# Daniel F. Caruso Chairman

#### 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

January 20, 2009

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

RE: **EM-CING-141-081208** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 61 Lowell Davis Road, Thompson, 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 December 8, 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.

Executive Director

SDP/MP/laf

c: The Honorable Larry Groh, First Selectman, Town of Thompson John E. Mahon, Jr., Zoning Enforcement Officer, Town of Thompson Charter Communications

CONNECTICUT SITING COUNCIL
Affirmative Action / Equal Opportunity Employer



#### STATE OF CONNECTICUT

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Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov www.ct.gov/csc

December 11, 2008

The Honorable Larry Groh
First Selectman
Town of Thompson
Town Office Building
815 Riverside Drive
P. O. Box 899
North Grosvenordale, CT 06255

RE: **EM-CING-141-081208** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 61 Lowell Davis Road, Thompson, Connecticut.

Dear Mr. Groh:

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 December 26, 2008.

Thank you for your cooperation and consideration.

S. Derek Phelps

**Executive Director** 

SDP/jb

Enclosure: Notice of Intent

c: John E. Mahon, Jr., Zoning Enforcement Officer, Town of Thompson



#### EM-CING-141-081208



COLOR OF LETT DOLLAR

Cingular Wireless PCS, LLC

nterprise Drive

ROCKY Hill, Connecticut 06067-3900 Phone: (860) 513-7636

Fax: (860) 513-7190

ORIGINAL

Steven L. Levine
Read Estate Consultan

CONNECTICUT SITING COUNCIL

HAND DELIVERED

December 8, 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 telecommunications facility located at 61 Lowell Davis Road, Thompson (owner, Charter Communications)

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. 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 or, installation of additional antennas of a size required to accommodate UMTS.
  - 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.
  - Radome enlargement for flagpole and "stick" structures to accommodate larger antennas and additional associated equipment.

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 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**

61 Lowell Davis Road, Thompson

Site Number 1052

Exempt Modifications approved 4/90 and 8/02

Tower Owner/Manager:

**Charter Communications** 

**Equipment Configuration:** 

**Guyed Lattice Tower** 

Current and/or Approved: Nine CSS DUO-1417-8686 panel antennas @ 205 ft AGL

Six TMA's and three diplexers @ 205 ft

Nine runs 11/4 inch coax cable

**Equipment Shelter** 

**Planned Modifications:** 

Remove all existing antennas, TMA's, diplexers, and coax

Install six Powerwave 7770 antennas (or equivalent) @ 212 ft

Install six TMA's and six diplexers @ 212 ft

Install twelve lines 15/8 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 23.9 % 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 22.9 % 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 *							19.93
AT&T TDMA *	205	880 - 894	16	100	0.0137	0.5867	2.33
AT&T GSM *	205	1900 Band	2	427	0.0073	1.0000	0.73
AT&T GSM*	205	880 - 894	2	296	0.0051	0.5867	0.86
Total 🦠							23.8%

<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 *		-					19.93
AT&T UMTS	212	880 - 894	1	500	0.0040	0.5867	0.68
AT&T GSM	212	1900 Band	2	427	0.0068	1.0000	0.68
AT&T GSM	212	880 - 894	4	296	0.0095	0.5867	1.61
Total							2223%

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

#### **Structural information:**

The attached structural analysis demonstrates that the tower has adequate structural capacity to accommodate the proposed equipment modifications. (GPD Associates, 12/5/08)





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

December 8, 2008

Larry Groh, Jr., 1<sup>st</sup> Selectman Town of Thompson Town Office Bldg. 815 Riverside Drive North Grosvenor Dale 06255

Re: Telecommunications Facility – 61 Lowell Davis Road

Dear Mr. Groh:

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") 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 AT&T'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 AT&T'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



Derek Creaser Hudson Design Group, LLC 600 Osgood Street, Building 20 North, Suite 2-101 North Andover, MA 01845 (617) 306-3034



Keir Joy 520 South Main St., Suite 2531 Akron, Ohio 44311 (330) 572-2184 kjoy@gpdgroup.com

GPD# 2008147.23 December 5, 2008

#### STRUCTURAL ANALYSIS REPORT

**HDG DESIGNATION:** 

Site Name:

Thompson

Site Number:

CT1052

AT&T DESIGNATION:

Site USID:

71305

Site Name:

**Thompson** 

**ANALYSIS CRITERIA:** 

Codes:

TIA/EIA-222-F & 2003 IBC

85-mph with 0" ice 73.6-mph with 1/2" ice

SITE DATA:

61 Lowell Davis Rd., Thompson, CT, 06277 Windham County

Latitude 41° 58' 44.183"N, Longitude 71° 51' 9"W

250' Guyed Tower

Mr. Creaser,

GPD is pleased to submit this Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the addition of the following proposed loading configuration:

Elev. 212'

- (6) Powerwave 7770.00 Antennas on (3) existing 12' T-Frames w/ (12) proposed 1-5/8" coax.
- (6) Powerwave LGP 21401 Tower Mounted Amplifiers mounted behind antennas on the same mount.
- (6) Powerwave LGP 21901 Diplexers mounted behind antennas on the same mount.

Based on our analysis we have determined the design of the <u>tower is sufficient</u> for the proposed, existing, and reserved loadings as referenced in Appendix A. However, the foundations could not be verified with the information provided.

We at GPD appreciate the opportunity of providing our continuing professional services to you and AT&T. If you have any questions please do not hesitate to call.

Respectfully submitted,

David B. Granger, P.E.

Connecticut #: 17557

#### **SUMMARY & RESULTS**

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T to Hudson Design Group. This report was commissioned by Mr. Derek Creaser of Hudson Design Group.

No foundation information was available for this report. Therefore, the capacity of the existing foundation could not be verified. A foundation investigation and geotechnical report are required to verify the capacity of the existing foundation.

#### **TOWER SUMMARY AND RESULTS**

Member	Capacity	Results
Legs	73.9%	Pass
Diagonals	59.1%	Pass
Horizontals	36.6%	Pass
Guy Wires	94.9%	Pass
Torque Arms	71.8%	Pass
Guy Anchors	N/A	Not Verified
Foundation	N/A	Not Verified

#### **ANALYSIS METHOD**

RISA Tower (Version 5.3.0.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being provided without the benefit of a site visit.

#### **DOCUMENTS PROVIDED**

Document	Remarks	Source
Previous Analysis	Gem Engineering Co., Project #: 460569, dated 7/8/02	D. Creaser
Previous Analysis	Bergman & Associates, Inc., BAI# 1094, dated 3/6/03	D. Creaser
AT&T Proposed Loading	CT1052_01, Dated 9/23/08	D. Creaser

#### **ASSUMPTIONS**

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the monopole. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

- 1. The tower member sizes and shape are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
- 2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements
- 3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
- 4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
- 5. The soil parameters are as per data supplied or as assumed and stated in the calculations. If no data is available, the foundation system is not verified.
- The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
- All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report.
- 8. All tower mounted amplifiers are assumed to be mounted behind the antennas.
- 9. Bolts could not be verified due to lack of information.
- 10. All existing loading was taken from a previous structural analysis by Gem Engineering Company, Project #: 460569, dated 7/8/02, and proposed loading was obtained from the supplied RF configuration data sheet.
- 11. The locations of the coax are assumed from photos to be stacked and to be located on all three faces. If the coax layout differs in the field, contact the engineer immediately. See Appendix C for the coax layout.

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.

#### **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 owner's 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**

**Tower Analysis Summary Form** 

### 12/5/2008

# Tower Analysis Summary Form

General Info	
Site Name	Thompson
Site Number	CT1052
ysis	12/4/2008
Company Performing Analysis	Cas

200	222	
Company Performing Analysis	GpD	
Tower Info	Description	Date
Tower Type (G. SST, MP)	0	
Tower Height (top of steel AGL)	200 200	
Tower Manufacturer	12/3	
Tower Model	lower Model ४४३	
Manufacturer Drawings	ska	
Foundation Design	na	
Geotech Report		
Tower Mapping	n/a	
Previous Structural Analysis	Gem Eng. Co., Proj.#: 460569	7/8/2002

	gn Code Used	Windham County, Connecticut		ce Thickness (in)	Structure Classification (I, II, III)		
Design Parameters	Design Code Used	Location of Tower (County, State)	Basic Wind Speed (mph)	Ice Thickness (in)	Structure Classification (I, II, III)	Exposure Category (B, C, D)	

Analysis Results (% Maximum Usage) Existing & Future Condition Tower Tow
--

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Proposed Condition	ndition
Tower	73,3%
Foundation	e/u
Guy Wire	84.8%
Note: Foundation	wher Foundation capacity costs nut be verified.

## Steel Yield Strength (ksi)

္ဌာ	(C)	20Ite
regs		
"	Other steel	,
Fed	ğ	4

## Existing/Reserved

T	=	-	1:	1 :		11		: 1
ine	Attachment Leg/Face			1-1/4"				
Transmission Line	Size	1.5/80	1-1/4"	1-1/4"	1-1/4"		112"	1 3/2"
2 <u>1</u> .	Quantity	**	en.	-			**	-
	EPA (ff²) total		36,80	4.37	6)	\$.34	4,87	
	Model							
Mount	Type	8. Sidearns	3 12 T.Franses	8' Sideanm	1 5' Sidearm 4.97 1	2 6' Sidearms	B. Sidearm	6' Sidearm 4.97
	Quantity	2	65	***	4	6.4	4	*
The State of the S	Azimuth							
	EPA (ff²) each	2.81	19 19	2.3	.4 .4 .5	2.3	***	2,03
	Model	A09210	GSS DUD1417.8686.40-C 6.53	PD(10g	Omri PONS-2 2.48	PD/198 2.3	DB254 1.1	PD320
Antenna	Type	Ormeri A09210	Panel CSS	Omni PD1108	Omni	Ommi	neure)	Dipole
	Quantity	77	} & 2 t	2008	*	C4	172	****
	Attachment Height (ft)	232.6	212	205	209	180		
	Antenna Owner	Unknown 222.6	AT&T 212	Unknowm	Unknown 209	Unknown 190 2 Ormi PD1	Unknown 172	Unknown 180

Note: The existing antennas and coax at 212' shall be removed prior to the installation of the proposed equipment.

## Proposed

_		_	_		_
Jine	Attachment Leg/Face				
Transmission Line	Size	1-5/8"			
4	Quantity	12			
	EPA (ff²) total				
	Model				
Mount	Туре	junow awas uo	on same mount	on same mount	
	Quantity				
	Azimuth	57, 158, 267			
	EPA (ff²) each	8,58	shielded	shielded	
	Nodel	8 Panel Powerwaye 7770,00	Powerwaye LGP 21401	Powerwave LGP 21901	
Antenna	Type	Panel	TREA		
	Quantity	43	SOG WILLS	(2)	
	Attachment Height (ft)	212	212	242	
	Antenna Owner	ATAT 212	AT&T	AT&T S Diplexer	

Revision:1.2 Date: 12/15/06



