

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

Web Site: www.state.ct.us/csc/index.htm

September 25, 2003

Stephen J. Humes
LeBoeuf, Lamb, Greene & MacRae
Goodwin Square
225 Asylum Street
Hartford, CT 06103

RE: **EM-T-MOBILE-014-030916** - Omnipoint Communications, Inc., notice of intent to modify an existing telecommunications facility located at 60 Hosley Avenue, Branford, Connecticut.

Dear Attorney Humes:

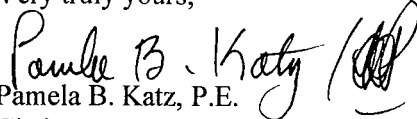
At a public meeting held on September 23, 2003, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated September 16, 2003. 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 Anthony J. DaRos, First Selectman, Town of Branford
Justine K. Gillen, Zoning Enforcement Officer, Town of Branford



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September 18, 2003

Honorable Anthony J. DaRos
First Selectman
Town of Branford
Town Hall
1019 Main Street
P. O. Box 150
Branford, CT 06405-0150

RE: **EM-T-MOBILE-014-030916** - Omnipoint Communications, Inc., notice of intent to modify an existing telecommunications facility located at 60 Hosley Avenue, Branford, Connecticut.

Dear Mr. DaRos:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for September 23, 2003, at 1:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/ld

Enclosure: Notice of Intent

c: Justine K. Gillen, Zoning Enforcement Officer, Town of Branford

RECEIVED
SEP 16 2003

LEBOEUF, LAMB, GREENE & MACRAE
L.L.P.

A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

CONNECTICUT
SITING COUNCIL

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(A LONDON-BASED
MULTINATIONAL PARTNERSHIP)

PARIS

BRUSSELS

JOHANNESBURG
(PTY) LTD.

MOSCOW

RIYADH
(AFFILIATED OFFICE)

TASHKENT

U'KEK

U'ATY

JING

GOODWIN SQUARE

225 ASYLUM STREET, 13TH FLOOR

HARTFORD, CT 06103

(860) 293-3500

FACSIMILE: (860) 293-3555

E-MAIL ADDRESS: STEPHEN.HUMES@LLGM.COM

WRITER'S DIRECT DIAL: (860) 293-3744

WRITER'S DIRECT FACSIMILE: (860) 241-1344

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EM-T-MOBILE-014-030916

September 16, 2003

Pamela Katz, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Notice of Exempt Modification
60 Hosley Avenue, Branford, Connecticut

Dear Chairman Katz and Members of the Council:

Please be advised that LeBoeuf, Lamb, Greene & MacRae, L.L.P. represents Omnipoint Communications, Inc., a subsidiary of T-Mobile USA, Inc. (hereinafter T-Mobile) in the above-referenced matter. T-Mobile intends to add six antennas to its existing three-antenna array currently mounted on a low profile platform on the existing monopole facility at 60 Hosley Avenue in Branford. Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the Branford First Selectman, Anthony DaRos.

Background

T-Mobile holds the "A block" "Wideband PCS" license for the 2-GHz PCS frequencies for the greater New York City area, including the entire State of Connecticut. T-Mobile is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation.

Discussion

The existing facility consists of a one hundred fifty foot (150') monopole (see drawing attached as Exhibit B) and surrounding compound. The coordinates for the site are **Lat: 41°-16-59.9** and **Long: 71°-50-57.8**. The tower is on the south side of Interstate 95 between Exits 52 and 53 in Branford. The tower is next to Amtrak tracks within an Amtrak right-of-way in the western portion of Branford (see site location map, attached as exhibit A). Amtrak is fully aware of and supports the modification to the tower.

T-Mobile's proposal calls for the addition of six (6) panel antennas to its existing three (3) antenna array, creating a total of nine (9) antennas. The proposed configuration is a cluster of three sectors with three antennas per sector mounted on an existing low profile platform at the one hundred fifty foot (150') centerline above ground level ("AGL"). The model number for the replacement antennas is EMS-RR90-17-02DP. A new structural analysis of the tower has been completed and is attached as Exhibit D. As stated in the structural analysis, the existing tower structure is capable of supporting the proposed T-Mobile installation. Two new Nortel S8000 equipment cabinets will be installed to accompany an existing T-Mobile cabinet. As shown on the drawing in Exhibit B, the existing T-Mobile cabinet and a cabinet of another carrier would both be moved two feet to accommodate the new installations. Two new concrete pads, two foot six inches by five foot six inches (2'-6" x 5'-6") and three foot by five foot six inches (3'-0" x 5'-6") would be installed by T-Mobile to accommodate the new cabinets. The proposed T-Mobile ground equipment is all within a leased area. A new gate will be added to the existing fenced compound but it will not alter the dimensions of the fence. Utilities will be run via underground conduit from those currently in place.

The planned modifications to the Branford facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

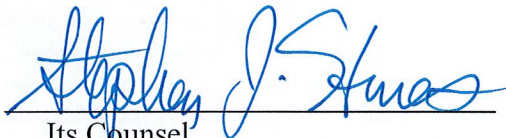
1. The proposed modification will not increase the height of T-Mobile's approved antennas on the tower and will not extend the boundaries of the existing compound area. The enclosed tower drawings confirm that the planned changes will not increase the overall height of the tower.
2. The installation of T-Mobile equipment, as reflected on the attached site plan, will not require an extension of the site boundaries.
3. The proposed modification to the facility will not increase the noise levels at the existing facility by six decibels or more. T-Mobile's equipment is self-contained and requires no additional heating, ventilation or cooling equipment.
4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the applicable standard. The "worst-case" RF power density calculations, for a point at the site boundary, are attached hereto as Exhibit F.

For the foregoing reasons, T-Mobile respectfully submits that the proposed addition of antennas and equipment at the Branford facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Thank you for your consideration of this matter.

Respectfully submitted,

OMNIPOINT COMMUNICATIONS, INC.

By: 
Its Counsel
Stephen J. Humes

cc: Branford First Selectman, Anthony DaRos

Exhibit A
Site Map

60 Hosley Avenue
Branford, Connecticut

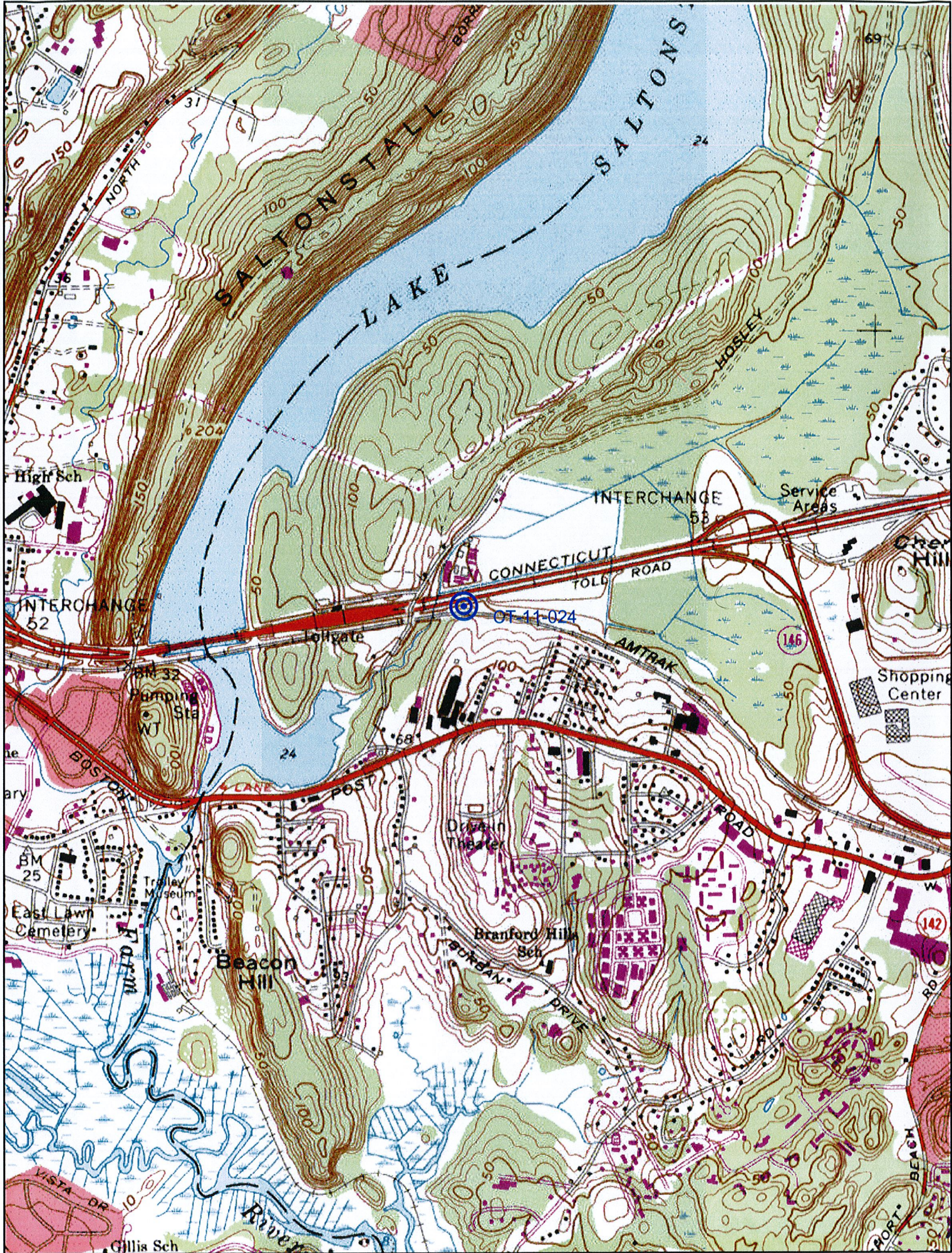
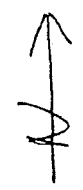


Exhibit B

Design Drawings

60 Hosley Avenue

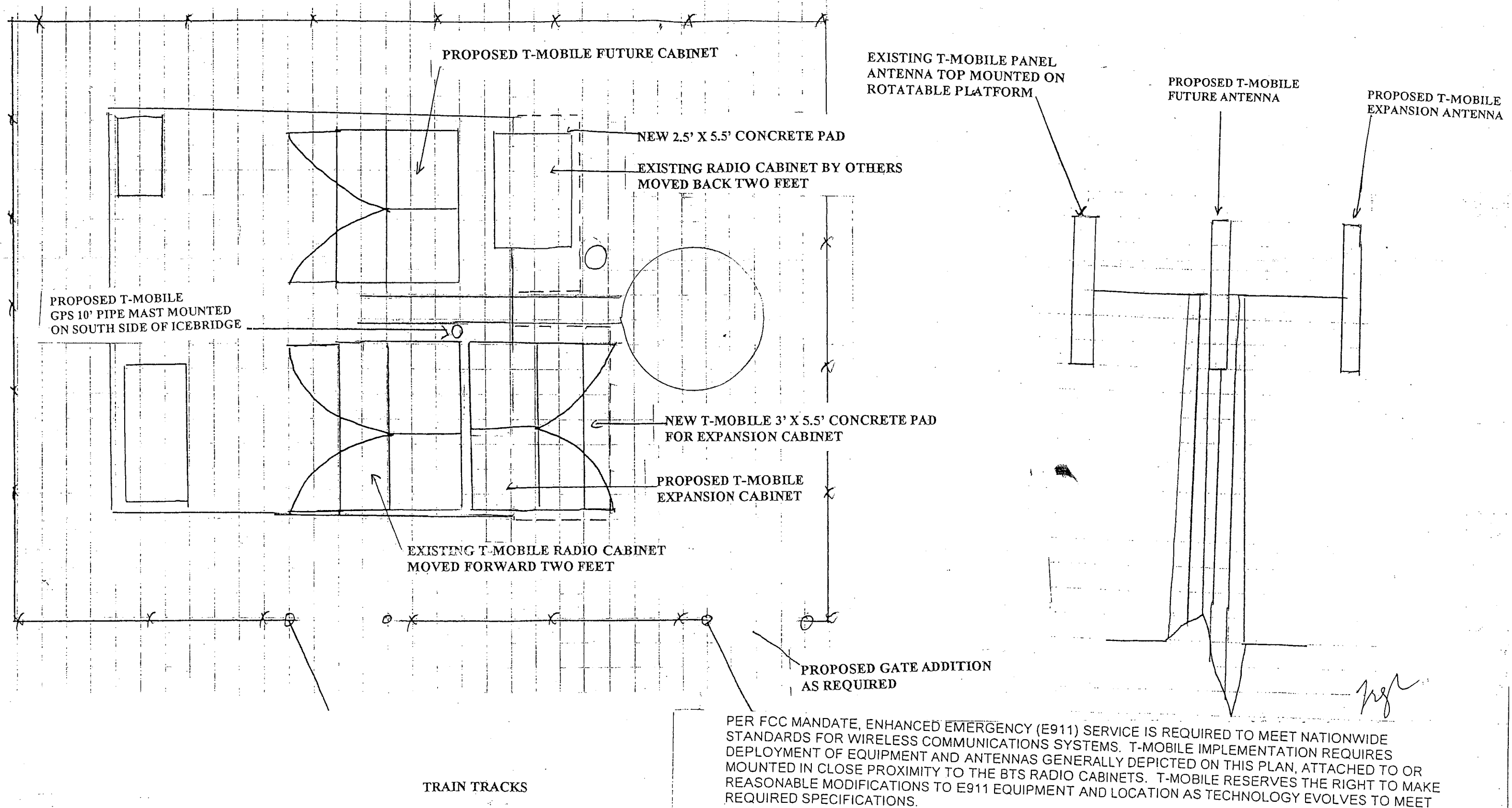
Branford, Connecticut



I-95

ELEVATIONAL VIEW
RAD = 150' AGL

SCALE: NTS



T-Mobile
 100 FILLEY STREET
 BLOOMFIELD, CT 06002

SITE: CT11024B
 SITE NAME: BRANFORD I-95 AMTRAK
 ADDRESS: 60 HOSLEY AVENUE, BRANFORD CT.
 SCALE: NTS

"LEASE EXHIBIT"
 PROPOSED T-MOBILE CABINET AND ANTENNA ADD

REVISIONS	DESIGNED BY: JM	DATE: 12/6/02
	DRAWN BY:	SCALE: AS NOTED
	PM:	L-1

Exhibit C

Equipment Specifications

60 Hosley Avenue

Branford, Connecticut



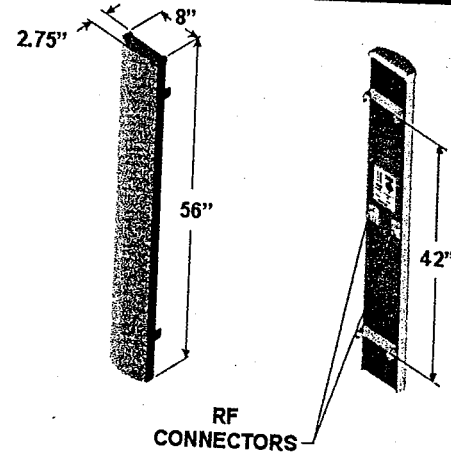
RR90-17-XXDP

DualPol® Polarization
1850 MHz - 1990 MHz

Electrical Specifications

- Azimuth Beamwidth
- Elevation Beamwidth
- Gain
- Polarization
- Port-to-Port Isolation
- Front-to-Back Ratio
- Electrical Downtilt Options
- VSWR
- Connectors
- Power Handling
- Passive Intermodulation
- Lightning Protection

- 90°
- 6°
- 16.5 dBi (14.4 dBd)
- Dual Linear Slant ($\pm 45^\circ$)
- ≥ 30 dB
- ≥ 28 dB (≥ 30 dB Typ.)
- 0°, 2°, 4°, 6°
- 1.35:1 Max
- 2; 7-16 DIN (female)
- 250 Watts CW
- ≤ -150 dBc
- [2 x 20 W (+ 43 dBm)]
- Chassis Ground

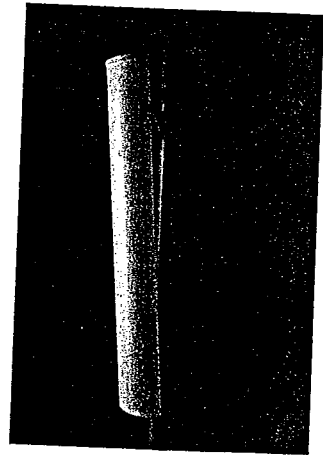


Mechanical Specifications

Dimensions (L x W x D)

- Rated Wind Velocity
- Equivalent Flat Plate Area
- Front Wind Load @ 100 mph (161 kph)
- Side Wind Load @ 100 mph (161 kph)
- Weight

- 56 in x 8 in x 2.75 in
(142 cm x 20.3 cm x 7.0 cm)
- 150 mph (241 km/hr)
- 3.1ft² (.29 m²)
- 90 lbs (400 N)
- 31lbs (139 N)
- 18 lbs (8.2 kg)

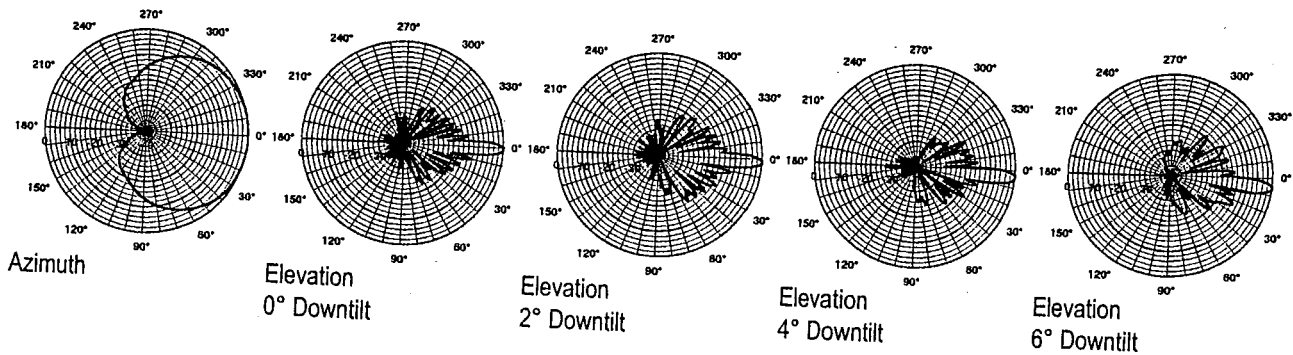


Mounting Options

MTG-P00-10, MTG-S02-10, MTG-DXX-20*, MTG-CXX-10*, MTG-C02-10, MTG-TXX-10*

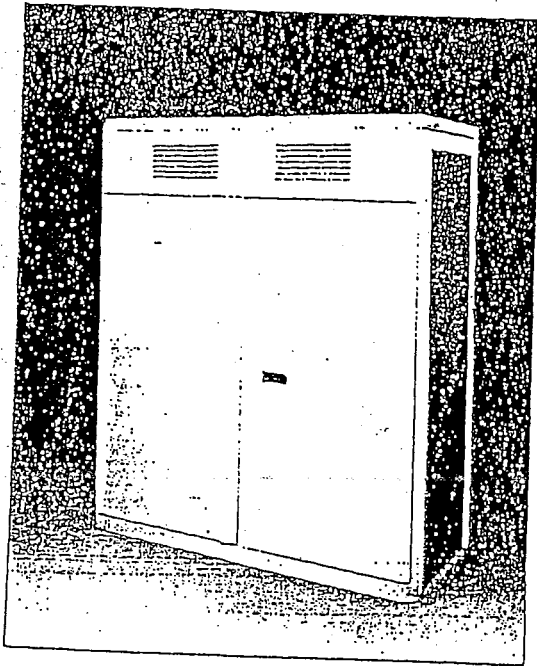
Note: *Model number shown represents a series of products. See Mounting Options section for specific model number.

Patterns



Revised 04/05/02

58000 Outdoor Base Transceiver Station



Nortel's S8000 Outdoor Base Transceiver Station has been designed to meet the economic and performance requirements of network operators. Based on a highly integrated RF and digital design, the S8000 Outdoor Base Transceiver Station represents a major technology advancement and delivers all the benefits of a compact, modular, high quality and high performance product.

Nortel's S8000 Outdoor BTS: Radio Performance Leadership - Reduced Site Acquisition and Operating Costs

Installation

- The S8000 Outdoor Base Transceiver Station (BTS) offers compact packaging and requires minimal floor space, only .88 sq m (9.5 sq ft.). Front only access keeps total space required, including maintenance access, to only 1.8 sq m (19.4 sq ft.) per cabinet.

Transmission

- Integrated drop and insert connection to the Base Station Controller (BSC) and signaling concentration on the A-bis interface provide significant transmission cost reduction.
- Optional integrated digital microwave radio.

Maintenance

- Highly reliable technology, redundant architecture and integrated battery backup ensure high availability service.
- Front access and interconnections, as well as powerful fault detection, help reduce lifetime maintenance costs.

Industry leading performance

- New RF technology and advanced digital processing techniques provide very high receive sensitivity (-108 dBm guaranteed) and improved diversity gain (up to 6 dB). This provides higher resistance to interference, as well as, improved speech quality and cell coverage.
- Nortel's proven experience in frequency hopping, 1*3 frequency reuse, sophisticated microcellular handover algorithms and support of half-rate vocoders enables the operator to maximize use of available spectrum and deploy fewer cell sites.

Fast network deployment

- The S8000 BTS can be shipped fully equipped and tested, which provides fast network roll out to meet operator time to market requirements.

Modular and flexible configuration

- The S8000 supports eight transceivers (TRX) per cabinet in Omni and sector configurations. The typical one cabinet S222 configuration may be expanded up to S332 or S422 without an additional cabinet.

• Frequency range		900 MHz GSM
		900 MHz GSM extended
		1800 MHz DCS
		1900 MHz PCS
• Receive sensitivity (guaranteed)		-108 dBm
• Dimensions	Height	1600 mm / 5 ft. 3 in.
	Width	1350 mm / 4 ft. 5 in.
	Depth	650 mm / 2 ft. 1 in.
• Weight	Fully equipped	600 kg / 1300 lbs.
• Capacity		8 TRX per cabinet
		up to 3 cabinets
	• Configuration	Trisectorial
	Omnidirectional	up to O16
• Amplifier output power		30 W (± 1.5 dB)
• Power control	Static	6 steps of 2 dB
	Dynamic	15 steps of 2 dB
• Frequency hopping		RF synthesized
		baseband
• Supported vocoders		Full rate
		Enhanced full rate
		Half rate
• Encryption algorithms		A5/1 A5/2
• Power supply		230V AC 50/60 Hz
• Power back-up		Integrated battery back-up plus optional battery cabinet allows provisioning up to 8 hours back-up time.
• Operating temperature range		-40°C to +50°C
		-40°F to +122°F

For more information,
please contact your local Nortel account representative.

In the USA:
Northern Telecom
2221 Lakeside Boulevard
Richardson TX 75082
USA
Telephone: 1-800-4 NORTEL
1-800-466-7838 or (214) 684-5935 —
<http://www.nortel.com/wireless>

In Canada:
Northern Telecom
2920 Matheson Boulevard East
Mississauga ON L4W 4M7
Canada
Telephone: 1-800-4 NORTEL

In the Caribbean and Latin America:
Northern Telecom (CALA) Corporation
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12-12bis rue Jean Jaurès
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design as engineering or manufacturing
methods warrant.

NORTEL
NORTHERN TELECOM

Exhibit D

Structural Analysis

60 Hosley Avenue

Branford, Connecticut

September 10, 2003

Ms. Charmaine Simpson
T-Mobile
100 Filley Street
Bloomfield, CT 06002

Re: Model: MP48 x 150'
Site: CT-024B Amtrak, Branford, Connecticut
PiRod Engineering File A-115111
PiRod Renalysis PR-2003-09-014

Dear Ms. Simpson:

Per your request PiRod has structurally analyzed the above referenced pole for a proposed change in antenna loading. We have found that the pole will support the following antenna loading in accordance with the TIA/EIA-222-F Standard with 1) an 85 mph basic wind speed and no ice and 2) an 85 mph basic wind speed and ½" ice with a 25% wind load reduction (as allowed by the standard).

HEIGHT (FT)	ANTENNAS		MOUNTS		LINES	
	QTY.	MODEL	QTY.	MODEL	QTY.	SIZE
150'	3	EMS RR90-17 (existing)	1	10'-6" Low Profile Platform	6	1-5/8"
	3	EMS RR90-17 (proposed)	6	2" x 84" Antenna Pipe	6	1-5/8"
100'	1	Celwave BCR12	1	5' Long, 1-Arm Clamp Mount 2" x 50" Antenna Pipe	1	1-5/8"
70'	1	Celwave BCR12	1	5' Long, 1-Arm Clamp Mount 2" x 50" Antenna Pipe	1	1-5/8"
50'	1	Celwave BCR12	1	5' Long, 1-Arm Clamp Mount 2" x 50" Antenna Pipe	1	1-5/8"

Our conclusion is based on the tower and foundation being installed per the original design specifications (drawing 203964-B, revision B, dated 09/24/1998) and being in good working condition. We have not confirmed the actual placement of the antennas. Similarly, we have not confirmed the condition of the tower. The conclusion stated above is a theoretical assessment of the structure and does not constitute a condition assessment of the structure and the supporting foundation.

J:\REANALYS\115\115111lt.doc

Please contact me with any questions or concerns by phone at 574-936-4221 ext. 5257 or by e-mail at dennis.abel@valmont.com.

Sincerely,

Dennis D. Abel
09/10/2003

Dennis D. Abel, P.E.
Manager of Reanalysis Services
Connecticut Professional Engineer #23247

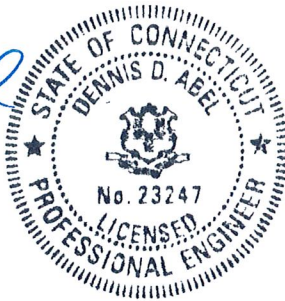
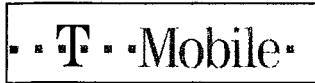


Exhibit E

Power Density Calculations

60 Hosley Avenue

Branford, Connecticut



T-Mobile USA Inc.
100 Filley St, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: Stephen Humes
From: Jeetendra Ghare - Radio Frequency Engineer
cc: Overbey Jason
Subject: Power Density Report for CT11024B
Date: September 9, 2003

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a New Monopole at 60 Hosley Avenue, Branford, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the 1935-1945 MHz frequency band.
- 2) The antenna array consists of three sectors, with 3 antennas per sector.
- 3) The model number for each antenna is EMS RR90-17-02DP.
- 4) The antenna center line height is 150 ft.
- 5) The maximum transmit power from any sector is 1437.87 Watts Effective Radiated Power (EIRP) assuming 8 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

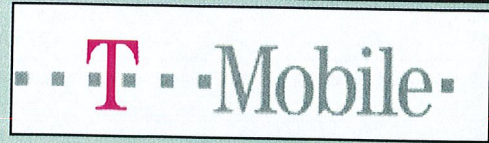
3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a New Monopole at 60 Hosley Avenue, Branford, CT, is 0.01521 mW/cm². This value represents 1.521% of the Maximum Permissible Emission (MPE) standard of 1 milliwatt per square centimeter (mW/cm²) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.

New England Market

Connecticut

Worst Case Power Density



Site:	CT11024B
Site Address:	60 Hosley Avenue
Town:	Branford
Tower Height:	125 ft.
Tower Style:	New Monopole
Base Station TX output	20 W
Number of channels	8
Antenna Model	EMS RR90-17-02DP
Cable Size	1 1/4 in.
Cable Length	160 ft.
Antenna Height	150.0 ft.
Ground Reflection	1.6
Frequency	1935.0 MHz
Jumper & Connector loss	4.50 dB
Antenna Gain	16.5 dBi
Cable Loss per foot	0.0154 dB
Total Cable Loss	2.4640 dB
Total Attenuation	6.9640 dB
Total EIRP per Channel	52.55 dBm
(In Watts)	179.73 W
Total EIRP per Sector	61.58 dBm
(In Watts)	1437.87 W
nsg	9.5360
Power Density (S) =	0.015213 mW/cm²
T-Mobile USA Worst Case % MPE =	1.5213%

Equation Used :

$$S = \frac{(1000 (grf)^2 (Power)^* 10^{(nsg/10)}}{4 \pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	% of Standard
Verizon	
Cingular	
Sprint PCS	
AT&T Wireless	
Nextel	
Total Excluding T-Mobile USA	0.0000 %
T-Mobile USA	1.5213
Total % MPE for Site	1.5213%