



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

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

August 20, 2008

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

RE: **EM-CING-034-080709** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 181 Clapboard Ridge Road, Danbury, 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 July 9, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps  
Executive Director

SDP/MP/cm

c: The Honorable Mark D. Boughton, Mayor, City of Danbury  
Dennis Elpern, City Planner, City of Danbury  
Hans Fiedler, T-Mobile



CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer



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

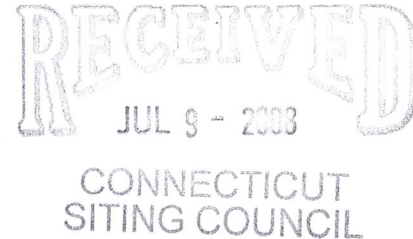
**EM-CING-034-080709**

**Steven L. Levine**  
Real Estate Consultant

HAND DELIVERED

July 9, 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 181 Clapboard Ridge Road, Danbury (owner, T-Mobile)

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

**CINGULAR WIRELESS  
Equipment Modification**

181 Clapboard Ridge Road, Danbury  
Site Number 5535  
Former AT&T Cell Site  
Exempt Modification 5/6/03

**Tower Owner/Manager:** T-Mobile

**Equipment configuration:** Flagpole

**Current and/or approved:** 24-inch diameter flagpole  
Three Allgon 7250 panel antennas @ 62 ft c.l.  
Six runs 7/8 inch coax

**Planned Modifications:** Remove all three existing antennas  
Replace top 30 ft of flagpole (RF-transparent radome) with  
31-inch diameter radome to accommodate Powerwave  
antennas & associated equipment  
Install three Powerwave 7770 antennas @ 62 ft  
Install six TMA's @ 62 ft  
Remove one existing outdoor cabinet  
Install one new outdoor cabinet for UMTS

**Power Density:**

Calculations for AT&T's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 17 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for AT&T's planned operations would be approximately 42% 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 *							6.66
AT&T GSM *	59	1900 Band	4	250	0.1033	1.0000	10.33
<b>Total</b>							<b>17.0%</b>

\* Per CSC records.

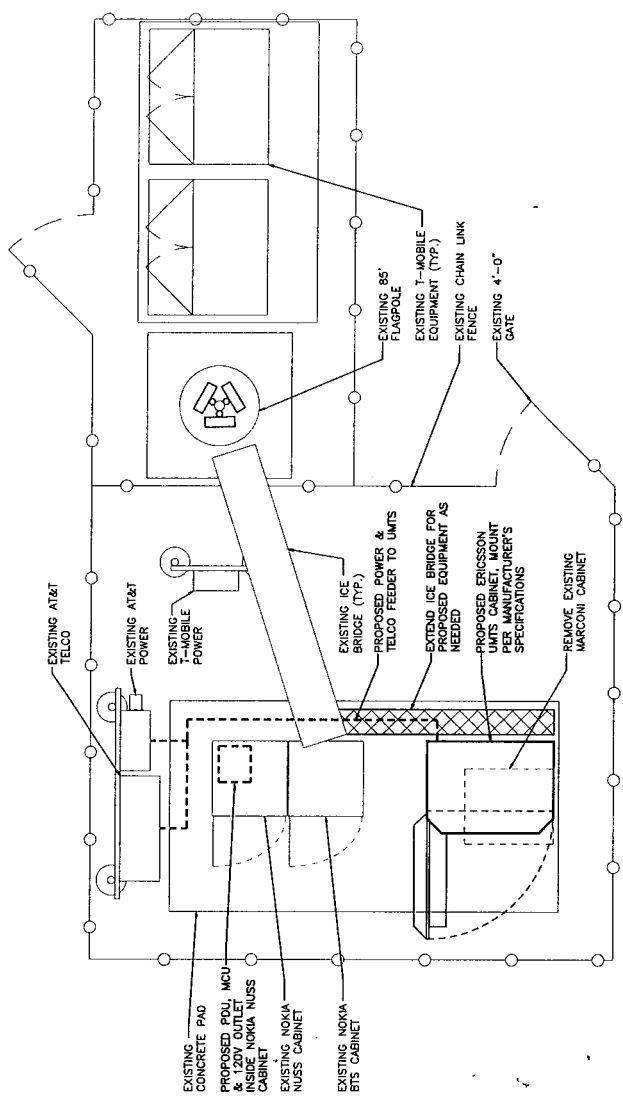
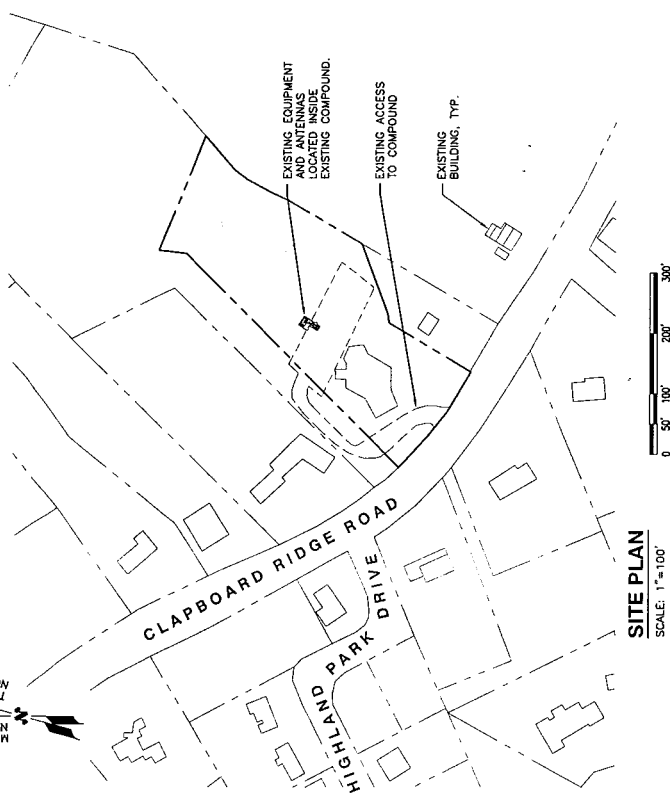
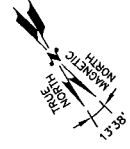
## Proposed

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 *							6.66
AT&T GSM	62	1900 Band	4	427	0.1598	1.0000	15.98
AT&T GSM	62	880 - 894	2	296	0.0554	0.5867	9.44
AT&T UMTS	62	880 - 894	1	500	0.0468	0.5867	7.97
<b>Total</b>							<b>40.0%</b>

\* Per CSC records.

### Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Paul J. Ford & Company, dated 6/19/08)



**COMPOUND PLAN**  
SCALE: 1/2"=1'-0"



184 ROCKINGHAM ROAD, UNIT A  
LONDONDERRY, NH 03053  
TEL: 603.452.5500  
FAX: 603.452.5500

184 ROCKINGHAM ROAD, UNIT A  
LONDONDERRY, NH 03053

**SITE NUMBER: 5535**  
**SITE NAME: DANBURY NORTH**  
179-181 CLAPBOARD RIDGE ROAD  
DANBURY, CT 06470  
FAIRFIELD COUNTY

500 ENTERPRISE DRIVE  
ROCKY HILL, CT 06067

*James J. Harmon*

NO.	DATE	REVISIONS	BY	CHK	APP
3	04/25/01	CONSTRUCTION FINAL	PC	DC	DBH
2	06/29/01	CONSTRUCTION FINAL	PC	DC	DBH
1	06/15/01	CONSTRUCTION FINAL	JG	DC	DBH
0	04/14/01	ISSUED FOR CONSTRUCTION	JG	DC	DBH
REV					
		DESIGNED BY: PC	DRAWN BY: JG		
		CHECKED BY: PC			
		DATE: 05/23/01			
		JOB NUMBER: 5535.01			
		DRAWING NUMBER: A-1			
		SITE PLAN & COMPOUND PLAN			
		AT&T			

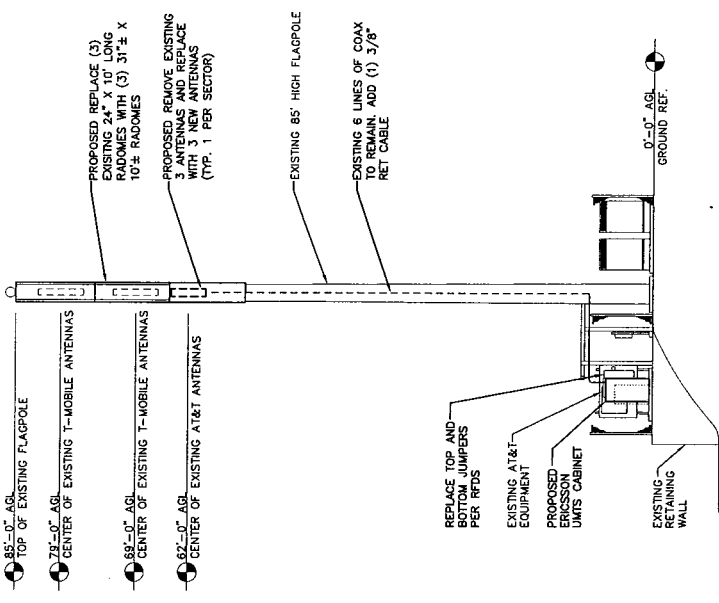
RF TABLE

SECTOR NAME	ANTENNA MAKE & MODEL	ANTENNA COUNT	RAD CENTER	MECHANICAL DOWNHILL	TMA COUNT	DIPLEXER COUNT	# OF COAX CABLES
1	POWERWAVE 7770	1 PROPOSED 0 EXISTING	70'	0*	2 PROPOSED 0 EXISTING	0 PROPOSED 0 EXISTING	0 PROPOSED 2 EXISTING
2	POWERWAVE 7770	1 PROPOSED 0 EXISTING	82'	0*	2 PROPOSED 0 EXISTING	0 PROPOSED 0 EXISTING	0 PROPOSED 2 EXISTING
3	POWERWAVE 7770	1 PROPOSED 0 EXISTING	310'	0*	2 PROPOSED 0 EXISTING	0 PROPOSED 0 EXISTING	0 PROPOSED 2 EXISTING

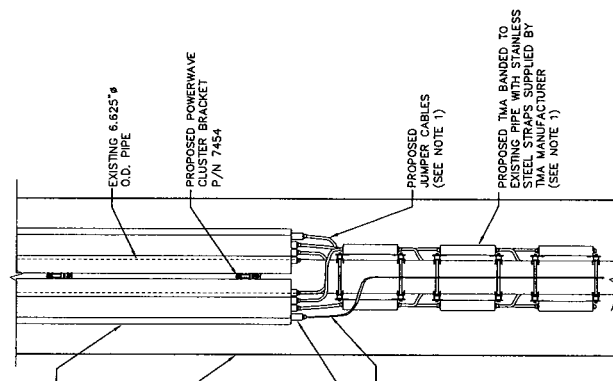
**NOTE:**  
1. CONTRACTOR TO VERIFY PROPOSED ANTENNAS WILL FIT INSIDE FLAGPOLE.  
2. BOOM TRUCK OR MANLIPT REQUIRED TO INSTALL ANTENNAS.

**NOTE:**  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING FLAGPOLE TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

**NOTE:**  
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

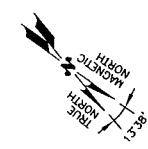


**WEST ELEVATION**  
SCALE: 3/32"=1'-0"  
0 5'-4" 10'-8" 21'-4" 32'-0"



**PROPOSED ANTENNA DETAIL**  
SCALE: 1" = 1'-0"  
0 0'-6" 1'-0" 2'-0" 3'-0"

**NOTES:**  
1. REFER TO RF CONFIG & SECTOR SCHEMATICS FOR QUANTITY REQUIRED PER SECTOR



**PROPOSED ANTENNA PLAN VIEW**  
SCALE: 1" = 1'-0"  
0 0'-6" 1'-0" 2'-0" 3'-0"

184 ROCKY HILL ROAD, UNIT A  
LONGBRIDGE, NY 03055  
TEL: (603) 885-6553  
FAX: (603) 885-6556

179-181 CLAREBORO ROAD  
DANBURY, CT 06470  
FAIRFIELD COUNTY

SITE NUMBER: 5535  
500 ENTERPRISE DRIVE  
ROCKY HILL, CT 06067

NO.	DATE	BY	CHK	REVISED BY	REASON
1	04/17/08	PC	DC	PC	AS SHOWN
2	06/25/08	PC	DC	PC	CONSTRUCTION FINAL
3	06/25/08	PC	DC	PC	CONSTRUCTION FINAL
4	07/17/08	PC	DC	PC	ISSUED FOR CONSTRUCTION

AT&T  
ANTENNA LAYOUT AND ELEVATION

DATE: 05/15/08  
DRAWING NUMBER: 5535.01  
DRAWN BY: JC  
CHECKED BY: JC



**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

July 9, 2008

Hon. Mark D. Boughton, Mayor  
City of Danbury  
City Hall, 155 Deer Hill Ave.  
Danbury, CT 06810-7726

Re: Telecommunications Facility – 181 Clapboard Hill Road, Danbury

Dear Mayor Boughton:

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





PAUL J. FORD AND COMPANY  
STRUCTURAL ENGINEERS  
250 East Broad Street · Suite 1500 · Columbus, Ohio 43215

## Structural Analysis Report

PJF Project No.: **31908-0086**

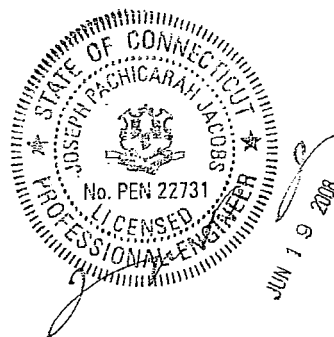
Structure: Existing 85-ft Flag Pole w/  
New Antenna Concealment Cylinders  
Owner: AT&T Wireless  
Pole & Concealment Manufacturer: Stealth Concealment Solutions, Inc.  
Location: Danbury, CT  
Site Name: St. Ann's Melkite Church  
Site Number: CT-535

Prepared For:

### Stealth Concealment Solutions, Inc.

6549 Fain Blvd.  
North Charleston, SC 29406  
*Attn: Charlene Polk*

June 19, 2008



Analyzed by:  
Kurt J. Swarts, P.E. *KJS*  
Project Manager  
kswarts@pjfweb.com

Reviewed by:  
Joseph Jacobs, P.E.  
CT License PEN.0022731

COLUMBUS, OHIO  
(614) 221-6679  
Fax (614) 448-4105

• ATLANTA, GEORGIA •  
(404) 266-2407  
Fax (706) 369-0044

• ORLANDO, FLORIDA •  
(407) 898-9039  
Fax (407) 897-3662

• [www.pjfweb.com](http://www.pjfweb.com) •



### Executive Summary

#### Design Standard:

Paul J. Ford and Company has analyzed the existing flag pole in accordance with the Telecommunications Industry Association Standard TIA/EIA-222-F for the following *fastest mile* design wind velocities:

*85 mph Basic Wind Velocity without ice*  
*74 mph Basic Wind Velocity with 1/2" radial ice*  
*50 mph (Operational) Basic Wind Velocity without ice*

#### Antenna Loads:

The existing flag pole was analyzed for the following loading:

Status	Elevation	Description
Existing	85'	Ball Truck
Existing	84'	12-ft x 18-ft Flag
Existing	79'	(3) Panel Antennas
New	79'	31 1/4" OD x 9.88' Concealment Cylinder
Existing	69'	(3) Panel Antennas
New	69'	32 1/8" OD x 9.75' Concealment Cylinder
Existing	59'	(3) Panel Antennas
New	59'	33" OD x 9.88' Concealment Cylinder

All antennas are installed inside the antenna concealment cylinders.

Coaxial cable for this analysis are internally mounted and not exposed to the wind.

#### Results:

The existing antenna concealment cylinder and base pole have sufficient capacity to support the above antenna loading while meeting the local minimum wind requirements.

The existing spread footing foundation has sufficient capacity to support the above antenna loading while meeting the local minimum wind requirements.



PAUL J. FORD AND COMPANY  
STRUCTURAL ENGINEERS  
250 East Broad Street • Suite 1500 • Columbus, Ohio 43215

Page 3 of 6  
June 19, 2008  
PJF Project #31908-0086  
CT-535: Danbury, CT  
AT&T Wireless

### **Project Description:**

Paul J. Ford and Company has analyzed the existing 85-ft flag pole to determine if it will have sufficient capacity to support new larger antenna concealment cylinders. It is proposed to replace the existing cylinders with new cylinders having the following diameters (from top to bottom); 31 1/4", 32 1/8", and 33".

### **Pole History:**

The existing 85-ft flag pole is constructed of a 54.17-ft base pole with a 29.5-ft tall antenna concealment cylinder. The 54.17-ft base pole was designed by Trico Engineering Consultants in 2002 per job #02-300. The base pole was designed in accordance with TIA/EIA-222-F for a 85 mph design wind.

The 29.5-ft antenna concealment cylinder was manufactured by Stealth Concealment Solutions in 2002, reference product number CELL-3C-100-30.

### **Structural Analysis:**

Our analysis was completed according to the recommendations of the TIA/EIA-222-F 1996. This standard recommends a minimum design wind velocity of 85 mph (no ice) for Fairfield County. If ice accumulation is considered, the TIA/EIA standard allows the design wind pressure reduced by 25% in conjunction with 1/2" radial ice. Our analysis was completed in compliance with the minimum wind requirements under the following load cases:

*85 mph Basic Wind Velocity without ice*  
*74 mph Basic Wind Velocity with 1/2" radial ice*  
*50 mph (Operational) Basic Wind Velocity without ice*



### Existing & Proposed Antenna Loading:

Our analysis was completed using the following loading:

Status	Elevation	Description
Existing	85'	Ball Truck
Existing	84'	12-ft x 18-ft Flag
Existing	79'	(3) Panel Antennas
New	79'	31 1/4" OD x 9.88' Concealment Cylinder
Existing	69'	(3) Panel Antennas
New	69'	32 1/8" OD x 9.75' Concealment Cylinder
Existing	59'	(3) Panel Antennas
New	59'	33" OD x 9.88' Concealment Cylinder

All antennas are installed inside the antenna concealment cylinders.

Coaxial cable for this analysis are internally mounted and not exposed to the wind.

### Results:

When the new, larger antenna concealment cylinders are considered, the antenna concealment cylinder and base pole has sufficient capacity to safely support the new loading while maintaining the minimum wind rating:

Member	Elevation	Percent Capacity
Antenna Concealment Cylinder	54'	75.50%
Shaft #1	0'	31.8%
Base Plate	0'	45.6%
Anchor Rods	0'	43.8%

The existing spread footing foundation has sufficient capacity to support the new loading while maintaining the minimum required safety factors.



PAUL J. FORD AND COMPANY  
STRUCTURAL ENGINEERS  
250 East Broad Street • Suite 1500 • Columbus, Ohio 43215

Page 5 of 6  
June 19, 2008  
PJF Project #31908-0086  
CT-535: Danbury, CT  
AT&T Wireless

**Conclusion:**

The existing antenna concealment cylinder and base pole has sufficient capacity to support the above antenna loading while meeting the local minimum wind requirements.

The existing spread footing foundation has sufficient capacity to support the above loading while meeting the local minimum wind requirements.

If you have any questions concerning our analysis, or if we can be of further service to you, please feel free to contact us at (614) 221-6679.

Sincerely,

Paul J. Ford and Company

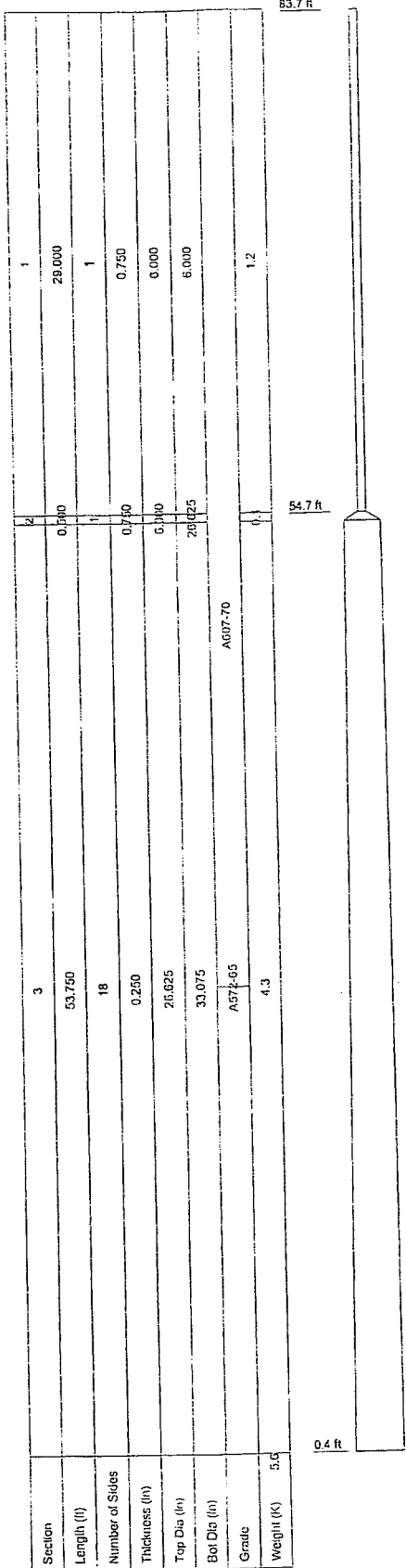
Kurt J. Swarts, P.E.  
Project Manager



## STANDARD CONDITIONS FOR FURNISHING OF PROFESSIONAL ENGINEERING SERVICES ON EXISTING STRUCTURES BY PAUL J. FORD AND COMPANY

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1. Paul J. Ford and Company has not made a field inspection to verify the monopole dimensions or the antenna/coax loading. If the existing conditions are not as represented on these sketches, we should be contacted immediately to reevaluate any conclusions stated in this report.
2. No allowance was made for any damaged, missing, or rusted monopole parts. The analysis of this pole assumes that no physical deterioration has occurred in any of the structural components of the pole and that all the pole members have the same capacity as the day the pole was erected.
3. It is not possible to have all of the very detailed information to perform a thorough analysis of every structural sub-component of an existing monopole. The structural analysis provided by Paul J. Ford and Company verifies the adequacy of the main structural members of the monopole. Paul J. Ford and Company provides a limited scope of service in that we cannot verify the adequacy of every weld, plate, connection detail, etc.
4. It is the owner's responsibility to determine the amount of ice accumulation, if any, that shall be used in the structural analysis.
5. The monopole has been analyzed according to the minimum basic design wind velocity recommended by the Electronics Industry Association Standard ANSI/EIA-222-F. If the owner or local or state agencies require a higher design wind velocity, Paul J. Ford and Company should be made aware of this requirement.
6. The enclosed sketches are a schematic representation of the monopole we have analyzed. If any material is fabricated from these sketches, the fabricator shall be responsible for field verifying the existing conditions and for proper fit and clearance in the field.
7. Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.
8. Installation of new hand hole ports and/or cable access ports will not reduce the structural capacity of the monopole shaft, if the hand hole frames and/or cable access ports are properly designed and installed in accordance to proper procedures. Paul J. Ford and Company recommends that new hand holes and/or cable access port hole frames be purchased from the original pole manufacturer. The new hand hole and/or cable access frames shall be installed per the original manufacturer's installation procedures. Paul J. Ford and Company will design and provide installation procedures for new hand holes and/or cable access ports if required, as an additional scope of services.



**DESIGNED APPURTENANCE LOADING**

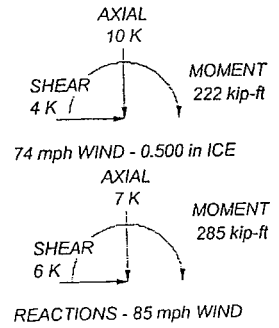
TYPE	ELEVATION	TYPE	ELEVATION
Stealth Ball Truck	84.67	(3) Stealth Generic Panel Antennas	69
Stealth 12' x 18' Flag	83.67	32.125" OD x 9.75" Cylinder	68.92
(3) Stealth Generic Panel Antennas	79	33" OD x 9.88" Cylinder	59.1075
31.25" OD x 9.88" Cylinder	78.7325	(3) Stealth Generic Panel Antennas	59

**MATERIAL STRENGTH**

GRADE	Fy	Fu	GRADE	Fy	Fu
A607-70	70 ksi	85 ksi	A572-65	65 ksi	80 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.
6. TOWER RATING: **75.5%**



Section	3
Length (ft)	53.750
Number of Sides	18
Thickness (in)	0.250
Top Dia (in)	26.025
Bot Dia (in)	33.075
Grade	A572-65
Weight (K)	4.3

<b>Paul J. Ford and Company</b> 250 East Broad Street, Suite 1500 Columbus, OH 43215 Phone: (614) 221-6679 FAX: (614) 448-4105		<b>Job: Existing 85-Ft Flag Pole: CT-535: St. Anns Melkite Ch.: Danbury, C</b> Project: 31908-0086 Client: ATTW-80662W-02R1   Drawn by: kswarts   App'd: Code: TIA/EIA-222-F   Date: 06/17/08   Scale: NTS Path: G:\TOWER\319_Stealth_Network_Technologies\31908-0086-0035.dwg   Dwg No. E-1	
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