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

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

March 15, 2011

Thomas J. Regan, Esq.
Brown Rudnick LLP
CityPlace I, 185 Asylum Street
Hartford, CT 06103

RE: **EM-SPRINT-NEXTEL-014-110210** – Sprint Nextel Corporation notice of intent to modify an existing telecommunications facility located at 150 North Main Street, Branford, Connecticut.

Dear Attorney Regan:

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:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

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 10, 2011. 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, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to 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,

Linda Roberts
Executive Director

LR/CDM/laf

c: The Honorable Anthony "Unk" DaRos, First Selectman, Town of Branford
Diana Ross, Inland Wetland Enforcement Officer, Town of Branford
Justine K. Gillen, Zoning Enforcement Officer, Town of Branford
Crown Castle USA, Inc.

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Daniel F. Caruso
Chairman

February 24, 2011

The Honorable Anthony "Unk" DaRos
First Selectman
Town of Branford
Town Hall
1019 Main Street
P. O. Box 150
Branford, CT 06405-0150

RE: **EM-SPRINT-NEXTEL-014-110210** – Sprint Nextel Corporation notice of intent to modify an existing telecommunications facility located at 150 North Main Street, Branford, Connecticut.

Dear First Selectman DaRos:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by March 10, 2011.

Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts

Linda Roberts
Executive Director

LR/jbw

Enclosure: Notice of Intent

c: Diana Ross, Inland Wetland Enforcement Officer, Town of Branford
Justine K. Gillen, Zoning Enforcement Officer, Town of Branford

BROWNRUDNICK

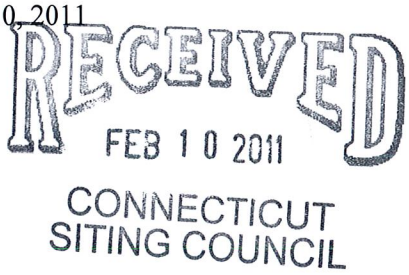
Em-SPRINT-Nextel-014-110210

THOMAS J. REGAN
Direct Dial: (860) 509-6522
tregan@brownrudnick.com

CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

Via Hand Delivery

February 10, 2011



Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification / Branford @ 150 North Main Street

Dear Mr. Caruso:

On behalf of Sprint Nextel Corporation ("Sprint"), enclosed for filing are an original and five (5) copies of Sprint's Notice of Exempt Modification for a Facility located at the above-referenced site.

I also enclose herewith a check in the amount of $625.00 representing the filing fee.

I would appreciate it if you would date-stamp the enclosed copy of this transmittal letter and return it to the courier delivering this package.

If you have any questions, please feel free to contact me.

Very truly yours,

BROWN RUDNICK LLP

By: _____
Thomas J. Regan

Enclosures

cc w/ encl. via 1st Class Mail – First Selectman Anthony DaRos

40281283 v1 - REGANTJ - 025064/0018

EM-SPRINT-NEXTEL-014-110210

CONNECTICUT SIT

In re:
Sprint Nextel Corporation's Notice to Make an Exempt Modification to an Existing Facility at 150 North Main Street, Branford, Connecticut. : **EXEMPT MODIFICATION NO. _____**

February 10, 2011

ORIGINAL

RECEIVED
FEB 10 2011
CONNECTICUT
SITING COUNCIL

NOTICE OF EXEMPT MODIFICATION

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), Sprint Nextel Corporation ("Sprint") hereby gives notice to the Connecticut Siting Council ("Council") and the Town of Branford of Sprint's intent to make an exempt modification to an existing monopole tower (the "Tower") located at 150 North Main Street in Branford, Connecticut. Specifically, Sprint plans to remove and replace existing antennas and install Tower Mounted Amplifiers ("TMA"). Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), Sprint's plans do not constitute a modification subject to the Council's review because Sprint will not change the height of the tower, will not extend the boundaries of the compound, will not increase the noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

Sprint is currently upgrading its existing installations throughout Connecticut. This upgrade is designed to enhance the performance of Sprint's network. Upon completion of the upgrades to Sprint's network, it will offer improved voice and data communications to residents and travelers in Connecticut. In order to accomplish the upgrade at this site, Sprint plans to remove and replace antennas, install TMA and install related electronic equipment at the base of the Tower.

BROWN RUDNICK LLP
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HARTFORD, CT 06103
(860) 509-6500

The Tower is a 150-foot monopole tower located at 150 North Main Street in Branford, Connecticut (latitude 41° 17' 19" N, longitude 72° 48' 49.9" W). The Tower is owned by

Crown Castle. Multiple carriers are currently located on the Tower. Presently, Sprint has 9 antennas, and 3 Samsung RRH spread over three sectors and 2 Dragonwave dishes located on the Tower with a centerline of 147 feet. Sprint's base station equipment is located adjacent to the base of the Tower. A site plan with the Tower specifications is attached.

Sprint's plans to remove and replace 3 of its existing antennas with 3 upgraded antennas (one per sector). Additionally, Sprint proposes to install 2 TMAs on the Tower. The new antennas and TMAs will have the same centerline as the existing antennas – 147 feet. Sprint will continue to utilize its existing coax cables. To confirm that the Tower can support these changes, Sprint commissioned Paul J. Ford and Company to complete the Structural Analysis Report of the Tower (attached). According to the analysis dated November 8, 2010, the structure and foundation have "...sufficient capacity..." to support the existing and proposed loading (Page 1, Structural Analysis Report).

Within the existing compound Sprint will install one MCPA cabinet on its proposed 3-foot by 3-foot (approximately) concrete pad. Sprint's concrete pad will be located adjacent to the existing concrete pad and within the existing fenced area; therefore, no increase in the size of compound is necessary. Excluding brief, minor, construction-related noise during the addition of the antennas and dishes and the installation of the equipment cabinets, the proposed changes to the Tower will not increase noise levels at the site.

The installation of the new antennas and the TMAs will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications

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Commission ("FCC"). A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit 22.55% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, Sprint's proposed plan to remove and replace antennas, install 2 TMAs and associated base station equipment does not constitute a modification subject to the Council's jurisdiction because Sprint will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See* Conn. Agencies Regs. § 16-50j-72.

SPRINT NEXTEL CORPORATION

By: _____

Thomas J. Regan
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6501

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Certificate of Service

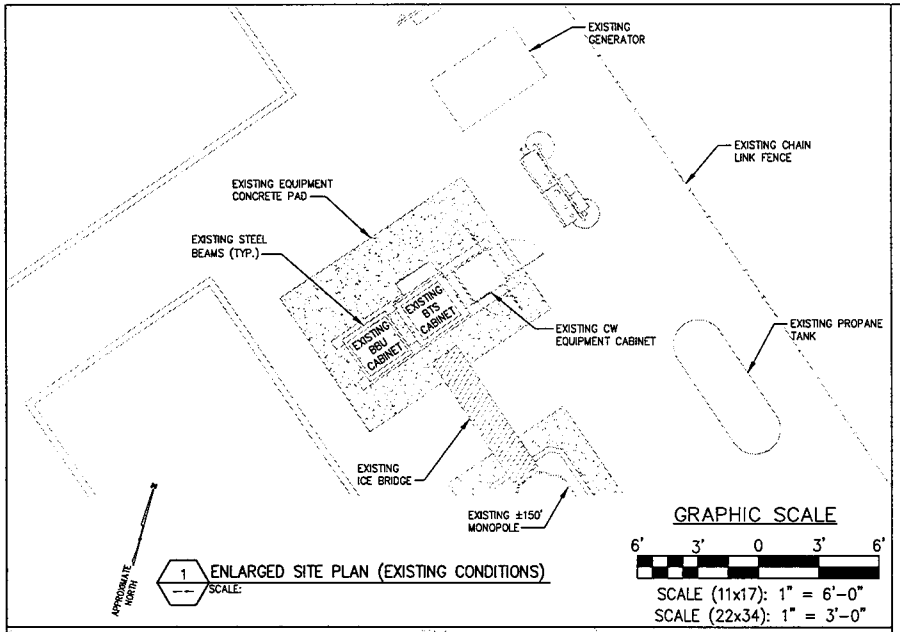
This is to certify that on this 10th day of February, 2011, the foregoing Notice of Exempt Modification was sent, via first class mail, to the following:

Town of Branford
First Selectman Anthony DaRos
1019 Main Street
Branford, CT 06405

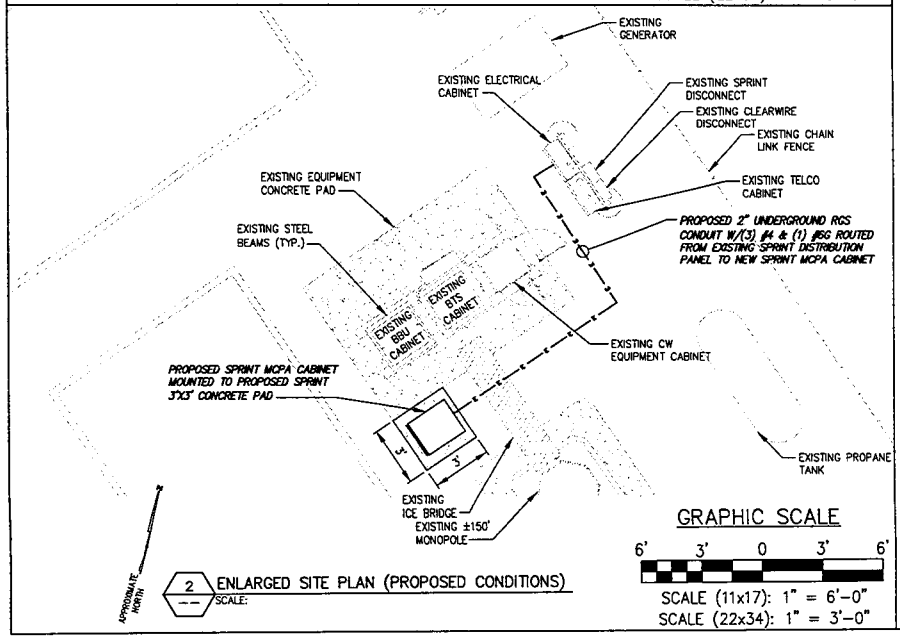
By: _____
Thomas J. Regan

40281219 v1 - 025064/0018

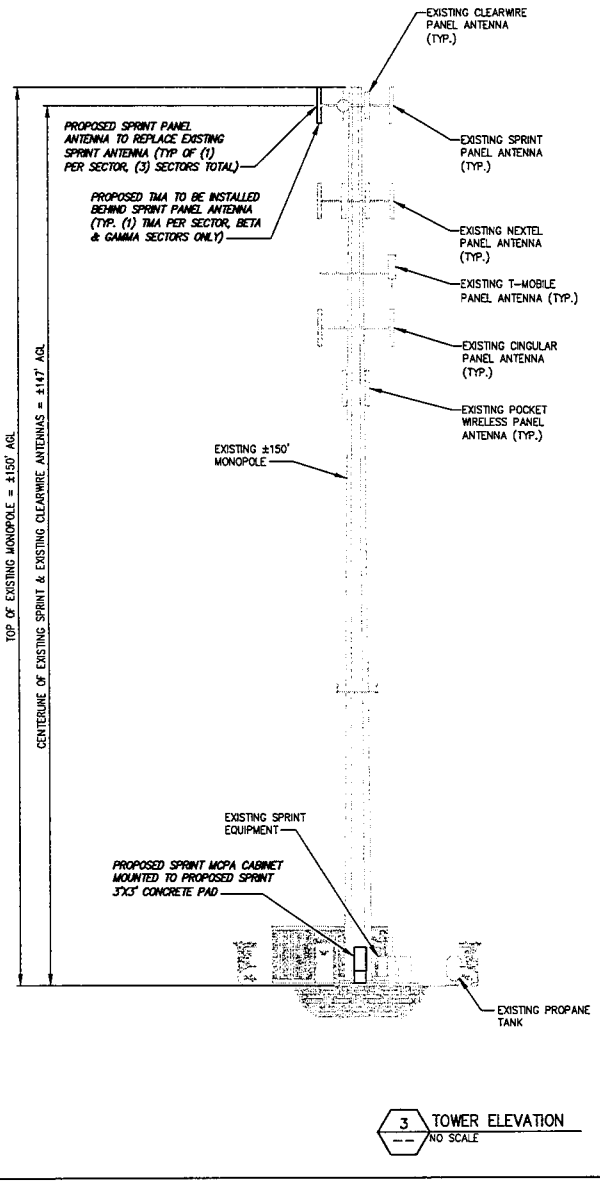
BROWN RUDNICK LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500



1 ENLARGED SITE PLAN (EXISTING CONDITIONS)
SCALE:



2 ENLARGED SITE PLAN (PROPOSED CONDITIONS)
SCALE:



3 TOWER ELEVATION
NO SCALE

NOTES:
- BASEMAPPING BASED ON INFORMATION PROVIDED TO INFINIGY ENGINEERING AND A FIELD VISIT COMPLETED BY INFINIGY ENGINEERING.
- NO ELECTRIC LOAD STUDY WAS COMPLETED AT TIME OF ISSUANCE OF THESE DRAWINGS. CONTRACTOR TO ENSURE INSTALLATION IS PER ALL LOCAL AND NATIONAL CODES.
- INFINIGY ENGINEERING HAS NOT COMPLETED A STRUCTUAL ANALYSIS. INFINIGY ACCEPTS NO LIABILITY FOR THE PROPOSED OR EXISTING INSTALLATION.
- CONTRACTOR TO INSTALL NEW RF JUMPERS FROM EXISTING HARDLINE TO NEW MCPA CABINET. CONTRACTOR TO INSTALL NEW RF JUMPERS FROM MCPA CABINET TO EXISTING BTS CABINET.
- CONTRACTOR TO INSTALL NEW RF JUMPERS FROM PROPOSED TMA TO EXISTING SPRINT PANEL ANTENNAS. CONTRACTOR TO REUSE EXISTING RF JUMPERS FROM EXISTING HARDLINE TO PROPOSED TMA.
- PROPOSED TMA TO BE INSTALLED BEHIND SPRINT PANEL ANTENNA (TYP. (1) TMA PER SECTOR, BETA & GAMMA SECTORS ONLY)
- PROPOSED SPRINT MCPA CABINET TO BE MOUNTED IN EXISTING SPRINT LEASE AREA.

infinigy
engineering & surveying
11 HERBERT DRIVE
LATHAM, NY 12110
OFFICE: (518) 690-0790
FAX: (518) 690-0793

No.	Submittal / Revision	App'd	Date
1	REVISED PER CLIENT	SCB	9/27/10
0	ISSUED FOR REVIEW	MDV	9/16/10

Drawn: MDV Date: 9/8/10
Designed: SJB Date: 9/8/10
Checked: SJB Date: 9/8/10

Project Number
150-004

Project Title
CT03XC040
BRANFORD
BANM TOWER
150 NORTH MAIN STREET
BRANFORD, CT 06405

Prepared For
Sprint
Together with Nextel.
8 AIRLINE DRIVE SUITE 105
ALBANY, NY 12205

Drawing Scale:
AS NOTED
Date:
9/27/10

Drawing Title
EQUIPMENT PLAN & TOWER ELEVATION

Drawing Number
LE

PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street • Suite 1500 • Columbus, Ohio 43215-3708

November 8, 2010
LaTisha Leach
Crown Castle
3530 Toringdon Way
Suite 300
Charlotte, NC 28277
(704) 405-6616

Structure is Adequate
Monopole is Adequate
Foundation is Adequate

Subject: Structural Analysis Report of Existing 147-Ft Monopole

Carrier Designation	Sprint PCS Co-Locate Carrier Site Number: Carrier Site Name:	 CT03XC040 Branford BANM Tower
Crown Castle Designation	Crown Castle BU Number: Crown Castle Site Name: Crown Castle JDE Job Number: Crown Castle Application Number: Crown Castle PO Number: Crown Castle WO Number:	876321 BRANFORD BANM TOWER 141992 106889 Rev. 0 394168 368722
Engineering Firm Designation	Paul J. Ford and Company	37510-1418 R2
Site Data	150 North Main Street, BRANFORD, New Haven County, CT Latitude 41° 17' 19", Longitude -72° 48' 49.9"	

Dear LaTisha Leach,

Paul J. Ford and Company is pleased to submit this "Structural Analysis Report" to determine the structural adequacy of the above monopole. This analysis has been performed in accordance with the Crown Castle Structural "Statement of Work", the terms of the Purchase Order, and the TIA/EIA-222-F Standard for the following Basic Wind Speeds: 85 mph without ice, 37.6 mph with 0.75" radial ice, and 50 mph (Operational) without ice.

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

LC5: Existing + Proposed Equipment — **Sufficient Capacity**
Note: See Table 1 and Table 2 for the proposed and existing loading, respectively.

Based on our analysis, we have determined that the existing monopole structure and foundation have sufficient capacity to adequately support the existing and proposed loading. Modifications are not required at this time.

Respectfully submitted,

Ellen T. Swanson, EI
Structural Engineer
eswanson@pjfweb.com

STATE OF CONNECTICUT
JOSEPH PACHICARAH JACOBS
No. PEN 22731
LICENSED PROFESSIONAL ENGINEER
NOV 09 2010

TABLE OF CONTENTS

INTRODUCTION

At the request of Crown Castle, Paul J. Ford and Company has analyzed the monopole at the BRANFORD BANM TOWER site located in BRANFORD, New Haven County, CT. This structural analysis has been performed in accordance with the TIA/EIA-222-F-1996 Standard, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures" to determine if the monopole structure has adequate capacity to support the existing and proposed antenna loading.

ANALYSIS CRITERIA

The existing monopole has been analyzed for the antenna and coax loading listed in Tables 1 and 2 below. The monopole has been analyzed in accordance with the TIA/EIA-222-F-1996 Standard for the following fastest-mile Basic Wind Speeds: 85 mph without ice, 37.6 with 0.75" radial ice, and 50 mph without ice as recommended for New Haven County, CT.

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
147	149	6	Andrew	HBX-9014DS-R2M w/ Pipe	-	-	Proposed
		2	Comm Components	TMA-CE-1819-200MC			

Table 2 - Existing 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
147	149	2	Dragonwave	A-ANT-23G-2-C	6* (E) 6 (I) 5 (E)	5/16 1-5/8 1/2	Existing
	147	1	-	Platform Mount [LP 403-1]			
	145	3	Argus	LLPX310R W/ MOUNT PIPE			
		3	Samsung	FDD_R6_RRH			
131	132	12	Decibel	DB844H90E-XY w/Mount Pipe	12 (I)	1-5/8	Existing
	131	1	-	12' Low Profile Platform			
119	122	3	RFS	APX16DWV-16DWVS-C w/ mount pipe	12 (I)	1-5/8	Existing
		6	Remec	S20057A-1			
	119	1	-	(3) 12' T-Arm Mounts			
110	112	6	Powerwave	7770 w/ Mount Pipe	12 (I)	1-1/4	Existing
		12	Powerwave	LGP2140X			
	110	1	-	12' Low Profile Platform			
100	100	3	RFS/Celwave	APXV18-206517S-C w/ Pipe	6 (E)	1-5/8	Existing
		1	-	Pipe Mount [PM 602-3]			
60	60	-	-	-	1 (I)	1/2	Existing
49	49	1	-	Side Arm Mount [SO 701-1]	1 (I)	1/2	Existing
		1	Lucent	KS24019-L112A			

*Coax installed inside (1) externally mounted 3" diameter conduit.
(E) Coax to be mounted externally and exposed to the wind. See coax layout in Appendix B.
(I) Coax to be mounted internally and shielded from the wind. See coax layout in Appendix B.

Information for the existing monopole and foundation is based on the available drawings, documents, and/or information listed in Table 3 below.

Table 3 - Reference Documents Provided

Document	Source	Reference	Remarks
Proposed Antenna Loading	Crown Castle	876321	
Existing Antenna Loading	Crown Castle	876321	
Tower Reinforcement Design/Drawings/Data	CCISITES	2431042	PJF, 41709-0058 Record, 06/15/09
Geotechnical Reports	CCISITES	2135657	Dr. Clarence Welti, 10/08/96
Tower Foundation Drawings/Design/Specs	CCISITES	1613620	PJF, 29299-111, 03/15/99
Tower Manufacturer Drawings	CCISITES	1614568	PJF, 29299-111, 03/15/99
Structural Analysis	CCISITES	2724058	PJF, 37510-1418 R1, 9/21/2010

ANALYSIS PROCEDURE

ANALYSIS METHODS

RISA Tower (Version 5.4.2.0), a commercially available software program, was used to create a three-dimensional model of the monopole and calculate member stresses for various dead, live, wind, and ice load cases. The analysis was performed in accordance with the TIA/EIA-222-F Standard. Selected output from the analysis is included in Appendix A.

ASSUMPTIONS

1. Monopole was fabricated and installed in accordance with the manufacturer's specifications.
2. Monopole has been properly maintained in accordance with manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4. Monopole was reinforced in conformance with the referenced modification drawings.
5. This analysis does not use standard Crown Castle antenna mount wind areas for mount(s). The antenna mount wind areas have been reduced to account for shielding from the antennas.

If any of the above assumptions are not valid or have been made in error, then the results of this analysis may be affected. In that case, please notify Paul J. Ford and Company immediately so that we can review any new and/or modified information and determine its affect on the analysis results regarding the structural adequacy of the monopole and foundation.

ANALYSIS RESULTS

Our structural analysis indicates that the existing monopole structure and foundation have sufficient capacity to adequately support the existing and proposed loading.

Table 4 - Component Stresses vs. Capacity

Notes	Component	Elevation ft	% Capacity	Pass / Fail
Risa Tower Analysis Summary:				
	L1	147 - 99.5	61.6	Pass
	L2	99.5 - 68.5	85.3	Pass
	L3	68.5 - 59	73.8	Pass
	L4	59 - 49.5	86.4	Pass
	L5	49.5 - 29.25	83.4	Pass
	L6	29.25 - 23	88.6	Pass
	L7	23 - 0	88.9	Pass
Additional Components:				
	Base Plate	0 - 0	39.7	Pass
	Anchor Rods	0 - 0	81.6	Pass
	Foundation (Soil) - PLS Caisson Methodology	0 - 0	87.3	Pass
	Foundation (Structural) - PLS Caisson Methodology	0 - 0	91.4	Pass
			Structural Rating (maximum capacity of all components) =	91.4

As summarized in Table 4 above, our analysis indicates that the existing monopole structure and foundation have sufficient capacity to adequately support the existing and proposed loading. Modifications are not required at this time.

*Foundation Analysis Notes: According to the procedures prescribed and agreed to by the Crown Castle Engineering Foundation Committee in January 2010, the existing caisson foundation was analyzed using the methodology in the software 'PLS-Caisson' (Version 8.10, or newer, by Power Line Systems, Inc.). Per the methods in PLS-Caisson, the soil reactions of cohesive soils are calculated using 8CD independent of the depth of the soil layer. The depth of soil to be ignored at the top of the caisson is the greater of the geotechnical report's recommendation, the frost depth of the site or half of the caisson diameter.

Table 5 - Microwave Dish Tilt (Sway) Results for 50 mph Service Wind

Dish Elevation ft	Dish	Dish Diameter ft	Dish Frequency GHz	Analysis Results Tilt(Sway) at Service Wind deg
149	Andrew VHLP2-18	2.18	19.70	1.97
	Andrew VHLP2.5-18	2.92	19.70	1.97

APPENDIX A

Output From Computer Programs

Tower Input Data

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

Tower is located in New Haven County, Connecticut.
Basic wind speed of 85 mph.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 38 mph is used in combination with ice.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	√ Treat Feedline Bundles As Cylinder
Consider Moments - Horizontals	Assume Legs Pinned	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Calculate Redundant Bracing Forces
Use Moment Magnification	√ Use Clear Spans For Wind Area	Ignore Redundant Members in FEA
√ Use Code Stress Ratios	Use Clear Spans For KL/r	SR Leg Bolts Resist Compression
√ Use Code Safety Factors - Guys	Retension Guys To Initial Tension	All Leg Panels Have Same Allowable
√ Escalate Ice	√ Bypass Mast Stability Checks	Offset Girt At Foundation
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Consider Feedline Torque
Use Special Wind Profile	√ Project Wind Area of Appurt.	Include Angle Block Shear Check
Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
Leg Bolts Are At Top Of Section	SR Members Have Cut Ends	√ Include Shear-Torsion Interaction
Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
Add IBC .6D+W Combination		

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	147.00-99.50	47.50	3.75	12	22.0000	30.3130	0.2500	1.0000	A607-60 (60 ksi)
L2	99.50-68.50	34.75	0.00	12	29.1567	35.2376	0.3125	1.2500	A607-65 (65 ksi)
L3	68.50-59.00	9.50	4.75	12	35.2376	36.9000	0.3804	1.5217	65 ksi (w/ Reinf.) (65 ksi)
L4	59.00-49.50	14.25	0.00	12	35.3079	37.9374	0.3750	1.5000	A607-65 (65 ksi)
L5	49.50-29.25	20.25	5.25	12	37.9374	41.4810	0.4251	1.7002	65 ksi (w/ Reinf.)

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
L6	29.25-23.00	11.50	0.00	12	39.7122	41.8248	0.4375	1.7500	(65 ksi) A607-65 (65 ksi)
L7	23.00-0.00	23.00		12	41.8248	45.8500	0.4708	1.8830	65 ksi (w/ Reinf.) (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	22.7761	17.5087	1057.2060	7.7865	11.3960	92.7699	2142.1860	8.6173	5.2260	20.904
	31.3823	24.2007	2791.7645	10.7626	15.7021	177.7952	5656.8718	11.9109	7.4539	29.816
L2	30.8646	29.0245	3082.2498	10.3262	15.1032	204.0796	6245.4738	14.2850	6.9765	22.325
	36.4806	35.1434	5471.4800	12.5032	18.2531	299.7566	11086.701 9	17.2965	8.6062	27.54
L3	36.4806	42.6995	6622.0576	12.4789	18.2531	362.7913	13418.084 0	21.0154	8.4241	22.144
	38.2017	44.7359	7615.4145	13.0740	19.1142	398.4166	15430.894 4	22.0177	8.8696	23.315
L4	37.4609	42.1815	6570.1987	12.5060	18.2895	359.2331	13313.003 8	20.7605	8.4575	22.553
	39.2757	45.3566	8168.3265	13.4473	19.6516	415.6576	16551.244 0	22.3231	9.1622	24.433
L5	39.2757	51.3429	9221.7751	13.4294	19.6516	469.2640	18685.816 6	25.2694	9.0281	21.24
	42.9443	56.1930	12089.826 3	14.6980	21.4872	562.6536	24497.265 7	27.6565	9.9777	23.474
L6	42.1115	55.3282	10893.250 2	14.0603	20.5709	529.5465	22072.678 3	27.2309	9.4704	21.647
	43.3002	58.3044	12747.386 8	14.8167	21.6652	588.3795	25829.661 7	28.6956	10.0365	22.941
L7	43.3002	62.6864	13683.437 3	14.8047	21.6652	631.5847	27726.353 7	30.8523	9.9474	21.131
	47.4674	68.7880	18080.608 0	16.2458	23.7503	761.2791	36636.213 7	33.8554	11.0262	23.422

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
L1 147.00-99.50				1	1	1		
L2 99.50-68.50				1	1	1		
L3 68.50-59.00				1	1	1		
L4 59.00-49.50				1	1	1		
L5 49.50-29.25				1	1	1		
L6 29.25-23.00				1	1	1		
L7 23.00-0.00				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
LDF7-50A (1 5/8" foam)	C	No	Inside Pole	147.00 - 0.00	6	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
						2" Ice	0.00	0.92
						4" Ice	0.00	0.92
***								
9207 (5/16 FOEM)	A	No	CaAa (Out Of Face)	147.00 - 0.00	6	No Ice	0.00	1.00
						1/2" Ice	0.00	1.32
						1" Ice	0.00	2.26
						2" Ice	0.00	5.96
						4" Ice	0.00	20.69
LDF4-50A (1/2" foam)	A	No	CaAa (Out Of Face)	147.00 - 0.00	5	No Ice	0.00	0.15
						1/2" Ice	0.00	0.84
						1" Ice	0.00	2.14
						2" Ice	0.00	6.58
						4" Ice	0.00	22.78
3" Conduit	A	No	CaAa (Out Of Face)	147.00 - 0.00	1	No Ice	0.25	0.95
						1/2" Ice	0.35	0.95
						1" Ice	0.45	0.95
						2" Ice	0.65	0.95
						4" Ice	1.05	0.95
***								
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	131.00 - 0.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
***								
LDF7-50A (1 5/8" foam)	C	No	Inside Pole	119.00 - 0.00	12	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
						2" Ice	0.00	0.92
						4" Ice	0.00	0.92
***								
LDF6-50 (1 1/4" foam)	C	No	Inside Pole	110.00 - 0.00	12	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
						2" Ice	0.00	0.66
						4" Ice	0.00	0.66
***								
LDF7-50A (1-5/8 FOAM)	C	No	CaAa (Out Of Face)	100.00 - 0.00	6	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
**								
LDF4P-50A (1/2 FOAM)	C	No	Inside Pole	60.00 - 0.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
						2" Ice	0.00	0.15
						4" Ice	0.00	0.15
**								
LDF4P-50A (1/2 FOAM)	C	No	Inside Pole	49.00 - 0.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
						2" Ice	0.00	0.15
						4" Ice	0.00	0.15
**								
Aero MP3-04	C	No	CaAa (Out Of Face)	25.50 - 0.00	1	No Ice	0.27	0.00
						1/2" Ice	0.38	0.00
						1" Ice	0.49	0.00
						2" Ice	0.71	0.00
						4" Ice	1.16	0.00
Aero MP3-04	C	No	CaAa (Out Of Face)	52.00 - 32.00	1	No Ice	0.27	0.00
						1/2" Ice	0.38	0.00

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
						1" Ice	0.49	0.00
						2" Ice	0.71	0.00
						4" Ice	1.16	0.00
Aero MP3-04	C	No	CaAa (Out Of Face)	71.00 - 61.00	1	No Ice	0.27	0.00
						1/2" Ice	0.38	0.00
						1" Ice	0.49	0.00
						2" Ice	0.71	0.00
						4" Ice	1.16	0.00
LDF7-50A (1-5/8 FOAM)	C	No	CaAa (Out Of Face)	32.00 - 25.50	1	No Ice	0.20	0.00
						1/2" Ice	0.30	0.00
						1" Ice	0.40	0.00
						2" Ice	0.60	0.00
						4" Ice	1.00	0.00
LDF7-50A (1-5/8 FOAM)	C	No	CaAa (Out Of Face)	61.00 - 52.00	1	No Ice	0.20	0.00
						1/2" Ice	0.30	0.00
						1" Ice	0.40	0.00
						2" Ice	0.60	0.00
						4" Ice	1.00	0.00
LDF7-50A (1-5/8 FOAM)	C	No	CaAa (Out Of Face)	100.00 - 71.00	1	No Ice	0.20	0.00
						1/2" Ice	0.30	0.00
						1" Ice	0.40	0.00
						2" Ice	0.60	0.00
						4" Ice	1.00	0.00

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	147.00-99.50	A	0.000	0.000	0.000	11.875	0.37
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.099	0.87
L2	99.50-68.50	A	0.000	0.000	0.000	7.750	0.24
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	6.316	1.22
L3	68.50-59.00	A	0.000	0.000	0.000	2.375	0.07
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	2.414	0.37
L4	59.00-49.50	A	0.000	0.000	0.000	2.375	0.07
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	2.059	0.37
L5	49.50-29.25	A	0.000	0.000	0.000	5.062	0.16
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	5.252	0.80
L6	29.25-23.00	A	0.000	0.000	0.000	1.562	0.05
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	1.415	0.25
L7	23.00-0.00	A	0.000	0.000	0.000	5.750	0.18
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	6.188	0.91

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	147.00-99.50	A	0.878	0.000	0.000	0.000	20.213	1.06
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.187	0.87
L2	99.50-68.50	A	0.839	0.000	0.000	0.000	13.192	0.69

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	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.806	1.22
L3	68.50-59.00	A	0.812	0.000	0.000	0.000	3.917	0.20
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	4.091	0.37
L4	59.00-49.50	A	0.796	0.000	0.000	0.000	3.917	0.20
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	3.646	0.37
L5	49.50-29.25	A	0.766	0.000	0.000	0.000	8.164	0.40
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	8.652	0.80
L6	29.25-23.00	A	0.750	0.000	0.000	0.000	2.520	0.12
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	2.415	0.25
L7	23.00-0.00	A	0.750	0.000	0.000	0.000	9.200	0.44
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	10.021	0.91

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	147.00-99.50	-0.0028	-0.3345	-0.0047	-0.5022
L2	99.50-68.50	-0.2272	-0.1901	-0.3666	-0.2606
L3	68.50-59.00	-0.2823	-0.1581	-0.4217	-0.2231
L4	59.00-49.50	-0.2449	-0.1844	-0.3834	-0.2538
L5	49.50-29.25	-0.2916	-0.1566	-0.4299	-0.2207
L6	29.25-23.00	-0.2586	-0.1801	-0.3965	-0.2484
L7	23.00-0.00	-0.3060	-0.1517	-0.4481	-0.2163

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(2) Andrew HBX-9014DS-R2M w/ Mount Pipe	A	From Face	4.00 0.00 0.00	0.0000	149.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.62 4.01 4.45 5.35 7.30	3.76 4.38 5.02 6.35 9.47	0.06 0.10 0.15 0.26 0.59
(2) Andrew HBX-9014DS-R2M w/ Mount Pipe	B	From Face	4.00 0.00 0.00	0.0000	149.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.62 4.01 4.45 5.35 7.30	3.76 4.38 5.02 6.35 9.47	0.06 0.10 0.15 0.26 0.59
(2) Andrew HBX-9014DS-R2M w/ Mount Pipe	C	From Face	4.00 0.00 0.00	0.0000	149.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.62 4.01 4.45 5.35 7.30	3.76 4.38 5.02 6.35 9.47	0.06 0.10 0.15 0.26 0.59

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			
CE-1819-200MC	B	From Face	4.00 0.00 0.00	0.0000	149.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.44 0.56 0.69 0.97 1.63	1.17 1.32 1.48 1.83 2.62	0.01 0.02 0.03 0.05 0.13
CE-1819-200MC	C	From Face	4.00 0.00 0.00	0.0000	149.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.44 0.56 0.69 0.97 1.63	1.17 1.32 1.48 1.83 2.62	0.01 0.02 0.03 0.05 0.13
Platform Mount [LP 403-1]	C	None		0.0000	147.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	18.85 24.30 29.75 40.65 62.45	18.85 24.30 29.75 40.65 62.45	1.50 1.80 2.09 2.69 3.87
**									
LLPX310R W/ MOUNT PIPE	A	From Face	4.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.96 5.35 5.75 6.58 8.37	2.85 3.37 3.90 5.08 7.84	0.04 0.08 0.12 0.23 0.53
LLPX310R W/ MOUNT PIPE	B	From Face	4.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.96 5.35 5.75 6.58 8.37	2.85 3.37 3.90 5.08 7.84	0.04 0.08 0.12 0.23 0.53
LLPX310R W/ MOUNT PIPE	C	From Face	4.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	4.96 5.35 5.75 6.58 8.37	2.85 3.37 3.90 5.08 7.84	0.04 0.08 0.12 0.23 0.53
FDD_R6_RRH	A	From Face	4.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.79 1.97 2.16 2.57 3.49	0.99 1.24 1.50 2.10 3.53	0.04 0.05 0.07 0.12 0.27
FDD_R6_RRH	B	From Face	4.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.79 1.97 2.16 2.57 3.49	0.99 1.24 1.50 2.10 3.53	0.04 0.05 0.07 0.12 0.27
FDD_R6_RRH	C	From Face	4.00 0.00 0.00	0.0000	145.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.79 1.97 2.16 2.57 3.49	0.99 1.24 1.50 2.10 3.53	0.04 0.05 0.07 0.12 0.27
**									
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(4) DB844H90E-XY w/Mount Pipe	A	From Face	4.00 0.00 0.00	0.0000	132.00	No Ice 1/2" Ice Ice	3.58 4.20 4.73	5.40 6.49 7.30	0.04 0.08 0.13

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice	5.86	8.96	0.25
						2" Ice	8.27	12.49	0.62
						4" Ice			
(4) DB844H90E-XY w/Mount Pipe	B	From Face	4.00 0.00 0.00	0.0000	132.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.58 4.20 4.73 5.86 8.27	5.40 6.49 7.30 8.96 12.49	0.04 0.08 0.13 0.25 0.62
(4) DB844H90E-XY w/Mount Pipe	C	From Face	4.00 0.00 0.00	0.0000	132.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	3.58 4.20 4.73 5.86 8.27	5.40 6.49 7.30 8.96 12.49	0.04 0.08 0.13 0.25 0.62
12' Low Profile Platform	C	None		0.0000	131.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	22.61 25.26 27.91 33.21 43.81	22.61 25.26 27.91 33.21 43.81	0.93 1.20 1.47 2.01 3.09
***									
RFS APX16DWV-16DWVS-C w/ mount pipe	A	From Face	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.15 7.62 8.10 9.09 11.18	3.34 3.99 4.64 6.01 9.00	0.06 0.10 0.16 0.28 0.65
RFS APX16DWV-16DWVS-C w/ mount pipe	B	From Face	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.15 7.62 8.10 9.09 11.18	3.34 3.99 4.64 6.01 9.00	0.06 0.10 0.16 0.28 0.65
RFS APX16DWV-16DWVS-C w/ mount pipe	C	From Face	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.15 7.62 8.10 9.09 11.18	3.34 3.99 4.64 6.01 9.00	0.06 0.10 0.16 0.28 0.65
(2) Remec S20057A-1	A	From Face	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.83 0.96 1.10 1.41 2.13	0.39 0.50 0.62 0.89 1.52	0.01 0.01 0.02 0.04 0.11
(2) Remec S20057A-1	B	From Face	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.83 0.96 1.10 1.41 2.13	0.39 0.50 0.62 0.89 1.52	0.01 0.01 0.02 0.04 0.11
(2) Remec S20057A-1	C	From Face	4.00 0.00 0.00	0.0000	122.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.83 0.96 1.10 1.41 2.13	0.39 0.50 0.62 0.89 1.52	0.01 0.01 0.02 0.04 0.11
12' T-Arm Mounts	C	None		0.0000	119.00	No Ice 1/2" Ice 1" Ice	12.00 15.00 18.00 24.00	12.00 15.00 18.00 24.00	0.80 0.88 0.96 1.12

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	36.00	36.00	1.44
						4" Ice			
***									
(2) Powerwave 7770 w/ Mount Pipe	A	From Face	4.00 0.00 0.00	0.0000	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.98 6.44 6.91 7.87 9.91	4.12 4.77 5.43 6.81 9.98	0.06 0.11 0.16 0.29 0.65
(2) Powerwave 7770 w/ Mount Pipe	B	From Face	4.00 0.00 0.00	0.0000	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.98 6.44 6.91 7.87 9.91	4.12 4.77 5.43 6.81 9.98	0.06 0.11 0.16 0.29 0.65
(2) Powerwave 7770 w/ Mount Pipe	C	From Face	4.00 0.00 0.00	0.0000	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.98 6.44 6.91 7.87 9.91	4.12 4.77 5.43 6.81 9.98	0.06 0.11 0.16 0.29 0.65
(4) LGP2140X	A	From Face	4.00 0.00 0.00	0.0000	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.23 1.38 1.54 1.89 2.69	0.26 0.34 0.44 0.64 1.16	0.00 0.01 0.02 0.04 0.12
(4) LGP2140X	B	From Face	4.00 0.00 0.00	0.0000	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.23 1.38 1.54 1.89 2.69	0.26 0.34 0.44 0.64 1.16	0.00 0.01 0.02 0.04 0.12
(4) LGP2140X	C	From Face	4.00 0.00 0.00	0.0000	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.23 1.38 1.54 1.89 2.69	0.26 0.34 0.44 0.64 1.16	0.00 0.01 0.02 0.04 0.12
12' Low Profile Platform	C	None		0.0000	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	19.02 22.72 26.42 33.82 48.62	19.02 22.72 26.42 33.82 48.62	0.93 1.20 1.47 2.01 3.09
***									
APXV18-206517S-C w/ Mount Pipe	A	From Face	1.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.40 5.96 6.48 7.55 9.92	4.70 5.86 6.73 8.51 12.28	0.05 0.09 0.15 0.28 0.68
APXV18-206517S-C w/ Mount Pipe	B	From Face	1.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	5.40 5.96 6.48 7.55 9.92	4.70 5.86 6.73 8.51 12.28	0.05 0.09 0.15 0.28 0.68
APXV18-206517S-C w/ Mount Pipe	C	From Face	1.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	5.40 5.96 6.48 7.55	4.70 5.86 6.73 8.51	0.05 0.09 0.15 0.28

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						2" Ice	9.92	12.28	0.68
						4" Ice			
Pipe Mount [PM 602-3]	C	None		0.0000	100.00	No Ice	7.68	7.68	0.28
						1/2" Ice	9.50	9.50	0.35
						1" Ice	11.32	11.32	0.43
						2" Ice	14.96	14.96	0.58
						4" Ice	22.24	22.24	0.87
Side Arm Mount [SO 701-1]	C	None		0.0000	49.00	No Ice	0.85	1.67	0.07
						1/2" Ice	1.14	2.34	0.08
						1" Ice	1.43	3.01	0.09
						2" Ice	2.01	4.35	0.12
						4" Ice	3.17	7.03	0.18
KS24019-L112A	C	From Face	2.00 0.00 0.00	0.0000	49.00	No Ice	0.16	0.16	0.01
						1/2" Ice	0.22	0.22	0.01
						1" Ice	0.30	0.30	0.01
						2" Ice	0.48	0.48	0.02
						4" Ice	0.95	0.95	0.06

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
A-ANT-23G-2-C	A	Paraboloid w/o Radome	From Face	4.00 0.00 0.00	0.0000		149.00	2.17	No Ice	3.72	0.01
									1/2" Ice	4.01	0.02
									1" Ice	4.30	0.03
									2" Ice	4.88	0.04
									4" Ice	6.04	0.07
A-ANT-23G-2-C	C	Paraboloid w/o Radome	From Face	4.00 0.00 0.00	0.0000		149.00	2.17	No Ice	3.72	0.01
									1/2" Ice	4.01	0.02
									1" Ice	4.30	0.03
									2" Ice	4.88	0.04
									4" Ice	6.04	0.07

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 147.00-99.50	122.32	1.454	27	103.536	A	0.000	103.536	103.536	100.00	0.000	11.875
					B	0.000	103.536		100.00	0.000	0.000
					C	0.000	103.536		100.00	0.000	0.099
L2 99.50-	83.77	1.305	24	84.024	A	0.000	84.024	84.024	100.00	0.000	7.750

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
68.50					B	0.000	84.024		100.00	0.000	0.000
					C	0.000	84.024		100.00	0.000	6.316
L3 68.50-59.00	63.71	1.207	22	28.554	A	0.000	28.554	28.554	100.00	0.000	2.375
					B	0.000	28.554		100.00	0.000	0.000
					C	0.000	28.554		100.00	0.000	2.414
L4 59.00-49.50	54.21	1.152	21	29.340	A	0.000	29.340	29.340	100.00	0.000	2.375
					B	0.000	29.340		100.00	0.000	0.000
					C	0.000	29.340		100.00	0.000	2.059
L5 49.50-29.25	39.22	1.051	19	67.009	A	0.000	67.009	67.009	100.00	0.000	5.062
					B	0.000	67.009		100.00	0.000	0.000
					C	0.000	67.009		100.00	0.000	5.252
L6 29.25-23.00	26.11	1	18	21.485	A	0.000	21.485	21.485	100.00	0.000	1.562
					B	0.000	21.485		100.00	0.000	0.000
					C	0.000	21.485		100.00	0.000	1.415
L7 23.00-0.00	11.32	1	18	84.022	A	0.000	84.022	84.022	100.00	0.000	5.750
					B	0.000	84.022		100.00	0.000	0.000
					C	0.000	84.022		100.00	0.000	6.188

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 147.00-99.50	122.32	1.454	5	0.8777	110.484	A	0.000	110.484	110.484	100.00	0.000	20.213
						B	0.000	110.484		100.00	0.000	0.000
						C	0.000	110.484		100.00	0.000	0.187
L2 99.50-68.50	83.77	1.305	5	0.8387	88.558	A	0.000	88.558	88.558	100.00	0.000	13.192
						B	0.000	88.558		100.00	0.000	0.000
						C	0.000	88.558		100.00	0.000	11.806
L3 68.50-59.00	63.71	1.207	4	0.8116	29.840	A	0.000	29.840	29.840	100.00	0.000	3.917
						B	0.000	29.840		100.00	0.000	0.000
						C	0.000	29.840		100.00	0.000	4.091
L4 59.00-49.50	54.21	1.152	4	0.7960	30.625	A	0.000	30.625	30.625	100.00	0.000	3.917
						B	0.000	30.625		100.00	0.000	0.000
						C	0.000	30.625		100.00	0.000	3.646
L5 49.50-29.25	39.22	1.051	4	0.7657	69.594	A	0.000	69.594	69.594	100.00	0.000	8.164
						B	0.000	69.594		100.00	0.000	0.000
						C	0.000	69.594		100.00	0.000	8.652
L6 29.25-23.00	26.11	1	4	0.7500	22.282	A	0.000	22.282	22.282	100.00	0.000	2.520
						B	0.000	22.282		100.00	0.000	0.000
						C	0.000	22.282		100.00	0.000	2.415
L7 23.00-0.00	11.32	1	4	0.7500	86.897	A	0.000	86.897	86.897	100.00	0.000	9.200
						B	0.000	86.897		100.00	0.000	0.000
						C	0.000	86.897		100.00	0.000	10.021

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 147.00-	122.32	1.454	9	103.53	A	0.000	103.536	103.536	100.00	0.000	11.875

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
99.50				6	B	0.000	103.536		100.00	0.000	0.000
					C	0.000	103.536		100.00	0.000	0.099
L2 99.50-68.50	83.77	1.305	8	84.024	A	0.000	84.024	84.024	100.00	0.000	7.750
					B	0.000	84.024		100.00	0.000	0.000
					C	0.000	84.024		100.00	0.000	6.316
L3 68.50-59.00	63.71	1.207	8	28.554	A	0.000	28.554	28.554	100.00	0.000	2.375
					B	0.000	28.554		100.00	0.000	0.000
					C	0.000	28.554		100.00	0.000	2.414
L4 59.00-49.50	54.21	1.152	7	29.340	A	0.000	29.340	29.340	100.00	0.000	2.375
					B	0.000	29.340		100.00	0.000	0.000
					C	0.000	29.340		100.00	0.000	2.059
L5 49.50-29.25	39.22	1.051	7	67.009	A	0.000	67.009	67.009	100.00	0.000	5.062
					B	0.000	67.009		100.00	0.000	0.000
					C	0.000	67.009		100.00	0.000	5.252
L6 29.25-23.00	26.11	1	6	21.485	A	0.000	21.485	21.485	100.00	0.000	1.562
					B	0.000	21.485		100.00	0.000	0.000
					C	0.000	21.485		100.00	0.000	1.415
L7 23.00-0.00	11.32	1	6	84.022	A	0.000	84.022	84.022	100.00	0.000	5.750
					B	0.000	84.022		100.00	0.000	0.000
					C	0.000	84.022		100.00	0.000	6.188

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
15	Dead+Wind 0 deg+Ice
16	Dead+Wind 30 deg+Ice
17	Dead+Wind 60 deg+Ice
18	Dead+Wind 90 deg+Ice
19	Dead+Wind 120 deg+Ice
20	Dead+Wind 150 deg+Ice
21	Dead+Wind 180 deg+Ice
22	Dead+Wind 210 deg+Ice
23	Dead+Wind 240 deg+Ice
24	Dead+Wind 270 deg+Ice
25	Dead+Wind 300 deg+Ice
26	Dead+Wind 330 deg+Ice
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

Comb. No.	Description
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	147 - 99.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-16.37	0.01	0.99
			Max. Mx	5	-8.75	-408.74	-7.28
			Max. My	2	-8.73	2.13	412.47
			Max. Vy	5	16.35	-408.74	-7.28
			Max. Vx	2	-16.42	2.13	412.47
			Max. Torque	5			-0.56
L2	99.5 - 68.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-24.66	0.19	1.97
			Max. Mx	5	-14.98	-1088.46	-12.95
			Max. My	2	-14.97	3.97	1095.28
			Max. Vy	5	21.96	-1088.46	-12.95
			Max. Vx	2	-22.04	3.97	1095.28
			Max. Torque	5			-0.42
L3	68.5 - 59	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-25.82	0.22	2.10
			Max. Mx	5	-15.96	-1194.17	-13.72
			Max. My	2	-15.95	4.23	1201.41
			Max. Vy	5	22.58	-1194.17	-13.72
			Max. Vx	2	-22.66	4.23	1201.41
			Max. Torque	5			-0.35
L4	59 - 49.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-30.23	0.32	2.50
			Max. Mx	5	-19.64	-1529.50	-16.01
			Max. My	2	-19.63	5.00	1538.04
			Max. Vy	5	24.44	-1529.50	-16.01
			Max. Vx	2	-24.52	5.00	1538.04
			Max. Torque	3			0.38
L5	49.5 - 29.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-34.50	0.42	2.89
			Max. Mx	5	-23.38	-1909.91	-18.42
			Max. My	2	-23.38	5.81	1919.80
			Max. Vy	5	26.26	-1909.91	-18.42
			Max. Vx	2	-26.33	5.81	1919.80
			Max. Torque	3			0.43
L6	29.25 - 23	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-39.06	0.51	3.22
			Max. Mx	5	-27.31	-2219.97	-20.23
			Max. My	2	-27.31	6.43	2230.91
			Max. Vy	5	27.63	-2219.97	-20.23
			Max. Vx	2	-27.71	6.43	2230.91
			Max. Torque	3			0.47
L7	23 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	14	-46.51	0.68	3.92
			Max. Mx	5	-34.05	-2884.47	-23.76
			Max. My	2	-34.04	7.66	2897.49
			Max. Vy	5	30.20	-2884.47	-23.76
			Max. Vx	2	-30.28	7.66	2897.49
			Max. Torque	3			0.55

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	15	46.51	0.01	7.05
	Max. H_x	11	34.06	30.11	0.02
	Max. H_z	2	34.06	0.04	30.26
	Max. M_x	2	2897.49	0.04	30.26
	Max. M_z	5	2884.47	-30.19	-0.16
	Max. Torsion	3	0.55	-14.96	26.20
	Min. Vert	1	34.06	0.00	0.00
	Min. H_x	5	34.06	-30.19	-0.16
	Min. H_z	8	34.06	-0.25	-30.25
	Min. M_x	8	-2892.72	-0.25	-30.25
	Min. M_z	11	-2872.99	30.11	0.02
	Min. Torsion	6	-0.34	-26.21	-15.17

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	34.06	0.00	0.00	-1.15	0.67	0.00
Dead+Wind 0 deg - No Ice	34.06	-0.04	-30.26	-2897.49	7.66	-0.52
Dead+Wind 30 deg - No Ice	34.06	14.96	-26.20	-2507.65	-1420.28	-0.55
Dead+Wind 60 deg - No Ice	34.06	26.20	-15.11	-1445.85	-2506.19	-0.18
Dead+Wind 90 deg - No Ice	34.06	30.19	0.16	23.76	-2884.47	0.25
Dead+Wind 120 deg - No Ice	34.06	26.21	15.17	1452.99	-2508.76	0.34
Dead+Wind 150 deg - No Ice	34.06	15.27	26.15	2498.26	-1469.27	0.27
Dead+Wind 180 deg - No Ice	34.06	0.25	30.25	2892.72	-37.87	0.19
Dead+Wind 210 deg - No Ice	34.06	-15.03	26.05	2483.31	1433.95	0.10
Dead+Wind 240 deg - No Ice	34.06	-26.07	15.03	1432.14	2487.97	0.18
Dead+Wind 270 deg - No Ice	34.06	-30.11	-0.02	-4.55	2872.99	0.21
Dead+Wind 300 deg - No Ice	34.06	-26.10	-15.34	-1481.54	2492.27	-0.01
Dead+Wind 330 deg - No Ice	34.06	-15.04	-26.29	-2521.60	1434.34	-0.28
Dead+Ice	46.51	0.00	-0.00	-3.92	0.68	-0.00
Dead+Wind 0 deg+Ice	46.51	-0.01	-7.05	-708.31	2.27	-0.14
Dead+Wind 30 deg+Ice	46.51	3.49	-6.11	-613.54	-345.21	-0.16
Dead+Wind 60 deg+Ice	46.51	6.11	-3.52	-355.39	-608.88	-0.08
Dead+Wind 90 deg+Ice	46.51	7.04	0.04	1.65	-700.98	0.03
Dead+Wind 120 deg+Ice	46.51	6.11	3.54	349.46	-609.45	0.07
Dead+Wind 150 deg+Ice	46.51	3.56	6.10	603.86	-356.39	0.08
Dead+Wind 180 deg+Ice	46.51	0.06	7.05	699.69	-8.10	0.08
Dead+Wind 210 deg+Ice	46.51	-3.51	6.08	600.44	349.42	0.06
Dead+Wind 240 deg+Ice	46.51	-6.08	3.51	344.72	605.78	0.08
Dead+Wind 270 deg+Ice	46.51	-7.02	-0.00	-4.77	699.43	0.07
Dead+Wind 300 deg+Ice	46.51	-6.09	-3.57	-363.52	606.76	-0.00
Dead+Wind 330 deg+Ice	46.51	-3.51	-6.13	-616.72	349.48	-0.08
Dead+Wind 0 deg - Service	34.06	-0.02	-10.47	-1004.67	3.11	-0.18
Dead+Wind 30 deg - Service	34.06	5.17	-9.06	-869.58	-491.61	-0.19
Dead+Wind 60 deg - Service	34.06	9.07	-5.23	-501.72	-867.85	-0.06
Dead+Wind 90 deg - Service	34.06	10.45	0.06	7.45	-998.90	0.08
Dead+Wind 120 deg - Service	34.06	9.07	5.25	502.63	-868.75	0.12
Dead+Wind 150 deg - Service	34.06	5.28	9.05	864.78	-508.60	0.10
Dead+Wind 180 deg - Service	34.06	0.09	10.47	1001.44	-12.68	0.08
Dead+Wind 210 deg - Service	34.06	-5.20	9.01	859.57	497.25	0.04
Dead+Wind 240 deg - Service	34.06	-9.02	5.20	495.39	862.42	0.06
Dead+Wind 270 deg - Service	34.06	-10.42	-0.01	-2.36	995.81	0.07
Dead+Wind 300 deg - Service	34.06	-9.03	-5.31	-514.10	863.94	-0.01

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+Wind 330 deg - Service	34.06	-5.20	-9.10	-874.44	497.40	-0.10

Solution Summary

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
1	0.00	-34.06	0.00	0.00	34.06	0.00	0.000%
2	-0.04	-34.06	-30.26	0.04	34.06	30.26	0.000%
3	14.96	-34.06	-26.20	-14.96	34.06	26.20	0.000%
4	26.20	-34.06	-15.11	-26.20	34.06	15.11	0.000%
5	30.19	-34.06	0.16	-30.19	34.06	-0.16	0.000%
6	26.21	-34.06	15.17	-26.21	34.06	-15.17	0.000%
7	15.27	-34.06	26.15	-15.27	34.06	-26.15	0.000%
8	0.25	-34.06	30.25	-0.25	34.06	-30.25	0.000%
9	-15.03	-34.06	26.05	15.03	34.06	-26.05	0.000%
10	-26.07	-34.06	15.03	26.07	34.06	-15.03	0.000%
11	-30.11	-34.06	-0.02	30.11	34.06	0.02	0.000%
12	-26.10	-34.06	-15.34	26.10	34.06	15.34	0.000%
13	-15.04	-34.06	-26.29	15.04	34.06	26.29	0.000%
14	0.00	-46.51	0.00	0.00	46.51	0.00	0.000%
15	-0.01	-46.51	-7.05	0.01	46.51	7.05	0.000%
16	3.49	-46.51	-6.11	-3.49	46.51	6.11	0.000%
17	6.11	-46.51	-3.52	-6.11	46.51	3.52	0.000%
18	7.04	-46.51	0.04	-7.04	46.51	-0.04	0.000%
19	6.11	-46.51	3.54	-6.11	46.51	-3.54	0.000%
20	3.56	-46.51	6.10	-3.56	46.51	-6.10	0.000%
21	0.06	-46.51	7.05	-0.06	46.51	-7.05	0.000%
22	-3.51	-46.51	6.08	3.51	46.51	-6.08	0.000%
23	-6.08	-46.51	3.51	6.08	46.51	-3.51	0.000%
24	-7.02	-46.51	-0.00	7.02	46.51	0.00	0.000%
25	-6.09	-46.51	-3.57	6.09	46.51	3.57	0.000%
26	-3.51	-46.51	-6.13	3.51	46.51	6.13	0.000%
27	-0.02	-34.06	-10.47	0.02	34.06	10.47	0.000%
28	5.17	-34.06	-9.06	-5.17	34.06	9.06	0.000%
29	9.07	-34.06	-5.23	-9.07	34.06	5.23	0.000%
30	10.45	-34.06	0.06	-10.45	34.06	-0.06	0.000%
31	9.07	-34.06	5.25	-9.07	34.06	-5.25	0.000%
32	5.28	-34.06	9.05	-5.28	34.06	-9.05	0.000%
33	0.09	-34.06	10.47	-0.09	34.06	-10.47	0.000%
34	-5.20	-34.06	9.01	5.20	34.06	-9.01	0.000%
35	-9.02	-34.06	5.20	9.02	34.06	-5.20	0.000%
36	-10.42	-34.06	-0.01	10.42	34.06	0.01	0.000%
37	-9.03	-34.06	-5.31	9.03	34.06	5.31	0.000%
38	-5.20	-34.06	-9.10	5.20	34.06	9.10	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00047253
3	Yes	5	0.00000001	0.00067779
4	Yes	5	0.00000001	0.00069530
5	Yes	4	0.00000001	0.00069147
6	Yes	5	0.00000001	0.00070368
7	Yes	5	0.00000001	0.00070070

8	Yes	4	0.00000001	0.00071280
9	Yes	5	0.00000001	0.00067972
10	Yes	5	0.00000001	0.00068099
11	Yes	4	0.00000001	0.00033785
12	Yes	5	0.00000001	0.00070663
13	Yes	5	0.00000001	0.00069758
14	Yes	4	0.00000001	0.00000001
15	Yes	4	0.00000001	0.00028394
16	Yes	4	0.00000001	0.00093711
17	Yes	4	0.00000001	0.00098212
18	Yes	4	0.00000001	0.00027790
19	Yes	4	0.00000001	0.00097022
20	Yes	4	0.00000001	0.00096054
21	Yes	4	0.00000001	0.00027680
22	Yes	4	0.00000001	0.00093244
23	Yes	4	0.00000001	0.00092544
24	Yes	4	0.00000001	0.00027746
25	Yes	4	0.00000001	0.00099931
26	Yes	4	0.00000001	0.00098582
27	Yes	4	0.00000001	0.00016107
28	Yes	5	0.00000001	0.00005463
29	Yes	5	0.00000001	0.00005695
30	Yes	4	0.00000001	0.00016318
31	Yes	5	0.00000001	0.00005794
32	Yes	5	0.00000001	0.00005713
33	Yes	4	0.00000001	0.00015650
34	Yes	5	0.00000001	0.00005490
35	Yes	5	0.00000001	0.00005505
36	Yes	4	0.00000001	0.00015230
37	Yes	5	0.00000001	0.00005820
38	Yes	5	0.00000001	0.00005749

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147 - 99.5	34.809	38	1.9657	0.0020
L2	103.25 - 68.5	17.770	38	1.6385	0.0006
L3	68.5 - 59	7.712	38	1.0672	0.0002
L4	63.75 - 49.5	6.689	38	0.9886	0.0002
L5	49.5 - 29.25	4.016	38	0.7713	0.0001
L6	34.5 - 23	1.985	38	0.5212	0.0001
L7	23 - 0	0.884	38	0.3679	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.00	A-ANT-23G-2-C	38	34.809	1.9657	0.0020	36432
147.00	Platform Mount [LP 403-1]	38	34.809	1.9657	0.0020	36432
145.00	LLPX310R W/ MOUNT PIPE	38	33.988	1.9561	0.0020	36432
132.00	(4) DB844H90E-XY w/Mount Pipe	38	28.689	1.8895	0.0014	12143
131.00	12' Low Profile Platform	38	28.286	1.8837	0.0014	11384
122.00	RFS APX16DWV-16DWVS-C w/ mount pipe	38	24.718	1.8244	0.0011	7285
119.00	12' T-Arm Mounts	38	23.556	1.8012	0.0010	6504
112.00	(2) Powerwave 7770 w/ Mount Pipe	38	20.913	1.7382	0.0008	5203

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
110.00	12' Low Profile Platform	38	20.177	1.7176	0.0007	4921
100.00	APXV18-206517S-C w/ Mount Pipe	38	16.657	1.5947	0.0005	3990
49.00	Side Arm Mount [SO 701-1]	38	3.936	0.7632	0.0002	3016

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	147 - 99.5	100.117	13	5.6598	0.0054
L2	103.25 - 68.5	51.160	13	4.7193	0.0016
L3	68.5 - 59	22.220	13	3.0754	0.0007
L4	63.75 - 49.5	19.275	13	2.8490	0.0006
L5	49.5 - 29.25	11.576	13	2.2232	0.0004
L6	34.5 - 23	5.722	13	1.5025	0.0003
L7	23 - 0	2.548	13	1.0607	0.0002

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.00	A-ANT-23G-2-C	13	100.117	5.6598	0.0054	12909
147.00	Platform Mount [LP 403-1]	13	100.117	5.6598	0.0054	12909
145.00	LLPX310R W/ MOUNT PIPE	13	97.759	5.6324	0.0052	12909
132.00	(4) DB844H90E-XY w/Mount Pipe	13	82.535	5.4409	0.0038	4301
131.00	12' Low Profile Platform	13	81.379	5.4242	0.0037	4032
122.00	RFS APX16DWV-16DWVS-C w/ mount pipe	13	71.129	5.2540	0.0029	2578
119.00	12' T-Arm Mounts	13	67.790	5.1871	0.0026	2301
112.00	(2) Powerwave 7770 w/ Mount Pipe	13	60.193	5.0059	0.0021	1839
110.00	12' Low Profile Platform	13	58.080	4.9468	0.0020	1739
100.00	APXV18-206517S-C w/ Mount Pipe	13	47.959	4.5932	0.0014	1407
49.00	Side Arm Mount [SO 701-1]	13	11.344	2.1997	0.0005	1050

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	147 - 99.5 (1)	TP30.313x22x0.25	47.50	0.00	0.0	36.000	23.6724	-8.73	852.21	0.010
L2	99.5 - 68.5 (2)	TP35.2376x29.1567x0.3125	34.75	0.00	0.0	39.000	35.1434	-14.97	1370.59	0.011
L3	68.5 - 59 (3)	TP36.9x35.2376x0.3804	9.50	0.00	0.0	39.000	43.7177	-15.95	1704.99	0.009
L4	59 - 49.5 (4)	TP37.9374x35.3079x0.375	14.25	0.00	0.0	39.000	45.3566	-19.63	1768.91	0.011

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 $\frac{P}{P_a}$
L5	49.5 - 29.25 (5)	TP41.481x37.9374x0.4251	20.25	0.00	0.0	39.000	54.9356	-23.37	2142.49	0.011
L6	29.25 - 23 (6)	TP41.8248x39.7122x0.4375	11.50	0.00	0.0	39.000	58.3044	-27.31	2273.87	0.012
L7	23 - 0 (7)	TP45.85x41.8248x0.4708	23.00	0.00	0.0	39.000	68.7880	-34.04	2682.73	0.013

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	147 - 99.5 (1)	TP30.313x22x0.25	413.46	29.171	36.000	0.810	0.00	0.000	36.000	0.000
L2	99.5 - 68.5 (2)	TP35.2376x29.1567x0.3125	1097.11	43.920	39.000	1.126	0.00	0.000	39.000	0.000
L3	68.5 - 59 (3)	TP36.9x35.2376x0.3804	1203.37	37.962	39.000	0.973	0.00	0.000	39.000	0.000
L4	59 - 49.5 (4)	TP37.9374x35.3079x0.375	1540.34	44.470	39.000	1.140	0.00	0.000	39.000	0.000
L5	49.5 - 29.25 (5)	TP41.481x37.9374x0.4251	1922.47	42.910	39.000	1.100	0.00	0.000	39.000	0.000
L6	29.25 - 23 (6)	TP41.8248x39.7122x0.4375	2233.86	45.560	39.000	1.168	0.00	0.000	39.000	0.000
L7	23 - 0 (7)	TP45.85x41.8248x0.4708	2901.00	45.728	39.000	1.173	0.00	0.000	39.000	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	147 - 99.5 (1)	TP30.313x22x0.25	16.45	0.695	24.000	0.059	0.12	0.004	24.000	0.000
L2	99.5 - 68.5 (2)	TP35.2376x29.1567x0.3125	22.06	0.628	26.000	0.049	0.14	0.003	26.000	0.000
L3	68.5 - 59 (3)	TP36.9x35.2376x0.3804	22.68	0.519	26.000	0.041	0.15	0.002	26.000	0.000
L4	59 - 49.5 (4)	TP37.9374x35.3079x0.375	24.54	0.541	26.000	0.042	0.17	0.002	26.000	0.000
L5	49.5 - 29.25 (5)	TP41.481x37.9374x0.4251	26.35	0.480	26.000	0.037	0.21	0.002	26.000	0.000
L6	29.25 - 23 (6)	TP41.8248x39.7122x0.4375	27.73	0.476	26.000	0.037	0.23	0.002	26.000	0.000
L7	23 - 0 (7)	TP45.85x41.8248x0.4708	30.30	0.440	26.000	0.034	0.28	0.002	26.000	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	147 - 99.5 (1)	0.010	0.810	0.000	0.059	0.000	0.821 ✓	1.333	H1-3+VT ✓
L2	99.5 - 68.5 (2)	0.011	1.126	0.000	0.049	0.000	1.138 ✓	1.333	H1-3+VT ✓

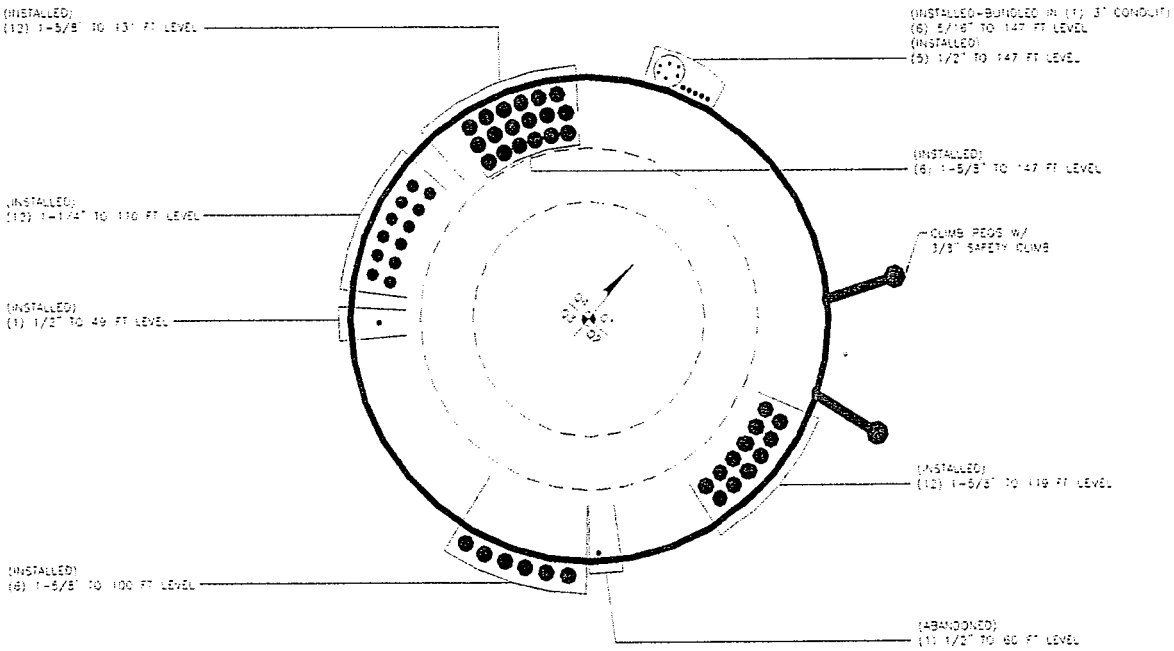
Section No.	Elevation ft	Ratio $\frac{P}{P_a}$	Ratio $\frac{f_{bx}}{F_{bx}}$	Ratio $\frac{f_{by}}{F_{by}}$	Ratio $\frac{f_v}{F_v}$	Ratio $\frac{f_{vt}}{F_{vt}}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L3	68.5 - 59 (3)	0.009	0.973	0.000	0.041	0.000	0.983 ✓	1.333	H1-3+VT ✓
L4	59 - 49.5 (4)	0.011	1.140	0.000	0.042	0.000	1.152 ✓	1.333	H1-3+VT ✓
L5	49.5 - 29.25 (5)	0.011	1.100	0.000	0.037	0.000	1.112 ✓	1.333	H1-3+VT ✓
L6	29.25 - 23 (6)	0.012	1.168	0.000	0.037	0.000	1.181 ✓	1.333	H1-3+VT ✓
L7	23 - 0 (7)	0.013	1.173	0.000	0.034	0.000	1.186 ✓	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	147 - 99.5	Pole	TP30.313x22x0.25	1	-8.73	1135.99	61.6	Pass
L2	99.5 - 68.5	Pole	TP35.2376x29.1567x0.3125	2	-14.97	1827.00	85.3	Pass
L3	68.5 - 59	Pole	TP36.9x35.2376x0.3804	3	-15.95	2272.75	73.8	Pass
L4	59 - 49.5	Pole	TP37.9374x35.3079x0.375	4	-19.63	2357.96	86.4	Pass
L5	49.5 - 29.25	Pole	TP41.481x37.9374x0.4251	5	-23.37	2855.94	83.4	Pass
L6	29.25 - 23	Pole	TP41.8248x39.7122x0.4375	6	-27.31	3031.07	88.6	Pass
L7	23 - 0	Pole	TP45.85x41.8248x0.4708	7	-34.04	3576.08	88.9	Pass
							Summary	
						Pole (L7)	88.9	Pass
						RATING =	**88.9**	**Pass**

APPENDIX B

Cable Routing Drawing



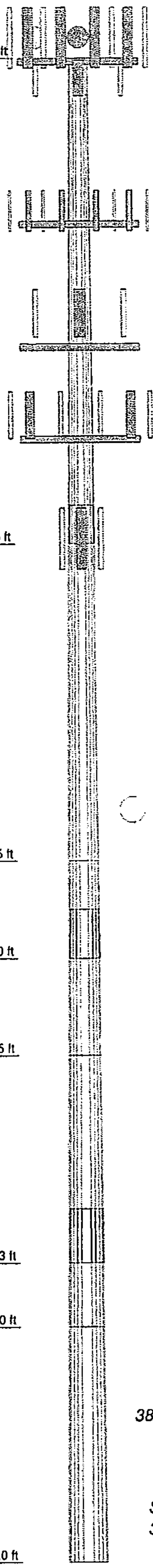
APPENDIX C

Table C1 - List of Attached Documents

Attachment
ERI Monopole Profile
Base Plate Calculations
Foundation Calculations

Program Version 5.4.2.0 - 6/17/2010 File:G:/TOWER/375_CROWN_CASTLE/2010/37510-1418 BU 876321/WO 368722 BU 876321/37510-1418_R2.eri

Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
47.50	12	0.2500	3.75	22.0000	30.3130	A607-60	3.4
34.75	12	0.3125		29.1567	35.2376	A607-65	3.8
9.50	12	0.3804	4.75	35.2376	36.9000	65 ksi (w/ Reinf.)	1.4
14.25	12	0.3750		35.3079	37.9374	65 ksi (w/ Reinf.)	2.1
20.25	12	0.4251	5.25	37.9374	41.4810	A607-65	3.7
11.50	12	0.4375		39.7122	41.8248	65 ksi (w/ Reinf.)	2.2
23.00	12	0.4708		41.8248	45.8500	65 ksi (w/ Reinf.) A607-65	5.1
							21.8



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) Andrew HBX-9014DS-R2M w/ Mount Pipe	149	(2) Remec S20057A-1	122
(2) Andrew HBX-9014DS-R2M w/ Mount Pipe	149	(2) Remec S20057A-1	122
(2) Andrew HBX-9014DS-R2M w/ Mount Pipe	149	(2) Remec S20057A-1	122
CE-1819-200MC	149	RFS APX16DWV-16DWVS-C w/ mount pipe	122
CE-1819-200MC	149	RFS APX16DWV-16DWVS-C w/ mount pipe	122
A-ANT-23G-2-C	149	12' T-Arm Mounts	119
A-ANT-23G-2-C	149	(2) Powerwave 7770 w/ Mount Pipe	112
Platform Mount [LP 403-1]	147	(4) LGP2140X	112
LLPX310R W/ MOUNT PIPE	145	(4) LGP2140X	112
FDD_R6_RRH	145	(4) LGP2140X	112
FDD_R6_RRH	145	(2) Powerwave 7770 w/ Mount Pipe	112
FDD_R6_RRH	145	(2) Powerwave 7770 w/ Mount Pipe	112
LLPX310R W/ MOUNT PIPE	145	12' Low Profile Platform	110
LLPX310R W/ MOUNT PIPE	145	APXV18-206517S-C w/ Mount Pipe	100
(4) DB844H90E-XY w/Mount Pipe	132	Pipe Mount [PM 602-3]	100
(4) DB844H90E-XY w/Mount Pipe	132	APXV18-206517S-C w/ Mount Pipe	100
(4) DB844H90E-XY w/Mount Pipe	132	APXV18-206517S-C w/ Mount Pipe	100
12' Low Profile Platform	131	Side Arm Mount [SO 701-1]	49
RFS APX16DWV-16DWVS-C w/ mount pipe	122	KS24019-L112A	49

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-60	60 ksi	75 ksi	65 ksi (w/ Reinf.)	65 ksi	80 ksi
A607-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 88.9%

AXIAL 47 K

SHEAR 7 K

MOMENT 709 kip-ft

TORQUE 0 kip-ft

38 mph WIND - 0.7500 in ICE

AXIAL 34 K

SHEAR 30 K

MOMENT 2901 kip-ft

TORQUE 1 kip-ft

REACTIONS - 85 mph WIND

Paul J Ford and Company 250 E. Broad Street Suite 1500 Columbus, OH 43215 Phone: 614.221.6679 FAX: 614.448.4105	Job: 147' MP; BRANFORD, CT Project: BU 876321 (PJF 37510-1418 R2) Client: Crown Castle — Drawn by: Ellen Swanson — App'd: Code: TIA/EIA-222-F — Date: 11/09/10 — Scale: Path: G:\TOWER\375 CROWN CASTLE\2010\37510-1418 BU 876321\WO 369772 BU 876321\37510-1418 R2 — Dwg N

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

Assumptions: Rod groups at corners. Total # rods divisible by 4. Maximum total # of rods = 48.
Rod Spacing = Straight Center-to-Center distance between any (2) adjacent rods (same corner)

Site Data	
BU#:	*876321*
Site Name:	
App #:	

Reactions		
Moment:	2901	ft-kips
Axial:	34	kips
Shear:	30	kips

Connection Type:	*Butt*

Anchor Rod Data		
Qty:	16	
Diam:	2.25	in
Rod Material:	A615-J	
Grade(Fy):	75	ksi
Bolt Circle:	54	in
Anchor Spacing:	6	in

Plate Data		
W=Side:	54	in
Thick:	3.5	in
Grade:	50	ksi
B effective	27.52	in

Pole Data		
Diam:	48.85	in
Thick:	0.4375	in
Grade:	65	ksi

Stress Increase Factor		
ASIF:	1.333	

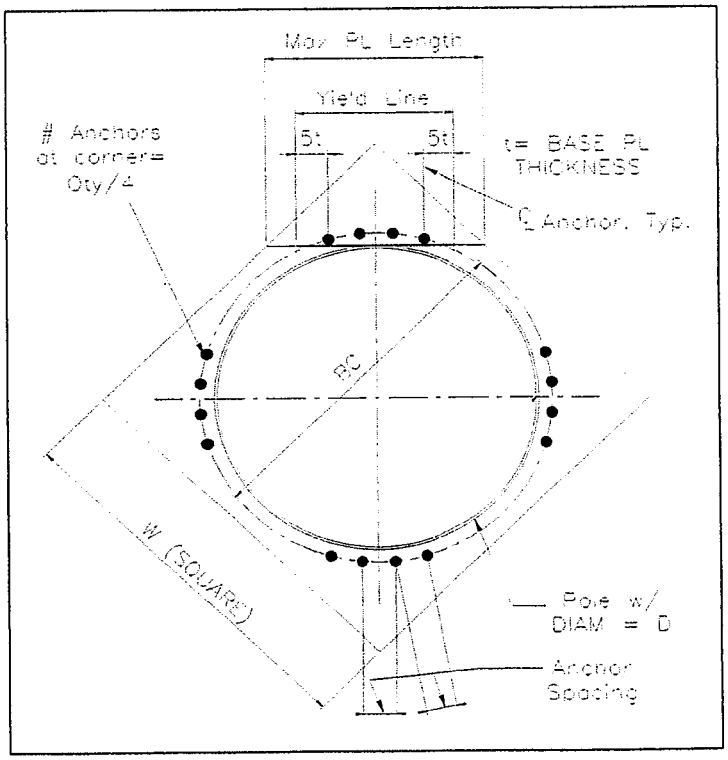
Anchor Rod Results

Maximum Rod Tension:	159.0 Kips
Allowable Tension:	195.0 Kips
Anchor Rod Stress Ratio:	81.6% Pass

Base Plate Results

Base Plate Stress:	19.9 ksi
Allowable Plate Stress:	50.0 ksi
Base Plate Stress Ratio:	39.7% Pass

PL Ref. Data
Yield Line (in): 27.52
Max PL Length: 27.52



PJF job no. **37510-1418 R2** Project name **BU 876321**

Foundation Loads:

Tower leg compression =	34	(kips)
Horizontal load at top of pier =	30	(kips)
Overturning moment at top of pier=	2901	(ft-kips)

Design criteria:

Safety factor against overturning =	1.5	

Soil Properties:

Soil density =	125	(pcf)
Allowable soil bearing =	4	(ksf)
Depth to water table =	4.5	(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 =	11	(ft)
Footing thickness =	3	(ft)
Footing width =	20.5	(ft)
Footing length =	20.5	(ft)

Concrete:

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

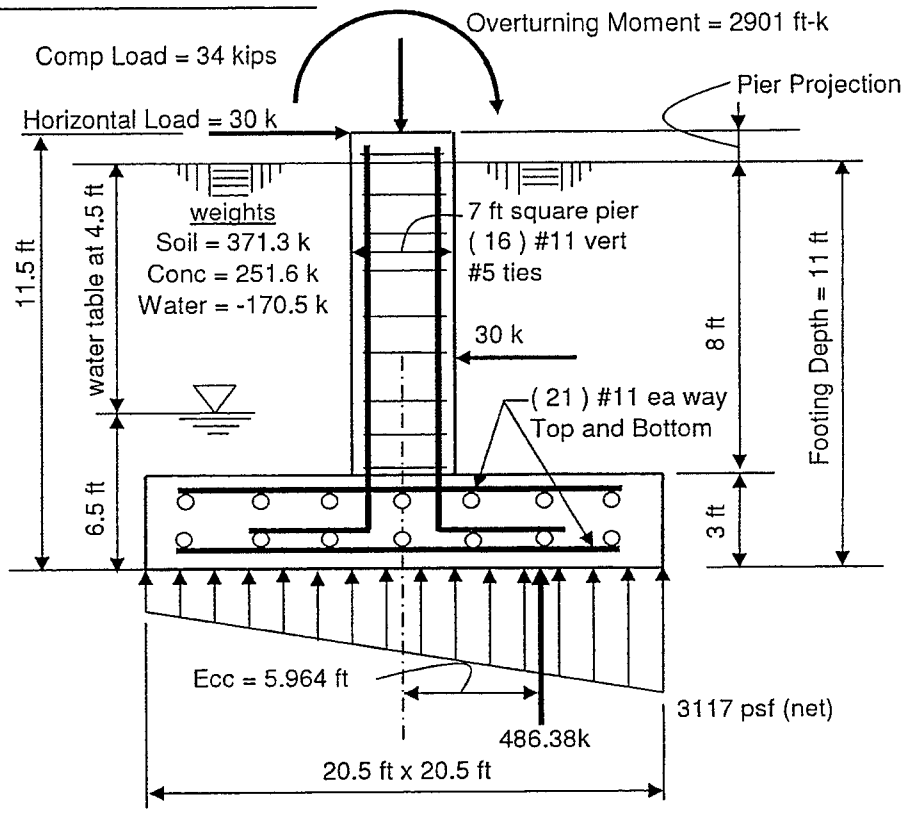
Reinforcing Steel:

	Pad	
minimum cover over rebar =	3	inches
size of pad rebar =	#11	bar
quantity of pad rebar =	21	(ea direction)

Reinforcing Steel:

	Pier	
size of vert rebar in pier=	#11	bar
vertical rebar quantity =	16	
size of pier ties =	#5	bar
minimum cover over rebar =	3	inches

Total volume of concrete = 62.1 cu yd



Summary of analysis results	
Maximum Net Soil Bearing = 3.117 ksf Allowable Net Soil Bearing = 4 ksf **Soil Bearing Stress Ratio = 0.78 Okay**	Ult Bending Shear Capacity = 110 psi Ult Bending Shear Stress = 42 psi **Bending Shear Stress Ratio = 0.38 Okay**
Ftg Overturning Resistance = 4985 ft-kips Overturning Moment = 2901 ft-kips Required Overturning Safety Factor = 1.5 Overturning Safety Factor = 1.719 **Ratio = 0.87 Okay**	Pad Bending Moment Capacity= 4330 ft-k Pad Bending Moment = 1215 ft-k **Bending Moment Stress Ratio = 0.28 OK**

General Information:
==========
File Name: G:\TOWER\375_Crown_Castle\2010\37510-1418 BU 876321\W...\37510-1418-R2-foundationpier.col
Project: 37510-1418
Column: Pier
Code: ACI 318-02
Engineer: ETS
Units: English

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

Material Properties:
==========
f'c = 3 ksi
Ec = 3122.02 ksi
fy = 60 ksi
Es = 29000 ksi
Ultimate strain = 0.003 in/in
Betal = 0.85

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

Gross section area, Ag = 7056 in^2
Ix = 4.14893e+006 in^4
rx = 24.2487 in
Xo = 0 in
Iy = 4.14893e+006 in^4
ry = 24.2487 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 #10 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 = 24.96 in^2 at rho = 0.35% (Note: rho < 0.50%)
Minimum clear spacing = 17.42 in

16 #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	34.00	4103.00	4488.20	1.094	5.29	79.67	0.04215	0.900

91.4%

*** End of output ***

GIANT SOLUTIONS LLC

Electomagnetic Exposure Analysis
Sprint
CT03XC040
February 4, 2011

Executive Summary:
A power density study has been performed utilizing the transmit power of all proposed transceiver equipment to be installed on the tower. This theoretical result has been combined with empirical data recorded during a field survey of the existing installed transmitters (see below). This report takes into consideration the cumulative effect of both the proposed Sprint transmitting elements and the existing transmitting elements currently located on the tower. This report assumes a worse case scenario of all new elements radiating from the same point in space simultaneously. Careful review of the data indicates that the site, as is and as proposed, is in compliance with applicable Federal standards for Maximum Permissible Exposure levels for RF power density.

Background:
FCC 96-326 is the standard FCC guideline for power density. The guidelines are given in terms of mW/cm^2 and the maximum limits are termed 'Maximum Permissible Exposure' (MPE) for both occupational (controlled) and general (uncontrolled) cases. Because these guidelines are based upon the same limits as those in the American National Standards Institute/Institute of Electrical and Electronics Engineering (ANSI/IEEE) guidelines, they also include the safety factors of 10 and 50 for occupational and general public scenarios respectively.

Additionally, FCC Bulletin OET 65 is the standard for evaluating compliance with FCC guidelines. GIANT Solutions has adopted these methods and procedures and others based on sound engineering practice to ensure that the theoretical calculations performed to complete this analysis will over-predict field strength levels at ground distances close to the transmitting elements. A more realistic approach to calculating power densities at areas near the base of the tower was utilized by taking advantage of the relative gain patterns of the directional antennas being proposed by Sprint. Directional antennas focus energy toward the horizon. This results in a pattern of losses and gains relative to the direction of propagation due to elevation angle changes. Equation 6 from OET 65 was utilized in conjunction with the antenna vertical gain patterns to predict the field strength levels at various points away from the base of the tower. This equation takes into consideration a four-fold increase in power density by assuming a 100% reflection of incoming radiation at the ground level.

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$$S=\frac{1.65\times ERP\times G}{\Pi\times R^2}$$

Where:
S = Power density in microwatts per centimeter squared.
ERP = Effective Radiated Power in microwatts (uW).
R = Straight-line distance between antenna centerline and head level in centimeters (cm).
$\Pi = 3.14$
G = Relative numeric gain of the antenna at specified angle of declination such that

$$G=10^{(dB/10)}$$

and, ***dB*** = relative antenna gain in dB (available from the antenna manufacturer).

Sprint has provided to GIANT Solutions the following information for the proposed installation required for analysis of these transmitting elements. These parameters were utilized to calculate the maximum exposure levels in and around the compound for the proposed installation.

- PCS B-Band, 2 carriers, 16 W per carrier. On Beta and Gamma sectors, adding a Cellextender that will increase the signal's power by 6 dB.

With this information, the signal's additional power was calculated to increase by 48 W per carrier.

This site currently has several antennas installed. Applicable transmit parameters for all existing equipment was unavailable, thus a field study was conducted to determine existing exposure levels. The details and results of the field study are included at the end of this report.

Power density levels were calculated for the additional Sprint transmitting equipment utilizing the methods and procedures previously referenced at a transmitting height of 147' AGL. These values were then compared to the applicable Maximum Permissible Exposure limits for General Population /Uncontrolled and Occupation/Controlled exposure[1]. The ratio of the calculated value to the maximum permissible exposure value was then computed to analyze the results as a percentage of the maximum allowable levels. For example, an antenna operating in the frequency range of 1900 MHz with a calculated value of power density equal to 0.03 mW/cm^2 would be operating at 3% of the allowable General Public standard which is defined

[1] FCC Bulletin OET 65 Table 1

as 1mW/cm^2. These values were then summed to analyze the combined effect of all proposed transmitting equipment.

These calculated values were then added to the RF exposure measurements from the field survey to get the total combined field strength of the existing and proposed equipment.

Areas closest to the transmitting elements surrounding the site compound were considered for this report. Points further away from surveyed areas will see a decrease in power density due to the attenuation of radio waves traveling through free space.

Results of the cumulative total indicate that no area accessible to the general public will exceed 22.55% of the maximum permissible limit for General Public/Uncontrolled access. **This is 4.4 times less than the allowed maximum.** This is based on the highest measured level in the area as described below. As indicated previously, a conservative approach was taken in calculating the power density levels at the site since it is unlikely that all of the transmitters at the site will be transmitting simultaneously at maximum power. The actual levels experienced at the site will likely be lower.

RF Exposure Measurements

Site Name: CT03XC040
Date Collected: 01/27/2011
Time: 15:33– 16:02
Survey Meter: *Model #NARDA BN 2251/02*
Serial # L-0098
Date of Last Calibration: 1/2010
Calibration Due: 1/2013
Operator: Harold Briggs

Measurements were made at this facility utilizing the above-referenced Narda Meter. This equipment is designed to measure cumulative RF fields over the 3MHz – 40 GHz spectrum band. Due to the wide band nature of the measuring device the minimum detectable level for occupational exposure is approximately 5% of the Occupational threshold. Site data provided for this facility indicates a number of transmitters operating at the site and through visual inspection it was determined that there were no AM transmitters present. As a result, it was assumed that all existing elements were transmitting in the spectrum band measured. The weather was clear and the operating temperature was approximately 50 degrees F.

The test equipment was set to read percent of the total exposure limit as defined by the Federal Communications Commission Regulations ("FCC") for Exposure limits.

The unit was then carried around the tower site, taking two individual sets of data. The sets of data were taken over a period of approximately 30 minutes, and included the area directly around the antenna site. Measurements were taken in all accessible areas.

Multiple trips were made around the compound looking for the largest signals to contribute to the percent of the standard being displayed on the monitor. Logged data was collected around the tower as well as spatial averaging to provide an additional means of data comparison. The highest average electrical field detected was 22.05% of the FCC general public/uncontrolled standard for human exposure in the areas accessible to the public.

Based upon these measurements, there were no instances when the measured data indicated that the site, as operating at the time of measurement, was not in full compliance with all applicable FCC RF exposure guidelines.

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