# STATE OF CONNECTICUT



Daniel F. Caruso Chairman

March 16, 2009

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

Steven L. Levine Real Estate Consultant New Cingular Wireless PCS, LLC 500 Enterprise Drive Rocky Hill, CT 06067-3900

RE: EM-CING-028-090127 - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at Chestnut Hill Road, Colchester, Connecticut.

Dear Mr. Levine:

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 January 27, 2009, 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.

Executive Director

SDP/MP/laf

c: The Honorable Linda M. Riley Hodge, First Selectman, Town of Colchester Christopher Beauchemin, Town Planner, Town of Colchester American Tower Corporation

CONNECTICUT SITING COUNCIL Affirmative Action / Equal Opportunity Employer

# 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

E-Mail: siting.council@ct.gov Internet: ct.gov/csc

January 28, 2009

The Honorable Linda M. Riley Hodge First Selectman Town of Colchester Town Hall 127 Norwich Avenue Colchester, CT 06415

RE: **EM-CING-028-090127** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at Chestnut Hill Road, Colchester, Connecticut.

Dear Ms. Hodge:

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 February 11, 2009.

Thank you for your cooperation and consideration.

S. IDerek Phelps

Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Christopher Beauchemin, Town Planner, Town of Colchester



# EM-CING-028-090127





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

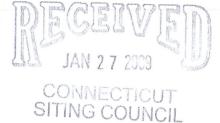
Fax: (860) 513-7190

ORIGINAL Steven L. Levine
Real Estate Consultant

# **HAND DELIVERED**

January 27, 2009

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 telecommunications facility located at Chestnut Hill Road, Colchester (owner, American Tower)

Dear Chairman Caruso and Members of the Council:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. 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.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile (GSM) communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T'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 be unaffected.
- 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 use of one or more GSM channel for UMTS 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, New 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

#### **NEW CINGULAR WIRELESS Equipment Modification**

Chestnut Hill Road, Colchester

Site Number 2046

Docket No. 112 and Exempt Modification approved 8/02

**Tower Owner/Manager:** 

American Tower

**Equipment Configuration:** 

Monopole

Current and/or Approved: Nine CSS DUO-1417-8686 panel antennas @ 185 ft AGL

Six TMA's and three combiners @ 185 ft

Nine runs coax cable **Equipment Shelter** 

**Planned Modifications:** 

Remove all existing equipment and coax

Install six Powerwave 7770 antennas (or equivalent) @ 185 ft

Install six TMA's and six diplexers @ 185 ft

Install twelve runs 1 5/8 inch coax

### **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 4.8 % 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 3.9 % of the standard.

#### **Existing**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *							0.00
Cingular TDMA *	185	880 - 894	16	100	0.0168	0.5867	2.87
Cingular GSM*	185	1900 Band	2	427	0.0090	1.0000	0.90
Cingular GSM*	185	880 - 894	2	296	0.0062	0.5867	1.06
Total							4.8%

<sup>\*</sup> Per CSC records

## **Proposed**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
Other Users *							0.00
Cingular UMTS	185	880 - 894	1	500	0.0053	0.5867	0.90
Cingular GSM*	185	1900 Band	2	427	0.0090	1.0000	0.90
Cingular GSM*	185	880 - 894	4	296	0.0124	0.5867	2.12
Total							3.9%

<sup>\*</sup> Per CSC records

### **Structural information:**

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity to accommodate the proposed modifications. (American Tower, 1/22/09)





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 27, 2009

Linda M. Hodge, 1<sup>st</sup> Selectman Town of Colchester Town Hall, 127 Norwich Ave. Colchester, CT 06415

Re:

Telecommunications Facility - Chestnut Hill Road

Dear Ms. Hodge:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") capability, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("Cingular") will be changing its equipment configuration at certain cell sites.

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



# **Structural Analysis Report**

**Structure** 

: 181 ft Monopole

**ATC Site Name** 

Clch - Colchester, CT

**ATC Site Number** 

302496

**Proposed Carrier** 

: AT&T Mobility

**Carrier Site Name** 

Colchester

Carrier Site Number :

2046

County

**New London** 

Eng. Number

42727721

Date

: January 22, 2009

Usage

96%

Portholes Required

No

Submitted by: Zachary A. Medoff, E.I. Design 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 181 ft Monopole located on Chestnut Hill Road, Colchester, CT 06415, New London County (ATC site #302496). Tower geometry and structural information was based on a mapping by HighTower Solutions Inc. (Project #HTS011509, dated January 13, 2009).

#### **Analysis**

The tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition.

Basic Wind Speed: 105 mph (3-Second Gust)

Radial Ice:

50 mph (3-Second Gust) w/ 3/4" ice

Code:

ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2008 CT Amendments

#### **Antenna Loads**

The following antenna loads were used in the tower analysis.

#### **Existing Antennas**

Elev. (ft)	Qty	Antennas	Antennas Mount		Carrier
_	-	-	-	-	-

#### **Proposed Antennas**

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
	6	LGP Allgon LGP21903			
180.0	6	Powerwave LGP17201	Platform w/ Handrails	(12) 1 5/8	AT&T Mobility
	6	Powerwave 7770.00			

Install proposed coax inside monopole.

#### Results

The maximum structure usage is: 96%

Additional exit and/or entry ports may be required to accommodate the running of the proposed lines to the proposed antennas. These additional ports <u>may not</u> be installed without installation drawings providing the location, size and welding requirements of each port.

To ensure compliance with all conditions of this structural analysis, port installation drawings shall be provided by American Tower's Engineering Department under a subsequent project.

Pole Reactions	Current Analysis Reactions
Moment (ft-kips)	2,305.8
Shear (kips)	21.9
Axial (kips)	27.7

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.

#### **Conclusion**

Based on the analysis results, the structure meets the requirements per ANSI/TIA-222-G and 2003 IBC w/ 2005 CT Supplement & 2008 CT Amendments. The tower and foundation can support the existing and proposed antennas with the TX line distribution as described in this report.

If you have any questions or require additional information, please call 919-465-6535.

#### **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:

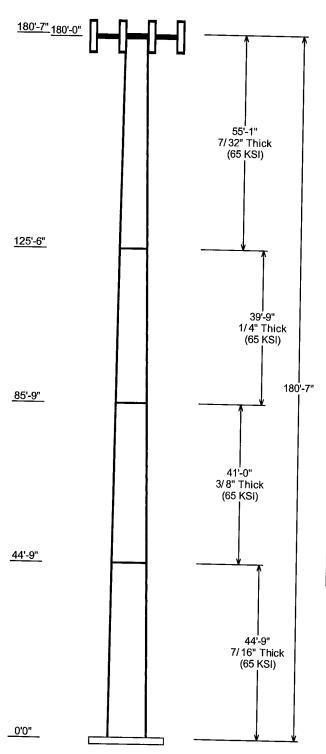
- -- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.
- -- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements 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 are in an un-corroded condition and have not deteriorated; and we, therefore, assume 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 from 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.

Copyright Semaan Engineering Solutions, Inc



#### Job Information

Pole: 302496 Code: ANSI/TIA-222 Rev G

Description: 180 ft Monopole
Client: AT&T Mobility

Struct Class : II

Location: Clch - Colchester, CT

Exposure : B Topo : 1

Shape: 12 Sides

Base Elev (ft): 0.00

Height: 180.58 (ft)

Taper: 0.144532(in/ft)

	Sections Properties							
Shaft Section	Length (ft)		eter (in) oss Flats Bottom	Thick (in)	Joint Type	Overlap Length Tape (in) (in/ft	Steel r Grade ) (ksi)	
1	44.750	35.23	41.70	0.438		0.000 0.1445	32 65	
2	41.000	29.30	35.23	0.375	<b>Butt Joint</b>	0.000 0.1445	_ ••	
3	39.750	23.56	29.30	0.250	<b>Butt Joint</b>	0.000 0.1445		
4	55.083	15.60	23.56	0.219	<b>Butt Joint</b>	0.000 0.1445		

Discrete Appurtenance					
Attach Elev (ft)	Force ⊟ev (ft)	Qty	Description		
180.000	180.000	1	Round Platform w/ Handrails		
180.000	180.000	6	LGP Allgon LGP21903		
180.000	180.000	6	Powerwave LGP17201		
180.000	180.000	6	Powerwave 7770.00		

Linear Appurtenance				
⊟ev From	(ft) To	Description	Exposed To Wind	
0.000	180.0	1 5/8" Coax	No	

	Load Cases
1.2D + 1.6W	105.00 mph with No Ice
0.9D + 1.6W	105.00 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50.00 mph with 0.75 in Radial Ice
1.0D + 1.0W	60.00 mph Serviceability

Reactions					
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)		
1.2D + 1.6W	2305.82	21.91	27.72		
0.9D + 1.6W	2270.77	21.89	20.78		
1.2D + 1.0Di + 1.0Wi	484.72	4.25	41.06		
1.0D + 1.0W	467.28	4.47	23.14		

Dish Deflections				
Load Case	Attach ⊟ev (ft)	Deflection (in)	Rotation (deg)	
1.0D + 1.0W	0.00	0.000	0.000	