STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

June 1, 2009

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

RE: **EM-CING-143-090422** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 1925 East Main Street, Torrington, 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 with the following conditions:

- The proposed coax lines shall be installed inside the monopole shaft; and
- The Council shall be notified in writing that the coax was installed as specified.

The proposed modifications are to be implemented as specified here and in your notice dated April 21, 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.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Ryan J. Bingham, Mayor, City of Torrington
Martin Connor, City Planner, City of Torrington
SBA Network Services, LLC

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
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www.ct.gov/csc

April 23, 2009

The Honorable Ryan J. Bingham
Mayor
City of Torrington
Municipal Building
140 Main Street
Torrington, CT 06790-5245

RE: **EM-CING-143-090422-** New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 1925 East Main Street, Torrington, Connecticut.

Dear Mayor Bingham:

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 May 7, 2009.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Martin Connor, City Planner, City of Torrington

CSC
CONNECTICUT SITING COUNCIL

EM-CING-143-090422

raising the bar℠

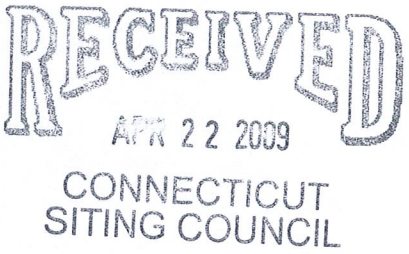
ew Cingular Wireless PCS, LLC
J0 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

ORIGINAL

HAND DELIVERED

April 21, 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 1925 East Main Street, Torrington (owner, SBA)

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

1925 East Main St., Torrington
Site Number 1118
Exempt Modification approved 2/04

Tower Owner/Manager: SBA

Equipment Configuration: Monopole

Current and/or Approved: Nine CSS panel antennas @ 95 ft AGL
Six TMA's and three diplexers @ 95 ft
Nine runs 1 5/8 inch coax cable
Equipment shelter

Planned Modifications: Remove existing antennas, TMA's, and diplexers
Install six Powerwave 7770 antennas (or equivalent) @ 95 ft
Install six TMA's and six diplexers @ 95 ft
Install three additional 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 42.1 % 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 49.5 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							34.68
AT&T GSM *	95	1900 Band	2	427	0.0340	1.0000	3.40
AT&T GSM *	95	880 - 894	2	296	0.0236	0.5867	4.02
Total							42.1%

* Per CSC records

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							34.68
AT&T UMTS	95	880 - 894	1	500	0.0199	0.5867	3.40
AT&T GSM *	95	1900 Band	2	427	0.0340	1.0000	3.40
AT&T GSM *	95	880 - 894	4	296	0.0472	0.5867	8.04
Total							**49.5%**

* Per CSC records

Structural information:

The attached structural analysis by FDH Engineering (12/20/07; for Verizon's recent installation under EM-VER-143-080117) accounts for an AT&T equipment inventory of 12 CSS antennas, 6 † TMA's, and 12 lines 1 5/8 inch coax. As shown on the attached loading comparison, this *configuration represents both greater weight and greater wind loading* than the proposed new array of 6 Powerwave antennas, 6 TMA's, 6 diplexers, and 12 lines 1 5/8 inch coax. No load-affecting equipment changes have taken place on this tower since the 12/07 structural was performed. Accordingly, the 12/07 structural is still valid for assessing the structural impacts of the proposed equipment modifications and demonstrates that there is adequate structural capacity to accommodate the proposed modifications.

†See tower design drawing, attached.

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500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7636
Fax: (860) 513-7190

Steven L. Levine
Real Estate Consultant

April 21, 2009

Mayor Ryan J. Bingham
City of Torrington
Municipal Bldg. 140 Main St.
Torrington, CT 06790

Re: Telecommunications Facility – 1925 East Main St., Torrington

Dear Mayor Bingham:

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

Loading Comparison - 1118 - Torrington

		QTY	Length	Width	Depth	Weight	Sail Area	Total Sail Area (sq in)	Total Weight (lbs)
Utilized in 9/08 Structural Analysis									
Antennas	CSS DUO 1417-8686	12	48	14	9	30.8	672	8064	369.6
TMAs	ADC CG1900W850 †	6	11.7	11.3	2.8	15.4	132.21	793.26	92.4
Diplexers	CSS DBC-750	0	7.9	6.6	1.3	4.9	52.14	0	0
coax	twelve 1 5/8 inch	12	95			0.8			912
			† see tower design load drawing					**8857.26**	**1374**
Proposed									
Antennas	Powerwave 7770	6	55	11	5	35	605	3630	210
TMAs	Powerwave LGP 21401	6	14	9	2.7	19	126	756	114
Diplexers	Powerwave LGP 13519	6	4.4	6.3	3	5.3	27.72	166.32	31.8
coax	twelve 1 5/8 inch	12	95			0.8			912
								4552.32	**1267.8**

Specs

Antennas					
	CSS DUO 1417-8686	48	14	9	30.8
	Powerwave 7770	55	11	5	35
TMAs	ADC CG1900W850	11.7	11.3	2.8	15.4
	Powerwave LGP 21401	14	9	2.7	19
Diplexers	CSS DBC-750	7.9	6.6	1.3	4.9
	Powerwave LGP 13519	4.4	6.3	3	5.3
	Powerwave LGP 21903	4.4	6.3	3	5.3
coax	7/8 inch				.34 / ft
	1 1/4 inch				.69 / ft
	1 5/8 inch				.8 / ft

#1118

Structural Analysis for SBA Network Services

153' Monopole

Site Name: Torrington
Site ID: CT01499-S

FDH Project Number 07-1290E

Prepared By:

Krystyn Wagner, EI
Project Engineer

Reviewed By:

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

FDH Engineering, Inc.
PO Box 99556
Raleigh, NC 27615
(919)-755-1012
info@fdh-inc.com

December 20, 2007

Prepared pursuant to ANSI/TIA-222-G Structural Standards for Antenna Supporting Structures and Antennas

TABLE OF CONTENTS

2730 Rowland Rd., Suite 100 Raleigh, NC 27615 Ph: (919)-755-1012 Fax: (919)-755-1031 info@fdh-inc.com

EXECUTIVE SUMMARY

At the request of SBA Network Services, FDH Engineering performed a structural analysis of the monopole located in Torrington, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads, pursuant to the *Structural Standards for Antenna Supporting Structures and Antennas, ANSI/TIA-222-G.* Information pertaining to the existing/proposed antenna loading, current tower geometry, and member sizes was obtained from Fred A. Nudd Corporation (Project No. 7783) original design drawings dated August 18, 2000, Vertical Structures, Inc. (Job No. 2003-007-015) structural analysis and modification drawings dated September 9, 2003, and SBA Network Services.

The *basic design wind speed* per *ANSI/TIA-222-G* standards is 100 MPH without ice and 40 MPH with 1" radial ice.

Conclusions

With the existing and proposed antennas from Verizon at 123 ft, the tower meets the requirements of the *ANSI/TIA-222-G* standards. Furthermore, provided the foundation was constructed per the original design drawings (see Fred A. Nudd Corporation Project No. 7783), the foundation should have the necessary capacity to support the existing and proposed loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH is accurate (i.e., the steel data, tower layout, existing and proposed antenna loading) and that the tower was properly erected and maintained per the original design drawings.

Recommendations

To ensure the requirements of the *ANSI/TIA-222-G* standards are met with the existing and proposed loading in place, we have the following recommendations:

1. The proposed coax lines should be installed inside the monopole shaft.

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APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1.** *If the actual layout determined in the field deviates from this layout, FDH should be contacted to perform a revised analysis.*

Table 1 – Appurtenance Loading

Existing Loading:

No.	Centerline Elevation (ft)	Coax and Lines[1]	Carrier	Mount Type	Description
1-6	153	(6) 1-5/8"	Sprint	Low Profile Platform	(6) EMS RR90-17-02DP
7-18	143	(12) 1-1/4"	Nextel	Low Profile Platform	(12) Decibel DB844H90E-XY
19-24	133	(12) 1-5/8"	T-Mobile	Low Profile Platform	(6) EMS RR90-17-02DP
25-36	123	(12) 1-5/8"[2]	Verizon	Low Profile Platform	(12) Decibel DB950F65E-M
37	110	(1) 1/2"	Torrington PD	Standoff	(1) 10 ft whip
38-49	95	(12) 1-5/8"[3,4]	Cingular	Low Profile Platform	(12) CSS DUO-1417-8686-40

1 The existing coax is located inside the pole's shaft, unless otherwise noted.
2 The loading for Verizon at 123 ft will be altered. See proposed loading below.
3 Currently Cingular had (9) CSS DUO-1417-8686-40 antennas and (9) coax installed at 95 ft. According to information provided by SBA, Cingular may install up to (12) antennas and (12) coax. Analysis is performed with total leased loading in place.
4 Cingular's coax at 95 feet is installed outside the monopole shaft in a single row.

Proposed Loading:

No.	Centerline Elevation (ft)	Coax and Lines	Carrier	Mount Type	Description
1-6	123	(12) 1-5/8"[1]	Verizon	Low Profile Platform	(6) Antel LPA-80063/6CF (6) Decibel DB950F65E-M

1 This represents the final configuration for Verizon at 123 ft. According to information provided by SBA, Verizon will remove (6) Decibel DB950F65E-M antennas at 123 ft and replace with (6) Antel LPA-80063/6CF antennas. The complete loading at 123 ft will be (12) antennas and (12) coax.

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RESULTS

Based on information obtained from the original design drawings, the yield strength of steel for individual members was as follows:

Table 2 - Material Strength

Member Type	Yield Strength
Tower Shaft Sections	65 ksi
Base Plate	50 ksi
Anchor Bolts	125 ksi

Table 3 displays the ratio (as a percentage) of actual force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. *Note: Capacities up to 105% are considered acceptable.* **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information.

Table 3 – Summary of Working Percentage of Structural Components

Section No.	Elevation ft	Component Type	Size	% Capacity	Pass Fail
L1	153 - 150	Pole	TP26.5x24x0.25	5.3	Pass
L2	150 - 110	Pole	TP35.25x26.5x0.25	29.7	Pass
L3	110 - 65	Pole	TP45.36x33.6563x0.3125	53.4	Pass
L4	65 - 21	Pole	TP55.27x43.3306x0.3125	72.5	Pass
L5	21 - 0	Pole	TP60x52.9735x0.375	64.4	Pass
			Anchor Bolts	OK	Pass
			Base Plate	OK	Pass

Table 4 – Maximum Base Reactions

Load Type	Current Analysis *(ANSI/TIA-222-G)*	Original Design *(TIA/EIA-222-F)*
Axial	46.6 k	---
Shear	32.2 k	32.1 k
Moment	3,133 k-ft	3,692 k-ft

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GENERAL COMMENTS

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Engineering should be notified immediately to perform a revised analysis.

LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Engineering, Inc.

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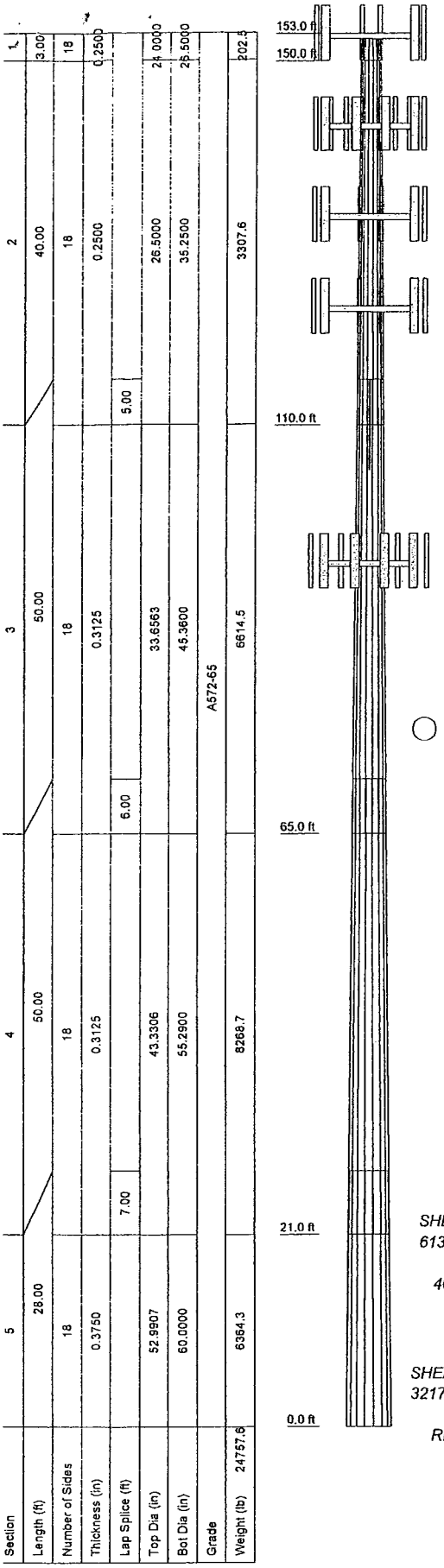
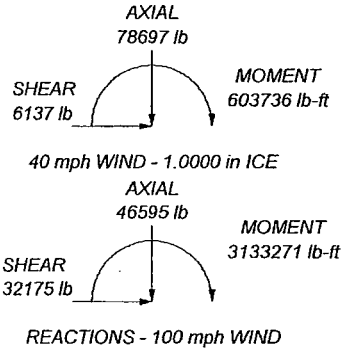


Section	1	2	3	4	5
Length (ft)	3.00	40.00	50.00	50.00	28.00
Number of Sides	18	18	18	18	18
Thickness (in)	0.2500	0.2500	0.3125	0.3125	0.3750
Lap Splice (ft)		5.00	6.00	7.00	
Top Dia (in)	24.0000	26.5000	33.6563	43.3306	52.9907
Bot Dia (in)	26.5000	35.2500	45.3600	55.2900	60.0000
Grade	A572-65				
Weight (lb)	202.5	3307.6	6614.5	8268.7	6364.3
					24757.6



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) RR90-17-02DP (Sprint)	153	Low Profile Platform (Verizon)	123
(2) RR90-17-02DP (Sprint)	153	(2) Antel LPA-80063/6CF	123
(2) RR90-17-02DP (Sprint)	153	(2) Antel LPA-80063/6CF	123
Low Profile Platform (Sprint)	153	(2) Antel LPA-80063/6CF	123
(4) DB844H90E-XY (Nextel)	143	10' whip (Torrington PD)	115 - 105
(4) DB844H90E-XY (Nextel)	143	Side Mount Standoff (1) (Torrington PD)	105
(4) DB844H90E-XY (Nextel)	143	(2) TMA (Cingular)	95
Low Profile Platform (Nextel)	143	Low Profile Platform (Cingular)	95
(2) RR90-17-02DP (T-Mobile)	133	(4) DUO1417-8686 (Cingular)	95
(2) RR90-17-02DP (T-Mobile)	133	(4) DUO1417-8686 (Cingular)	95
(2) RR90-17-02DP (T-Mobile)	133	(2) TMA (Cingular)	95
Low Profile Platform (T-Mobile)	133	(2) TMA (Cingular)	95
(2) DB950F65E-M (Verizon)	123	(4) DUO1417-8686 (Cingular)	95
(2) DB950F65E-M (Verizon)	123		
(2) DB950F65E-M (Verizon)	123		

MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Litchfield County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 100 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 40 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. (18) 2" Anchor Bolts on a 67" Bolt Circle; Base Plate thickness = 1.5 in; Stiffeners 1' x 3/4"

FDH Engineering
2730 Rowland Road, Suite 100
Raleigh, NC 27615
Phone: (919) 755-1012
FAX: (919) 755-1031

Tower Analysis

Job: **Torrington CT01499-S**		
Project: **07-1290E**		
Client: SBA	Drawn by: Krystyn Wagner	App'd:
Code: TIA-222-G	Date: 01/04/08	Scale: NTS
Path:		Dwg No. E-1