481x0.95	Reinf. 9 Tension Rupture	84.2%	Pass
38.75 - 37.17	Pole + Reinf.	TP31.844x31.531x0.9375	Reinf. 9 Tension Rupture	84.9%	Pass
37.17 - 36.92	Pole + Reinf.	TP31.894x31.844x0.8875	Reinf. 9 Tension Rupture	88.2%	Pass
36.92 - 34	Pole + Reinf.	TP32.471x31.894x0.8875	Reinf. 9 Tension Rupture	89.4%	Pass
34 - 33.75	Pole + Reinf.	TP32.52x32.471x0.875	Reinf. 8 Tension Rupture	89.4%	Pass
33.75 - 29.75	Pole + Reinf.	TP33.312x32.52x0.8625	Reinf. 8 Tension Rupture	91.0%	Pass
29.75 - 29.5	Pole + Reinf.	TP33.361x33.312x0.8625	Reinf. 8 Tension Rupture	90.0%	Pass
29.5 - 24.5	Pole + Reinf.	TP34.351x33.361x0.85	Reinf. 8 Tension Rupture	91.7%	Pass
24.5 - 23	Pole + Reinf.	TP34.648x34.351x0.8375	Reinf. 8 Tension Rupture	92.2%	Pass
23 - 22.75	Pole + Reinf.	TP34.697x34.648x0.9625	Reinf. 8 Tension Rupture	85.5%	Pass
22.75 - 21.58	Pole + Reinf.	TP34.928x34.697x0.9625	Reinf. 8 Tension Rupture	85.9%	Pass
21.58 - 21.33	Pole + Reinf.	TP34.978x34.928x0.85	Reinf. 8 Tension Rupture	90.7%	Pass
21.33 - 16.33	Pole + Reinf.	TP35.967x34.978x0.8375	Reinf. 8 Tension Rupture	92.1%	Pass
16.33 - 12.92	Pole + Reinf.	TP36.644x35.967x0.825	Reinf. 8 Tension Rupture	93.1%	Pass
12.92 - 12.67	Pole + Reinf.	TP36.693x36.644x0.9125	Reinf. 7 Tension Rupture	84.4%	Pass
12.67 - 12.5	Pole + Reinf.	TP36.726x36.693x0.9125	Reinf. 7 Tension Rupture	84.4%	Pass
12.5 - 12.25	Pole + Reinf.	TP36.776x36.726x0.7625	Reinf. 14 Tension Rupture	87.6%	Pass
12.25 - 12	Pole + Reinf.	TP36.825x36.776x0.7625	Reinf. 14 Tension Rupture	87.6%	Pass
12 - 11.75	Pole + Reinf.	TP36.874x36.825x0.6625	Reinf. 2 Tension Rupture	89.6%	Pass
11.75 - 8.5	Pole + Reinf.	TP37.518x36.874x0.65	Reinf. 2 Tension Rupture	90.3%	Pass
8.5 - 8.25	Pole + Reinf.	TP37.567x37.518x0.925	Reinf. 1 Tension Rupture	74.1%	Pass
8.25 - 7	Pole + Reinf.	TP37.815x37.567x0.9125	Reinf. 1 Tension Rupture	74.3%	Pass
7 - 6.75	Pole + Reinf.	TP37.864x37.815x0.8125	Reinf. 1 Tension Rupture	86.1%	Pass
6.75 - 1.75	Pole + Reinf.	TP38.854x37.864x0.7875	Reinf. 1 Tension Rupture	87.2%	Pass
1.75 - 0	Pole + Reinf.	TP39.2x38.854x0.7875	Reinf. 1 Tension Rupture	87.6%	Pass
				Summary	
			Pole	80.2%	Pass
			Reinforcement	93.8%	Pass
			Overall	93.8%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in⁴)			Area (in²)			% Capacity*																								
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20	R21	R22	R23	R24	R25	R26	R27	R28
144.25 - 139.25	279	n/a	279	14.58	n/a	14.58	12.5%																												
139.25 - 134.75	279	n/a	279	14.58	n/a	14.58	25.8%																												
134.75 - 134.25	332	n/a	332	15.44	n/a	15.44	24.4%																												
134.25 - 129.25	225	n/a	225	8.61	n/a	8.61	49.1%																												
129.25 - 124.25	274	n/a	274	9.20	n/a	9.20	67.9%																												
124.25 - 123.42	283	n/a	283	9.30	n/a	9.30	70.7%																												
123.42 - 123.17	286	481	767	9.33	13.50	22.83	25.9%																									46.1%	46.1%		
123.17 - 118.17	344	538	882	9.93	13.50	23.43	34.0%																									59.2%	59.2%		
118.17 - 113.17	410	598	1008	10.52	13.50	24.02	42.5%																									72.6%	72.6%		
113.17 - 109.5	463	644	1108	10.96	13.50	24.46	48.6%																									81.9%	81.9%		
109.5 - 109.25	472	909	1380	10.99	19.50	30.49	44.0%																									69.1%	69.1%	62.8%	62.8%
109.25 - 104.75	544	993	1536	11.52	19.50	31.02	52.0%																									80.1%	80.1%	73.1%	73.1%
104.75 - 104.5	548	1509	2056	11.55	31.50	43.05	39.1%										64.6%															56.3%	56.3%	53.7%	53.7%
104.5 - 102.42	584	1569	2153	11.80	31.50	43.30	41.9%										68.5%															59.8%	59.8%	57.0%	57.0%
102.42 - 102.17	583	1079	1662	11.83	27.25	39.08	52.2%										85.5%												72.5%		53.5%			72.7%	
102.17 - 98.75	645	1148	1793	12.23	27.25	39.48	58.2%										93.8%												77.8%		58.9%			79.9%	
98.75 - 98.5	649	2001	2651	12.26	40.84	53.11	39.2%						82.0%				64.9%												56.7%		44.9%			57.4%	
98.5 - 97.5	669	2037	2706	12.38	40.84	53.23	46.4%						71.3%				66.6%												57.2%		46.1%			59.0%	
97.5 - 97.25	677	1812	2489	12.41	37.84	50.26	45.7%						83.0%				69.7%												61.2%		46.1%				
97.25 - 95.55	711	1867	2577	12.61	37.84	50.46	48.0%						86.5%				72.7%												63.8%		48.1%				
95.55 - 90.55	1025	1971	2996	17.27	37.84	55.11	45.3%						89.8%				76.0%												67.2%		51.5%				
90.55 - 89.25	1062	2016	3078	17.48	37.84	55.32	46.5%						91.9%				77.8%												68.9%		52.8%				
89.25 - 89	1064	2782	3846	17.52	47.88	65.39	36.8%					79.4%					65.5%												57.9%	59.2%	47.8%				
89 - 88.25	1087	2779	3865	17.64	47.88	65.51	38.3%					80.8%					66.4%												58.3%	60.0%	48.4%				
88.25 - 88	1094	2011	3104	17.68	35.88	53.55	47.5%					76.9%																	72.7%	74.9%	58.5%				
88 - 87.83	1099	2016	3115	17.70	35.88	53.58	47.6%					76.2%																	72.9%	75.2%	58.7%				
87.83 - 87.58	1113	1720	2832	17.74	29.63	47.37	55.3%					80.8%																	78.9%	74.6%					
87.58 - 82.58	1270	1866	3135	18.54	29.63	48.17	60.5%					87.0%																	86.2%	80.6%					
82.58 - 77.58	1441	2018	3459	19.34	29.63	48.97	65.3%					92.6%																	91.9%	86.0%					
77.58 - 77	1462	2036	3498	19.44	29.63	49.06	65.9%					93.2%																	92.5%	86.6%					
77 - 76.75	1468	3032	4501	19.48	41.63	61.10	51.2%					73.7%				87.4%													74.4%	76.7%					
76.75 - 76.33	1483	3052	4535	19.54	41.63	61.17	51.5%					74.1%				87.8%													74.8%	71.0%					
76.33 - 76.08	1494	3049	4544	19.58	38.63	58.21	52.2%					81.1%				88.9%													77.5%						
76.08 - 74.25	1562	3135	4698	19.88	38.63	58.50	53.6%					82.8%				90.7%													79.2%						
74.25 - 74	1565	3585	5150	19.92	41.63	61.54	46.3%					73.1%				80.1%												79.3%	78.3%						
74 - 73.75	1574	3599	5173	19.96	41.63	61.58	46.4%					73.3%				80.3%												79.5%	78.5%						
73.75 - 73.5	1586	3743	5328	20.00	44.63	64.62	46.5%					72.2%				79.2%										71.2%	71.2%	78.8%							
73.5 - 68.5	1784	4029	5813	20.80	44.63	65.42	49.8%					76.9%				83.4%										75.1%	75.1%	83.8%							
68.5 - 63.5	1997	4326	6323	21.60	44.63	66.22	53.0%					79.6%				87.3%										78.6%	78.6%	87.8%							
63.5 - 60.5	2134	4509	6643	22.08	44.63	66.70	54.8%					81.5%				89.4%										80.6%	80.6%	90.9%							
60.5 - 60.25	2145	4524	6670	22.12	44.63	66.74	55.0%					81.7%			86.9%											80.8%	80.8%	90.1%							
60.25 - 59.5	2180	4571	6751	22.24	44.63	66.86	55.4%					82.2%			87.4%											81.3%	81.3%	90.7%							
59.5 - 59.25	2192	5057	7249	22.28	48.84	71.12	51.9%				75.7%				82.9%											76.4%	76.4%	84.9%							
59.25 - 54.25	2437	5404	7841	23.08	48.84	71.92	54.8%				75.9%				85.2%											79.4%	79.4%	88.1%							
54.25 - 50	2658	5709	8368	23.76	48.84	72.60	57.2%				78.1%				87.7%											81.7%	81.7%	90.7%							
50 - 44.8	3482	5456	8938	30.16	44.34	74.51	55.6%				85.8%				92.4%											86.4%		88.9%							
44.8 - 43.58	3567	5539	9106	30.41	44.34	74.75	56.1%				86.3%				93.0%											81.0%		89.5%							
43.58 - 43.33	3582	5665	9247	30.46	48.84	79.30	54.4%				80.6%				92.1%								78.6%			78.3%		89.9%							
43.33 - 43.17	3594	5676	9270	30.49	48.84	79.33	54.4%				80.7%				92.2%								78.7%			78.4%		90.0%							
43.17 - 42.92	3621	6494	10115	30.54	53.34	83.88	51.6%				76.4%				87.3%									78.4%	70.7%										
42.92 - 39	3905	6811	10716	31.32	53.34	84.66	53.2%				80.0%				89.1%									80.0%	72.1%										
39 - 38.75	3914	7251	11165	31.37	57.34	88.71	49.2%				71.6%			78.6%			84.2%							71.2%	71.7%										
38.75 - 37.17	4033	7389	11422	31.68	57.34	89.03	49.8%				72.2%			79.2%		84.8%								71.8%	72.3%										
37.17 - 36.92	4051	6900	10951	31.73	54.34	86.08	51.8%				73.5%			79.5%		88.2%						81.1%	83.6%	72.7%											
36.92 - 34	4277	7140	11418	32.31	54.34	86.66	52.9%				74.5%			80.7%		89.4%						82.2%	84.7%	73.8%											
34 - 33.75	4297	7121	11418	32.36	50.34	82.71	53.1%				77.7%			89.4%	89.4%							84.5%	84.9%	84.5%											
33.75 - 29.75	4622	7457	12079	33.16	50.34	83.50	54.6%				79.0%			91.0%	91.0%							85.0%	86.3%	86.0%											
29.75 - 29.5	4643	7624	12267	33.21	51.28	84.49	54.0%	77.5%		76.7%				90.0%	90.0%							85.1%	85.4%	85.1%											
29.5 - 24.5	5072	8064	13136	34.20	51.28	85.48	55.8%	79.0%		78.2%				91.7%	91.7%							86.7%	87.1%	86.7%											
24.5 - 23	5206	8198	13404	34.50	51.28	85.78	56.4%	79.4%		78.6%				92.2%	92.2%							87.2%	87.5%	87.2%											
23 - 22.75	5252	9911	15163	34.55	60.28	94.83	53.2%	71.2%		77.0%				83.7%	85.5%					71.5%	75.6%	81.4%													
22.75 - 21.58	5358	10038	15397	34.78	60.28	95.06	53.6%	71.5%		77.3%				84.0%	85.9%					71.8%	76.0%	81.8%													
21.58 - 21.33	5366	8584	13950	34.83	55.78	90.61	59.2%	74.2%		87.9%				85.1%	90.7%					71.8%	79.5%														
21.33 - 16.33	5838	9057	14895	35.83	55.78	91.61	61.0%	75.4%		89.2%				86.6%	92.1%					73.0%	80.8%														
16.33 - 12.92	6177	9386	15563	36.51	55.78	92.29	62.1%	76.2%		90.1%				87.5%	93.1%					73.8%	81.7%														
12.92 - 12.67	6193	10933	17126	36.56	64.38	100.93	55.2%	72.4%	74.9%					84.4%	81.1%					68.0%	78.6%														
12.67 - 12.5	6210	10952	17162	36.59	64.38	100.96	55.2%	72.4%	74.9%					84.4%	81.1%					68.0%	78.6%														
12.5 - 12.25	6235	8459	14694	36.64	52.38	89.01	63.0%	78.3%	83.2%											78.4%	87.6%														
12.25 - 12	6261	8481	14742	36.69	52.38	89.06	63.1%	78.4%	83.3%											78.4%	87.6%														
12 - 11.75	6353	6630	12984	36.74	46.38	83.11	79.0%	86.8%	89.6%											77.1%															
11.75 - 8.5	6693	6854	13547	37.38	46.38	83.76	80.2%	89.5%	90.3%											77.8%															
8.5 - 8.25	6727	12128	18855	37.43	67.38	104.81	58.3%	74.1%	76.5%										71.1%	63.3%															
8.25 - 7	6862	12276	19138	37.68	67.38	105.06	58.8%	74.3%	76.8%										71.3%	63.5%															
7 - 6.75	6906	10096	17001	37.73	55.38	93.11	66.7%	86.1%	74.5%										72.3%																
6.75 - 1.75	7464	10587	18051	38.73	55.38	94.10	68.5%	87.2%	75.7%										73.1%																
1.75 - 0	7666	10762	18428	39.07	55.38	94.45	69.1%	87.6%	76.0%										73.4%																

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

Monopole Flange Plate Connection

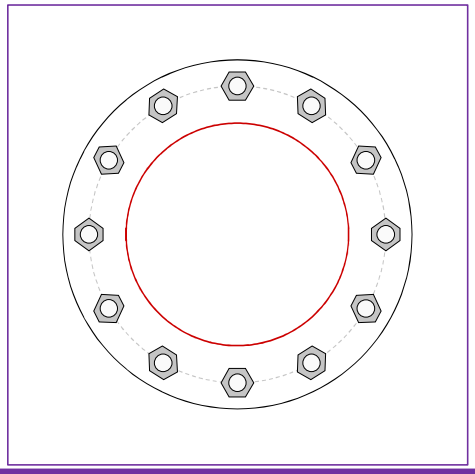
Elevation = 134.25 ft.

BU #	876317
Site Name	WATERBURY,CT
Order #	553382,Rev# 2
TIA-222 Revision	H

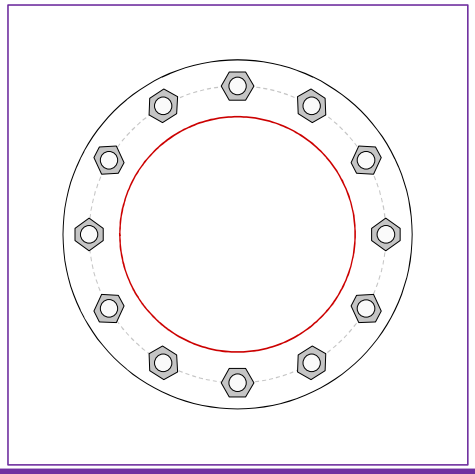
Applied Loads	
Moment (kip-ft)	54.92
Axial Force (kips)	4.81
Shear Force (kips)	6.20

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(12) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 17" BC

Top Plate Data

20" OD x 1" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Bottom Plate Data

20" OD x 1" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

12.75" x 0.375" round pole (A500-46; Fy=46 ksi, Fu=62 ksi)

Bottom Pole Data

13.48" x 0.1875" 12-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	12.50	
Allowable (kips)	54.53	
Stress Rating:	**21.8%**	Pass

Top Plate Capacity

Max Stress (ksi):	18.18	(Flexural)
Allowable Stress (ksi):	45.00	
Stress Rating:	**38.5%**	Pass
Tension Side Stress Rating:	**23.5%**	Pass

Bottom Plate Capacity

Max Stress (ksi):	14.61	(Flexural)
Allowable Stress (ksi):	45.00	
Stress Rating:	**30.9%**	Pass
Tension Side Stress Rating:	**17.1%**	Pass

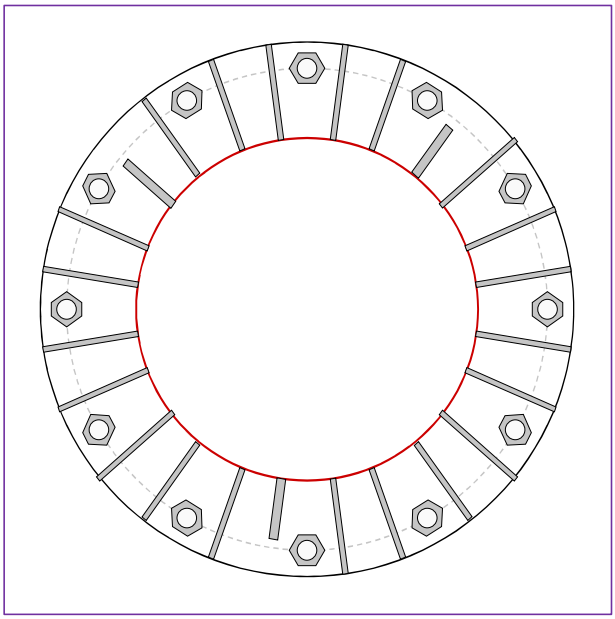
Monopole Base Plate Connection

Site Info	
BU #	876317
Site Name	WATERBURY,CT
Order #	553382,Rev# 2

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	0.25

Applied Loads	
Moment (kip-ft)	3144.43
Axial Force (kips)	58.86
Shear Force (kips)	29.84

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

(12) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 55.16" BC

Base Plate Data

61.16" OD x 2.5" Plate (S-128; Fy=60 ksi, Fu=80 ksi)

Stiffener Data

Group 1: (21) 21.5"H x 11"W x 0.625"T, Notch: 0.75"
plate: Fy= 50 ksi ; weld: Fy= 80 ksi
horiz. weld: 0.3125" groove, 45° dbl bevel, 0.5" fillet
vert. weld: 0.3125" fillet

Group 2: (3) 126"H x 7"W x 1"T, Notch: 0.75"
plate: Fy= 65 ksi ; weld: Fy= 80 ksi
horiz. weld: 0.5" groove, 45° dbl bevel, 0.3125" fillet
vert. weld: 0.3125" fillet

Pole Data

39.2" x 0.3125" 12-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Anchor Rod Summary		*(units of kips, kip-in)*
Pu_t = 222.96	ϕPn_t = 243.75	**Stress Rating**
Vu = 2.49	ϕVn = 149.1	**87.1%**
Mu = n/a	ϕMn = n/a	Pass

Base Plate Summary		
Max Stress (ksi):	30.63	(Flexural)
Allowable Stress (ksi):	54	
Stress Rating:	**54.0%**	Pass

Stiffener Summary		
Horizontal Weld:	**40.4%**	Pass
Vertical Weld:	**40.7%**	Pass
Plate Flexure+Shear:	**22.0%**	Pass
Plate Tension+Shear:	**42.0%**	Pass
Plate Compression:	**60.5%**	Pass

Pole Summary		
Punching Shear:	**16.5%**	Pass

Pier and Pad Foundation

BU # :	876317
Site Name:	WATERBURY, CT
App. Number:	553382,Rev# 2

TIA-222 Revision:	H
Tower Type:	Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp}:	59	kips
Base Shear, Vu_comp:	30	kips
Moment, M_u:	3144	ft-kips
Tower Height, **H**:	143	ft
BP Dist. Above Fdn, bp_{dist}:	2.75	in
Bolt Circle / Bearing Plate Width, **BC**:	55.16	in

Foundation Analysis Checks				
	Capacity	**Demand**	**Rating***	**Check**
Lateral (Sliding) (kips)	277.58	30.00	**10.3%**	**Pass**
Bearing Pressure (ksf)	22.50	5.64	**25.1%**	**Pass**
*Overturning (kip*ft)*	3935.98	3353.38	**85.2%**	**Pass**
*Pad Flexure (kip*ft)*	9014.86	1873.42	**19.8%**	**Pass**
Pad Shear - 1-way (kips)	1732.56	155.56	**8.6%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.000	**0.0%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	18499.97	0.00	**0.0%**	**Pass**

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

Structural Rating*:	**19.8%**
Soil Rating*:	**85.2%**

Pad Properties		
Depth, **D**:	6.75	ft
Pad Width, W_1:	20	ft
Pad Thickness, **T**:	6.75	ft
Pad Rebar Size (Top dir.2), Sp_{top2}:	9	
Pad Rebar Quantity (Top dir. 2), mp_{top2}:	28	
Pad Rebar Size (Bottom dir. 2), Sp_2:	10	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	21	
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:	125	pcf
Ultimate Gross Bearing, Qult:	30.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	36	degrees
SPT Blow Count, N_{blows}:		
Base Friction, μ:	0.5	
Neglected Depth, **N**:	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	11.5	ft

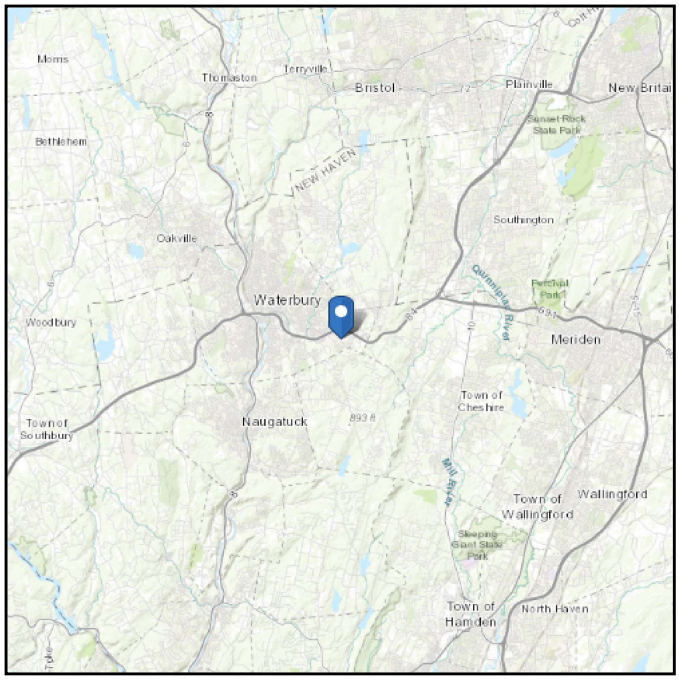
<--Toggle between Gross and Net

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 660.21 ft (NAVD 88)
Latitude: 41.537861
Longitude: -72.985028



Wind

Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Fri Oct 01 2021

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

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

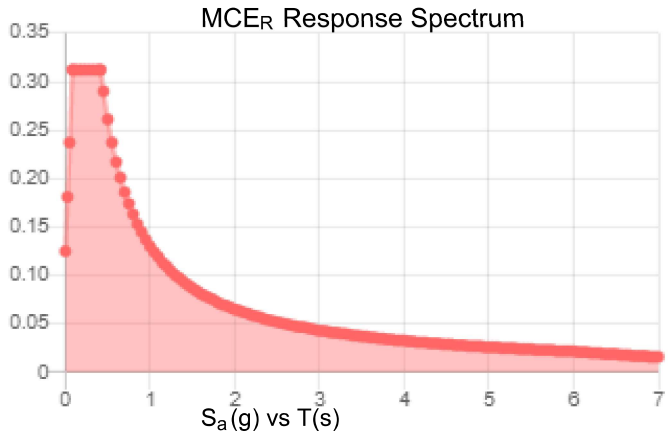
Seismic

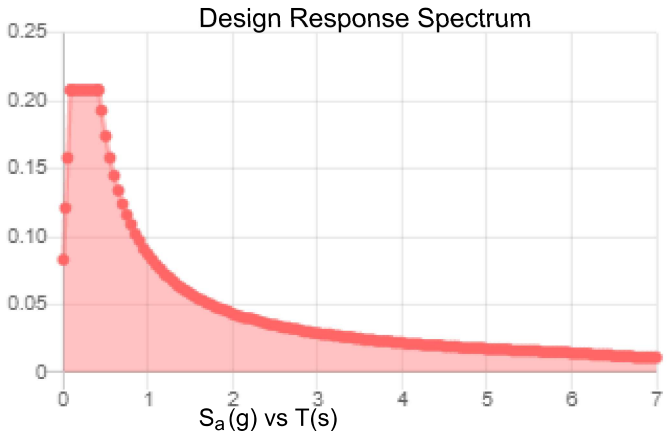
Site Soil Class: D - Default (see Section 11.4.3)

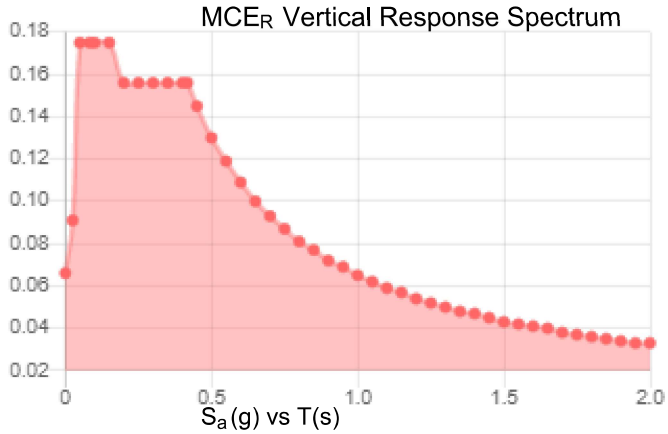
Results:

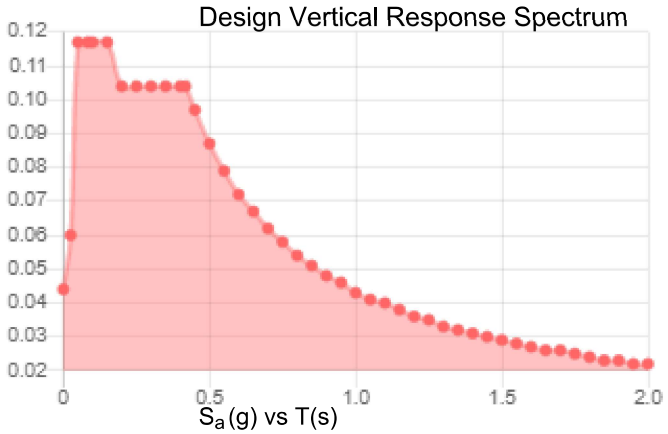
S_S :	0.195	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.108
F_v :	2.4	PGA_M :	0.171
S_{MS} :	0.312	F_{PGA} :	1.585
S_{M1} :	0.13	I_e :	1
S_{DS} :	0.208	C_v :	0.7

Seismic Design Category B









Data Accessed: Fri Oct 01 2021

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Fri Oct 01 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 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Exhibit E

Mount Analysis

Date: **September 14, 2021**

Jacob Montoya
Crown Castle
2055 S. Stearman Dr.
Chandler, AZ 85286
480-298-9641

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
Infinigy Engineering, PLLC
1033 Watervliet Shaker Road
Albany, NY 12205
518-690-0790
structural@infinigy.com

Subject:	**Mount Analysis Report**	
Carrier Designation:	**Dish Network 5G**	
	Carrier Site Number:	BOHVN00165A
	Carrier Site Name:	CT-CCI-T-876317
Crown Castle Designation:	**Crown Castle BU Number:**	876317
	Crown Castle Site Name:	WATERBURY
	Crown Castle JDE Job Number:	645174
	Crown Castle Order Number:	553382 Rev.1
Engineering Firm Designation:	**Infinigy Engineering, PLLC Report Designation:** 1039-Z0001-B	
Site Data:	**150 Mattatuck Heights, Waterbury, New Haven County, CT, 06705-3831** **Latitude 41°32'16.30" Longitude -72°59'6.10"**	
Structure Information:	**Tower Height & Type:**	**144.3 ft Monopole**
	Mount Elevation:	**120.0 ft**
	Mount Type:	**8.0 ft Platform**

Dear Jacob Montoya,

Infinigy Engineering, PLLC is pleased to submit this **"Mount Analysis Report"** to determine the structural integrity of Dish Network'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.

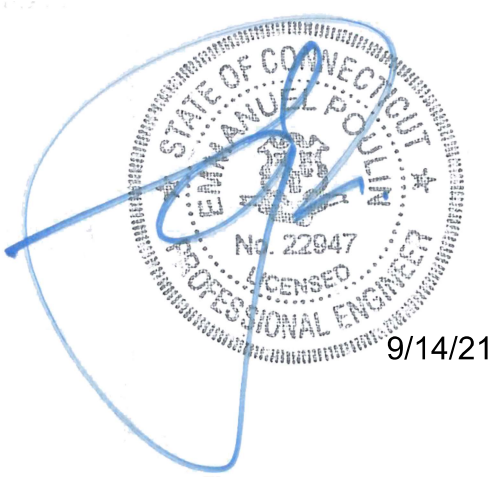
The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Platform **Sufficient**
***Sufficient upon completion of the changes listed in the 'Recommendations' section of this report.**

This analysis has been performed in accordance with the 2015 International Building Code based upon an ultimate 3-second gust wind speed of 118 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Iker Moreno, EIT

Respectfully Submitted by:
Emmanuel Poulin, P.E.
518-690-0790
structural@infinigy.com
CT PE License No. 22947



9/14/21

TABLE OF CONTENTS

1) INTRODUCTION

This is a proposed 3 sector 8.0 ft Platform, designed by Commscope.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	118 mph
Exposure Category:	B
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.188
Seismic S_1:	0.064
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb
Man Live Load at Mount Pipes:	500 lb

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
120.0	120.0	3	JMA WIRELESS	MX08FRO665-21	8.0 ft Platform {Commscope MC-PK8-DSH}
		3	FUJITSU	TA08025-B604	
		3	FUJITSU	TA08025-B605	
		1	RAYCAP	RDIDC-9181-PF-48	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	Dish Network Application	553382 Rev.1	CCI Sites
Mount Manufacturer Drawings	Commscope	MC-PK8-DSH	Infinigy

3.1) Analysis Method

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

Infinigy Mount Analysis Tool V2.1.7, a tool internally developed by Infinigy, 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 B).

3.2) Assumptions

1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
3) 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.
4) 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.
5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
6) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A500 (GR B-46)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. Infinigy Engineering, PLLC 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, All Sectors)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1,2	Mount Pipe(s)	MP4	120.0	12.1	Pass
	Horizontal(s)	H1		10.5	Pass
	Standoff(s)	S2		29.1	Pass
	Bracing(s)	CA1		31.2	Pass
	Corner Plate(s)	P2		15.4	Pass
	Mount Connection(s)	--		24.0	Pass

Structure Rating (max from all components) =	31.2%

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 detailed mount connection calculations.

4.1) Recommendations

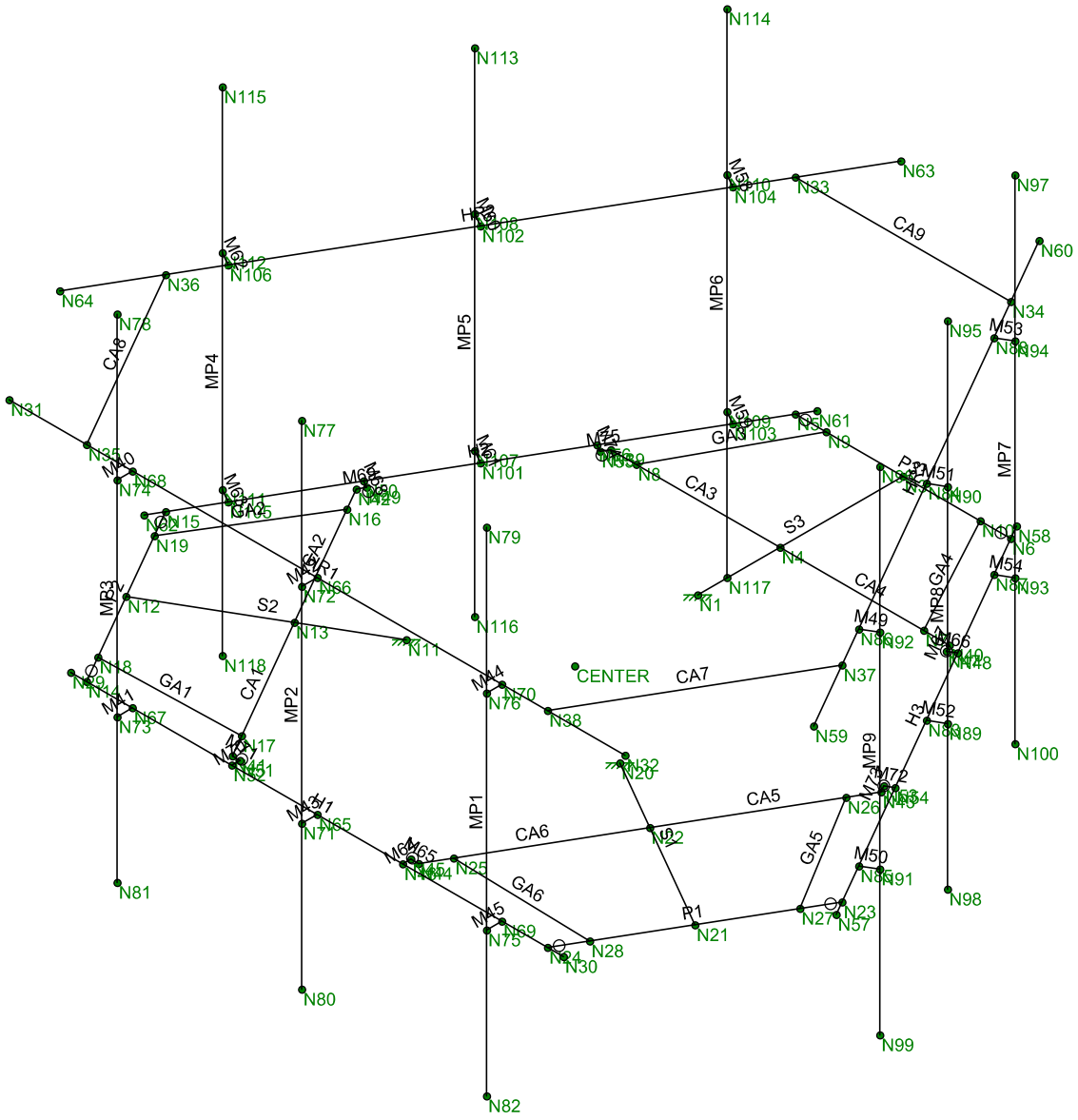
The mount has sufficient capacity to carry the proposed loading configuration. In order for the results of the analysis to be considered valid, the proposed mount listed below must be installed.

1. Commscope MC-PK8-DSH

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

APPENDIX A

WIRE FRAME AND RENDERED MODELS



Infinigy Engineering	876317	Wireframe
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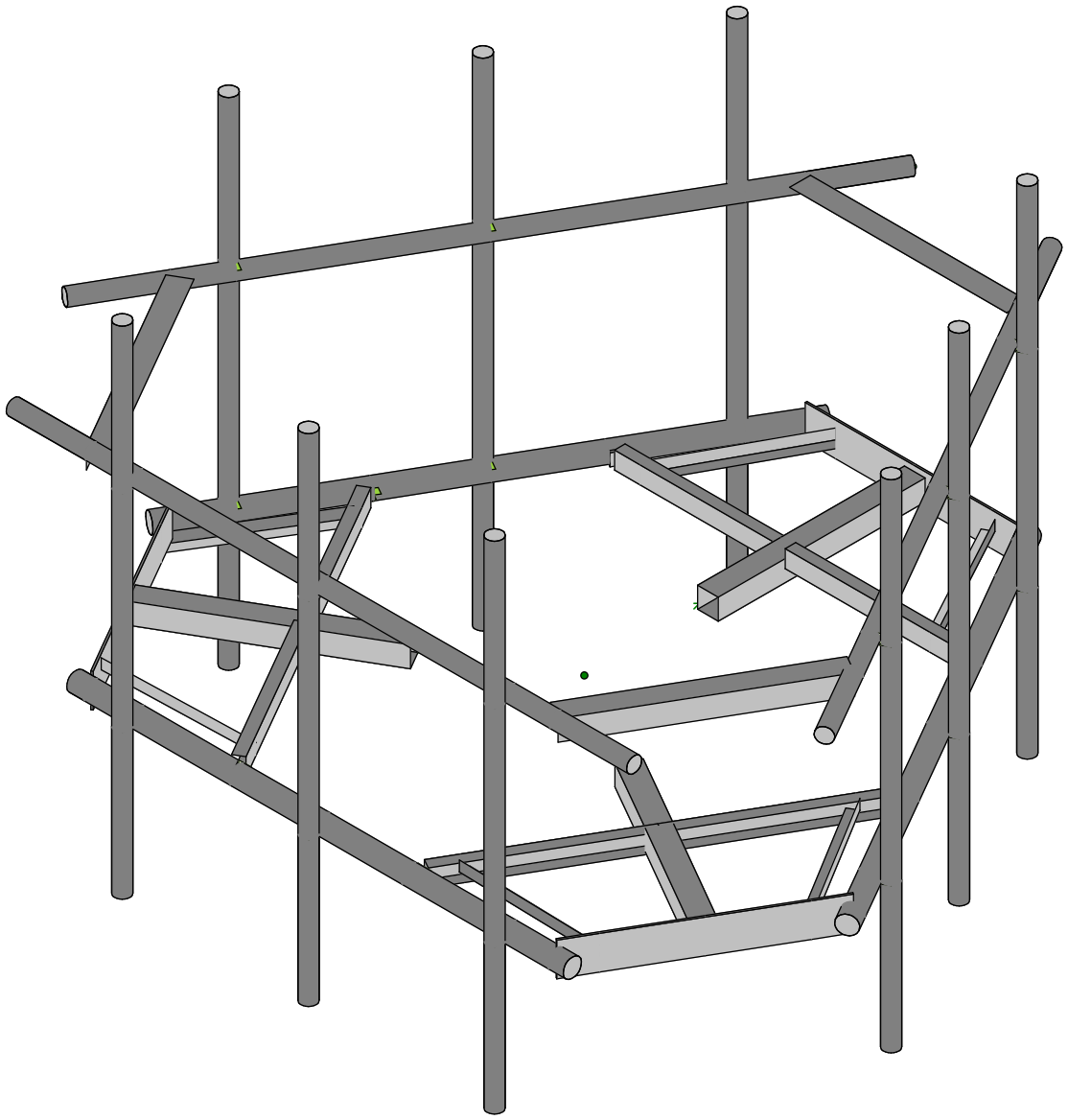
1039-Z0001-B		876317_loaded.r3d



Infinigy Engineering	876317	Rendering
IM		Sept 14, 2021 at 12:25 PM
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APPENDIX B

SOFTWARE INPUT CALCULATIONS

Program Inputs

PROJECT INFORMATION	
Client:	Crown Castle
Carrier:	Dish Network
Engineer:	Iker Moreno

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	B	
Topo Factor Procedure:	Method 1, Category 1	
Site Class:	D - Stiff Soil (Assumed)	
Ground Elevation:	660.21	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	120.00	ft
Tower Height AGL:	144.25	ft

TOPOGRAPHIC DATA		
Topo Feature:	N/A	
Slope Distance:	N/A	ft
Crest Distance:	N/A	ft
Crest Height:	N/A	ft

FACTORS		
Directionality Fact. (K_d):	0.950	
Ground Ele. Factor (K_e):	0.976	*Rev H Only
Rooftop Speed-Up (K_s):	1.000	*Rev H Only
Topographic Factor (K_{zt}):	1.000	
Gust Effect Factor (G_h):	1.000	

CODE STANDARDS		
Building Code:	2015 IBC	
TIA Standard:	TIA-222-H	
ASCE Standard:	ASCE 7-10	

WIND AND ICE DATA		
Ultimate Wind (V_{ult}):	118	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1.5	in
Flat Pressure:	68.843	psf
Round Pressure:	41.306	psf
Ice Wind Pressure:	7.416	psf

SEISMIC DATA		
Short-Period Accel. (S_s):	0.188	g
1-Second Accel. (S_1):	0.064	g
Short-Period Design (S_{DS}):	0.201	
1-Second Design (S_{D1}):	0.102	
Short-Period Coeff. (F_a):	1.600	
1-Second Coeff. (F_v):	2.400	
Amplification Factor (A_s):	3.000	
Response Mod. Coeff. (R):	2.000	

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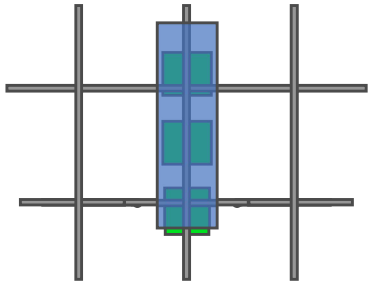
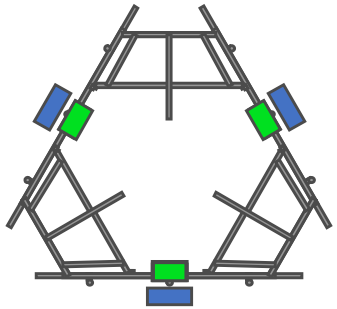
Infinigy Load Calculator V2.1.7

Program Inputs

ELEVATION VIEW



PLAN VIEW



INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

Infinigy Load Calculator V2.1.7

APPURTENANCE INFORMATION

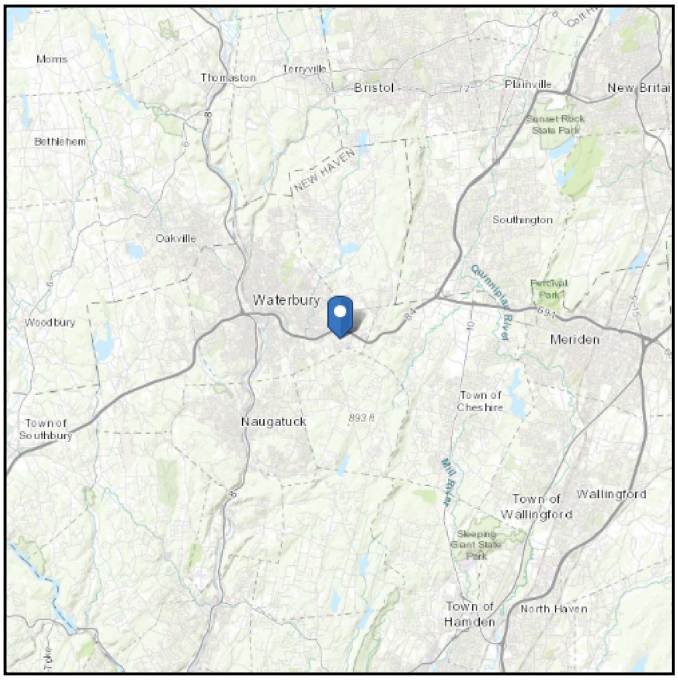
Appurtenance Name	Elevation	Qty.	K_a	q_z (psf)	EPA_N (ft^2)	EPA_T (ft^2)	Wind F_z (lbs)	Wind F_x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)
JMA WIRELESS MX08FRO665-21	120.0	3	0.90	34.42	8.01	3.21	248.14	99.44	82.50	24.82	MP2
FUJITSU TA08025-B604	120.0	3	0.90	34.42	1.96	0.98	60.83	30.39	63.90	19.22	MP2
FUJITSU TA08025-B605	120.0	3	0.90	34.42	1.96	1.13	60.83	34.99	75.00	22.56	MP2
RAYCAP RDIDC-9181-PF-48	120.0	1	0.90	34.42	2.00	1.16	62.06	36.04	21.85	6.57	MP2

ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 660.21 ft (NAVD 88)
Latitude: 41.537861
Longitude: -72.985028



Wind

Results:

Wind Speed:	118 Vmph per State of Connecticut allowing ASCE 7-16 wind speed values
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	92 Vmph
100-year MRI	99 Vmph

Data Accessed: Tue Sep 14 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.

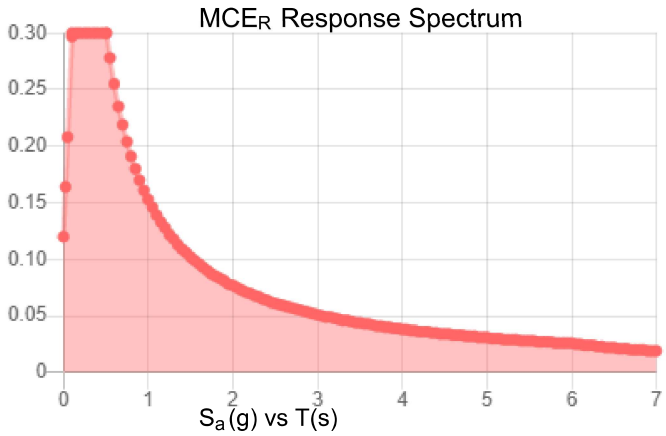
Seismic

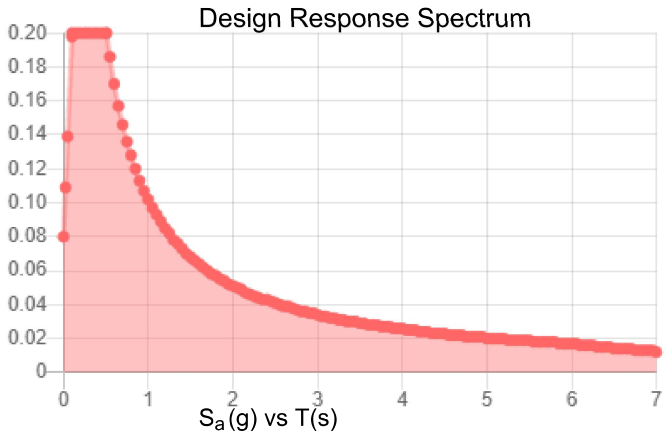
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.188	S_{DS} :	0.2
S_1 :	0.064	S_{D1} :	0.102
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.097
S_{MS} :	0.3	PGA_M :	0.155
S_{M1} :	0.153	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B





Data Accessed: Tue Sep 14 2021

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

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Tue Sep 14 2021

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

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

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	S3	N1	N3			Standoff	Beam	Tube	A500 Gr....	Typical
2	GA4	N7	N10		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
3	GA3	N8	N9			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
4	P3	N5	N6			Corner Plates	Beam	RECT	A36 Gr.36	Typical
5	S2	N11	N12			Standoff	Beam	Tube	A500 Gr....	Typical
6	GA2	N16	N19		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
7	GA1	N17	N18			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
8	P2	N14	N15			Corner Plates	Beam	RECT	A36 Gr.36	Typical
9	S1	N20	N21			Standoff	Beam	Tube	A500 Gr....	Typical
10	GA6	N25	N28		270	Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
11	GA5	N26	N27			Grating Angle	Beam	Single Angle	A36 Gr.36	Typical
12	P1	N23	N24			Corner Plates	Beam	RECT	A36 Gr.36	Typical
13	H1	N29	N30			Horizontal	Beam	Pipe	A53 Gr.B	Typical
14	HR1	N31	N32			Handrail	Beam	Pipe	A53 Gr.B	Typical
15	CA8	N36	N35		180	Handrail Connector	Beam	Single Angle	A36 Gr.36	Typical
16	CA9	N34	N33		180	Handrail Connector	Beam	Single Angle	A36 Gr.36	Typical
17	CA7	N38	N37		180	Handrail Connector	Beam	Single Angle	A36 Gr.36	Typical
18	CA3	N4	N39			Channel	Beam	Channel	A36 Gr.36	Typical
19	CA4	N40	N4			Channel	Beam	Channel	A36 Gr.36	Typical
20	CA1	N13	N41			Channel	Beam	Channel	A36 Gr.36	Typical
21	CA2	N42	N13			Channel	Beam	Channel	A36 Gr.36	Typical
22	CA5	N22	N43			Channel	Beam	Channel	A36 Gr.36	Typical
23	CA6	N44	N22			Channel	Beam	Channel	A36 Gr.36	Typical
24	M64	N46	N45			RIGID	None	None	RIGID	Typical
25	M65	N44	N45			RIGID	None	None	RIGID	Typical
26	M66	N48	N47			RIGID	None	None	RIGID	Typical
27	M67	N40	N47			RIGID	None	None	RIGID	Typical
28	M68	N50	N49			RIGID	None	None	RIGID	Typical
29	M69	N42	N49			RIGID	None	None	RIGID	Typical
30	M70	N52	N51			RIGID	None	None	RIGID	Typical
31	M71	N41	N51			RIGID	None	None	RIGID	Typical
32	M72	N54	N53			RIGID	None	None	RIGID	Typical
33	M73	N43	N53			RIGID	None	None	RIGID	Typical
34	M74	N56	N55			RIGID	None	None	RIGID	Typical
35	M75	N39	N55			PL 2.375x0.5	None	None	A36 Gr.36	Typical
36	H3	N57	N58			Horizontal	Beam	Pipe	A53 Gr.B	Typical
37	HR3	N59	N60			Handrail	Beam	Pipe	A53 Gr.B	Typical
38	H2	N61	N62			Horizontal	Beam	Pipe	A53 Gr.B	Typical
39	HR2	N63	N64			Handrail	Beam	Pipe	A53 Gr.B	Typical
40	M40	N68	N74			RIGID	None	None	RIGID	Typical
41	M41	N67	N73			RIGID	None	None	RIGID	Typical
42	M42	N66	N72			RIGID	None	None	RIGID	Typical
43	M43	N65	N71			RIGID	None	None	RIGID	Typical
44	M44	N70	N76			RIGID	None	None	RIGID	Typical
45	M45	N69	N75			RIGID	None	None	RIGID	Typical
46	MP3	N78	N81			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
47	MP2	N77	N80			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
48	MP1	N79	N82			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
49	M49	N86	N92			RIGID	None	None	RIGID	Typical
50	M50	N85	N91			RIGID	None	None	RIGID	Typical
51	M51	N84	N90			RIGID	None	None	RIGID	Typical
52	M52	N83	N89			RIGID	None	None	RIGID	Typical
53	M53	N88	N94			RIGID	None	None	RIGID	Typical
54	M54	N87	N93			RIGID	None	None	RIGID	Typical
55	MP9	N96	N99			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
56	MP8	N95	N98			Mount Pipe	Column	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
57	MP7	N97	N100			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
58	M58	N104	N110			RIGID	None	None	RIGID	Typical
59	M59	N103	N109			RIGID	None	None	RIGID	Typical
60	M60	N102	N108			RIGID	None	None	RIGID	Typical
61	M61	N101	N107			RIGID	None	None	RIGID	Typical
62	M62	N106	N112			RIGID	None	None	RIGID	Typical
63	M63	N105	N111			RIGID	None	None	RIGID	Typical
64	MP6	N114	N117			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
65	MP5	N113	N116			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
66	MP4	N115	N118			Mount Pipe	Column	Pipe	A53 Gr.B	Typical

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[lb/f...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	490	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	490	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	490	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	490	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	490	50	1.4	65	1.3
8	A913 Gr.65	29000	11154	.3	.65	490	65	1.1	80	1.1
9	A500 GR.C	29000	11154	.3	.65	490	46	1.6	60	1.2
10	A529 Gr. 50	29000	11154	.3	.65	490	50	1.1	65	1.1
11	A1011-33Ksi	29000	11154	.3	.65	490	33	1.5	58	1.2
12	A1011 36 Ksi	29000	11154	.3	.65	490	36	1.5	58	1.2
13	A1018 50 Ksi	29000	11154	.3	.65	490	50	1.5	65	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Corner Plates	PL6.5x0.375	Beam	RECT	A36 Gr.36	Typical	2.438	.029	8.582	.11
2	6"x0.37" Plate	Plate 6x.37	Beam	RECT	A36 Gr.36	Typical	2.22	.025	6.66	.097
3	Grating Angle	L2x2x4	Beam	Single Angle	A36 Gr.36	Typical	.944	.346	.346	.021
4	Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
5	Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
6	Channel	C3.38x2.06x0.25	Beam	Channel	A36 Gr.36	Typical	1.75	.715	3.026	.034
7	Standoff	HSS4X4X4	Beam	Tube	A500 Gr.B Re...	Typical	3.37	7.8	7.8	12.8
8	Handrail Connector	L4X4X4	Beam	Single Angle	A36 Gr.36	Typical	1.93	3	3	.044
9	Handrail	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	-0.	0	-74.1865	0	
2	CENTER	0	0	-50.1865	0	
3	N3	-0.	0	-114.1865	0	
4	N4	-0.	0	-90.1865	0	
5	N5	-21.	0	-114.1865	0	
6	N6	21.	0	-114.1865	0	
7	N7	28.	0	-90.1865	0	
8	N8	-28.	0	-90.1865	0	
9	N9	-15.	0	-114.1865	0	
10	N10	15.	0	-114.1865	0	
11	N11	-20.78461	0	-38.1865	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
12	N12	-55.425626	0	-18.1865	0	
13	N13	-34.641016	0	-30.1865	0	
14	N14	-44.925626	0	0.000033	0	
15	N15	-65.925626	0	-36.373033	0	
16	N16	-48.641016	0	-54.435211	0	
17	N17	-20.641016	0	-5.937789	0	
18	N18	-47.925626	0	-5.196119	0	
19	N19	-62.925626	0	-31.176881	0	
20	N20	20.78461	0	-38.1865	0	
21	N21	55.425626	0	-18.1865	0	
22	N22	34.641016	0	-30.1865	0	
23	N23	65.925626	0	-36.373033	0	
24	N24	44.925626	0	0.000033	0	
25	N25	20.641016	0	-5.937789	0	
26	N26	48.641016	0	-54.435211	0	
27	N27	62.925626	0	-31.176881	0	
28	N28	47.925626	0	-5.196119	0	
29	N29	-48.	0	0.000033	0	
30	N30	48.	0	0.000033	0	
31	N31	-60.	40	0.000033	0	
32	N32	60.	40	0.000033	0	
33	N33	-21.	40	-114.1865	0	
34	N34	21.	40	-114.1865	0	
35	N35	-44.925626	40	0.000033	0	
36	N36	-65.925626	40	-36.373033	0	
37	N37	65.925626	40	-36.373033	0	
38	N38	44.925626	40	0.000033	0	
39	N39	-33.	0	-90.1865	0	
40	N40	33.	0	-90.1865	0	
41	N41	-18.141016	0	-1.607662	0	
42	N42	-51.141016	0	-58.765338	0	
43	N43	51.141016	0	-58.765338	0	
44	N44	18.141016	0	-1.607662	0	
45	N45	16.641016	0	-1.607662	0	
46	N46	16.641016	0	0.000033	0	
47	N47	33.75	0	-88.887462	0	
48	N48	35.142305	0	-89.691309	0	
49	N49	-50.391016	0	-60.064377	0	
50	N50	-51.783321	0	-60.868224	0	
51	N51	-16.641016	0	-1.607662	0	
52	N52	-16.641016	0	0.000033	0	
53	N53	50.391016	0	-60.064377	0	
54	N54	51.783321	0	-60.868224	0	
55	N55	-33.75	0	-88.887462	0	
56	N56	-35.142305	0	-89.691309	0	
57	N57	67.462813	0	-33.710548	0	
58	N58	19.462813	0	-116.848986	0	
59	N59	73.462813	40	-23.318243	0	
60	N60	13.462813	40	-127.241291	0	
61	N61	-19.462813	0	-116.848986	0	
62	N62	-67.462813	0	-33.710547	0	
63	N63	-13.462813	40	-127.241291	0	
64	N64	-73.462813	40	-23.318242	0	
65	N65	0.	0	0.000033	0	
66	N66	0.	40	0.000033	0	
67	N67	-36.	0	0.000033	0	
68	N68	-36.	40	0.000033	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
69	N69	36.	0	0.000033	0	
70	N70	36.	40	0.000033	0	
71	N71	0.	0	3.000033	0	
72	N72	0.	40	3.000033	0	
73	N73	-36.	0	3.000033	0	
74	N74	-36.	40	3.000033	0	
75	N75	36.	0	3.000033	0	
76	N76	36.	40	3.000033	0	
77	N77	0.	68	3.000033	0	
78	N78	-36.	68	3.000033	0	
79	N79	36.	68	3.000033	0	
80	N80	0.	-28	3.000033	0	
81	N81	-36.	-28	3.000033	0	
82	N82	36.	-28	3.000033	0	
83	N83	43.462813	0	-75.279767	0	
84	N84	43.462813	40	-75.279767	0	
85	N85	61.462813	0	-44.102852	0	
86	N86	61.462813	40	-44.102852	0	
87	N87	25.462813	0	-106.456681	0	
88	N88	25.462813	40	-106.456681	0	
89	N89	46.060889	0	-76.779767	0	
90	N90	46.060889	40	-76.779767	0	
91	N91	64.060889	0	-45.602852	0	
92	N92	64.060889	40	-45.602852	0	
93	N93	28.060889	0	-107.956681	0	
94	N94	28.060889	40	-107.956681	0	
95	N95	46.060889	68	-76.779767	0	
96	N96	64.060889	68	-45.602852	0	
97	N97	28.060889	68	-107.956681	0	
98	N98	46.060889	-28	-76.779767	0	
99	N99	64.060889	-28	-45.602852	0	
100	N100	28.060889	-28	-107.956681	0	
101	N101	-43.462813	0	-75.279766	0	
102	N102	-43.462813	40	-75.279766	0	
103	N103	-25.462813	0	-106.456681	0	
104	N104	-25.462813	40	-106.456681	0	
105	N105	-61.462813	0	-44.102852	0	
106	N106	-61.462813	40	-44.102852	0	
107	N107	-46.060889	0	-76.779766	0	
108	N108	-46.060889	40	-76.779766	0	
109	N109	-28.060889	0	-107.956681	0	
110	N110	-28.060889	40	-107.956681	0	
111	N111	-64.060889	0	-45.602852	0	
112	N112	-64.060889	40	-45.602852	0	
113	N113	-46.060889	68	-76.779766	0	
114	N114	-28.060889	68	-107.956681	0	
115	N115	-64.060889	68	-45.602852	0	
116	N116	-46.060889	-28	-76.779766	0	
117	N117	-28.060889	-28	-107.956681	0	
118	N118	-64.060889	-28	-45.602852	0	

Hot Rolled Steel Design Parameters

	Label	Shape	Length...	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torque[i...	Kyy	Kzz	Cb	Funct...
1	S3	Standoff	40			Lbyy						Lateral
2	GA4	Grating A...	27.295			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length...	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torque[i...	Kyy	Kzz	Cb	Funct...
3	GA3	Grating A...	27.295			Lbyy						Lateral
4	P3	Corner Pl...	42			Lbyy						Lateral
5	S2	Standoff	40			Lbyy						Lateral
6	GA2	Grating A...	27.295			Lbyy						Lateral
7	GA1	Grating A...	27.295			Lbyy						Lateral
8	P2	Corner Pl...	42			Lbyy						Lateral
9	S1	Standoff	40			Lbyy						Lateral
10	GA6	Grating A...	27.295			Lbyy						Lateral
11	GA5	Grating A...	27.295			Lbyy						Lateral
12	P1	Corner Pl...	42			Lbyy						Lateral
13	H1	Horizontal	96			Lbyy						Lateral
14	HR1	Handrail	120			Lbyy						Lateral
15	CA8	Handrail ...	42			Lbyy						Lateral
16	CA9	Handrail ...	42			Lbyy						Lateral
17	CA7	Handrail ...	42			Lbyy						Lateral
18	CA3	Channel	33			Lbyy						Lateral
19	CA4	Channel	33			Lbyy						Lateral
20	CA1	Channel	33			Lbyy						Lateral
21	CA2	Channel	33			Lbyy						Lateral
22	CA5	Channel	33			Lbyy						Lateral
23	CA6	Channel	33			Lbyy						Lateral
24	M75	PL 2.375x...	1.5			Lbyy						Lateral
25	H3	Horizontal	96			Lbyy						Lateral
26	HR3	Handrail	120			Lbyy						Lateral
27	H2	Horizontal	96			Lbyy						Lateral
28	HR2	Handrail	120			Lbyy						Lateral
29	MP3	Mount Pipe	96			Lbyy						Lateral
30	MP2	Mount Pipe	96			Lbyy						Lateral
31	MP1	Mount Pipe	96			Lbyy						Lateral
32	MP9	Mount Pipe	96			Lbyy						Lateral
33	MP8	Mount Pipe	96			Lbyy						Lateral
34	MP7	Mount Pipe	96			Lbyy						Lateral
35	MP6	Mount Pipe	96			Lbyy						Lateral
36	MP5	Mount Pipe	96			Lbyy						Lateral
37	MP4	Mount Pipe	96			Lbyy						Lateral

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface(Plate/Wall)
1	Self Weight	DL		-1			13		3	
2	Wind Load AZ...	WLZ					26			
3	Wind Load AZ...	None					26			
4	Wind Load AZ...	None					26			
5	Wind Load AZ...	WLX					26			
6	Wind Load AZ...	None					26			
7	Wind Load AZ...	None					26			
8	Wind Load AZ...	None					26			
9	Wind Load AZ...	None					26			
10	Wind Load AZ...	None					26			
11	Wind Load AZ...	None					26			
12	Wind Load AZ...	None					26			
13	Wind Load AZ...	None					26			
14	Distr. Wind Lo...	WLZ						66		
15	Distr. Wind Lo...	WLX						66		
16	Ice Weight	OL1					13	66	3	
17	Ice Wind Load...	OL2					26			

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface(Plate/Wall)
18	Ice Wind Load...	None					26			
19	Ice Wind Load...	None					26			
20	Ice Wind Load...	OL3					26			
21	Ice Wind Load...	None					26			
22	Ice Wind Load...	None					26			
23	Ice Wind Load...	None					26			
24	Ice Wind Load...	None					26			
25	Ice Wind Load...	None					26			
26	Ice Wind Load...	None					26			
27	Ice Wind Load...	None					26			
28	Ice Wind Load...	None					26			
29	Distr. Ice Wind...	OL2						66		
30	Distr. Ice Wind...	OL3						66		
31	Seismic Load Z	ELZ			-.301		13			
32	Seismic Load X	ELX	-.301				13			
33	Service Live L...	LL				1				
34	Maintenance L...	LL				1				
35	Maintenance L...	LL				1				
36	Maintenance L...	LL				1				
37	Maintenance L...	LL				1				
38	Maintenance L...	LL				1				
39	Maintenance L...	LL				1				
40	Maintenance L...	LL				1				
41	Maintenance L...	LL				1				
42	Maintenance L...	LL				1				
43	BLC 1 Transie...	None						9		
44	BLC 16 Transi...	None						9		

Joint Loads and Enforced Displacements (BLC 33 : Service Live Loads)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N30	L	Y	-250

Joint Loads and Enforced Displacements (BLC 34 : Maintenance Load 1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N67	L	Y	-500

Joint Loads and Enforced Displacements (BLC 35 : Maintenance Load 2)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N65	L	Y	-500

Joint Loads and Enforced Displacements (BLC 36 : Maintenance Load 3)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N69	L	Y	-500

Joint Loads and Enforced Displacements (BLC 37 : Maintenance Load 4)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N85	L	Y	-500

Joint Loads and Enforced Displacements (BLC 38 : Maintenance Load 5)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N83	L	Y	-500

Joint Loads and Enforced Displacements (BLC 39 : Maintenance Load 6)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N87	L	Y	-500

Joint Loads and Enforced Displacements (BLC 40 : Maintenance Load 7)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N103	L	Y	-500

Joint Loads and Enforced Displacements (BLC 41 : Maintenance Load 8)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N101	L	Y	-500

Joint Loads and Enforced Displacements (BLC 42 : Maintenance Load 9)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2...
1	N105	L	Y	-500

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Y	-41.25	6
2	MP2	Y	-41.25	78
3	MP2	Y	-63.9	%25
4	MP2	Y	-75	%50
5	MP2	Y	-21.85	%75
6	MP5	Y	-41.25	6
7	MP5	Y	-41.25	78
8	MP5	Y	-63.9	%33
9	MP5	Y	-75	%67
10	MP8	Y	-41.25	6
11	MP8	Y	-41.25	78
12	MP8	Y	-63.9	%33
13	MP8	Y	-75	%67

Member Point Loads (BLC 2 : Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	-124.07	6
3	MP2	X	0	78
4	MP2	Z	-124.07	78
5	MP2	X	0	%25
6	MP2	Z	-60.83	%25
7	MP2	X	0	%50
8	MP2	Z	-60.83	%50
9	MP2	X	0	%75
10	MP2	Z	-62.06	%75
11	MP5	X	0	6
12	MP5	Z	-68.31	6
13	MP5	X	0	78
14	MP5	Z	-68.31	78
15	MP5	X	0	%33
16	MP5	Z	-38	%33
17	MP5	X	0	%67
18	MP5	Z	-41.45	%67
19	MP8	X	0	6
20	MP8	Z	-68.31	6
21	MP8	X	0	78

Member Point Loads (BLC 2 : Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
22	MP8	Z	-68.31	78
23	MP8	X	0	%33
24	MP8	Z	-38	%33
25	MP8	X	0	%67
26	MP8	Z	-41.45	%67

Member Point Loads (BLC 3 : Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-52.74	6
2	MP2	Z	-91.35	6
3	MP2	X	-52.74	78
4	MP2	Z	-91.35	78
5	MP2	X	-26.61	%25
6	MP2	Z	-46.09	%25
7	MP2	X	-27.18	%50
8	MP2	Z	-47.08	%50
9	MP2	X	-27.78	%75
10	MP2	Z	-48.11	%75
11	MP5	X	-52.74	6
12	MP5	Z	-91.35	6
13	MP5	X	-52.74	78
14	MP5	Z	-91.35	78
15	MP5	X	-26.61	%33
16	MP5	Z	-46.09	%33
17	MP5	X	-27.18	%67
18	MP5	Z	-47.08	%67
19	MP8	X	-24.86	6
20	MP8	Z	-43.06	6
21	MP8	X	-24.86	78
22	MP8	Z	-43.06	78
23	MP8	X	-15.2	%33
24	MP8	Z	-26.32	%33
25	MP8	X	-17.5	%67
26	MP8	Z	-30.3	%67

Member Point Loads (BLC 4 : Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-59.16	6
2	MP2	Z	-34.15	6
3	MP2	X	-59.16	78
4	MP2	Z	-34.15	78
5	MP2	X	-32.91	%25
6	MP2	Z	-19	%25
7	MP2	X	-35.9	%50
8	MP2	Z	-20.72	%50
9	MP2	X	-36.84	%75
10	MP2	Z	-21.27	%75
11	MP5	X	-107.45	6
12	MP5	Z	-62.04	6
13	MP5	X	-107.45	78
14	MP5	Z	-62.04	78
15	MP5	X	-52.68	%33
16	MP5	Z	-30.41	%33
17	MP5	X	-52.68	%67
18	MP5	Z	-30.41	%67
19	MP8	X	-59.16	6

Member Point Loads (BLC 4 : Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP8	Z	-34.15	6
21	MP8	X	-59.16	78
22	MP8	Z	-34.15	78
23	MP8	X	-32.91	%33
24	MP8	Z	-19	%33
25	MP8	X	-35.9	%67
26	MP8	Z	-20.72	%67

Member Point Loads (BLC 5 : Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-49.72	6
2	MP2	Z	0	6
3	MP2	X	-49.72	78
4	MP2	Z	0	78
5	MP2	X	-30.39	%25
6	MP2	Z	0	%25
7	MP2	X	-34.99	%50
8	MP2	Z	0	%50
9	MP2	X	-36.04	%75
10	MP2	Z	0	%75
11	MP5	X	-105.48	6
12	MP5	Z	0	6
13	MP5	X	-105.48	78
14	MP5	Z	0	78
15	MP5	X	-53.22	%33
16	MP5	Z	0	%33
17	MP5	X	-54.37	%67
18	MP5	Z	0	%67
19	MP8	X	-105.48	6
20	MP8	Z	0	6
21	MP8	X	-105.48	78
22	MP8	Z	0	78
23	MP8	X	-53.22	%33
24	MP8	Z	0	%33
25	MP8	X	-54.37	%67
26	MP8	Z	0	%67

Member Point Loads (BLC 6 : Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-59.16	6
2	MP2	Z	34.15	6
3	MP2	X	-59.16	78
4	MP2	Z	34.15	78
5	MP2	X	-32.91	%25
6	MP2	Z	19	%25
7	MP2	X	-35.9	%50
8	MP2	Z	20.72	%50
9	MP2	X	-36.84	%75
10	MP2	Z	21.27	%75
11	MP5	X	-59.16	6
12	MP5	Z	34.15	6
13	MP5	X	-59.16	78
14	MP5	Z	34.15	78
15	MP5	X	-32.91	%33
16	MP5	Z	19	%33
17	MP5	X	-35.9	%67

Member Point Loads (BLC 6 : Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
18	MP5	Z	20.72	%67
19	MP8	X	-107.45	6
20	MP8	Z	62.04	6
21	MP8	X	-107.45	78
22	MP8	Z	62.04	78
23	MP8	X	-52.68	%33
24	MP8	Z	30.41	%33
25	MP8	X	-52.68	%67
26	MP8	Z	30.41	%67

Member Point Loads (BLC 7 : Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-52.74	6
2	MP2	Z	91.35	6
3	MP2	X	-52.74	78
4	MP2	Z	91.35	78
5	MP2	X	-26.61	%25
6	MP2	Z	46.09	%25
7	MP2	X	-27.18	%50
8	MP2	Z	47.08	%50
9	MP2	X	-27.78	%75
10	MP2	Z	48.11	%75
11	MP5	X	-24.86	6
12	MP5	Z	43.06	6
13	MP5	X	-24.86	78
14	MP5	Z	43.06	78
15	MP5	X	-15.2	%33
16	MP5	Z	26.32	%33
17	MP5	X	-17.5	%67
18	MP5	Z	30.3	%67
19	MP8	X	-52.74	6
20	MP8	Z	91.35	6
21	MP8	X	-52.74	78
22	MP8	Z	91.35	78
23	MP8	X	-26.61	%33
24	MP8	Z	46.09	%33
25	MP8	X	-27.18	%67
26	MP8	Z	47.08	%67

Member Point Loads (BLC 8 : Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	124.07	6
3	MP2	X	0	78
4	MP2	Z	124.07	78
5	MP2	X	0	%25
6	MP2	Z	60.83	%25
7	MP2	X	0	%50
8	MP2	Z	60.83	%50
9	MP2	X	0	%75
10	MP2	Z	62.06	%75
11	MP5	X	0	6
12	MP5	Z	68.31	6
13	MP5	X	0	78
14	MP5	Z	68.31	78
15	MP5	X	0	%33

Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
16	MP5	Z	38	%33
17	MP5	X	0	%67
18	MP5	Z	41.45	%67
19	MP8	X	0	6
20	MP8	Z	68.31	6
21	MP8	X	0	78
22	MP8	Z	68.31	78
23	MP8	X	0	%33
24	MP8	Z	38	%33
25	MP8	X	0	%67
26	MP8	Z	41.45	%67

Member Point Loads (BLC 9 : Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	52.74	6
2	MP2	Z	91.35	6
3	MP2	X	52.74	78
4	MP2	Z	91.35	78
5	MP2	X	26.61	%25
6	MP2	Z	46.09	%25
7	MP2	X	27.18	%50
8	MP2	Z	47.08	%50
9	MP2	X	27.78	%75
10	MP2	Z	48.11	%75
11	MP5	X	52.74	6
12	MP5	Z	91.35	6
13	MP5	X	52.74	78
14	MP5	Z	91.35	78
15	MP5	X	26.61	%33
16	MP5	Z	46.09	%33
17	MP5	X	27.18	%67
18	MP5	Z	47.08	%67
19	MP8	X	24.86	6
20	MP8	Z	43.06	6
21	MP8	X	24.86	78
22	MP8	Z	43.06	78
23	MP8	X	15.2	%33
24	MP8	Z	26.32	%33
25	MP8	X	17.5	%67
26	MP8	Z	30.3	%67

Member Point Loads (BLC 10 : Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	59.16	6
2	MP2	Z	34.15	6
3	MP2	X	59.16	78
4	MP2	Z	34.15	78
5	MP2	X	32.91	%25
6	MP2	Z	19	%25
7	MP2	X	35.9	%50
8	MP2	Z	20.72	%50
9	MP2	X	36.84	%75
10	MP2	Z	21.27	%75
11	MP5	X	107.45	6
12	MP5	Z	62.04	6
13	MP5	X	107.45	78

Member Point Loads (BLC 10 : Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
14	MP5	Z	62.04	78
15	MP5	X	52.68	%33
16	MP5	Z	30.41	%33
17	MP5	X	52.68	%67
18	MP5	Z	30.41	%67
19	MP8	X	59.16	6
20	MP8	Z	34.15	6
21	MP8	X	59.16	78
22	MP8	Z	34.15	78
23	MP8	X	32.91	%33
24	MP8	Z	19	%33
25	MP8	X	35.9	%67
26	MP8	Z	20.72	%67

Member Point Loads (BLC 11 : Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	49.72	6
2	MP2	Z	0	6
3	MP2	X	49.72	78
4	MP2	Z	0	78
5	MP2	X	30.39	%25
6	MP2	Z	0	%25
7	MP2	X	34.99	%50
8	MP2	Z	0	%50
9	MP2	X	36.04	%75
10	MP2	Z	0	%75
11	MP5	X	105.48	6
12	MP5	Z	0	6
13	MP5	X	105.48	78
14	MP5	Z	0	78
15	MP5	X	53.22	%33
16	MP5	Z	0	%33
17	MP5	X	54.37	%67
18	MP5	Z	0	%67
19	MP8	X	105.48	6
20	MP8	Z	0	6
21	MP8	X	105.48	78
22	MP8	Z	0	78
23	MP8	X	53.22	%33
24	MP8	Z	0	%33
25	MP8	X	54.37	%67
26	MP8	Z	0	%67

Member Point Loads (BLC 12 : Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	59.16	6
2	MP2	Z	-34.15	6
3	MP2	X	59.16	78
4	MP2	Z	-34.15	78
5	MP2	X	32.91	%25
6	MP2	Z	-19	%25
7	MP2	X	35.9	%50
8	MP2	Z	-20.72	%50
9	MP2	X	36.84	%75
10	MP2	Z	-21.27	%75
11	MP5	X	59.16	6

Member Point Loads (BLC 12 : Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
12	MP5	Z	-34.15	6
13	MP5	X	59.16	78
14	MP5	Z	-34.15	78
15	MP5	X	32.91	%33
16	MP5	Z	-19	%33
17	MP5	X	35.9	%67
18	MP5	Z	-20.72	%67
19	MP8	X	107.45	6
20	MP8	Z	-62.04	6
21	MP8	X	107.45	78
22	MP8	Z	-62.04	78
23	MP8	X	52.68	%33
24	MP8	Z	-30.41	%33
25	MP8	X	52.68	%67
26	MP8	Z	-30.41	%67

Member Point Loads (BLC 13 : Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	52.74	6
2	MP2	Z	-91.35	6
3	MP2	X	52.74	78
4	MP2	Z	-91.35	78
5	MP2	X	26.61	%25
6	MP2	Z	-46.09	%25
7	MP2	X	27.18	%50
8	MP2	Z	-47.08	%50
9	MP2	X	27.78	%75
10	MP2	Z	-48.11	%75
11	MP5	X	24.86	6
12	MP5	Z	-43.06	6
13	MP5	X	24.86	78
14	MP5	Z	-43.06	78
15	MP5	X	15.2	%33
16	MP5	Z	-26.32	%33
17	MP5	X	17.5	%67
18	MP5	Z	-30.3	%67
19	MP8	X	52.74	6
20	MP8	Z	-91.35	6
21	MP8	X	52.74	78
22	MP8	Z	-91.35	78
23	MP8	X	26.61	%33
24	MP8	Z	-46.09	%33
25	MP8	X	27.18	%67
26	MP8	Z	-47.08	%67

Member Point Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Y	-139.878	6
2	MP2	Y	-139.878	78
3	MP2	Y	-68.656	%25
4	MP2	Y	-73.148	%50
5	MP2	Y	-71.885	%75
6	MP5	Y	-139.878	6
7	MP5	Y	-139.878	78
8	MP5	Y	-68.656	%33
9	MP5	Y	-73.148	%67

Member Point Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
10	MP8	Y	-139.878	6
11	MP8	Y	-139.878	78
12	MP8	Y	-68.656	%33
13	MP8	Y	-73.148	%67

Member Point Loads (BLC 17 : Ice Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	-17.6	6
3	MP2	X	0	78
4	MP2	Z	-17.6	78
5	MP2	X	0	%25
6	MP2	Z	-6.8	%25
7	MP2	X	0	%50
8	MP2	Z	-6.8	%50
9	MP2	X	0	%75
10	MP2	Z	-7.03	%75
11	MP5	X	0	6
12	MP5	Z	-13.45	6
13	MP5	X	0	78
14	MP5	Z	-13.45	78
15	MP5	X	0	%33
16	MP5	Z	-5.53	%33
17	MP5	X	0	%67
18	MP5	Z	-5.73	%67
19	MP8	X	0	6
20	MP8	Z	-13.45	6
21	MP8	X	0	78
22	MP8	Z	-13.45	78
23	MP8	X	0	%33
24	MP8	Z	-5.53	%33
25	MP8	X	0	%67
26	MP8	Z	-5.73	%67

Member Point Loads (BLC 18 : Ice Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-8.11	6
2	MP2	Z	-14.04	6
3	MP2	X	-8.11	78
4	MP2	Z	-14.04	78
5	MP2	X	-3.19	%25
6	MP2	Z	-5.52	%25
7	MP2	X	-3.22	%50
8	MP2	Z	-5.58	%50
9	MP2	X	-3.35	%75
10	MP2	Z	-5.8	%75
11	MP5	X	-8.11	6
12	MP5	Z	-14.04	6
13	MP5	X	-8.11	78
14	MP5	Z	-14.04	78
15	MP5	X	-3.19	%33
16	MP5	Z	-5.52	%33
17	MP5	X	-3.22	%67
18	MP5	Z	-5.58	%67
19	MP8	X	-6.03	6
20	MP8	Z	-10.45	6

Member Point Loads (BLC 18 : Ice Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
21	MP8	X	-6.03	78
22	MP8	Z	-10.45	78
23	MP8	X	-2.55	%33
24	MP8	Z	-4.42	%33
25	MP8	X	-2.69	%67
26	MP8	Z	-4.65	%67

Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-11.64	6
2	MP2	Z	-6.72	6
3	MP2	X	-11.64	78
4	MP2	Z	-6.72	78
5	MP2	X	-4.79	%25
6	MP2	Z	-2.76	%25
7	MP2	X	-4.96	%50
8	MP2	Z	-2.86	%50
9	MP2	X	-5.21	%75
10	MP2	Z	-3.01	%75
11	MP5	X	-15.24	6
12	MP5	Z	-8.8	6
13	MP5	X	-15.24	78
14	MP5	Z	-8.8	78
15	MP5	X	-5.89	%33
16	MP5	Z	-3.4	%33
17	MP5	X	-5.89	%67
18	MP5	Z	-3.4	%67
19	MP8	X	-11.64	6
20	MP8	Z	-6.72	6
21	MP8	X	-11.64	78
22	MP8	Z	-6.72	78
23	MP8	X	-4.79	%33
24	MP8	Z	-2.76	%33
25	MP8	X	-4.96	%67
26	MP8	Z	-2.86	%67

Member Point Loads (BLC 20 : Ice Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-12.06	6
2	MP2	Z	0	6
3	MP2	X	-12.06	78
4	MP2	Z	0	78
5	MP2	X	-5.1	%25
6	MP2	Z	0	%25
7	MP2	X	-5.37	%50
8	MP2	Z	0	%50
9	MP2	X	-5.68	%75
10	MP2	Z	0	%75
11	MP5	X	-16.21	6
12	MP5	Z	0	6
13	MP5	X	-16.21	78
14	MP5	Z	0	78
15	MP5	X	-6.38	%33
16	MP5	Z	0	%33
17	MP5	X	-6.44	%67
18	MP5	Z	0	%67

Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
19	MP8	X	-16.21	6
20	MP8	Z	0	6
21	MP8	X	-16.21	78
22	MP8	Z	0	78
23	MP8	X	-6.38	%33
24	MP8	Z	0	%33
25	MP8	X	-6.44	%67
26	MP8	Z	0	%67

Member Point Loads (BLC 21 : Ice Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-11.64	6
2	MP2	Z	6.72	6
3	MP2	X	-11.64	78
4	MP2	Z	6.72	78
5	MP2	X	-4.79	%25
6	MP2	Z	2.76	%25
7	MP2	X	-4.96	%50
8	MP2	Z	2.86	%50
9	MP2	X	-5.21	%75
10	MP2	Z	3.01	%75
11	MP5	X	-11.64	6
12	MP5	Z	6.72	6
13	MP5	X	-11.64	78
14	MP5	Z	6.72	78
15	MP5	X	-4.79	%33
16	MP5	Z	2.76	%33
17	MP5	X	-4.96	%67
18	MP5	Z	2.86	%67
19	MP8	X	-15.24	6
20	MP8	Z	8.8	6
21	MP8	X	-15.24	78
22	MP8	Z	8.8	78
23	MP8	X	-5.89	%33
24	MP8	Z	3.4	%33
25	MP8	X	-5.89	%67
26	MP8	Z	3.4	%67

Member Point Loads (BLC 22 : Ice Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-8.11	6
2	MP2	Z	14.04	6
3	MP2	X	-8.11	78
4	MP2	Z	14.04	78
5	MP2	X	-3.19	%25
6	MP2	Z	5.52	%25
7	MP2	X	-3.22	%50
8	MP2	Z	5.58	%50
9	MP2	X	-3.35	%75
10	MP2	Z	5.8	%75
11	MP5	X	-6.03	6
12	MP5	Z	10.45	6
13	MP5	X	-6.03	78
14	MP5	Z	10.45	78
15	MP5	X	-2.55	%33
16	MP5	Z	4.42	%33

Member Point Loads (BLC 22 : Ice Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
17	MP5	X	-2.69	%67
18	MP5	Z	4.65	%67
19	MP8	X	-8.11	6
20	MP8	Z	14.04	6
21	MP8	X	-8.11	78
22	MP8	Z	14.04	78
23	MP8	X	-3.19	%33
24	MP8	Z	5.52	%33
25	MP8	X	-3.22	%67
26	MP8	Z	5.58	%67

Member Point Loads (BLC 23 : Ice Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	0	6
2	MP2	Z	17.6	6
3	MP2	X	0	78
4	MP2	Z	17.6	78
5	MP2	X	0	%25
6	MP2	Z	6.8	%25
7	MP2	X	0	%50
8	MP2	Z	6.8	%50
9	MP2	X	0	%75
10	MP2	Z	7.03	%75
11	MP5	X	0	6
12	MP5	Z	13.45	6
13	MP5	X	0	78
14	MP5	Z	13.45	78
15	MP5	X	0	%33
16	MP5	Z	5.53	%33
17	MP5	X	0	%67
18	MP5	Z	5.73	%67
19	MP8	X	0	6
20	MP8	Z	13.45	6
21	MP8	X	0	78
22	MP8	Z	13.45	78
23	MP8	X	0	%33
24	MP8	Z	5.53	%33
25	MP8	X	0	%67
26	MP8	Z	5.73	%67

Member Point Loads (BLC 24 : Ice Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	8.11	6
2	MP2	Z	14.04	6
3	MP2	X	8.11	78
4	MP2	Z	14.04	78
5	MP2	X	3.19	%25
6	MP2	Z	5.52	%25
7	MP2	X	3.22	%50
8	MP2	Z	5.58	%50
9	MP2	X	3.35	%75
10	MP2	Z	5.8	%75
11	MP5	X	8.11	6
12	MP5	Z	14.04	6
13	MP5	X	8.11	78
14	MP5	Z	14.04	78

Member Point Loads (BLC 24 : Ice Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
15	MP5	X	3.19	%33
16	MP5	Z	5.52	%33
17	MP5	X	3.22	%67
18	MP5	Z	5.58	%67
19	MP8	X	6.03	6
20	MP8	Z	10.45	6
21	MP8	X	6.03	78
22	MP8	Z	10.45	78
23	MP8	X	2.55	%33
24	MP8	Z	4.42	%33
25	MP8	X	2.69	%67
26	MP8	Z	4.65	%67

Member Point Loads (BLC 25 : Ice Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	11.64	6
2	MP2	Z	6.72	6
3	MP2	X	11.64	78
4	MP2	Z	6.72	78
5	MP2	X	4.79	%25
6	MP2	Z	2.76	%25
7	MP2	X	4.96	%50
8	MP2	Z	2.86	%50
9	MP2	X	5.21	%75
10	MP2	Z	3.01	%75
11	MP5	X	15.24	6
12	MP5	Z	8.8	6
13	MP5	X	15.24	78
14	MP5	Z	8.8	78
15	MP5	X	5.89	%33
16	MP5	Z	3.4	%33
17	MP5	X	5.89	%67
18	MP5	Z	3.4	%67
19	MP8	X	11.64	6
20	MP8	Z	6.72	6
21	MP8	X	11.64	78
22	MP8	Z	6.72	78
23	MP8	X	4.79	%33
24	MP8	Z	2.76	%33
25	MP8	X	4.96	%67
26	MP8	Z	2.86	%67

Member Point Loads (BLC 26 : Ice Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	12.06	6
2	MP2	Z	0	6
3	MP2	X	12.06	78
4	MP2	Z	0	78
5	MP2	X	5.1	%25
6	MP2	Z	0	%25
7	MP2	X	5.37	%50
8	MP2	Z	0	%50
9	MP2	X	5.68	%75
10	MP2	Z	0	%75
11	MP5	X	16.21	6
12	MP5	Z	0	6

Member Point Loads (BLC 26 : Ice Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
13	MP5	X	16.21	78
14	MP5	Z	0	78
15	MP5	X	6.38	%33
16	MP5	Z	0	%33
17	MP5	X	6.44	%67
18	MP5	Z	0	%67
19	MP8	X	16.21	6
20	MP8	Z	0	6
21	MP8	X	16.21	78
22	MP8	Z	0	78
23	MP8	X	6.38	%33
24	MP8	Z	0	%33
25	MP8	X	6.44	%67
26	MP8	Z	0	%67

Member Point Loads (BLC 27 : Ice Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	11.64	6
2	MP2	Z	-6.72	6
3	MP2	X	11.64	78
4	MP2	Z	-6.72	78
5	MP2	X	4.79	%25
6	MP2	Z	-2.76	%25
7	MP2	X	4.96	%50
8	MP2	Z	-2.86	%50
9	MP2	X	5.21	%75
10	MP2	Z	-3.01	%75
11	MP5	X	11.64	6
12	MP5	Z	-6.72	6
13	MP5	X	11.64	78
14	MP5	Z	-6.72	78
15	MP5	X	4.79	%33
16	MP5	Z	-2.76	%33
17	MP5	X	4.96	%67
18	MP5	Z	-2.86	%67
19	MP8	X	15.24	6
20	MP8	Z	-8.8	6
21	MP8	X	15.24	78
22	MP8	Z	-8.8	78
23	MP8	X	5.89	%33
24	MP8	Z	-3.4	%33
25	MP8	X	5.89	%67
26	MP8	Z	-3.4	%67

Member Point Loads (BLC 28 : Ice Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	8.11	6
2	MP2	Z	-14.04	6
3	MP2	X	8.11	78
4	MP2	Z	-14.04	78
5	MP2	X	3.19	%25
6	MP2	Z	-5.52	%25
7	MP2	X	3.22	%50
8	MP2	Z	-5.58	%50
9	MP2	X	3.35	%75
10	MP2	Z	-5.8	%75

Member Point Loads (BLC 28 : Ice Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
11	MP5	X	6.03	6
12	MP5	Z	-10.45	6
13	MP5	X	6.03	78
14	MP5	Z	-10.45	78
15	MP5	X	2.55	%33
16	MP5	Z	-4.42	%33
17	MP5	X	2.69	%67
18	MP5	Z	-4.65	%67
19	MP8	X	8.11	6
20	MP8	Z	-14.04	6
21	MP8	X	8.11	78
22	MP8	Z	-14.04	78
23	MP8	X	3.19	%33
24	MP8	Z	-5.52	%33
25	MP8	X	3.22	%67
26	MP8	Z	-5.58	%67

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Z	-12.408	6
2	MP2	Z	-12.408	78
3	MP2	Z	-19.221	%25
4	MP2	Z	-22.56	%50
5	MP2	Z	-6.572	%75
6	MP5	Z	-12.408	6
7	MP5	Z	-12.408	78
8	MP5	Z	-19.221	%33
9	MP5	Z	-22.56	%67
10	MP8	Z	-12.408	6
11	MP8	Z	-12.408	78
12	MP8	Z	-19.221	%33
13	MP8	Z	-22.56	%67

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-12.408	6
2	MP2	X	-12.408	78
3	MP2	X	-19.221	%25
4	MP2	X	-22.56	%50
5	MP2	X	-6.572	%75
6	MP5	X	-12.408	6
7	MP5	X	-12.408	78
8	MP5	X	-19.221	%33
9	MP5	X	-22.56	%67
10	MP8	X	-12.408	6
11	MP8	X	-12.408	78
12	MP8	X	-19.221	%33
13	MP8	X	-22.56	%67

Member Distributed Loads (BLC 14 : Distr. Wind Load Z)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	S3	SZ	-68.843	-68.843	0	%100
2	GA4	SZ	-68.843	-68.843	0	%100
3	GA3	SZ	-68.843	-68.843	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
4	P3	SZ	-68.843	-68.843	0	%100
5	S2	SZ	-68.843	-68.843	0	%100
6	GA2	SZ	-68.843	-68.843	0	%100
7	GA1	SZ	-68.843	-68.843	0	%100
8	P2	SZ	-68.843	-68.843	0	%100
9	S1	SZ	-68.843	-68.843	0	%100
10	GA6	SZ	-68.843	-68.843	0	%100
11	GA5	SZ	-68.843	-68.843	0	%100
12	P1	SZ	-68.843	-68.843	0	%100
13	H1	SZ	-41.306	-41.306	0	%100
14	HR1	SZ	-41.306	-41.306	0	%100
15	CA8	SZ	-68.843	-68.843	0	%100
16	CA9	SZ	-68.843	-68.843	0	%100
17	CA7	SZ	-68.843	-68.843	0	%100
18	CA3	SZ	-68.843	-68.843	0	%100
19	CA4	SZ	-68.843	-68.843	0	%100
20	CA1	SZ	-68.843	-68.843	0	%100
21	CA2	SZ	-68.843	-68.843	0	%100
22	CA5	SZ	-68.843	-68.843	0	%100
23	CA6	SZ	-68.843	-68.843	0	%100
24	M64	SZ	0	0	0	%100
25	M65	SZ	0	0	0	%100
26	M66	SZ	0	0	0	%100
27	M67	SZ	0	0	0	%100
28	M68	SZ	0	0	0	%100
29	M69	SZ	0	0	0	%100
30	M70	SZ	0	0	0	%100
31	M71	SZ	0	0	0	%100
32	M72	SZ	0	0	0	%100
33	M73	SZ	0	0	0	%100
34	M74	SZ	0	0	0	%100
35	M75	SZ	-68.843	-68.843	0	%100
36	H3	SZ	-41.306	-41.306	0	%100
37	HR3	SZ	-41.306	-41.306	0	%100
38	H2	SZ	-41.306	-41.306	0	%100
39	HR2	SZ	-41.306	-41.306	0	%100
40	M40	SZ	0	0	0	%100
41	M41	SZ	0	0	0	%100
42	M42	SZ	0	0	0	%100
43	M43	SZ	0	0	0	%100
44	M44	SZ	0	0	0	%100
45	M45	SZ	0	0	0	%100
46	MP3	SZ	-41.306	-41.306	0	%100
47	MP2	SZ	-41.306	-41.306	0	%100
48	MP1	SZ	-41.306	-41.306	0	%100
49	M49	SZ	0	0	0	%100
50	M50	SZ	0	0	0	%100
51	M51	SZ	0	0	0	%100
52	M52	SZ	0	0	0	%100
53	M53	SZ	0	0	0	%100
54	M54	SZ	0	0	0	%100
55	MP9	SZ	-41.306	-41.306	0	%100
56	MP8	SZ	-41.306	-41.306	0	%100
57	MP7	SZ	-41.306	-41.306	0	%100
58	M58	SZ	0	0	0	%100
59	M59	SZ	0	0	0	%100
60	M60	SZ	0	0	0	%100

Member Distributed Loads (BLC 14 : Distr. Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
61	M61	SZ	0	0	0	%100
62	M62	SZ	0	0	0	%100
63	M63	SZ	0	0	0	%100
64	MP6	SZ	-41.306	-41.306	0	%100
65	MP5	SZ	-41.306	-41.306	0	%100
66	MP4	SZ	-41.306	-41.306	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	S3	SX	-68.843	-68.843	0	%100
2	GA4	SX	-68.843	-68.843	0	%100
3	GA3	SX	-68.843	-68.843	0	%100
4	P3	SX	-68.843	-68.843	0	%100
5	S2	SX	-68.843	-68.843	0	%100
6	GA2	SX	-68.843	-68.843	0	%100
7	GA1	SX	-68.843	-68.843	0	%100
8	P2	SX	-68.843	-68.843	0	%100
9	S1	SX	-68.843	-68.843	0	%100
10	GA6	SX	-68.843	-68.843	0	%100
11	GA5	SX	-68.843	-68.843	0	%100
12	P1	SX	-68.843	-68.843	0	%100
13	H1	SX	-41.306	-41.306	0	%100
14	HR1	SX	-41.306	-41.306	0	%100
15	CA8	SX	-68.843	-68.843	0	%100
16	CA9	SX	-68.843	-68.843	0	%100
17	CA7	SX	-68.843	-68.843	0	%100
18	CA3	SX	-68.843	-68.843	0	%100
19	CA4	SX	-68.843	-68.843	0	%100
20	CA1	SX	-68.843	-68.843	0	%100
21	CA2	SX	-68.843	-68.843	0	%100
22	CA5	SX	-68.843	-68.843	0	%100
23	CA6	SX	-68.843	-68.843	0	%100
24	M64	SX	0	0	0	%100
25	M65	SX	0	0	0	%100
26	M66	SX	0	0	0	%100
27	M67	SX	0	0	0	%100
28	M68	SX	0	0	0	%100
29	M69	SX	0	0	0	%100
30	M70	SX	0	0	0	%100
31	M71	SX	0	0	0	%100
32	M72	SX	0	0	0	%100
33	M73	SX	0	0	0	%100
34	M74	SX	0	0	0	%100
35	M75	SX	-68.843	-68.843	0	%100
36	H3	SX	-41.306	-41.306	0	%100
37	HR3	SX	-41.306	-41.306	0	%100
38	H2	SX	-41.306	-41.306	0	%100
39	HR2	SX	-41.306	-41.306	0	%100
40	M40	SX	0	0	0	%100
41	M41	SX	0	0	0	%100
42	M42	SX	0	0	0	%100
43	M43	SX	0	0	0	%100
44	M44	SX	0	0	0	%100
45	M45	SX	0	0	0	%100
46	MP3	SX	-41.306	-41.306	0	%100
47	MP2	SX	-41.306	-41.306	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
48	MP1	SX	-41.306	-41.306	0	%100
49	M49	SX	0	0	0	%100
50	M50	SX	0	0	0	%100
51	M51	SX	0	0	0	%100
52	M52	SX	0	0	0	%100
53	M53	SX	0	0	0	%100
54	M54	SX	0	0	0	%100
55	MP9	SX	-41.306	-41.306	0	%100
56	MP8	SX	-41.306	-41.306	0	%100
57	MP7	SX	-41.306	-41.306	0	%100
58	M58	SX	0	0	0	%100
59	M59	SX	0	0	0	%100
60	M60	SX	0	0	0	%100
61	M61	SX	0	0	0	%100
62	M62	SX	0	0	0	%100
63	M63	SX	0	0	0	%100
64	MP6	SX	-41.306	-41.306	0	%100
65	MP5	SX	-41.306	-41.306	0	%100
66	MP4	SX	-41.306	-41.306	0	%100

Member Distributed Loads (BLC 16 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	S3	Y	-15.354	-15.354	0	%100
2	GA4	Y	-9.456	-9.456	0	%100
3	GA3	Y	-9.456	-9.456	0	%100
4	P3	Y	-17.135	-17.135	0	%100
5	S2	Y	-15.354	-15.354	0	%100
6	GA2	Y	-9.456	-9.456	0	%100
7	GA1	Y	-9.456	-9.456	0	%100
8	P2	Y	-17.135	-17.135	0	%100
9	S1	Y	-15.354	-15.354	0	%100
10	GA6	Y	-9.456	-9.456	0	%100
11	GA5	Y	-9.456	-9.456	0	%100
12	P1	Y	-17.135	-17.135	0	%100
13	H1	Y	-10.857	-10.857	0	%100
14	HR1	Y	-9.553	-9.553	0	%100
15	CA8	Y	-15.354	-15.354	0	%100
16	CA9	Y	-15.354	-15.354	0	%100
17	CA7	Y	-15.354	-15.354	0	%100
18	CA3	Y	-11.812	-11.812	0	%100
19	CA4	Y	-11.812	-11.812	0	%100
20	CA1	Y	-11.812	-11.812	0	%100
21	CA2	Y	-11.812	-11.812	0	%100
22	CA5	Y	-11.812	-11.812	0	%100
23	CA6	Y	-11.812	-11.812	0	%100
24	M64	Y	-3.559	-3.559	0	%100
25	M65	Y	-3.559	-3.559	0	%100
26	M66	Y	-3.559	-3.559	0	%100
27	M67	Y	-3.559	-3.559	0	%100
28	M68	Y	-3.559	-3.559	0	%100
29	M69	Y	-3.559	-3.559	0	%100
30	M70	Y	-3.559	-3.559	0	%100
31	M71	Y	-3.559	-3.559	0	%100
32	M72	Y	-3.559	-3.559	0	%100
33	M73	Y	-3.559	-3.559	0	%100
34	M74	Y	-3.559	-3.559	0	%100

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
35	M75	Y	-8.619	-8.619	0	%100
36	H3	Y	-10.857	-10.857	0	%100
37	HR3	Y	-9.553	-9.553	0	%100
38	H2	Y	-10.857	-10.857	0	%100
39	HR2	Y	-9.553	-9.553	0	%100
40	M40	Y	-3.559	-3.559	0	%100
41	M41	Y	-3.559	-3.559	0	%100
42	M42	Y	-3.559	-3.559	0	%100
43	M43	Y	-3.559	-3.559	0	%100
44	M44	Y	-3.559	-3.559	0	%100
45	M45	Y	-3.559	-3.559	0	%100
46	MP3	Y	-9.553	-9.553	0	%100
47	MP2	Y	-9.553	-9.553	0	%100
48	MP1	Y	-9.553	-9.553	0	%100
49	M49	Y	-3.559	-3.559	0	%100
50	M50	Y	-3.559	-3.559	0	%100
51	M51	Y	-3.559	-3.559	0	%100
52	M52	Y	-3.559	-3.559	0	%100
53	M53	Y	-3.559	-3.559	0	%100
54	M54	Y	-3.559	-3.559	0	%100
55	MP9	Y	-9.553	-9.553	0	%100
56	MP8	Y	-9.553	-9.553	0	%100
57	MP7	Y	-9.553	-9.553	0	%100
58	M58	Y	-3.559	-3.559	0	%100
59	M59	Y	-3.559	-3.559	0	%100
60	M60	Y	-3.559	-3.559	0	%100
61	M61	Y	-3.559	-3.559	0	%100
62	M62	Y	-3.559	-3.559	0	%100
63	M63	Y	-3.559	-3.559	0	%100
64	MP6	Y	-9.553	-9.553	0	%100
65	MP5	Y	-9.553	-9.553	0	%100
66	MP4	Y	-9.553	-9.553	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	S3	SZ	-11.891	-11.891	0	%100
2	GA4	SZ	-16.366	-16.366	0	%100
3	GA3	SZ	-16.366	-16.366	0	%100
4	P3	SZ	-11.304	-11.304	0	%100
5	S2	SZ	-11.891	-11.891	0	%100
6	GA2	SZ	-16.366	-16.366	0	%100
7	GA1	SZ	-16.366	-16.366	0	%100
8	P2	SZ	-11.304	-11.304	0	%100
9	S1	SZ	-11.891	-11.891	0	%100
10	GA6	SZ	-16.366	-16.366	0	%100
11	GA5	SZ	-16.366	-16.366	0	%100
12	P1	SZ	-11.304	-11.304	0	%100
13	H1	SZ	-14.649	-14.649	0	%100
14	HR1	SZ	-16.221	-16.221	0	%100
15	CA8	SZ	-11.891	-11.891	0	%100
16	CA9	SZ	-11.891	-11.891	0	%100
17	CA7	SZ	-11.891	-11.891	0	%100
18	CA3	SZ	-13.812	-13.812	0	%100
19	CA4	SZ	-13.812	-13.812	0	%100
20	CA1	SZ	-13.812	-13.812	0	%100
21	CA2	SZ	-13.812	-13.812	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
22	CA5	SZ	-13.812	-13.812	0	%100
23	CA6	SZ	-13.812	-13.812	0	%100
24	M64	SZ	0	0	0	%100
25	M65	SZ	0	0	0	%100
26	M66	SZ	0	0	0	%100
27	M67	SZ	0	0	0	%100
28	M68	SZ	0	0	0	%100
29	M69	SZ	0	0	0	%100
30	M70	SZ	0	0	0	%100
31	M71	SZ	0	0	0	%100
32	M72	SZ	0	0	0	%100
33	M73	SZ	0	0	0	%100
34	M74	SZ	0	0	0	%100
35	M75	SZ	-17.847	-17.847	0	%100
36	H3	SZ	-14.649	-14.649	0	%100
37	HR3	SZ	-16.221	-16.221	0	%100
38	H2	SZ	-14.649	-14.649	0	%100
39	HR2	SZ	-16.221	-16.221	0	%100
40	M40	SZ	0	0	0	%100
41	M41	SZ	0	0	0	%100
42	M42	SZ	0	0	0	%100
43	M43	SZ	0	0	0	%100
44	M44	SZ	0	0	0	%100
45	M45	SZ	0	0	0	%100
46	MP3	SZ	-16.221	-16.221	0	%100
47	MP2	SZ	-16.221	-16.221	0	%100
48	MP1	SZ	-16.221	-16.221	0	%100
49	M49	SZ	0	0	0	%100
50	M50	SZ	0	0	0	%100
51	M51	SZ	0	0	0	%100
52	M52	SZ	0	0	0	%100
53	M53	SZ	0	0	0	%100
54	M54	SZ	0	0	0	%100
55	MP9	SZ	-16.221	-16.221	0	%100
56	MP8	SZ	-16.221	-16.221	0	%100
57	MP7	SZ	-16.221	-16.221	0	%100
58	M58	SZ	0	0	0	%100
59	M59	SZ	0	0	0	%100
60	M60	SZ	0	0	0	%100
61	M61	SZ	0	0	0	%100
62	M62	SZ	0	0	0	%100
63	M63	SZ	0	0	0	%100
64	MP6	SZ	-16.221	-16.221	0	%100
65	MP5	SZ	-16.221	-16.221	0	%100
66	MP4	SZ	-16.221	-16.221	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	S3	SX	-11.891	-11.891	0	%100
2	GA4	SX	-16.366	-16.366	0	%100
3	GA3	SX	-16.366	-16.366	0	%100
4	P3	SX	-11.304	-11.304	0	%100
5	S2	SX	-11.891	-11.891	0	%100
6	GA2	SX	-16.366	-16.366	0	%100
7	GA1	SX	-16.366	-16.366	0	%100
8	P2	SX	-11.304	-11.304	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
9	S1	SX	-11.891	-11.891	0	%100
10	GA6	SX	-16.366	-16.366	0	%100
11	GA5	SX	-16.366	-16.366	0	%100
12	P1	SX	-11.304	-11.304	0	%100
13	H1	SX	-14.649	-14.649	0	%100
14	HR1	SX	-16.221	-16.221	0	%100
15	CA8	SX	-11.891	-11.891	0	%100
16	CA9	SX	-11.891	-11.891	0	%100
17	CA7	SX	-11.891	-11.891	0	%100
18	CA3	SX	-13.812	-13.812	0	%100
19	CA4	SX	-13.812	-13.812	0	%100
20	CA1	SX	-13.812	-13.812	0	%100
21	CA2	SX	-13.812	-13.812	0	%100
22	CA5	SX	-13.812	-13.812	0	%100
23	CA6	SX	-13.812	-13.812	0	%100
24	M64	SX	0	0	0	%100
25	M65	SX	0	0	0	%100
26	M66	SX	0	0	0	%100
27	M67	SX	0	0	0	%100
28	M68	SX	0	0	0	%100
29	M69	SX	0	0	0	%100
30	M70	SX	0	0	0	%100
31	M71	SX	0	0	0	%100
32	M72	SX	0	0	0	%100
33	M73	SX	0	0	0	%100
34	M74	SX	0	0	0	%100
35	M75	SX	-17.847	-17.847	0	%100
36	H3	SX	-14.649	-14.649	0	%100
37	HR3	SX	-16.221	-16.221	0	%100
38	H2	SX	-14.649	-14.649	0	%100
39	HR2	SX	-16.221	-16.221	0	%100
40	M40	SX	0	0	0	%100
41	M41	SX	0	0	0	%100
42	M42	SX	0	0	0	%100
43	M43	SX	0	0	0	%100
44	M44	SX	0	0	0	%100
45	M45	SX	0	0	0	%100
46	MP3	SX	-16.221	-16.221	0	%100
47	MP2	SX	-16.221	-16.221	0	%100
48	MP1	SX	-16.221	-16.221	0	%100
49	M49	SX	0	0	0	%100
50	M50	SX	0	0	0	%100
51	M51	SX	0	0	0	%100
52	M52	SX	0	0	0	%100
53	M53	SX	0	0	0	%100
54	M54	SX	0	0	0	%100
55	MP9	SX	-16.221	-16.221	0	%100
56	MP8	SX	-16.221	-16.221	0	%100
57	MP7	SX	-16.221	-16.221	0	%100
58	M58	SX	0	0	0	%100
59	M59	SX	0	0	0	%100
60	M60	SX	0	0	0	%100
61	M61	SX	0	0	0	%100
62	M62	SX	0	0	0	%100
63	M63	SX	0	0	0	%100
64	MP6	SX	-16.221	-16.221	0	%100
65	MP5	SX	-16.221	-16.221	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
66	MP4	SX	-16.221	-16.221	0	%100

Member Distributed Loads (BLC 43 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	S2	Y	-3.185	-3.185	16.404	40
2	GA2	Y	-1.605	-1.605	3.828	27.295
3	GA1	Y	-1.605	-1.605	3.828	27.295
4	S3	Y	-3.185	-3.185	16.404	40
5	GA4	Y	-1.605	-1.605	3.828	27.295
6	GA3	Y	-1.605	-1.605	3.828	27.295
7	S1	Y	-3.185	-3.185	16.404	40
8	GA6	Y	-1.605	-1.605	3.828	27.295
9	GA5	Y	-1.605	-1.605	3.828	27.295

Member Distributed Loads (BLC 44 : BLC 16 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[in,%]	End Location[in,%]
1	S2	Y	-28.941	-28.941	16.404	40
2	GA2	Y	-14.585	-14.585	3.828	27.295
3	GA1	Y	-14.585	-14.585	3.828	27.295
4	S3	Y	-28.941	-28.941	16.404	40
5	GA4	Y	-14.585	-14.585	3.828	27.295
6	GA3	Y	-14.585	-14.585	3.828	27.295
7	S1	Y	-28.941	-28.941	16.404	40
8	GA6	Y	-14.585	-14.585	3.828	27.295
9	GA5	Y	-14.585	-14.585	3.828	27.295

Load Combinations

	Description	S...	PDel...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4DL	Yes	Y		1	1.4																		
2	1.2DL + 1WL AZI 0	Yes	Y		1	1.2	2	1	14	1	15													
3	1.2DL + 1WL AZI 30	Yes	Y		1	1.2	3	1	14	.866	15	.5												
4	1.2DL + 1WL AZI 60	Yes	Y		1	1.2	4	1	14	.5	15	.866												
5	1.2DL + 1WL AZI 90	Yes	Y		1	1.2	5	1	14		15	1												
6	1.2DL + 1WL AZI 120	Yes	Y		1	1.2	6	1	14	-.5	15	.866												
7	1.2DL + 1WL AZI 150	Yes	Y		1	1.2	7	1	14	-.8...	15	.5												
8	1.2DL + 1WL AZI 180	Yes	Y		1	1.2	8	1	14	-1	15													
9	1.2DL + 1WL AZI 210	Yes	Y		1	1.2	9	1	14	-.8...	15	-.5												
10	1.2DL + 1WL AZI 240	Yes	Y		1	1.2	10	1	14	-.5	15	-.8...												
11	1.2DL + 1WL AZI 270	Yes	Y		1	1.2	11	1	14		15	-1												
12	1.2DL + 1WL AZI 300	Yes	Y		1	1.2	12	1	14	.5	15	-.8...												
13	1.2DL + 1WL AZI 330	Yes	Y		1	1.2	13	1	14	.866	15	-.5												
14	0.9DL + 1WL AZI 0	Yes	Y		1	.9	2	1	14	1	15													
15	0.9DL + 1WL AZI 30	Yes	Y		1	.9	3	1	14	.866	15	.5												
16	0.9DL + 1WL AZI 60	Yes	Y		1	.9	4	1	14	.5	15	.866												
17	0.9DL + 1WL AZI 90	Yes	Y		1	.9	5	1	14		15	1												
18	0.9DL + 1WL AZI 120	Yes	Y		1	.9	6	1	14	-.5	15	.866												
19	0.9DL + 1WL AZI 150	Yes	Y		1	.9	7	1	14	-.8...	15	.5												
20	0.9DL + 1WL AZI 180	Yes	Y		1	.9	8	1	14	-1	15													
21	0.9DL + 1WL AZI 210	Yes	Y		1	.9	9	1	14	-.8...	15	-.5												
22	0.9DL + 1WL AZI 240	Yes	Y		1	.9	10	1	14	-.5	15	-.8...												
23	0.9DL + 1WL AZI 270	Yes	Y		1	.9	11	1	14		15	-1												
24	0.9DL + 1WL AZI 300	Yes	Y		1	.9	12	1	14	.5	15	-.8...												
25	0.9DL + 1WL AZI 330	Yes	Y		1	.9	13	1	14	.866	15	-.5												
26	1.2D + 1.0Di	Yes	Y		1	1.2	16	1																

Load Combinations (Continued)

	Description	S...	PDel...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
27	1.2D + 1.0Di +1.0Wi AZI 0	Yes	Y		1	1.2	16	1	17	1	29	1	30											
28	1.2D + 1.0Di +1.0Wi AZI 30	Yes	Y		1	1.2	16	1	18	1	29	.866	30	.5										
29	1.2D + 1.0Di +1.0Wi AZI 60	Yes	Y		1	1.2	16	1	19	1	29	.5	30	.866										
30	1.2D + 1.0Di +1.0Wi AZI 90	Yes	Y		1	1.2	16	1	20	1	29		30	1										
31	1.2D + 1.0Di +1.0Wi AZI 120	Yes	Y		1	1.2	16	1	21	1	29	-.5	30	.866										
32	1.2D + 1.0Di +1.0Wi AZI 150	Yes	Y		1	1.2	16	1	22	1	29	-.8...	30	.5										
33	1.2D + 1.0Di +1.0Wi AZI 180	Yes	Y		1	1.2	16	1	23	1	29	-1	30											
34	1.2D + 1.0Di +1.0Wi AZI 210	Yes	Y		1	1.2	16	1	24	1	29	-.8...	30	-.5										
35	1.2D + 1.0Di +1.0Wi AZI 240	Yes	Y		1	1.2	16	1	25	1	29	-.5	30	-.8...										
36	1.2D + 1.0Di +1.0Wi AZI 270	Yes	Y		1	1.2	16	1	26	1	29		30	-1										
37	1.2D + 1.0Di +1.0Wi AZI 300	Yes	Y		1	1.2	16	1	27	1	29	.5	30	-.8...										
38	1.2D + 1.0Di +1.0Wi AZI 330	Yes	Y		1	1.2	16	1	28	1	29	.866	30	-.5										
39	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	1	32															
40	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	.866	32	.5														
41	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	.5	32	.866														
42	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31		32	1														
43	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	-.5	32	.866														
44	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	-.8...	32	.5														
45	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	-1	32															
46	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	-.8...	32	-.5														
47	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	-.5	32	-.8...														
48	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31		32	-1														
49	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	.5	32	-.8...														
50	(1.2 + 0.2Sds)DL + 1.0E AZ..	Yes	Y		1	1.24	31	.866	32	-.5														
51	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	1	32															
52	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	.866	32	.5														
53	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	.5	32	.866														
54	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31		32	1														
55	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	-.5	32	.866														
56	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	-.8...	32	.5														
57	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	-1	32															
58	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	-.8...	32	-.5														
59	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	-.5	32	-.8...														
60	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31		32	-1														
61	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	.5	32	-.8...														
62	(0.9 - 0.2Sds)DL + 1.0E AZI..	Yes	Y		1	.86	31	.866	32	-.5														
63	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	2	.259	14	.259	15		33	1.5										
64	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	3	.259	14	.224	15	.129	33	1.5										
65	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	4	.259	14	.129	15	.224	33	1.5										
66	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	5	.259	14		15	.259	33	1.5										
67	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	6	.259	14	-.1...	15	.224	33	1.5										
68	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	7	.259	14	-.2...	15	.129	33	1.5										
69	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	8	.259	14	-.2...	15		33	1.5										
70	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	9	.259	14	-.2...	15	-.1...	33	1.5										
71	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	10	.259	14	-.1...	15	-.2...	33	1.5										
72	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	11	.259	14		15	-.2...	33	1.5										
73	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	12	.259	14	.129	15	-.2...	33	1.5										
74	1.0DL + 1.5LL + 1.0SWL (6...	Yes	Y		1	1	13	.259	14	.224	15	-.1...	33	1.5										
75	1.2DL + 1.5LL	Yes	Y		1	1.2	33	1.5																
76	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	2	.065	14	.065	15											
77	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	3	.065	14	.056	15	.032										
78	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	4	.065	14	.032	15	.056										
79	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	5	.065	14		15	.065										
80	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	6	.065	14	-.0...	15	.056										
81	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	7	.065	14	-.0...	15	.032										
82	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	8	.065	14	-.0...	15											
83	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	9	.065	14	-.0...	15	-.0...										

Load Combinations (Continued)

	Description	S...	PDel...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
84	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	10	.065	14	-.0...	15	-.0...										
85	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	11	.065	14		15	-.0...										
86	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	12	.065	14	.032	15	-.0...										
87	1.2DL + 1.5LM-MP1 + 1SW..	Yes	Y		1	1.2	34	1.5	13	.065	14	.056	15	-.0...										
88	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	2	.065	14	.065	15											
89	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	3	.065	14	.056	15	.032										
90	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	4	.065	14	.032	15	.056										
91	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	5	.065	14		15	.065										
92	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	6	.065	14	-.0...	15	.056										
93	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	7	.065	14	-.0...	15	.032										
94	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	8	.065	14	-.0...	15											
95	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	9	.065	14	-.0...	15	-.0...										
96	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	10	.065	14	-.0...	15	-.0...										
97	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	11	.065	14		15	-.0...										
98	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	12	.065	14	.032	15	-.0...										
99	1.2DL + 1.5LM-MP2 + 1SW..	Yes	Y		1	1.2	35	1.5	13	.065	14	.056	15	-.0...										
100	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	2	.065	14	.065	15											
101	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	3	.065	14	.056	15	.032										
102	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	4	.065	14	.032	15	.056										
103	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	5	.065	14		15	.065										
104	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	6	.065	14	-.0...	15	.056										
105	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	7	.065	14	-.0...	15	.032										
106	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	8	.065	14	-.0...	15											
107	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	9	.065	14	-.0...	15	-.0...										
108	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	10	.065	14	-.0...	15	-.0...										
109	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	11	.065	14		15	-.0...										
110	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	12	.065	14	.032	15	-.0...										
111	1.2DL + 1.5LM-MP3 + 1SW..	Yes	Y		1	1.2	36	1.5	13	.065	14	.056	15	-.0...										
112	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	2	.065	14	.065	15											
113	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	3	.065	14	.056	15	.032										
114	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	4	.065	14	.032	15	.056										
115	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	5	.065	14		15	.065										
116	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	6	.065	14	-.0...	15	.056										
117	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	7	.065	14	-.0...	15	.032										
118	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	8	.065	14	-.0...	15											
119	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	9	.065	14	-.0...	15	-.0...										
120	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	10	.065	14	-.0...	15	-.0...										
121	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	11	.065	14		15	-.0...										
122	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	12	.065	14	.032	15	-.0...										
123	1.2DL + 1.5LM-MP4 + 1SW..	Yes	Y		1	1.2	37	1.5	13	.065	14	.056	15	-.0...										
124	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	2	.065	14	.065	15											
125	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	3	.065	14	.056	15	.032										
126	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	4	.065	14	.032	15	.056										
127	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	5	.065	14		15	.065										
128	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	6	.065	14	-.0...	15	.056										
129	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	7	.065	14	-.0...	15	.032										
130	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	8	.065	14	-.0...	15											
131	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	9	.065	14	-.0...	15	-.0...										
132	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	10	.065	14	-.0...	15	-.0...										
133	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	11	.065	14		15	-.0...										
134	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	12	.065	14	.032	15	-.0...										
135	1.2DL + 1.5LM-MP5 + 1SW..	Yes	Y		1	1.2	38	1.5	13	.065	14	.056	15	-.0...										
136	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	2	.065	14	.065	15											
137	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	3	.065	14	.056	15	.032										
138	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	4	.065	14	.032	15	.056										
139	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	5	.065	14		15	.065										
140	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	6	.065	14	-.0...	15	.056										

Load Combinations (Continued)

	Description	S...	PDel...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
141	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	7	.065	14	-.0...	15	.032										
142	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	8	.065	14	-.0...	15											
143	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	9	.065	14	-.0...	15	-.0...										
144	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	10	.065	14	-.0...	15	-.0...										
145	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	11	.065	14		15	-.0...										
146	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	12	.065	14	.032	15	-.0...										
147	1.2DL + 1.5LM-MP6 + 1SW..	Yes	Y		1	1.2	39	1.5	13	.065	14	.056	15	-.0...										
148	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	2	.065	14	.065	15											
149	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	3	.065	14	.056	15	.032										
150	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	4	.065	14	.032	15	.056										
151	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	5	.065	14		15	.065										
152	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	6	.065	14	-.0...	15	.056										
153	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	7	.065	14	-.0...	15	.032										
154	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	8	.065	14	-.0...	15											
155	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	9	.065	14	-.0...	15	-.0...										
156	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	10	.065	14	-.0...	15	-.0...										
157	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	11	.065	14		15	-.0...										
158	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	12	.065	14	.032	15	-.0...										
159	1.2DL + 1.5LM-MP7 + 1SW..	Yes	Y		1	1.2	40	1.5	13	.065	14	.056	15	-.0...										
160	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	2	.065	14	.065	15											
161	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	3	.065	14	.056	15	.032										
162	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	4	.065	14	.032	15	.056										
163	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	5	.065	14		15	.065										
164	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	6	.065	14	-.0...	15	.056										
165	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	7	.065	14	-.0...	15	.032										
166	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	8	.065	14	-.0...	15											
167	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	9	.065	14	-.0...	15	-.0...										
168	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	10	.065	14	-.0...	15	-.0...										
169	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	11	.065	14		15	-.0...										
170	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	12	.065	14	.032	15	-.0...										
171	1.2DL + 1.5LM-MP8 + 1SW..	Yes	Y		1	1.2	41	1.5	13	.065	14	.056	15	-.0...										
172	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	2	.065	14	.065	15											
173	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	3	.065	14	.056	15	.032										
174	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	4	.065	14	.032	15	.056										
175	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	5	.065	14		15	.065										
176	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	6	.065	14	-.0...	15	.056										
177	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	7	.065	14	-.0...	15	.032										
178	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	8	.065	14	-.0...	15											
179	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	9	.065	14	-.0...	15	-.0...										
180	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	10	.065	14	-.0...	15	-.0...										
181	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	11	.065	14		15	-.0...										
182	1.2DL + 1.5LM-MP9 + 1SW..	Yes	Y		1	1.2	42	1.5	12	.065	14	.032	15	-.0...										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-...	LC	MZ [lb-ft]	LC
1	N20	...	815.197	18	2158.851	35	1268.227	13	131.786	15	1640.4..	19	3895.021	35
2		...	-813.87	12	66.472	16	-1266.76	19	-2352.711	107	-1642....	13	-178.412	16
3	N11	...	815.187	4	2161.416	31	1269.695	3	131.598	25	1645.0..	3	176.039	24
4		...	-816.507	22	67.326	24	-1268.235	21	-2352.915	81	-1642....	21	-3901.119	31
5	N1	...	1321.274	17	2088.84	27	492.256	14	4400.483	27	1455.3..	23	722.337	145
6		...	-1321.276	23	32.498	20	-496.903	8	-284.017	20	-1455....	17	-712.022	151
7	Totals:	...	2684.985	5	6002.432	27	2839.856	2						
8		...	-2684.985	11	1611.014	57	-2839.855	20						

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

	Member	Shape	Code ...	Loc[in]	LC	Shear ..	Loc[in]	Dir	LC	phi*Pnc ..	phi*Pnt [..	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	CA1	C3.38x2.06...	.312	0	31	.048	28.1...	y	38	47760.0...	56700	2202.821	5751.945	1...	H1-1b
2	CA6	C3.38x2.06...	.312	33	35	.048	4.813	y	28	47760.0...	56700	2202.821	5751.945	1...	H1-1b
3	CA2	C3.38x2.06...	.309	33	31	.047	4.813	y	36	47760.0...	56700	2202.821	5751.945	1...	H1-1b
4	CA5	C3.38x2.06...	.309	0	35	.047	28.1...	y	30	47760.0...	56700	2202.821	5751.945	1...	H1-1b
5	CA4	C3.38x2.06...	.301	33	27	.046	4.813	y	32	47760.0...	56700	2202.821	5751.945	1...	H1-1b
6	CA3	C3.38x2.06...	.298	0	27	.046	28.1...	y	34	47760.0...	56700	2202.821	5751.945	1...	H1-1b
7	S2	HSS4X4X4	.291	0	33	.093	0	y	82	133178....	139518	16180.5	16180.5	2...	H1-1b
8	S1	HSS4X4X4	.291	0	33	.093	0	y	106	133178....	139518	16180.5	16180.5	2...	H1-1b
9	S3	HSS4X4X4	.281	0	29	.091	0	y	146	133178....	139518	16180.5	16180.5	2...	H1-1b
10	M75	PL 2.375x0.5	.163	1.5	12	.268	0	y	28	38256.8...	38475	400.783	1903.711	2...	H1-1b
11	P2	PL6.5x0.375	.154	21	6	.081	5.687	y	77	3658.14	78975	616.993	7454.237	1...	H1-1b
12	P3	PL6.5x0.375	.154	21	2	.082	5.687	y	157	3658.14	78975	616.993	7428.804	1...	H1-1b
13	P1	PL6.5x0.375	.153	21	10	.081	36.3...	y	111	3658.14	78975	616.993	7454.244	1...	H1-1b
14	GA2	L2x2x4	.149	0	6	.024	27.2...	z	30	23539.0...	30585.6	690.934	1576.849	2...	H2-1
15	GA5	L2x2x4	.148	0	10	.024	27.2...	y	36	23539.0...	30585.6	690.934	1576.849	2...	H2-1
16	GA4	L2x2x4	.140	0	2	.024	27.2...	z	38	23539.0...	30585.6	690.934	1576.849	2...	H2-1
17	GA3	L2x2x4	.140	0	2	.023	27.2...	y	28	23539.0...	30585.6	690.934	1576.849	2...	H2-1
18	GA1	L2x2x4	.134	0	6	.024	27.2...	y	32	23539.0...	30585.6	690.934	1576.849	2...	H2-1
19	GA6	L2x2x4	.134	0	10	.024	27.2...	z	34	23539.0...	30585.6	690.934	1576.849	2...	H2-1
20	CA7	L4X4X4	.131	0	13	.023	42	y	13	46987.2...	62532	3137.597	6897.039	2...	H2-1
21	CA8	L4X4X4	.131	42	3	.023	0	y	3	46987.2...	62532	3137.597	6897.039	2...	H2-1
22	MP4	PIPE_2.5	.121	28	8	.044	68		10	30038.4...	50715	3596.25	3596.25	3...	H1-1b
23	MP9	PIPE_2.5	.121	28	8	.044	68		6	30038.4...	50715	3596.25	3596.25	3...	H1-1b
24	MP5	PIPE_2.5	.121	68	7	.062	68		7	30038.4...	50715	3596.25	3596.25	3...	H1-1b
25	MP8	PIPE_2.5	.121	68	9	.062	68		9	30038.4...	50715	3596.25	3596.25	3...	H1-1b
26	MP1	PIPE_2.5	.121	28	12	.048	68		2	30038.4...	50715	3596.25	3596.25	4...	H1-1b
27	MP3	PIPE_2.5	.121	28	4	.048	68		2	30038.4...	50715	3596.25	3596.25	4...	H1-1b
28	CA9	L4X4X4	.120	0	5	.022	0	y	11	46987.2...	62532	3137.597	6897.039	2...	H2-1
29	MP2	PIPE_2.5	.119	68	5	.059	68		5	30038.4...	50715	3596.25	3596.25	3...	H1-1b
30	MP6	PIPE_2.5	.118	68	13	.042	68		10	30038.4...	50715	3596.25	3596.25	4...	H1-1b
31	MP7	PIPE_2.5	.118	68	3	.042	68		6	30038.4...	50715	3596.25	3596.25	4...	H1-1b
32	H1	PIPE_3.0	.105	48	90	.053	32		5	46290.5...	65205	5748.75	5748.75	1...	H1-1b
33	H2	PIPE_3.0	.103	48	166	.054	64		7	46290.5...	65205	5748.75	5748.75	1...	H1-1b
34	H3	PIPE_3.0	.103	48	130	.054	32		9	46290.5...	65205	5748.75	5748.75	1...	H1-1b
35	HR1	PIPE_2.5	.099	96.25	7	.110	16.25		8	22373.4...	50715	3596.25	3596.25	1...	H1-1b
36	HR3	PIPE_2.5	.099	23.75	13	.108	23.75		13	22373.4...	50715	3596.25	3596.25	1...	H1-1b
37	HR2	PIPE_2.5	.099	96.25	3	.108	96.25		3	22373.4...	50715	3596.25	3596.25	1...	H1-1b

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		29	71.1	0
3	Total General		29	71.1	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	C3.38x2.06x0.25	6	198	98.255
7	A36 Gr.36	L2x2x4	6	163.8	43.838
8	A36 Gr.36	PL6.5x0.375	3	126	87.09
9	A36 Gr.36	L4X4X4	3	126	68.957
10	A36 Gr.36	PL 2.375x0.5	1	1.5	.505
11	A500 Gr.B Rect	HSS4X4X4	3	120	123.333
12	A53 Gr.B	PIPE_2.5	12	1224	558.804
13	A53 Gr.B	PIPE_3.0	3	288	169.05
14	Total HR Steel		37	2247.3	1149.833

APPENDIX D

ADDITIONAL CALCUATIONS

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless

Bolt Calculation Tool, V1.5.1

PROJECT DATA	
Site Name:	WATERBURY
Site Number:	876317
Connection Description:	Mount to Tower

MAXIMUM BOLT LOADS		
Bolt Tension:	4871.97	lbs
Bolt Shear:	840.16	lbs

WORST CASE BOLT LOADS[1]		
Bolt Tension:	4871.97	lbs
Bolt Shear:	487.99	lbs

BOLT PROPERTIES		
Bolt Type:	Bolt	-
Bolt Diameter:	0.625	in
Bolt Grade:	A325	-
# of Bolts:	4	-
Threads Excluded?	No	-

[1] *Worst case bolt loads correspond to Load combination #33 on member S2 in RISA-3D, which causes the maximum demand on the bolts.*

Member Information
I nodes of S3, S2, S1

BOLT CHECK		
Tensile Strength	20340.15	
Shear Strength	13805.83	
Max Tensile Usage	24.0%	
Max Shear Usage	6.1%	
Interaction Check (Worst Case)	0.06	***≤1.05***
Result	Pass	

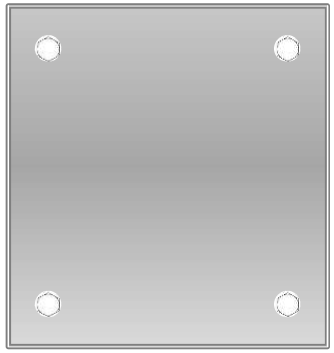


Exhibit F

Power Density/RF Emissions Report

EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

Dish Wireless Existing Facility

Site ID: BOHVN00165A

876317
150 Mattatuck Heights Road
Waterbury, Connecticut 06705

November 19, 2021

EBI Project Number: 6221007199

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**27.88%**

21 B Street, Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

November 19, 2021

Dish Wireless

Emissions Analysis for Site: BOHVN00165A - 876317

EBI Consulting was directed to analyze the proposed Dish Wireless facility located at **150 Mattatuck Heights Road** in **Waterbury, Connecticut** for the purpose of determining whether the emissions from the Proposed Dish Wireless Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully

aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed Dish Wireless Wireless antenna facility located at 150 Mattatuck Heights Road in Waterbury, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since Dish Wireless is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 4 n71 channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 4 n70 channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

3) 4 n66 channels (AWS Band - 2190 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

5) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative

estimate as gain reductions for these particular antennas are typically much higher in this direction.

6) The antennas used in this modeling are the JMA MX08FRO665-20 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector A, the JMA MX08FRO665-20 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector B, the JMA MX08FRO665-20 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antenna mounting height centerline of the proposed antennas is 120 feet above ground level (AGL).

8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

9) All calculations were done with respect to uncontrolled / general population threshold limits.

Dish Wireless Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	JMA MX08FRO665-20	Make / Model:	JMA MX08FRO665-20	Make / Model:	JMA MX08FRO665-20
Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz	Frequency Bands:	600 MHz / 1900 MHz / 2190 MHz
Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd	Gain:	17.45 dBd / 22.65 dBd / 22.65 dBd
Height (AGL):	120 feet	Height (AGL):	120 feet	Height (AGL):	120 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts	Total TX Power (W):	440 Watts
ERP (W):	5,236.31	ERP (W):	5,236.31	ERP (W):	5,236.31
Antenna A1 MPE %:	**1.82%**	Antenna B1 MPE %:	**1.82%**	Antenna C1 MPE %:	**1.82%**

Site Composite MPE %	
Carrier	**MPE %**
Dish Wireless (Max at Sector A):	1.82%
AT&T	8.06%
Verizon	8.82%
T-Mobile	7.03%
Clearwire	0.12%
Sprint	1.59%
Nextel	0.44%
Site Total MPE % :	27.88%

Dish Wireless MPE % Per Sector	
Dish Wireless Sector A Total:	1.82%
Dish Wireless Sector B Total:	1.82%
Dish Wireless Sector C Total:	1.82%
Site Total MPE % :	27.88%

Dish Wireless Maximum MPE Power Values (Sector A)

Dish Wireless Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
Dish Wireless 600 MHz n71	4	223.68	120.0	2.48	600 MHz n71	400	0.62%
Dish Wireless 1900 MHz n70	4	542.70	120.0	6.01	1900 MHz n70	1000	0.60%
Dish Wireless 2190 MHz n66	4	542.70	120.0	6.01	2190 MHz n66	1000	0.60%
						Total:	**1.82%**

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the Dish Wireless facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

Dish Wireless Sector	Power Density Value (%)
Sector A:	1.82%
Sector B:	1.82%
Sector C:	1.82%
Dish Wireless Maximum MPE % (Sector A):	1.82%
Site Total:	27.88%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **27.88%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

Exhibit G

Letter of Authorization

4545 E River Rd, Suite 320
West Henrietta, NY 14586

Phone: (585) 445-5896
Fax: (724) 416-4461
www.crowncastle.com

Crown Castle Letter of Authorization

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

Re: Tower Share Application
Crown Castle telecommunications site at:
150 MATTATUCK HEIGHTS, WATERBURY, CT 06705-3831

GLOBAL SIGNAL ACQUISITIONS II LLC ("Crown Castle") hereby authorizes DISH Wireless LLC, including their Agent, to act as our Agent in the processing of all zoning applications, building permits and approvals through the CT - CONNECTICUT SITING COUNCIL for the existing wireless communications site described below:

Crown Site ID/Name:	**876317/WATERBURY**
Customer Site ID:	**BOHVN00165A/CT-CCI-T-876317**
Site Address:	**150 Mattatuck Heights, WATERBURY, CT 06705-3831**

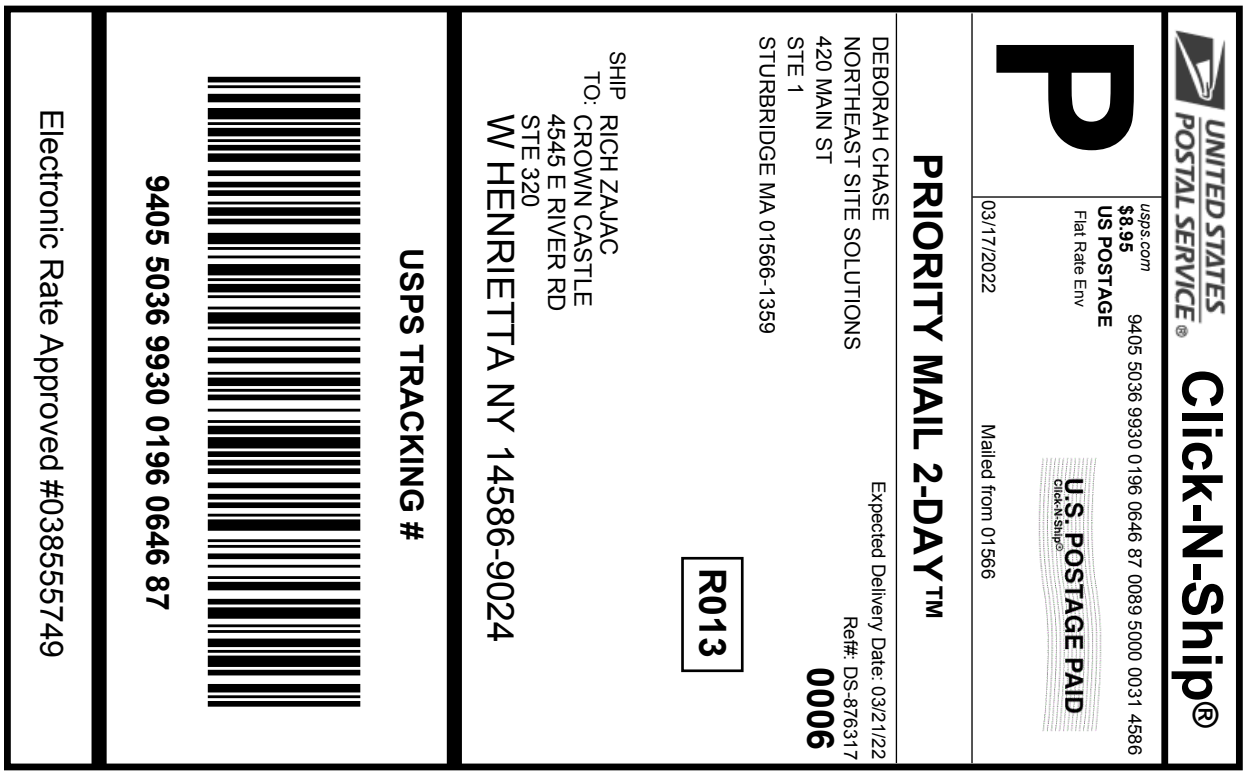
Crown Castle

By: _____ Date: 3/14/2022

Richard Zajac
Site Acquisition Specialist

Exhibit H

Recipient Mailings



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2. **Place your label so it does not wrap around the edge of the package.**
3. **Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.**
4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0196 0646 87

Trans. #:	559093099
Print Date:	03/17/2022
Ship Date:	03/17/2022
Expected Delivery Date:	03/21/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

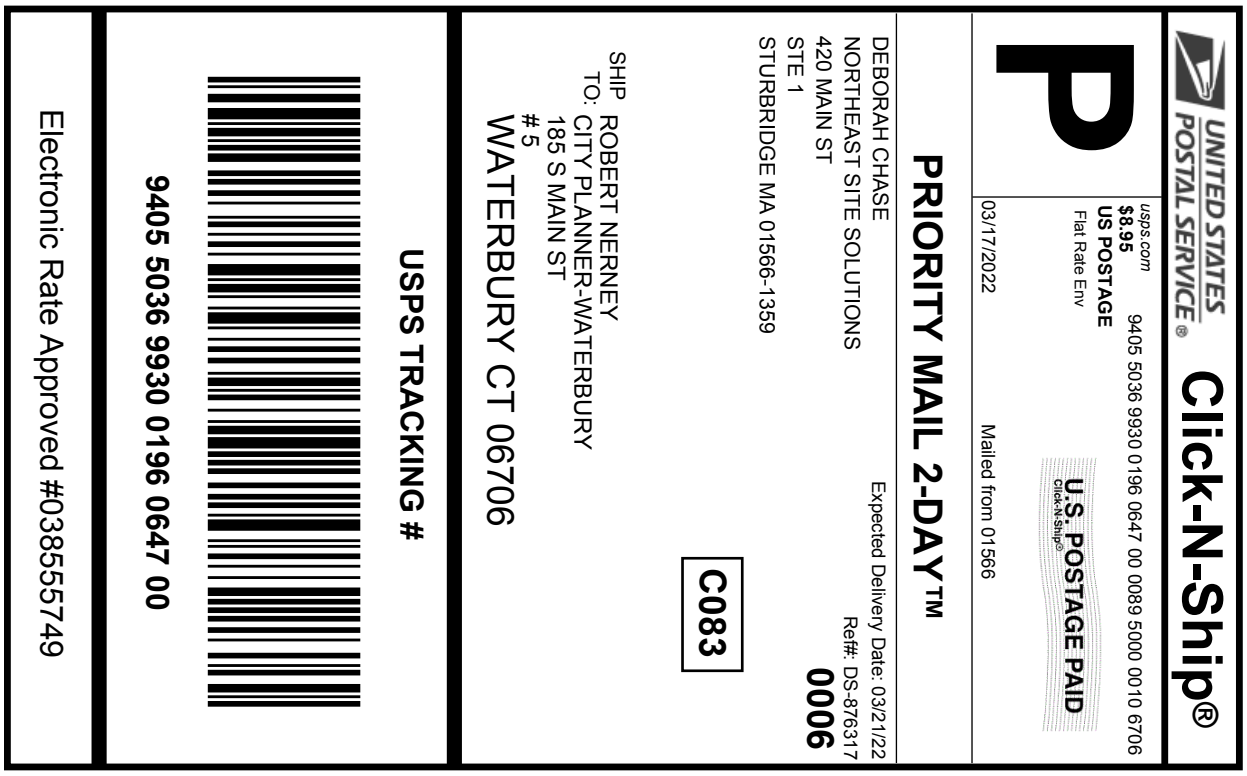
From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: DS-876317

To: RICH ZAJAC
CROWN CASTLE
4545 E RIVER RD
STE 320
W HENRIETTA NY 14586-9024

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

Thank you for shipping with the United States Postal Service!
Check the status of your shipment on the USPS Tracking® page at usps.com



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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0196 0647 00

Trans. #:	559093099
Print Date:	03/17/2022
Ship Date:	03/17/2022
Expected Delivery Date:	03/21/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: DS-876317

To: ROBERT NERNEY
CITY PLANNER-WATERBURY
185 S MAIN ST
5
WATERBURY CT 06706

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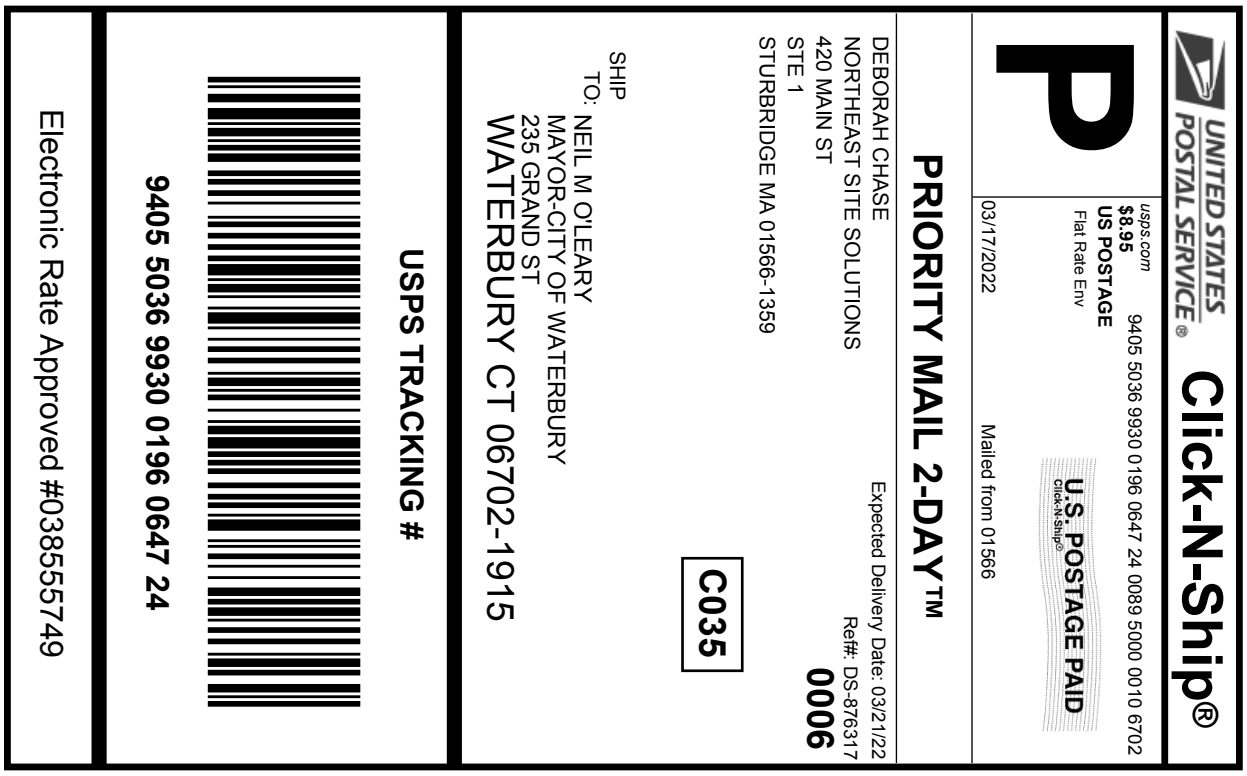

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4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0196 0647 24

Trans. #:	559093099
Print Date:	03/17/2022
Ship Date:	03/17/2022
Expected Delivery Date:	03/21/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: DS-876317

To: NEIL M O'LEARY
MAYOR-CITY OF WATERBURY
235 GRAND ST
WATERBURY CT 06702-1915

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

Thank you for shipping with the United States Postal Service!
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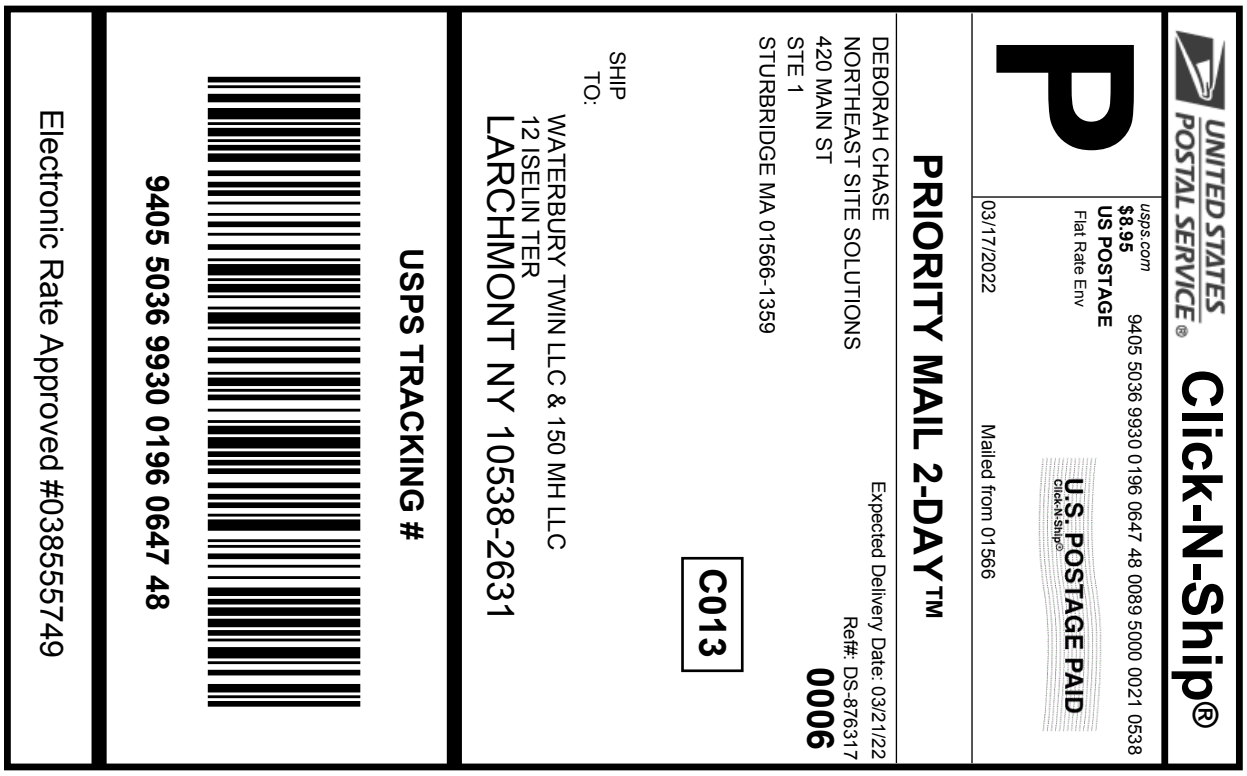

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5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0196 0647 48

Trans. #:	559093099
Print Date:	03/17/2022
Ship Date:	03/17/2022
Expected Delivery Date:	03/21/2022

Priority Mail® Postage:	**$8.95**
Total:	**$8.95**

From: DEBORAH CHASE
NORTHEAST SITE SOLUTIONS
420 MAIN ST
STE 1
STURBRIDGE MA 01566-1359

Ref#: DS-876317

To: WATERBURY TWIN LLC & 150 MH LLC
12 ISELIN TER
LARCHMONT NY 10538-2631

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

Thank you for shipping with the United States Postal Service!
Check the status of your shipment on the USPS Tracking® page at usps.com

876317 Crown Dish

UNITED STATES POSTAL SERVICE.

FARMINGTON
210 MAIN ST
FARMINGTON, CT 06032-9998
(800)275-8777

03/18/2022 03:20 PM

Product	Qty	Unit Price	Price
Prepaid Mail West Henrietta, NY 14586 Weight: 0 lb 1.90 oz Acceptance Date: Fri 03/18/2022 Tracking #: 9405 5036 9930 0196 0646 87	1		$0.00
Prepaid Mail Waterbury, CT 06702 Weight: 0 lb 8.20 oz Acceptance Date: Fri 03/18/2022 Tracking #: 9405 5036 9930 0196 0647 24	1		$0.00
Prepaid Mail Larchmont, NY 10538 Weight: 0 lb 8.20 oz Acceptance Date: Fri 03/18/2022 Tracking #: 9405 5036 9930 0196 0647 48	1		$0.00
Prepaid Mail Waterbury, CT 06706 Weight: 0 lb 8.20 oz Acceptance Date: Fri 03/18/2022 Tracking #: 9405 5036 9930 0196 0647 00	1		$0.00
Grand Total:			$0.00

****
Every household in the U.S. is ...