

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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Web Site: www.ct.gov/csc

February 19, 2004

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

RE: **EM-CING-155-040116** - Southwestern Bell Mobile Systems, LLC notice of intent to modify an existing telecommunications facility located at 3114 Albany Avenue, West Hartford, Connecticut.

Dear Ms. Briggs:

At a public meeting held on February 18, 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 16, 2004, and additional information received January 26, 2004, and February 9, 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 Jonathan Harris, Mayor, Town of West Hartford
Mila Limson, Town Planner, Town of West Hartford
Marlin Towers LLC
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Sandy M. Carter, Verizon Wireless

RECEIVED**Perrone, Michael****From:** Levine, Steven [Steven.Levine@cingular.com]

FEB -9 2004

Sent: Monday, February 09, 2004 10:30 AM**To:** Martin, David C.; Perrone, MichaelCONNECTICUT
SITING COUNCIL**Subject:** FW: West Hartford EMF Report

EM-CING-155-040116

Dave & Mike,

The requested report on power density measurements at the West Hartford WCCC tower site is attached. Cingular's EM application for the site was tabled on 2/3/04 pending receipt of this report.

According to the report's conclusion, below, Cingular's installation will not cause the site to exceed maximum exposure limits.

The area within the immediate vicinity of the West Hartford site, located at 3114 Albany Avenue, was surveyed and found to be within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3). The "worst case spatial average" power density measured during the assessment was 40.9 % of the General Population/Uncontrolled MPE limit. This level occurred only in the immediate vicinity of the Northwestern Anchor of Tower #2.

The possible "Worst Case" cumulative power density, with the proposed Cingular Wireless antennas installed on Tower # 2 at the West Hartford site, was computed to be within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3). The majority of the points studied were shown to be less than 10% of the General Population/Uncontrolled MPE limit. The possible "Worst Case" power density, with Cingular Wireless antennas operating at full power, was shown to be 45.96% MPE of the General Population/Uncontrolled MPE limit.

Please review the attached report and confirm that it fulfills Cingular's obligation to the Council. If so, please have the Cingular application placed on the 2/18 agenda for approval.

Thanks.

SW Bell Mobile Systems/ Cingular Wireless**Steve Levine**

Real Estate Consultant

500 Enterprise Drive, 3rd Fl., Rocky Hill, CT 06067

Office 860-513-7636

Mobile 203-556-1655

Fax 860-513-7190

-----Original Message-----

From: Tony Wells [mailto:tony.wells@csquaredsystems.com]

Sent: Friday, February 06, 2004 7:26 PM

To: Walter Saddig

Cc: Robert Sullivan; Paul Kearns

2/9/2004

RECEIVED
FEB - 9 2004

EM-CING-155-040116



CONNECTICUT
SITING COUNCIL

C Squared Systems
13 Forest Drive
East Kingston, NH 03827
Phone 603-770-3143
Email support@csquaredsystems.com

Radio Frequency Field Survey

Of

West Hartford

**WEST HARTFORD
3114 ALBANY AVENUE
WEST HARTFORD, CT**



Table of Contents

Introduction	1
Site Description	1
Measurement Procedures.....	2
Survey Results	3
Aerial View of Measurement Locations	5
Photos of West Hartford Facility	6
Discussion of Results	10
Summarized Results	10
Possible "Worst Case" Results	11
Conclusion	13
Statement of Certification.....	14
References	15

Introduction

This report was prepared on behalf of Cingular Wireless to document an evaluation conducted at the towers located on Albany Avenue in West Hartford, to evaluate the cumulative power density at this site before and after installation of the proposed installation of Cingular transmission equipment.

The measurements and calculations are compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments.

All results presented herein are listed as a percentage of Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of milliwatts per square centimeter (mW/cm^2). The number of mW/cm^2 measured is referred to as the power density. The exposure limit for power density varies with frequency. Radio Broadcasters, Wireless Carriers, and Paging Service Providers use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

Site Description

The West Hartford site is located at 3114 Albany Avenue in West Hartford, CT, which is situated on the crest of Avon Mountain near the Avon – West Hartford town line. The geographic co-ordinates of the towers are North $41^\circ 47' 48''$, West $72^\circ 47' 49''$ (NAD 83).

The subject transmission facility consists of two 346-foot guyed lattice towers, owned and operated by Marlin Towers, and are populated with several broadcast antennas mounted on the upper levels of the towers. The FCC Tower Registration number of Tower #1 is 1046246 and the FCC Registration number of Tower #2 is 1226764. Several wireless service providers have antennas installed on the lower levels of the towers.

WCCC-FM, WMNR-FM, and LPTV-38 have broadcast antenna installed on the towers. **ATT Wireless Services** and **Verizon Wireless** have panel antennas installed on the main tower. **Rinker's Paging** and the **West Hartford Fire Department** have omni "whip" antennas installed at the site.

Field survey measurements were sampled on 2/04/2004 between the hours of 11:00 AM to 3:30 pm. The local weather conditions during this assessment were clear and sunny with an ambient temperature of 38°F .

Measurement Procedures

Frequency Range – Frequencies from 300 KHz to 50 GHz were measured using the Narda A8722D probe in conjunction with the 8718B survey meter. The A8722D probe is “shaped” such that in a mixed signal environment (i.e.: more than one frequency band is used in a particular location) it accurately measures the percent of MPE.

Probe Description – As suggested in FCC OET Bulletin No. 65 - Edition 97-01, the response of the measurement instrument should be essentially isotropic, (i.e., independent of orientation or rotation angle of the probe). For this reason, the Narda A8722D Isotropic probe was used for these measurements.

Sampling Description: At each measurement location, a spatially averaged measurement is collected over the height of an average human body. The 8718B survey meter performs a time average measurement while the user slowly moves the probe over a distance range of 0 cm to 200 cm (about 6 feet) above ground level. The results recorded at each measurement location include both average and peak values over the spatial distance.

Instrumentation Information: A summary of specifications for the equipment used is provided in the table below.

Manufacturer	Narda Microwave			
Probe	A8722D, Serial Number 07030			
Calibration Date	01/14/04			
Calibration Interval	12 Months			
Meter	8718B, Serial Number 06028			
Calibration Date	06/24/03			
Calibration Interval	12 Months			
Probe Specifications	Freq Range	Field Measured	Standard	Measurement Range
	300 KHz-50 GHz	E	FCC 1997	0.3 – 300 % of Controlled

Measurement Uncertainty: The total measurement uncertainty of the NARDA measurement probe and meter is no greater than ± 3 dB. The factors which contribute to this include the probe's frequency response deviation, calibration uncertainty, ellipse ratio, and isotropic response. Every effort is taken to reduce the overall uncertainty during measurement collection, including rotating the probe about the axis of the handle and pointing the probe directly at the likely highest source of emissions.

Survey Results

Measured results, both the Spatial Average and Maximum Peak values are detailed in Table 1 as presented below. All measured results were recorded on February 4, 2004 between the hours of 11:00 to 3:30 PM. The local weather conditions during this assessment were clear and sunny with an ambient temperature of 38 ° F.

Each measurement point corresponds to the indicted location marked on the aerial photograph presented in Figure 1.

Measurement Point	Spatial Average % General Population MPE	Maximum Peak % General Population MPE	Location Details
1	2.05	3.75	At gate to fence surrounding Tower #2
2	3.85	5.55	East corner of fence surrounding Tower #2
3	2.9	3.2	North corner of fence surrounding Tower #2
4	2.45	2.8	West corner of fence surrounding Tower #2
5	3.4	3.75	South corner of fence surrounding Tower #2
6	2.8	5.55	30 ft south of gate to base of Tower #2
7	3.6	5.55	30 ft south of fence surrounding Tower #1
8	3.45	4.15	At access door to old transmitter building
9	3.75	9.75	
10	3.6	6.4	At gate to fence surrounding Tower #1
11	4.15	13.15	
12	7.7	29.15	East of fence surrounding Tower #1
13	9.45	32.65	North of fence surrounding Tower #1
14	4.55	16.5	West of fence surrounding Tower #1
15	3.2	4.6	South of fence surrounding Tower #1
16	3.05	3.45	
17	3.85	4.5	
18	3.75	9.45	
19	2.4	3.4	
20	3.4	3.85	Access door to Verizon Equipment Room
21	3.55	4.5	
22	2.85	5.15	
23	2.95	4.2	
24	3.7	4.6	Main access door to new transmitter building
25	1.7	5.45	
26	3.55	9.3	
27	< 1.0	3.65	
28	< 1.0	3.75	
29	1.15	7.15	
30	< 1.0	3.95	
31	1.05	5.7	
32	< 1.0	1.5	
33	< 1.0	1.7	
34	1.4	2.35	
35	2.45	4.9	

Table 1. Measured Results

Measurement Point	Spatial Average % General Population MPE	Maximum Peak % General Population MPE	Location Details
36	4.65	10.05	On site access road
37	2.55	4.9	On site access road
38	7.8	15.2	
39	2.55	6.55	Near South anchor of Tower # 1
40	1.5	2.15	
41	2.3	3.4	Near Northeastern Anchor of Tower #2
42	< 1.0	2.7	
43	< 1.0	< 1.0	
44	2.3	6.95	Near North anchor of Tower # 1
45	< 1.0	1.05	
46	2	2.25	
47	2.9	3.1	
48	3.45	5.8	
49	40.9	77.4	Near Northwestern Anchor of Tower #2
50	7.15	12.95	6 ft east of location 49
51	4.55	7.5	
52	5.95	11.05	
53	15.7	27.3	Near West anchor of Tower # 1
54	9.95	17.9	
55	8.65	19.15	
56	12.2	25.7	Near South anchor of Tower # 2
57	1.2	1.5	
58	7.05	11.15	On site access road
59	1.05	1.5	On site access road
60	1.05	1.3	Site access road 30 ft east of entrance gate
61	1.05	1.5	At site entrance gate
62	1.3	1.6	Intersection of Rt 44 & site access road
63	< 1.0	< 1.0	Intersection of Mt Video Rd & Rt 44

Table 1. Measured Results (Continued)

Aerial View of Measurement Locations

Figure 1, as presented below, depicts the locations of field measurement points overlaid onto an aerial photograph of the West Hartford facility.

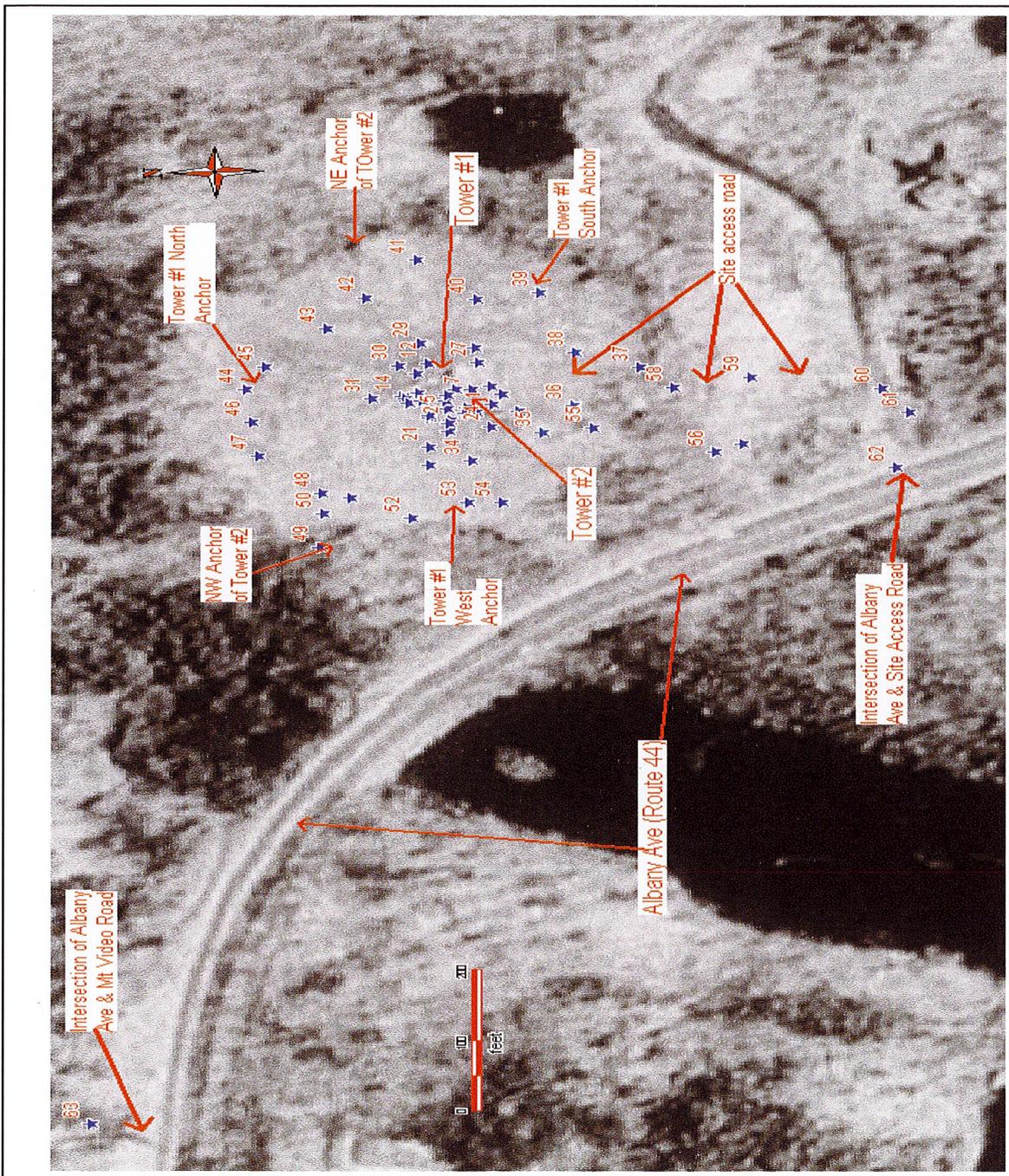
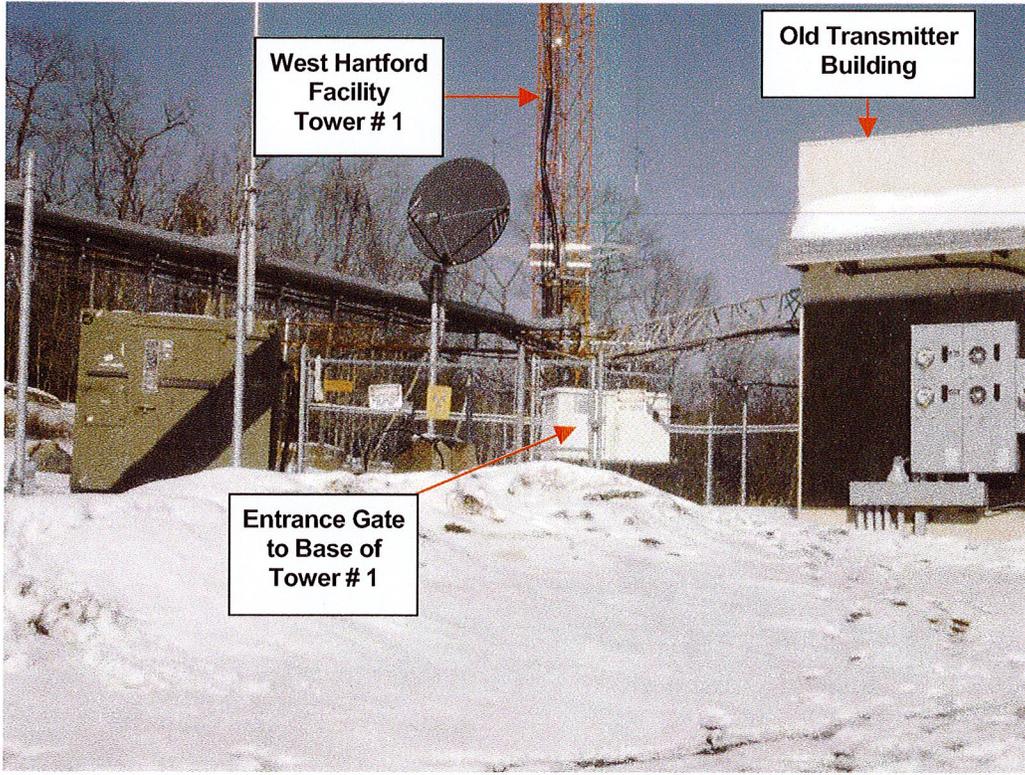


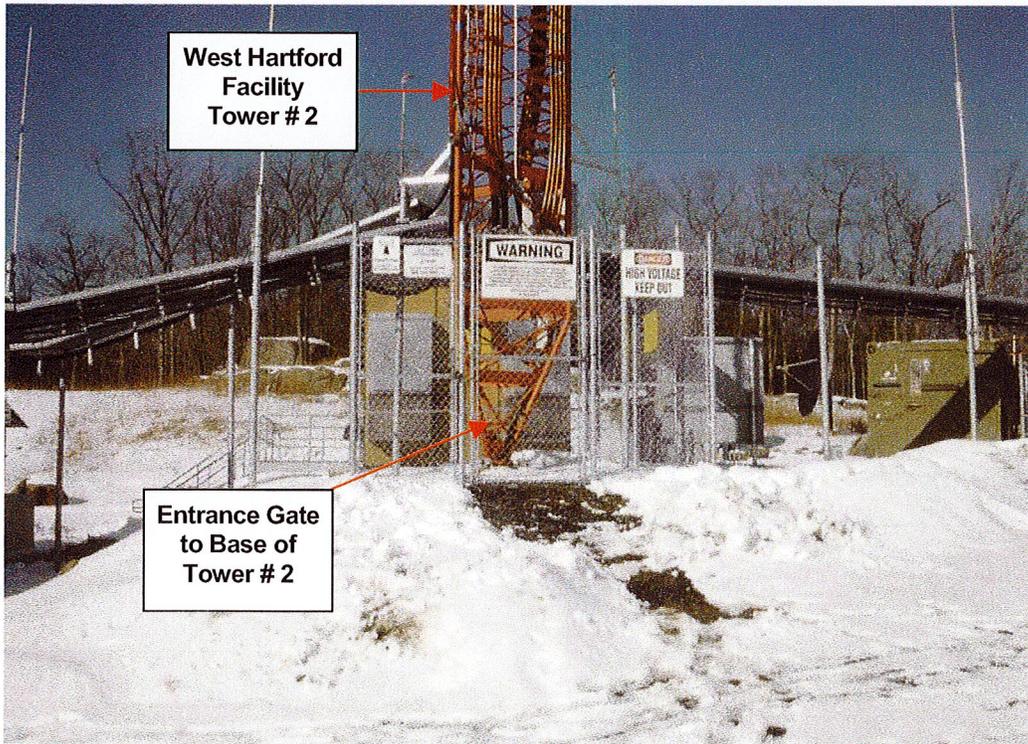
Figure 1. Aerial View of West Hartford Facility- 1 Meter Resolution

Photos of West Hartford Facility

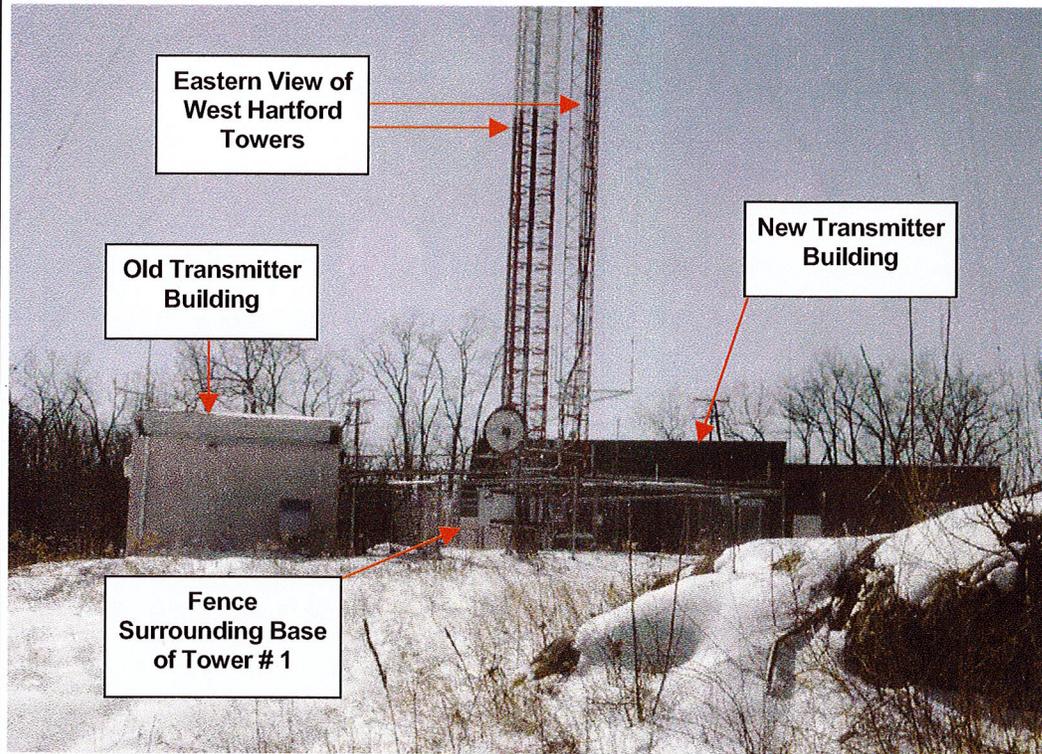
PICTURE 1



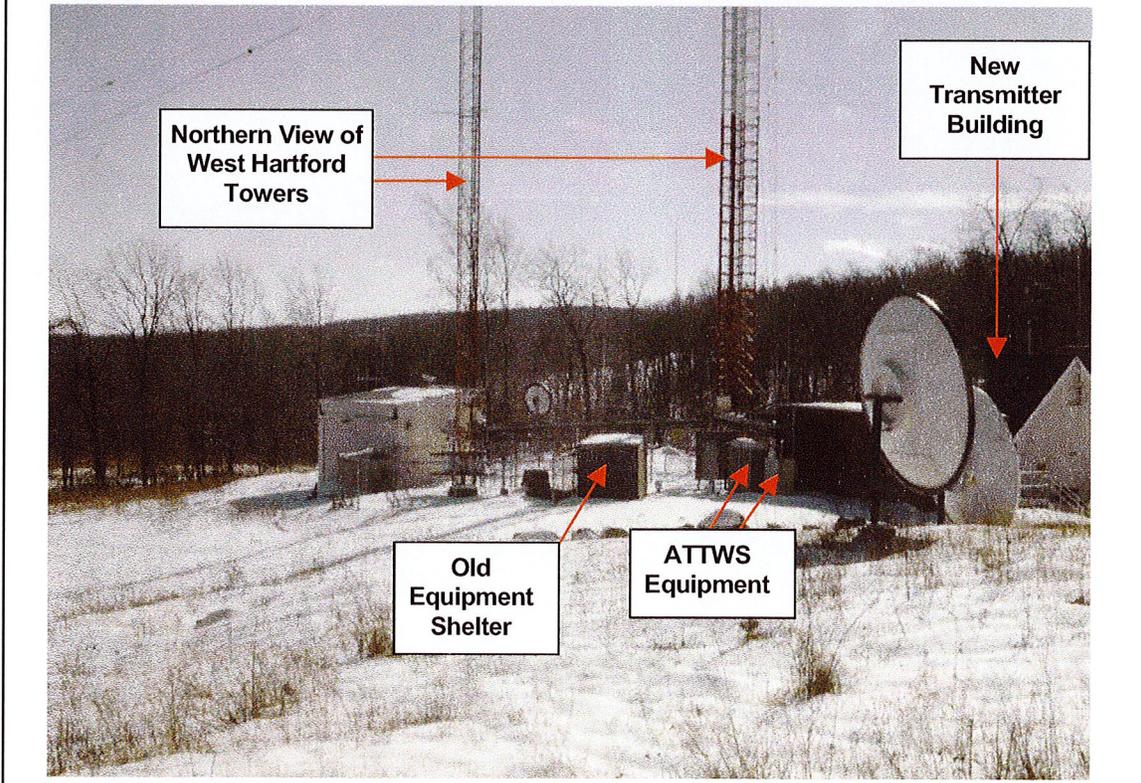
PICTURE 2



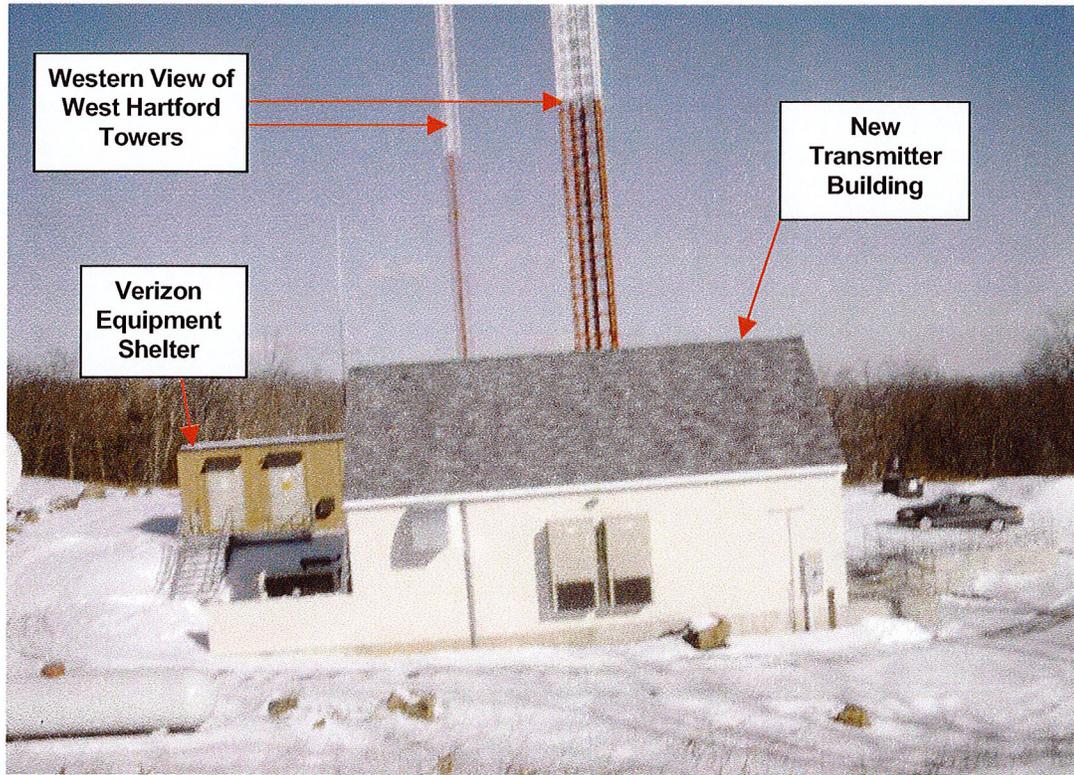
PICTURE 3



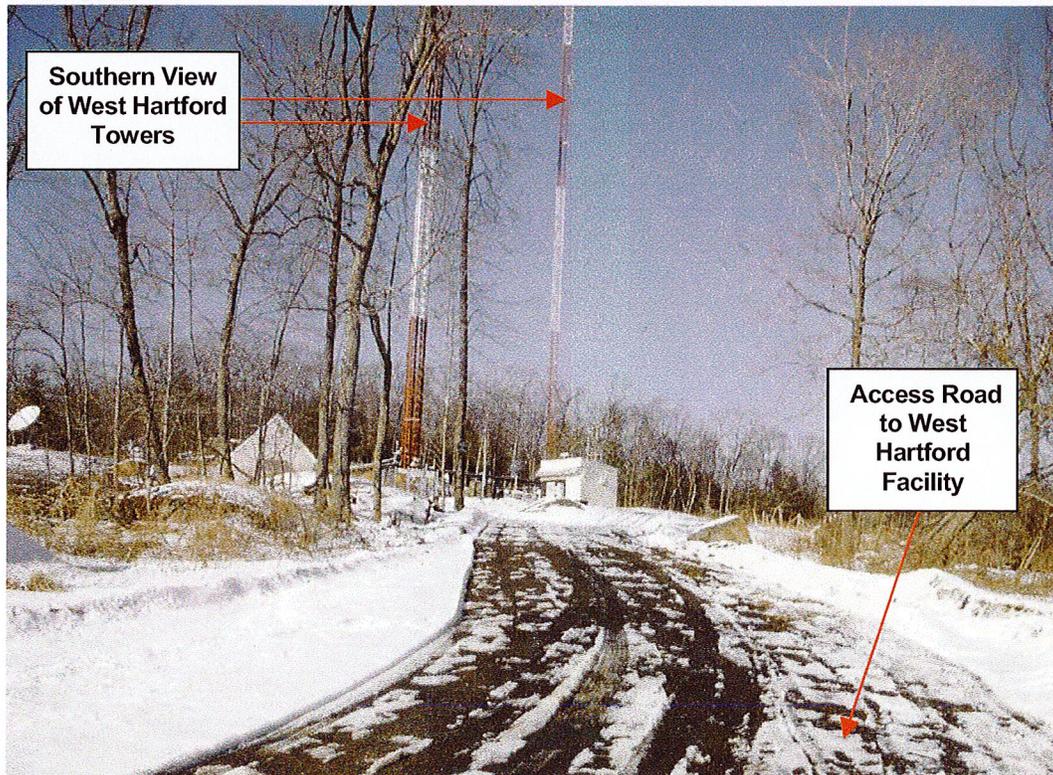
PICTURE 4



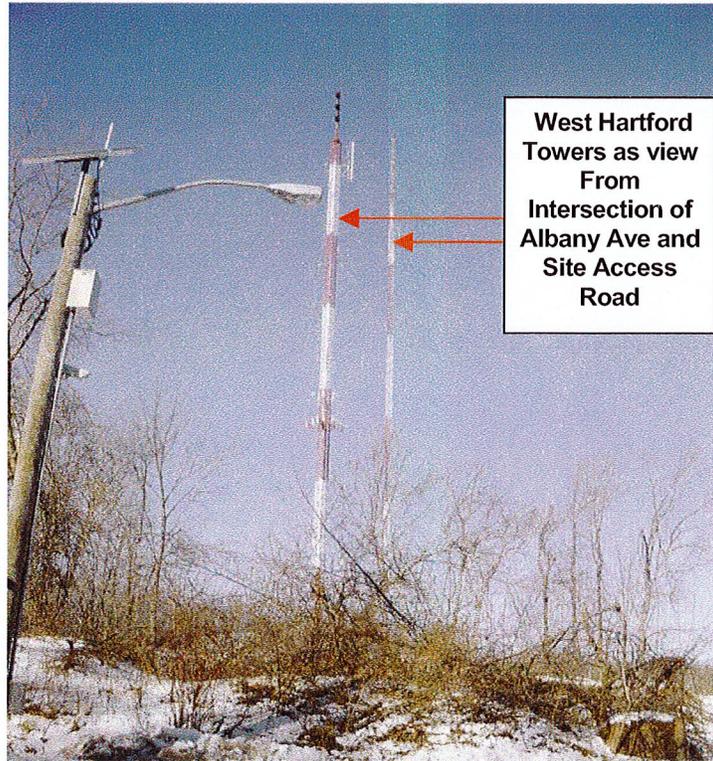
PICTURE 5



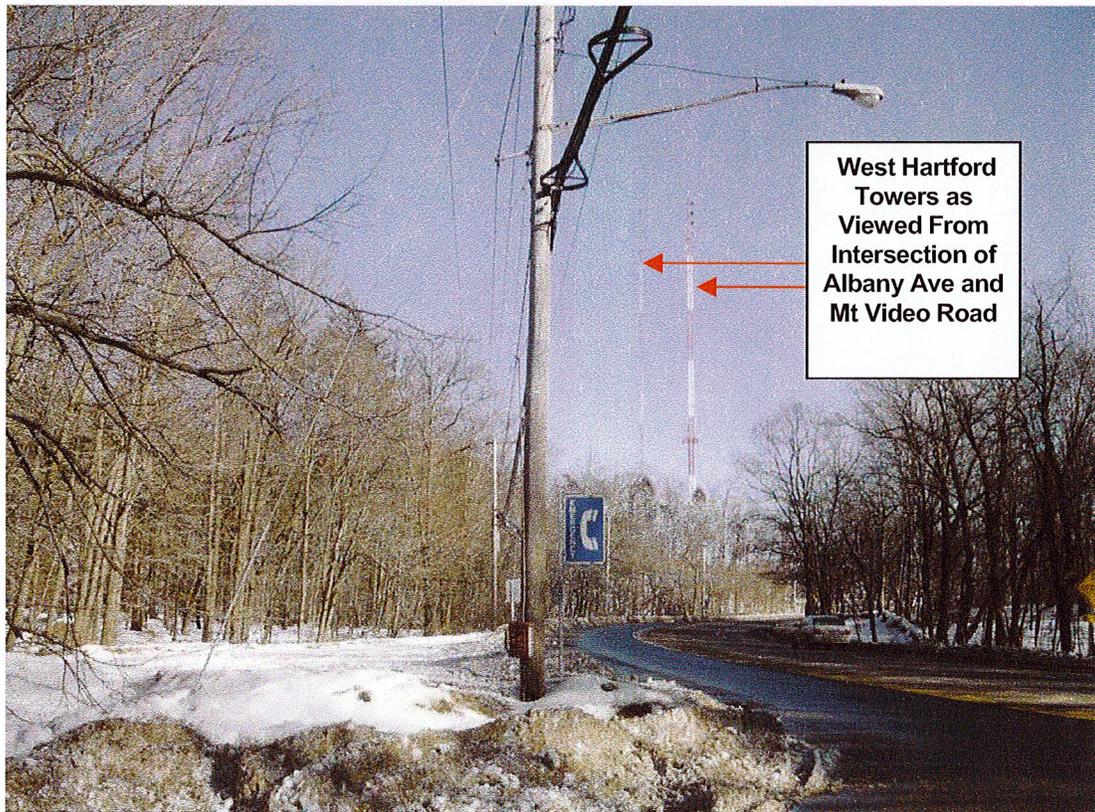
PICTURE 6



PICTURE 7



PICTURE 8



Discussion of Results

The "worst case spatial average" power density measured during this assessment was 40.9% of the FCC MPE limits for General Population/Uncontrolled exposure as outlined in FCC OET Bulletin 65 Edition 97-01. This worst-case measurement location was recorded near the northwestern anchor of Tower # 2, which corresponds to Measurement Location # 49.

It should be noted that the % MPE values recorded for measurement location # 49, which was within 2 feet of the northwest guy anchor for Tower # 2, might not be completely attributable to RF emanations from the West Hartford towers. RF currents induced onto the guy wires themselves may be contributing to measurements sampled near the northwestern anchor of Tower # 2. An additional measurement was sampled 6 feet east of Location # 49, which is designated herein as Measurement Location #50. The Spatial Average value detected at this adjacent location was 7.15 % MPE and the corresponding Maximum Peak value detected was 12.95 % MPE.

The results reported herein reflect the cumulative power density levels from the antennas currently installed upon the West Hartford towers located at 3114 Albany Avenue in West Hartford. In order to assess the possible impact upon the cumulative power density at the West Hartford site, after the addition of the proposed Cingular Wireless antennas onto Tower #2, an additional analysis was performed.

"Worst Case" cumulative power density levels at the West Hartford site, with Cingular Wireless equipment operating at full power, must comply with the FCC's General Population/Uncontrolled MPE limit. To demonstrate this future compliance the calculated "worst case" exposure at the base of the tower, as submitted by Cingular Wireless, is added to the measured cumulative power density reported herein for the antennas currently installed on the West Hartford Towers.

Cingular Wireless reports, under a separate submittal, their "worst case" calculated exposure at the base of the tower from their cellular antennas to be 2.74% MPE and 2.32 % MPE from their PCS antennas. These calculated "worst case" exposure values are then added to the measured cumulative power density values to determine the possible "worst case" cumulative power density with Cingular Wireless operating at full power.

Table 2 depicts the possible "worst case" cumulative power density results for the West Hartford site. The "worst case" possible cumulative power density was calculated to be 45.96 % MPE of the FCC's Population/Uncontrolled limit.

Summarized Results

The "worst case" spatial average power density measured during this assessment was 40.9% of the FCC MPE limits for General Population/Uncontrolled exposure as outlined in FCC OET Bulletin 65 Edition 97-01. This worst-case measurement location was recorded near the northwestern guy line anchor of Tower # 2, which corresponds to Measurement Location # 49.

The possible "worst case" spatial average power density, with Cingular Wireless antennas installed on the West Hartford Tower #2, was calculated to be 45.96% of the FCC MPE limits for General Population/Uncontrolled exposure as outlined in FCC OET Bulletin 65 Edition 97-01. This possible "worst-case" measurement location was near the northwestern guy line anchor of Tower # 2, which corresponds to Measurement Location # 49.

Possible "Worst Case" Results

The Spatial Average % MPE values measured on 02/04/2004, as detailed in Table 1, are added to the calculated "Worst Case" exposure at the base of the tower as submitted by Cingular Wireless, to determine the possible "Worst case" MPE value in the vicinity of the West Hartford site after activation of the Cingular Wireless facility..

Measurement Point	Spatial Average % General Population MPE Measured on 02/04/04	Spatial Average % General Population MPE with "Worst Case" Cingular Wireless Calculated Exposure
1	2.05	7.11
2	3.85	8.91
3	2.9	7.96
4	2.45	7.51
5	3.4	8.46
6	2.8	7.86
7	3.6	8.66
8	3.45	8.51
9	3.75	8.81
10	3.6	8.66
11	4.15	9.21
12	7.7	12.76
13	9.45	14.51
14	4.55	9.61
15	3.2	8.26
16	3.05	8.11
17	3.85	8.91
18	3.75	8.81
19	2.4	7.46
20	3.4	8.46
21	3.55	8.61
22	2.85	7.91
23	2.95	8.01
24	3.7	8.76
25	1.7	6.76
26	3.55	8.61
27	< 1.0	5.91
28	< 1.0	5.66
29	1.15	6.21
30	< 1.0	5.86
31	1.05	6.11
32	< 1.0	5.96
33	< 1.0	5.81
34	1.4	6.46
35	2.45	7.51

Table 2. Possible "Worst Case" Results with Cingular Wireless

Measurement Point	Spatial Average % General Population MPE Measured on 02/04/04	Spatial Average % General Population MPE with "Worst Case" Cingular Wireless Calculated Exposure
36	4.65	9.71
37	2.55	7.61
38	7.8	12.86
39	2.55	7.61
40	1.5	6.56
41	2.3	7.36
42	< 1.0	5.36
43	< 1.0	5.71
44	2.3	7.36
45	< 1.0	5.81
46	2	7.06
47	2.9	7.96
48	3.45	8.51
49	40.9	45.96
50	7.15	12.21
51	4.55	9.61
52	5.95	11.01
53	15.7	20.76
54	9.95	15.01
55	8.65	13.71
56	12.2	17.26
57	1.2	6.26
58	7.05	12.11
59	1.05	6.11
60	1.05	6.11
61	1.05	6.11
62	1.3	6.36
63	< 1.0	5.46

Table 2. Possible "Worst Case" Results with Cingular Wireless (Continued)

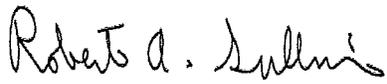
Conclusion

The area within the immediate vicinity of the West Hartford site, located at 3114 Albany Avenue, was surveyed and found to be within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3). The "worst case spatial average" power density measured during this assessment was 40.9 % of the General Population/Uncontrolled MPE limit. This level occurred only in the immediate vicinity of the Northwestern Anchor of Tower #2.

The possible "Worst Case" cumulative power density, with the proposed Cingular Wireless antennas installed on Tower # 2 at the West Hartford site, was computed to be within the mandated General Population/Uncontrolled limits for Maximum Permissible Exposure, as delineated in the Federal Communications Commission's Radio Frequency exposure rules published in 47 CFR 1.1307(b)(1)-(b)(3). The majority of the points studied were shown to be less than 10% of the General Population/Uncontrolled MPE limit. The possible "Worst Case" power density, with Cingular Wireless antennas operating at full power, was shown to be 45.96% MPE of the General Population/Uncontrolled MPE limit.

Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The measurements were obtained with properly calibrated equipment using techniques in compliance with ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Robert A. Sullivan
C Squared Systems, LLC

February 6, 2004
Date

References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission
Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

DECEIVED
cingular

JAN 26 2004

WIRELESS CONNECTICUT SITING COUNCIL

FACSIMILE TRANSMITTAL SHEET

TO: DAVE MARTIN FROM: STEVE LEVINE

COMPANY: CSC DATE: 1-26-04

FAX NUMBER: 827-2950 TOTAL NO. OF PAGES INCLUDING COVER: 2

PHONE NUMBER: SENDER'S REFERENCE NUMBER:

RE: 3114 ALBANY AVE, WEST HARTFORD, YOUR REFERENCE NUMBER:

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

NOTES/COMMENTS:

Thanks.

Steve

RECEIVED
 JAN 26 2004

CONNECTICUT SITING COUNCIL

Power Density Calculations

Site	Carrier	# Ch	Watts/Ch	Ant Ht	Power Density		MHz	S	%MPE	Site Total
					(mW/cm ²)					
West Hartford - 3114 Albany Avenue	Verizon	19	100	130	0.0404		874.5	0.5830	6.93%	
West Hartford - 3114 Albany Avenue	AT&T	4	250	140	0.0183		1945	1.0000	1.83%	
West Hartford - 3114 Albany Avenue	VHF	1	250	200	0.0022		450	0.3000	0.75%	
West Hartford - 3114 Albany Avenue	WCCC	1	23000	420	0.0469		106.9	0.2000	23.44%	
West Hartford - 3114 Albany Avenue	WMNR	1	10	150	0.0002		91.9	0.2000	0.08%	
West Hartford - 3114 Albany Avenue	Rinkers									
West Hartford - 3114 Albany Avenue	Paging	1	100	265	0.0005		152.03	0.2000	0.26%	
West Hartford - 3114 Albany Avenue	LPTV, Ch.									
West Hartford - 3114 Albany Avenue	38	1	50000	285	0.2213		614	0.4093	54.07%	
West Hartford - 3114 Albany Avenue	W/Hd Fire									
West Hartford - 3114 Albany Avenue	Dept	1	50	265	0.0003		166.25	0.2000	0.13%	
West Hartford - 3114 Albany Avenue	Cingular	2	296	115	0.0161		880	0.5867	2.74%	
West Hartford - 3114 Albany Avenue	Cingular	2	427	115	0.0232		1930	1.0000	2.32%	92.56%

*These numbers are reasonable
 and acceptable to Cingular here
 and acceptable to MPE analysis here
 The WCCC %MPE of true conditions
 is more reflective of true conditions
 than the worst-case calculations
 done by Cingular.
 - Anthony Rin
 1/26/04*



Fax: (860) 513-7190

Michele G. Briggs
Manager of Real Estate

January 16, 2004

RECEIVED
JAN 16 2004

CONNECTICUT
SITING COUNCIL

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

**Re: Notice of Exempt Modification – Existing Marlin Towers LLC
Telecommunications Tower Facility at 3114 Albany Avenue, West Hartford,
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 Albany Avenue in West Hartford, Connecticut.

The West Hartford facility is located at 3114 Albany Avenue (north side of US Highway 44), near the crest of Avon Mountain and close to the Avon – West Hartford line. Tower coordinates (NAD 83) are N 41° 47’ 48” and W 72° 47’ 49”. The facility is owned and operated by Marlin Towers LLC (“Marlin”), with offices at 1039 Asylum Avenue, Hartford, CT 06105. Marlin also owns the underlying land.

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 West Hartford.

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.

Marlin 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, proposed tower profiles, and a structural analysis report that shows the tower is structurally capable of supporting the proposed SBMS telecommunications equipment.

Marlin's Albany Avenue tower was approved by local zoning authorities on July 5, 2000. Because the tower was initially proposed as an FM radio tower, it was exempt from Council jurisdiction. Additionally, the local approval date was prior to the November 2000 Covello decision concerning Council and Town jurisdiction for tower siting. The tower came under the Council's jurisdiction with AT&T's application to co-locate in EM-AT&T-029-020801, which was approved on August 15, 2002.

The Albany Avenue facility consists of a 346-foot guyed lattice tower on a 12.5 acre parcel owned by Marlin. It (Tower #2) is one of two similar structures on the property. (Tower #1 is approximately 50 feet to the northeast of Tower #2.) Marlin has previously leased space on Tower #2 and ground space to Verizon and AT&T, as well as to a number of other radio and television broadcasters. AT&T operates panel antennas at the 145' level of Tower #2 and has its equipment on a 7' x 16' concrete pad. Verizon operates panel antennas at the 130' level and houses equipment in a 12' x 30' equipment building.¹

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 115 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 West Hartford 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 Marlin and within the existing equipment compound.
3. The proposed additions will not increase the noise level at the existing facility

¹ Although Verizon's earlier application to the Council stated plans to locate equipment at the 150 ft level of Tower #2, it's actual intent was to locate at 130 ft. Verizon has since corrected this error with the Council. (Letter attached.)

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 base of Tower #2, 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 [†] (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
WCCC - FM *	327	106.9	1	23,000	0.0773	0.2000	38.67
LPTV, Ch. 38	285	614	1	50,000	0.2213	0.4093	54.08
Rinker's Paging	265	152.03	1	100	0.0005	0.2000	0.26
West Hartford Fire Dept.	265	166.25	1	50	0.0003	0.2000	0.13
WMNR - FM *	165	91.9	1	10	0.0001	0.2000	0.07
AT&T *	145	D: 1945 E: 1985	16	250	0.0684	1.0000	6.84
Verizon *	130	875	19	100	0.0404	0.5833	6.93
Cingular GSM	115	880 - 894	2	296	0.0161	0.5867	2.74
Cingular GSM	115	1930 - 1935	2	427	0.0232	1.0000	2.32
Total							73.36%

* Power density parameters taken from applications to the Council in TS-VER-155-011101 and EM-AT&T-155-020801, and from information provided by Marlin Towers LLC.

† 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 at the base of Tower #2 would be approximately 73% of the ANSI/IEEE standard, as calculated for mixed frequency sites. Moreover, the FM and LPTV transmissions are strongly directional (flat, toward the horizon) according to the tower owner. Accordingly, the worst-case calculation is exceptionally conservative. Total power density levels resulting from SBMS' use of Tower #2 would thus be within applicable standards.

Tower #1 is approximately 50 feet away from Tower #2. The "worst-case" exposure calculation for a point of interest at the base of Tower #1 would be:

Company	Centerline Height (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density [†] (mW/cm ²)	Standard Limits (mW/cm ²)	Percent of Limit
WCCC - FM Backup	323	106.9	1	0	0.0000	0.2000	0.00
Station Master	284	224.94	1	50	0.0002	0.2000	0.11
UHF Master	280	451 - 461	3	50	0.0007	0.3006	0.23
WIMI	104	1.29	1	490	0.0163	100.0000	0.02
Total							0.36%

* Power density parameters provided by Marlin Towers LLC.

This table demonstrates that the power density contribution of Tower #1 is negligible, and the entire site would remain within applicable RF emission standards.

For the foregoing reasons, SBMS respectfully submits that proposed changes to implement expanded shared use at the West Hartford 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,

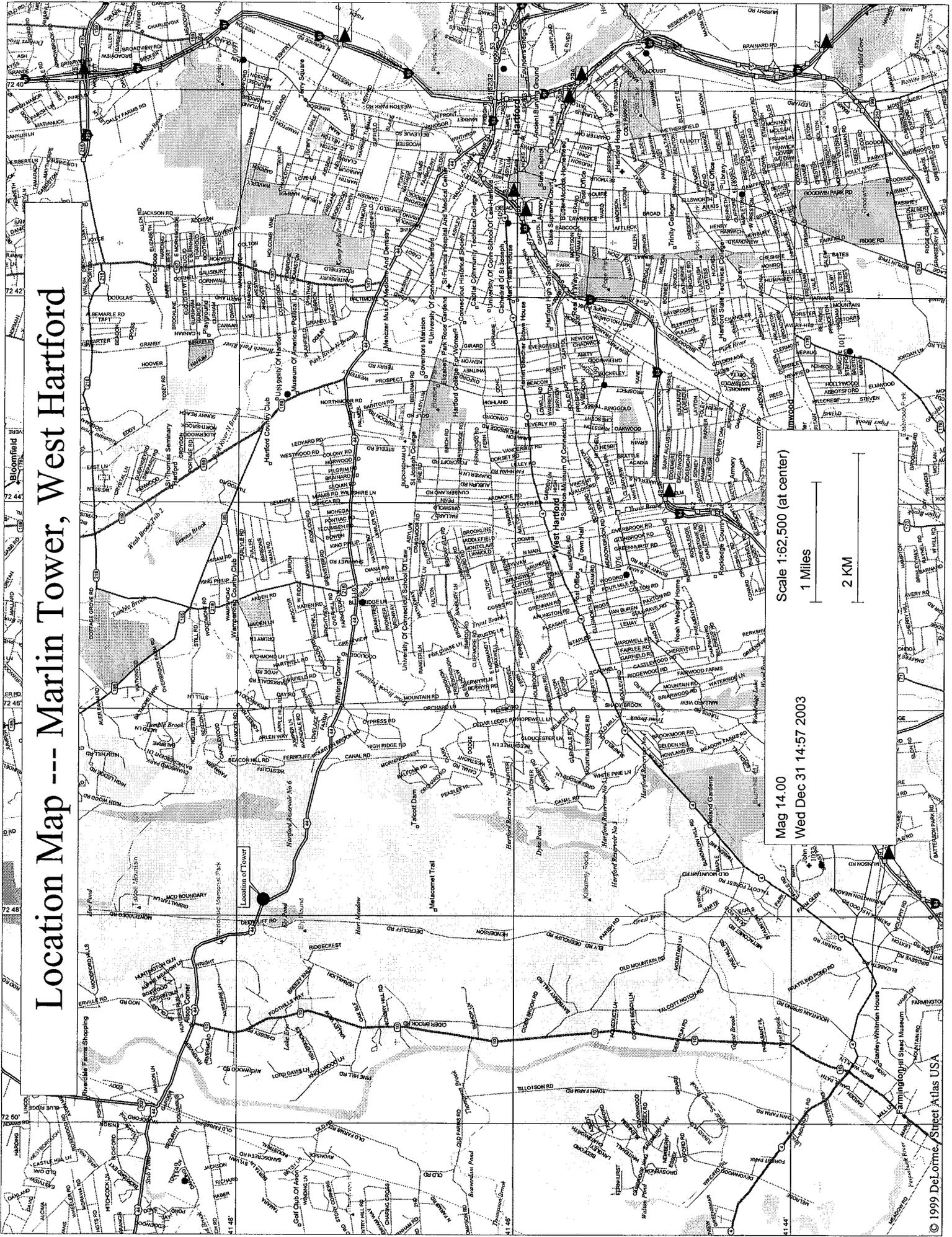
A handwritten signature in blue ink that reads "Michele G. Briggs / SLL". The signature is written in a cursive style.

Michele G. Briggs
Manager of Real Estate

Enclosures

cc: Honorable Barry M. Feldman, Town Manager, Town of West Hartford

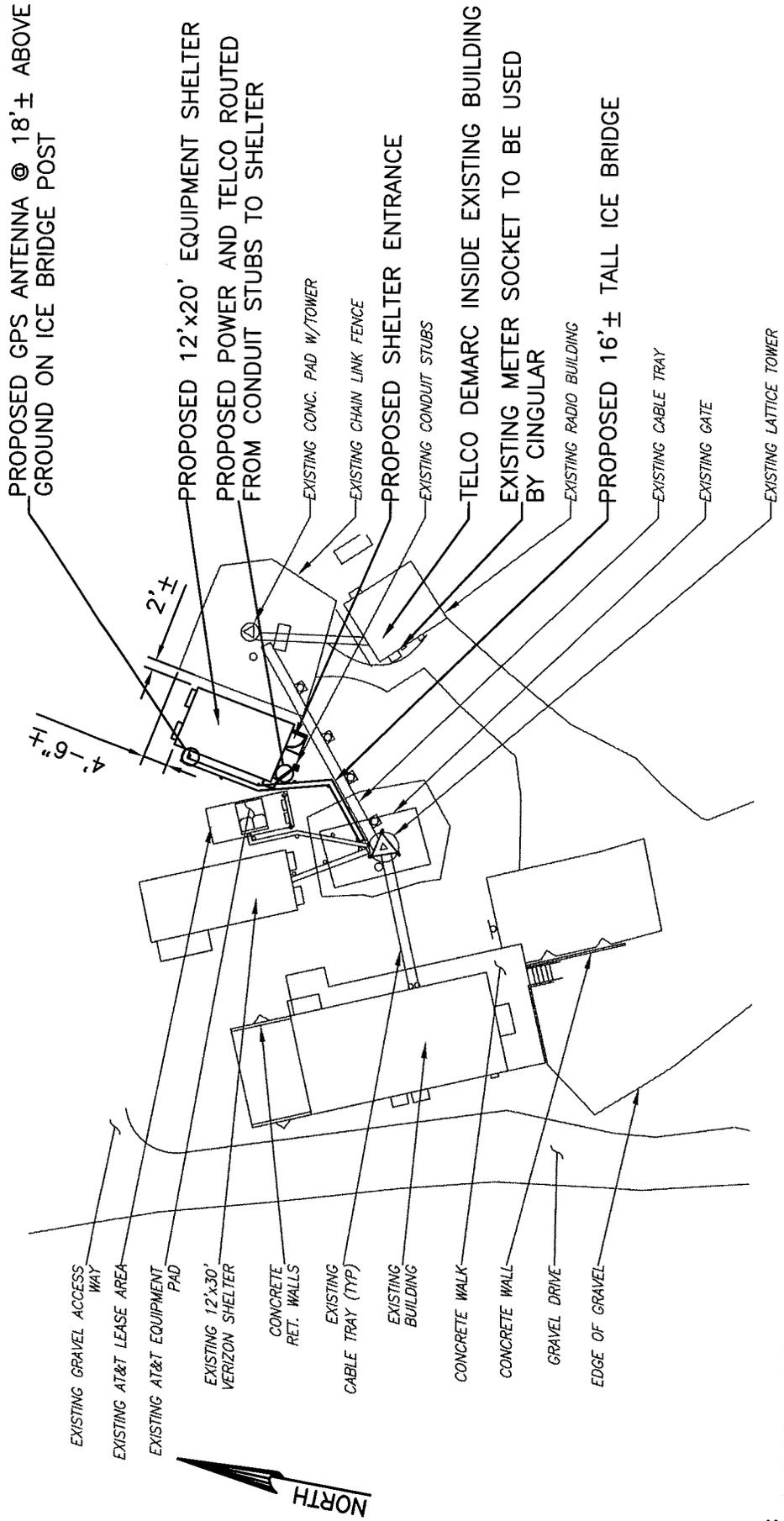
Location Map --- Marlin Tower, West Hartford



Mag 14.00
Wed Dec 31 14:57 2003

Scale 1:62,500 (at center)

1 Miles
2 KM



NOTE:

1. PROPOSED UNDERGROUND TELCO AND ELECTRIC WILL BE ROUTED IN EXISTING CONDUIT FROM THE EXISTING RADIO BUILDING.

LEASE PLAN
SCALE: 1"=30'

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

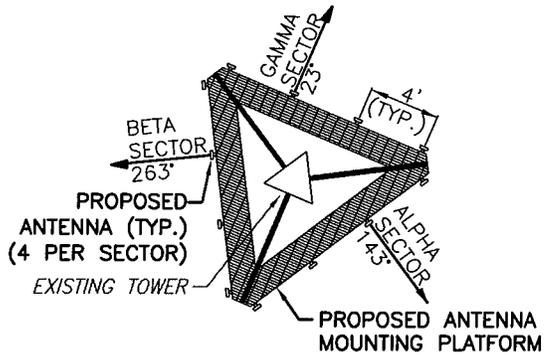
Engineers
Planners
Surveyors

SCALE:	AS SHOWN
DESIGNED BY:	CKD
DATE:	01/15/04

LEASING PLAN	SITE NAME MARLIN TOWERS, LLC. 3114 ALBANY AVENUE WEST HARTFORD, CONNECTICUT
--------------	--

Cingular WIRELESS

SHEET NO. **LE1**

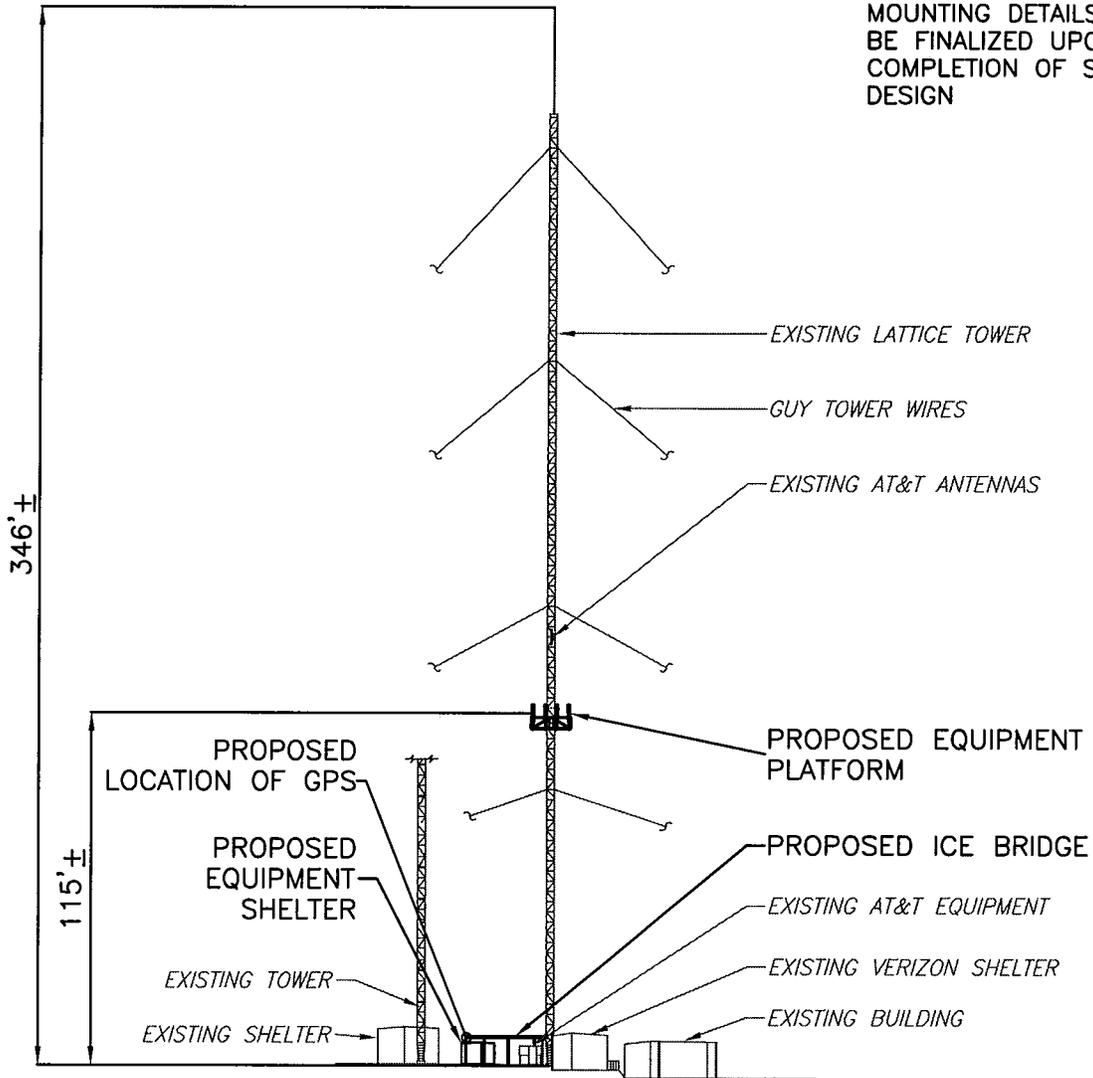


TOP VIEW

SCALE: N.T.S.

NOTES:

ANTENNA AZIMUTHS AND MOUNTING DETAILS SHALL BE FINALIZED UPON COMPLETION OF SITE DESIGN



NORTH ELEVATION

SCALE: 1"=60'

Q:\3666\04-West Hartford\cadd\cell\lease\12.dwg Plot: msmith Thu, Jan 15 2004 3:11:48pm By: MJS Xref: Layer State:

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:

01/15/04

**LEASING
 ELEVATION**

SITE NAME **MARLIN TOWERS, LLC.**
 3114 ALBANY AVENUE
 WEST HARTFORD, CONNECTICUT



SHEET NO.

LE2

Marlin Tower LLC

Tower Space Available!!

Tower Sketch

- Marketing Info
- Site Plan
- Photographs
- Detuning Info
- Legal Info
- Tower Sketch
- Links
- Directions
- Contact

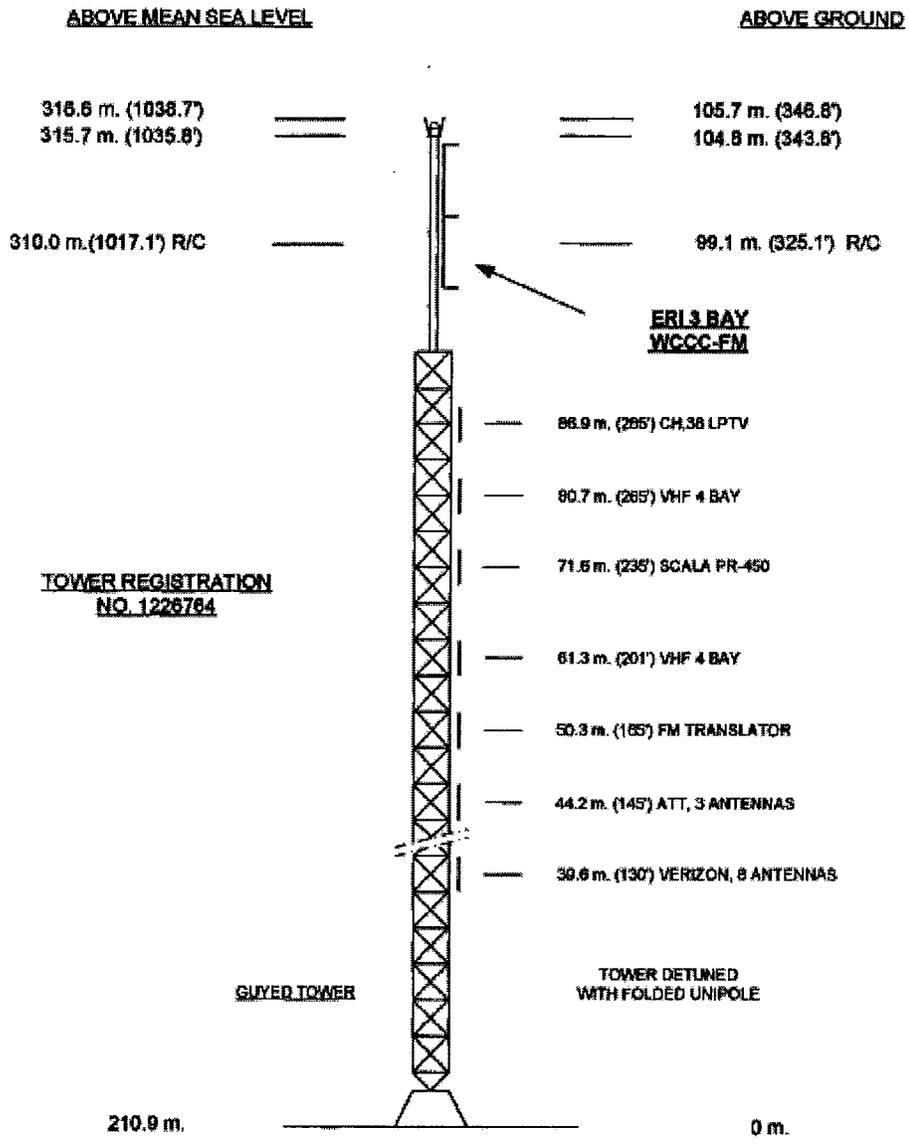


EXHIBIT E - 1
 VERTICAL SKETCH
 MARLIN TOWER 2
 WEST HARTFORD, CONNECTICUT
 DECEMBER 2003

MARLINTOWERLLC.COM, NOVEMBER 2003

-- Back --

ROBINSON & COLE_{LLP}

KENNETH C. BALDWIN

280 Trumbull Street
 Hartford, CT 06103-3597
 Main (860) 275-8200
 Fax (860) 275-8299
 kbaldwin@rc.com
 Direct (860) 275-8345

January 14, 2004

Via Facsimile and U.S. Mail

S. Derek Phelps
 Executive Director
 Connecticut Siting Council
 10 Franklin Square
 New Britain, CT 06051

Re: **Cellco Partnership d/b/a Verizon Wireless ("Cellco")**
TS - VER - 155-011101
3114 Albany Avenue, West Hartford, Connecticut

Dear Mr. Phelps:

It has come to our attention that there was a discrepancy with the location of our antennas shown on the plan submitted with the above referenced tower share authorization request. This request was approved on November 29, 2001. In this filing we incorrectly stated Cello intended to locate panel antennas at the 150-foot level on the existing tower. Cello intended and, in fact did, locate its antennas at the 130-foot level. We have reviewed our prior filing and confirmed that the power density calculation submitted at that time was based on antennas located at the 130-foot level and is therefore, still accurate.

We have discussed this discrepancy with Michael Perrone, your Staff Analysts and together, decided to send this letter to correct the Siting Council's records and the Council's telecommunications database. Please contact me with any questions.



Law Offices

BOSTON

HARTFORD

NEW LONDON

STAMFORD

GREENWICH

NEW YORK

www.rc.com

Sincerely,

Kenneth C. Baldwin

cc: Sandy Carter
 Michael Perrone, Siting Analyst
 Steve Levine, Cingular Wireless

HART1-1152262-1



PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS
250 East Broad Street • Suite 500 • Columbus, Ohio 43215

December 19, 2003

Dewberry
59 Elm Street
New Haven, CT 06510

Attn: Mr. Chris Daddi

Re: Existing 346-ft. Guyed Tower
Located in West Hartford, Hartford, CT (Marlin Tower 2)
PJF Project #34803-061 ; Dewberry #3666-05

Dear Chris:

Paul J. Ford and Company understands that Cingular proposes to collocate on the above referenced tower. Paul J. Ford and Company was supplied with the original tower and foundation design drawings by PiRod, Inc. dated 8-4-2000. The tower was originally designed as an initial 346' tower extendable to a future height of 670'. The tower was designed for an 80 mph basic wind velocity (69 mph with 1/2" ice) for the following antenna loading:

670' to 723'	TFU-30GTH-RD-TV w/ 6" line
630' to 650'	3-Bay FM w/ radomes w/ 3 1/8" line
600', 575', 550', 525', 500', 475', 450', 425'	(1) PD220 w/ 6' sidearm w/ 1 5/8" line
335', 310'	(3) PD220 w/ (3) 6' sidearms w/ (3) 1 5/8" line
311' to 346'	3-Bay FM w/ radomes w/ 3 1/8" line
300'	1-Bay FM w/ radome w/ 3 1/8" line
275'	(4) PD220 w/ (3) 6' sidearms w/ (4) 7/8" line
250', 230', 210', 190', 170', 150'	(12) ALP9212N w/ T-frame mounts w/ (12) 1 5/8" line
115'	(2) Scala PR-950 w/ (2) 7/8" line

For this structural review, we were provided with antenna information regarding the proposed antennas and an inventory of the existing antennas. Based on information provided, it is our understanding that the following antenna loading is to be considered for this structural review:

COLUMBUS, OHIO
(614) 221-6679
Fax (614) 221-2540

ATLANTA, GEORGIA
(404) 266-2407
Fax (404) 869-4608

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

• www.pjfweb.com •

Dewberry

Attn: Mr. Chris Daddi

Re: Existing 346-ft. Guyed Tower
Located in West Hartford, Hartford County, CT (Marlin Tower 2)
PJF Project #34803-061 ; Dewberry #3666-05

311' to 346'	3-Bay Fm
285'	ACS #16P4(38)052501 Ch #39
265'	DB420B
235'	Scala PR-450U
201'	DB420B
165'	Shively .6810 (1-Bay FM)
145'	AT&T, (3) panel antennas, exact model number unknown
130'	Verizon, (8) Allgon 7129.16 panel antennas
115'	<i>Proposed Cingular (12) CSS DUO-1417-8686-40 w/ (12) TMA's and (12) 1 5/8" lines on 15' PiRod low profile platform</i>

For this structural review we have compared design wind areas with wind areas from the existing and proposed antennas. Based on our comparison we have concluded that the existing and proposed antenna wind area will not exceed the wind areas from the original design.

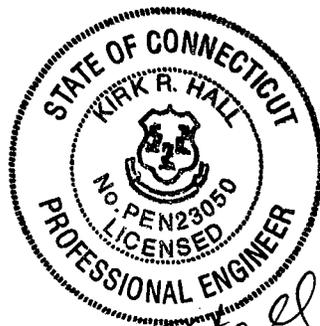
By inspection, we do not believe that a complete structural analysis of this structure is required at this time. The existing tower and foundation system should have sufficient capacity to support proposed loading while maintaining the original design wind and ice requirements.

If you have any questions or concerns regarding the review of this tower structure, please feel free to contact us at (614) 221-6679.

Sincerely,

PAUL J. FORD AND COMPANY

Kirk R. Hall, P.E.
Project Manager



Kirk R. Hall
12-19-03



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 16, 2004

Honorable Barry M. Feldman
Town Manager, Town of West Hartford
Town Hall, 50 South Main St.
West Hartford, Connecticut 06107

Re: Notice of Exempt Modification – Existing Marlin Towers LLC Telecommunications Tower Facility at 3114 Albany Avenue, West Hartford, Connecticut

Dear Mr. Feldman:

Southwestern Bell Mobile Systems, LLC (“SBMS”) intends to install telecommunications antennas and associated equipment at an existing multicarrier telecommunications tower at 3114 Albany Avenue in West Hartford, Connecticut.

The facility is owned and operated by Marlin Towers LLC (“Marlin”), with offices at 1039 Asylum Avenue, Hartford, CT 06105. Marlin also owns the underlying land.

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 West Hartford 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,

Michele G. Briggs
Manager of Real Estate

Enclosure