

# 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](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

Daniel F. Caruso  
Chairman

February 6, 2008

Steven L. Levine  
New Cingular Wireless PCS, LLC  
500 Enterprise Drive  
Rocky Hill, CT 06067

RE: **EM-CING-097-080111** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 20 Barnabas Road, Newtown, Connecticut.

Dear Mr. Levine:

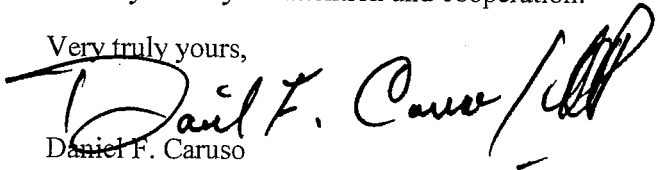
At a public meeting held on January 24, 2008, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated January 11, 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 Joseph E. Borst, First Selectman, Town of Newtown  
Gary Frenette, Zoning Enforcement Officer, Town of Newtown  
Connecticut Light & Power



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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Phone: (860) 827-2935 Fax: (860) 827-2950

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Internet: [ct.gov/csc](http://ct.gov/csc)

Daniel F. Caruso  
Chairman

January 14, 2008

The Honorable Joseph E. Borst  
First Selectman  
Town of Newtown  
Town Hall  
45 Main Street  
Newtown, CT 06470

RE: **EM-CING-097-080111** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 20 Barnabas Road, Newtown, Connecticut.

Dear Mr. Borst:

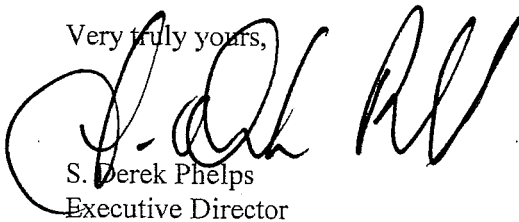
The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for January 24, 2008, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

If you have any questions or comments regarding this proposal, please call me or inform the Council by January 23, 2008.

Thank you for your cooperation and consideration.

Very truly yours,



S. Derek Phelps  
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Gary Frenette, Zoning Enforcement Officer, Town of Newtown



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

EM-CING-097-080111

HAND DELIVERED

ORIGINAL

RECEIVED  
JAN 11 2008

CONNECTICUT  
SITING COUNCIL

January 11, 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 20 Barnabas Road, Newtown (owner, CL&P)

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 ("Cingular") 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 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 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 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 use of one 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, 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  
Equipment Modification**

20 Barnabas Road, Newtown (Hawleyville)  
Site 5178  
Former AT&T Cell Site  
Exempt Modifications approved 11/14/00, 2/14/02, and 3/11/03

**Tower Owner/Manager:** Connecticut Light & Power

**Equipment configuration:** Self Supporting Lattice Tower

**Current and/or approved:** Nine Allgon 7250 Antennas @ 135 ft c.l. (12 approved)  
Nine runs 1 5/8 inch coax (12 approved)

**Planned Modifications:** Remove all existing antennas and 3 runs of coax  
Install 3 Powerwave 7770 (or equivalent) antennas @ 135 ft  
Install 6 TMA's @ 135 ft c.l.

**Power Density:**

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 27.5 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately - 29.8 % of the standard.

**Existing**

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Other Users *							25.99
Cingular GSM *	136	1900 Band	8	100	0.0156	1.0000	1.56
<b>Total</b>							<b>27.5%</b>

\* Per CSC records.

## Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Other Users *							25.99
Cingular GSM	135	1900 Band	2	708	0.0279	1.0000	2.79
Cingular UMTS	135	880 - 894	1	500	0.0099	1.0000	0.99
Total							29.8%

Note: Tower structure is mounted on concrete piers, accounting for the increased height AGL as compared to attached structural analysis.

### Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Malouf Engineering Intl, 1/9/08)



**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

January 11, 2008

Honorable Joseph Borst  
1<sup>st</sup> Selectman, Town of Newtown  
Edmond Town Hall, 45 Main Street  
Newtown, Connecticut 06470

Re: Telecommunications Facility – 20 Barnabas Road, Newtown

Dear Mr. Borst:

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

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# Structural Analysis Report

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## AT&T - Hawleyville Site # 5178

20 Barnabas Rd, Newtown, CT 06470

January 09, 2008

MEI PROJECT ID: CT00837S-08V0

**MALOUF ENGINEERING INTL., INC.**



**STRUCTURAL CONSULTANTS**

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17950 PRESTON ROAD, SUITE 720 ■ DALLAS, TEXAS 75252-5635 ■ TEL. 972 -783-2578 FAX 972-783-2583  
[www.maloufengineering.com](http://www.maloufengineering.com)

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January 9, 2008

## STRUCTURAL RE-ANALYSIS

Structure:	180 ft <b>Self-Supporting</b>	Rohn SSV	
Client/ Site Name /#:	<b>Hudson / AT&amp;T</b>	<b>Hawleyville</b>	<b># 5178</b>
Owner/Site Name /#:	Northeast Utilities	Hawleyville	
MEI Project ID:	<b>CT008375-08V0</b>		
Location:	20 Barnabas Rd., Newtown, CT 06470	Fairfield County FCC # N/A	
	LAT	41-25-40.1 N	LON 73-20-38 W

### EXECUTIVE SUMMARY:

Malouf Engineering Int'l (MEI), as requested, has performed a rigorous structural re-analysis of the above-mentioned structure to assess the impact of the changed condition as noted in Table 1.

Based on the stress analysis performed, the existing structure **is in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections.

**The installation of the proposed changed condition of replacing all existing AT&T antennas (including removal of 6 inoperative antennas and (3) coaxes) with (3) LGP Allgon 7770 Panel antennas, (6) LGP 21401 TMA's and (3) RCU/RET Units onto (3) existing Sector Frame mounts fed with existing (6) 1-5/8" lines and an additional (1) 1/2" RET cable at Elev. 132 ft c.l. is structurally acceptable.**

MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects please contact us.

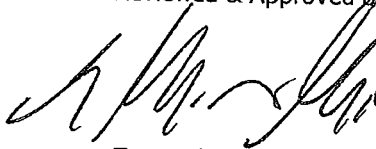
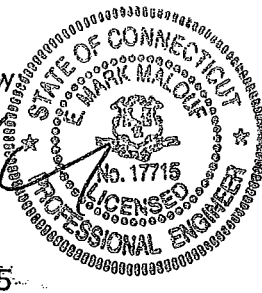
Respectfully submitted,

**MALOUF ENGINEERING INT'L, INC.**

Analysis performed by:

Helder Lopez, EIT  
Project Engineer

Reviewed & Approved by

  
  
 E. Mark Malouf, PE  
 Connecticut #17715  
 972-783-2578 ext. 106  
 mmalouf@maloufengineering.com

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**TABLE OF CONTENTS**

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**1. INTRODUCTION & SCOPE** \_\_\_\_\_ 4

**2. SOURCE OF DATA** \_\_\_\_\_ 4

    Background Information:-----4

**3. ANALYSIS CRITERIA** \_\_\_\_\_ 5

    Appurtenances Configuration-----5

**4. ANALYSIS PROCEDURE** \_\_\_\_\_ 6

    Analysis Program -----6

    Assumptions -----6

**5. ANALYSIS RESULTS** \_\_\_\_\_ 7

**6. FINDINGS & RECOMMENDATIONS** \_\_\_\_\_ 8

**7. REPORT DISCLAIMER** \_\_\_\_\_ 9

**APPENDIX 1 - TOWER DRAWING** \_\_\_\_\_ 10

**APPENDIX 2 - ANALYSIS PRINTOUT & GRAPHICS** \_\_\_\_\_ 11

## 1. INTRODUCTION & SCOPE

A structural analysis was performed by Malouf Engineering Int'l (MEI), as requested and authorized by Mr. Derek Creaser, Hudson Design Group, LLC, on behalf of AT&T to determine the acceptance of the proposed changed conditions in conformance with the ANSI/TIA-222-F Standard, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

The scope of this independent analysis is to determine the overall stability and the adequacy of structural members, foundations, and member connections, as available and stated. This analysis considers the structure to have been properly installed and maintained with no structural defects. Installation procedures and related loading are not within the scope of this analysis and should be performed and evaluated by a competent person of the erection contractor.

The different report sections detail the applicable information used in this evaluation, relating to the tower data, the appurtenances configuration and the wind and ice loading considered.

## 2. SOURCE OF DATA

The following information has been used in this evaluation as source data that accurately represent the existing structure and the related appurtenances:

	Source	Information	Reference
<b>STRUCTURE</b>			
<b>Tower</b>	Hudson D.G. / Derek Creaser	Tower Original Drawings and Tower Mapping	HEB Engineering Analysis, Dated 10/01/2002 and CSB Comm. LLC Tower Mapping dated 8/22/2006.
<b>Foundation</b>		No data available	
<b>Material Grade</b>	Available from supplied documents - refer to Appendix.		
<b>CURRENT APPURTENANCES</b>			
	Hudson D.G. / Derek Creaser	Previous Analysis Report & mainly recent Photos	HEB Engineering Analysis, Dated 10/01/2002 and Email by Derek Creaser
<b>CHANGED CONDITION</b>			
	Hudson D.G. / Derek Creaser	Cingular RF Data Sheet and email instructions.	Sheet dated 07/09/07 and email dated 11/26/07 & update on 01/08/08.

### Background Information:

Based on available information, the following is known regarding this structure:

<b>DESIGNER / FABRICATOR</b>	Rohn SSV
<b>DESIGN CRITERIA</b>	TIA/EIA 222 Unknown
<b>PRIOR STRUCTURAL MODIFICATIONS</b>	Modification upgrades as per HEB Engineers Analysis dated 10/01/2002 and as per field mapping & email correspondence.

### 3. ANALYSIS CRITERIA

The structural analysis performed used the following criteria:

<b>CODE / STANDARD</b>	ANSI/TIA-222-F-96 Standard / IBC2003	
<b>LOADING CASES</b>	<i>Full Wind:</i>	85 Mph <i>Fastest Mile</i> (with No Radial Ice)
	<i>Iced Case:</i>	74 Mph + 1/2" Radial Ice
	<i>Service:</i>	50 Mph

#### Appurtenances Configuration

The following appurtenances configuration has been considered:

**Table 1: Proposed Changed Condition Appurtenances**

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
132	AT&T*	3	LGP Allgon 7770 Panel Ants	Re-Use Exist (3) Sector Frame Mounts	6	1-5/8" - (FZ) [re-use exist]
		6	LGP 21401 TMA's			
		3	RCU/RET Units		1	1/2" RET Cable

**Table 2: Current and Reserved/Future Appurtenances**

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
180		1	8' Whip	Leg Mounted	1	1 5/8 - (FZ)
		1	10' Dipole Whip	Leg Mounted	1	1 5/8 - (FZ)
		1	16' Whip	Leg Mounted	1	1 5/8 - (FZ)
177		1	6ft Standard Dish w/ Radome	Dish Pipe Mount	1	EW63 - (FZ)
173		1	12' Dipole Loop		1	1 5/8 - (FZ)
157				Empty Side Arm		
146	T-Mobile	3	RR90-17-00DP Panel	(3) Side Arm Mounts	6	1 5/8 - (FZ)
		6	TMA's			
135		1	10' Dipole Whip	Side Arm Mount	1	1 5/8 - (FZ)
110		1	12' Dipole Loop	Leg Mounted	1	1 5/8 - (FZ)
103	Nextel	12	4ft H. Panel Antennas	(3) Sector Face Mnts	12	1 5/8 - (FZ)
88	Sprint	6	DB980 Panel Antennas	(3) Sector Frame Mnts	6	1 5/8 - (FZ)
59	Sprint	1	GPS Antenna	Mount	1	1/2 - (FZ)

#### Notes:

- \* Existing (6) inoperative antennas and (3) coaxes are to be removed as part of this new changed condition. Please note appurtenances not listed above are to be removed/not present as per data supplied.
- Existing antenna loading information and transmission lines were derived as per limited data and photos made available.
- (FZ) = Within Face Zone & (OFZ) = Outside Face Zone - as per TIA-222.
- The above antennas, mounts, and lines represent MEI's understanding of the appurtenances configuration. If different than above, the analysis is invalid. Please refer to Appendix 2 for EPA wind areas used in the calculations. Please contact MEI if any discrepancies are found.

#### 4. ANALYSIS PROCEDURE

The subject structure is analyzed for feasibility of the installation of the proposed changed condition previously noted. The data records furnished were reviewed and a computer stress analysis was performed in accordance with the TIA-222 Standard provisions and with the agreed scope of work terms and the results of this analysis are reported.

##### Analysis Program

The computer program used to model the structure is a rigorous Finite Element Analysis program, RISATower (ver. 5.022), a commercially available program developed by C-Concepts, WI and now maintained by RISA Technologies. The latticed structures members are modeled using beam/truss and cable members and the pole members using tubular beam elements. The structural parameters and geometry of the members are included in the model. The dead and temperature loads and the wind loads are internally calculated by the program for the different wind directions and then applied as external loads on the structure.

##### Assumptions

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

- This existing tower is assumed, for the purpose of this analysis, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its member capacities ('as-new' condition).
- The tower member sizes and configuration are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated.
- The appurtenances configuration is as supplied and/or as stated in the report. 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.
- Some assumptions are made regarding antennas and mounts sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type & industry practice.
- Mounts are considered adequate to support the loading. No actual analysis of the platform/mount itself is performed, with the analysis being limited to analyzing the structure.
- The soil parameters are as per data supplied or as assumed and stated in the calculations. Refer to the Appendix. If no data is available, the foundation system is assumed to support the structure with its new reactions.
- All welds and connections are assumed to develop at least the member capacity, unless determined otherwise and explicitly stated in this report. All guy cable assemblies, as applicable, are assumed to develop the rated breaking strength of the wire.
- All prior structural modifications, if any, are assumed to be as per data supplied/available, and to have been properly installed and to be fully effective.

If any of the above assumptions are not valid or have been made in error, this analysis results may be invalidated, MEI should be contacted to review any contradictory information to determine its effect.

## 5. ANALYSIS RESULTS

The results of the structural stress analysis based on data available and with the previous listed criteria, indicated the following:

**Table 3: Stress Analysis Results**

Member Type	Maximum Stress Ratio	Controlling Elevation / Component	Pass/Fail	Comment
<b>LEGS</b>	63.6%	Elev. 60 – 40ft	<b>Pass</b>	
<b>DIAGONALS</b>	105.5%	Elev. 20 – 40ft	<b>Acceptable</b>	Bolt Controls
<b>TOP GIRT</b>	1.50%	Elev. 180 – 160ft	<b>Pass</b>	
<b>FOUNDATION</b>	-	-	<b>Cannot Determine</b>	No data Available – Considered Acceptable

**Notes:**

1. The Maximum Stress Ratio is the percentage that the maximum load in the member is relative to the allowable load as determined by Code requirements.
2. Refer to the Appendix 2 for more details on the member loads.
3. A maximum stress ratio between 100% to 105% may be considered as *Acceptable* according to industry standard practice.



## 6. FINDINGS & RECOMMENDATIONS

- Based on the rigorous stress analysis results, the subject structure is **rated at 105.5%** of its support capacity (controlling component: Diagonals) with the proposed changed condition considered. Please refer to Table 3 and to Appendix 2 for more details of the analysis results.
- Based on the stress analysis performed, the existing structure is **in conformance** with the ANSI/TIA **222-F** Standard for the loading considered under the criteria listed and referenced in the report sections.
- ***The installation of the proposed changed condition of replacing all existing AT&T antennas (including removal of 6 inoperative antennas and (3) coaxes) with (3) LGP Allgon 7770 Panel antennas, (6) LGP 21401 TMA's and (3) RCU/RET Units onto (3) existing Sector Frame mounts fed with existing (6) 1-5/8" lines and an additional (1) 1/2" RET cable at Elev. 132 ft c.l. is structurally acceptable.***
- Please note that the modifications as per HEB Engineering Analysis, dated 10/01/2002 have been assumed implemented and fully effective as confirmed by limited CSB Comm. LLC Tower Mapping data dated 8/22/2006 with exception of the bolt replacement at elev. 100ft-120ft.
- Please note that the tower rating is governed by the ice loading condition.
- This structure is at its maximum support capacity for the appurtenances and loading criteria considered. Therefore, No changes to the configuration considered should be made without performing a new proper evaluation.

*Rigging and temporary supports required for the erection/modification shall be determined, documented, furnished and installed by the erector/contractor accounting for the loads imposed on the structure due to the proposed construction method.*

## 7. REPORT DISCLAIMER

*The engineering services rendered by Malouf Engineering International, Inc. ('MEI') in connection with this Structural Analysis are limited to a computer analysis of the tower structure, size and capacity of its members. MEI does not analyze the fabrication, including welding and connection capacities, except as included in this Report.*

The analysis performed and the conclusions contained herein are based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following:

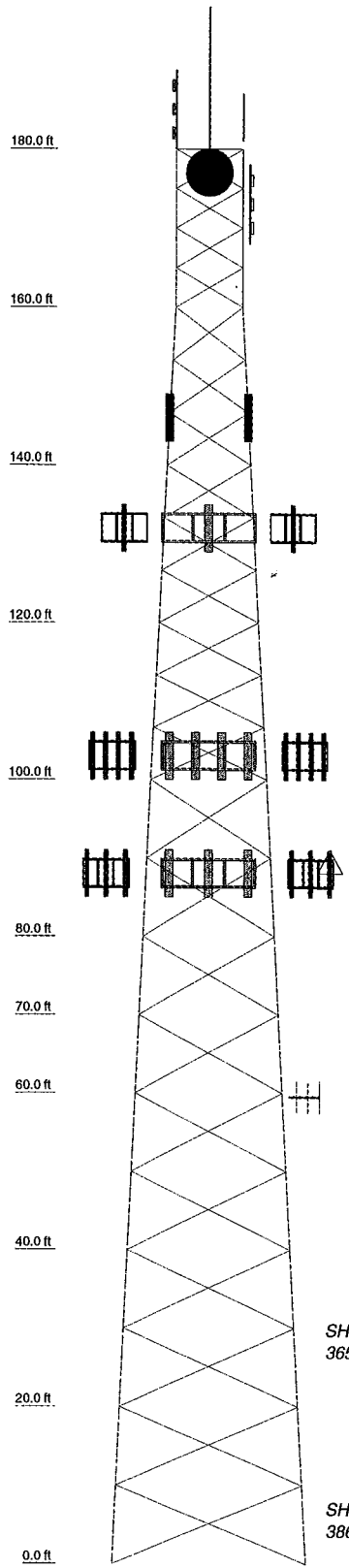
1. Proper alignment and plumbness.
2. Correct guy tensions, as applicable.
3. Correct bolt tightness or slip jacking of sleeved connections.
4. No significant deterioration or damage to any structural component.

Furthermore, the information and conclusions contained in this Report were determined by application of the current "state-of-the-art" engineering and analysis procedures and formulae. MALOUF ENGINEERING INTERNATIONAL, INC. Assumes no obligation to revise any of the information or conclusions contained in this Report in the event that such engineering and analysis procedures and formulae are hereafter modified or revised. In addition, under no circumstances will MALOUF ENGINEERING INTERNATIONAL, INC. Have any obligation or responsibility whatsoever for or on account of consequential or incidental damages sustained by any person, firm or organization as a result of any information or conclusions contained in the Report, and the maximum liability of MALOUF ENGINEERING INTERNATIONAL, INC., if any, pursuant to this Report shall be limited to the total funds actually received by MALOUF ENGINEERING INTERNATIONAL, INC. For preparation of this Report.

Customer has requested MALOUF ENGINEERING INTERNATIONAL, INC. To prepare and submit to Customer an engineering analysis with respect to the Subject Tower and has further requested MALOUF ENGINEERING INTERNATIONAL, INC. to make appropriate recommendations regarding suggested structural modifications and changes to the Subject Tower. In making such request of MALOUF ENGINEERING INTERNATIONAL, INC., Customer has informed MALOUF ENGINEERING INTERNATIONAL, INC. that Customer will make a determination as to whether or not to implement any of the changes or modifications which may be suggested by MALOUF ENGINEERING INTERNATIONAL, INC. and that Customer will have any such changes or modifications made by riggers, erectors and other subcontractors of Customer's choice. MALOUF ENGINEERING INTERNATIONAL, INC. shall have the right to rely upon the accuracy of the information supplied by the customer and shall not be held responsible for the Customer's misrepresentation or omission of relevant fact whether intentional or otherwise.

Customer hereby agrees and acknowledges that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than MALOUF ENGINEERING INTERNATIONAL, INC. in connection with the implementation of services including but not limited to any services rendered for Customer or for others by riggers, erectors or other subcontractors. Customer acknowledges and agrees that any riggers, erectors or subcontractors retained or employed by Customer shall be solely responsible to Customer and to others for the quality of work performed by them and that MALOUF ENGINEERING INTERNATIONAL, INC. shall have no liability or responsibility whatsoever as a result of any negligence or breach of contract by any such rigger, erector or subcontractor and that Customer and rigger, erector, or subcontractor will provide MALOUF ENGINEERING INTERNATIONAL, INC. with a Certificate of Insurance naming MALOUF ENGINEERING INTERNATIONAL, INC. as additional insured.

Section	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	P6x.432	P5x.375	P5x.258	P4x.337	P3x.216	P2.5x.203				
Leg Grade	L4x4x3/8	L3 1/2x3 1/2x3/8	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4	L3x3x3/16	A572-50				
Diagonals							L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2x2x1/8	L1 3/4x1 3/4x3/16
Diagonal Grade						A36				
Top Girts						N.A.				L2 1/2x2 1/2x3/16
Face Width (ft)	24.8646	20.8646	20.8646	18.7708	16.7708	16.7708	14.7708	10.6042		8.5625
# Panels @ (ft)	4740.9	4657.0	3486.4	1943.7	1315.6	1710.7	2613.6	1187.2	887.4	928.7
Weight (lb)	22082.4									



**DESIGNED APPURTENANCE LOADING**

TYPE	ELEVATION	TYPE	ELEVATION
8' Whip Antenna (1)(E)<1>	180	RET Units (3)(P)<10> (ATT)	132
10' Dipole Whip Ant (1)(E)<2>	180	7770 Panel Ants (3)(P)<10> (ATT)	132
16' Whip Antenna Ant. (1)(E)<3>	180	12' Dipole Loop Antenna (1)(E)<11>	110
Dish Pipe Mount (1)(E)<4>	177	Sector Frame Mounts (3)(E)<12> (NEXTEL)	103
6ft Dia. Dish w/ Radome	177	4ft H. Panel Ants (12)(E)<12> (NEXTEL)	103
12' Dipole Loop Antenna (1)(E)<5>	173	DB980 Panel Ants (6)(E)<13> (SPRINT)	88
Empty Side Arm Mnt (1)(E)<6>	157	Sector Frame Mounts (3)(E)<13> (SPRINT)	88
TMA's (6)(E)<7> (T-Mobile)	146	GPS + Mnt (1)(E)<14> (SPRINT)	59
Side Arm Mounts (3)(E)<7> (T-Mobile)	146		
RR90-17-00DP Panel Ants (3)(E)<7> (T-Mobile)	146		
Side Arm Mount (1)(E)<8>	135		
10' Dipole Whip Ant. (1)(E)<8>	135		
LGP 21401 DB TMA's (6)(P)<10> (ATT)	132		

**MATERIAL STRENGTH**

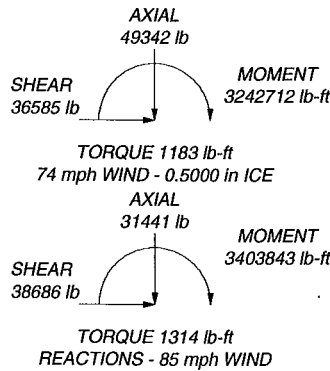
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

**TOWER DESIGN NOTES**

1. Tower is located in Fairfield 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: 105.5%

**MAX. CORNER REACTIONS AT BASE:**

DOWN: 168553 lb  
 UPLIFT: -139551 lb  
 SHEAR: 23212 lb



<p>MEIlogo</p>	<p><b>Malouf Engineering Int'l. Inc</b>          17950 Preston Rd., Suite 720          Dallas, Texas - 75252          Phone: (972) 783-2578          FAX: (972) 783-2583</p>	<p>Job: <b>180-ft SST - Hawleyville Site #5178</b>          Project: <b>CT00837S-08V0</b>          Client: <b>Hudson Design Group / AT&amp;T</b>          Code: <b>TIA/EIA-222-F</b>          Path: <b>C:\MEI\Project\08files\CT00837S-08v0\CT00837S-08V0.eri</b></p>	<p>Drawn by: <b>HML</b>          Date: <b>01/09/08</b>          Scale: <b>NTS</b>          Dwg No. <b>E-1</b></p>
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