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

August 21, 2008

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-066-080717** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 64 Hungerford Lane, Harwinton, Connecticut.

Dear Attorney Baldwin:

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.

The proposed modifications are to be implemented as specified here and in your notice dated July 17, 2008, including the placement of all necessary equipment and shelters within the tower compound. 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. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps

S. Derek Phelps
Executive Director

SDP/MP/cm

c: The Honorable Frank J. Chiaramonte, First Selectman, Town of Harwinton
William J. Tracy, Jr., Planning Chairman, Town of Harwinton
Crown Castle

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Daniel F. Caruso
Chairman

July 18, 2008

The Honorable Frank J. Chiaramonte
First Selectman
Town of Harwinton
Town Hall
100 Bentley Drive
Harwinton, CT 06791

RE: **EM-VER-066-080717** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 64 Hungerford Lane, Harwinton, Connecticut.

Dear Mr. Chiaramonte:

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 August 1, 2008.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: William J. Tracy, Jr., Planning Chairman, Town of Harwinton

ROBINSON & COLE

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

EM-VER-066-080717

ORIGINAL

July 17, 2008

Via Hand Delivery

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap**
64 Hungerford Lane, Harwinton, Connecticut

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the above referenced location. The Council approved Cellco's shared use of this facility on October 14, 2003. Cellco intends to modify its installation by replacing six of its twelve PCS antennas with six (6) LPA-80080/6CF cellular antennas at the same 168-foot level on the 180-foot Crown Castle tower. Attached behind Tab 1 are the specifications for the proposed replacement antennas.

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 Frank Chiaramonte, First Selectman of the Town of Harwinton. Pursuant to a Council directive, a copy of this letter is also being sent to Buckley Broadcasting Corporation of CT, the owner of the property on which the facility is located.

The planned modifications to the facility falls 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 any increase in the overall height of the existing structures. Cellco's replacement antennas will be located at the same height and location as the existing antennas.

2. The proposed modifications will not involve any 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 the facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower can support the proposed modifications. (See Tab 3).

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:
Frank Chiaramonte, Harwinton First Selectman
Buckley Broadcasting Corporation of CT
Sandy M. Carter

Vertically Polarized, Log Periodic 80° / 14 dBd

LPA-80080/6CF ___

When ordering replace "___" with connector type.

Mechanical specifications

Length	1800	mm	70.9	in
Width	140	mm	5.5	in
Depth	335	mm	13.2	in
Depth with z-bracket	375	mm	14.8	in
[4] Weight	9.5	kg	21.0	lbs
Wind Area				
Fore/Aft	0.25	m^2	2.7	ft^2
Side	0.60	m^2	6.5	ft^2
Rated Wind Velocity (Safety factor 2.0)	>295	km/hr	>183	mph
Wind Load @ 100 mph (161 km/hr)				
Fore/Aft	415	N	93.3	lbs
Side	870	N	195.6	lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

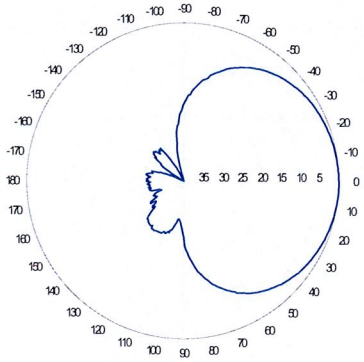
Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

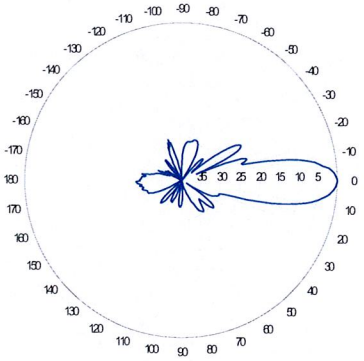
Electrical specifications

	Frequency Range	806-960 MHz
	Impedance	50Ω
[3]	Connector(s)	NE or E-DIN 1 port / center
[1]	VSWR	≤ 1.4:1
	Polarization	Vertical
[1]	Gain	14 dBd
[2]	Power Rating	500 W
[1]	Half Power Angle	
	H-Plane	80°
	E-Plane	10°
[1]	Electrical Downtilt	0°
[1]	Null Fill	10%
	Lightning Protection	Direct Ground

Radiation pattern[1]



Horizontal

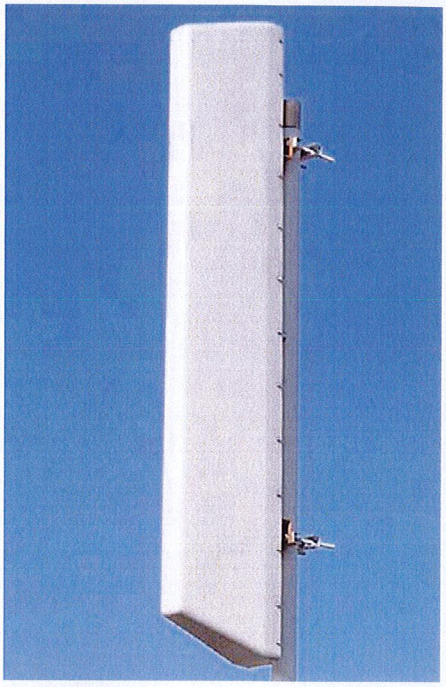


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

CF Denotes a Center-Fed Connector.

806-960 MHz

[1] Typical values.
[2] Power rating limited by connector only.
[3] NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
[4] The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Amphenol Antel, Inc.

The Antenna Technology Company

Amphenol Antel, Inc. 1300 Capital Drive Rockford, Illinois 61109 USA Tel. (815) 399-0001
Toll-Free (888) 417-9562 Fax. (815) 399-0156 antel@antelinc.com www.antelinc.com

Revision Date: 7/5/07

	General	Power	Density					
Site Name: Harwinton 1								
Tower Height: Verizon @ 168Ft.								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Sprint	11	494	180	0.0603	1950	1.0000	6.03%	
*Cingular	6	296	158	0.0256	880	0.5867	4.36%	
*Cingular	3	427	158	0.0185	1930	1.0000	1.85%	
Verizon	**9**	**485**	**168**	**0.0556**	**1970**	**1.0000**	5.56%	
Verizon	**9**	**200**	**168**	**0.0229**	**875**	**0.5830**	3.93%	
								21.73%
* Source: Siting Council								

Date: July 15, 2008

GPD ASSOCIATES

Ben Goodhart
Crown Castle USA, Inc.
9105 Monroe Rd., Suite 150
Charlotte, NC 28270
(704) 321-3845

GPD Associates
520 South Main St., Suite 2531
Akron, Ohio 44311
(614) 210-0751
dherriott@gpdgroup.com

Subject:	**Structural Analysis Report**	
Carrier Designation	**Verizon Wireless Co-Locate** **Verizon Wireless Site Name:**	 **Harwinton 1**
Crown Castle Designation	**Crown Castle BU Number:** **Crown Castle Site Name:** **Crown Castle JDE Number:**	**876369** **Harwinton/Buckley Broadcasting** **98691**
GPD Associate Designation	**GPD Associates Project Number:**	**2008275.12**
Site Data	**64 Hungerford Lane, Harwinton, Connecticut 06791** **Latitude 41° 45' 26.15", Longitude -73° 3' 9.2"** **180' EEI Monopole**	

Dear Mr. Goodhart,

GPD is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the aforementioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of the Crown Castle Purchase Order Number 294365, in accordance with application 56159, revision 2. The purpose of the analysis is to determine the suitability of the tower with the existing and reserved loading configurations and the addition of the following proposed loading configuration:

Elev. 168' (6) Antel LPA-80080/6CF Antennas mounted on an existing LP platform w/ existing (6) 1-5/8" internal coax

This analysis has been performed in accordance with the TIA/EIA-222-F standard based upon a wind speed condition of 80 mph and the Connecticut Building code. Based upon our analysis we have determined that the **tower and its foundation are sufficient** for the proposed, existing, and reserved loadings as referenced in Tables 1 and 2.

We at GPD appreciate the opportunity of providing our continuing professional services to you and Crown Castle USA, Inc. If you have any questions please do not hesitate to call.

Respectfully submitted,

David B. Granger, P.E.
Connecticut #: 17557

STATE OF CONNECTICUT
DAVID B. GRANGER, P.E.
NO. 17557
LICENSED
PROFESSIONAL ENGINEER

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The purpose of this analysis was to verify that the existing structure is capable of carrying the proposed loading configuration as specified by Verizon Wireless to Crown Castle USA, Inc. This report was commissioned by Mr. Ben Goodhart of Crown Castle USA, Inc.

The existing tower is structurally satisfactory for the proposed loading configuration for a basic wind speed of 80 mph with ½" radial ice (25% reduction) in accordance with TIA/EIA-222-F and the Connecticut Building code. The tower rating/capacity is 75.2%.

The foundation reactions, with the proposed loading, were found to be 62.9% of the original design reactions. If the existing foundation was properly designed for the original reactions, then it is our opinion that the foundation is adequate.

Six of the existing antennas at the 168' level are to be removed prior to the installation of the proposed loading and were not considered in this analysis. The six existing 1-5/8" coax are to be reused for the proposed loading. See Appendix D for the proposed coax layout.

ANALYSIS CRITERIA

The current requirements of TIA/EIA-222-F and the Connecticut Building Code are for a basic wind speed of 80 mph with 1/2" radial ice. A 25% reduction in wind load is allowed when wind and ice are applied simultaneously. TIA/EIA-222-F requires towers within Litchfield County, Connecticut be analyzed with an 80 mph wind speed.

Table 1 – Proposed Antenna and Cable Information

Center Line Elevation (feet)	Number of Antenna	Antenna Manufacturer	Antenna Model	Mount Type	Number of Feed Lines	Feed Line Size (inches)
168	6	Antel	LPA-80080/6CF			

Note: All coax are internal to monopole U.N.O.

Table 2 – Existing and Reserved Antenna and Cable Information

Center Line Elevation (feet)	Number of Antenna	Antenna Manufacturer	Antenna Model	Mount Type	Number of Feed Lines	Feed Line Size (inches)
177*	6	Decibel	DB980H90E-M	12' LP Platform	6	1-5/8
168**	12	Decibel	DB950G85E-M	12' LP Platform	12	1-5/8
158	6 12	Powerwave Powerwave	7770.00 LGP2140X TMA's	PiROD 13' LP Platform	12	1-5/8
76	1	Lucent	KS24019-L112A	2' Standoff	1	1/2

* Both the existing and MLA loadings were considered. The MLA loading was found to control the analysis.
** See Executive Summary

TOWER DESCRIPTION

The existing monopole has eighteen sides and is evenly tapered from 54.5" (flat-flat) at the base to 19.5" (flat-flat) at the top. The tower has four major sections connected with slip joints. The structure is galvanized and has no tower lighting.

The tower was originally designed for Sprint PCS by Engineering Endeavors Inc. of Mentor, Ohio for a 85 mph wind speed with ½" radial ice (25% reduction) in accordance with EIA/TIA-222-F.

ANALYSIS PROCEDURE

Table 3 – Documents Provided

Document	Remarks	Reference	Source
Original Tower Drawings	EEI Job #: 8428, dated 11/9/2007	Doc ID # 2150280	Crown DMZ

Analysis Methods

RISA Tower (Version 5.2.0.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate member stresses for various dead, live, wind, and ice load cases. All loads were computed in accordance with the ANSI/EIA/TIA-222-F and all local building code requirements. Selected output from the analysis is included in Appendix A.

Assumptions

1. Tower and structures were built in accordance with the manufacturer's specifications.
2. The tower and structures have been maintained in accordance with manufacturer's specifications.
3. The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 & 2 and the referenced drawings.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Associates should be allowed to review any new information to determine its effect on the structural integrity of the tower.

ANALYSIS RESULTS

Table 4 – Tower Summary

Notes	Member	Strength (ksi)	Capacity	Elevation (feet)	Results
	Pole (L1)	65	65.6%	130 - 178	Pass
	Pole (L2)	65	62.5%	85 - 130	Pass
	Pole (L3)	65	61.2%	41 - 85	Pass
	Pole (L4)	65	57.3%	0 - 41	Pass
	Base Plate	60	75.2%		Pass
	Anchor Rods	75	51.3%		Pass
	Foundation	O.T.M.	62.9% of Original Design		Pass
Structure Rating: 75.2%					

1) See additional documentation in Appendix C for calculations supporting the % capacity used.

Recommended Modifications

The tower and its foundation are sufficient for the proposed loading configuration and do not require further modifications.

DISCLAIMER OF WARRANTIES

GPD ASSOCIATES has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD ASSOCIATES in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD ASSOCIATES does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD ASSOCIATES provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owners responsibility to determine the amount of ice accumulation, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD ASSOCIATES, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD ASSOCIATES makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD ASSOCIATES will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD ASSOCIATES pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

RISA Tower Output File

RISATower	Job	Page
	Harwinton/Buckley Broadcasting BU#: 876369	1 of 3
GPD Associates 520 South Main St. Suite 2531 Akron, OH 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	**Project** 2008275.12	**Date** 08:02:26 07/15/08
	Client Crown Castle	**Designed by** DMH

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 Litchfield County, Connecticut.
Basic wind speed of 80 mph.
Nominal ice thickness of 0.5000 in.
Ice density of 56 pcf.
A wind speed of 69 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Monopole Base Plate Data

Base Plate Data

Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	20
Embedment length	102.0000 in
f'_c	3 ksi
Grout space	3.0000 in
Base plate grade	A572-60
Base plate thickness	2.2500 in
Bolt circle diameter	63.0000 in
Outer diameter	69.0000 in
Inner diameter	44.5000 in
Base plate type	Plain Plate

Feed Line/Linear Appurtenances - Entered As Area

Description	*Face or Leg*	*Allow Shield*	*Component Type*	*Placement* *ft*	*Total Number*		C_AA_A *ft²/ft*	*Weight* *plf*
LDF7-50A (1-5/8 FOAM)	B	No	Inside Pole	178.00 - 8.00	9	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF4-50A (1/2 FOAM)	B	No	Inside Pole	75.00 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	169.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
LDF7-50A (1-5/8 FOAM)	A	No	Inside Pole	158.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
12' LP Platform	C	None		0.0000	178.00	No Ice	25.00	25.00	1.50
						1/2" Ice	30.00	30.00	1.75
(3) FV65-14-00NA2	A	From Centroid-Leg	2.83 2.83 -1.00	45.0000	178.00	No Ice	8.40	5.28	0.03
						1/2" Ice	8.95	5.74	0.08
(3) FV65-14-00NA2	B	From Centroid-Leg	2.83 2.83 -1.00	45.0000	178.00	No Ice	8.40	5.28	0.03
						1/2" Ice	8.95	5.74	0.08
(3) FV65-14-00NA2	C	From Centroid-Leg	2.83 2.83 -1.00	45.0000	178.00	No Ice	8.40	5.28	0.03
						1/2" Ice	8.95	5.74	0.08
PiROD 16'6" LP Platform	C	None		0.0000	166.00	No Ice	21.50	21.50	1.85
						1/2" Ice	24.90	24.90	2.08
(2) DB950G85E-M	A	From Centroid-Face	4.00 0.00 2.00	0.0000	166.00	No Ice	2.29	4.24	0.01
						1/2" Ice	2.65	4.62	0.03
(2) DB950G85E-M	B	From Centroid-Face	3.90 0.50 2.00	-10.0000	166.00	No Ice	2.29	4.24	0.01
						1/2" Ice	2.65	4.62	0.03
(2) DB950G85E-M	C	From Centroid-Face	4.00 0.00 2.00	0.0000	166.00	No Ice	2.29	4.24	0.01
						1/2" Ice	2.65	4.62	0.03
(2) LPA-80080/6CF	A	From Centroid-Face	4.00 0.00 2.00	0.0000	166.00	No Ice	4.33	5.18	0.01
						1/2" Ice	4.76	5.63	0.04
(2) LPA-80080/6CF	B	From Centroid-Face	3.90 0.50 2.00	-10.0000	166.00	No Ice	4.33	5.18	0.01
						1/2" Ice	4.76	5.63	0.04
(2) LPA-80080/6CF	C	From Centroid-Face	4.00 0.00 2.00	0.0000	166.00	No Ice	4.33	5.18	0.01
						1/2" Ice	4.76	5.63	0.04
PiROD 13' Low Profile Platform (Monopole)	C	None		0.0000	156.00	No Ice	15.70	15.70	1.30
						1/2" Ice	20.10	20.10	1.76
(2) 7770.00	A	From Centroid-Leg	3.46 2.00 2.00	30.0000	156.00	No Ice	5.88	2.93	0.04
						1/2" Ice	6.31	3.27	0.07
(2) 7770.00	B	From Centroid-Leg	3.46 2.00 2.00	30.0000	156.00	No Ice	5.88	2.93	0.04
						1/2" Ice	6.31	3.27	0.07
(2) 7770.00	C	From Centroid-Leg	3.46 2.00 2.00	30.0000	156.00	No Ice	5.88	2.93	0.04
						1/2" Ice	6.31	3.27	0.07
KS24019-L112A	C	From Face	0.50 0.00 1.00	0.0000	75.00	No Ice	0.10	0.10	0.01
						1/2" Ice	0.18	0.18	0.01
(4) LGP2140X	A	From Centroid-Leg	3.46 2.00 2.00	30.0000	156.00	No Ice	1.23	0.37	0.02
						1/2" Ice	1.38	0.48	0.02
(4) LGP2140X	B	From Centroid-Leg	3.46 2.00 2.00	30.0000	156.00	No Ice	1.23	0.37	0.02
						1/2" Ice	1.38	0.48	0.02
(4) LGP2140X	C	From Centroid-Leg	3.46 2.00 2.00	30.0000	156.00	No Ice	1.23	0.37	0.02
						1/2" Ice	1.38	0.48	0.02

RISATower	Job	Page
	Harwinton/Buckley Broadcasting BU#: 876369	3 of 3
GPD Associates 520 South Main St. Suite 2531 Akron, OH 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	**Project** 2008275.12	**Date** 08:02:26 07/15/08
	Client Crown Castle	**Designed by** DMH

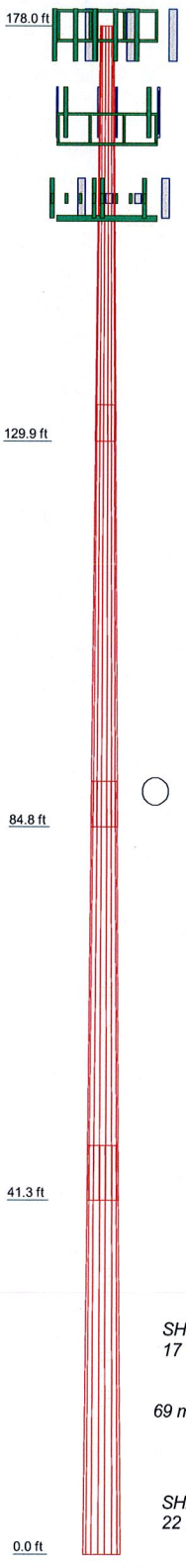
Section Capacity Table

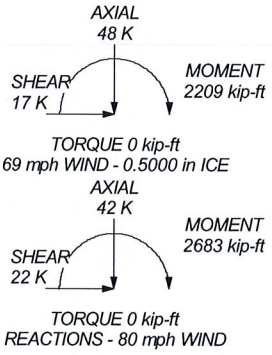
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	178 - 129.87	Pole	TP29.64x19.5x0.25	1	-8.42	100.94	65.6	Pass
L2	129.87 - 84.83	Pole	TP38.5x28.2446x0.375	2	-15.88	331.91	62.5	Pass
L3	84.83 - 41.283	Pole	TP46.8x36.6404x0.4375	3	-26.28	697.09	61.2	Pass
L4	41.283 - 0	Pole	TP54.5x44.5913x0.5	4	-41.75	1374.02	57.3	Pass
							Summary	
						Pole (L1)	65.6	Pass
						Base Plate	75.2	Pass
						RATING =	**75.2**	**Pass**

APPENDIX B

Tower Elevation Drawing

Section	1	2	3	4
Length (ft)	48.13	49.29	48.88	47.70
Number of Sides	18	18	18	18
Thickness (in)	0.2500	0.3750	0.4375	0.5000
Lap Splice (ft)	4.25	5.33	6.42	
Top Dia (in)	19.5000	28.2446	36.6404	44.5913
Bot Dia (in)	29.6400	38.5000	46.8000	54.5000
Grade	A572-65			
Weight (K) 31.9	3.2	6.6	9.5	12.6





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
12' LP Platform	178	(2) LPA-80080/6CF	166
(3) FV65-14-00NA2	178	PiROD 13' Low Profile Platform (Monopole)	156
(3) FV65-14-00NA2	178		
(3) FV65-14-00NA2	178	(2) 7770.00	156
PiROD 16'6" LP Platform	166	(2) 7770.00	156
(2) DB950G85E-M	166	(2) 7770.00	156
(2) DB950G85E-M	166	(4) LGP2140X	156
(2) DB950G85E-M	166	(4) LGP2140X	156
(2) LPA-80080/6CF	166	(4) LGP2140X	156
(2) LPA-80080/6CF	166	KS24019-L112A	75

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

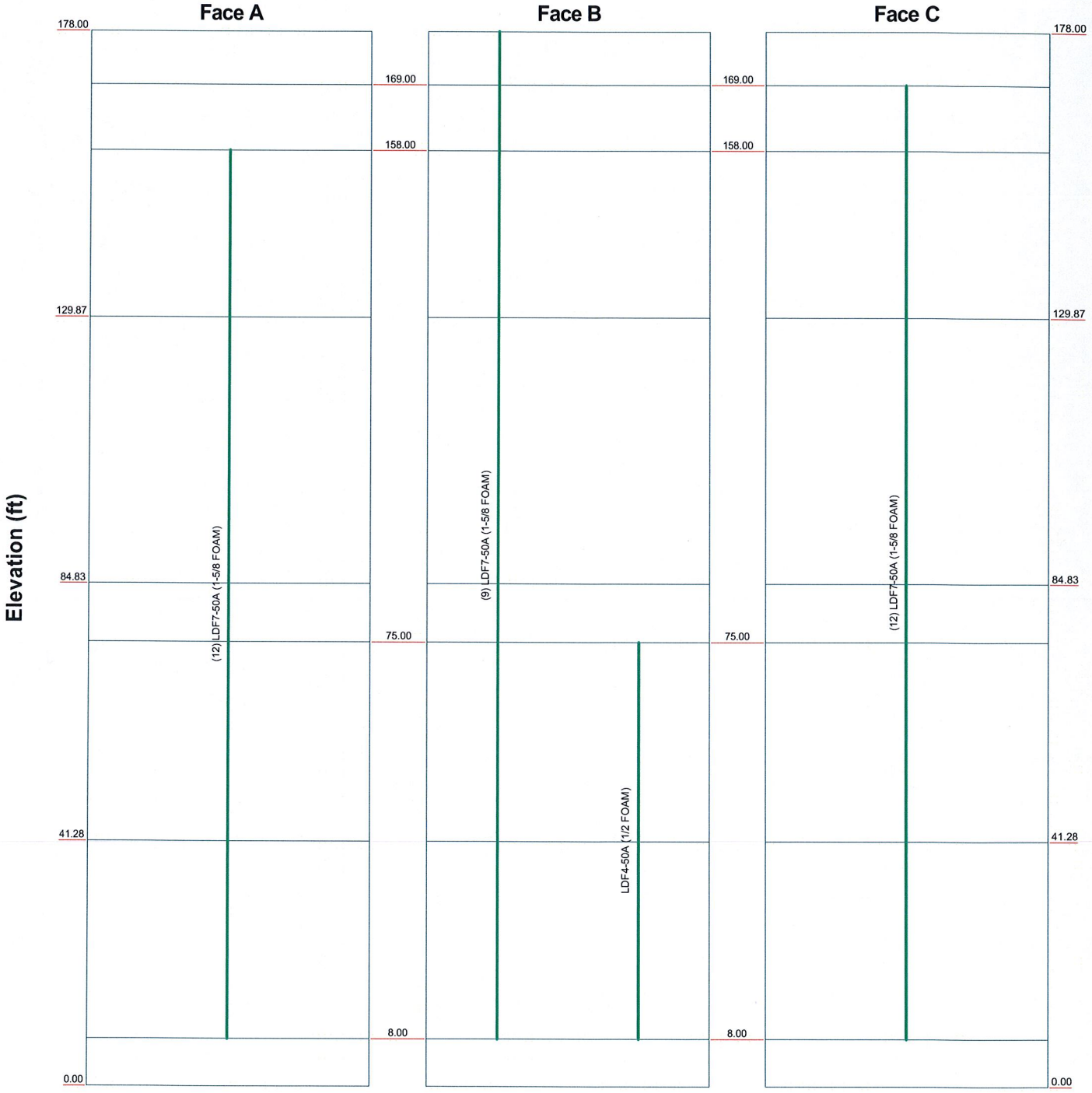
1. Tower is located in Litchfield County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 69 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 60 mph wind.
5. TOWER RATING: 75.2%

GPD Associates
520 South Main St. Suite 2531
Akron, OH 44311
Phone: (330) 572-2100
FAX: (330) 572-2101

Job: Harwinton/Buckley Broadcasting BU#: 876369			
Project: 2008275.12			
Client: Crown Castle	Drawn by: DMH	App'd:	
Code: TIA/EIA-222-F	Date: 07/15/08	Scale: NTS	
Path: G:\Telecom\2008275\12\RISA Model\876369.eri		Dwg No. E-1	

Feedline Distribution Chart
0' - 178'

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



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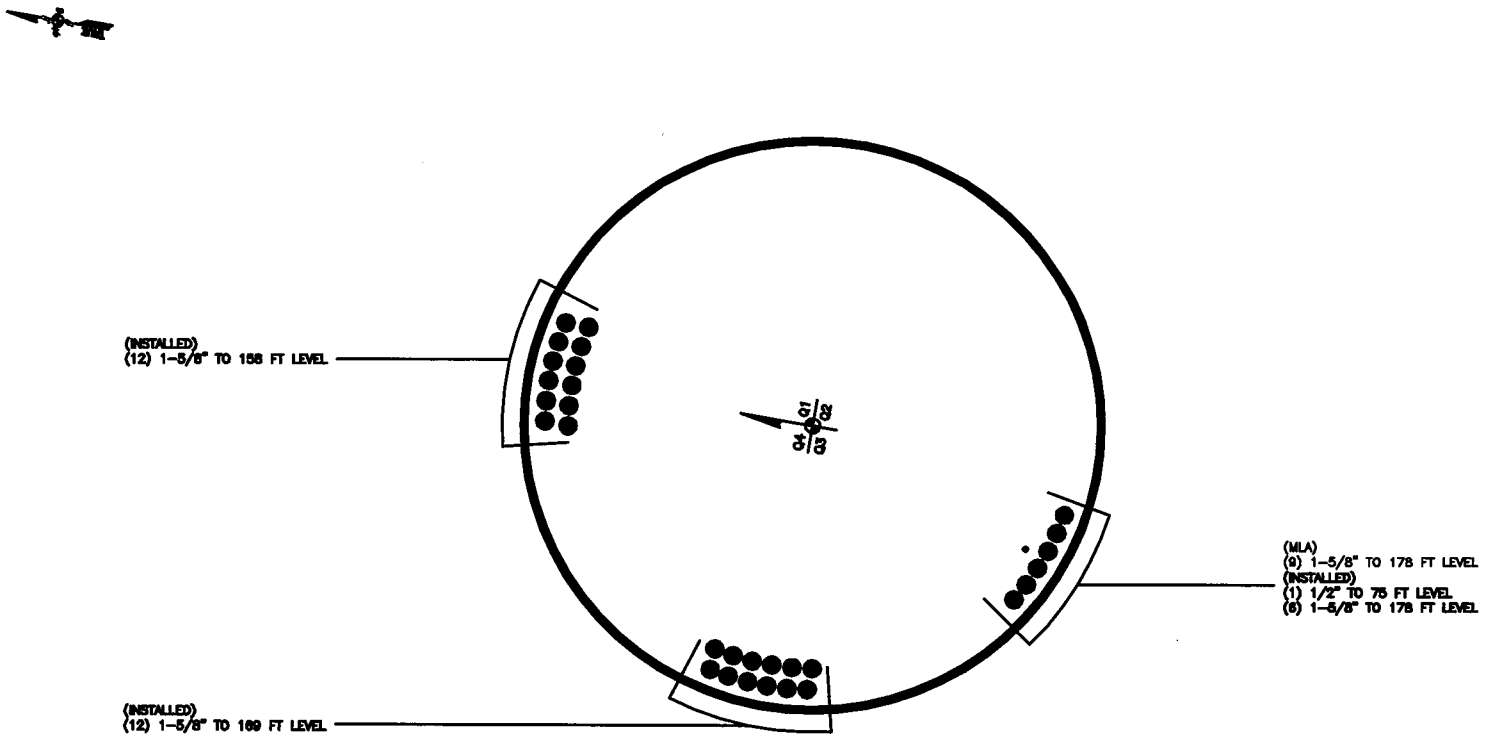
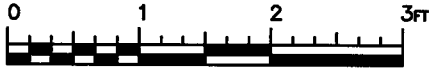
Code: TIA/EIA-222-F	Date: 07/15/08	Scale: NTS	
Path: G:\Telecom\2008275\12\RISA Model\876369.eri		Dwg No. E-7	

APPENDIX C

Base Level Drawing





: SCALE :

BUSINESS UNIT: 876369 TOWER ID: C_BASELEVEL

LEGEND: FEEDLINES

- ● SOLID BLUE CIRCLE DENOTES EXISTING FEEDLINE
- ○ OPEN RED CIRCLE DENOTES PROPOSED FEEDLINE
- ○ OPEN BLUE CIRCLE DENOTES RESERVED FEEDLINE
- X BLUE "X" DENOTES LOCATION NOT GIVEN

NOTE: ASSUME FEEDLINE ATTACHMENT HEIGHT TO TOWER STEEL AT 8-FEET ABOVE FINISHED GRADE UNLESS OTHERWISE SPECIFIED

BASE LEVEL DRAWING

SCALE 1" = 1'-0" | 1

APPENDIX D

Anchor Rod & Base Plate Analysis

Anchor Bolt and Base Plate Stresses

Harwinton/Buckley Broadcasting BU# 876369

Overturning Moment =	2683.00	k*ft
Axial Force =	42.00	k
Shear Force =	22.00	k

Anchor Bolts		
Pole Diameter =	54.5	in
Number of Bolts =	20	
Bolt Grade (Fy) =	75	ksi
Bolt Circle =	63	in
Bolt Diameter =	2.25	in
Net Tensile Area =	3.25	in^2
Max Tension on Bolt =	100.11	kips
Max Compression on Bolt =	104.31	kips
Allow. Bolt Force =	195.00	kips
Anchor Bolt Capacity =	51.3%	OK

Base Plate		
Plate Strength (Fy) =	60	ksi
Plate Thickness =	2.25	in
w_{calc} =	8.56	in
e =	3.125	in
w_{max} =	12.5	in
w =	8.56	in
S =	7.22	in^3
fb =	45.13	ksi
Fb =	60	ksi
Base Plate Capacity =	75.2%	OK