

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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E-Mail: siting.council@po.state.ct.us

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

May 8, 2003

Christopher B. Fisher, Esq.
Cuddy & Feder & Worby LLP
90 Maple Avenue
White Plains, NY 10601-5196

RE: **EM-AT&T-034-030421** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 181 Clapboard Ridge Road, Danbury, Connecticut.

Dear Attorney Fisher:

At a public meeting held on May 6, 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 received in our office on April 21, 2003, and additional information dated April 23, 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 Mark. D. Boughton, Mayor, City of Danbury
Dennis Elpern, City Planner, City of Danbury
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae LLP

CUDDY & FEDER & WORBY LLP

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1971-1995

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CHAUNCEY L. WALKER (also CA)
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Of Counsel

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DANIEL F. LEARY (also CT)
HARRY E. LONG

April 23, 2003

VIA FACSIMILE (860-827-2950)

David Martin
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: AT&T - 181 Clapboard Ridge Road, Danbury, CT

Dear Mr. Martin:

In response to your correspondence dated April 22, 2003 for the above referenced site, please be advised that the latitude of the site is 41° 26' 01" and the longitude of the site is 73° 29' 33".

Should you or the Council have any questions or require any additional information, please do not hesitate to contact us.

Very truly yours,


Christopher B. Fisher

RECEIVED

APR 21 2003

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
181 CLAPBOARD RIDGE ROAD, DANBURY, CONNECTICUT**

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes § 16-50g et. seq. ("PUESA"), and Sections 16-50j-72(b) of the Regulations of Connecticut State Agencies adopted pursuant to the PUESA, AT&T Wireless PCS, LLC d/b/a AT&T Wireless ("AT&T Wireless") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 181 Clapboard Ridge Road, Danbury, Connecticut (the "Clapboard Ridge Road Facility"), owned by T-Mobile USA, Inc. ("T-Mobile"). AT&T Wireless and T-Mobile have agreed to share the use of the Clapboard Ridge Road Facility, as detailed below.

The Clapboard Ridge Road Facility

The Clapboard Ridge Road Facility consists of an approximately eighty-five (85) foot "flagpole" tower and associated equipment located on a parcel of property improved with a church and located along State Route 39.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by Scientel America, Inc., including a site plan and tower elevation of the Clapboard Ridge Road Facility, AT&T Wireless proposes shared use of the Facility by placing antennas in the "flagpole" tower and equipment cabinets at grade needed to provide personal communications services ("PCS"). AT&T Wireless will install 3 panel antennas at approximately the 59 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76"H x 30" W x 30" D) located on a concrete pad within an expansion of the existing fenced compound and supported by a modest retaining wall. As evidenced in the structural evaluation prepared by Semaan Engineering Solutions, annexed hereto as Exhibit A, AT&T has confirmed that the tower is structurally capable of supporting the addition of AT&T Wireless' antennas.

AT&T Wireless' Facility Constitutes An Exempt Modification

The proposed addition of AT&T Wireless' antennas and equipment to the Clapboard Ridge Road Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas and equipment to the tower will not result in an increase of the tower's height nor extend the site boundaries (all AT&T equipment and the expanded compound will be located on the existing T-Mobile lease parcel). Further, there will be no increase in noise levels by six (6) decibels or more at the tower site's boundary. As set forth in an Emissions Report prepared by Vishal Kataria, RF Engineer, annexed hereto as Exhibit B, the total radio frequency electromagnetic radiation power density at the tower site's

boundary will not be increased to or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. For all the foregoing reasons, addition of AT&T Wireless' facility to the tower constitutes an exempt modification which will not have a substantially adverse environmental effect.

Conclusion

Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Clapboard Ridge Road Facility meets the Council's exemption criteria.

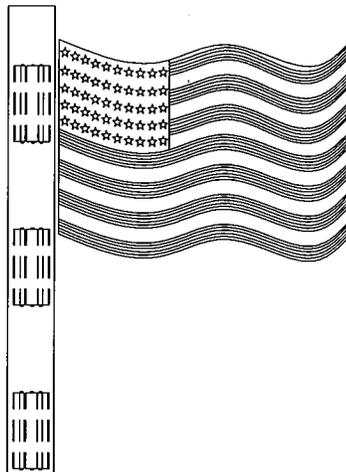
Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'C. Fisher', with a long horizontal flourish extending to the right.

Christopher B. Fisher, Esq.
On behalf of AT&T Wireless

cc: Mayor, City of Danbury
Johnny R. Salmon, Bechtel
Tim Parks, Optasite

- TOP OF FLAG POLE
EL = ± 85.0'
- ☉ T-MOBILE ANTENNAS
EL = ± 79.0'
- ☉ T-MOBILE ANTENNAS
EL = 69.0'
- ☉ AT&T ANTENNAS
EL = 59'



☉ OF FLAG
EL = ± 76.7'

- AT&T ICE BRIDGE
- AT&T GPS AND LMU ANTENNA
- T-MOBILE POWER AND TELCO DEMARC
- AT&T EQUIPMENT ON CONCRETE PAD
- AT&T POWER AND TELCO DEMARC
- EXISTING FENCE
- RETAINING WALL
- ± 85.0' FLAG POLE
- T-MOBILE EQUIPMENT ON CONCRETE PAD
- T-MOBILE ICE BRIDGE
- CHAIN LINK FENCE

GRADE
EL = 0'-0"

T-MOBILE SITE NO.: CT-111950

NORTH ELEVATION

SCALE: 3/32" = 1'-0"

1
SC2

Scientel America, Inc.

10 PRECISION ROAD
DANBURY, CT 06810
Tel: (203) 798-7904
Fax: (203) 798-9601



AT&T WIRELESS PCS, LLC
149 EAST WATER STREET
SOUTH NORWALK, CT. 06855

DRAWING TITLE:

NORTH ELEVATION

PROJECT INFORMATION:

St. ANN'S MELKITE
CT-535
181 CLAPBOARD RIDGE ROAD
DANBURY, CT. 06811

TOWER OWNER:

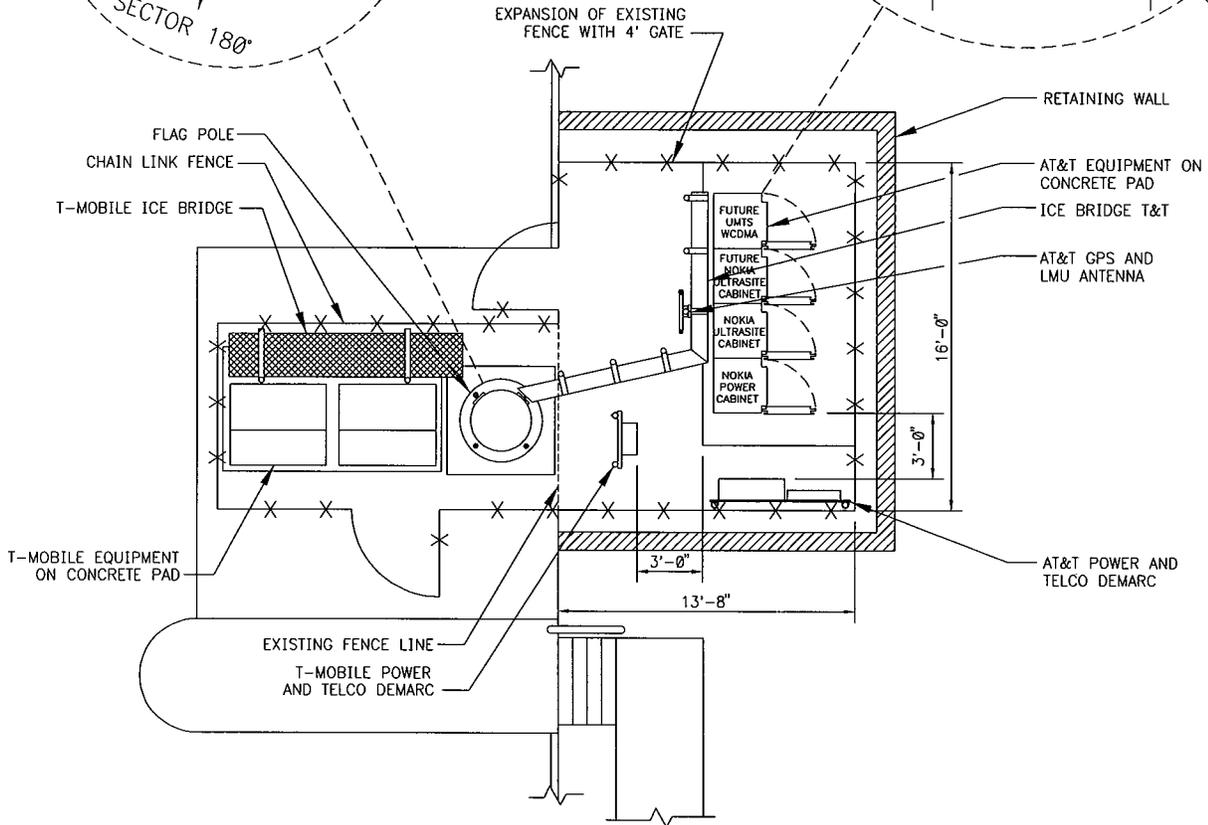
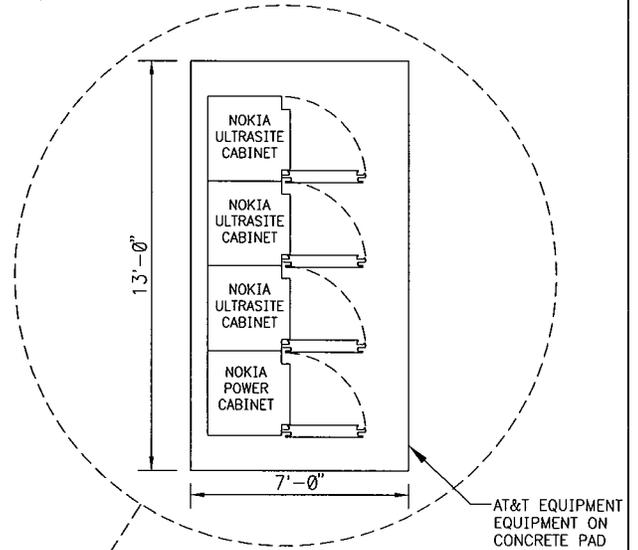
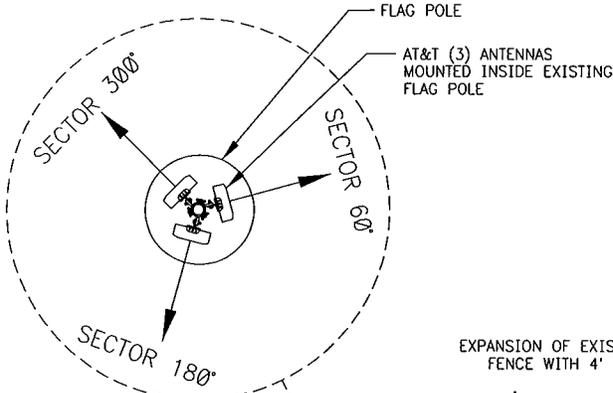
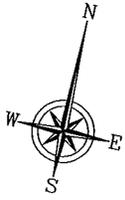
T-MOBILE USA, INC
4 SYLVAN WAY
PARSIPPANY, NJ 07054

DRAWING NO.

SC2

REVISION NO.	0	DRAWN BY:	JT
DATE ISSUED:	04/15/03	CHECKED BY:	KW
SCALE:	3/32" = 1'-0"	APPROVED BY:	SC
		SHEET NO.	2 OF 2
A/E PROJECT NO:	2003-200-004		

NOTE:
EXISTING ANTENNAS NOT
SHOWN FOR CLARITY



SITE PLAN

SCALE: 1/8" = 1'-0"

1
SC1

T-MOBILE SITE NO.: CT-111950

Scientel America, Inc.
10 PRECISION ROAD
DANBURY, CT 06810
Tel: (203) 798-7904
Fax: (203) 798-9601



AT&T WIRELESS PCS, LLC
149 EAST WATER STREET
SOUTH NORWALK, CT. 06855

DRAWING TITLE:

SITING COUNCIL

PROJECT INFORMATION:

St. ANN'S MELKITE
CT-535
181 CLAPBOARD RIDGE ROAD
DANBURY, CT. 06811

TOWER OWNER:

T-MOBILE USA, INC
4 SYLVAN WAY
PARSIPPANY, NJ 07054

DRAWING NO.

SC1

REVISION NO.	0	DRAWN BY:	JT
DATE ISSUED:	04/15/03	CHECKED BY:	KW
SCALE:	1/8" = 1'-0"	APPROVED BY:	SC
		SHEET NO.	1 OF 2
A/E PROJECT NO:	2003-200-004		

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1047 N. 204th Avenue
Elkhorn, NE 68022
Ph:402-289-1888
Fax:402-289-1861

SEMAAN ENGINEERING SOLUTIONS

**85 ft Stealth Network Technologies
Flag Monopole
Structural Analysis**

**Prepared for:
T-Mobile USA
12920 SE 38th Street
Bellevue, WA 98006**

**Site: CT11195D / Danbury / AT&T
Danbury, CT**



March 28, 2003

Mr. Joseph Laurenzano
T-Mobile USA
12920 SE 38th Street
Bellevue, WA 98006

Re: Site Number CT11195D – Danbury, CT.

Dear Mr. Laurenzano:

We have completed the structural analysis for the existing monopole, located at the above referenced site. The purpose of this analysis is to determine that the existing monopole design is in conformance with the EIA/TIA-222-F standard for the proposed antennae loads installation. Refer to the Review and Recommendations section at the end of this report for the analysis results.

Description of Structure:

The structure is a 85 ft Stealth Network Technologies Flag Monopole.

Refer to Stealth Network Technologies job #VOIC-20499W-02 dated December 5, 2002 for a detailed description of the structure.

Method of analysis:

The tower was analyzed using Semaan Engineering Solutions' software suite for communication structures. The structural analysis is performed using the SAPS finite element engine. The method is 3D, non-linear, which accounts for the second order geometric effects due to the displacements. The analysis was performed in conformance with **EIA/TIA-222-F for a basic wind speed of 85 mph and 1/2" radial ice with reduced wind speed**. Wind is applied to the structure, accessories and antennas.

Structure loading:

Per the loading sheet supplied, the analysis was performed using the following loading: (Proposed loading in bold)

Elev. (ft)	Qty.	Antennas and Mounts	Coax	Owner
79.0	4	RR65-19-00DP mounted inside the concealment cylinder	(8) 1-5/8 inside	T-Mobile
76.7	1	12 ft x 18 ft flag		
69.0	4	RR65-19-00DP mounted inside the concealment cylinder	(8) 1-5/8 inside	T-Mobile
59.0	3	Allgon 7250 mounted inside the concealment cylinder	(6) 7/8 inside	AT&T

All new access holes shall be reinforced with welded rims that are compatible with the pole and to be sized and supplied by pole manufacturer.

All transmission lines are assumed running inside of pole shaft.

Results of Analysis:

Refer to the attached Computer Summary sheets for detailed analysis results.

Structure:

The existing monopole is structurally capable of supporting the existing and proposed antennas. The maximum structure usage is: 25.3%.

Foundation:

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	146.20	226.60	155.0
Shear (kips)	3.40	4.80	141.1

The structure base reactions resulting from this analysis exceed the ones shown on the original structure drawings. After further review of the documents, the foundation was found to be structurally acceptable.

Review and Recommendations:

Based on the analysis results, the existing structure meets the requirements per the EIA/TIA-222-F standards for a basic wind speed of 85 mph and 1/2" radial ice with reduced wind speed.



**RF Exposure Analysis for Proposed
AT&T Wireless Antenna Facility**

SITE ID: 913-010-535

APR 15,2003

**Prepared by AT&T Wireless Services, Inc.
Vishal Kataria RF Engineer**

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1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 179 Clapboard Road, Danbury, CT. This analysis uses site-specific engineering data to determine the predicted levels of radio frequency (RF) electromagnetic energy in the vicinity of the proposed facility and compares those levels with the Maximum Permissible Exposure (MPE) limits established by the Federal Communications Commission.

2. Site Data

Site Name: <i>Danbury North</i>	
Number of simultaneously operating channels	12
Type of antenna	Allgon 7250.03
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	59.00 feet
Antenna Aperture Length	5 feet

3. RF Exposure Prediction

The following equations established by the FCC, in conjunction with the site data, were used to determine the levels of RF electromagnetic energy present in the vicinity of the proposed facility¹:

$$PowerDensity = \frac{0.64 * N * EIRP(\theta)}{\pi * R^2} (mW/cm^2) \quad Eq. 1-Far-field$$

Where, N = Number of channels, R = distance in cm from the antenna centerline, and $EIRP(\theta)$ = The isotropic power expressed in milliwatts in the direction of prediction point. This is the correct equation for antennas which have their gain expressed in dBi, which is the usual case for the PCS bands.

$$PowerDensity = \frac{P_{in} / ch * N * 10^3}{2 * \pi * R * h * \alpha / 360} (mW/cm^2) \quad Eq. 2-Near-field$$

Where P_{in}/ch = Input power to antenna terminals in watts/ch, R = distance from the antenna centerline, h = aperture height in meters, α = 3 dB beam-width of horizontal pattern.

¹ RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts (μ W), a millionth of a watt, per square centimeter (cm^2). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

4. FCC Guidelines for Evaluating the Environmental Effects of RF Emissions

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by a Second Memorandum Opinion and Order. These new rules represent a consensus of the federal agencies responsible for the protection of public health and the environment, including the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the National Institute for Occupational Health and Safety (NIOSH), and the Occupational Safety and Health Administration (OSHA).

Under the laws that govern the delivery of wireless communications services in the United States, as amended by the Telecommunications Act of 1996, the FCC has exclusive jurisdiction over RF emissions from personal wireless antenna facilities, which include cellular, PCS, messaging and aviation sites.² Pursuant to its authority under federal law, the FCC has established rules to regulate the safety of emissions from these facilities.

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.002685 mW/cm² which occurs at 700 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000556 mW/cm² at a distance of 4 feet. Table 1 below shows the Maximum Permissible Exposure (MPE) limits established by the FCC. There are different MPE limits for public/uncontrolled and occupational/controlled environments.

Table 1: Maximum Permissible Exposure limits for RF Emissions

<i>Frequency</i>	<i>Public/Uncontrolled</i>	<i>Occupational/controlled</i>	<i>Maximum power density at Accessible location</i>
Cellular	.580 mW/cm ²	2.9 mW/cm ²	0.002685 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.27% of the public MPE limit for all frequencies in use.

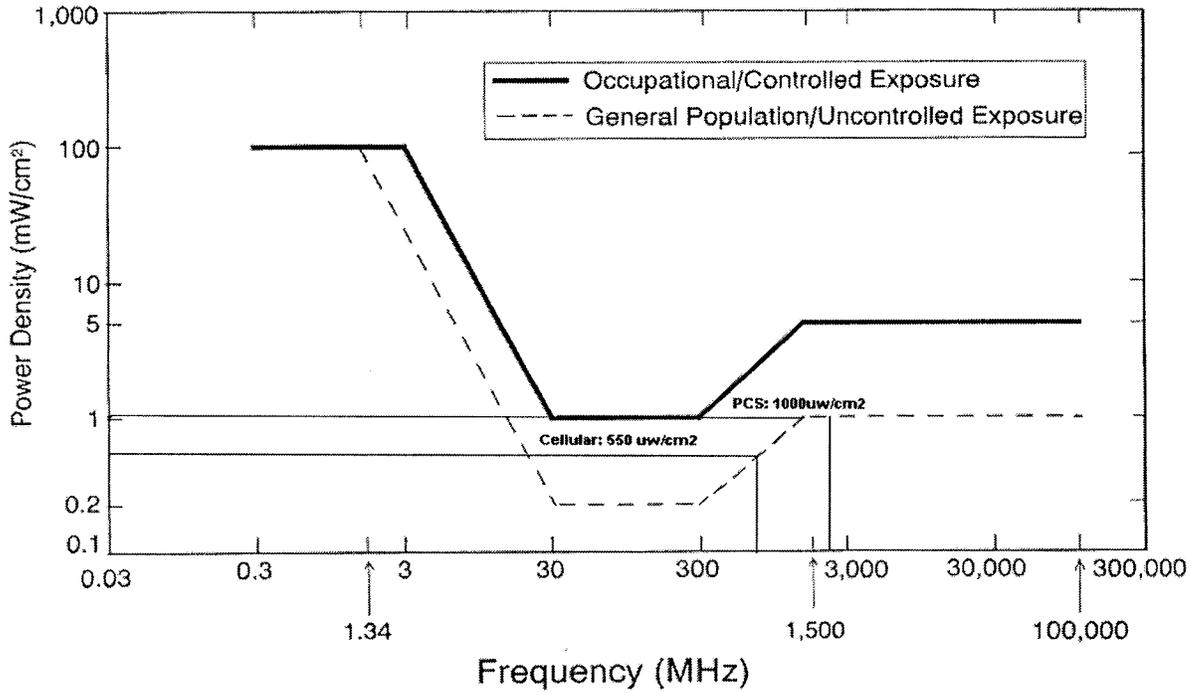
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.002685 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission’s regulations concerning such emissions.”

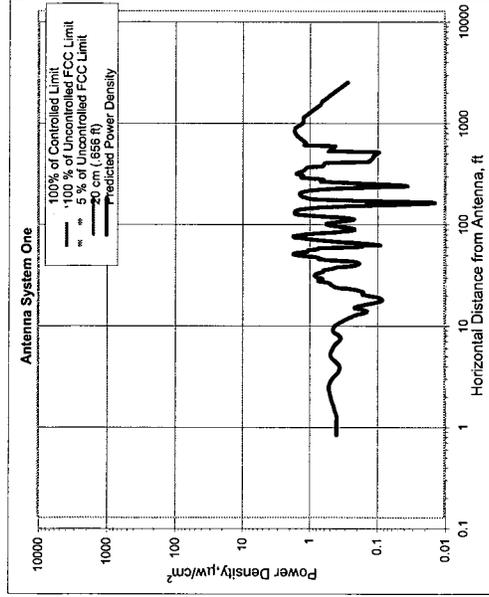
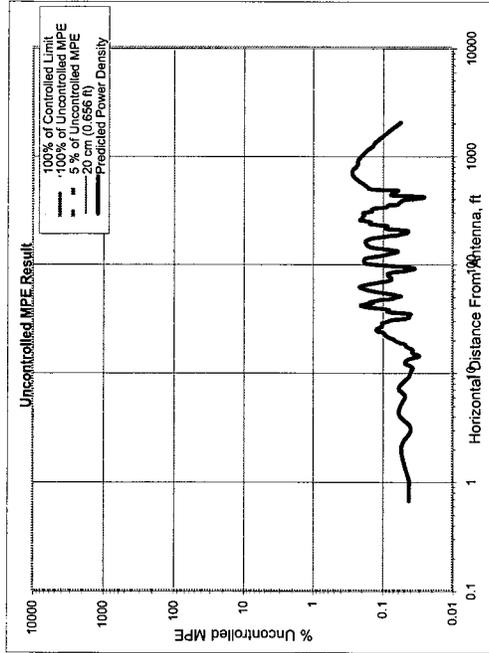
7. FCC Limits for Maximum Permissible Exposure

FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density



AT&T Wireless Services, Inc.

8. Exhibit A



Number of Antenna Systems: 3
 Meets FCC Controlled Limits for The Antennas Systems.

Meets FCC Uncontrolled Limits for The Antenna Systems.

Meets 5% of FCC Uncontrolled Limits for The Antenna Systems.

No Further Maximum Permissible Exposure (MPE) Analysis Required.

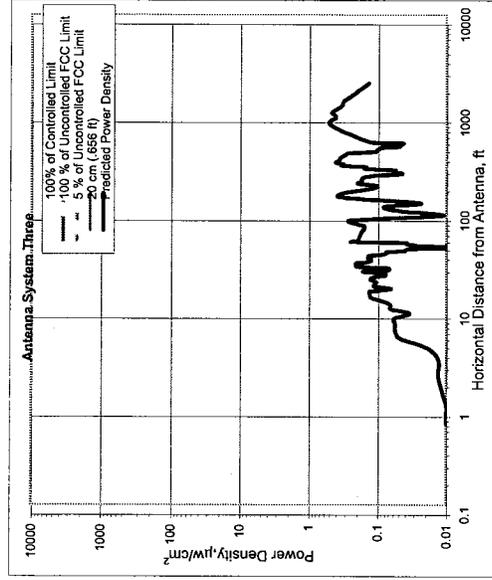
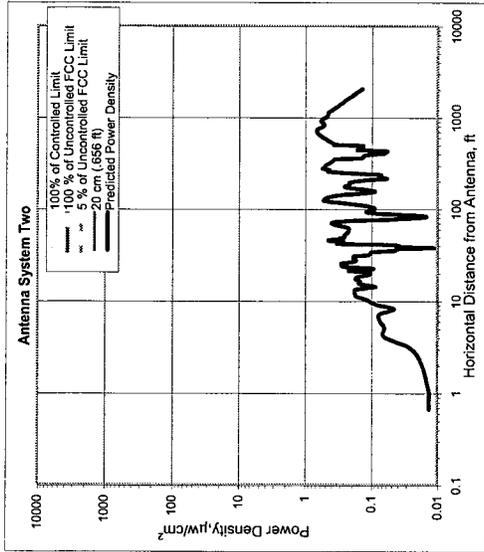
Power Density	mW/cm²	% of limit	@Horiz. Dist.
Maximum Power Density =	0.002685	0.27	700.00
372.46 times lower than the MPE limit for uncontrolled environment			
Composite Power (ERP) =	6,000.00	Watts	

Site ID: 913-010-535
 Site Name: Danbury North
 Site Location: 179 Clapboard Road
 Danbury, CT

Ant System ONE Owner: AT&T
 Sector: 3
 Azimuth: 60/180/300

Antenna System One

Frequency	units	Value
MHz	MHz	1965.00
# of Channels	#	42
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	5.96
Max Pwr/Ch Into Ant. (Antenna Centerline)	feet	59.00
Calculation Point (above ground or roof surface)	feet	5.00
Antenna Model No.		0.00
Max Ant Gain	dBd	Align: 7250.03
Down tilt	degrees	16.30
Miscellaneous Att.	dB	0.00
Height of aperture	feet	0.00
Ant. HBW	degrees	5.11
Distance to Ant. base	feet	65.00
WOS?	Y/N?	51.45
		n



Antenna System Two

Antenna System Three

Frequency	units	Value
1955.00	MHz	1955.00
# of Channels	#	6
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	7.21
Max Pwr/Ch (Center of Radiation)	feet	69.00
Calculation Point (above ground or roof surface)	feet	5.00
Antenna Model No.		0.00
RR651900DP		
Max Ant Gain	dBd	15.40
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.00
Ant HBW	degrees	65.00
Distance to Ant _{base}	feet	61.50
WOST?	Y/N?	n

Frequency	units	Value
1955.00	MHz	1955.00
# of Channels	#	6
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	7.21
Max Pwr/Ch (Center of Radiation)	feet	79.00
Calculation Point (above ground or roof surface)	feet	5.00
Antenna Model No.		0.00
RR651900DP		
Max Ant Gain	dBd	15.40
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.00
Ant HBW	degrees	65.00
Distance to Ant _{base}	feet	71.50
WOST?	Y/N?	n

Ant System TWO Owner: T-Mobile
Sector: 3
Azimuth 60/180/300

Ant System Three Owner: T-Mobile
Sector: 3
Azimuth 60/180/300

9. For Further Information

Additional information about the environmental impact of RF energy from personal wireless antenna facilities can be obtained from the Federal Communications Commission:

Dr. Robert Cleveland
Federal Communications Commission
Office of Engineering and Technology
Washington, DC 20554

RF Safety Program: 202-418-2464
Internet address: rfsafety@fcc.gov
RF Safety Web Site: www.fcc.gov/oet/rfsafety

10. References

- [1] The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section 332 (c)(7)(B)(iv).
- [2] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Notice of Proposed Rulemaking, ET Docket 93-62, 8 FCC Rcd 2849 (1993).
- [3] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Report and Order, ET Docket 93-62, FCC 96-326, adopted August 1, 1996. 61 Federal Register 41006 (1996).
- [4] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Second Memorandum Opinion and Order, ET Docket 93-62, adopted August 25, 1997.
- [5] *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields*, OET Bulletin 65, August, 1997.