



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

February 25, 2008

Steven Levine
New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-030-080123** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 14 Thompson Hill Road, Columbia, Connecticut.

Dear Mr. Levine:

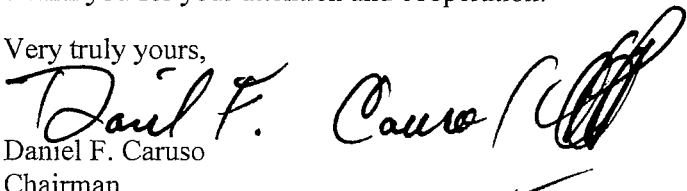
At a public meeting held on February 14, 2008, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated January 22, 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,


Daniel F. Caruso
Chairman

DFC/MP/cm

c: The Honorable Donald P. Cianci, First Selectman, Town of Columbia
Carl S. Fontneau, Town Planner, Town of Columbia
Crown Castle



New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

ORIGINAL

RECEIVED
JAN 23 2008

CONNECTICUT
SITING COUNCIL

HAND DELIVERED

January 22, 2008

Honorable Daniel F. Caruso, Chairman,
and Members of the Connecticut Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing tele-communications facility located at 14 Thompson Hill Road, Columbia (owner Crown Castle)

Dear Chairman Caruso and Members of the Council:

To enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("Cingular") plans to "dual band" the referenced site. This involves installing new antennas and associated equipment at the cell site to enable transmissions in the 850 Mhz band as well as the 1900 MHz band.

Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Cingular's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will not be affected. Modifications to the existing site include all or some of the following as necessary to bring the site into conformance with the plan:

- Replacement of existing panel antennas with new antennas of similar size, shape, and weight, or, installation of additional antennas of similar size, shape, and weight.
- Installation of small tower mount amplifiers ("TMA's") and/or diplexers to the platform on which the panel antennas are mounted to enhance signal reception.
- Installation of additional or larger coaxial cables as required.
- Installation of an additional equipment cabinet in existing shelters, or on existing or enlarged concrete pads.

None of these modifications will extend the height of the tower.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. Radio frequency power density may increase due to the addition of the 850 MHz transmissions. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, Cingular Wireless respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7636 with questions concerning this matter. Thank you for your consideration.

Sincerely,



Steven L. Levine
Real Estate Consultant

Attachments

**CINGULAR WIRELESS
Dual Banding Equipment Modification**

14 Thompson Hill Road, Columbia
Site Number 5861
Former AT&T Site
Exempt Modification approved 6/25/02

Tower Owner/Manager: Crown Castle

Equipment Configuration: Monopole

Current and/or Approved: Three Allgon 7250 Panel Antennas @ 140 ft c.l. (6 approved)
Six 1 5/8 inch coax cables (12 approved)

Planned Modifications: Remove existing antennas
Install 6 Powerwave 7770 antennas (or equivalent) @ 140 ft
Install 6 TMA's and 6 diplexers @ 140 ft
Install six additional runs 1 5/8 inch coax cable
New radio cabinets inside existing shelter

Power Density:

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 13.6 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 15.2% of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Other Users *							11.75
Cingular GSM	140	1900 Band	4	250	0.0183	1.0000	1.83
Total							13.6%

* Per CSC records

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
Other Users *							11.75
Cingular GSM	140	1900 Band	2	427	0.0157	1.0000	1.57
Cingular GSM	140	880 - 894	2	296	0.0109	0.5867	1.85
Total							15.2%

* Per CSC records

Structural information:

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity to accommodate the proposed modifications. (FDH Engineering, 12/31/07)



New Cingular Wireless PCS, LLC
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

January 22, 2008

Honorable Donald P. Cianci
1st Selectman, Town of Columbia
Yeomans Hall 323 Jonathan Trumbull Hwy, Route 87
Columbia, Connecticut 06237

Re: Telecommunications Facility – 14 Thompson Hill Road, Columbia

Dear Mr. Cianci:

To enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC (“Cingular”) plans to “dual band” the referenced site to enable transmissions in the 850 Mhz band as well as the 1900 MHz band. This involves changing Cingular’s equipment configuration at the site.

As required by Regulations of Connecticut State Agencies (“R.C.S.A.”) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review Cingular’s proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Cingular’s proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council’s procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure



Date: **December 31, 2007**

Mr. Jonathan Randall
Crown Castle International
1000 Windward Concourse Suite 500
Alpharetta, GA 30005
(919)-465-3520

FDH Engineering, Inc.
2730 Rowland Rd., Suite 100
Raleigh, NC 27615
(919) 755-1012
info@FDH-Inc.com

Subject: Structural Analysis Report

Carrier Designation: Cingular Wireless Co-Locate
Carrier Site Number: 5861
Carrier Site Name: Columbia-Thompson Hill Rd

Crown Castle Designation: Crown Castle BU Number: 876391
Crown Castle Site Name: Columbia/Deojay
Crown Castle JDE Job Number: 99183

Engineering Firm Designation: FDH Engineering, Inc. Project Number: **07-12130E**

Site Data: 14 Thompson Hill Rd, Columbia, CT, Tolland Co.
Latitude **41° 43' 3.44"**, Longitude **-72° 17' 59.09"**
180 Foot – Monopole

Dear Mr. Randall,

FDH Engineering, Inc. 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 Crown Castle Purchase Order Number 269796, in accordance with application 57726, revision 1.

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

LC1: Existing + Reserved + Proposed Equipment Sufficient Capacity
Note: See Table I and Table II for the proposed and existing/reserved loading.

The analysis has been performed in accordance with the TIA/EIA-222-F standard based upon a basic wind speed of 85 mph without ice and 74 mph with 1/2" radial ice.

All equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

We at FDH Engineering, Inc. appreciate the opportunity of providing our continuing professional services to you and Crown Castle International. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted.

Adrian L. Creech, EI
Project Engineer

Christopher M. Murphy, PE
Vice President
CT PE License No. 25842

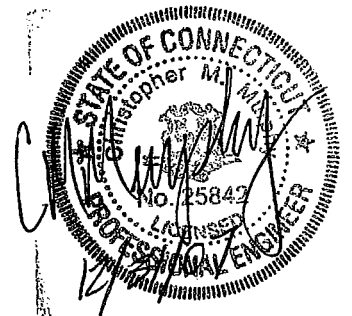


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1) INTRODUCTION

The subject tower is a 180 foot monopole manufactured in 1999 by Engineered Endeavors Inc.

2) ANALYSIS CRITERIA

- TIA-222-F – Structural Standards for Steel Antenna Towers and Antenna Supporting Structures
- 85 MPH without ice
- 74 MPH with 1/2" radial ice.

Table 1 – Proposed Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount Information	Number of Feed Lines	Feed Line Size (in)
140 ¹	6 6 6	Powerwave Powerwave Powerwave	7770.00 LGP 17201 TMAs LGP13519 Diplexers	Low Profile Platform	12	1-5/8"

1. This represents the total loading at 140 ft. According to information provided by Crown Castle, the carrier will remove (3) 7250.03 antennas and install (6) 7770.00 antennas, (6) TMAs, (6) Diplexers, and (6) coax for a total loading of (6) antennas, (6) TMAs, (6) Diplexers, and (6) coax at 140 ft.

Table 2 – Existing and Reserved Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
181 ¹	6 9	Decibel MLA	DB980H90T2E-M 72" x 12" Panel	6 9	1-5/8" 1-5/8"
170	12	Decibel	DB844H90E-XY	12	1-1/4"
162	6	EMS	RR90-17-02DP	12	1-5/8"
147	6	Decibel	DB948F85T2E-M	12	1-5/8"
150	6 1	Decibel Lucent	DB844H80E-XY KS24019-L112 GPS	12 1	1-5/8" 1/2"
140	3	Allgon	7250.03	6	1-5/8"
84	2	Kathrein	OG-860/1920/GPS-A	2	1/2"
79	1	Lucent	KS24019-L112A GPS	1	1/2"

1. Currently, there are (6) DB980H90T2E-M antennas and (6) coax installed at 180 ft. According to info provided by Crown Castle, the carrier may install up to (9) 72" x 12" MLA antennas and (9) coax. Analysis performed with largest loading in place.

Table 3 – Design Antenna and Cable Information

Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
180	12	Decibel	DB980H	---	---
170	12	Decibel	DB980H	---	---
160	12	Decibel	DB980H	---	---
150	12	Decibel	DB980H	---	---
140	12	Decibel	DB980H	---	---
130	12	Decibel	DB980H	---	---

3) ANALYSIS PROCEDURE

Table 4 – Documents Provided

Document	Remarks	Reference	Source
Tower Manufacturer Drawings	Engineered Endeavors, Inc	Doc # 1614546	Crown Castle
Foundation Drawings	Engineered Endeavors, Inc	Doc # 1613632	Crown Castle
Structural Analysis	Engineered Endeavors, Inc	Doc # 1771066	Crown Castle

3.1) Analysis Method

RISA Tower (version 5.0), a commercially available analysis software package, 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 TIA/EIA-222-F and the local building code requirements. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

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

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

4) ANALYSIS RESULTS

Table 5 – Tower Component Stresses vs. Capacity – LC1

Notes	Component	Elevation (ft)	% Capacity	Pass/Fail
RISA Tower Analysis Summary:(Monopole)				
			Summary	
Notes:	Component	Elevation	% Capacity	Pass/Fail
	L1	180 - 131.75	62.2%	Pass
	L2	131.75 - 86.71	68.5%	Pass
	L3	86.71 - 43.1633	70.1%	Pass
	L4	43.1633 - 0	66.9%	Pass
Individual Components:				
Notes:	Component	Elevation	% Capacity	Pass/Fail
2	Anchor Rods		65%	Pass
2	Base Plate		105%	Pass
2	Base Foundation (Compared w/ Design Loads)		76%	Pass
Structure Rating (max from all components) =				105 %

*Notes:

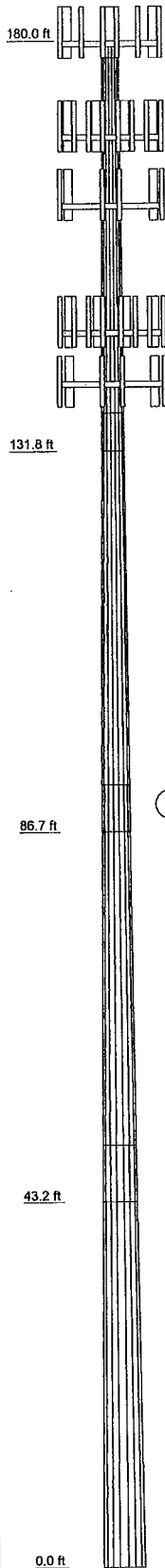
- 1) The following components listed in the RISA Tower Analysis Summary were analyzed separately to determine the percent capacity consumed (see attached calculations):
- 2) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity listed.

4.1) Recommendations

1. The proposed coax should be installed inside the pole's shaft.

**APPENDIX A
RISA TOWER OUTPUT**

Section	1	2	3	4
Length (ft)	48.25	49.54	49.13	49.83
Number of Sides	18	18	18	18
Thickness (in)	0.2500	0.3750	0.4375	0.5000
Lap Splice (ft)			5.58	5.67
Top Dia (in)	21.0000	29.9210	38.5222	46.6687
Bot Dia (in)	31.3900	40.4600	48.9600	57.2500
Grade	A572-65	A572-65	A572-65	A572-65
Weight (K)	3.4	7.0	10.1	13.8



DESIGNED APPURTENANCE LOADING

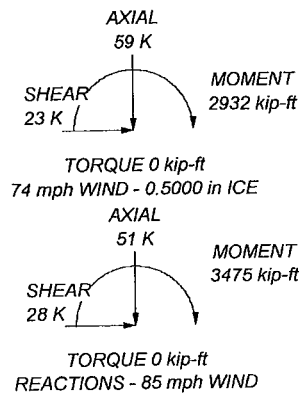
TYPE	ELEVATION	TYPE	ELEVATION
(3) 6' x 1' Panel	181	GPS	147
(3) 6' x 1' Panel	181	Low Profile Platform	146
(3) 6' x 1' Panel	181	(2) 7770.00	140
Low Profile Platform	180	(2) 7770.00	140
(4) DB844H90E-XY	170	(2) 7770.00	140
(4) DB844H90E-XY	170	Low Profile Platform	140
(4) DB844H90E-XY	170	(2) TMA	140
Low Profile Platform	169	(2) TMA	140
(2) RR90-17-02DP	162	(2) TMA	140
(2) RR90-17-02DP	162	(2) Diplexers	140
(2) RR90-17-02DP	162	(2) Diplexers	140
Low Profile Platform	161	(2) Diplexers	140
(2) DB844H80E-XY	147	GPS	84
(2) DB844H80E-XY	147	GPS	84
(2) DB844H80E-XY	147	Standoff	83
(2) DB948F85T2E-M	147	Standoff	83
(2) DB948F85T2E-M	147	GPS	79
(2) DB948F85T2E-M	147	Standoff	78

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Tolland County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 74 mph basic wind with 0.50 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 70.1%



 FDH Engineering, Inc. 2730 Rowland Road, Suite 100 Raleigh, NC Tower Analysis Phone: (919) 755-1012 FAX: (919) 755-1031	Job: Columbia/Deojay, CT 876391	
	Project: 07-12130E	
	Client: Crown Castle Code: TIA/EIA-222-F Path:	Drawn by: ALC Date: 12/31/07
	App'd:	Scale: NTS
	Dwg No. E-1	