CROWN CASTLE

12 Gill Street
Suite 5800
Woburn, Ma 01801

Telephone: 781-771-2255
Email
jeff.barbadora@crowncastle.com

November 20, 2019

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

RE: AT&T-Exempt Modification – EM-AT&T-077-160223

Dear Ms. Bachman:

This letter is to confirm that all construction activity has been completed. There were no deviations or material changes to the proposed installation. Pursuant to the Connecticut Siting Council 3/14/2016 approval of **EM-AT&T-077-160223,** this letter is to satisfy item numbers one, two and five of the CSC decision.

A revised SA was completed for ATT with the same scope of work as submitted to the CSC for ATT initially. The revised SA shows no modifications were requied.

.

Please contact me if you have any questions.

Sincerely,

Jeffrey Barbadora
781-970-0053

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

March 14, 2016

Amanda Goodall
Crown Castle
12 Gill Street, Ste. 5800
Woburn, MA 01801

RE: **EM-AT&T-077-160223** – AT&T notice of intent to modify an existing telecommunications facility located at 53 Slater Street, Manchester, Connecticut.

Dear Ms. Goodall:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

1. Reinforcements shall be made in accordance and consistent with the structural analysis report and modification drawings prepared by Paul J. Ford and Company dated January 12, 2016 and stamped by Justin T. Kline;

2. Within 45 days following completion of the equipment installation, AT&T shall provide documentation certified by a Professional Engineer that its installation complied with the recommendations of the structural analysis;

3. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;

4. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;

5. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

6. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by AT&T shall be removed within 60 days of the date the antenna ceased to function;

7. The validity of this action shall expire one year from the date of this letter; and

8. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated February 22, 2016. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured

at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and Environmental Protection pursuant to Connecticut General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below state and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Melanie A. Bachman
Acting Executive Director

MAB/CH/cm

c: The Honorable Jay Moran, Mayor, Town of Manchester
Scott A. Shanley, General Manager, Town of Manchester
James Davis, Zoning Enforcement Officer, Town of Manchester
One Hundred Twenty One Connecticut Avenue Associates, LLC

CROWN CASTLE

Construction Complete Verification Letter

Contractor Company Name:	Empire Telecom
Crown BU#:	876347
Crown Application #:	315907
Construction Start Date:	11-02-16
Construction Complete Date:	12-20-16

This letter is to verify the SOW for the above referenced site was completed within the dates noted above and submitted to Crown Castle within 48 hours of completion date. A time stamped winner photo of the structure on the last day of construction must be attached to or included with this form. This form will not be accepted without this photo. If you have any questions or need further information please contact the Project Manager or Construction Manager listed on your NTP.

Date:	12-20-16
Submitted By:	Martin Nagle

Authorized Signature:

Martin Nagle

Digitally signed by Martin Nagle
DN: cn=Martin Nagle, o=Empire, ou=Construction Coordinator, email=mnagle@empiretelecomm.com, c=US
Date: 2016.12.20 10:12:35 -05'00'

(Electronic Signature Acceptable)

Insert picture below or attach separately. This form will not be accepted without a date stamped picture of either the Crown site ID sign posted on site or of the entire structure (no cell phone photos).

PAUL J. FORD & COMPANY

Date: **May 25, 2016**

Rebecca Klein
Crown Castle
525 Alderman Lane
Fort Mill, SC 29715
704.405.5625

Paul J. Ford and Company
250 E. Broad Street, Suite 600
Columbus, OH 43215
614.221.6679
jmeinerding@pjfweb.com

Subject: **Structural Analysis Report**

Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Carrier Site Number:	CTL05307
	Carrier Site Name:	Manchester North
Crown Castle Designation:	**Crown Castle BU Number:**	876347
	Crown Castle Site Name:	BUCKLAND MALL
	Crown Castle JDE Job Number:	351390
	Crown Castle Work Order Number:	1241070
	Crown Castle Application Number:	315907 Rev. 3
Engineering Firm Designation:	**Paul J. Ford and Company Project Number:**	37516-0064.003.7805
Site Data:	**53 Slater Street, MANCHESTER, Hartford County, CT**	
	Latitude *41° 48' 18"*, Longitude *-72° 32' 1"*	
	155 Foot - Monopole Tower	

Dear Rebecca Klein,

Paul J. Ford and Company is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 906476, in accordance with application 315907, revision 3.

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: Existing + Reserved + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

The structural analysis was performed for this tower in accordance with the requirements of the 2005 Connecticut Building Code and the TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 80 mph with no ice, 37.6 mph with 1 inch ice thickness and 50 mph under service loads.

We at *Paul J. Ford and Company* appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

Joey Meinerding, E.I.
Structural Designer

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED
PROFESSIONAL ENGINEER

5-25-16

tnxTower Report - version 7.0.5.1

PAUL J. FORD & COMPANY

Date: **May 25, 2016**

Rebecca Klein
Crown Castle
525 Alderman Lane
Fort Mill, SC 29715
704.405.5625

Paul J. Ford and Company
250 E. Broad Street, Suite 600
Columbus, OH 43215
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Respectfully submitted by:

Joey Meinerding, E.I.
Structural Designer

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 155 ft. monopole tower designed by Summit in February of 2002. The tower was originally designed for a wind speed of 80 mph per TIA/EIA-222-F.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of the 2005 Connecticut Building Code and the TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 80 mph with no ice, 37.6 mph with 1 inch ice thickness and 50 mph under service loads.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
143.0	145.0	3	cci antennas	DTMABP7819VG12A	1 2	3/8 3/4	--
		3	ericsson	RRUS 32 B30			
		3	quintel technology	QS66512-2 w/ Mount Pipe			
		1	raycap	DC6-48-60-18-8F			

Table 2 - Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
155.0	155.0	3	alcatel lucent	TD-RRH8x20-25	3 5 1 1 3	5/16 1/2 5/8 3/4 1-1/4	1
		3	argus technologies	LPX310R w/ Mount Pipe			
		3	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe			
		3	rfs celwave	APXVTM14-C-120 w/ Mount Pipe			
		3	samsung telecommunications	WIMAX DAP HEAD			
		1	tower mounts	Platform Mount [LP 713-1]			
	151.0	1	andrew	VHLP1-23			
		1	andrew	VHLP2-11			
		1	andrew	VHLP2.5-18			
		3	dragonwave	HORIZON COMPACT			
153.0	153.0	3	alcatel lucent	800MHz 2X50W RRH W/FILTER	--	--	1
		3	alcatel lucent	PCS 1900MHz 4x45W-65MHz			
		1	tower mounts	Pipe Mount [PM 601-3]			
145.0	147.0	3	ericsson	RRUS 11	--	--	1
	145.0	1	tower mounts	Pipe Mount [PM 601-3]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
143.0	145.0	3	ericsson	RRUS-11	1 2 6	3/8 3/4 1-1/4	1
		3	kathrein	800 10121 w/ Mount Pipe			
		6	kathrein	860 10025			
		1	raycap	DC6-48-60-18-8F			
	143.0	1	tower mounts	T-Arm Mount [TA 702-3]			
		3	kmw communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe	--	--	3
		6	powerwave technologies	LGP21401			
133.0	133.0	3	ericsson	KRC 118 057/1 w/ Mount Pipe	--	--	2
		3	ericsson	RRUS 11 B12			
		3	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	1 6	1-1/4 1-5/8	1
		3	ericsson	KRY 112 144/1			
		1	tower mounts	Platform Mount [LP 403-1]			
113.0	113.0	3	alcatel lucent	RRH2X60-AWS	1	1-5/8	2
		3	alcatel lucent	RRH2X60-PCS			
		3	alcatel lucent	RRH2x60-700			
		6	commscope	SBNHH-1D65B w/ Mount Pipe			
		3	andrew	LNX-6512DS-T0M w/ Mount Pipe	13	1-5/8	1
		3	antel	BXA-70063/6CFx2 w/ Mount Pipe			
		1	rfs celwave	DB-T1-6Z-8AB-0Z			
		1	tower mounts	Platform Mount [LP 1201-1]			
78.0	78.0	1	tower mounts	Platform Mount [LP 303-1]	--	--	3
60.0	60.0	1	tower mounts	Side Arm Mount [SO 701-1]	1	1/2	3

Notes:
1) Existing Equipment
2) Reserved Equipment
3) Equipment To Be Removed

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	FDH, 1204605EG1, 06/12/2012	1533476	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Summit/PJF, 3960/29298-597, 09/11/1998	1615406	CCISITES
4-TOWER MANUFACTURER DRAWINGS	SEA/PJF, A02-T0021, 02/18/2002	2068033	CCISITES

3.1) Analysis Method

tnxTower (version 7.0.5.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) 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. Paul J. Ford and Company 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	155 - 115.5	Pole	TP29.31x22x0.25	1	-8.73	1080.07	62.9	Pass
L2	115.5 - 79.25	Pole	TP35.51x28.11x0.31	2	-17.06	1772.22	92.9	Pass
L3	79.25 - 43.75	Pole	TP41.46x34.06x0.38	3	-24.67	2481.90	99.6	Pass
L4	43.75 - 0	Pole	TP48.8x39.73x0.44	4	-38.45	3491.31	97.9	Pass
							Summary	
						Pole (L3)	99.6	Pass
						Rating =	99.6	Pass

Table 5 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	91.0	Pass
1	Base Plate	0	78.1	Pass
1	Base Foundation Structural Steel	0	53.8	Pass
1	Base Foundation Soil Interaction	0	85.3	Pass

Structure Rating (max from all components) =	99.6%

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.

4.1) Recommendations

The monopole and its foundation have sufficient capacity to carry the existing, reserved, and proposed loads. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Tower Input Data

There is a pole section.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

1) Tower is located in Hartford County, Connecticut.
2) Basic wind speed of 80.0 mph.
3) Nominal ice thickness of 1.00 in.
4) Ice thickness is considered to increase with height.
5) Ice density of 56 pcf.
6) A wind speed of 37.6 mph is used in combination with ice.
7) Temperature drop of 50 °F.
8) Deflections calculated using a wind speed of 50.0 mph.
9) A non-linear (P-delta) analysis was used.
10) Pressures are calculated at each section.
11) Stress ratio used in pole design is 1.333.
12) 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-G Bracing Resist. Exemption
Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Use TIA-222-G 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		

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	155.00-115.50	39.50	3.75	18	22.00	29.31	0.25	1.00	A607-60 (60 ksi)
L2	115.50-79.25	40.00	4.50	18	28.11	35.51	0.31	1.25	A607-65 (65 ksi)
L3	79.25-43.75	40.00	5.25	18	34.06	41.46	0.38	1.50	A607-65 (65 ksi)
L4	43.75-0.00	49.00		18	39.73	48.80	0.44	1.75	A607-65 (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	22.34	17.26	1031.48	7.72	11.18	92.29	2064.32	8.63	3.43	13.728
	29.76	23.06	2459.70	10.32	14.89	165.21	4922.63	11.53	4.72	18.873
L2	29.25	27.58	2692.83	9.87	14.28	188.55	5389.20	13.79	4.40	14.074
	36.06	34.92	5466.10	12.50	18.04	302.98	10939.40	17.46	5.70	18.241
L3	35.43	40.09	5745.80	11.96	17.30	332.11	11499.17	20.05	5.33	14.224
	42.10	48.90	10425.54	14.58	21.06	495.05	20864.80	24.45	6.64	17.697
L4	41.33	54.57	10646.61	13.95	20.19	527.44	21307.22	27.29	6.22	14.225
	49.55	67.16	19844.89	17.17	24.79	800.51	39715.89	33.59	7.82	17.872

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 155.00-115.50				1	1	1			
L2 115.50-79.25				1	1	1			
L3 79.25-43.75				1	1	1			
L4 43.75-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
ATCB-B01-005(5/16)	C	No	Inside Pole	155.00 - 0.00	3	No Ice	0.00	0.07
						1/2" Ice	0.00	0.07
						1" Ice	0.00	0.07
						2" Ice	0.00	0.07
						4" Ice	0.00	0.07
FSJ4-50B(1/2")	C	No	CaAa (Out Of Face)	155.00 - 0.00	5	No Ice	0.00	0.14
						1/2" Ice	0.00	0.76
						1" Ice	0.00	2.00
						2" Ice	0.00	6.30
						4" Ice	0.00	22.23
2" Conduit	C	No	CaAa (Out Of Face)	155.00 - 0.00	1	No Ice	0.00	1.16
						1/2" Ice	0.00	2.53
						1" Ice	0.00	4.51
						2" Ice	0.00	10.30
						4" Ice	0.00	29.21
2" Conduit	C	No	CaAa (Out Of Face)	155.00 - 0.00	1	No Ice	0.17	1.16
						1/2" Ice	0.27	2.53
						1" Ice	0.37	4.51
						2" Ice	0.57	10.30
						4" Ice	0.97	29.21
9776(3/4")	C	No	Inside Pole	155.00 - 0.00	1	No Ice	0.00	0.31
						1/2" Ice	0.00	0.31
						1" Ice	0.00	0.31
						2" Ice	0.00	0.31
						4" Ice	0.00	0.31
HB058-M12-XXXF(5/8")	C	No	Inside Pole	155.00 - 0.00	1	No Ice	0.00	0.24
						1/2" Ice	0.00	0.24
						1" Ice	0.00	0.24
						2" Ice	0.00	0.24
						4" Ice	0.00	0.24
HB114-1-08U4-M5J(1 1/4")	C	No	Inside Pole	155.00 - 0.00	3	No Ice	0.00	1.08
						1/2" Ice	0.00	1.08
						1" Ice	0.00	1.08
						2" Ice	0.00	1.08
						4" Ice	0.00	1.08
***								
LDF6-50A(1-1/4")	C	No	Inside Pole	143.00 - 0.00	6	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
						2" Ice	0.00	0.66
						4" Ice	0.00	0.66
FB-L98B-002-75000(3/8")	C	No	Inside Pole	143.00 - 0.00	1	No Ice	0.00	0.06
						1/2" Ice	0.00	0.06
						1" Ice	0.00	0.06
						2" Ice	0.00	0.06
						4" Ice	0.00	0.06
WR-VG86ST-BRD(3/4)	C	No	Inside Pole	143.00 - 0.00	2	No Ice	0.00	0.59
						1/2" Ice	0.00	0.59
						1" Ice	0.00	0.59
						2" Ice	0.00	0.59
						4" Ice	0.00	0.59
2" Conduit	C	No	Inside Pole	143.00 - 0.00	1	No Ice	0.00	1.16
						1/2" Ice	0.00	1.16
						1" Ice	0.00	1.16
						2" Ice	0.00	1.16
						4" Ice	0.00	1.16
FB-L98B-034-XXXXXX(3/8)	C	No	CaAa (Out Of Face)	143.00 - 0.00	1	No Ice	0.00	0.05
						1/2" Ice	0.00	0.60
						1" Ice	0.00	1.75
						2" Ice	0.00	5.90
						4" Ice	0.00	21.52
WR-VG86ST-BRD(3/4)	C	No	CaAa (Out Of Face)	143.00 - 0.00	1	No Ice	0.00	0.59
						1/2" Ice	0.00	1.37
						1" Ice	0.00	2.76
						2" Ice	0.00	7.37
						4" Ice	0.00	23.92
WR-VG86ST-BRD(3/4)	C	No	CaAa (Out Of Face)	143.00 - 0.00	1	No Ice	0.08	0.59
						1/2" Ice	0.18	1.37
						1" Ice	0.28	2.76
						2" Ice	0.48	7.37
						4" Ice	0.88	23.92
***								
HB114-21U3M12-XXXF(1-1/4")	C	No	Inside Pole	133.00 - 0.00	1	No Ice	0.00	1.22
						1/2" Ice	0.00	1.22
						1" Ice	0.00	1.22
						2" Ice	0.00	1.22
						4" Ice	0.00	1.22
LCF158-50JA-A0(1 5/8")	C	No	Inside Pole	133.00 - 0.00	6	No Ice	0.00	0.08
						1/2" Ice	0.00	0.08
						1" Ice	0.00	0.08
						2" Ice	0.00	0.08
						4" Ice	0.00	0.08
***								
561(1-5/8")	C	No	Inside Pole	113.00 - 0.00	12	No Ice	0.00	1.35
						1/2" Ice	0.00	1.35
						1" Ice	0.00	1.35
						2" Ice	0.00	1.35
						4" Ice	0.00	1.35
HB158-1-08U8-S8J18(1-5/8)	C	No	Inside Pole	113.00 - 0.00	1	No Ice	0.00	1.30
						1/2" Ice	0.00	1.30
						1" Ice	0.00	1.30
						2" Ice	0.00	1.30
						4" Ice	0.00	1.30
HB158-1-08U8-S8J18(1-5/8)	C	No	Inside Pole	113.00 - 0.00	1	No Ice	0.00	1.30
						1/2" Ice	0.00	1.30
						1" Ice	0.00	1.30
						2" Ice	0.00	1.30
						4" Ice	0.00	1.30
***								
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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	155.00-115.50	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	9.002	0.52
L2	115.50-79.25	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	9.113	1.23
L3	79.25-43.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	8.925	1.25
L4	43.75-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	10.999	1.54

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	155.00-115.50	A	1.184	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	24.863	1.62
L2	115.50-79.25	A	1.138	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	26.277	2.33
L3	79.25-43.75	A	1.077	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	25.086	2.26
L4	43.75-0.00	A	1.000	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	29.851	2.66

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	155.00-115.50	-0.27	0.16	-0.60	0.35
L2	115.50-79.25	-0.30	0.17	-0.70	0.40
L3	79.25-43.75	-0.30	0.17	-0.72	0.41
L4	43.75-0.00	-0.31	0.18	-0.72	0.42

Discrete Tower Loads

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
LPX310R w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.31 2.64 2.99 3.77 5.50	2.34 2.87 3.41 4.56 7.24	0.03 0.05 0.08 0.16 0.40
LPX310R w/ Mount Pipe	B	From Leg	4.00 0.00	0.000	155.00	No Ice 1/2"	2.31 2.64	2.34 2.87	0.03 0.05

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
			0.00			Ice	2.99	3.41	0.08
						1" Ice	3.77	4.56	0.16
						2" Ice	5.50	7.24	0.40
						4" Ice			
LPX310R w/ Mount Pipe	C	From Leg	4.00	0.000	155.00	No Ice	2.31	2.34	0.03
			0.00			1/2"	2.64	2.87	0.05
			0.00			Ice	2.99	3.41	0.08
						1" Ice	3.77	4.56	0.16
						2" Ice	5.50	7.24	0.40
						4" Ice			
HORIZON COMPACT	A	From Leg	4.00	0.000	155.00	No Ice	0.84	0.43	0.01
			0.00			1/2"	0.97	0.52	0.02
			-4.00			Ice	1.10	0.63	0.03
						1" Ice	1.39	0.86	0.05
						2" Ice	2.08	1.43	0.12
						4" Ice			
HORIZON COMPACT	B	From Leg	4.00	0.000	155.00	No Ice	0.84	0.43	0.01
			0.00			1/2"	0.97	0.52	0.02
			-4.00			Ice	1.10	0.63	0.03
						1" Ice	1.39	0.86	0.05
						2" Ice	2.08	1.43	0.12
						4" Ice			
HORIZON COMPACT	C	From Leg	4.00	0.000	155.00	No Ice	0.84	0.43	0.01
			0.00			1/2"	0.97	0.52	0.02
			-4.00			Ice	1.10	0.63	0.03
						1" Ice	1.39	0.86	0.05
						2" Ice	2.08	1.43	0.12
						4" Ice			
WIMAX DAP HEAD	A	From Leg	4.00	0.000	155.00	No Ice	1.80	0.78	0.03
			0.00			1/2"	1.99	0.92	0.04
			0.00			Ice	2.18	1.07	0.06
						1" Ice	2.59	1.39	0.09
						2" Ice	3.51	2.14	0.20
						4" Ice			
WIMAX DAP HEAD	B	From Leg	4.00	0.000	155.00	No Ice	1.80	0.78	0.03
			0.00			1/2"	1.99	0.92	0.04
			0.00			Ice	2.18	1.07	0.06
						1" Ice	2.59	1.39	0.09
						2" Ice	3.51	2.14	0.20
						4" Ice			
WIMAX DAP HEAD	C	From Leg	4.00	0.000	155.00	No Ice	1.80	0.78	0.03
			0.00			1/2"	1.99	0.92	0.04
			0.00			Ice	2.18	1.07	0.06
						1" Ice	2.59	1.39	0.09
						2" Ice	3.51	2.14	0.20
						4" Ice			
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.00	0.000	155.00	No Ice	8.50	6.95	0.08
			0.00			1/2"	9.15	8.13	0.15
			0.00			Ice	9.77	9.02	0.23
						1" Ice	11.03	10.84	0.41
						2" Ice	13.68	14.85	0.91
						4" Ice			
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.00	0.000	155.00	No Ice	8.50	6.95	0.08
			0.00			1/2"	9.15	8.13	0.15
			0.00			Ice	9.77	9.02	0.23
						1" Ice	11.03	10.84	0.41
						2" Ice	13.68	14.85	0.91
						4" Ice			
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.00	0.000	155.00	No Ice	8.50	6.95	0.08
			0.00			1/2"	9.15	8.13	0.15
			0.00			Ice	9.77	9.02	0.23
						1" Ice	11.03	10.84	0.41
						2" Ice	13.68	14.85	0.91
						4" Ice			
APXVTM14-C-120 w/	A	From Leg	4.00	0.000	155.00	No Ice	7.13	4.96	0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Mount Pipe			0.00 0.00			1/2" Ice 1" Ice 2" Ice 4" Ice	7.66 8.18 9.26 11.53	5.75 6.47 8.01 11.41	0.13 0.19 0.34 0.75
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.13 7.66 8.18 9.26 11.53	4.96 5.75 6.47 8.01 11.41	0.08 0.13 0.19 0.34 0.75
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.13 7.66 8.18 9.26 11.53	4.96 5.75 6.47 8.01 11.41	0.08 0.13 0.19 0.34 0.75
TD-RRH8x20-25	A	From Leg	4.00 0.00 0.00	0.000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.72 5.01 5.32 5.95 7.31	1.70 1.92 2.15 2.62 3.68	0.07 0.10 0.13 0.20 0.40
TD-RRH8x20-25	B	From Leg	4.00 0.00 0.00	0.000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.72 5.01 5.32 5.95 7.31	1.70 1.92 2.15 2.62 3.68	0.07 0.10 0.13 0.20 0.40
TD-RRH8x20-25	C	From Leg	4.00 0.00 0.00	0.000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.72 5.01 5.32 5.95 7.31	1.70 1.92 2.15 2.62 3.68	0.07 0.10 0.13 0.20 0.40
Platform Mount [LP 713-1]	C	None		0.000	155.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	31.27 39.68 48.09 64.91 98.55	31.27 39.68 48.09 64.91 98.55	1.51 1.93 2.35 3.19 4.86
***									
800MHz 2X50W RRH W/FILTER	A	From Leg	1.00 0.00 0.00	0.000	153.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.40 2.61 2.83 3.30 4.34	2.25 2.46 2.68 3.13 4.15	0.06 0.09 0.11 0.17 0.34
800MHz 2X50W RRH W/FILTER	B	From Leg	1.00 0.00 0.00	0.000	153.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.40 2.61 2.83 3.30 4.34	2.25 2.46 2.68 3.13 4.15	0.06 0.09 0.11 0.17 0.34
800MHz 2X50W RRH W/FILTER	C	From Leg	1.00 0.00 0.00	0.000	153.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.40 2.61 2.83 3.30 4.34	2.25 2.46 2.68 3.13 4.15	0.06 0.09 0.11 0.17 0.34
PCS 1900MHz 4x45W-65MHz	A	From Leg	1.00 0.00 0.00	0.000	153.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.71 2.95 3.20 3.72 4.86	2.61 2.85 3.09 3.61 4.74	0.06 0.08 0.11 0.17 0.35

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						4" Ice			
PCS 1900MHz 4x45W-65MHz	B	From Leg	1.00 0.00 0.00	0.000	153.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.71 2.95 3.20 3.72 4.86	2.61 2.85 3.09 3.61 4.74	0.06 0.08 0.11 0.17 0.35
PCS 1900MHz 4x45W-65MHz	C	From Leg	1.00 0.00 0.00	0.000	153.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	2.71 2.95 3.20 3.72 4.86	2.61 2.85 3.09 3.61 4.74	0.06 0.08 0.11 0.17 0.35
Pipe Mount [PM 601-3]	C	None		0.000	153.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.39 5.48 6.57 8.75 13.11	4.39 5.48 6.57 8.75 13.11	0.20 0.24 0.28 0.36 0.53
***									
RRUS 11	A	From Leg	1.00 0.00 2.00	0.000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.26 3.50 3.75 4.28 5.44	1.38 1.56 1.74 2.15 3.05	0.05 0.07 0.10 0.15 0.31
RRUS 11	B	From Leg	1.00 0.00 2.00	0.000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.26 3.50 3.75 4.28 5.44	1.38 1.56 1.74 2.15 3.05	0.05 0.07 0.10 0.15 0.31
RRUS 11	C	From Leg	1.00 0.00 2.00	0.000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.26 3.50 3.75 4.28 5.44	1.38 1.56 1.74 2.15 3.05	0.05 0.07 0.10 0.15 0.31
Pipe Mount [PM 601-3]	C	None		0.000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.39 5.48 6.57 8.75 13.11	4.39 5.48 6.57 8.75 13.11	0.20 0.24 0.28 0.36 0.53
***									
800 10121 w/ Mount Pipe	A	From Leg	3.00 0.00 2.00	0.000	143.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.03 6.71 7.30 8.50 11.04	4.95 6.02 6.81 8.46 12.10	0.07 0.12 0.18 0.32 0.73
800 10121 w/ Mount Pipe	B	From Leg	3.00 0.00 2.00	0.000	143.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.03 6.71 7.30 8.50 11.04	4.95 6.02 6.81 8.46 12.10	0.07 0.12 0.18 0.32 0.73
800 10121 w/ Mount Pipe	C	From Leg	3.00 0.00 2.00	0.000	143.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.03 6.71 7.30 8.50 11.04	4.95 6.02 6.81 8.46 12.10	0.07 0.12 0.18 0.32 0.73
(2) 860 10025	A	From Leg	3.00 0.00	0.000	143.00	No Ice 1/2"	0.16 0.22	0.13 0.19	0.00 0.00

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
			2.00			Ice	0.29	0.26	0.01
						1" Ice	0.47	0.43	0.01
						2" Ice	0.92	0.87	0.05
						4" Ice			
(2) 860 10025	B	From Leg	3.00	0.000	143.00	No Ice	0.16	0.13	0.00
			0.00			1/2"	0.22	0.19	0.00
			2.00			Ice	0.29	0.26	0.01
						1" Ice	0.47	0.43	0.01
						2" Ice	0.92	0.87	0.05
						4" Ice			
(2) 860 10025	C	From Leg	3.00	0.000	143.00	No Ice	0.16	0.13	0.00
			0.00			1/2"	0.22	0.19	0.00
			2.00			Ice	0.29	0.26	0.01
						1" Ice	0.47	0.43	0.01
						2" Ice	0.92	0.87	0.05
						4" Ice			
RRUS-11	A	From Leg	3.00	0.000	143.00	No Ice	3.26	1.38	0.05
			0.00			1/2"	3.50	1.56	0.07
			2.00			Ice	3.75	1.74	0.09
						1" Ice	4.28	2.15	0.15
						2" Ice	5.44	3.05	0.31
						4" Ice			
RRUS-11	B	From Leg	3.00	0.000	143.00	No Ice	3.26	1.38	0.05
			0.00			1/2"	3.50	1.56	0.07
			2.00			Ice	3.75	1.74	0.09
						1" Ice	4.28	2.15	0.15
						2" Ice	5.44	3.05	0.31
						4" Ice			
RRUS-11	C	From Leg	3.00	0.000	143.00	No Ice	3.26	1.38	0.05
			0.00			1/2"	3.50	1.56	0.07
			2.00			Ice	3.75	1.74	0.09
						1" Ice	4.28	2.15	0.15
						2" Ice	5.44	3.05	0.31
						4" Ice			
DC6-48-60-18-8F	A	From Leg	3.00	0.000	143.00	No Ice	1.47	1.47	0.02
			0.00			1/2"	1.67	1.67	0.04
			2.00			Ice	1.88	1.88	0.06
						1" Ice	2.33	2.33	0.11
						2" Ice	3.38	3.38	0.24
						4" Ice			
QS66512-2 w/ Mount Pipe	A	From Leg	3.00	0.000	143.00	No Ice	8.64	8.46	0.14
			0.00			1/2"	9.29	9.66	0.21
			2.00			Ice	9.91	10.62	0.30
						1" Ice	11.18	12.61	0.49
						2" Ice	13.83	16.81	1.03
						4" Ice			
QS66512-2 w/ Mount Pipe	B	From Leg	3.00	0.000	143.00	No Ice	8.64	8.46	0.14
			0.00			1/2"	9.29	9.66	0.21
			2.00			Ice	9.91	10.62	0.30
						1" Ice	11.18	12.61	0.49
						2" Ice	13.83	16.81	1.03
						4" Ice			
QS66512-2 w/ Mount Pipe	C	From Leg	3.00	0.000	143.00	No Ice	8.64	8.46	0.14
			0.00			1/2"	9.29	9.66	0.21
			2.00			Ice	9.91	10.62	0.30
						1" Ice	11.18	12.61	0.49
						2" Ice	13.83	16.81	1.03
						4" Ice			
DTMABP7819VG12A	A	From Leg	3.00	0.000	143.00	No Ice	1.14	0.39	0.02
			0.00			1/2"	1.28	0.49	0.03
			2.00			Ice	1.44	0.59	0.04
						1" Ice	1.77	0.83	0.06
						2" Ice	2.54	1.41	0.14
						4" Ice			
DTMABP7819VG12A	B	From Leg	3.00	0.000	143.00	No Ice	1.14	0.39	0.02

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00				1/2"	1.28	0.49	0.03
			2.00				Ice	1.44	0.59	0.04
							1" Ice	1.77	0.83	0.06
							2" Ice	2.54	1.41	0.14
							4" Ice			
DTMABP7819VG12A	C	From Leg	3.00		0.000	143.00	No Ice	1.14	0.39	0.02
			0.00				1/2"	1.28	0.49	0.03
			2.00				Ice	1.44	0.59	0.04
							1" Ice	1.77	0.83	0.06
							2" Ice	2.54	1.41	0.14
							4" Ice			
RRUS 32 B30	A	From Leg	3.00		0.000	143.00	No Ice	3.87	2.76	0.08
			0.00				1/2"	4.15	3.02	0.10
			2.00				Ice	4.44	3.29	0.14
							1" Ice	5.06	3.85	0.21
							2" Ice	6.38	5.08	0.41
							4" Ice			
RRUS 32 B30	B	From Leg	3.00		0.000	143.00	No Ice	3.87	2.76	0.08
			0.00				1/2"	4.15	3.02	0.10
			2.00				Ice	4.44	3.29	0.14
							1" Ice	5.06	3.85	0.21
							2" Ice	6.38	5.08	0.41
							4" Ice			
RRUS 32 B30	C	From Leg	3.00		0.000	143.00	No Ice	3.87	2.76	0.08
			0.00				1/2"	4.15	3.02	0.10
			2.00				Ice	4.44	3.29	0.14
							1" Ice	5.06	3.85	0.21
							2" Ice	6.38	5.08	0.41
							4" Ice			
DC6-48-60-18-8F	A	From Leg	3.00		0.000	143.00	No Ice	1.47	1.47	0.02
			0.00				1/2"	1.67	1.67	0.04
			2.00				Ice	1.88	1.88	0.06
							1" Ice	2.33	2.33	0.11
							2" Ice	3.38	3.38	0.24
							4" Ice			
T-Arm Mount [TA 702-3]	C	None			0.000	143.00	No Ice	5.64	5.64	0.34
							1/2"	6.55	6.55	0.43
							Ice	7.46	7.46	0.52
							1" Ice	9.28	9.28	0.70
							2" Ice	12.92	12.92	1.06
							4" Ice			
***										
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	4.00		0.000	133.00	No Ice	6.83	5.64	0.11
			0.00				1/2"	7.35	6.48	0.17
			0.00				Ice	7.86	7.26	0.23
							1" Ice	8.93	8.86	0.38
							2" Ice	11.18	12.29	0.81
							4" Ice			
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	4.00		0.000	133.00	No Ice	6.83	5.64	0.11
			0.00				1/2"	7.35	6.48	0.17
			0.00				Ice	7.86	7.26	0.23
							1" Ice	8.93	8.86	0.38
							2" Ice	11.18	12.29	0.81
							4" Ice			
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	4.00		0.000	133.00	No Ice	6.83	5.64	0.11
			0.00				1/2"	7.35	6.48	0.17
			0.00				Ice	7.86	7.26	0.23
							1" Ice	8.93	8.86	0.38
							2" Ice	11.18	12.29	0.81
							4" Ice			
KRY 112 144/1	A	From Leg	4.00		0.000	133.00	No Ice	0.41	0.20	0.01
			0.00				1/2"	0.50	0.27	0.01
			0.00				Ice	0.59	0.35	0.02
							1" Ice	0.81	0.53	0.03
							2" Ice	1.36	1.00	0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						4" Ice			
KRY 112 144/1	B	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.59 0.81 1.36	0.20 0.27 0.35 0.53 1.00	0.01 0.01 0.02 0.03 0.08
KRY 112 144/1	C	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.41 0.50 0.59 0.81 1.36	0.20 0.27 0.35 0.53 1.00	0.01 0.01 0.02 0.03 0.08
KRC 118 057/1 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	9.75 10.29 10.84 11.96 14.31	7.94 8.83 9.65 11.36 14.98	0.16 0.24 0.33 0.52 1.05
KRC 118 057/1 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	9.75 10.29 10.84 11.96 14.31	7.94 8.83 9.65 11.36 14.98	0.16 0.24 0.33 0.52 1.05
KRC 118 057/1 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	9.75 10.29 10.84 11.96 14.31	7.94 8.83 9.65 11.36 14.98	0.16 0.24 0.33 0.52 1.05
RRUS 11 B12	A	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.31 3.55 3.80 4.33 5.50	1.36 1.54 1.73 2.13 3.04	0.05 0.07 0.10 0.15 0.31
RRUS 11 B12	B	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.31 3.55 3.80 4.33 5.50	1.36 1.54 1.73 2.13 3.04	0.05 0.07 0.10 0.15 0.31
RRUS 11 B12	C	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.31 3.55 3.80 4.33 5.50	1.36 1.54 1.73 2.13 3.04	0.05 0.07 0.10 0.15 0.31
(2) 2.375" OD x 5' Mount Pipe	A	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.19 1.50 1.81 2.46 3.92	1.19 1.50 1.81 2.46 3.92	0.02 0.03 0.04 0.08 0.20
(2) 2.375" OD x 5' Mount Pipe	B	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.19 1.50 1.81 2.46 3.92	1.19 1.50 1.81 2.46 3.92	0.02 0.03 0.04 0.08 0.20
(2) 2.375" OD x 5' Mount Pipe	C	From Leg	4.00 0.00 0.00	0.000	133.00	No Ice 1/2" Ice 1" Ice	1.19 1.50 1.81 2.46	1.19 1.50 1.81 2.46	0.02 0.03 0.04 0.08

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
							2" Ice	3.92	3.92	0.20
							4" Ice			
Platform Mount [LP 403-1]	C	None			0.000	133.00	No Ice	18.85	18.85	1.50
							1/2" Ice	24.30	24.30	1.80
							1" Ice	29.75	29.75	2.09
							2" Ice	40.65	40.65	2.69
							4" Ice	62.45	62.45	3.87
***										
BXA-70063/6CFx2 w/ Mount Pipe	A	From Leg	4.00	0.00	0.000	113.00	No Ice	7.97	5.40	0.04
			0.00				1/2" Ice	8.61	6.55	0.10
			0.00				1" Ice	9.22	7.41	0.17
							2" Ice	10.46	9.18	0.33
							4" Ice	13.07	12.93	0.79
BXA-70063/6CFx2 w/ Mount Pipe	B	From Leg	4.00	0.00	0.000	113.00	No Ice	7.97	5.40	0.04
			0.00				1/2" Ice	8.61	6.55	0.10
			0.00				1" Ice	9.22	7.41	0.17
							2" Ice	10.46	9.18	0.33
							4" Ice	13.07	12.93	0.79
BXA-70063/6CFx2 w/ Mount Pipe	C	From Leg	4.00	0.00	0.000	113.00	No Ice	7.97	5.40	0.04
			0.00				1/2" Ice	8.61	6.55	0.10
			0.00				1" Ice	9.22	7.41	0.17
							2" Ice	10.46	9.18	0.33
							4" Ice	13.07	12.93	0.79
LNX-6512DS-T0M w/ Mount Pipe	A	From Leg	4.00	0.00	0.000	113.00	No Ice	5.85	4.55	0.05
			0.00				1/2" Ice	6.31	5.23	0.09
			0.00				1" Ice	6.77	5.91	0.15
							2" Ice	7.74	7.34	0.28
							4" Ice	9.80	10.46	0.65
LNX-6512DS-T0M w/ Mount Pipe	B	From Leg	4.00	0.00	0.000	113.00	No Ice	5.85	4.55	0.05
			0.00				1/2" Ice	6.31	5.23	0.09
			0.00				1" Ice	6.77	5.91	0.15
							2" Ice	7.74	7.34	0.28
							4" Ice	9.80	10.46	0.65
LNX-6512DS-T0M w/ Mount Pipe	C	From Leg	4.00	0.00	0.000	113.00	No Ice	5.85	4.55	0.05
			0.00				1/2" Ice	6.31	5.23	0.09
			0.00				1" Ice	6.77	5.91	0.15
							2" Ice	7.74	7.34	0.28
							4" Ice	9.80	10.46	0.65
DB-T1-6Z-8AB-0Z	A	From Leg	4.00	0.00	0.000	113.00	No Ice	5.60	2.33	0.04
			0.00				1/2" Ice	5.92	2.56	0.08
			0.00				1" Ice	6.24	2.79	0.12
							2" Ice	6.91	3.28	0.21
							4" Ice	8.37	4.37	0.45
(2) SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.00	0.00	0.000	113.00	No Ice	8.64	7.07	0.07
			0.00				1/2" Ice	9.30	8.26	0.14
			0.00				1" Ice	9.92	9.18	0.21
							2" Ice	11.20	11.01	0.39
							4" Ice	13.86	15.05	0.90
(2) SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.00	0.00	0.000	113.00	No Ice	8.64	7.07	0.07
			0.00				1/2" Ice	9.30	8.26	0.14
			0.00				1" Ice	9.92	9.18	0.21
							2" Ice	11.20	11.01	0.39
							4" Ice	13.86	15.05	0.90
(2) SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.00	0.00	0.000	113.00	No Ice	8.64	7.07	0.07
							1/2" Ice	9.30	8.26	0.14

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			Ice	9.92	9.18	0.21
						1" Ice	11.20	11.01	0.39
						2" Ice	13.86	15.05	0.90
						4" Ice			
RRH2X60-AWS	A	From Leg	4.00	0.000	113.00	No Ice	2.19	1.43	0.04
			0.00			1/2"	2.40	1.61	0.06
			0.00			Ice	2.61	1.80	0.08
						1" Ice	3.07	2.21	0.13
						2" Ice	4.09	3.13	0.26
						4" Ice			
RRH2X60-AWS	B	From Leg	4.00	0.000	113.00	No Ice	2.19	1.43	0.04
			0.00			1/2"	2.40	1.61	0.06
			0.00			Ice	2.61	1.80	0.08
						1" Ice	3.07	2.21	0.13
						2" Ice	4.09	3.13	0.26
						4" Ice			
RRH2X60-AWS	C	From Leg	4.00	0.000	113.00	No Ice	2.19	1.43	0.04
			0.00			1/2"	2.40	1.61	0.06
			0.00			Ice	2.61	1.80	0.08
						1" Ice	3.07	2.21	0.13
						2" Ice	4.09	3.13	0.26
						4" Ice			
RRH2X60-PCS	A	From Leg	4.00	0.000	113.00	No Ice	2.57	2.01	0.06
			0.00			1/2"	2.79	2.22	0.08
			0.00			Ice	3.02	2.43	0.10
						1" Ice	3.52	2.89	0.16
						2" Ice	4.61	3.92	0.31
						4" Ice			
RRH2X60-PCS	B	From Leg	4.00	0.000	113.00	No Ice	2.57	2.01	0.06
			0.00			1/2"	2.79	2.22	0.08
			0.00			Ice	3.02	2.43	0.10
						1" Ice	3.52	2.89	0.16
						2" Ice	4.61	3.92	0.31
						4" Ice			
RRH2X60-PCS	C	From Leg	4.00	0.000	113.00	No Ice	2.57	2.01	0.06
			0.00			1/2"	2.79	2.22	0.08
			0.00			Ice	3.02	2.43	0.10
						1" Ice	3.52	2.89	0.16
						2" Ice	4.61	3.92	0.31
						4" Ice			
RRH2x60-700	A	From Leg	4.00	0.000	113.00	No Ice	3.96	1.82	0.06
			0.00			1/2"	4.27	2.08	0.08
			0.00			Ice	4.60	2.36	0.11
						1" Ice	5.27	2.96	0.17
						2" Ice	6.72	4.25	0.35
						4" Ice			
RRH2x60-700	B	From Leg	4.00	0.000	113.00	No Ice	3.96	1.82	0.06
			0.00			1/2"	4.27	2.08	0.08
			0.00			Ice	4.60	2.36	0.11
						1" Ice	5.27	2.96	0.17
						2" Ice	6.72	4.25	0.35
						4" Ice			
RRH2x60-700	C	From Leg	4.00	0.000	113.00	No Ice	3.96	1.82	0.06
			0.00			1/2"	4.27	2.08	0.08
			0.00			Ice	4.60	2.36	0.11
						1" Ice	5.27	2.96	0.17
						2" Ice	6.72	4.25	0.35
						4" Ice			
Platform Mount [LP 1201-1]	C	None		0.000	113.00	No Ice	23.10	23.10	2.10
						1/2"	26.80	26.80	2.50
						Ice	30.50	30.50	2.90
						1" Ice	37.90	37.90	3.70
						2" Ice	52.70	52.70	5.30
						4" Ice			

***

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
***								
***								

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
VHLP1-23	A	Paraboloid w/o Radome	From Leg	4.00 0.00 -4.00	0.000		155.00	1.27	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.28 1.45 1.62 1.97 2.66	0.01 0.02 0.03 0.04 0.07
VHLP2.5-18	B	Paraboloid w/Shroud (HP)	From Leg	4.00 0.00 -4.00	0.000		155.00	2.92	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.68 7.07 7.46 8.23 9.78	0.05 0.08 0.12 0.19 0.34
VHLP2-11	C	Paraboloid w/o Radome	From Leg	4.00 0.00 -4.00	0.000		155.00	2.17	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.72 4.01 4.30 4.88 6.04	0.03 0.05 0.07 0.11 0.19

Tower Pressures - No Ice

G_H = 1.690

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
L1 155.00-115.50	134.52	1.494	24	84.444	A	0.000	84.444	84.444	100.00	0.000	0.000
					B	0.000	84.444		100.00	0.000	0.000
					C	0.000	84.444		100.00	0.000	9.002
L2 115.50-79.25	96.99	1.361	22	97.153	A	0.000	97.153	97.153	100.00	0.000	0.000
					B	0.000	97.153		100.00	0.000	0.000
					C	0.000	97.153		100.00	0.000	9.113
L3 79.25-43.75	61.36	1.194	19	112.927	A	0.000	112.927	112.927	100.00	0.000	0.000
					B	0.000	112.927		100.00	0.000	0.000
					C	0.000	112.927		100.00	0.000	8.925
L4 43.75-0.00	21.22	1	16	163.162	A	0.000	163.162	163.162	100.00	0.000	0.000
					B	0.000	163.162		100.00	0.000	0.000
					C	0.000	163.162		100.00	0.000	10.999

Tower Pressure - With Ice

G_H = 1.690

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 155.00-115.50	134.52	1.494	5	1.18	92.237	A	0.000	92.237	92.237	100.00	0.000	0.000
						B	0.000	92.237		100.00	0.000	0.000
						C	0.000	92.237		100.00	0.000	24.863
L2 115.50-79.25	96.99	1.361	5	1.14	104.304	A	0.000	104.304	104.304	100.00	0.000	0.000
						B	0.000	104.304		100.00	0.000	0.000
						C	0.000	104.304		100.00	0.000	26.277
L3 79.25-43.75	61.36	1.194	4	1.08	119.661	A	0.000	119.661	119.661	100.00	0.000	0.000
						B	0.000	119.661		100.00	0.000	0.000
						C	0.000	119.661		100.00	0.000	25.086
L4 43.75-0.00	21.22	1	4	1.00	171.017	A	0.000	171.017	171.017	100.00	0.000	0.000
						B	0.000	171.017		100.00	0.000	0.000
						C	0.000	171.017		100.00	0.000	29.851

Tower Pressure - Service

G_H = 1.690

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 155.00-115.50	134.52	1.494	10	84.444	A	0.000	84.444	84.444	100.00	0.000	0.000
					B	0.000	84.444		100.00	0.000	0.000
					C	0.000	84.444		100.00	0.000	9.002
L2 115.50-79.25	96.99	1.361	9	97.153	A	0.000	97.153	97.153	100.00	0.000	0.000
					B	0.000	97.153		100.00	0.000	0.000
					C	0.000	97.153		100.00	0.000	9.113
L3 79.25-43.75	61.36	1.194	8	112.927	A	0.000	112.927	112.927	100.00	0.000	0.000
					B	0.000	112.927		100.00	0.000	0.000
					C	0.000	112.927		100.00	0.000	8.925
L4 43.75-0.00	21.22	1	6	163.162	A	0.000	163.162	163.162	100.00	0.000	0.000
					B	0.000	163.162		100.00	0.000	0.000
					C	0.000	163.162		100.00	0.000	10.999

Load Combinations

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

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

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Force K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	155 - 115.5	Pole	Max Tension	1	0.00	0	0
			Max. Compression	14	-20.14	1	0
			Max. Mx	11	-8.74	390	4
			Max. My	2	-8.74	-1	388
			Max. Vy	5	15.54	-390	1
			Max. Vx	2	-15.50	-1	388
			Max. Torque	3			-1
L2	115.5 - 79.25	Pole	Max Tension	1	0.00	0	0
			Max. Compression	14	-34.80	2	-1
			Max. Mx	11	-17.07	1147	8
			Max. My	2	-17.06	-2	1148
			Max. Vy	5	23.59	-1147	3
			Max. Vx	2	-23.68	-2	1148
			Max. Torque	5			1
L3	79.25 - 43.75	Pole	Max Tension	1	0.00	0	0
			Max. Compression	14	-44.76	4	-2
			Max. Mx	11	-24.67	2010	12
			Max. My	2	-24.67	-2	2014
			Max. Vy	5	25.95	-2009	4
			Max. Vx	2	-26.04	-2	2014
			Max. Torque	5			1
L4	43.75 - 0	Pole	Max Tension	1	0.00	0	0
			Max. Compression	14	-61.80	6	-3
			Max. Mx	11	-38.45	3349	17
			Max. My	2	-38.45	-3	3356
			Max. Vy	5	28.57	-3347	5
			Max. Vx	2	-28.66	-3	3356
			Max. Torque	5			1

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	14	61.80	-0.00	0.00
	Max. H_x	11	38.48	28.53	0.11
	Max. H_z	2	38.48	-0.03	28.62
	Max. M_x	2	3356	-0.03	28.62
	Max. M_z	5	3347	-28.54	0.04
	Max. Torsion	5	1	-28.54	0.04

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. Vert	2	38.48	-0.03	28.62
	Min. H_x	5	38.48	-28.54	0.04
	Min. H_z	8	38.48	-0.09	-28.57
	Min. M_x	8	-3348	-0.09	-28.57
	Min. M_z	11	-3349	28.53	0.11
	Min. Torsion	10	0	24.73	-14.22

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	38.48	-0.00	0.00	0	1	0
Dead+Wind 0 deg - No Ice	38.48	0.03	-28.62	-3356	-3	0
Dead+Wind 30 deg - No Ice	38.48	14.38	-24.70	-2893	-1691	0
Dead+Wind 60 deg - No Ice	38.48	24.77	-14.24	-1667	-2907	0
Dead+Wind 90 deg - No Ice	38.48	28.54	-0.04	-5	-3347	-1
Dead+Wind 120 deg - No Ice	38.48	24.80	14.23	1665	-2913	0
Dead+Wind 150 deg - No Ice	38.48	14.26	24.71	2896	-1672	0
Dead+Wind 180 deg - No Ice	38.48	0.09	28.57	3348	-13	0
Dead+Wind 210 deg - No Ice	38.48	-14.16	24.77	2905	1658	0
Dead+Wind 240 deg - No Ice	38.48	-24.73	14.22	1664	2904	0
Dead+Wind 270 deg - No Ice	38.48	-28.53	-0.11	-17	3349	0
Dead+Wind 300 deg - No Ice	38.48	-24.73	-14.32	-1679	2902	0
Dead+Wind 330 deg - No Ice	38.48	-14.34	-24.72	-2896	1686	0
Dead+Ice+Temp	61.80	0.00	-0.00	3	6	0
Dead+Wind 0 deg+Ice+Temp	61.80	0.01	-8.23	-1021	5	0
Dead+Wind 30 deg+Ice+Temp	61.80	4.13	-7.10	-880	-509	0
Dead+Wind 60 deg+Ice+Temp	61.80	7.12	-4.10	-506	-880	0
Dead+Wind 90 deg+Ice+Temp	61.80	8.21	-0.01	1	-1015	0
Dead+Wind 120 deg+Ice+Temp	61.80	7.13	4.09	511	-882	0
Dead+Wind 150 deg+Ice+Temp	61.80	4.10	7.11	887	-504	0
Dead+Wind 180 deg+Ice+Temp	61.80	0.02	8.22	1025	3	0
Dead+Wind 210 deg+Ice+Temp	61.80	-4.08	7.12	889	513	0
Dead+Wind 240 deg+Ice+Temp	61.80	-7.11	4.09	511	892	0
Dead+Wind 270 deg+Ice+Temp	61.80	-8.21	-0.03	-2	1028	0
Dead+Wind 300 deg+Ice+Temp	61.80	-7.11	-4.12	-509	892	0
Dead+Wind 330 deg+Ice+Temp	61.80	-4.12	-7.11	-881	521	0
Dead+Wind 0 deg - Service	38.48	0.01	-11.18	-1313	-1	0
Dead+Wind 30 deg - Service	38.48	5.62	-9.65	-1132	-661	0
Dead+Wind 60 deg - Service	38.48	9.67	-5.56	-652	-1137	0
Dead+Wind 90 deg - Service	38.48	11.15	-0.01	-2	-1310	0
Dead+Wind 120 deg - Service	38.48	9.69	5.56	652	-1140	0
Dead+Wind 150 deg - Service	38.48	5.57	9.65	1133	-654	0
Dead+Wind 180 deg - Service	38.48	0.03	11.16	1311	-5	0
Dead+Wind 210 deg - Service	38.48	-5.53	9.68	1137	649	0
Dead+Wind 240 deg - Service	38.48	-9.66	5.55	651	1137	0
Dead+Wind 270 deg -	38.48	-11.15	-0.04	-6	1311	0

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
Service Dead+Wind 300 deg - Service	38.48	-9.66	-5.59	-657	1136	0
Dead+Wind 330 deg - Service	38.48	-5.60	-9.66	-1133	660	0

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX K	PY K	PZ K	PX K	PY K	PZ K	% Error
1	0.00	-38.48	0.00	0.00	38.48	0.00	0.000%
2	0.03	-38.48	-28.62	-0.03	38.48	28.62	0.007%
3	14.38	-38.48	-24.70	-14.38	38.48	24.70	0.000%
4	24.77	-38.48	-14.24	-24.77	38.48	14.24	0.000%
5	28.54	-38.48	-0.04	-28.54	38.48	0.04	0.007%
6	24.80	-38.48	14.23	-24.80	38.48	-14.23	0.000%
7	14.26	-38.48	24.71	-14.26	38.48	-24.71	0.000%
8	0.09	-38.48	28.57	-0.09	38.48	-28.57	0.007%
9	-14.16	-38.48	24.77	14.16	38.48	-24.77	0.000%
10	-24.73	-38.48	14.22	24.73	38.48	-14.22	0.000%
11	-28.54	-38.48	-0.11	28.53	38.48	0.11	0.007%
12	-24.73	-38.48	-14.32	24.73	38.48	14.32	0.000%
13	-14.34	-38.48	-24.72	14.34	38.48	24.72	0.000%
14	0.00	-61.80	0.00	-0.00	61.80	0.00	0.002%
15	0.01	-61.80	-8.23	-0.01	61.80	8.23	0.002%
16	4.13	-61.80	-7.11	-4.13	61.80	7.10	0.001%
17	7.12	-61.80	-4.10	-7.12	61.80	4.10	0.001%
18	8.21	-61.80	-0.01	-8.21	61.80	0.01	0.002%
19	7.13	-61.80	4.09	-7.13	61.80	-4.09	0.001%
20	4.10	-61.80	7.11	-4.10	61.80	-7.11	0.001%
21	0.02	-61.80	8.22	-0.02	61.80	-8.22	0.002%
22	-4.08	-61.80	7.12	4.08	61.80	-7.12	0.001%
23	-7.11	-61.80	4.09	7.11	61.80	-4.09	0.001%
24	-8.21	-61.80	-0.03	8.21	61.80	0.03	0.002%
25	-7.11	-61.80	-4.12	7.11	61.80	4.12	0.001%
26	-4.12	-61.80	-7.11	4.12	61.80	7.11	0.001%
27	0.01	-38.48	-11.18	-0.01	38.48	11.18	0.004%
28	5.62	-38.48	-9.65	-5.62	38.48	9.65	0.002%
29	9.67	-38.48	-5.56	-9.67	38.48	5.56	0.002%
30	11.15	-38.48	-0.01	-11.15	38.48	0.01	0.004%
31	9.69	-38.48	5.56	-9.69	38.48	-5.56	0.002%
32	5.57	-38.48	9.65	-5.57	38.48	-9.65	0.002%
33	0.03	-38.48	11.16	-0.03	38.48	-11.16	0.004%
34	-5.53	-38.48	9.68	5.53	38.48	-9.68	0.002%
35	-9.66	-38.48	5.55	9.66	38.48	-5.55	0.002%
36	-11.15	-38.48	-0.04	11.15	38.48	0.04	0.004%
37	-9.66	-38.48	-5.59	9.66	38.48	5.59	0.002%
38	-5.60	-38.48	-9.66	5.60	38.48	9.66	0.002%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	15	0.00007344	0.00010318
3	Yes	20	0.00000001	0.00007583
4	Yes	20	0.00000001	0.00007512
5	Yes	15	0.00007346	0.00012216
6	Yes	20	0.00000001	0.00007453
7	Yes	20	0.00000001	0.00007483
8	Yes	15	0.00007348	0.00011208

9	Yes	20	0.00000001	0.00007409
10	Yes	20	0.00000001	0.00007431
11	Yes	15	0.00007345	0.00012363
12	Yes	20	0.00000001	0.00007570
13	Yes	20	0.00000001	0.00007505
14	Yes	9	0.00000001	0.00001430
15	Yes	16	0.00010751	0.00012727
16	Yes	17	0.00000001	0.00011588
17	Yes	17	0.00000001	0.00011542
18	Yes	16	0.00010753	0.00012661
19	Yes	17	0.00000001	0.00011593
20	Yes	17	0.00000001	0.00011534
21	Yes	16	0.00010749	0.00012757
22	Yes	17	0.00000001	0.00011757
23	Yes	17	0.00000001	0.00011747
24	Yes	16	0.00010751	0.00012826
25	Yes	17	0.00000001	0.00011776
26	Yes	17	0.00000001	0.00011791
27	Yes	15	0.00007933	0.00005309
28	Yes	16	0.00000001	0.00014873
29	Yes	16	0.00000001	0.00014676
30	Yes	15	0.00007935	0.00005441
31	Yes	16	0.00000001	0.00014356
32	Yes	16	0.00000001	0.00014605
33	Yes	15	0.00007933	0.00005308
34	Yes	16	0.00000001	0.00014367
35	Yes	16	0.00000001	0.00014364
36	Yes	15	0.00007934	0.00005361
37	Yes	16	0.00000001	0.00014869
38	Yes	16	0.00000001	0.00014517

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	155 - 115.5	49.97	31	2.762	0.003
L2	119.25 - 79.25	30.15	27	2.417	0.001
L3	83.75 - 43.75	14.61	27	1.684	0.000
L4	49 - 0	4.92	27	0.931	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
155.00	LPX310R w/ Mount Pipe	31	49.97	2.762	0.003	22714
153.00	800MHz 2X50W RRH W/FILTER	31	48.82	2.749	0.003	22714
151.00	VHLP1-23	31	47.66	2.735	0.002	22714
145.00	RRUS 11	31	44.22	2.692	0.002	11356
143.00	800 10121 w/ Mount Pipe	31	43.08	2.677	0.002	9463
133.00	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	27	37.46	2.589	0.002	5161
113.00	BXA-70063/6CFx2 w/ Mount Pipe	27	27.05	2.313	0.001	3073

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	155 - 115.5	127.31	2	7.045	0.006
L2	119.25 - 79.25	76.89	2	6.167	0.003
L3	83.75 - 43.75	37.28	2	4.300	0.001
L4	49 - 0	12.57	2	2.378	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
155.00	LPX310R w/ Mount Pipe	2	127.31	7.045	0.006	9152
153.00	800MHz 2X50W RRH W/FILTER	2	124.37	7.010	0.006	9152
151.00	VHLP1-23	2	121.44	6.976	0.005	9152
145.00	RRUS 11	2	112.68	6.866	0.005	4574
143.00	800 10121 w/ Mount Pipe	2	109.78	6.827	0.005	3811
133.00	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	2	95.50	6.604	0.004	2076
113.00	BXA-70063/6CFx2 w/ Mount Pipe	2	68.98	5.901	0.004	1230

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	F_a ksi	A in^2	Actual P K	Allow. P_a K	Ratio $\frac{P}{P_a}$
L1	155 - 115.5 (1)	TP29.31x22x0.25	39.50	0.00	0.0	36.00	22.51	-8.73	810.25	0.011
L2	115.5 - 79.25 (2)	TP35.51x28.11x0.31	40.00	0.00	0.0	39.00	34.09	-17.06	1329.50	0.013
L3	79.25 - 43.75 (3)	TP41.46x34.06x0.38	40.00	0.00	0.0	39.00	47.74	-24.67	1861.89	0.013
L4	43.75 - 0 (4)	TP48.8x39.73x0.44	49.00	0.00	0.0	39.00	67.16	-38.45	2619.14	0.015

Pole Bending Design Data

Section No.	Elevation ft	Size	Actual M_x kip-ft	Actual f_{bx} ksi	Allow. F_{bx} ksi	Ratio $\frac{f_{bx}}{F_{bx}}$	Actual M_y kip-ft	Actual f_{by} ksi	Allow. F_{by} ksi	Ratio $\frac{f_{by}}{F_{by}}$
L1	155 - 115.5 (1)	TP29.31x22x0.25	390	29.76	36.00	0.827	0	0.00	36.00	0.000
L2	115.5 - 79.25 (2)	TP35.51x28.11x0.31	1150	47.77	39.00	1.225	0	0.00	39.00	0.000
L3	79.25 - 43.75 (3)	TP41.46x34.06x0.38	2014	51.22	39.00	1.313	0	0.00	39.00	0.000
L4	43.75 - 0 (4)	TP48.8x39.73x0.44	3356	50.31	39.00	1.290	0	0.00	39.00	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V K	Actual f_v ksi	Allow. F_v ksi	Ratio $\frac{f_v}{F_v}$	Actual T kip-ft	Actual f_{vt} ksi	Allow. F_{vt} ksi	Ratio $\frac{f_{vt}}{F_{vt}}$
L1	155 - 115.5 (1)	TP29.31x22x0.25	15.57	0.69	24.00	0.058	0	0.01	24.00	0.000
L2	115.5 - 79.25 (2)	TP35.51x28.11x0.31	23.65	0.69	26.00	0.053	1	0.01	26.00	0.000
L3	79.25 - 43.75 (3)	TP41.46x34.06x0.38	26.01	0.54	26.00	0.042	1	0.01	26.00	0.000
L4	43.75 - 0 (4)	TP48.8x39.73x0.44	28.66	0.43	26.00	0.033	0	0.00	26.00	0.000

Pole Interaction Design Data

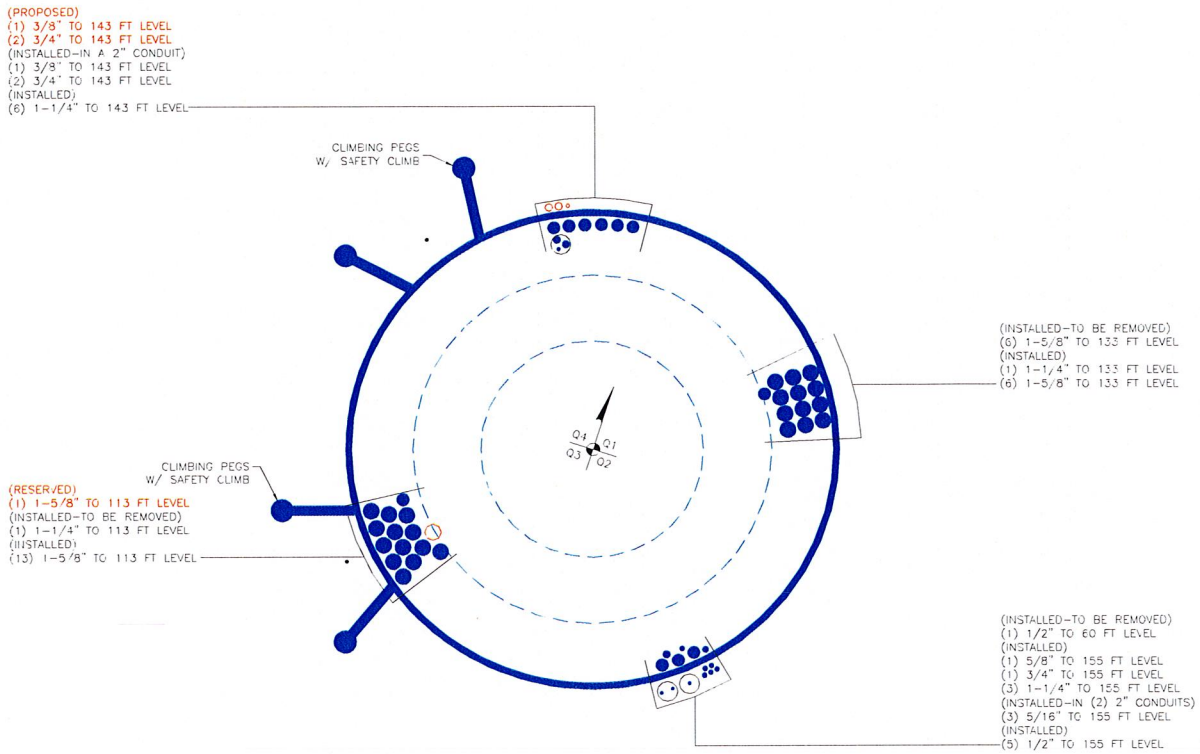
Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	155 - 115.5 (1)	0.011	0.827	0.000	0.058	0.000	0.838 ✔	1.333	H1-3+VT ✔
L2	115.5 - 79.25 (2)	0.013	1.225	0.000	0.053	0.000	1.238 ✔	1.333	H1-3+VT ✔
L3	79.25 - 43.75 (3)	0.013	1.313	0.000	0.042	0.000	1.327 ✔	1.333	H1-3+VT ✔
L4	43.75 - 0 (4)	0.015	1.290	0.000	0.033	0.000	1.305 ✔	1.333	H1-3+VT ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	155 - 115.5	Pole	TP29.31x22x0.25	1	-8.73	1080.07	62.9	Pass
L2	115.5 - 79.25	Pole	TP35.51x28.11x0.31	2	-17.06	1772.22	92.9	Pass
L3	79.25 - 43.75	Pole	TP41.46x34.06x0.38	3	-24.67	2481.90	99.6	Pass
L4	43.75 - 0	Pole	TP48.8x39.73x0.44	4	-38.45	3491.31	97.9	Pass
							Summary	
						Pole (L3)	99.6	Pass
						RATING =	**99.6**	**Pass**

APPENDIX B

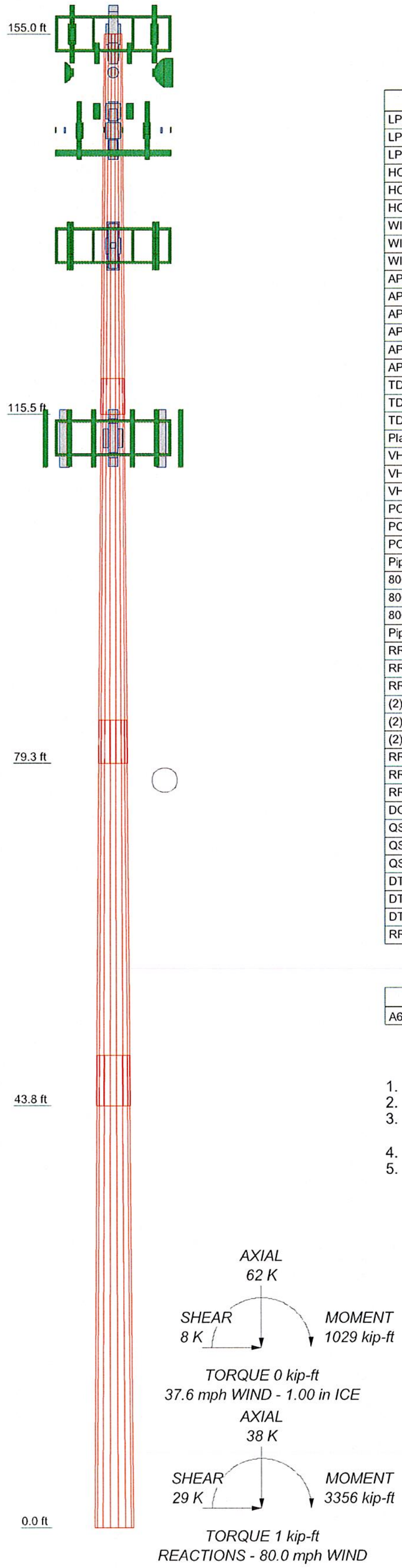
BASE LEVEL DRAWING


(PROPOSED)
(1) 3/8" TO 143 FT LEVEL
(2) 3/4" TO 143 FT LEVEL
(INSTALLED-IN A 2" CONDUIT)
(1) 3/8" TO 143 FT LEVEL
(2) 3/4" TO 143 FT LEVEL
(INSTALLED)
(6) 1-1/4" TO 143 FT LEVEL
CLIMBING PEGS W/ SAFETY CLIMB
(INSTALLED-TO BE REMOVED)
(6) 1-5/8" TO 133 FT LEVEL
(INSTALLED)
(1) 1-1/4" TO 133 FT LEVEL
(6) 1-5/8" TO 133 FT LEVEL
Q4
Q1
Q3
Q2
CLIMBING PEGS W/ SAFETY CLIMB
(RESERVED)
(1) 1-5/8" TO 113 FT LEVEL
(INSTALLED-TO BE REMOVED)
(1) 1-1/4" TO 113 FT LEVEL
(INSTALLED)
(13) 1-5/8" TO 113 FT LEVEL
(INSTALLED-TO BE REMOVED)
(1) 1/2" TO 60 FT LEVEL
(INSTALLED)
(1) 5/8" TO 155 FT LEVEL
(1) 3/4" TO 155 FT LEVEL
(3) 1-1/4" TO 155 FT LEVEL
(INSTALLED-IN (2) 2" CONDUITS)
(3) 5/16" TO 155 FT LEVEL
(INSTALLED)
(5) 1/2" TO 155 FT LEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Section	1	2	3	4
Length (ft)	39.50	40.00	40.00	49.00
Number of Sides	18	18	18	18
Thickness (in)	0.25	0.31	0.38	0.44
Socket Length (ft)	3.75	4.50	5.25	
Top Dia (in)	22.00	28.11	34.06	39.73
Bot Dia (in)	29.31	35.51	41.46	48.80
Grade	A607-60	A607-60	A607-65	A607-65
Weight (K) 23.2	2.7	4.3	6.1	10.1



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
LPX310R w/ Mount Pipe	155	RRUS 32 B30	143
LPX310R w/ Mount Pipe	155	RRUS 32 B30	143
LPX310R w/ Mount Pipe	155	DC6-48-60-18-8F	143
HORIZON COMPACT	155	T-Arm Mount [TA 702-3]	143
HORIZON COMPACT	155	800 10121 w/ Mount Pipe	143
HORIZON COMPACT	155	800 10121 w/ Mount Pipe	143
WIMAX DAP HEAD	155	800 10121 w/ Mount Pipe	143
WIMAX DAP HEAD	155	KRY 112 144/1	133
WIMAX DAP HEAD	155	KRY 112 144/1	133
APXVSPP18-C-A20 w/ Mount Pipe	155	KRY 112 144/1	133
APXVSPP18-C-A20 w/ Mount Pipe	155	KRC 118 057/1 w/ Mount Pipe	133
APXVSPP18-C-A20 w/ Mount Pipe	155	KRC 118 057/1 w/ Mount Pipe	133
APXVTM14-C-120 w/ Mount Pipe	155	KRC 118 057/1 w/ Mount Pipe	133
APXVTM14-C-120 w/ Mount Pipe	155	RRUS 11 B12	133
APXVTM14-C-120 w/ Mount Pipe	155	RRUS 11 B12	133
TD-RRH8x20-25	155	RRUS 11 B12	133
TD-RRH8x20-25	155	(2) 2.375" OD x 5' Mount Pipe	133
TD-RRH8x20-25	155	(2) 2.375" OD x 5' Mount Pipe	133
Platform Mount [LP 713-1]	155	(2) 2.375" OD x 5' Mount Pipe	133
VHLP1-23	155	Platform Mount [LP 403-1]	133
VHLP2.5-18	155	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	133
VHLP2-11	155	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	133
PCS 1900MHz 4x45W-65MHz	153	ERICSSON AIR 21 B2A B4P w/ Mount Pipe	133
PCS 1900MHz 4x45W-65MHz	153	LNX-6512DS-T0M w/ Mount Pipe	113
PCS 1900MHz 4x45W-65MHz	153	LNX-6512DS-T0M w/ Mount Pipe	113
Pipe Mount [PM 601-3]	153	LNX-6512DS-T0M w/ Mount Pipe	113
800MHz 2X50W RRH W/FILTER	153	DB-T1-6Z-8AB-0Z	113
800MHz 2X50W RRH W/FILTER	153	(2) SBNHH-1D65B w/ Mount Pipe	113
800MHz 2X50W RRH W/FILTER	153	(2) SBNHH-1D65B w/ Mount Pipe	113
Pipe Mount [PM 601-3]	145	(2) SBNHH-1D65B w/ Mount Pipe	113
RRUS 11	145	RRH2X60-AWS	113
RRUS 11	145	RRH2X60-AWS	113
RRUS 11	145	RRH2X60-AWS	113
(2) 860 10025	143	RRH2X60-PCS	113
(2) 860 10025	143	RRH2X60-PCS	113
(2) 860 10025	143	RRH2X60-PCS	113
RRUS-11	143	RRH2x60-700	113
RRUS-11	143	RRH2x60-700	113
RRUS-11	143	RRH2x60-700	113
DC6-48-60-18-8F	143	Platform Mount [LP 1201-1]	113
QS66512-2 w/ Mount Pipe	143	BXA-70063/6CFx2 w/ Mount Pipe	113
QS66512-2 w/ Mount Pipe	143	BXA-70063/6CFx2 w/ Mount Pipe	113
QS66512-2 w/ Mount Pipe	143	BXA-70063/6CFx2 w/ Mount Pipe	113
DTMABP7819VG12A	143		
DTMABP7819VG12A	143		
DTMABP7819VG12A	143		
RRUS 32 B30	143		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-60	60 ksi	75 ksi	A607-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80.0 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 37.6 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50.0 mph wind.
5. TOWER RATING: 99.6%

PJF **Paul J. Ford and Company**
250 E. Broad Street, Suite 600
Columbus, OH 43215
Phone: 614.221.6679
FAX: 614.448.4105

Job: **155 ft Monopole / Buckland Mall**			
Project: **PJF 37516-0064 / BU 876347**			
Client: Crown Castle	Drawn by: Joey Meinerding	App'd:	
Code: TIA/EIA-222-F	Date: 05/25/16	Scale: NTS	
Path:		Dwg No. E-1	

Square, Stiffened / Unstiffened Base Plate, Any Rod Material - Rev. F /G

Assumptions: 1) Rod groups at corners. Total # rods divisible by 4. Maximum total # of rods = 48 (12 per Corner).
2) Rod Spacing = Straight Center-to-Center distance between any (2) adjacent rods (same corner)
3) Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#: *876347*
Site Name: *Buckland Mall*
App #:

Anchor Rod Data		
Qty:	16	
Diam:	2.25	in
Rod Material:	A615-J	
Yield, Fy:	75	ksi
Strength, Fu:	100	ksi
Bolt Circle:	56	in
Anchor Spacing:	6	in

Plate Data		
W=Side:	55	in
Thick:	3.25	in
Grade:	50	ksi
Clip Distance:	10	in

Stiffener Data (Welding at both sides)		
Configuration:	Unstiffened	
Weld Type:		**
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		<-- Disregard
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

Pole Data		
Diam:	48.8	in
Thick:	0.4375	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round

Stress Increase Factor		
ASD ASIF:	1.333	

Base Reactions		
TIA Revision:	F	
Unfactored Moment, M:	3356	ft-kips
Unfactored Axial, P:	38	kips
Unfactored Shear, V:	29	kips

Anchor Rod Results

TIA F --> Maximum Rod Tension	177.4 Kips
Allowable Tension:	195.0 Kips
Anchor Rod Stress Ratio:	91.0% **Pass**

Base Plate Results Flexural Check

Base Plate Stress:	39.1 ksi
Allowable PL Bending Stress:	50.0 ksi
Base Plate Stress Ratio:	78.1% **Pass**

PL Ref. Data
Yield Line (in): 28.98
Max PL Length: 28.98

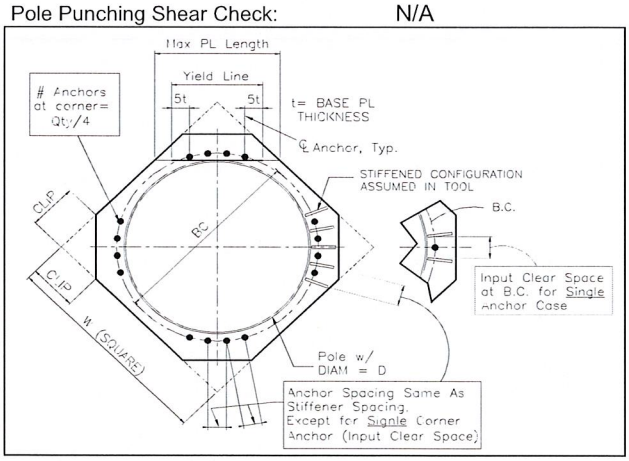
N/A - Unstiffened

Stiffener Results

Horizontal Weld :	N/A
Vertical Weld:	N/A
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	N/A
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	N/A
Plate Comp. (AISC Bracket):	N/A

Pole Results

Pole Punching Shear Check: N/A



** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

PJF job no. **37516-0064.003** Project name **Buckland Mall**

Foundation Loads:

Pole weight or tower leg compression =	38	(kips)
Horizontal load at top of pier =	29	(kips)
Overturning moment at top of pier=	3356	(ft-kips)

Design criteria:

Safety factor against overturning =	2	

Soil Properties:

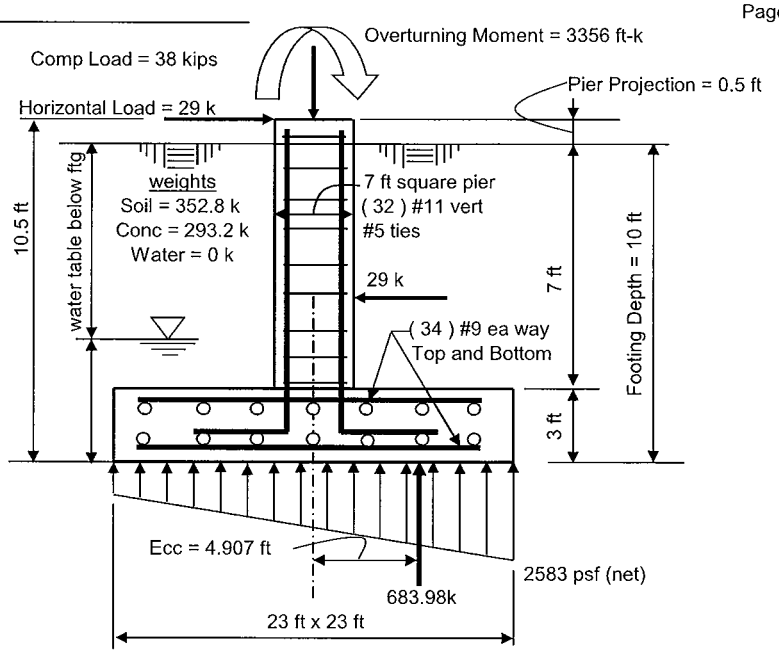
Soil density =	105	(pcf)
Allowable soil bearing =	15	(ksf)
Depth to water table =	99	(ft)

Dimensions:

Pier shape (round or square)	S	("R" or "S")
Pier width =	7	(ft)
Pier height above grade =	0.5	(ft)
depth to bottom of footing =	10	(ft)
Footing thickness =	3	(ft)
Footing width =	23	(ft)
Footing length =	23	(ft)

Concrete:

Concrete strength =	3	(ksi)
Rebar strength =	60	(ksi)
ultimate load factor =	1.3	



Reinforcing Steel:

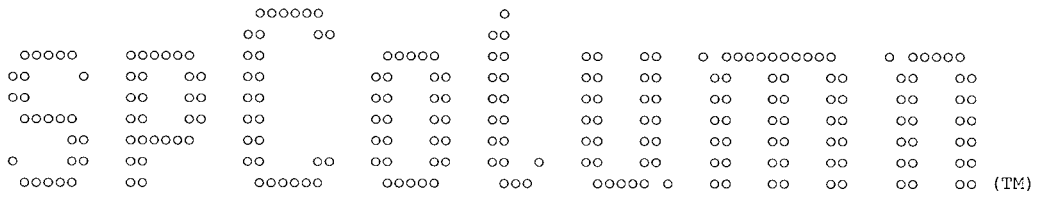
	Pad	
minimum cover over rebar =	3	inches
size of pad rebar =	#9	bar
quantity of pad rebar =	34	(ea direction)

Reinforcing Steel:

	Pier	
size of vert rebar in pier=	#11	bar
vertical rebar quantity =	32	
size of pier ties =	#5	bar
minimum cover over rebar =	3	inches

Total volume of concrete = 72.4 cu yd

Summary of analysis results	
Maximum Net Soil Bearing = 2.583 ksf Allowable Net Soil Bearing = 15 ksf **Soil Bearing Stress Ratio = 0.17 Okay**	Ult Bending Shear Capacity = 110 psi Ult Bending Shear Stress = 36 psi **Bending Shear Stress Ratio = 0.33 Okay**
Ftg Overturning Resistance = 7866 ft-kips Overturning Moment = 3356 ft-kips Required Overturning Safety Factor = 2 Overturning Safety Factor = 2.344 **Ratio = 0.85 Okay**	Pad Bending Moment Capacity= 4569 ft-k Pad Bending Moment = 1355 ft-k **Bending Moment Stress Ratio = 0.3 OK**



spColumn v5.00 (TM)
Computer program for the Strength Design of Reinforced Concrete Sections

General Information:
==========
File Name: T:\375_Crown_Castle\2016\37516-0064_876347_BUCKLAND MALL\37516...\37516-0064.003.7805.col
Project: 37516-0064.003.7805
Column: Engineer: JWM
Code: ACI 318-02 Units: English

Run Option: Investigation Slenderness: Not considered
Run Axis: X-axis Column Type: Structural

Material Properties:
==========
Concrete: Standard Steel: Standard
f'c = 3 ksi fy = 60 ksi
Ec = 3122.02 ksi Es = 29000 ksi
fc = 2.55 ksi Eps_yt = 0.00206897 in/in
Eps_u = 0.003 in/in
Beta1 = 0.85

Section:
==========
Rectangular: Width = 84 in Depth = 84 in

Gross section area, Ag = 7056 in^2
Ix = 4.14893e+006 in^4 Iy = 4.14893e+006 in^4
rx = 24.2487 in ry = 24.2487 in
Xo = 0 in Yo = 0 in

Reinforcement:
==========
Bar Set: ASTM A615

Size	Diam (in)	Area (in^2)	Size	Diam (in)	Area (in^2)	Size	Diam (in)	Area (in^2)
# 3	0.38	0.11	# 4	0.50	0.20	# 5	0.63	0.31
# 6	0.75	0.44	# 7	0.88	0.60	# 8	1.00	0.79
# 9	1.13	1.00	# 10	1.27	1.27	# 11	1.41	1.56
# 14	1.69	2.25	# 18	2.26	4.00			

Confinement: Tied; #5 ties with #11 bars, #5 with larger bars.
phi(a) = 0.8, phi(b) = 0.9, phi(c) = 0.65

Layout: Rectangular
Pattern: All Sides Equal (Cover to transverse reinforcement)
Total steel area: As = 49.92 in^2 at rho = 0.71% (Note: rho < 1.0%)
Minimum clear spacing = 8.01 in

32 #11 Cover = 3 in

Factored Loads and Moments with Corresponding Capacities:
==========

No.	Pu kip	Mux k-ft	PhiMnx k-ft	PhiMn/Mu	NA depth in	Dt depth in	eps_t	Phi
1	38.00	4645.55	8634.73	1.859	8.71	79.67	0.02444	0.900

*** End of output ***

STATE OF CONNECTICUT

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

VIA ELECTRONIC MAIL

RECEIVED NOV 21 2019 Connecticut Siting Council

October 18, 2019

Lucia Chiocchio, Esq.
Cuddy & Feder LLP
445 Hamilton Avenue, 14th Floor
White Plains, New York 10601
lchiocchio@cuddyfeder.com

RE: **<u>2nd Request</u> - Notification of Completion Received/Additional Condition Requirement Outstanding.**

Dear Attorney Chiocchio:

The Connecticut Siting (Council) is in receipt of a construction activity completion letter with an attached spreadsheet dated June 14, 2019 listing completion dates for various AT&T exempt modifications as a result of the 1st Quarter 2018 exempt modification/tower sharing audit. Thank you for providing this information.

On June 21, 2019 the Council sent correspondence with an attached spreadsheet noting that some of the exempt modification decision letters contained site-specific conditions that require written confirmation to the Council certifying that the conditions have been met (spreadsheet attached).

To date, the Council is not in receipt of any communication that the site-specific conditions have been met. You can view the decision letters for each filing on our website at www.ct.gov/csc.

Please also note that exempt modifications **expire one year from their decision letter date** unless a written request for extension is submitted to the Council not less than 60 days prior to the expiration.

The Council hereby requests compliance on these matters no later than December 20, 2019. If additional time is needed to gather the requested information, please notify the Council in writing by December 20, 2019.

If you have any questions or concerns, please call the Council office at 860-827-2935.

Thank you for your attention to this matter.

Sincerely,

Melanie Bachman
Executive Director

MB/IN/laf

Enclosure

EM-AT&T-168-160922
119-160907
094-160211
085-160202
059T-171129
014-160203
077-160223