

# 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@po.state.ct.us](mailto:siting.council@po.state.ct.us)

Web Site: [www.ct.gov/csc](http://www.ct.gov/csc)

February 4, 2004

Michele G. Briggs  
Manager of Real Estate  
Southwestern Bell Mobile Systems, LLC  
500 Enterprise Drive  
Rocky Hill, CT 06067-3900

RE: **EM-CING-078-040106** - Southwestern Bell Mobile Systems, LLC notice of intent to modify an existing telecommunications facility located at 1725 Stafford Road, Mansfield, Connecticut.

Dear Ms. Briggs:

At a public meeting held on February 3, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated January 6, 2004. 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. 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,

  
Pamela B. Katz, P.E.  
Chairman

PBK/laf

c: Honorable Elizabeth Patterson, Mayor, Town of Mansfield  
Martin H. Berliner, Town Manager, Town of Mansfield  
Gregory Padick, Town Planner, Town of Mansfield  
Christopher B. Fisher, Esq., Cuddy & Feder LLP  
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae LLP



**Southwestern Bell Mobile Systems, LLC**  
500 Enterprise Drive  
Rocky Hill, Connecticut 06067-3900  
Phone: (860) 513-7700  
Fax: (860) 513-7190

**Michele G. Briggs**  
*Manager of Real Estate*

January 6, 2004

**RECEIVED**  
JAN - 6 2004

**CONNECTICUT  
SITING COUNCIL**

Ms. Pam Katz, Chairman  
Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051

**Re: Notice of Exempt Modification – Existing Municipal Telecommunications Tower Facility at 1725 Stafford Road, Mansfield, Connecticut**

Dear Chairman Katz:

Southwestern Bell Mobile Systems, LLC ("SBMS") intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower off Stafford Road in Mansfield, Connecticut.

The Mansfield facility is located at 1725 Stafford Road, on the grounds of the Town's school bus depot. Tower coordinates (NAD 83) are N 41° 50' 8.6" and W 72° 18' 27". The tower facility is owned by the Town of Mansfield ("the Town"), with an address of Town Office Building, 4 So. Eagleville Rd., Storrs, Connecticut 06268, and operated under a long-term management agreement by TCP Communications, Inc.

Please accept this letter as notification to the Council, 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 is being sent to the Town Manager of Mansfield.

SBMS, the local component of the nationwide Cingular Wireless network, is licensed by the Federal Communications Commission ("FCC") to provide cellular mobile telephone service in the Hartford, CT Metropolitan Statistical Area, which includes the area to be served by SBMS' proposed installation. The public need for cellular service has been predetermined by the FCC.

The Town has agreed to plans put forth by SBMS pursuant to mutually acceptable terms and conditions and has also authorized SBMS to obtain necessary government approvals. Attached to this Notice are a site location map, a proposed site plan, the proposed tower profile, and a structural analysis report that shows the tower is structurally capable of supporting the proposed SBMS telecommunications equipment.

The Town facility was approved by local zoning authorities as a municipal tower facility after the November 2000 Covello decision concerning Council and Town jurisdiction for tower siting. The tower came under Council jurisdiction with AT&T's application to co-locate in TS-AT&T-078-030128, which was approved on June 19, 2003.

The Stafford Road facility consists of a 170-foot monopole within an L-shaped 72' x 80' compound surrounded by 8-ft high chain link fence. The Town operates several whip antennas at the top of the tower and has also leased tower and ground space to AT&T and T-Mobile.

As shown on the attached drawings and as further described below, SBMS proposes to install up to twelve CSS DUO4-8670 panel antennas, approximately 48 inches in height, with the center of radiation approximately 150 feet above ground level. Associated equipment to be installed on the tower are up to six ADC Co. dual-band tower top amplifiers ("TTA's"; small metal boxes approximately 26 pounds apiece) immediately behind the antennas, and up to three very small (5 pounds apiece) CSS dual-band "combiners." SBMS also proposes to place a 12' x 20' prefabricated concrete equipment building at the base of the tower. All work will be done inside the existing fenced compound.

With the "GSM-only" configuration, SBMS will broadcast up to:

- 2 channels, 296 Watts ERP, 880 – 894 MHz; and
- 2 channels, 427 Watts ERP, 1930 – 1935 MHz.

### **Statutory Considerations**

The changes to the Mansfield tower facility do not constitute a modification 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) because they will not result in any substantial adverse environmental effect.

1. The height of the overall structure will be unaffected.
2. The proposed changes will not affect the property boundaries. All new construction will take place on property owned by the Town and within the existing fenced compound.
3. The proposed additions will not increase the noise level at the existing facility by six decibels or more.
4. Operation of the additional antennas will not increase the total radio frequency electromagnetic radiation power density, measured at the tower base, to or above the standard adopted by the State of Connecticut and the FCC. The "worst-case" exposure calculation in accordance with FCC OET Bulletin No. 65 (1997) for a point of interest at the base of the tower in relation to the operation of the currently proposed antenna array is as

follows:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density <sup>†</sup> (mW/cm <sup>2</sup> )	Standard Limits (mW/cm <sup>2</sup> )	Percent of Limit
Town of Mansfield *	170	138	1	200	0.0025	0.2000	1.24
	170	140	1	200	0.0025	0.2000	1.24
	170	150	1	200	0.0025	0.2000	1.24
AT&T *	160	D: 1945 E: 1985	12	250	0.0421	1.0000	4.21
Cingular GSM	150	880 - 894	2	296	0.0095	0.5867	1.61
Cingular GSM	150	1930 - 1935	2	427	0.0136	1.0000	1.36
T-Mobile *	140	1935	8	130	0.0191	1.0000	1.91
<b>Total</b>							<b>12.83%</b>

\* Power density parameters taken from AT&T's application to the Council in TS-AT&T-078-030128 and T-Mobile's application in TS-T-MOBILE-078-030912.

† Please note that the standard power density equation provided by the Council in its memo of January 22, 2001 incorporates a ground reflection factor of 2.56 (i.e., the square of 1.6) as described in FCC OET Bulletin No. 65.

As the table demonstrates, the cumulative "worst-case" exposure would be approximately 13% of the ANSI/IEEE standard, as calculated for mixed frequency sites. Total power density levels resulting from SBMS' use of the tower facility would thus be within applicable standards.

For the foregoing reasons, SBMS respectfully submits that proposed changes to implement expanded shared use at the Mansfield site constitute an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7700 with questions concerning this application. Thank you for your consideration in this matter.

Respectfully yours,



Michele G. Briggs  
Manager of Real Estate

Enclosures

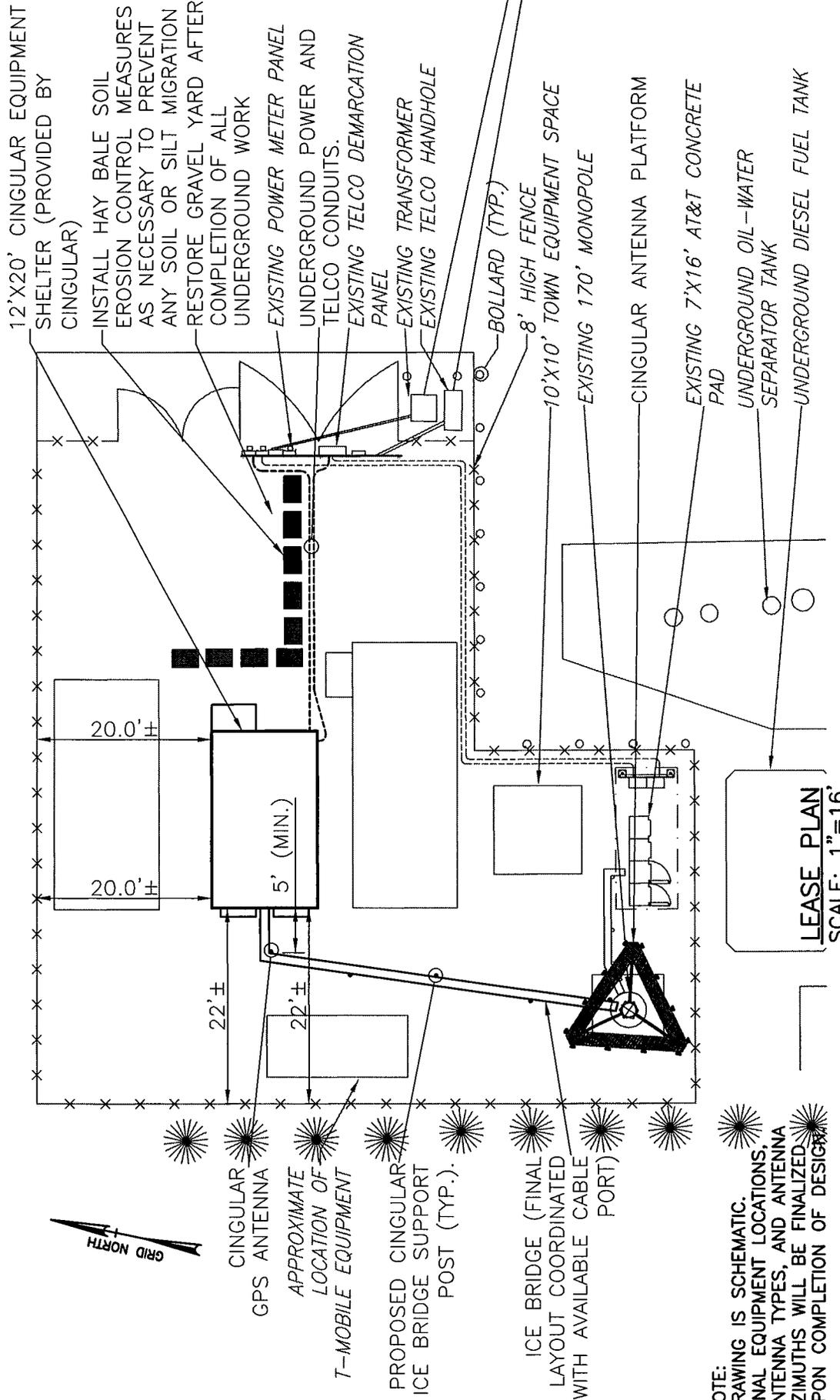
cc: Honorable Martin H. Berliner, Town Manager, Town of Mansfield

# Location Map --- Mansfield Muni Tower



Mag 14.00  
 Mon Jan 05 15:51 2004  
 Scale 1:31,250 (at center)  
 2000 Feet  
 1000 Meters

- |   |   |
|---|---|
|  Local Road                |  Locale      |
|  State Route               |  Water       |
|  Primary State Route       |  Woodland    |
|  Interstate/Limited Access |  River/Canal |
|  US Highway                |   |
|  Railroad                  |   |
|  Small Town                |   |
|  Summit                    |   |



NOTE:  
 DRAWING IS SCHEMATIC.  
 FINAL EQUIPMENT LOCATIONS,  
 ANTENNA TYPES, AND ANTENNA  
 AZIMUTHS WILL BE FINALIZED  
 UPON COMPLETION OF DESIGN.

NOTE:  
 THIS DOCUMENT WAS DEVELOPED TO  
 REFLECT A SPECIFIC SITE AND ITS SITE  
 CONDITIONS AND IS NOT TO BE USED  
 FOR ANOTHER SITE OR WHEN OTHER  
 CONDITIONS PERTAIN. REUSE OF THIS  
 DOCUMENT IS AT THE SOLE RISK OF THE  
 USER.

**Dewberry-Goodkind, Inc.**  
 A Dewberry Company  
 Engineers  
 Planners  
 Surveyors  
 59 Elm Street, Suite 101  
 New Haven, CT 06510  
 P. (203) 776-2277  
 F. (203) 776-2288

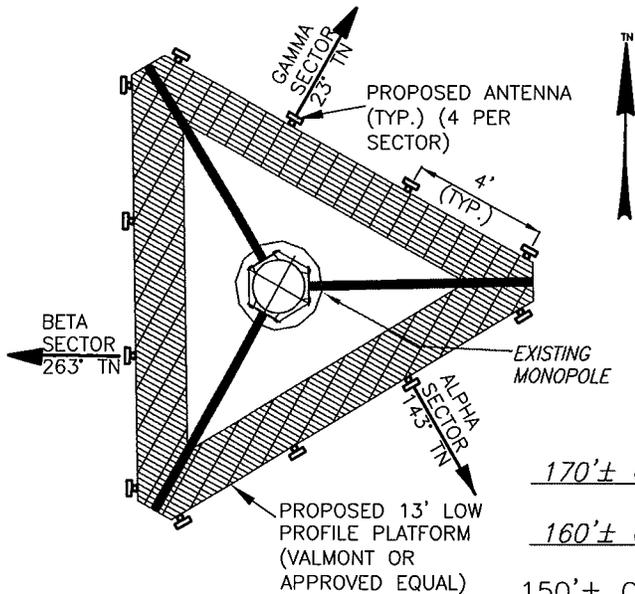
SCALE:  
 AS SHOWN  
 DESIGNED BY:  
 CKD  
 DATE:  
 12/16/03

**Cingular** WIRELESS

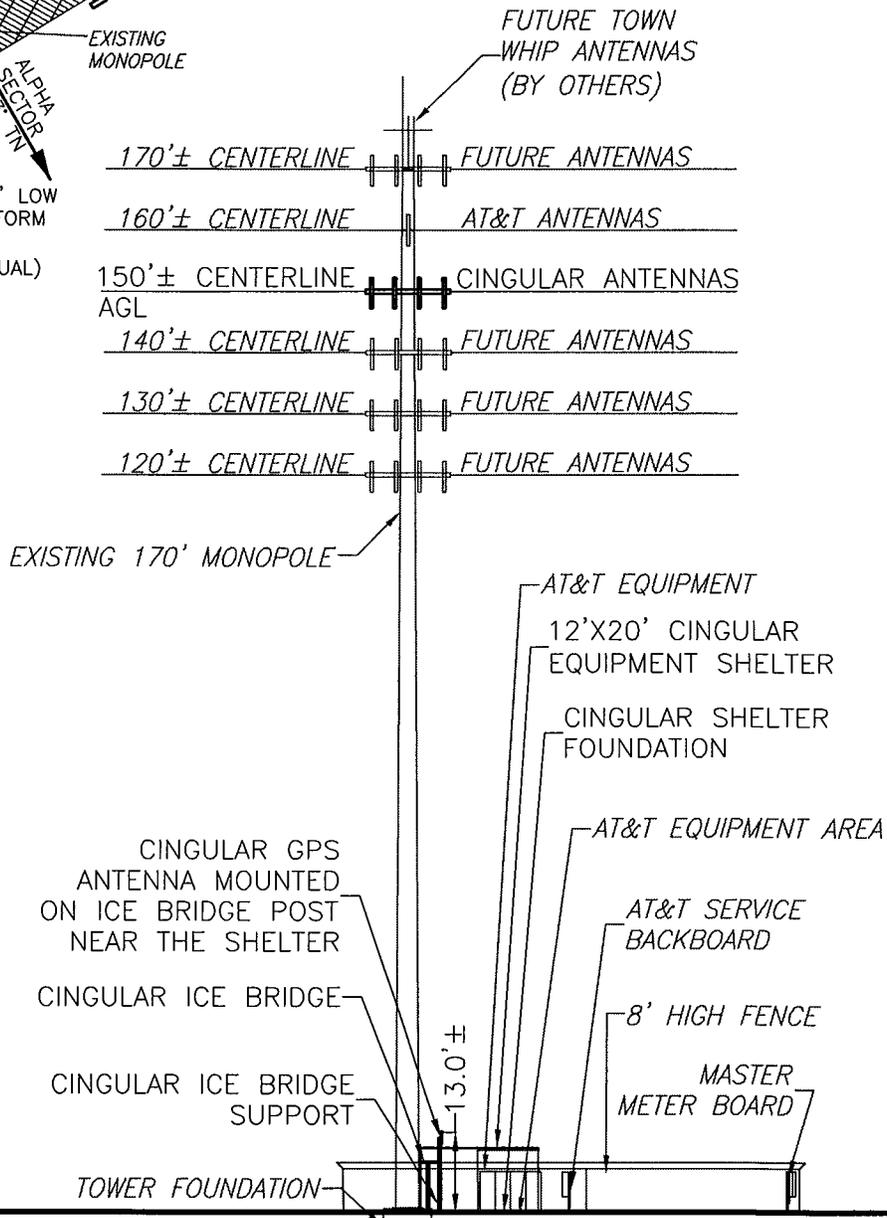
LEASING PLAN

SITE NAME  
 MANSFIELD  
 1725 STAFFORD ROAD  
 MANSFIELD, CONNECTICUT

SHEET NO.  
**LE1**



**TOP VIEW**  
SCALE: N.T.S.



**SOUTH ELEVATION**  
SCALE: 1"=20'

Q:\3666\05-Mansfield\cadd\cell\Lease\L2\_cingular.dwg By: MJS  
 Wed, Dec 17 2003 2:09:07pm Layer State: Plot: msmith

**Dewberry-Goodkind, Inc.**  
A Dewberry Company

59 Elm Street, Suite 101  
New Haven, CT 06510  
p. (203) 776-2277  
f. (203) 776-2288

Engineers  
Planners  
Surveyors

SCALE:  
AS SHOWN

DESIGNED BY:  
CKD

DATE:  
12/17/03

**LEASING  
ELEVATION**

SITE NAME **MANSFIELD**  
1725 STAFFORD ROAD  
MANSFIELD, CONNECTICUT



SHEET NO.  
**LE2**

December 22, 2003

Mr. Stephen Schadler  
Cingular Wireless  
500 Enterprise Drive, 3<sup>rd</sup> Floor  
Rocky Hill, CT 06067

**Re:     *Mansfield***  
          *1725 Stafford Road, Mansfield, CT*  
          *Structural Assessment of 170-Foot Monopole*

Dear Mr. Schadler:

We have completed our structural review of the 170ft monopole structure's capacity to support an array of panel antennas on a low profile platform at the above referenced site as required by to Section 108.1.1 of the Connecticut State Building Code (CSBC). We reviewed the monopole and foundation calculations dated December 6, 2002 prepared by Paul J. Ford and Company.

Section 1609.1 of the Connecticut State Building Code addresses radio and television towers and references Section 3108.4 of the 1996 BOCA Code. The Boca Code references the Electronics Industry Association and the Telecommunications Industry Association Standard EIA/TIA 222-E for antenna supporting structures. The calculations indicate that the design is based on the later version of the Standard, TIA/EIA 222-F, and therefore also satisfies the EIA/TIA 222-E requirements.

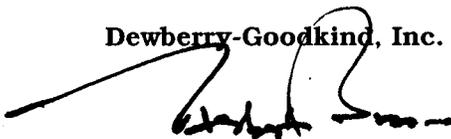
The monopole, manufactured by Penn Summit Tubular, LLC, is designed to be 170 ft high supporting a total of 6 arrays of 12 panel antennas on 14ft wide, low profile platforms. The Cingular antennas, proposed to be located 150ft above grade will be at the third highest elevation. The design is based on the use of 4 generic Decibel Products DB896H panel antennas in each of 3 sectors, with wind area of 6.3 sq ft. per antenna. The antennas proposed for the Cingular installation will be comprised of 3 sectors with four 2.54 sq ft. antennas in each sector plus associated with each antenna will be a Full Band Masthead Unit of maximum wind area 1.1 sq ft per unit. The structural design by Paul J. Ford is presented in spreadsheet format, the lateral wind loads and the gravity loads are calculated by the program in accordance with the requirements of TIA/EIA 222-F. These loads were used to determine the forces in the monopole sections and the foundation reactions including overturning moment. The foundation is a 96in diameter concrete caisson 28ft deep. The drawings indicate that the foundation design is based on the recommendations of a soil report prepared by Jaworski Geotech, Inc. dated April 4, 2001. A copy of the report summary was available for review. Hand calculations by Dewberry-Goodkind, Inc. using the larger wind area of the generic antennas confirmed the results of the computer analysis. The structural design was deemed to be in accordance with the requirements of EIA/TIA 222-E.

Upon review of the signed and sealed calculations and sketches prepared by Kirk R. Hall, P.E. for Paul J. Ford and Company it is our conclusion that the monopole has ample capacity to support the proposed Cingular antennas, coaxial cables and mounting hardware. The monopole, as designed, will continue to be in compliance with the Connecticut State Building Code when the Cingular antennas are installed.

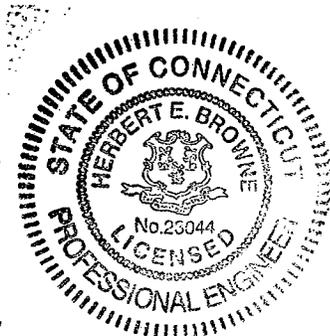
Should you have any questions, please contact us.

Very truly yours,

**Dewberry-Goodkind, Inc.**



Herbert Browne, P.E.  
Director, Building Structures





**Southwestern Bell Mobile Systems, LLC**  
500 Enterprise Drive  
Rocky Hill, Connecticut 06067-3900  
Phone: (860) 513-7700  
Fax: (860) 513-7190

**Michele G. Briggs**  
*Manager of Real Estate*

January 6, 2004

Honorable Martin H. Berliner  
Town Manager, Town of Mansfield  
Town Office Building 4 South Eagleville Rd.  
Storrs, Connecticut 06268

**Re: Notice of Exempt Modification – Existing Municipal Telecommunications Tower Facility  
at 1725 Stafford Road, Mansfield, Connecticut**

Dear Mr. Berliner:

Southwestern Bell Mobile Systems, LLC (“SBMS”) intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower at Stafford Road in Mansfield, Connecticut.

The facility is owned by the Town of Mansfield and operated under a long-term management agreement by TCP Communication, Inc.

A Notice of Exempt Modification has been filed with the Connecticut Siting Council as required by Regulations of Connecticut State Agencies (“R.C.S.A.”) Section 16-50j-73. Please accept this letter as notification to the Town of Mansfield 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 attached letter fully sets forth the SBMS proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council’s procedures, please contact the undersigned or Mr. Derek Phelps, Executive Director of the Connecticut Siting Council, at (860) 827-2935.

Sincerely,

A handwritten signature in cursive script that reads "Michele G. Briggs".

Michele G. Briggs  
Manager of Real Estate

Enclosure