ROBINSON & COLE LLP

EM-VER-063-120423

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

April 20, 2012

Linda Roberts
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap**
185 Fiske Road, Hampton, Connecticut

Dear Ms. Roberts:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) wireless telecommunications antennas at the 142-foot level on an existing 160-foot guyed-lattice tower at the above-referenced address. The tower and underlying property are owned by American Tower Corporation. Cellco's use of the tower was approved by the Council in 2000. Cellco now intends to replace all of its existing antennas with six (6) model LPA-80080-4CF cellular antennas; three (3) model BXA-171085-8BF PCS antennas; and three (3) model BXA-70063-6CF LTE antennas, all at the same 142-foot level. Cellco also intends to attach six (6) coax cable diplexers to its antenna frame mounting structure. Attached behind Tab 1 are the specifications for the replacement antennas and cable diplexers.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Allan Cahill, First Selectman of the Town of Hampton.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas and diplexers will be located at the 142-foot level on the existing 160-foot tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundaries.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A cumulative power density table for Cellco's modified facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower and foundation can support Cellco's proposed modifications. (See Tab 3). Please note that notwithstanding the reference at the bottom of page 1 of the Structural Analysis, Cellco has no plans to install new coax cables as part of this modification proposal.

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Allan Cahill, Hampton First Selectman
Sandy M. Carter

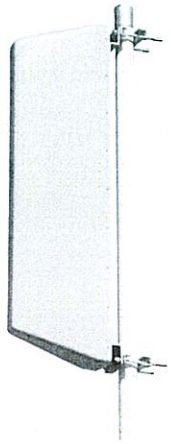
Amphenol ANTENNA SOLUTIONS

LPA-80080-4CF-EDIN-X

V-Pol | Log Periodic | 80° | 12.5 dBd

Replace "X" with desired electrical downtilt.

Antenna is also available with NE connector(s). Replace "EDIN" with "NE" in the model number when ordering.

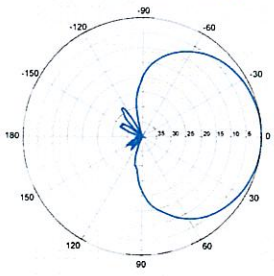


Electrical Characteristics	
Frequency bands	806-960 MHz
Polarization	Vertical
Horizontal beamwidth	80°
Vertical beamwidth	15°
Gain	12.5 dBd (14.6 dBi)
Electrical downtilt (X)	0, 2, 4, 5, 6, 8, 10, 12, 14
Impedance	50Ω
VSWR	≤1.4:1
Upper sidelobe suppression (0°)	-14.2 dB
Front-to-back ratio (+/-30°)	-34.7 dB
Null fill	15% (-16.48 dB)
Input power	500 W
Lightning protection	Direct Ground
Connector(s)	1 Port / EDIN or NE / Female / Center (Back)

Mechanical Characteristics		
Dimensions Length x Width x Depth	1200 x 140 x 335 mm	47.2 x 5.5 x 13.2 in
Depth of antenna with z-bracket	375 mm	14.8 in
Weight without mounting brackets	5.4 kg	12 lbs
Survival wind speed	> 201 km/hr	> 125 mph
Wind area	Front: 0.17 m² Side: 0.40 m²	Front: 1.8 ft² Side: 4.3 ft²
Wind load @ 161 km/hr (100 mph)	Front: 254 N Side: 574 N	Front: 57 lbf Side: 129 lbf

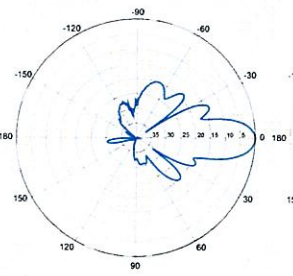
Mounting Options	Part Number	Fits Pipe Diameter	Weight
2-Point Mounting & Downtilt Bracket Kit (0-20°)	21699999	50-102 mm 2.0-4.0 in	5.4 kg 12 lbs
Lock-Down Brace	If the lock-down brace is used, the maximum diameter of the mounting pipe is 88.9 mm or 3.5 in.		

LPA-80080-4CF-EDIN-X



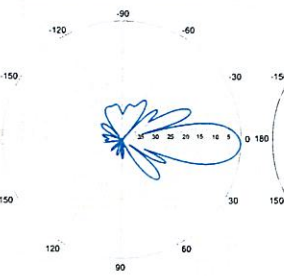
Horizontal

LPA-80080-4CF-EDIN-0



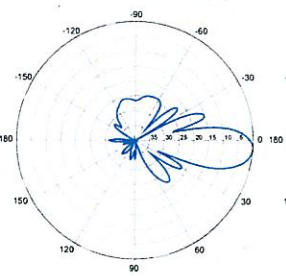
0° | Vertical

LPA-80080-4CF-EDIN-2



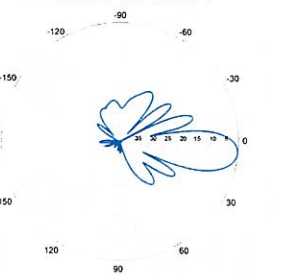
2° | Vertical

LPA-80080-4CF-EDIN-4



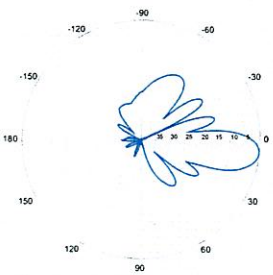
2° | Vertical

LPA-80080-4CF-EDIN-5



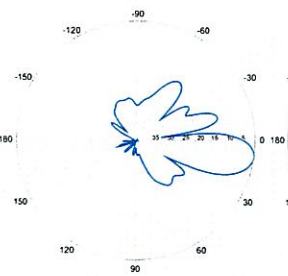
5° | Vertical

LPA-80080-4CF-EDIN-6



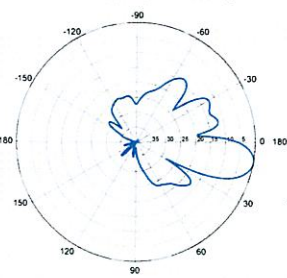
6° | Vertical

LPA-80080-4CF-EDIN-8



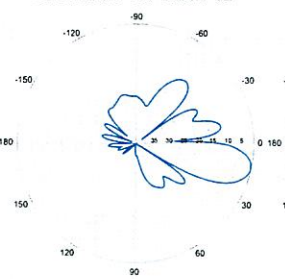
8° | Vertical

LPA-80080-4CF-EDIN-10



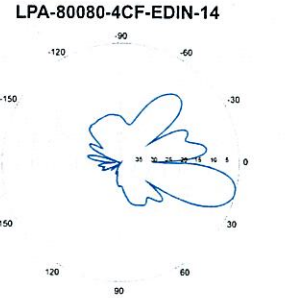
10° | Vertical

LPA-80080-4CF-EDIN-12



12° | Vertical

LPA-80080-4CF-EDIN-14



14° | Vertical

Amphenol ANTENNA SOLUTIONS

BXA-171085-8BF-EDIN-X

Replace "X" with desired electrical downtilt.

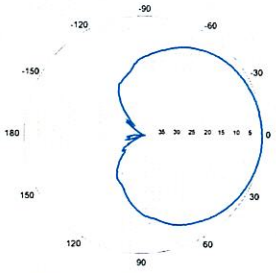
X-Pol | FET Panel | 85° | 16.4 dBi

Electrical Characteristics	1710-2170 MHz		
Frequency bands	1710-1880 MHz	1850-1990 MHz	1920-2170 MHz
Polarization	±45°	±45°	±45°
Horizontal beamwidth	88°	85°	80°
Vertical beamwidth	7°	7°	7°
Gain	13.5 dBd / 15.6 dBi	13.9 dBd / 16.0 dBi	14.3 dBd / 16.4 dBi
Electrical downtilt (X)	0, 2, 4		
Impedance	50Ω		
VSWR	≤1.5:1		
First upper sidelobe	< -17 dB		
Front-to-back isolation	> 30 dB		
In-band isolation	> 28 dB		
IM3 (20W carrier)	< -150 dBc		
Input power	300 W		
Lightning protection	Direct Ground		
Connector(s)	2 Ports / EDIN / Female / Bottom		
Operating temperature	-40° to +60° C / -40° to +140° F		

Mechanical Characteristics		
Dimensions Length x Width x Depth	1232 x 154 x 105 mm	48.5 x 6.1 x 4.1 in
Depth with t-brackets	133 mm	5.2 in
Weight without mounting brackets	4.8 kg	10.5 lbs
Survival wind speed	296 km/hr	184 mph
Wind area	Front: 0.19 m² Side: 0.14 m²	Front: 2.0 ft² Side: 1.5 ft²
Wind load @ 161 km/hr (100 mph)	Front: 281 N Side: 223 N	Front: 63 lbf Side: 50 lbf

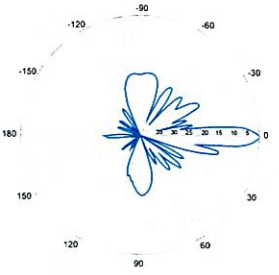
Mounting Options	Part Number	Fits Pipe Diameter	Weight
2-Point Mounting Bracket Kit	26799997	50-102 mm 2.0-4.0 in	2.3 kg 5 lbs
2-Point Mounting & Downtilt Bracket Kit	26799999	50-102 mm 2.0-4.0 in	3.6 kg 8 lbs
Concealment Configurations	For concealment configurations, order BXA-171085-8BF-EDIN-X-FP		

BXA-171085-8BF-EDIN-X



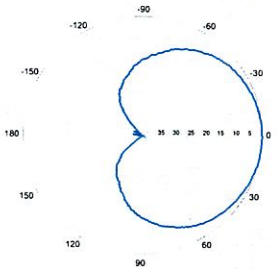
Horizontal | 1710-1880 MHz

BXA-171085-8BF-EDIN-0



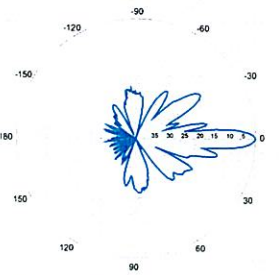
0° | Vertical | 1710-1880 MHz

BXA-171085-8BF-EDIN-X



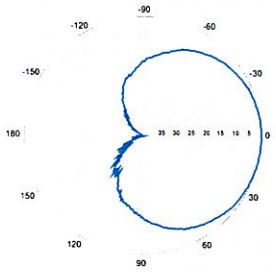
Horizontal | 1850-1990 MHz

BXA-171085-8BF-EDIN-0



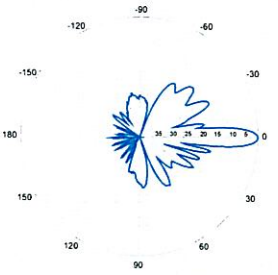
0° | Vertical | 1850-1990 MHz

BXA-171085-8BF-EDIN-X



Horizontal | 1920-2170 MHz

BXA-171085-8BF-EDIN-0

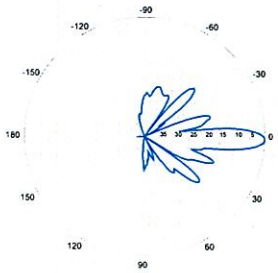


0° | Vertical | 1920-2170 MHz

BXA-171085-8BF-EDIN-X

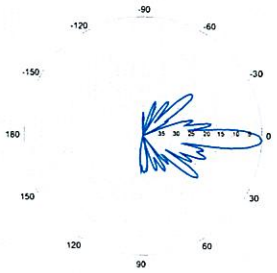
X-Pol | FET Panel | 85° | 16.4 dBi

BXA-171085-8BF-EDIN-2



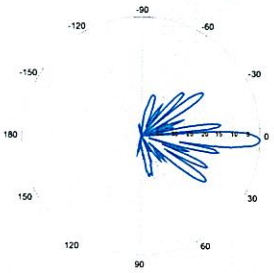
2° | Vertical | 1710-1880 MHz

BXA-171085-8BF-EDIN-2



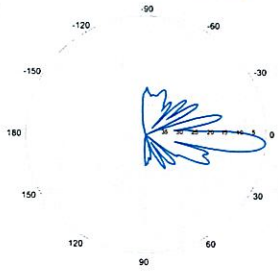
2° | Vertical | 1850-1990 MHz

BXA-171085-8BF-EDIN-2



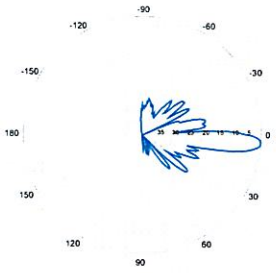
2° | Vertical | 1920-2170 MHz

BXA-171085-8BF-EDIN-4



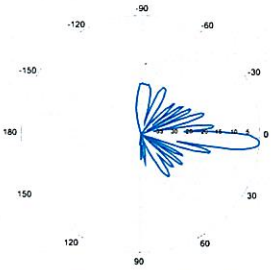
4° | Vertical | 1710-1880 MHz

BXA-171085-8BF-EDIN-4



4° | Vertical | 1850-1990 MHz

BXA-171085-8BF-EDIN-4



4° | Vertical | 1920-2170 MHz

BXA-70063-6CF-EDIN-X

X-Pol | FET Panel | 63° | 14.5 dBd

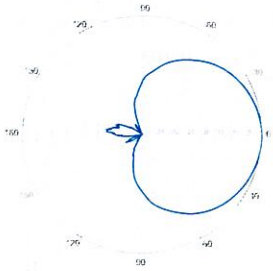
Replace "X" with desired electrical downtilt.

Antenna is also available with NE connector(s). Replace "EDIN" with "NE" in the model number when ordering.

Electrical Characteristics	696-900 MHz	
Frequency bands	696-806 MHz	806-900 MHz
Polarization	±45°	
Horizontal beamwidth	65°	63°
Vertical beamwidth	13°	11°
Gain	14.0 dBd (16.1 dBi)	14.5 dBd (16.6 dBi)
Electrical downtilt (X)	0, 2, 3, 4, 5, 6, 8, 10	
Impedance	50Ω	
VSWR	≤1.35:1	
Upper sidelobe suppression (0°)	-18.3 dB	-18.2 dB
Front-to-back ratio (+/-30°)	-33.4 dB	-36.3 dB
Null fill	5% (-26.02 dB)	
Isolation between ports	< -25 dB	
Input power with EDIN connectors	500 W	
Input power with NE connectors	300 W	
Lightning protection	Direct Ground	
Connector(s)	2 Ports / EDIN or NE / Female / Center (Back)	
Mechanical Characteristics		
Dimensions Length x Width x Depth	1804 x 285 x 132 mm	71.0 x 11.2 x 5.2 in
Depth with z-brackets	172 mm	6.8 in
Weight without mounting brackets	7.9 kg	17 lbs
Survival wind speed	> 201 km/hr	> 125 mph
Wind area	Front: 0.51 m² Side: 0.24 m²	Front: 5.5 ft² Side: 2.6 ft²
Wind load @ 161 km/hr (100 mph)	Front: 759 N Side: 391 N	Front: 169 lbf Side: 89 lbf

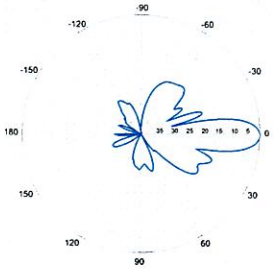
Mounting Options	Part Number	Fits Pipe Diameter	Weight
3-Point Mounting & Downtilt Bracket Kit	36210008	40-115 mm 1.57-4.5 in	6.9 kg 15.2 lbs
Concealment Configurations	For concealment configurations, order BXA-70063-6CF-EDIN-X-FP		

BXA-70063-6CF-EDIN-X



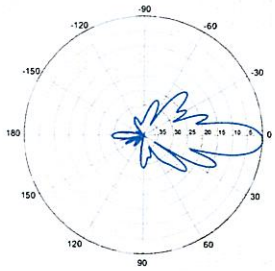
Horizontal | 750 MHz

BXA-70063-6CF-EDIN-0

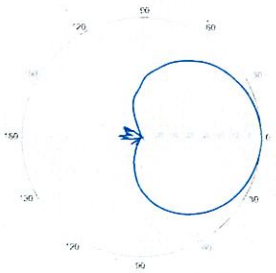


0° | Vertical | 750 MHz

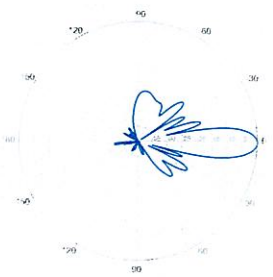
BXA-70063-6CF-EDIN-2



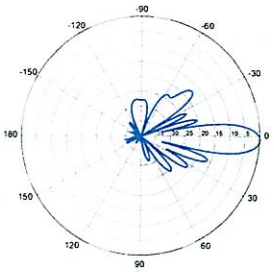
2° | Vertical | 750 MHz



Horizontal | 850 MHz



0° | Vertical | 850 MHz

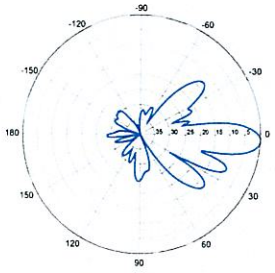


2° | Vertical | 850 MHz

BXA-70063-6CF-EDIN-X

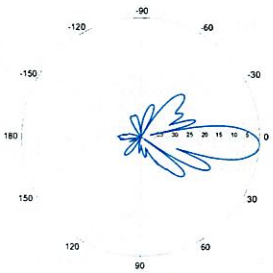
X-Pol | FET Panel | 63° | 14.5 dBd

BXA-70063-6CF-EDIN-3



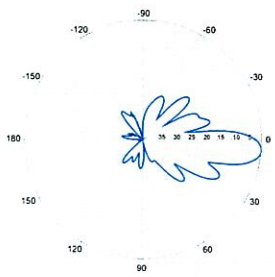
3° | Vertical | 750 MHz

BXA-70063-6CF-EDIN-4

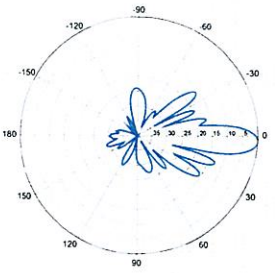


4° | Vertical | 750 MHz

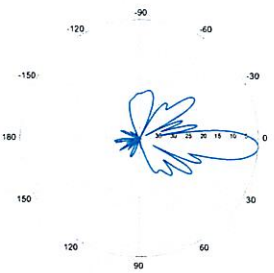
BXA-70063-6CF-EDIN-5



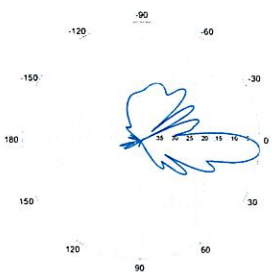
5° | Vertical | 750 MHz



3° | Vertical | 850 MHz

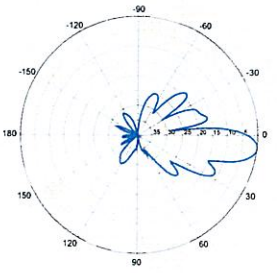


4° | Vertical | 850 MHz



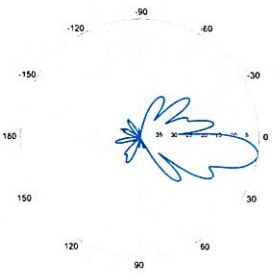
5° | Vertical | 850 MHz

BXA-70063-6CF-EDIN-6



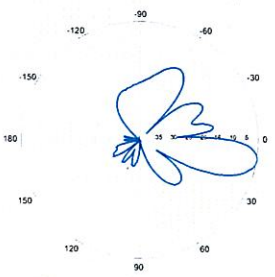
6° | Vertical | 750 MHz

BXA-70063-6CF-EDIN-8

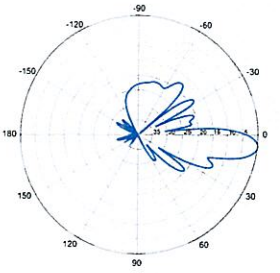


8° | Vertical | 750 MHz

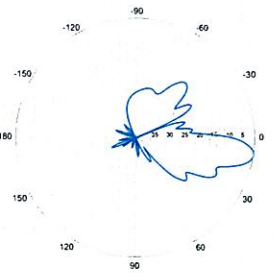
BXA-70063-6CF-EDIN-10



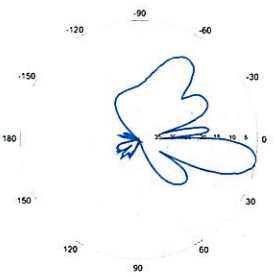
10° | Vertical | 750 MHz



6° | Vertical | 850 MHz



8° | Vertical | 850 MHz



10° | Vertical | 850 MHz

Product Data Sheet **FD9R6004/2C-3L**

ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

Product Description

The ShareLite FD9R6004 Series of diplexers are designed to enable feeder sharing between systems in the 698-960 MHz range and in the 1710-2200 MHz range. The diplexer is equipped with in-line connector placement so it can be installed in the BTS cabinet or at the tower top. This is especially valuable in crowded sites or when the feeders are not easily accessible. Due to its wideband design, the FD9R6004 Series can accommodate many combining solutions between 698-960 MHz and 1710-2200 MHz systems such as LTE 700 MHz, Cellular 800 MHz with PCS, GSM900 with GSM1800, or GSM900 with UMTS. This diplexer features a highly selective filter. It provides a high level of isolation between ports, while keeping the insertion loss on both paths at an extremely low level. The FD9R6004 diplexers are available with various DC pass options, helpful in configurations with or without the Tower Mount Amplifiers installed.

Features/Benefits

- **LTE ready design**
- **Extremely Low Insertion Loss**
- **High level of Rejection between bands – Protection against interferences**
- **Extremely High Power Handling Capability**
- **Integrated DC block/bypass versions available**
- **Very compact & small size design – Easy installation and reduced tower load**
- **In-line long-neck connectors for easy connection & waterproofing**
- **Exceptional reliability & environmental protection (IP 67)**
- **Equipped with 1 * Breathable Vent – Prevent any humidity inside the product**
- **Mounting hardware for Wall and Pole mount provided (P/N SEM2-1A)**
- **Grounding already provided through the mounting bracket**
- **Kit available for easy dual mount**

Technical Specifications

Product Type	Diplexer/Cross Band Coupler
Frequency Range 1, MHz	698-960
Frequency Range 2, MHz	1710-2200
Application	LTE700, GSM900, UMTS, GSM1800, Cellular 800, PCS
Configuration	Sharelite Single diplexer, outdoor, DC pass in the 1710-2170MHz path, with mounting hardware SEM2-1A
Mounting	Wall Mounting: With 4 screws (maximum 6mm diameter); Pole Mounting: With included clamp set 40-110mm (1.57-4.33)
Return Loss All Ports Min/Typ, dB	19/23
Power Handling Continuous, Max, W	1250 at common port; 750 in low frequency path & 500 in high frequency path
Power Handling Peak, Max, W	15000 in low frequency path & 8000 in high frequency path
Impedance, Ohms	50
Insertion Loss, Path 1, dB	0.07 typ.
Insertion Loss, Path 2, dB	0.13 typ.
Rejection Between Bands Min/Typ, dB	58/64@698-960MHz; 60/70@1710-2200MHz
IMP Level at the COM Port, Typ, dBm	-112 @ 2x43
DC Pass in Low Frequency Path	No
DC Pass in High Frequency Path	Yes
Temperature Range, °C (°F)	-40 to +60 (-40 to +140)
Environmental	ETSI 300-019-2-4 Class 4.1E
Ingress Protection	IP 67
Lightning Protection	EN/IEC61000-4-5 Level 4
Connectors	In-line long-neck 7-16-Female
Weight, kg (lb)	1.2 (2.6)
Shipping Weight, kg (lb)	3.2 (7) for 2 * single units in 1 * box, 9.8 (21.6) for 6 * units = 3 * Boxes in 1 * overwrap
Dimensions, H x W x D, mm (in)	147 x 164 x 37 (5.8 x 6.5 x 1.5)
Shipping Dimensions, H x W x D, mm (in)	254 x 406 x 82 (10 x 16 x 3.2) for 2 * Single Units in 1 * box, 280 x 406 x 241 (11 x 16 x 9.5) for 6 * units = 3 * Boxes in 1 * overwrap
Volume, L	0.43
Housing	Aluminum

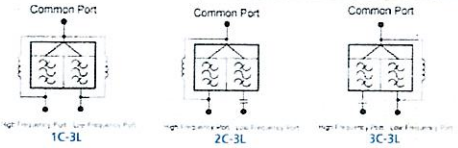
Notes

ShareLite Wideband Diplexer – In-line 698-960 MHz/1710-2200 MHz, DC pass in high frequency path

Other Documentation

FD9R6004/2C-3L Installation Instructions: Wideband_Diplexer_Installation_Rev5.pdf

Selection Guide Diplexer 698-960 / 1710-2200MHz					
	Model Number	Full DC Pass	DC Pass High Band	DC Pass Low Band	Mounting Hardware Included
Single	FD9R6004/1C-3L				X
	FD9R6004/2C-3L				X
	FD9R6004/3C-3L				X
Dual	KIT-FD9R6004/1C-DL				X
	KIT-FD9R6004/2C-DL				X
	KIT-FD9R6004/3C-DL				X



The FD9R6004 series is upgradeable to a Dual Diplexer kit by means of 2 diplexers and mounting hardware kits SEM2-1A and SEM2-3

Mounting Hardware and Ground Cable Ordering Information		
Model Number	**Description**	
SEM2-1A	Mounting Hardware, Pole mount ø40-110mm (Included with the Single and Dual Diplexer) Wall Screws M6 (Not included with the product)	
SEM2-3	Assembly kit for 2 pcs of FD9R6004/xC-3L (Can be ordered separately but included with the Dual Diplexer Kit)	
CA020-2	Ground Cable, 2m, includes lugs (Optional)	
CA030-2	Ground Cable, 2m, includes lugs (Optional)	
SEM6	Mounting Hardware for 6 Diplexers, Tower Base (Optional)	

	General	Power	Density					
Site Name: Hampton								
Tower Height: Verizon @ 142ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Sprint	11	122	152.3	0.0208	1950	1.0000	2.08%	
*Nextel	9	100	159.5	0.0127	851	0.5673	2.24%	
*Cingular UMTS	1	500	130	0.0106	880	0.5867	1.81%	
*Cingular GSM	2	427	130	0.0182	1900	1.0000	1.82%	
*Cingular GSM	4	296	130	0.0252	880	0.5867	4.29%	
*T-Mobile	8	135	115	0.0294	1935	1.0000	2.94%	
Verizon PCS	**11**	**250**	**142**	**0.0490**	**1970**	**1.0000**	**4.90%**	
Verizon Cellular	**9**	**257**	**142**	**0.0412**	**869**	**0.5793**	**7.12%**	
Verizon AWS	**1**	**664**	**142**	**0.0118**	**2145**	**1.0000**	**1.18%**	
Verizon 700	**1**	**841**	**142**	**0.0150**	**698**	**0.4653**	**3.22%**	
								31.61%
* Source: Siting Council								

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**160 ft Fred A. Nudd Guyed Tower**
ATC Site Name	:	**Hampton CT, CT**
ATC Site Number	:	**10029**
Proposed Carrier	:	**Verizon**
Carrier Site Name	:	**Hampton CT**
Carrier Site Number	:	**118588/2012710809**
County	:	**Windham**
Eng. Number	:	**48650721**
Date	:	**January 23, 2012***
Usage	:	**61% Legs, 52% Diagonals, 31% Horizontals, 65% Guys**
Result	:	**Pass**

Submitted by:
Joseph R. Johnston
Project Engineer

American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 160 ft Fred A. Nudd Guyed Tower located off Fisk Road, Hampton, Connecticut, 06247, Windham County (ATC Site No. 10029). The tower was originally designed and manufactured by Fred A. Nudd (Drawing No. 99-6606-1, dated February 17, 1999).

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software.

Basic Wind Speed: 85 mph (Fastest Mile)
Radial Ice: 74 mph (Fastest Mile) w/ ½" ice
Code: ANSI/TIA/EIA-222-F / 2003 IBC w/ 2005 CT Supplement and 2009 CT Amendments

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
156.0	9	Allgon 7120.16.05.00	Sector Frames	(9) 1 1/4	Sprint Nextel
150.0	9	Decibel DB980H90B-KL	Sector Frames	(9) 1 5/8	
130.0	6	Allgon 7770.00	Sector Frames	(12) 1 1/4	AT&T Mobility
	6	Powerwave LGP17201			
	6	Powerwave LGP13519			
75.0	1	Lucent KS-24019	Side Arm	(1) 7/8	Verizon

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
142.0	6	RFS FD9R6004/2C-3L	Sector Frames	(12) 1 5/8	Verizon
	3	Antel BXA-70063-6CF			
	6	Antel LPA-80080-4CF			
	3	Antel BXA-171085-8BF			

Bundle proposed coax along tower legs in place of existing.

Results

The maximum structure usage is: 65%

Foundation Reactions	Current Analysis Reactions
Base Compression (Kips)	85.9
Base Shear (Kips)	1.9
Anchor Uplift (Kips)	33.3
Anchor Shear (Kips)	44.0

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required. These calculations are located after the software output within this analysis.

Conclusion

Based on the analysis results, the structure meets the requirements per the ANSI/TIA/EIA-222-F standard and the 2003 IBC w/ 2005 Supplement and 2009 Amendments. The tower and foundation can support the existing and proposed antennas with the transmission line distribution as described in this report.

If you have any questions or require additional information, please call 919-466-5030.

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

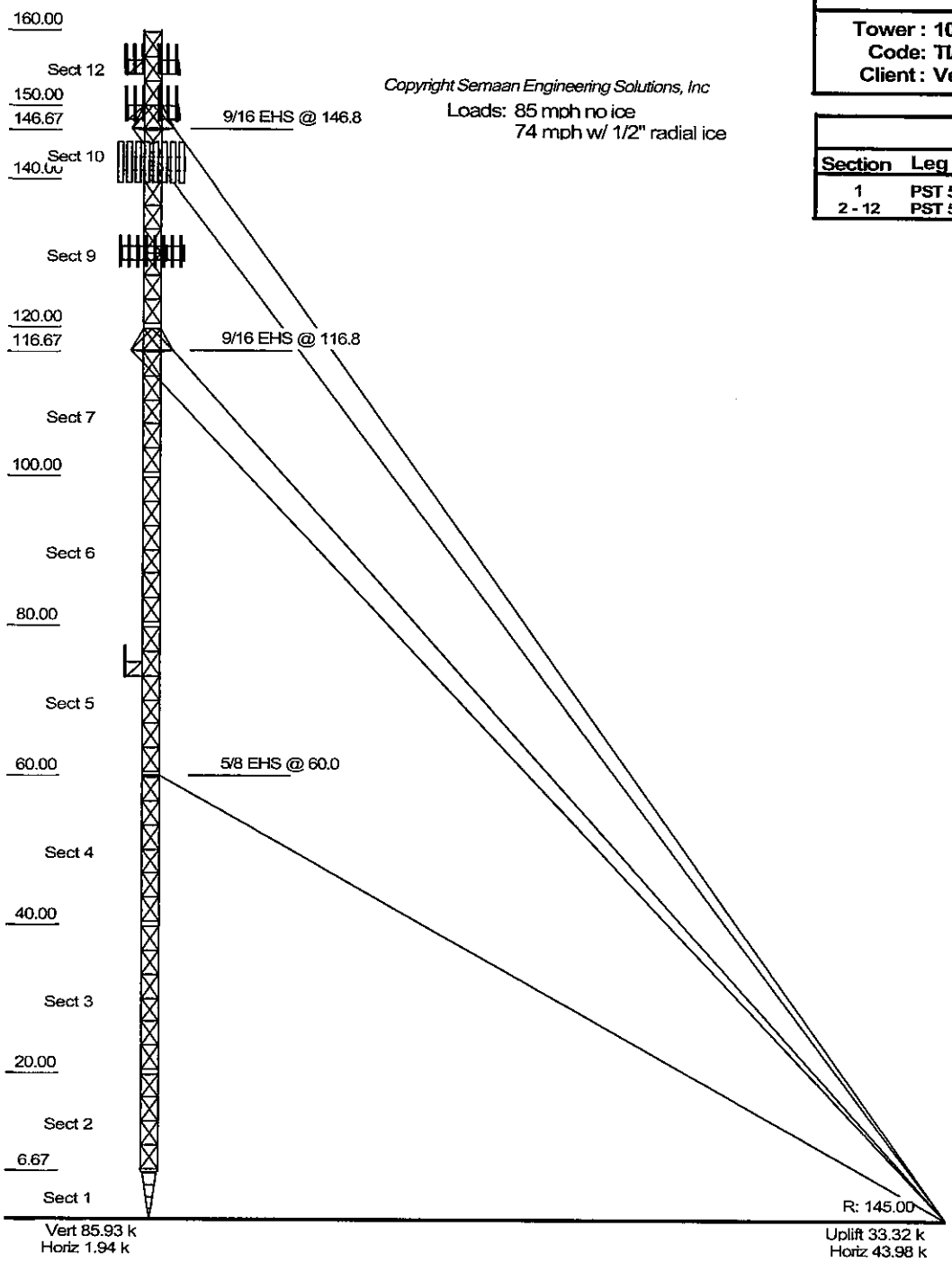
-- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Engineering Services and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different fom the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Engineering Services is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Loads: 85 mph no ice
74 mph w/ 1/2" radial ice

Job Information

Tower : 10029	Location : Hampton CT, CT	
Code: TIA/EIA-222 Rev F	Shape : Triangle	Base Width : 3.50 ft
Client : Verizon Wireless		

Sections Properties

Section	Leg Members		Diagonal Members	Horizontal Members
1	PST 55ksi	2-1/2" DIA PIPE		SAE 36ksi 2.5X2.5X0.25
2 - 12	PST 55ksi	2-1/2" DIA PIPE	SOL 36ksi 5/8" SOLID	SAE 36ksi 1.5X1.5X0.1875

Discrete Appurtenance

Elev (ft)	Type	Qty	Description
156.00	Straight Arm	3	Delta Mount
156.00	Panel	9	Allgon 7120.16.05.00
156.00	Mounting Frame	3	Flat Light Sector Frames
150.00	Straight Arm	3	Delta Mount
150.00	Panel	9	Decibel DB980H90B-KL
150.00	Mounting Frame	3	Flat Light Sector Frames
147.00	Other	1	Torque Arms
142.00	Panel	3	Antel BXA-171085-8BF
142.00	Panel	6	Antel LPA-80080-4CF
142.00	Panel	3	Antel BXA-70063-6CF
142.00	Panel	6	RFS FD9R6004/2C-3L
142.00	Mounting Frame	3	Flat Light Sector Frames
130.00	Panel	6	Powerwave LGP13519
130.00	Panel	6	Powerwave LGP17201
130.00	Panel	6	Allgon 7770.00
130.00	Mounting Frame	3	Flat Light Sector Frames
117.00	Other	1	Torque Arms
75.00	Straight Arm	1	Flat Side Arm
75.00	Whip	1	Lucent KS-24019

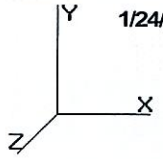
Linear Appurtenance

Elev (ft) From	To	Qty	Description
10.000	156.00	9	1 1/4" Coax
10.000	150.00	9	1 5/8" Coax
10.000	142.00	6	1 5/8" Coax
10.000	142.00	6	1 5/8" Coax
10.000	130.00	12	1 1/4" Coax
10.000	75.000	1	7/8" Coax

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:33 PM



Gh : 1.13

Section Forces

LoadCase Normal No Ice — 85.00 mph Wind Normal To Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
12	155.0	28.78	1.22	13.18	0.00	0.41	2.04	1.00	1.00	0.66	9.87	0.00	0.00	353.6	0.0	654.66	0.00	654.66	3
11	148.3	28.42	0.00	5.94	0.00	0.51	1.89	1.00	1.00	0.70	4.17	0.00	0.00	131.2	0.0	252.82	0.00	252.82	3
10	143.3	28.14	0.82	11.87	0.00	0.54	1.85	1.00	1.00	0.72	9.37	1.98	0.00	319.2	0.0	550.77	75.49	626.26	3
9	130.0	27.37	2.85	35.65	0.00	0.55	1.84	1.00	1.00	0.72	28.67	27.55	0.00	1,191.5	0.0	1,632.90	1,021.2	2,654.17	3
8	118.3	26.64	0.00	5.92	0.00	0.51	1.89	1.00	1.00	0.70	4.15	5.88	0.00	187.7	0.0	235.95	212.30	448.25	3
7	108.3	25.98	2.04	29.73	0.00	0.54	1.85	1.00	1.00	0.72	23.48	29.42	0.00	1,041.2	0.0	1,272.77	1,035.0	2,307.85	3
6	90.00	24.64	2.85	35.65	0.00	0.55	1.84	1.00	1.00	0.72	28.67	35.30	0.00	1,267.1	0.0	1,470.05	1,178.0	2,648.07	3
5	70.00	22.93	2.85	35.65	0.00	0.55	1.84	1.00	1.00	0.72	28.67	35.30	0.00	1,272.0	0.0	1,368.19	1,096.4	2,464.59	3
4	50.00	20.83	3.29	35.65	0.00	0.56	1.84	1.00	1.00	0.73	29.24	35.30	0.00	1,292.6	0.0	1,263.16	995.91	2,259.07	3
3	30.00	18.50	2.85	35.65	0.00	0.55	1.84	1.00	1.00	0.72	28.67	35.30	0.00	1,273.7	0.0	1,103.66	884.43	1,988.09	3
2	13.33	18.50	2.04	19.89	0.00	0.47	1.94	1.00	1.00	0.68	15.62	17.65	0.00	752.8	0.0	633.25	442.20	1,075.46	3
1	3.33	18.50	1.52	3.34	0.00	0.42	2.03	1.00	1.00	0.66	3.72	0.00	0.00	222.6	0.0	157.79	0.00	157.79	1
														9,305.3	0.0			17,537.08	

LoadCase 60 deg No Ice — 85.00 mph Wind at 60 deg From Face with No Ice

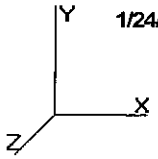
Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face
12	155.0	28.78	1.22	13.18	0.00	0.41	2.04	0.80	1.00	0.66	9.63	0.00	0.00	353.6	0.0	638.44	0.00	638.44	3
11	148.3	28.42	0.00	5.94	0.00	0.51	1.89	0.80	1.00	0.70	4.17	0.00	0.00	131.2	0.0	252.82	0.00	252.82	3
10	143.3	28.14	0.82	11.87	0.00	0.54	1.85	0.80	1.00	0.72	9.21	1.98	0.00	319.2	0.0	541.19	75.49	616.68	3
9	130.0	27.37	2.85	35.65	0.00	0.55	1.84	0.80	1.00	0.72	28.10	27.55	0.00	1,191.5	0.0	1,600.41	1,021.2	2,621.67	3
8	118.3	26.64	0.00	5.92	0.00	0.51	1.89	0.80	1.00	0.70	4.15	5.88	0.00	187.7	0.0	235.95	212.30	448.25	3
7	108.3	25.98	2.04	29.73	0.00	0.54	1.85	0.80	1.00	0.72	23.07	29.42	0.00	1,041.2	0.0	1,250.67	1,035.0	2,285.76	3
6	90.00	24.64	2.85	35.65	0.00	0.55	1.84	0.80	1.00	0.72	28.10	35.30	0.00	1,267.1	0.0	1,440.79	1,178.0	2,618.82	3
5	70.00	22.93	2.85	35.65	0.00	0.55	1.84	0.80	1.00	0.72	28.10	35.30	0.00	1,272.0	0.0	1,340.97	1,096.4	2,437.37	3
4	50.00	20.83	3.29	35.65	0.00	0.56	1.84	0.80	1.00	0.73	28.58	35.30	0.00	1,292.6	0.0	1,234.73	995.91	2,230.64	3
3	30.00	18.50	2.85	35.65	0.00	0.55	1.84	0.80	1.00	0.72	28.10	35.30	0.00	1,273.7	0.0	1,081.70	884.43	1,966.13	3
2	13.33	18.50	2.04	19.89	0.00	0.47	1.94	0.80	1.00	0.68	15.21	17.65	0.00	752.8	0.0	616.72	442.20	1,058.93	3
1	3.33	18.50	1.52	3.34	0.00	0.42	2.03	0.80	1.00	0.66	3.41	0.00	0.00	222.6	0.0	144.89	0.00	144.89	1
														9,305.3	0.0			17,320.40	

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:33 PM



Gh : 1.13

Section Forces

LoadCase 90 deg No Ice — 85.00 mph Wind at 90 deg From Face with No Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
12	155.0	28.78	1.22	13.18	0.00	0.41	2.04	0.85	1.00	0.66	9.69	0.00	0.00	353.6	0.0	642.49	0.00	642.49	3	
11	148.3	28.42	0.00	5.94	0.00	0.51	1.89	0.85	1.00	0.70	4.17	0.00	0.00	131.2	0.0	252.82	0.00	252.82	3	
10	143.3	28.14	0.82	11.87	0.00	0.54	1.85	0.85	1.00	0.72	9.25	1.98	0.00	319.2	0.0	543.59	75.49	619.08	3	
9	130.0	27.37	2.85	35.65	0.00	0.55	1.84	0.85	1.00	0.72	28.25	27.55	0.00	1,191.5	0.0	1,608.53	1,021.2	2,629.80	3	
8	118.3	26.64	0.00	5.92	0.00	0.51	1.89	0.85	1.00	0.70	4.15	5.88	0.00	187.7	0.0	235.95	212.30	448.25	3	
7	108.3	25.98	2.04	29.73	0.00	0.54	1.85	0.85	1.00	0.72	23.17	29.42	0.00	1,041.2	0.0	1,256.20	1,035.0	2,291.28	3	
6	90.00	24.64	2.85	35.65	0.00	0.55	1.84	0.85	1.00	0.72	28.25	35.30	0.00	1,267.1	0.0	1,448.11	1,178.0	2,626.13	3	
5	70.00	22.93	2.85	35.65	0.00	0.55	1.84	0.85	1.00	0.72	28.25	35.30	0.00	1,272.0	0.0	1,347.77	1,096.4	2,444.18	3	
4	50.00	20.83	3.29	35.65	0.00	0.56	1.84	0.85	1.00	0.73	28.74	35.30	0.00	1,292.6	0.0	1,241.84	995.91	2,237.75	3	
3	30.00	18.50	2.85	35.65	0.00	0.55	1.84	0.85	1.00	0.72	28.25	35.30	0.00	1,273.7	0.0	1,087.19	884.43	1,971.62	3	
2	13.33	18.50	2.04	19.89	0.00	0.47	1.94	0.85	1.00	0.68	15.31	17.65	0.00	752.8	0.0	620.86	442.20	1,063.06	3	
1	3.33	18.50	1.52	3.34	0.00	0.42	2.03	0.85	1.00	0.66	3.49	0.00	0.00	222.6	0.0	148.11	0.00	148.11	1	
														9,305.3	0.0			17,374.57		

LoadCase Normal Ice — 73.61 mph Wind Normal To Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

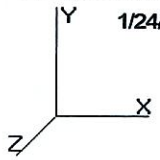
Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
12	155.0	21.58	1.22	22.59	9.42	0.68	1.78	1.00	1.00	0.81	19.43	0.00	0.00	584.7	231.1	840.90	0.00	840.90	3	
11	148.3	21.31	0.00	9.79	3.85	0.84	1.85	1.00	1.00	0.93	9.10	0.00	0.00	254.5	123.3	405.16	0.00	405.16	3	
10	143.3	21.10	0.82	20.14	8.26	0.90	1.92	1.00	1.00	0.98	20.58	1.98	2.31	606.6	287.4	941.67	122.76	1,064.43	3	
9	130.0	20.52	2.85	60.77	25.12	0.91	1.94	1.00	1.00	0.99	63.10	27.55	28.13	2,308.2	1,116.7	2,831.64	1,548.0	3,243.32	3	**
8	118.3	19.98	0.00	9.73	3.81	0.83	1.84	1.00	1.00	0.92	8.99	5.88	5.52	381.2	193.5	374.12	308.67	526.22	3	**
7	108.3	19.48	2.04	50.45	20.72	0.90	1.92	1.00	1.00	0.98	51.62	29.42	27.61	2,085.8	1,044.6	2,183.74	1,504.9	2,565.55	3	**
6	90.00	18.48	2.85	60.77	25.12	0.91	1.94	1.00	1.00	0.99	63.10	35.30	33.13	2,534.1	1,267.0	2,549.23	1,712.7	2,919.86	3	**
5	70.00	17.20	2.85	60.77	25.12	0.91	1.94	1.00	1.00	0.99	63.10	35.30	33.13	2,553.6	1,281.5	2,372.60	1,594.0	2,717.55	3	**
4	50.00	15.62	3.29	61.06	25.41	0.92	1.95	1.00	1.00	1.00	64.35	35.30	33.13	2,593.3	1,300.7	2,215.88	1,447.9	2,468.46	3	**
3	30.00	13.87	2.85	60.77	25.12	0.91	1.94	1.00	1.00	0.99	63.10	35.30	33.13	2,560.1	1,286.4	1,913.89	1,285.8	2,192.14	3	**
2	13.33	13.87	2.04	34.24	14.35	0.78	1.80	1.00	1.00	0.88	32.10	17.65	16.57	1,457.6	704.8	905.36	642.92	1,461.41	3	**
1	3.33	13.87	1.52	5.19	1.85	0.57	1.82	1.00	1.00	0.74	5.35	0.00	0.00	318.6	96.1	152.66	0.00	152.66	1	
														18,238.3	8,933.0			20,557.65		

** = 2QzGhAg Controls

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:33 PM



Gh : 1.13

Section Forces

LoadCase 60 deg Ice

73.61 mph Wind at 60 deg From Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
12	155.0	21.58	1.22	22.59	9.42	0.68	1.78	0.80	1.00	0.81	19.19	0.00	0.00	584.7	231.1	830.32	0.00	830.32	3	
11	148.3	21.31	0.00	9.79	3.85	0.84	1.85	0.80	1.00	0.93	9.10	0.00	0.00	254.5	123.3	405.16	0.00	405.16	3	
10	143.3	21.10	0.82	20.14	8.26	0.90	1.92	0.80	1.00	0.98	20.41	1.98	2.31	606.6	287.4	934.21	122.76	1,056.97	3	
9	130.0	20.52	2.85	60.77	25.12	0.91	1.94	0.80	1.00	0.99	62.53	27.55	28.13	2,308.2	1,116.7	2,806.04	1,548.0	3,243.32	3	**
8	118.3	19.98	0.00	9.73	3.81	0.83	1.84	0.80	1.00	0.92	8.99	5.88	5.52	381.2	193.5	374.12	308.67	526.22	3	**
7	108.3	19.48	2.04	50.45	20.72	0.90	1.92	0.80	1.00	0.98	51.21	29.42	27.61	2,085.8	1,044.6	2,166.50	1,504.9	2,565.55	3	**
6	90.00	18.48	2.85	60.77	25.12	0.91	1.94	0.80	1.00	0.99	62.53	35.30	33.13	2,534.1	1,267.0	2,526.18	1,712.7	2,919.86	3	**
5	70.00	17.20	2.85	60.77	25.12	0.91	1.94	0.80	1.00	0.99	62.53	35.30	33.13	2,553.6	1,281.5	2,351.15	1,594.0	2,717.55	3	**
4	50.00	15.62	3.29	61.06	25.41	0.92	1.95	0.80	1.00	1.00	63.70	35.30	33.13	2,593.3	1,300.7	2,193.22	1,447.9	2,468.46	3	**
3	30.00	13.87	2.85	60.77	25.12	0.91	1.94	0.80	1.00	0.99	62.53	35.30	33.13	2,560.1	1,286.4	1,896.58	1,285.8	2,192.14	3	**
2	13.33	13.87	2.04	34.24	14.35	0.78	1.80	0.80	1.00	0.88	31.70	17.65	16.57	1,457.6	704.8	893.86	642.92	1,461.41	3	**
1	3.33	13.87	1.52	5.19	1.85	0.57	1.82	0.80	1.00	0.74	5.05	0.00	0.00	318.6	96.1	143.98	0.00	143.98	1	
														18,238.3	8,933.0			20,530.94		

** = 2QzGhAg Controls

LoadCase 90 deg Ice

73.61 mph Wind at 90 deg From Face with Ice

Allow Stress Inc: 1.333
Dead LF: 1.000
Wind LF: 1.000

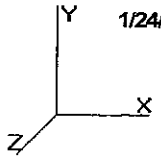
Sect Seq	Wind Height (ft)	qz	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Rr	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	Eff Face	
12	155.0	21.58	1.22	22.59	9.42	0.68	1.78	0.85	1.00	0.81	19.25	0.00	0.00	584.7	231.1	832.96	0.00	832.96	3	
11	148.3	21.31	0.00	9.79	3.85	0.84	1.85	0.85	1.00	0.93	9.10	0.00	0.00	254.5	123.3	405.16	0.00	405.16	3	
10	143.3	21.10	0.82	20.14	8.26	0.90	1.92	0.85	1.00	0.98	20.45	1.98	2.31	606.6	287.4	936.07	122.76	1,058.83	3	
9	130.0	20.52	2.85	60.77	25.12	0.91	1.94	0.85	1.00	0.99	62.67	27.55	28.13	2,308.2	1,116.7	2,812.44	1,548.0	3,243.32	3	**
8	118.3	19.98	0.00	9.73	3.81	0.83	1.84	0.85	1.00	0.92	8.99	5.88	5.52	381.2	193.5	374.12	308.67	526.22	3	**
7	108.3	19.48	2.04	50.45	20.72	0.90	1.92	0.85	1.00	0.98	51.31	29.42	27.61	2,085.8	1,044.6	2,170.81	1,504.9	2,565.55	3	**
6	90.00	18.48	2.85	60.77	25.12	0.91	1.94	0.85	1.00	0.99	62.67	35.30	33.13	2,534.1	1,267.0	2,531.94	1,712.7	2,919.86	3	**
5	70.00	17.20	2.85	60.77	25.12	0.91	1.94	0.85	1.00	0.99	62.67	35.30	33.13	2,553.6	1,281.5	2,356.51	1,594.0	2,717.55	3	**
4	50.00	15.62	3.29	61.06	25.41	0.92	1.95	0.85	1.00	1.00	63.86	35.30	33.13	2,593.3	1,300.7	2,198.89	1,447.9	2,468.46	3	**
3	30.00	13.87	2.85	60.77	25.12	0.91	1.94	0.85	1.00	0.99	62.67	35.30	33.13	2,560.1	1,286.4	1,900.91	1,285.8	2,192.14	3	**
2	13.33	13.87	2.04	34.24	14.35	0.78	1.80	0.85	1.00	0.88	31.80	17.65	16.57	1,457.6	704.8	896.74	642.92	1,461.41	3	**
1	3.33	13.87	1.52	5.19	1.85	0.57	1.82	0.85	1.00	0.74	5.12	0.00	0.00	318.6	96.1	146.15	0.00	146.15	1	
														18,238.3	8,933.0			20,537.62		

** = 2QzGhAg Controls

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:33 PM



Tower Loading

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	X Angle (deg)	Vert Ecc (ft)
156.0	Delta Mount	3	150.00	6.300	0.67	230.00	7.000	0.67	0.000	0.00	0.000
156.0	Allgon 7120.16.05.00	9	15.40	5.760	0.85	53.00	4.586	0.85	0.000	0.00	0.000
156.0	Flat Light Sector Frames	3	400.00	17.900	0.67	510.00	22.200	0.67	0.000	0.00	0.000
150.0	Delta Mount	3	150.00	6.300	0.67	230.00	7.000	0.67	0.000	0.00	0.000
150.0	Decibel DB980H90B-KL	9	8.50	3.800	0.79	28.62	4.370	0.79	0.000	0.00	0.000
150.0	Flat Light Sector Frames	3	400.00	17.900	0.67	510.00	22.200	0.67	0.000	0.00	0.000
147.0	Torque Arms	1	500.00	15.000	1.00	650.00	20.250	1.00	0.000	0.00	0.000
142.0	Antel BXA-171085-8BF	3	10.50	2.940	0.87	29.80	3.370	0.87	0.000	0.00	0.000
142.0	Antel LPA-80080-4CF	6	12.00	6.050	0.72	45.12	6.650	0.72	0.000	0.00	0.000
142.0	Antel BXA-70063-6CF	3	17.00	7.730	0.77	58.00	8.540	0.77	0.000	0.00	0.000
142.0	RFS FD9R6004/2C-3L	6	3.10	0.370	0.50	5.40	0.500	0.50	0.000	0.00	0.000
142.0	Flat Light Sector Frames	3	400.00	17.900	0.67	510.00	22.200	0.67	0.000	0.00	0.000
130.0	Powerwave LGP13519	6	10.00	0.338	0.50	20.00	0.467	0.50	0.000	0.00	0.000
130.0	Powerwave LGP17201	6	31.00	2.000	0.50	50.00	2.300	0.50	0.000	0.00	0.000
130.0	Allgon 7770.00	6	35.00	5.880	0.75	68.00	6.530	0.75	0.000	0.00	0.000
130.0	Flat Light Sector Frames	3	400.00	17.900	0.67	510.00	22.200	0.67	0.000	0.00	0.000
117.0	Torque Arms	1	500.00	15.000	1.00	650.00	20.250	1.00	0.000	0.00	0.000
75.00	Flat Side Arm	1	50.00	3.000	1.00	75.00	5.000	1.00	0.000	0.00	0.000
75.00	Lucent KS-24019	1	4.00	0.910	1.00	11.20	1.200	1.00	0.000	0.00	1.104
	Totals	76	7598.20			11015.30			Number of Appurtenances : 19		

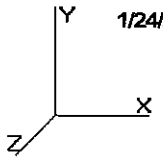
Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Wind	Spread On Faces	Bundling Arrangement
10.00	156.0	1 1/4" Coax	9	1.55	0.63	100.00	3	Separate
10.00	150.0	1 5/8" Coax	9	1.98	0.82	66.60	2	Separate
10.00	142.0	1 5/8" Coax	6	1.98	0.82	100.00	Lin App	Bundled
10.00	142.0	1 5/8" Coax	6	1.98	0.82	100.00	Lin App	Bundled
10.00	130.0	1 1/4" Coax	12	1.55	0.63	50.00	Lin App	Separate
10.00	75.00	7/8" Coax	1	1.09	0.33	100.00	1	Separate

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:33 PM



Force/Stress Summary

Section: 1 Section 1 Bot Elev (ft): 0.00 Height (ft): 6.667

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-35.13	60 deg Ice	1.64	100	100	100	20.8	41.2	70.2	0	0	0.00	0.00	50	Member X
HORIZ SAE - 2.5X2.5X0.25	-0.04	Normal No Ice	0.826	100	100	100	13.1	28.0	33.31	0	0	0.00	0.00	0	Member Z
DIAG	0.00		0.000	0	0	0	0.0	0.0	0.0(	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.0(	0	0	0.0(	0.00	0	
HORIZ SAE - 2.5X2.5X0.25	2.98	Normal Ice	3(	34.27	0	0	0.0(	0.00	8	Member
DIAG	0.00		0	0.0(	0	0	0.0(	0.00	0	

Section: 2 Section 2 Bot Elev (ft): 6.67 Height (ft): 13.333

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-36.90	60 deg Ice	3.21	100	100	100	40.7	37.3	63.61	0	0	0.00	0.00	58	Member X
HORIZ SAE - 1.5X1.5X0.1875	-1.22	90 deg Ice	3.500	100	100	100	93.2	18.4	9.77	0	0	0.00	0.00	12	Member Z
DIAG SOL - 5/8" SOLID	-1.60	Normal No Ice	4.748	50	50	50	164.3	7.4	2.2(	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.0(	0	0	0.0(	0.00	0	
HORIZ SAE - 1.5X1.5X0.1875	3.80	Normal Ice	3(	15.2(	0	0	0.0(	0.00	24	Member
DIAG SOL - 5/8" SOLID	1.78	90 deg Ice	36	8.8:	0	0	0.0(	0.00	20	Member

Section: 3 Section 3-9 Bot Elev (ft): 20.00 Height (ft): 20.000

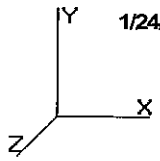
Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-37.84	60 deg Ice	3.21	100	100	100	40.7	37.3	63.61	0	0	0.00	0.00	59	Member X
HORIZ SAE - 1.5X1.5X0.1875	-0.49	60 deg Ice	3.500	100	100	100	93.2	18.4	9.77	0	0	0.00	0.00	4	Member Z
DIAG SOL - 5/8" SOLID	-1.26	Normal No Ice	4.748	50	50	50	164.3	7.4	2.2(	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.0(	0	0	0.0(	0.00	0	
HORIZ SAE - 1.5X1.5X0.1875	2.85	Normal Ice	3(	15.2(	0	0	0.0(	0.00	18	Member
DIAG SOL - 5/8" SOLID	1.09	60 deg Ice	36	8.8:	0	0	0.0(	0.00	12	Member

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:33 PM



Force/Stress Summary

Section: 4 **Section 3-9** **Bot Elev (ft): 40.00** **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-35.79	60 deg Ice	3.21	100	100	100	40.7	37.3	63.61	0	0	0.00	0.00	56	Member X
HORIZ SAE - 1.5X1.5X0.1875	-2.33	90 deg Ice	3.500	100	100	100	93.2	18.4	9.77	0	0	0.00	0.00	23	Member Z
DIAG SOL - 5/8" SOLID	-0.35	Normal No Ice	4.748	50	50	50	164.3	7.4	2.26	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.00	0	0	0.00	0.00	0	
HORIZ SAE - 1.5X1.5X0.1875	2.67	Normal Ice	36	15.26	0	0	0.00	0.00	17	Member
DIAG SOL - 5/8" SOLID	3.14	90 deg Ice	36	8.83	0	0	0.00	0.00	35	Member

Section: 5 **Section 3-9** **Bot Elev (ft): 60.00** **Height (ft): 20.000**

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-33.12	90 deg Ice	3.21	100	100	100	40.7	37.3	63.61	0	0	0.00	0.00	52	Member X
HORIZ SAE - 1.5X1.5X0.1875	-2.14	90 deg Ice	3.500	100	100	100	93.2	18.4	9.77	0	0	0.00	0.00	21	Member Z
DIAG SOL - 5/8" SOLID	-2.13	Normal No Ice	4.748	50	50	50	164.3	7.4	2.26	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.00	0	0	0.00	0.00	0	
HORIZ SAE - 1.5X1.5X0.1875	2.39	60 deg Ice	36	15.26	0	0	0.00	0.00	15	Member
DIAG SOL - 5/8" SOLID	2.89	90 deg Ice	36	8.83	0	0	0.00	0.00	32	Member

Section: 6 **Section 3-9** **Bot Elev (ft): 80.00** **Height (ft): 20.000**

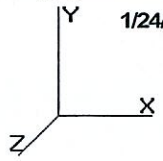
Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-26.31	60 deg Ice	3.21	100	100	100	40.7	37.3	63.61	0	0	0.00	0.00	41	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SOL - 5/8" SOLID	-1.08	Normal No Ice	4.748	50	50	50	164.3	7.4	2.26	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.00	0	0	0.00	0.00	0	
HORIZ SAE - 1.5X1.5X0.1875	2.13	Normal Ice	36	15.26	0	0	0.00	0.00	13	Member
DIAG	0.00		0	0.00	0	0	0.00	0.00	0	

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:33 PM



Force/Stress Summary

Section: 7 Section 8 Bot Elev (ft): 100.0 Height (ft): 16.667

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-38.86	Normal Ice	3.26	100	100	100	41.3	37.2	63.37	0	0	0.00	0.00	61	Member X
HORIZ SAE - 1.5X1.5X0.1875	-2.61	90 deg Ice	3.500	100	100	100	93.2	18.4	9.77	0	0	0.00	0.00	26	Member Z
DIAG SOL - 5/8" SOLID	-0.97	Normal No Ice	4.782	50	50	50	165.5	7.3	2.23	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.00	0	0	0.00	0.00	0	
HORIZ SAE - 1.5X1.5X0.1875	2.40	60 deg Ice	36	15.26	0	0	0.00	0.00	15	Member
DIAG SOL - 5/8" SOLID	3.75	90 deg Ice	36	8.83	0	0	0.00	0.00	42	Member

Section: 8 Section 8 Bot Elev (ft): 116.6 Height (ft): 3.333

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-36.18	Normal Ice	2.86	100	100	100	36.2	38.3	65.25	0	0	0.00	0.00	55	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0	
DIAG SOL - 5/8" SOLID	-1.78	Normal No Ice	4.519	50	50	50	156.4	8.1	2.50	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	8.60	60 deg No Ice	55	74.97	0	0	0.00	0.00	11	Member
HORIZ	0.00		0	0.00	0	0	0.00	0.00	0	
DIAG	0.00		0	0.00	0	0	0.00	0.00	0	

Section: 9 Section 3-9 Bot Elev (ft): 120.0 Height (ft): 20.000

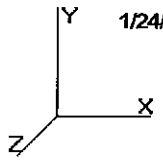
Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-33.05	Normal Ice	3.21	100	100	100	40.7	37.3	63.61	0	0	0.00	0.00	51	Member X
HORIZ SAE - 1.5X1.5X0.1875	-3.09	90 deg Ice	3.500	100	100	100	93.2	18.4	9.77	0	0	0.00	0.00	31	Member Z
DIAG SOL - 5/8" SOLID	-0.27	Normal No Ice	4.748	50	50	50	164.3	7.4	2.26	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	8.62	60 deg No Ice	55	74.97	0	0	0.00	0.00	11	Member
HORIZ SAE - 1.5X1.5X0.1875	1.68	60 deg Ice	36	15.26	0	0	0.00	0.00	11	Member
DIAG SOL - 5/8" SOLID	4.59	90 deg Ice	36	8.83	0	0	0.00	0.00	51	Member

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:34 PM



Force/Stress Summary

Section: 10 Section 9 Bot Elev (ft): 140.0 Height (ft): 6.667

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-12.48	Normal No Ice	3.15	100	100	100	39.9	37.5	63.91	0	0	0.00	0.00	19	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.0(	0	0	0.00	0.00	0	
DIAG SOL - 5/8" SOLID	-0.65	Normal No Ice	4.706	50	50	50	162.9	7.5	2.3(	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.0(	0	0	0.0(	0.00	0	
HORIZ SAE - 1.5X1.5X0.1875	1.35	Normal Ice	3(	15.2(	0	0	0.0(	0.00	8	Member
DIAG SOL - 5/8" SOLID	0.82	60 deg No Ice	36	8.8:	0	0	0.0(	0.00	9	Member

Section: 11 Section 9 Bot Elev (ft): 146.6 Height (ft): 3.333

Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-13.76	Normal No Ice	3.23	100	100	100	41.0	37.3	63.4:	0	0	0.00	0.00	21	Member X
HORIZ	0.00		0.000	0	0	0	0.0	0.0	0.0(	0	0	0.00	0.00	0	
DIAG SOL - 5/8" SOLID	-0.66	Normal No Ice	4.765	50	50	50	164.9	7.3	2.2:	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG	0.00		0	0.0(	0	0	0.0(	0.00	0	
HORIZ	0.00		0	0.0(	0	0	0.0(	0.00	0	
DIAG	0.00		0	0.0(	0	0	0.0(	0.00	0	

Section: 12 Section 9 Bot Elev (ft): 150.0 Height (ft): 10.000

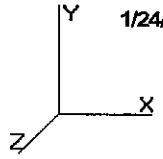
Max Compression Member	Force (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	Fa (ksi)	Member Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	-6.58	Normal No Ice	3.21	100	100	100	40.7	37.3	63.61	0	0	0.00	0.00	10	Member X
HORIZ SAE - 1.5X1.5X0.1875	-0.40	60 deg No Ice	3.500	100	100	100	93.2	18.4	9.77	0	0	0.00	0.00	4	Member Z
DIAG SOL - 5/8" SOLID	-1.51	Normal No Ice	4.748	50	50	50	164.3	7.4	2.2(	0	0	0.00	0.00		

Max Tension Member	Force (kip)	Load Case	Fy (ksi)	Cap (kip)	Num Bolts	Num Holes	Shear Cap (kip)	Bear Cap (kip)	Use %	Controls
LEG PST - 2-1/2" DIA PIP	5.22	60 deg No Ice	55	74.97	0	0	0.0(	0.00	6	Member
HORIZ SAE - 1.5X1.5X0.1875	0.46	Normal No Ice	3(	15.2(	0	0	0.0(	0.00	3	Member
DIAG SOL - 5/8" SOLID	1.62	90 deg No Ice	36	8.8:	0	0	0.0(	0.00	18	Member

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:34 PM



Support Forces Summary

Load Case	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
90 deg Ice	A1b	3.96	-4.03	-2.87	
	A1a	-36.14	-31.30	-20.22	
	A1	-1.41	-17.66	23.08	
	1	-1.83	85.93	0.01	
60 deg Ice	A1b	10.07	-9.71	-7.10	
	A1a	-38.09	-33.32	-21.99	
	A1	-1.11	-9.71	12.27	
	1	-1.57	85.32	-0.90	
Normal Ice	A1b	28.35	-25.14	-17.70	
	A1a	-28.35	-25.14	-17.70	
	A1	0.00	-1.52	1.94	
	1	0.00	85.09	-1.94	
90 deg No Ice	A1b	2.03	-2.00	-1.45	
	A1a	-31.02	-27.78	-17.57	
	A1	-0.70	-14.89	19.06	
	1	-1.54	63.42	-0.04	
60 deg No Ice	A1b	6.46	-6.07	-4.35	
	A1a	-31.54	-28.36	-18.21	
	A1	-0.54	-6.07	7.77	
	1	-1.38	59.08	-0.80	
Normal No Ice	A1b	25.35	-23.03	-15.32	
	A1a	-25.35	-23.03	-15.32	
	A1	0.00	-0.68	0.94	
	1	0.00	65.66	-1.57	

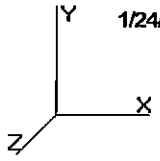
Max Reactions (kip)

	Base	Anch1
Vertical	85.93	-33.32
Horizonal	1.94	43.98

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:34 PM



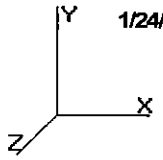
Cable Forces Summary

Load Case	Elevation (ft)	Cable	Node 1	Node 2	Allow Tension (kip)	Applied Tension (kip)	Use %
Normal No Ice	60.00	5/8 EHS	A1	28	21.20	0.62	2
		5/8 EHS	A1b	28a	21.20	8.06	38
		5/8 EHS	A1a	28b	21.20	8.06	38
	116.77	9/16 EHS	A1	T2	17.50	0.12	0
		9/16 EHS	A1a	T2b	17.50	6.98	39
		9/16 EHS	A1b	T2a	17.50	7.17	40
		9/16 EHS	A1b	T2	17.50	6.98	39
		9/16 EHS	A1a	T2a	17.50	7.17	40
		9/16 EHS	A1	T2b	17.50	0.12	0
	146.77	9/16 EHS	A1	T3	17.50	0.37	2
		9/16 EHS	A1a	T3b	17.50	7.87	44
		9/16 EHS	A1b	T3a	17.50	8.25	47
		9/16 EHS	A1b	T3	17.50	7.87	44
		9/16 EHS	A1a	T3a	17.50	8.25	47
		9/16 EHS	A1	T3b	17.50	0.37	2
60 deg No Ice	60.00	5/8 EHS	A1	28	21.20	2.26	10
		5/8 EHS	A1b	28a	21.20	2.26	10
		5/8 EHS	A1a	28b	21.20	9.87	46
	116.77	9/16 EHS	A1	T2	17.50	2.02	11
		9/16 EHS	A1a	T2b	17.50	8.65	49
		9/16 EHS	A1b	T2a	17.50	1.98	11
		9/16 EHS	A1b	T2	17.50	2.02	11
		9/16 EHS	A1a	T2a	17.50	8.65	49
		9/16 EHS	A1	T2b	17.50	1.98	11
	146.77	9/16 EHS	A1	T3	17.50	2.06	11
		9/16 EHS	A1a	T3b	17.50	9.95	56
		9/16 EHS	A1b	T3a	17.50	2.06	11
		9/16 EHS	A1b	T3	17.50	2.06	11
		9/16 EHS	A1a	T3a	17.50	9.95	56
		9/16 EHS	A1	T3b	17.50	2.06	11
90 deg No Ice	60.00	5/8 EHS	A1	28	21.20	5.13	24
		5/8 EHS	A1b	28a	21.20	0.81	3
		5/8 EHS	A1a	28b	21.20	9.58	45
	116.77	9/16 EHS	A1	T2	17.50	4.68	26
		9/16 EHS	A1a	T2b	17.50	8.62	49
		9/16 EHS	A1b	T2a	17.50	0.62	3
		9/16 EHS	A1b	T2	17.50	0.68	3
		9/16 EHS	A1a	T2a	17.50	8.34	47
		9/16 EHS	A1	T2b	17.50	4.73	27
	146.77	9/16 EHS	A1	T3	17.50	5.01	28
		9/16 EHS	A1a	T3b	17.50	9.91	56
		9/16 EHS	A1b	T3a	17.50	0.74	4
		9/16 EHS	A1b	T3	17.50	0.80	4
		9/16 EHS	A1a	T3a	17.50	9.63	55
		9/16 EHS	A1	T3b	17.50	5.31	30
Normal Ice	60.00	5/8 EHS	A1	28	21.20	1.09	5
		5/8 EHS	A1b	28a	21.20	9.65	45
		5/8 EHS	A1a	28b	21.20	9.65	45
	116.77	9/16 EHS	A1	T2	17.50	0.28	1

Site Number: 10029
Location: Hampton CT, CT

1/24/2012 5:22:34 PM

Code: TIA/EIA-222 Rev F

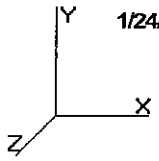


		9/16 EHS	A1a	T2b	17.50	8.02	45
		9/16 EHS	A1b	T2a	17.50	8.06	46
		9/16 EHS	A1b	T2	17.50	8.02	45
		9/16 EHS	A1a	T2a	17.50	8.06	46
		9/16 EHS	A1	T2b	17.50	0.28	1
	146.77	9/16 EHS	A1	T3	17.50	0.84	4
		9/16 EHS	A1a	T3b	17.50	8.58	49
		9/16 EHS	A1b	T3a	17.50	8.76	50
		9/16 EHS	A1b	T3	17.50	8.58	49
		9/16 EHS	A1a	T3a	17.50	8.76	50
		9/16 EHS	A1	T3b	17.50	0.84	4
60 deg Ice	60.00	5/8 EHS	A1	28	21.20	3.37	15
		5/8 EHS	A1b	28a	21.20	3.37	15
		5/8 EHS	A1a	28b	21.20	12.41	58
	116.77	9/16 EHS	A1	T2	17.50	3.25	18
		9/16 EHS	A1a	T2b	17.50	10.63	60
		9/16 EHS	A1b	T2a	17.50	3.13	17
		9/16 EHS	A1b	T2	17.50	3.25	18
		9/16 EHS	A1a	T2a	17.50	10.63	60
		9/16 EHS	A1	T2b	17.50	3.13	17
	146.77	9/16 EHS	A1	T3	17.50	3.49	19
		9/16 EHS	A1a	T3b	17.50	11.44	65
		9/16 EHS	A1b	T3a	17.50	3.41	19
		9/16 EHS	A1b	T3	17.50	3.49	19
		9/16 EHS	A1a	T3a	17.50	11.44	65
		9/16 EHS	A1	T3b	17.50	3.41	19
90 deg Ice	60.00	5/8 EHS	A1	28	21.20	6.46	30
		5/8 EHS	A1b	28a	21.20	1.41	6
		5/8 EHS	A1a	28b	21.20	11.71	55
	116.77	9/16 EHS	A1	T2	17.50	5.78	33
		9/16 EHS	A1a	T2b	17.50	10.10	57
		9/16 EHS	A1b	T2a	17.50	1.24	7
		9/16 EHS	A1b	T2	17.50	1.35	7
		9/16 EHS	A1a	T2a	17.50	9.89	56
		9/16 EHS	A1	T2b	17.50	5.68	32
	146.77	9/16 EHS	A1	T3	17.50	6.10	34
		9/16 EHS	A1a	T3b	17.50	10.86	62
		9/16 EHS	A1b	T3a	17.50	1.55	8
		9/16 EHS	A1b	T3	17.50	1.66	9
		9/16 EHS	A1a	T3a	17.50	10.70	61
		9/16 EHS	A1	T3b	17.50	6.17	35

Site Number: 10029
Location: Hampton CT, CT

Code: TIA/EIA-222 Rev F

1/24/2012 5:22:34 PM



Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
73.61 mph Wind Normal To Face with Ice	76.42	0.3171	0.0020	0.1760
	116.77	0.3855	0.0056	0.1156
	130.00	0.4593	0.0031	0.3343
	143.52	0.5314	0.0003	0.2920
	146.77	0.5477	0.0002	0.2908
	150.00	0.5650	0.0000	0.3260
	156.42	0.6032	0.0001	0.3359
73.61 mph Wind at 60 deg From Face with Ice	76.42	0.2776	0.0043	0.2228
	116.77	0.3485	0.0081	0.0992
	130.00	0.4107	0.0033	0.2748
	143.52	0.4683	0.0006	0.2324
	146.77	0.4812	0.0006	0.2286
	150.00	0.4951	0.0005	0.2653
	156.42	0.5263	0.0007	0.2749
73.61 mph Wind at 90 deg From Face with Ice	76.42	0.2967	-0.0211	0.2321
	116.77	0.3820	0.0463	0.1263
	130.00	0.4508	0.0098	0.3169
	143.52	0.5197	0.0075	0.2786
	146.77	0.5352	0.0085	0.2784
	150.00	0.5517	0.0094	0.3122
	156.42	0.5884	0.0109	0.3220
85.00 mph Wind Normal To Face with No Ice	76.42	0.2864	0.0002	0.1967
	116.77	0.3942	0.0045	0.2079
	130.00	0.4883	0.0024	0.4294
	143.52	0.5851	0.0001	0.4047
	146.77	0.6079	0.0003	0.4090
	150.00	0.6320	0.0004	0.4472
	156.42	0.6839	0.0002	0.4581
85.00 mph Wind at 60 deg From Face with No Ice	76.42	0.2066	0.0003	0.1361
	116.77	0.2761	0.0050	0.1209
	130.00	0.3364	0.0007	0.2758
	143.52	0.4021	0.0007	0.2738
	146.77	0.4173	0.0006	0.2763
	150.00	0.4341	0.0006	0.3165
	156.42	0.4712	0.0009	0.3269
85.00 mph Wind at 90 deg From Face with No Ice	76.42	0.2531	-0.1003	0.1811
	116.77	0.3550	0.0297	0.1882
	130.00	0.4379	-0.0011	0.3811
	143.52	0.5246	-0.0028	0.3631
	146.77	0.5449	-0.0016	0.3688
	150.00	0.5667	-0.0005	0.4049
	156.42	0.6139	0.0009	0.4156
		0.0000	0.0000	0.0000

Site Name:	**Hampton CT, CT**
Site Number:	**10029**
Engineering Number:	**48650721**
Engineer:	**J. Johnston**
Date:	**01/23/12**

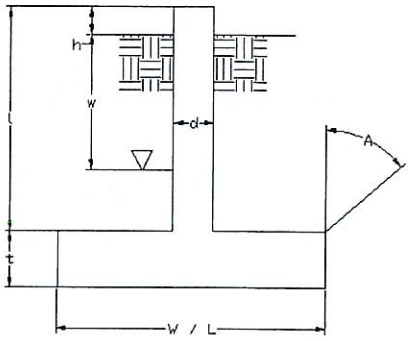
Program Last Updated: 8/8/2011
American Tower Corporation

Design Base Loads (Unfactored) per TIA-222-F

Foundation Mapped:	N		
Moment (M):	0.0 k-ft	Concrete Compressive Strength (f'_c):	4000 psi
Shear/Leg (V):	1.9 k	Vertical Steel Rebar Size #:	5
Compression/Leg (P):	85.9 k	Vertical Steel Rebar Area:	0.31 in^2
Uplift/Leg (U):	0.0 k	# of Vertical Steel Rebars:	5
Tower Type (GT / SST):	GT	Vertical Steel Rebar Yield Strength (F_y):	60 ksi
Diameter of Prismatic Portion of Pier (d):	1.5 ft	Tie / Stirrup Size #:	3
Depth to Base of Foundation:	5.0 ft	Tie / Stirrup Area:	0.11 in^2
Pier Height Above Ground (h):	0.25 ft	Tie / Stirrup Spacing:	10.0 in
Length / Width of Pad (w):	4.5 ft	Tie / Stirrup Steel Yield Strength (F_y):	60 ksi
Thickness of Pad (t):	1.0 ft	Rebar Cage Diameter:	10.0 in
Depth Below Ground Surface to Water Table (w):	4.0 ft	Bending/Tension Reduction Factor (ϕ_B):	0.90
Unit Weight of Concrete:	150.0 pcf	Shear Reduction Factor (ϕ_V):	0.75
Unit Weight of Water:	62.4 pcf	Compression Reduction Factor (ϕ_V):	0.65
Unit Weight of Soil Above Water Table:	120.0 pcf	Wind Design Factor:	1.30
Unit Weight of Soil Below Water Table:	65.0 pcf	Steel Elastic Modulus:	29000 ksi
Friction Angle of Uplift from Top of Pad:	35 Degrees	Pad Steel Rebar Size #:	4
Friction Angle of Uplift from Base of Pad:	35 Degrees	Pad Steel Rebar Area:	0.20 in^2
Uplift Angle Started at Top or Base of Pad (T/B):	T	Pad Steel Rebar Yield Strength (F_y):	60 ksi
Allowable Skin Friction:	0 psf	# of Rebar in Top of Pad:	0
Allowable Compressive Bearing Pressure:	5000 psf	# of Rebar in Base of Pad:	5
Capacity Increase (Due to Transient Loads):	1.33	Pad Clear Cover:	3 in

Axial Capacities and Design Moment

Weight of Concrete (Bouyancy Considered):	2.9 k	
Weight of Soil (Bouyancy Considered):	26.0 k	
Allowable Skin Friction Resistance:	0.0 k	
Controlling Failure Mode (Top / Base):	Top	
Allowable Uplift Capacity per Leg:	15.3 k	
Compressive Design Load:	86.7 k	
Allowable Compression Capacity per Leg:	134.7 k	
Uplift Design Load/Uplift Capacity:	0.00	Result: OK
Compression Design Load/Compression Capacity:	0.64	Result: OK



Depth (ft) Top	Depth (ft) Bottom	Ultimate Lateral Bearing Pressure (psf)	Increment (psf/ft)	γ_{Soil} (pcf)	Cohesion (psf)	ϕ (degree)
0.0	2.0	0.0	159.6	120	0	0
2.0	4.0	1177.9	589.0	120	0	35

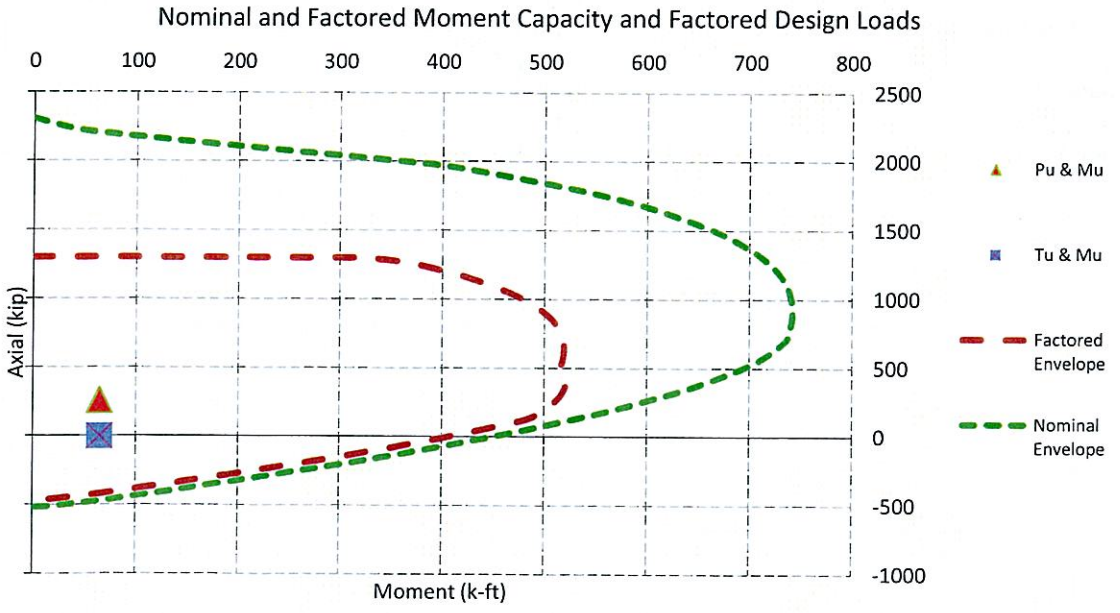
Inflection Point (Below Ground Surface):	2.7 ft
Unfactored Design Moment At Inflection Point:	3.9 k-ft

Pad Strength Capacity

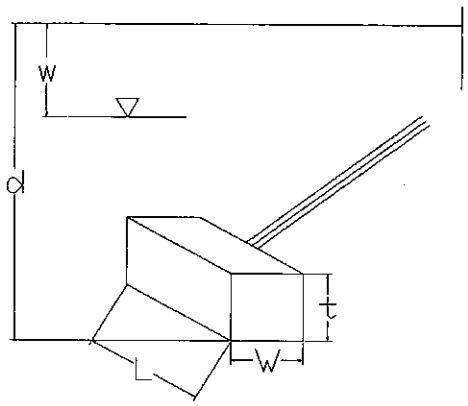
β:	0.85	ACI318-05 - 10.2.7.3
Lower Pad Flexural Reinforcement Ratio:	0.0021	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0000	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Flexural Reinforcement Spacing:	12	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Flexural Reinforcement Spacing:	0	in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
One Way Design Shear (V_u):	19.3	k
One Way Shear Capacity (ϕV_c):	46.0	k - ACI318-05 - 11.3.1.1
$V_u / \phi V_c$:	0.42	Result: OK
Punching Design Shear (V_u):	90.0	k
Nominal Punching Shear Capacity ($\phi_c V_n$):	139.5	k - ACI318-05 - 11.12.2.1
$V_u / \phi V_c$:	0.65	Result: OK
Flexural Loading Due to Soil Pressure (M_u):	28.2	k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	38.6	k-ft - ACI318-05 - 10.3
$M_u / \phi M_n$:	0.73	Result: OK
Flexural Loading Due to Uplift (M_u):	0.0	k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	0.0	k-ft - ACI318-05 - 10.3
$M_u / \phi M_n$:	0.00	Result: OK

Pier Strength Capacity

Design Moment (M_u):	5.0	k-ft
Nominal Moment Capacity ($\phi_B M_n$):	22.3	k-ft - ACI318-005 - 10.2
$M_u/\phi_B M_n$:	0.23	Result: OK
Design Shear (V_u):	2.5	k
Nominal Shear Capacity ($\phi_V V_n$):	43.1	k - ACI318-05 - 11.3.1.1 or 11.5.7.2
$V_u/\phi_V V_n$:	0.06	Result: OK
Design Tension (T_u):	0.0	k
Nominal Tension Capacity ($\phi_T T_n$):	83.7	k - ACI318-05 - 10.2
$T_u/\phi_T T_n$:	0.00	Result: OK
Design Compression (P_u):	111.7	k
Nominal Compression Capacity ($\phi_P P_n$):	447.2	k - ACI318-05 - 10.3.6.2
$P_u/\phi_P P_n$:	0.25	Result: OK
Pier Reinforcement Ratio:	0.006	Reinforcement Ratio is Satisfactory - ACI318-05 - 10.9.1 & 10.8.4
$M_u/\phi_B M_n + T_u/\phi_T T_n$:	0.23	Result: OK



Site Name:	**Hampton CT, CT**	*Program Last Updated:*	*8/8/2011*
Site Number:	**10029**	*American Tower Corporation*	
Engineering Number:	**48650721**		
Engineer:	**J. Johnston**		
Date:	**01/23/12**		



Design Standard per TIA-222-F

Anchor Radius:	145.0	ft
Uplift (Unfactored):	33.3	k
Shear (Unfactored):	44.0	k
Berm Present:	N	
Design Anchor Rod:	N	
Mapped Foundation:	N	
Anchor Base Depth (d):	8.0	ft
Width of Anchor (W):	5.0	ft
Length of Anchor (L):	11.5	ft
Thickness of Anchor (t):	2.0	ft
Depth Below Ground Surface to Water Table (w):	15.0	ft
Soil Uplift at Base / Top of Anchor (B/T):	T	
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil Above Water Table:	120.0	pcf
Unit Weight of Water:	62.4	pcf
Submerged Soil Unit Weight:	65.0	pcf
Internal Angle of Friction:	35	Degrees
Cohesion:	0	psf
Allowable Skin Friction of Pad Sides to Soil:	162	psf
Ultimate Coefficient of Shear Friction:	0.30	
Maximum Top Conical Failure Angle:	35	Degrees
Maximum Base Conical Failure Angle:	35	Degrees
Allowable Capacity Increase:	1.33	(Due to Transient Loads)

Uplift

Weight of Concrete (Buoyancy Effect Considered):	17.3	k
Weight of Soil (Buoyancy Effect Considered):	104.6	k
Uplift Resistance from Skin Friction:	9.3	k
Allowable Uplift Resistance (FS = 1.5 to 2):	66.1	k
Uplift Design Load/Allowable Uplift Resistance:	0.50	Result: OK

Shear

Ultimate Shear Friction Resistance Due to Normal Force - Uplift:	7.6	k
Passive Pressure:	3100	psf
Ultimate Passure Pressure Resistance:	94.8	k
Allowable Shear Resistance (FS = 1.5 to 2):	51.2	k
Shear Design Load/Allowable Shear Resistance:	0.86	Result: OK

Strength Analysis of Reinforced Concrete

Concrete Compressive Srength (f'_c):	4000	psi
Longitudinal Rebar Yield Strength:	60000	psi
# Longitudinal Rebar (Top):	8	
# Longitudinal Rebar (1 Side):	5	
Rebar Size:	4	
Wind Load Factor:	1.3	
Strength Reduction Factor for Shear (ϕ_v):	0.75	
Strength Reduction Factor for Flexure (ϕ_b):	0.9	
Compression Zone Factor (β_1):	0.85	
Area of Single Rebar:	0.20	in^2
One Way Shear due to Shear Load (V_u):	17.0	k
Nominal One Way Shear Capacity for Shear Load ($\phi_c V_n$):	127.5	k
$V_u/\phi_v V_n$:	0.13	Result: OK
One Way Shear due to Uplift (V_u):	18.5	k
Nominal One Way Shear Capacity for Uplift ($\phi_c V_n$):	113.8	k
$V_u/\phi_v V_n$:	0.16	Result: OK
Pad Flexure due to Shear Load (M_u):	82.2	k-ft
Nominal Flexural Capacity for Shear Load ($\phi_b M_n$):	252.0	k-ft
Pad Flexure due to Uplift (M_u):	62.3	k-ft
Nominal Flexural Capacity for Uplift ($\phi_b M_n$):	143.9	k-ft
$M_u/\phi_b M_n$ (Max.):	0.43	Result: OK