

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

September 6, 2007

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

RE: **EM-CING-132-134-152-165-166-070726** – New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 151 Sand Hill Road, South Windsor; 30 Old Country Road, Stafford; 53 Dayton Road, Waterford; 20 Spring Street, Windsor Locks; and 1233 Wolcott Road, Wolcott, Connecticut.

Dear Mr. Levine:

At a public meeting held on August 29, 2007, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the condition that the AT&T antenna mounts and platforms for the Stafford and Wolcott towers be removed with 180 days of this acknowledgement unless they can be utilized by another carrier within that time period.

The proposed modifications are to be implemented as specified here and in your notice dated July 25, 2007, including the placement of all necessary equipment and shelters within the tower compounds. 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 existing facility sites that would not increase tower heights, extend the boundaries of the tower sites, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power densities measured at the tower site boundaries to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on these towers.

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 any of these facilities 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

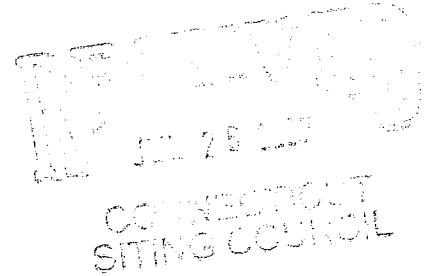
DFC/MP/cm

- c: The Honorable Thomas G. Dunn, Mayor, Town of Wolcott
- George Leggio, Zoning Enforcement Officer, Town of Wolcott
- The Honorable Daniel M. Steward, First Selectman, Town of Waterford
- Thomas V. Wagner, Planning Director, Town of Waterford
- The Honorable Steven N. Warruck, Jr., First Selectman, Town of Windsor Locks
- Alan Gannuscio, Planning and Zoning Chairman, Town of Winsor Locks
- The Honorable Mathew Streeter, Mayor, Town of South Windsor
- Marcia Banach, Director of Planning, Town of South Windsor
- The Honorable Allen Bacchiochi, First Selectman, Town of Stafford
- Wendell Avery, Zoning Enforcement Officer, Town of Stafford
- SBA
- Kenneth C. Baldwin, Robinson & Cole LLP
- Christopher B. Fisher, Cuddy & Feder LLP



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



HAND DELIVERED

July 25, 2007

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 5 existing tele-communications facilities located in South Windsor, Stafford, Waterford, Windsor Locks, and Wolcott

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 each of the municipalities in which an affected cell site is locate.

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 are summary sheets detailing the planned changes, including power density calculations reflecting the change in the effect of Cingular's operations at each affected site. Also included is documentation of the structural sufficiency of each tower to accommodate the revised antenna configuration.

The changes to the facilities do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facilities will not be significantly changed or altered. Rather, the planned changes to the facilities fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. In each instance, the height of the overall structure will be unaffected. Modifications to the existing sites include all or some of the following as necessary to bring each 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 noted in the following attachments.

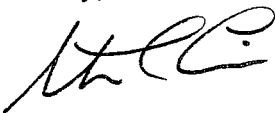
3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

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 sites 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**

151 Sand Hill Road, South Windsor, CT
Site Number 1139
Exempt Modifications 3/7/02 and 4/3/02

Tower Owner/Manager: SBA

Equipment configuration: Monopole

Current and/or approved: Nine CSS DUO1417 antennas @ 170 ft c.l.
Nine runs 1 5/8 inch coax
Six TMA's

Planned Modifications: Remove three existing antennas
Install three Powerwave 7770 antennas @ 170 ft c.l.
Install three additional runs 1 5/8 inch coax (total of 12)
Install three diplexers @ 170 ft

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 26.1 % 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 24.5 % 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 *							20.42
Cingular TDMA *	170	880 - 894	16	100	0.0199	0.5867	3.39
Cingular GSM *	170	880 - 894	2	296	0.0074	0.5867	1.26
Cingular GSM *	170	1930 - 1970	2	427	0.0106	1.0000	1.06
Total							26.1%

* 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 *							20.42
Cingular GSM	170	880 - 894	4	296	0.0147	0.5867	2.51
Cingular GSM	170	1900 Band	1	427	0.0053	1.0000	0.53
Cingular UMTS	170	880 - 894	1	500	0.0062	0.5867	1.06
Total							24.5%

* Per CSC Records

Structural information:

The attached structural analysis demonstrates that the tower and foundation have sufficient structural capacity to accommodate the proposed modifications. (FDH Engineering Inc., dated 7/8/07)



July 8, 2007

Mr. Mark Luther
SBA Network Services, Inc.
800 S. Washington Ave.
Scranton, PA 18505

RE: 188' Monopole
Site Name: South Windsor # 1139
SBA Site ID: CT07824-S
FDH Project Number: 07-0718E

Dear Mark:

Per your request, FDH Engineering, Inc. has reviewed the original manufacturer's drawings and the proposed loading for the 188' monopole located in South Windsor, CT. The original design configuration by Sabre Communications (Job No. 02-10062 dated November 6, 2001) stipulates the tower was designed to accommodate the appurtenance loading outlined in **Table 1** on the following page.

The load resulting from the current configuration (see **Table 2**) combined with New AT&T's proposed (3) Powerwave 7770 antennas and (3) Dplxers with a centerline elevation at 170 ft. and corresponding (3) 1-5/8" coax lines (see **Table 3**) will be below that of the original design loading. Furthermore, provided the tower foundation was constructed to support the tower's original design loading, the foundation should meet *TIA-EIA-222-F* standards with both the proposed and existing appurtenances in place. The proposed coax should be installed inside the pole's shaft.

Our assessment has been made assuming all information provided to FDH Engineering is accurate and that the tower as been properly erected and maintained.

In conclusion, the New AT&T installation should meet or exceed all applicable standards and should therefore be considered safe. Should you require additional information, please do not hesitate to contact our office.

Sincerely,

Jeremy D. Piner, EI
Senior Project Engineer

Reviewed By:

J. Darrin Holt, Ph.D., P.E.
President
CT PE License No. 22988

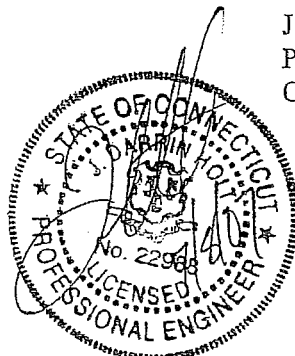


Table 1 – Design Appurtenance Loading

No.	Centerline Elevation (ft)	Coax and Lines	Description
1-7	187	(7) FLC78	(2) MF900B (2) ANT900D6-9 (1) ANT450F6 (2) DB201 (1) Platform
8-19	179	(12) 1-5/8"	(12) DB896 (1) Platform
20-31	169	(12) 1-5/8"	(12) DB896 (1) Platform
32-43	159	(12) 1-5/8"	(12) DB896 (1) Platform
44-55	150	(12) 1-5/8"	(12) DB896 (1) Platform
56-67	140	(12) 1-5/8"	(12) DB896 (1) Platform
68-79	129	(12) 1-5/8"	(12) DB896 (1) Platform
80-91	119	(12) 1-5/8"	(12) DB896 (1) Platform
92-97	91	(6) FLC78	(2) MF900B (1) ANT450D6-9 (1) ANT150D3 (1) ANT450Y10-WR (1) DB205 (1) Platform

Table 2 – Existing Appurtenance Loading

No.	Centerline Elevation (ft)	Coax and Lines	Carrier	Description
1-7	187	(3) 7/8" (4) 1/2"	Town of South Windsor	(2) MF900B (2) ANT900D6-9 (1) ANT450F6 (2) DB201
8-19	170	(12) 1-5/8" ^{1,2}	New AT&T	(12) 4' Panel Antennas (6) TMAs (6) Combiners (3) Diplexers
20-25	160	(12) 1-5/8"	T-Mobile	(6) EMS DR65-19-00DPQ
26-37	150	(12) 1-5/8"	Nextel	(12) Decibel DB844H90E-XY
38-49	140	(12) 1-5/8"	Verizon	(12) Decibel DB844H90E-XY
50-61	130	(12) 1-5/8"	Sprint	(12) Decibel DB980H90
62-67	92	(6) 1/2"	Town of South Windsor	(2) MF900B (1) ANT4506-9 (1) ANT150D3 (1) ANT450Y10-WR (1) DB205

1 Currently, New AT&T has (9) antennas, (6) TMAs, (6) Combiners, (3) Diplexers, and (9) coax installed at 170 ft. According to information provided by SBA, New AT&T may install up to (12) antennas, (6) TMAs, (6) Combiners, (3) Diplexers, and (12) coax. Evaluation performed with total loading in place.

2 The loading for New AT&T will be altered. See the proposed loading below

Table 3 – Proposed Appurtenance Loading

No.	Centerline Elevation (ft)	Coax and Lines	Carrier	Description
1-12	170	(12) 1-5/8" ¹	New AT&T	(9) 4' Panel Antennas (3) Powerwave 7770 (6) TMAs (6) Combiners (6) Diplexers

1 This represents the total loading for New AT&T at 170 ft. According to information provided by SBA, New AT&T will remove (3) 4' panel antennas and add (3) 7770 antennas, (3) Diplexers, and (3) coax to the existing loading at 170 ft.



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 25, 2007

Mr. Matthew B. Galligan, Town Manager
Town of South Windsor
Town Hall 1540 Sullivan Ave.
South Windsor, CT 06074-2786

Re: Telecommunications Facility – 151 Sand Hill Road, South Windsor

Dear Mr. Galligan:

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

**CINGULAR WIRELESS
Equipment Modification**

30 Old Country Road, Stafford, CT
Site Number 1112
Exempt Modification 2/4/04

Tower Owner/Manager: SBA

Equipment configuration: Monopole

Current and/or approved: Nine CSS DUO1417 antennas @ 157 ft c.l. (approved for 12)
Nine runs 1 5/8 inch coax (approved for 12)
Six TMA's / three diplexers
Decommissioned AT&T equipment @ 167 ft

Planned Modifications: Remove three CSS antennas
Install three Powerwave 7770 antennas at 157 ft c.l.
Install three additional diplexers @ 157 ft (total of 6)
Install three additional runs 1 5/8 inch coax (total of 12)
Remove decommissioned AT&T antennas

Decommissioning / Removal of AT&T Antennas

Cingular hereby gives notice that it has decommissioned the existing AT&T antennas at the 167 ft level of the tower. These antennas will be removed from the tower when the UMTS work is performed. SBA, however, has acquired the associated mount and coax cables from Cingular and has asked Cingular to leave them on the tower when the antennas are removed.

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 7.7 % 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 8.9 % 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 *							4.96
Cingular GSM *	157	880 - 894	2	296	0.0086	0.5867	1.47
Cingular GSM *	157	1900 Band	2	427	0.0125	1.0000	1.25
Total							7.7%

* 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 *							4.96
Cingular UMTS	157	880 - 894	1	500	0.0073	0.5867	1.24
Cingular GSM	157	1900 Band	2	427	0.0125	1.0000	1.25
Cingular GSM	157	880 - 894	2	296	0.0086	0.5867	1.47
Total							8.9%

* Per CSC Records

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (FDH Engineering, dated July 10, 2007)



July 10, 2007

Mr. Mark Luther
SBA Network Services, Inc.
800 S. Washington Ave.
Scranton, PA 18505

RE: 180' Monopole
Site Name: Stafford Springs 1112
SBA Site ID: CT03111-S
FDH Project Number: 07-0708E

Dear Mark:

Per your request, FDH Engineering, Inc. has reviewed the original manufacturer's drawings and the proposed loading for the 180' monopole located in Stafford Springs, CT. The original design configuration by Valmont (Order No. 10126-054 dated August 21, 2000) stipulates the tower was designed to accommodate the appurtenance loading outlined in **Table 1** on the following page.

The load resulting from the current configuration (see **Table 2**) combined with New AT&T's proposed (3) Powerwave 7770 panels and (3) LGP 13519 diplexors with a centerline elevation at 157 ft. and corresponding (3) 1-5/8" coax lines (see **Table 3**) will be below that of the original design loading. Furthermore, provided the tower foundation was designed to support the tower at capacity, the foundation should meet *TIA-EIA-222-F* standards with both the proposed and existing appurtenances in place. The proposed coax should be installed inside the poles shaft.

Our assessment has been made assuming all information provided to FDH Engineering is accurate and that the tower as been properly erected and maintained.

In conclusion, the New AT&T installation should meet or exceed all applicable standards and should therefore be considered safe. Should you require additional information, please do not hesitate to contact our office.

Sincerely,

Jeremy D. Piner, EI
Senior Project Engineer

Reviewed By:

J. Darrin Holt, PhD, PE
President
CT PE License No. 22988

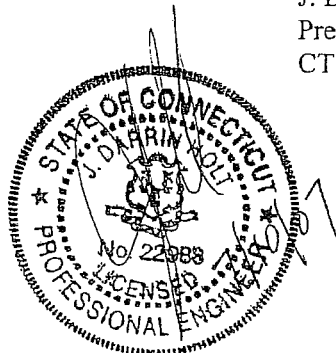


Table 1 – Design Appurtenance Loading

No.	Centerline Elevation (ft)	Coax and Lines	Description
1-12	177	(12) 1-5/8" (Assumed)	(12) Decibel DB896 on a 15' Platform w/o rails
13-24	167	(12) 1-5/8" (Assumed)	(12) Decibel DB896 on a 13.42' Platform w/o rails
25-36	157	(12) 1-5/8" (Assumed)	(12) Decibel DB896 on a 13.42' Platform w/o rails
37-48	147	(12) 1-5/8" (Assumed)	(12) Decibel DB896 on a 13.42' Platform w/o rails
49-60	137	(12) 1-5/8" (Assumed)	(12) Decibel DB896 on a 13.42' Platform w/o rails
61-72	127	(12) 1-5/8" (Assumed)	(12) Decibel DB896 on a 13.42' Platform w/o rails
73	75	(1) 1-5/8" (Assumed)	(1) GPS Antenna

Table 2 – Existing Appurtenance Loading

No.	Centerline Elevation (ft)	Coax and Lines	Carrier	Description
1-12	177	(12) 1-5/8"	VzW	(12) Decibel DB844H80
13-15	167	(6) 1-5/8" ¹	Old AT&T	(3) Allgon Panels
16-24	157	(12) 1-5/8" ²	New AT&T	(12) CSS 4' Panels (6) TMAs (3) Diplexors (6) Combiners

¹ The existing loading for old AT&T will be removed.

² New AT&T will alter their existing loading at 157'. See proposed loading below.

Table 3 – Proposed Appurtenance Loading

No.	Centerline Elevation (ft)	Coax and Lines	Carrier	Description
1-12	157	(12) 1-5/8" ¹	New AT&T	(9) CSS 4' Panels (3) Powerwave 7770 Panels (6) TMAs (6) Diplexors (6) Combiners

¹ According to information provided by SBA, New AT&T will remove (3) CSS 4' panels and install (3) Powerwave 7770 panels and (3) LGP 13519 diplexors, at 157 ft.



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 25, 2007

Honorable Allen Bacchiochi
1st Selectman, Town of Stafford
Warren Memorial Town Hall 1 Main St.
Stafford Springs, CT 06076-0011

Re: Telecommunications Facility – 30 Old Country Road, Stafford

Dear Mr. Bacchiochi:

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

**CINGULAR WIRELESS
Equipment Modification**

Cohanzie Fire Department
53 Dayton Road, Waterford, CT
Site Number 5221
Former AT&T site
Exempt Modifications 5/10/01 and 5/7/02

Tower Owner/Manager: Verizon

Equipment configuration: Self Supporting Lattice

Current and/or approved: Nine EMS RR90-17 antennas @ 155 ft c.l.
Twelve runs 1 5/8 inch coax

Planned Modifications: Remove all nine existing antennas
Install six Powerwave 7770 antennas @ 155 ft c.l.
Install six TMA's @ 155 ft
Install six diplexers @ 155 ft

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 13.8 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 16 % 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 *							12.18
Cingular GSM *	155	1900 Band	4	275	0.0165	1.0000	1.65
Total							13.8%

* 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 *							12.18
Cingular GSM	155	1900 Band	4	427	0.0256	1.0000	2.56
Cingular UMTS	155	880 - 894	1	500	0.0075	0.5867	1.28
Total							16.0%

* Per CSC Records

Structural information:

The attached structural analysis demonstrates that the tower has sufficient structural capacity to accommodate the proposed modifications. (All-Points Technology Corp., dated 7/17/07)



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 25, 2007

Honorable Daniel M. Steward
1st Selectman, Town of Waterford
Town Hall, 15 Rope Ferry Road
Waterford, Connecticut 06385-2806

Re: Telecommunications Facility – Cohanzie Fire Department, 53 Dayton Road, Waterford

Dear Mr. Steward:

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.

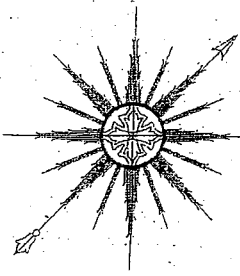
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The accompanying letter to the Siting Council fully describes Cingular’s proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council’s procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure



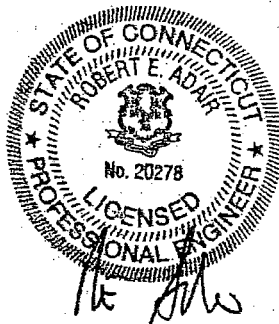
ALL-POINTS TECHNOLOGY CORPORATION, P.C.

**STRUCTURAL ANALYSIS REPORT
180' SELF-SUPPORTING TOWER
WATERFORD, CONNECTICUT**

Prepared for
Hudson Design Group, LLC

Cingular Site #5221

July 17, 2007



APT Project #CT198350

**STRUCTURAL ANALYSIS REPORT
180' SELF-SUPPORTING TOWER
WATERFORD, CONNECTICUT
prepared for
Hudson Design Group, LLC**

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed a structural analysis of this 180-foot self-supporting tower located at 53 Dayton Road in Waterford, Connecticut. The analysis was performed for Cingular Wireless's replacement of six panel antennas currently installed on three 14' sector mounts at 157'.

Our analysis indicates the tower and foundation meet the requirements of the Connecticut State Building Code and TIA-222 with the proposed changes.

INTRODUCTION:

A structural analysis of this communications tower was performed by APT for Hudson Design Group, LLC. The tower is located at 53 Dayton Road in Waterford, Connecticut.

APT did not visit the tower site. This analysis relied solely on information provided by others, which included recent photographs, ROHN tower and foundation drawings (Eng. File No. 38103AE dated August 20, 1998), a structural analysis report by URS Corporation dated November 8, 2002, and proposed antenna changes.

The structure is a 180-foot, galvanized steel, self-supporting tower manufactured by ROHN. The analysis was conducted using the following antenna inventory (proposed antenna changes shown in **bold** text):

Antenna	Elev.	Mount	Feed Lines
(2) 12' omnidirectional whips	180'	Leg, 2' pipe extension	(2) 1-5/8"
(1) 10', (3) 8' omnidirectional whips	178'	(3) 6' sidearms	(4) 1-5/8"
(9) RR90-17-02DP panels ¹	165'	(3) 10' sector mounts	(18) 1-5/8"
(6) 7770.0 panels, (6) TMAs, (6) Diplexers	157'	(3) 14' sector mounts	(12) 1-5/8"
16' omnidirectional whip	142'	6' sidearm	1-5/8"
(6) DB950F85, (6) ALP7129.16 panels	133'	(3) 15' sector mounts	(12) 1-5/8"

¹ Currently six antennas and twelve 1-5/8" lines installed.

All-Points Technology Corporation

150 Old Westside Road
North Conway, NH 03860
(603) 496-5853

3 Saddlebrook Drive
Killingworth, CT 06419
(860) 663-1697

STRUCTURAL ANALYSIS:

Methodology:

The structural analysis was done in accordance with TIA/EIA-222, Revisions F and G (TIA), Structural Standards for Steel Antenna Towers and Antenna Supporting Structures; and the American Institute of Steel Construction (AISC), Manual of Steel Construction, Allowable Stress Design, Ninth Edition. The more stringent of the two TIA revisions, Revision F, was used to compute the tower capacity values shown below.

The analysis was conducted using a 85 mph fastest mile wind speed (equivalent to 105 mph 3-second gust) and one-half inch of radial ice over the structure and associated appurtenances. The TIA Standard requires a basic wind speed of 85 miles per hour for New London County, Connecticut.

Two loading conditions were evaluated in accordance with TIA/EIA-222-F to determine tower capacity. The more demanding of the two cases is used to calculate tower capacity:

- Case 1 = Wind Load (without ice) + Tower Dead Load
- Case 2 = 0.75 Wind Load (with ice) + Ice Load + Tower Dead Load

The TIA/EIA standard permits a one-third increase in allowable stresses for towers less than 700-feet tall. Allowable stresses of tower members were increased by one-third when computing the tower capacity values shown below.

Analysis Results:

The following table summarizes the capacity of the tower based on stresses of leg and bracing members:

Elevation	Leg Capacity	Bracing Capacity
160'-180'	6%	15%
140'-160'	23%	20%
120'-140'	28%	28%
100'-120'	32%	34%
80'-100'	29%	30%
60'-80'	28%	35%
40'-60'	34%	40%
20'-40'	33%	31%
0'-20'	38%	37%

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Base reactions imposed with the proposed changes were calculated to be as follows:

Compression:	281.7 kips
Uplift:	197.3 kips
Total Shear:	36.6 kips
Overturning Moment:	5631 ft-kips

CONCLUSIONS AND SUGGESTIONS:

As detailed above, our analysis indicates that the existing 180' self-supporting tower located at 53 Dayton Road in Waterford, Connecticut meets the requirements of the Connecticut State Building Code and TIA-222 with Cingular Wireless's proposed antenna changes.

LIMITATIONS:

This report is based on the following:

1. Tower is properly installed and maintained.
2. All members are in new condition.
3. All bolts are in place and are properly tightened.
4. Tower is in plumb condition.

All-Points Technology Corporation, P.C. (APT) is not responsible for any modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

1. Adding or relocating antennas.
2. Installing antenna mounts or waveguide cables.
3. Extending tower.

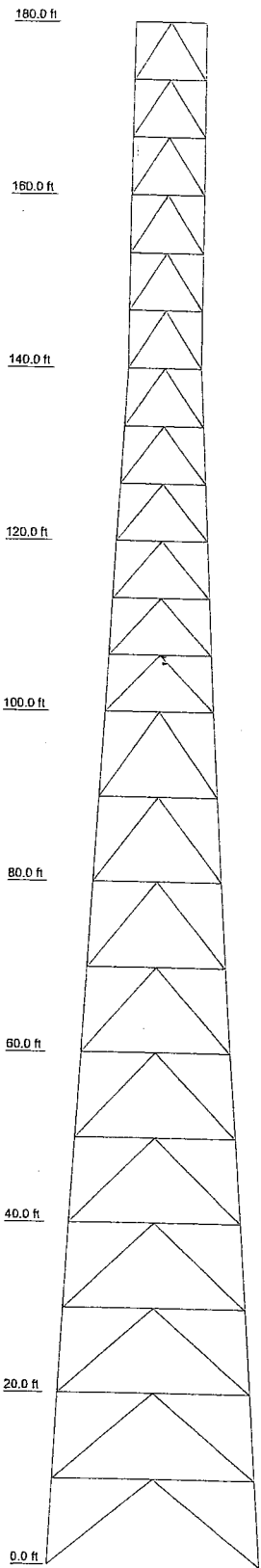
APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact APT. APT disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

All-Points Technology Corporation

150 Old Westside Road
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3 Saddlebrook Drive
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Section	T8	T7	T6	T5	T4	T3	T2	T1
Legs	ROHN 12 EH	ROHN 10 EH	ROHN 10 EH	ROHN 8 EH	ROHN 6 EH	ROHN 5 EH	ROHN 4 STD	ROHN 3 STD
Diagonals	ROHN 3.5 EH	ROHN 3 EH	ROHN 3 EH	A36M-42	ROHN 2.5 STD	ROHN 2.5 STD	ROHN 2 STD	ROHN 1.5 STD
Top Girts	ROHN 3 STD	ROHN 2.5 STD	ROHN 2.5 STD	ROHN 2 X-STR	ROHN 2 X-STR	ROHN 2 STD	ROHN 1.5 STD	ROHN 1.5 STD
Horizontals	ROHN 3 STD	ROHN 2.5 STD	ROHN 2.5 STD	ROHN 2 X-STR	ROHN 2 X-STR	ROHN 2 STD	ROHN 1.5 STD	ROHN 1.5 STD
Inner Bracing	L3 1/2x3 1/2x1/4	L3 3/4x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L2x2x1/8	L2x2x1/8	L2x2x1/8
Face Width (ft)	25.4792	20.4792	17.833	15.333	12.927	10.792	8.708	8.625
# Panels @ (ft)	20 @ 10	10 @ 10	10 @ 10	10 @ 10	12 @ 6.66667	12 @ 6.66667	12 @ 6.66667	12 @ 6.66667
Weight (lb)	40182.3	35167	30656	26173	21713	17277	12844	85417



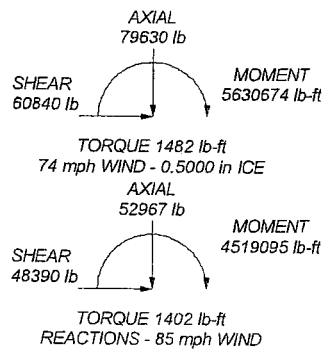
DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
12' x 2.5" omni whip	180	(2) LGP2140X TMA	157
12' x 2.5" omni whip	180	(2) LGP2140X TMA	157
8' x 2.5" omni whip	178	(2) LGP13519 Diplexer	157
8' x 2.5" omni whip	178	(2) LGP13519 Diplexer	157
8' x 2.5" omni whip	178	(2) LGP13519 Diplexer	157
6' sidearm	178	14' sector mount	157
6' sidearm	178	14' sector mount	157
6' sidearm	178	14' sector mount	157
10' x 2.5" omni whip	178	16' x 2.5" omni whip	142
(3) RR90-17-02DP	165	6' sidearm	142
(3) RR90-17-02DP	165	(2) DB950F85E-M	133
(3) RR90-17-02DP	165	(2) DB950F85E-M	133
10' sector mount	165	(2) DB950F85E-M	133
10' sector mount	165	(2) 7129.16.05.00	133
10' sector mount	165	(2) 7129.16.05.00	133
(2) 7770.00	157	(2) 7129.16.05.00	133
(2) 7770.00	157	15' sector mount	133
(2) 7770.00	157	15' sector mount	133
(2) LGP2140X TMA	157	15' sector mount	133

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36M-42	42 ksi	60 ksi

MAX. CORNER REACTIONS AT BASE:
 DOWN: 281722 lb
 UPLIFT: -197282 lb
 SHEAR: 36633 lb



All-Points Technology Corp. 150 Old Westside Road North Conway, NH 03860 Phone: 603-496-5853 FAX: 603-356-5214	Job: 180' Self-Supporting Tower
	Project: CT198350 Waterford
	Client: HDG; Cingular Site #5221
	Code: TIAVEIA-222-F
	Path:
Drawn by: Robert E. Adair, P.E.	App'd:
Date: 07/17/07	Scale: NTS
Dwg No. E-1	

**CINGULAR WIRELESS
Equipment Modification**

20 Spring Street, Windsor Locks, CT
Site Number 1096
Exempt Modifications 2/10/94, 8/6/98, 5/21/02, and 9/25/02

Tower Owner/Manager: AT&T Corporation

Equipment configuration: Monopole

Current and/or approved: Nine CSS DUO1417 antennas @ 104 ft c.l.
Nine runs 1 ¼ inch coax
Six TMA's

Planned Modifications: Remove three existing antennas
Install three Powerwave 7770 antennas @ 104 ft c.l.
Install three additional runs 1 ¼ inch coax (total of 12)
Install three diplexers @ 104 ft

“Decommissioning” of AT&T Installation

Council records contain co-location approval for AT&T Wireless on this structure in 2002. However, there does not appear to have been an executed lease between AT&T and either Cingular or the land owner, then Southern New England Telephone. Moreover, there are presently no AT&T antennas on the tower itself and probably never were according to our records. (See the attached recent photograph.) Therefore, it appears the AT&T installation was never built; it can be considered as essentially “decommissioned” for the Council’s purposes.

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 42.4 % 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 34.7 % 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 *							27.13
Cingular TDMA *	104	880 - 894	16	100	0.0532	0.5867	9.07
Cingular GSM *	104	880 - 894	2	296	0.0197	0.5867	3.35
Cingular GSM *	104	1930 - 1970	2	427	0.0284	1.0000	2.84
Total							42.4%

* Per CSC Records. (Note: CSC power density records contain erroneous elevation for Cingular antennas.)

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 *							27.13
Cingular GSM	104	880 - 894	2	296	0.0197	0.5867	3.35
Cingular GSM	104	1900 Band	1	427	0.0142	1.0000	1.42
Cingular UMTS	104	880 - 894	1	500	0.0166	0.5867	2.83
Total							34.7%

* Per CSC Records

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (Malouf Engineering Intl., dated July 13, 2007)





July 13, 2007

Mr. Derek Creaser
 HUDSON DESIGN GROUP, LLC
 representing AT&T
 46 Beechwood Drive
 North Andover, MA 01845

SUBJECT	FEASIBILITY STRUCTURAL EVALUATION		
Structure:	103 ft Monopole	18-sided	
Client/ Site Name /#:	Hudson D.G./ AT&T	1096 Windsor Locks - CO	# 1096
Owner/Site Name /#:	AT&T	1096 Windsor Locks - CO	# 1096
MEI Project ID:	CT00807M-07V0		
Location:	20 Spring Street Windsor Locks, CT 06096	Hartford County FCC # 1257423	
	LAT	41-55-47.8 N	LON 72-37-43.1 W

Malouf Engineering Int'l (MEI), as requested, has performed a feasibility structural evaluation of the above mentioned structure to assess the impact of the changed condition as noted below.

The structural evaluation performed used the following criteria:

CODE / STANDARD	ANSI/TIA-222-F-96 Standard / IBC 2003 Code - CT Building Code		
LOADING CASES	Full Wind:	80 Mph (with No Radial Ice)	
	Iced Case:	69 Mph + 0.50" Radial Ice	
	Service:	50 Mph	

Table 1: Proposed Changed Condition Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
104± *	AT&T	3	LGP 7770 Panels (New)	[exist 14ft LP Platform w/ rails]	12	1-1/4"-(I) [3 New + 9 exist]
		[6]	[DUO1417-8686 Panels]			
		[6]	[ADC CG-1900W850 TMA's]			
		3	LGP 13519 Diplexers (New)			

* Note: Existing center panel antenna in ea. sector is to be replaced with above new panel + 1 new diplexer added.

Table 2: Previous Analysis Appurtenances

Elev (ft)	Tenant	Ants Qty	Appurtenance Model / Description	Mount Description	Lines Qty	Line size & Location
104	Cingular	9	CSS DUO1417-8686 Panels	14ft LP Platform w/ rails	9	1-1/4"-(I)
		6	ADC TMA's Amplifiers			

(I) = internal; (E) = External - as per TIA-222

The information used as source data to represent the existing structure and the related appurtenances is as follows:

Structure & Current Appurtenances	Structure data and design appurtenances loading as per previous analysis data by SpectraSite, ref. # CT-0046, dated 09/11/02 - Tower designed for Max. Stress at 61%.
Changed Condition	As per AT&T /Cingular Wireless RF approval email, dated 04/26/07, Supplied by Hudson Design Group, LLC on 07/09/07.

The subject structure is evaluated for the feasibility of the installation of the proposed changed condition previously noted. The data records furnished were reviewed and the appurtenances loading was evaluated (no computer analysis performed, only relative loading magnitude comparison), in accordance with the TIA-222 Standard provisions and with the agreed limited scope of work terms and the results of this feasibility evaluation are reported. This evaluation 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 of its accuracy. This existing structure is assumed, for the purpose of this evaluation, to have been properly maintained and to be in good condition with no structural defects and with no deterioration to its capacity ('as-new').

Based on the feasibility structural evaluation of the data provided, the subject structure, including foundation, would meet the minimum requirements of ANSI/TIA 222-F Standard for the proposed changed condition as stated above when considering the structure to have been properly analyzed for the stated appurtenances. The proposed loading would stress the structure less or about the same than the previous analysis.

Therefore, **the installation of the noted proposed changed condition is structurally acceptable** on this existing structure in accordance with the ANSI/TIA 222-F Standard for the loading considered under the criteria listed and referenced.

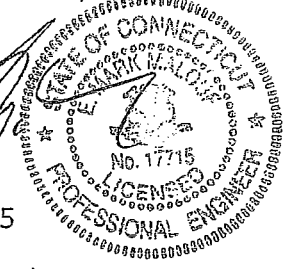
MEI appreciates the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or other projects please contact us.

Respectfully submitted,

MALOUF ENGINEERING INT'L, INC



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





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 25, 2007

Honorable Steven N. Wawruck
1st Selectman, Town of Windsor Locks
Town Office Bldg. 50 Church St.
Windsor Locks, CT 06096-0412

Re: Telecommunications Facility – 20 Spring Street, Windsor Locks

Dear Mr. Wawruck:

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

**CINGULAR WIRELESS
Equipment Modification**

1233 Wolcott Rd, Wolcott, CT
Site Number 1111
Exempt Modification 2/4/07

Tower Owner/Manager: SBA

Equipment configuration: Self-Supporting Lattice Tower

Current and/or approved: Six CSS DUO1417 antennas @ 185 ft c.l.
Six runs 1 5/8 inch coax
Six TMA's

Planned Modifications: Install three Powerwave 7775 antennas @ 185 ft c.l.
Install six new 1 5/8 inch coax (total of 12)
Install six diplexers @ 185 ft

Decommissioning:

Cingular hereby gives notice to the Council that the AT&T installation at this site has been decommissioned, and that AT&T's antennas and cables have been removed. SBA, which acquired this equipment from Cingular, elected to leave the platform in place for anticipated future use.

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 15.9 % 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 10.3 % of the standard.

Existing / Approved

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 *							8.43
Cingular GSM *	185	880 - 894	2	296	0.0062	0.5867	1.06
Cingular GSM *	185	1900 Band	2	427	0.0090	1.0000	0.90
AT&T **	140	1900 Band	12	250	0.0550	1.0000	5.50
Total							15.9%

* Per CSC records. ** AT&T facility has been decommissioned.

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 *							8.43
Cingular GSM	185	880 - 894	1	296	0.0031	0.5867	0.53
Cingular GSM	185	1900 Band	1	427	0.0045	1.0000	0.45
Cingular UMTS	185	880 - 894	1	500	0.0053	0.5867	0.90
Total							10.3%

* Per CSC records.

Structural information:

The attached structural analysis demonstrates that the tower and foundation have adequate structural capacity to accommodate the proposed modifications. (FDH Engineering, dated 7/16/07)



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 25, 2007

Honorable Thomas G. Dunn, Mayor
Town of Wolcott
Town Hall, 10 Kenea Avenue
Wolcott, Connecticut 06716

Re: Telecommunications Facility – 1233 Wolcott Road, Wolcott

Dear Mayor Dunn:

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

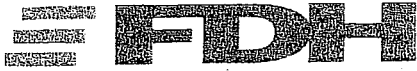
As required by Regulations of Connecticut State Agencies (“R.C.S.A.”) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review Cingular’s proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Cingular’s proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council’s procedures, please call me at (860) 513-7636 or Mr. Derek Phelps, Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure



**Structural Analysis for
SBA Network Services, Inc.**

350' Self-Support Tower

**Site Name: Cleary Tower
Site ID: CT20021-A**

1111

FDH Project Number 07-0748E

Prepared By:

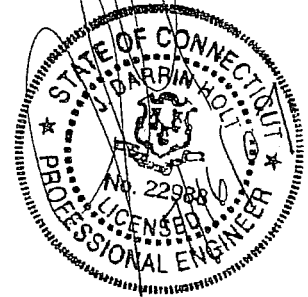
Adrian L. Creech, EI
Project Engineer

Reviewed By:

J. Darrin Holt, Ph.D, PE
President
CT PE License No. 22988

FDH Engineering, Inc.

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



July 16, 2007

Prepared pursuant to EIA/TIA-222-F June 1996 Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

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EXECUTIVE SUMMARY

At the request of SBA Network Services, FDH Engineering performed an analysis of the existing self-support tower located in Wolcott, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads, pursuant to the *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, TIA/EIA-222-F*. Information pertaining to the existing/proposed antenna loading, current tower geometry, and the member sizes was obtained from FDH, Inc. (Project No. 06-0879T) EIA/TIA Inspection Report dated September 19, 2006, Paul J. Ford and Company (Eng. File No. A03-T143) structural analysis report dated December 22, 2003, and SBA Network Services, Inc.

The basic design wind speed per TIA/EIA-222-F standards is 85 MPH without ice and 74 MPH with ½" radial ice.

Conclusions

With the existing and proposed antennas from Cingular in place at 186 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards. Furthermore, provided the foundation was constructed per the design drawings (see Paul J. Ford and Company Eng. File No. A03-T143), the foundation should have the necessary capacity to support both the proposed and existing 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, and proposed antenna loading) and that the tower was properly erected and maintained per the original design drawings.

Recommendation

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

1. Proposed coax lines must be installed as shown in **Figure 1**.

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:

Antenna No	Centerline Elevation (ft)	Coax and Lines (in)	Mount	Carrier	Description
1	350	(2) 1-1/4"	Star Mount	---	(1) Decibel DB809DK
2	350	(1) 1-1/4"	Star Mount	---	(1) Andrew 600200
3	350	(1) 1/2"	Star Mount	---	(1) RFS CAT #200
4	350	(1) 1-1/4"	Star Mount	---	(1) TX RX 101-58-10-0-03
5	350	(1) 1-1/4"	Star Mount	---	(1) Cellwave CAT #1110-9
6	328.5	(1) 1-1/4"	4' Standoff	---	(1) Andrew 600200-4
7-8	318	(2) 1-1/4"	6' Standoff	---	(2) TX RX Systems 101-58-10-0-03
9-20	201.5	(8) 1-1/4"	(3) Sector Mount	Nextel	(8) Decibel DB844H90E-XY (4) Decibel DB844H65E-XY
21-26	186	(12) 1-5/8" ^{2,3}	(3) Boom Gate	Cingular	(12) CSS Wireless DUO14178686-4-0, (6) TMAs (3) Combiners
27-28	172.5	(1) 1/2"	Pipe Mount	---	(1) Radiowave SPD2-5.8NS (1) Radiowave SPD3-2.4NS
29	158	(1) 5/8"	17" Standoff	---	(1) Cellwave Cat# 201-7
---	140	---	(3) Boom Gates	---	Empty Mounts
30-35	134	(6) 1-5/8"	(3) Sector Mount	Sprint	(6) Decibel DB980H90T2E-M
36	70	(1) 1-1/4"	Pipe Mount	---	(1) Channel Master 1.0 Meter Dish

¹ See **Figure 1** for coax location.

² Currently, Cingular has (6) antennas, (6) TMAs, and (6) coax installed at 186 ft. According to info provided by SBA, Cingular may install up to (12) antennas, (6) TMAs, (3) combiners, and (12) coax. Analysis performed with leased loading in place.

³ The loading for Cingular at 186 ft will be altered. See the proposed loading below.

Proposed Loading:

Antenna No	Centerline Elevation (ft)	Coax and Lines	Mount	Carrier	Description
1-12	186	(12) 1-5/8" ¹	Boom Gate	Cingular	(9) CSS Wireless DUO14178686-4-0 (3) Powerwave 7775 (6) TMAs (3) Combiners (6) Diplexers

¹ This represents the total loading for Cingular at 186 ft. According to information provided by SBA, Cingular will remove (3) DUO14178686-4-0 and install (3) 7775 antennas and (6) Diplexers at 186 ft.

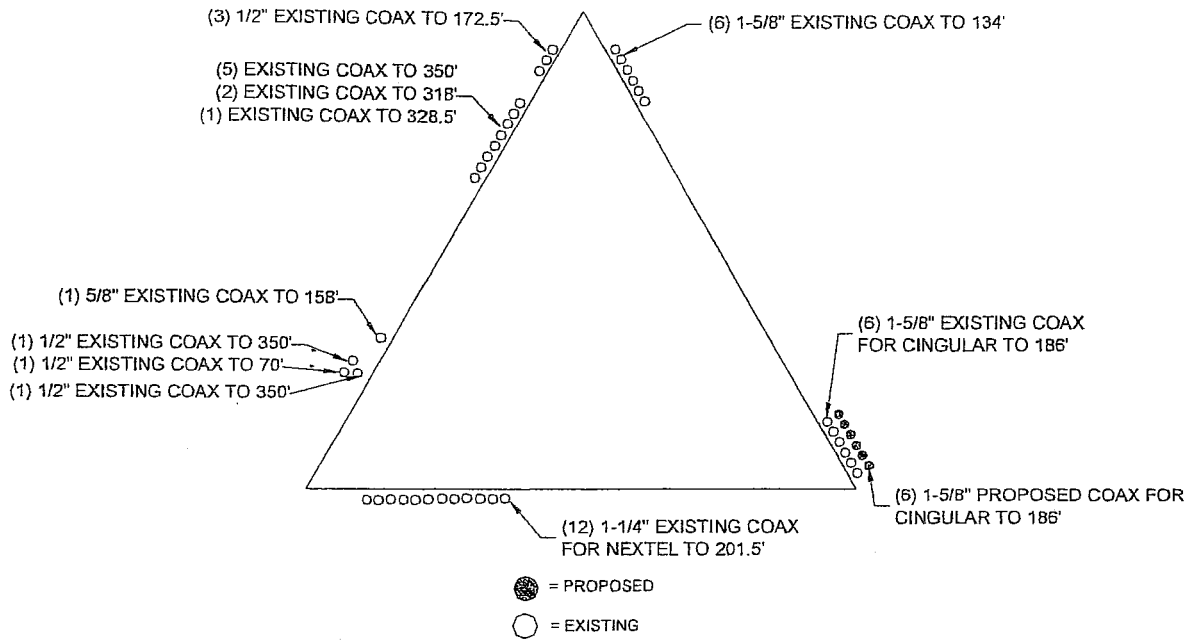


Figure 1 – Coax Layout

RESULTS

The following yield strength of steel for individual members was used for analysis:

Table 2 - Material Strength

Member Type	Yield Strength
Legs	50 ksi
Diagonals	36 ksi
Horizontals	36 ksi

Table 3 displays the summary of the ratio (as a percentage) of actual force in the member to their allowable capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its allowable 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
1	350 - 340	Leg	2	29.3
		Diagonal	L2x1 1/2x3/16	34.7
		Top Girt	L2x1 1/2x3/16	37.1 (b)
2	340 - 320	Leg	2	14.9
		Diagonal	L2x1 1/2x3/16	83.2
3	320 - 300	Leg	2 1/2	38.0
		Diagonal	L2x2x3/16	47.1 (b)
4	300 - 280	Leg	2 1/2	77.3
		Diagonal	L2x2x3/16	22.4
		Diagonal	L2x2x3/16	30.7 (b)
5	280 - 260	Leg	3 1/4	58.3
		Diagonal	L2 1/2x2 1/2x3/16	73.8 (b)
		Diagonal	L2 1/2x2 1/2x3/16	23.5
6	260 - 240	Leg	3 1/4	32.0 (b)
		Diagonal	L2 1/2x2 1/2x3/16	69.4
		Diagonal	L2 1/2x2 1/2x3/16	34.2
7	240 - 220	Leg	3 1/2	34.9 (b)
		Diagonal	L3x3x3/16	62.9
		Diagonal	L3x3x3/16	30.5
7	240 - 220	Leg	3 1/2	41.9 (b)
		Diagonal	2L2 1/2x2 1/2x3/16x3/8	56.0
		Diagonal	2L2 1/2x2 1/2x3/16x3/8	58.6 (b)
				21.8
				27.0 (b)

Section No	Elevation ft	Component Type	Size	% Capacity
8	220 - 200	Horizontal	L2 1/2x2 1/2x3/16	4.6
		Inner Bracing	L2 1/2x2 1/2x3/16	0.2
		Leg	3 3/4	53.5
		Diagonal	2L2 1/2x2 1/2x3/16x3/8	31.5
9	200 - 180	Horizontal	L2 1/2x2 1/2x3/16	10.0
		Inner Bracing	L2 1/2x2 1/2x3/16	0.2
		Leg	4	52.5
		Diagonal	2L3x3x3/16x3/8	33.8 39.0 (b)
10	180 - 160	Horizontal	L 3 x 3 x 3/16	21.8
		Inner Bracing	L3x3x3/16	0.3
		Leg	4 1/4	52.5
		Diagonal	2L3x3x3/16x3/8	43.6
11	160 - 140	Horizontal	L 3 x 3 x 3/16	7.2
		Inner Bracing	L3x3x3/16	0.3
		Leg	4 1/4	59.8
		Diagonal	2L3x3x3/16x3/8	56.2
12	140 - 120	Horizontal	L3 1/2x3 1/2x1/4	5.2 6.1 (b)
		Inner Bracing	L3 1/2x3 1/2x1/4	0.3
		Leg	4 1/2	57.5
		Diagonal	2L3x3x1/4x3/8	54.1 58.8 (b)
13	120 - 100	Horizontal	2L2 1/2x2 1/2x3/16x3/8	6.8
		Redund Horz 1 Bracing	L2x2x3/16	27.2
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	16.4
		Inner Bracing	L3 1/2x3 1/2x1/4	0.3
14	100 - 80	Leg	4 3/4	56.5
		Diagonal	2L3x3x1/4x3/8	61.5 61.8 (b)
		Horizontal	2L2 1/2x2 1/2x3/16x3/8	4.4
		Redund Horz 1 Bracing	L2x2x3/16	23.2
15	80 - 60	Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	16.8
		Inner Bracing	L4x4x1/4	0.4
		Leg	4 3/4	62.5
		Diagonal	2L3x3x1/4x3/8	66.6
16	60 - 40	Horizontal	2L2 1/2x2 1/2x3/16x3/8	5.2
		Redund Horz 1 Bracing	L2x2x3/16	29.8
		Redund Diag 1 Bracing	L2 1/2x2 1/2x3/16	14.9
		Inner Bracing	L4x4x1/4	0.4
17	40 - 20	Leg	5	60.5
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	51.1 51.9 (b)
		Horizontal	2L3x3x3/16x3/8	4.4
		Redund Horz 1 Bracing	L2 1/2x2 1/2x3/16	19.9
17	40 - 20	Redund Diag 1 Bracing	L3x3x3/16	13.3
		Inner Bracing	2L3x3x3/16x3/8	0.5
		Leg	5 1/4	59.0
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	55.0 56.2 (b)
17	40 - 20	Horizontal	2L3x3x3/16x3/8	4.2
		Redund Horz 1 Bracing	L2 1/2x2 1/2x3/16	24.3
		Redund Diag 1 Bracing	L3x3x3/16	12.8
		Inner Bracing	2L3x3x3/16x3/8	0.6
17	40 - 20	Leg	5 1/4	63.4

Section No.	Elevation ft.	Component Type	Size	% Capacity
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	64.6
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	2.7
		Redund Horz 1 Bracing	L2 1/2x2 1/2x3/16	31.3
		Redund Diag 1 Bracing	L3x3x3/16	18.8
		Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	0.5
18	20 - 0	Leg	5 1/2	61.5
		Diagonal	2L3 1/2x3 1/2x1/4x3/8	66.3
		Horizontal	2L3 1/2x3 1/2x1/4x3/8	2.3
		Redund Horz 1 Bracing	L3x3x3/16	21.4
		Redund Diag 1 Bracing	L3x3x3/16	17.2
		Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	0.6

*Capacities include 1/3 allowable increase for wind.

Table 4 – Maximum Base Reactions

Load Type	Direction	Computed Value Existing and Proposed Loading
Individual Foundation	Horizontal	54 k
	Uplift	401 k
	Compression	507 k
Overturning Moment		14,593 k*ft

GENERAL COMMENTS

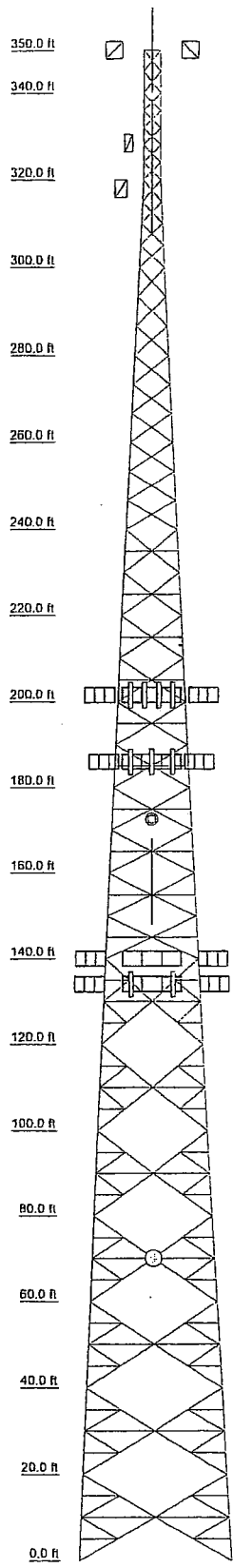
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA to verify that the tower modeled and analyzed is the correct structure. If there are substantial modifications made to the appurtenance loading provided by SBA, 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.

APPENDIX

SR 5 1/2	SR 5 1/4	SR 5	SR 4 3/4	SR 4 1/2	SR 4 1/4	SR 4	SR 3 3/4	SR 3 1/2	SR 3 1/4	SR 2 1/2	SR 2
Legs	2L3 1/2x3 1/2x1/4x3/8	2L3x3x3/16x3/8	2L3x3x3/16x3/8	2L3x3x3/16x3/8	2L3x3x3/16x3/8	2L3x3x3/16x3/8	2L2 1/2x2 1/2x3/16x3/8	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2x1 1/2x3/16
Diagonals	2L3 1/2x3 1/2x1/4x3/8	2L3x3x3/16x3/8	2L2 1/2x2 1/2x3/16	L2x2x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2x1 1/2x3/16
Top Chords	2L3 1/2x3 1/2x1/4x3/8	2L3x3x3/16x3/8	2L2 1/2x2 1/2x3/16	L2x2x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2x1 1/2x3/16
Reed Horizontals	L3x3x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2x1 1/2x3/16
Reed Diagonals	2L3 1/2x3 1/2x1/4x3/8	2L3x3x3/16x3/8	L4x4x1/4	L3 1/2x3 1/2x1/4	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2x1 1/2x3/16
Inner Bracing	2L3 1/2x3 1/2x1/4x3/8	2L3x3x3/16x3/8	L4x4x1/4	L3 1/2x3 1/2x1/4	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L2 1/2x2 1/2x3/16	L2x2x3/16	L2x1 1/2x3/16
Face Width (ft)	35	34	32	28	26	24	22	20	18	16	14
# Panels @ (ft)	90.5	10.3	8.9	8.7	8.1	8.1	2 @ 10	20 @ 4.97917	9 @ 5.53889	8	4 @ 4.97917
Weight (K)	90.5	10.3	8.9	8.7	8.1	8.1	5.4	4.9	4.0	3.5	2.8
											2.3
											1.4
											1.0
											0.5



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) DB8809DK-Y	350	Boom gates (3' out x 13.5' Wide)	186
Andrew 600200-5	350	Boom gates (3' out x 13.5' Wide)	186
RFS CAT # 200	350	Powerwave 7775	186
TX RX 101-58-10-0-03	350	Powerwave 7775	186
Cellwave CAT# 1110-9	350	Powerwave 7775	186
Star Mount	350	DUO1417-8686	186
Star Mount	350	DUO1417-8686	186
Star Mount	350	DUO1417-8686	186
Andrew 600200-4	328.5	Pipe Mount (5'3" Tall x 4.5" dia)	172.5
AML Comm R92-FF	328.5	Pipe Mount (5'3" Tall x 4.5" dia)	172.5
4' Standoff	328.5	1' tall x 8.5" diameter	172.5
TX RX Systems 101-58-10-0-03	318	1' tall x 8.5" diameter	172.5
TX RX Systems 101-58-10-0-03	318	SPD2-5.8	172.5
8' Standoff	318	radiowaves SPD3-2.4	172.5
(4) decibel DB844H65E-XY	201.5	17" Standoff	158
(4) decibel DB844H90E-XY	201.5	Cellwave Cat #201-7	158
(4) decibel DB844H90E-XY	201.5	Boom gates (4' out x 10' wide)	140
Sector Mount (5' out x 15' Wide)	201.5	Boom gates (4' out x 10' wide)	140
Sector Mount (5' out x 15' Wide)	201.5	Boom gates (4' out x 10' wide)	140
Sector Mount (5' out x 15' Wide)	201.5	Sector Mount (5' out x 15' Wide)	134
(2) ADC Cleargain	186	Sector Mount (5' out x 15' Wide)	134
(2) DUO1417-8686	186	(2) Decibel 980H90T2E-M	134
(2) ADC Cleargain	186	(2) Decibel 980H90T2E-M	134
(2) DUO1417-8686	186	Sector Mount (5' out x 15' Wide)	134
(2) ADC Cleargain	186	(2) Decibel 980H90T2E-M	134
(2) DUO1417-8686	186	Pipe Mount (27" Tall x 2.7" dia)	70
Boom gates (3' out x 13.5' Wide)	186	Channel Master 1 Meter	70

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L2x1 1/2x3/16	B	L3 1/2x3 1/2x1/4

MATERIAL STRENGTH

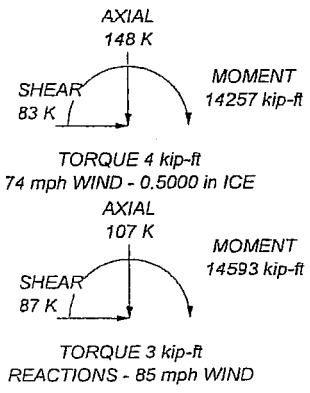
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in New Haven 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: 83.2%

MAX. CORNER REACTIONS AT BASE:

DOWN: 507 K
 UPLIFT: -401 K
 SHEAR: 54 K



<p>FDH Engineering, Inc. 2730 Rowland Road, Suite 100 Raleigh, NC Phone: (919) 755-1012 FAX: (919) 755-1031</p>	Job: Cleary Tower	CT20021-A	
	Project: 07-0748E		
	Client: SBA Network Services, Inc.	Drawn by: Adrian L. Creech	App'd:
	Code: TIA/EIA-222-F	Date: 07/16/07	Scale: NTS
	Path:		Dwg No. E-