STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Internet: ct.gov/csc

Daniel F. Caruso
Chairman

June 2, 2009

Thomas J. Regan, Esq.
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103

RE: **EM-T-MOBILE-033-090429** - Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 179 Shunpike Road, Cromwell, Connecticut.

Dear Attorney Regan:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated April 29, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Jeremy J. Shingleton, First Selectman, Town of Cromwell
Frederic Curtin, Zoning Enforcement Officer, Town of Cromwell
Cromwell Fire District

G:\EM\T-MOBILE\CROMWELL\dc052709ShunpikeRd.DOC

THOMAS J. REGAN
Direct Dial: (860) 509-6522
tregan@brownrudnick.com

BROWNRUDNICK
CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

Via Hand Delivery

April 30, 2009

Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: T-Mobile USA, Inc - Exempt Modification

Dear Mr. Caruso:

On behalf of T-Mobile USA, Inc., enclosed for filing are an original and five (5) copies of a Notice to Make an Exempt Modification to an Existing Facility for each of the following:

1. Bristol @ 985 Farmington Avenue;
2. Enfield @ 4 Oliver Road;
3. Cromwell @ 179 Shunpike Road;
4. East Windsor @ 232 South Main Street;
5. Windsor @ 297 Barber Street; and
6. Windsor @ 340 Bloomfield Avenue

I have also enclosed a sixth copy of each Notice which I would like to have date-stamped and returned to the courier delivering this package.

Also enclosed are six (6) checks in the amount of $500.00 each to cover the filing fee. If you have any questions, please feel free to contact me.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP

By: Thomas J. Regan
Thomas J. Regan

TJR/bh
Enclosures
40259330 v1 - REGANTJ - 025064/0016

cc/encls: via 1st Class Mail:

Arthur J. Ward, Mayor
City of Bristol
111 North Main Street
Bristol, CT 06010

Jeremy Shingleton, First Selectman
Town of Cromwell
Town Hall
41 West Street
Cromwell, CT 06416

Denise Menard, First Selectman
Town of East Windsor
Town Hall
11 Rye Street
East Windsor, CT 06016

Scott R. Kaupin, Mayor
Town of Enfield
Town Hall
820 Enfield Street
Enfield, CT 06082

Donald Trinks, Mayor
Town of Windsor
Town Hall
275 Broad Street
PO Box 472
Windsor, CT 06095-0472

CO

EM-T-MOBILE-033-090429

In re:

T-Mobile USA, Inc. Notice to Make an Exempt Modification to an Existing Facility, 179 Shunpike Road, Cromwell, Connecticut.	:	**EXEMPT MODIFICATION NO. _____**
	:	
	:	April 29, 2009

NOTICE OF EXEMPT MODIFICATION

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), T-Mobile USA, Inc. ("T-Mobile") hereby gives notice to the Connecticut Siting Council ("Council") and the Town of Cromwell of T-Mobile's intent to make an exempt modification to an existing self-support tower (the "Tower") located at 179 Shunpike Road in Cromwell, Connecticut. Specifically, T-Mobile plans to upgrade its wireless system in Connecticut by implementing its Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") technology that utilizes a code division multiple access ("CDMA") base to allow for fast and large data transfers. To accomplish this upgrade, T-Mobile must modify its antenna and equipment configurations at many of its existing sites.

Once the UMTS upgrade is complete, T-Mobile will operate on a more unified communication system, allowing international wireless telephones to function world-wide. Furthermore, UMTS will enhance GPS navigation capabilities and provide emergency responders with more advanced tracking capabilities. The proposed UMTS technology is compatible with the existing second-generation ("2G") Global System for Mobile Communication ("GSM") currently on the Tower and the proposed upgrade is expected to enhance the existing 2G system. In order to accomplish the upgrade at this site, T-Mobile plans to add UMTS technology and install associated equipment at the base of the tower.

Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), T-Mobile's plans do not constitute a modification subject to the Council's review because T-Mobile will not

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185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500

change the height of the Tower, will not extend the boundaries of the compound, will not increase the noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

The Tower is a 170-foot self-support tower located at 179 Shunpike Road in Cromwell, Connecticut (41.6233, -72.679). The Tower is owned by the Cromwell Fire District. There are multiple carriers on the Tower. Currently, T-Mobile has 6 antennas and 6 Tower Mounted Amplifiers ("TMA") located on the Tower with a centerline of 125 feet. A site plan with Tower specifications is attached.

T-Mobile plans to add 3 UMTS antennas and add 3 UMTS Twin TMA to the Tower. The proposed antennas and TMA will have the same centerline as the existing antennas and TMA – 125 feet. To confirm the Tower can support these changes, T-Mobile commissioned Armor Tower to perform a structural analysis of the Tower (attached). According to the structural analysis, dated April 16, 2009, "...the tower is capable of supporting the proposed loading" (Page 1, Structural Assessment).

In addition, T-Mobile plans to locate 6, 1-5/8 inch coax cables under the proposed ice bridge. T-Mobile proposes to install the UMTS equipment cabinet on its existing 16-foot by 14-foot (approximately) concrete pad. Hence, no increase in the size of the concrete pad is necessary. T-Mobile also proposes to install power wiring and telephone wiring to service the proposed equipment at this site.

Therefore, excluding brief, minor, construction-related noise during the addition of the antennas and the installation of the equipment cabinet, T-Mobile's changes to the Tower will not increase noise levels at the site.

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The proposed antennas and TMA will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency

exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications Commission ("FCC"). The worst-case power density analysis measured at the base of the Tower indicates that T-Mobile's antennas will emit 6.43% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit only 46.26% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, T-Mobile's proposed plan to add antennas and TMA at this site does not constitute a modification subject to the Council's jurisdiction because T-Mobile will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic radiation power density will stay within all applicable standards. *See* Conn. Agencies Regs. § 16-50j-72.

T-Mobile USA, Inc.

By: _____

Thomas J. Regan
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

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Certificate of Service

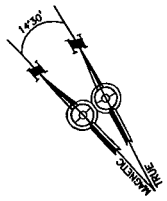
This is to certify that on this 29th day of April, 2009, the foregoing Notice of Exempt Modification was sent, via first class mail, to the following:

Town of Cromwell
First Selectman's Office
First Selectman Jeremy Shingleton
41 West Street
Cromwell, CT 06416

By: _____
Thomas J. Regan

40259135 v1 - 025064/0016

BROWN RUDNICK LLP
CITYPLACE I
185 ASYLUM STREET
HARTFORD, CT 06103
(860) 509-6500



FINAL CONFIGURATION	
CABINETS: 3	(E) (2) CABINETS TO REMAIN (P) (1) CABINET TO BE ADDED
ANTENNAS: 9	(E) (6) TO REMAIN (P) (3) TO BE ADDED
TMA: 9	(E) (6) TO REMAIN (P) (3) TO BE ADDED
COAX: 18	(E) (12) TO REMAIN (P) (6) TO BE ADDED

(E) BIT. CONC. DRIVEWAY

(E) CONC. BLOCK RETAINING WALL

(E) SHELTER

(E) LATTICE TOWER

SECTOR A 0°

SECTOR B 120°

SECTOR C 240°

(E) ICEBRIDGE 3.5' A.G.L.

(P) UMTS ERICSSON 3106 CABINET ON (E) T-MOBILE CONC. PAD

(P) ICEBRIDGE

(E) (2) EQUIPMENT CABINETS ON CONC PAD TO REMAIN

(E) CONC. BLOCK RETAINING WALL

(P) (3) ANTENNAS WITH (6) 1 5/8" COAX CABLES AND (3) TMAs

TYP. OF (1) ANTENNA, (1) TMA AND (2) 1 5/8" COAX CABLES PER SECTOR

(E) (6) ANTENNAS WITH (6) TMAs AND (12) 1 5/8" COAX CABLES TO REMAIN

ANTENNA AZIMUTHS:
SECTOR A= 0°
SECTOR B= 120°
SECTOR C= 240°

ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

PLAN

SCALE: 1" = 10'-0"

5 0 5 10 15

1 SHT-2

TRANSCEND WIRELESS
10 INDUSTRIAL AVE.
MAHWAH, NJ 0740
OFFICE: (210) 316-2085
FAX:(210) 684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC. DBA T-MOBILE USA, INC
35 GRIFIN ROAD SOUTH
BLOOMFIEL, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

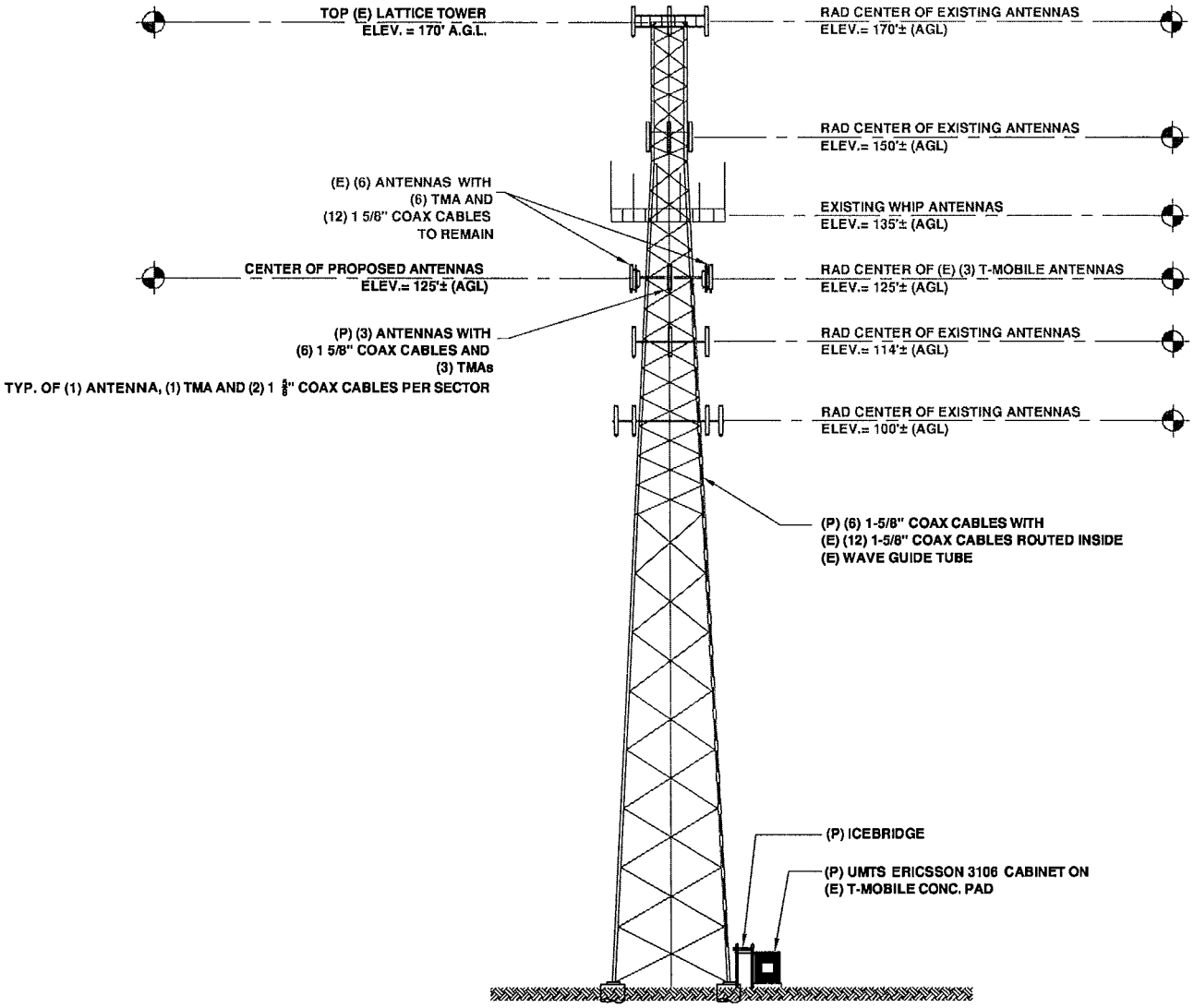
ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER:	
CT11059C	
SITE NAME:	
ROCKYHILL/ I-91/ X23	
ADDRESS:	
179 SHUNPIKE ROAD CROMWELL, CT 06416	
DRAWN BY	
P.J.D.	
0: FINAL LE	03-13-09
A: REVIEW	02-07-09
REVISION	DATE

APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.



ELEVATION

SCALE: 1" = 30'-0"

15 0 15 30 45

ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

TRANSCEND WIRELESS
10 INDUSTRIAL AVE.
MAHWAH, NJ 0740
OFFICE: (210) 316-2085
FAX:(210) 684-0066

FOR

OMNIPOINT COMMUNICATIONS, INC.
DBA T-MOBILE USA, INC
35 GRIFIN ROAD SOUTH
BLOOMFIEL, CT 06002
OFFICE: (860) 692-7100
FAX:(860) 692-7159

ATLANTIS GROUP
15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER:	CT11059C
SITE NAME:	ROCKYHILL/ I-91/ X23
ADDRESS:	179 SHUNPIKE ROAD CROMWELL, CT 06416
DRAWN BY	P.J.D.

REVISION	DATE
0: FINAL LE	03-13-09
A: REVIEW	02-07-09

APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date

The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.

ARMOR TOWER

April 16, 2009

Mr. Hans Fiedler
T-Mobile USA
35 Griffin Road South
Bloomfield, CT 06002

Re: CT11059C – Rocky Hill site
179 Shunpike Road, Cromwell, CT 06416

Dear Mr. Fiedler,

Armor Tower has performed a structural assessment of the self-supporting tower communications installation at the above referenced address. This assessment is based on the T-Mobile RFDS dated 2/10/09, the Atlantis Group lease exhibit dated 3/13/09, structural analyses dated 2000, 2006 and 2009 and pictures (all provided by Atlantis Group).

T-Mobile proposes:
-Add three new APX16DWV-16DWVS-A20 antennas (42 lb. wt. each) and three Andrew twin AWS TMAs (11 lb. each) on the existing sector boom mounts at 125' AGL.
-Install six new 1-5/8" transmission lines to 125', stacking them over existing T-Mobile lines.

-Install one new RBS 3106 equipment cabinet (1925 lb fully equipped) on the existing concrete pad, located east from the tower.

The current antenna mounts are capable of supporting the proposed antennas. The tower supports five major levels of antennas. According to the most recent analysis, the tower is at a maximum loading ratio of 72.7% (legs). We are increasing the T-Mobile antennas by half. Based on our professional experience, the tower loading would not experience a significant stress increase. Stresses will probably increase to a maximum of 85 to 90%. Thus the tower is capable of supporting the proposed loading.

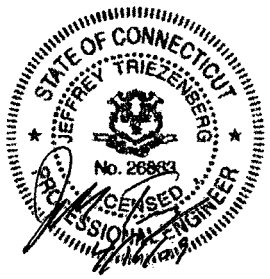
The existing ground mounted equipment pad should be capable of supporting the proposed cabinet, assuming normal soils.

No conclusions, expressed or implied, shall indicate that Armor Tower has made an evaluation of the original design, materials, fabrication, or potential erection deficiencies. In addition, the conclusions expressed herein are based upon the information contained within the aforementioned documents, as well as the results of the site survey and photographic documentation of the site. Any information contrary to that assumed for the purpose of preparing this assessment could alter the findings and conclusions as stated.

We appreciate the opportunity to provide our professional services to Atlantis Group and T-Mobile, and if we can be of further assistance, please do not hesitate to contact us.

Sincerely,
ARMOR TOWER, INC.

Derek Hartzell
Armor Tower, Inc



T-Mobile

T-Mobile USA Inc.
35 Griffin Rd South, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: Transcend
From: Farid Marbouh - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11059C
Date: April 22, 2009

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile antenna installation on a Self Support Tower at 179 Shunpike Road, Cromwell, 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 (1935-1944.8), (2140-2145), (2110-2120)MHz frequency Band.
2) The antenna array consists of three sectors, with 3 antennas per sector.
3) The model number for GSM antenna is RR90-17-02DP.
3) The model number for UMTS antenna is APX16DWV-16DWV.
4) GSM antenna center line height is 125 ft.
4) UMTS antenna center line height is 125 ft.
5) The maximum transmit power from any GSM sector is 1721.55 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
5) The maximum transmit power from any UMTS sector is 2426 Watts Effective Radiated Power (EiRP) assuming 2 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 antenna installation on a Self Support Tower at 179 Shunpike Road, Cromwell, CT, is 0.06426 mW/cm^2. This value represents 6.426% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm^2) 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.
The combined Power Density from other carriers is 39.83%. The combined Power Density for the site is 46.256% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site:	**CT11059C**
Site Address:	**179 Shunpike Road**
Town:	**Cromwell**
Tower Height:	**170 ft.**
Tower Style:	**Self Support Tower**

GSM Data		UMTS Data	
Base Station TX output	20 W	**Base Station TX output**	40 W
Number of channels	8	**Number of channels**	2
Antenna Model	RR90-17-02DP	**Antenna Model**	APX16DWV-16DWV
Cable Size	1 5/8 in.	**Cable Size**	1 5/8 in.
Cable Length	145 ft.	**Cable Length**	145 ft.
Antenna Height	125.0 ft.	**Antenna Height**	125.0 ft.
Ground Reflection	1.6	**Ground Reflection**	1.6
Frequency	1945.0 MHz	**Frequency**	2.1 GHz
Jumper & Connector loss	4.50 dB	**Jumper & Connector loss**	1.50 dB
Antenna Gain	16.5 dBi	**Antenna Gain**	18.0 dBi
Cable Loss per foot	0.0116 dB	**Cable Loss per foot**	0.0116 dB
Total Cable Loss	1.6820 dB	**Total Cable Loss**	1.6820 dB
Total Attenuation	6.1820 dB	**Total Attenuation**	3.1820 dB
Total EIRP per Channel	53.33 dBm	**Total EIRP per Channel**	60.84 dBm
(In Watts)	215.19 W	**(In Watts)**	1213.00 W
Total EIRP per Sector	62.36 dBm	**Total EIRP per Sector**	63.85 dBm
(In Watts)	1721.55 W	**(In Watts)**	2426.00 W
nsg	10.3180	**nsg**	14.8180
Power Density (S) =	**0.026671 mW/cm^2**	**Power Density (S) =**	**0.037585 mW/cm^2**

T-Mobile Worst Case % MPE = **6.4257%**

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	20.0400 %
Cingular	6.9300 %
Sprint	4.9100 %
AT&T Wireless	
Nextel	
MetroPCS	
Other Antenna Systems	7.9500 %
Total Excluding T-Mobile	**39.8300 %**
T-Mobile	6.4257
Total % MPE for Site	**46.2557%**