

# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@po.state.ct.us](mailto:siting.council@po.state.ct.us)

Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

September 6, 2002

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

RE: **EM-AT&T-118-010820** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 845 Ethan Allen Highway, Ridgefield, Connecticut.

Dear Attorney Fisher:


At a public meeting held on September 5, 2002, 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 August 20, 2002. 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.

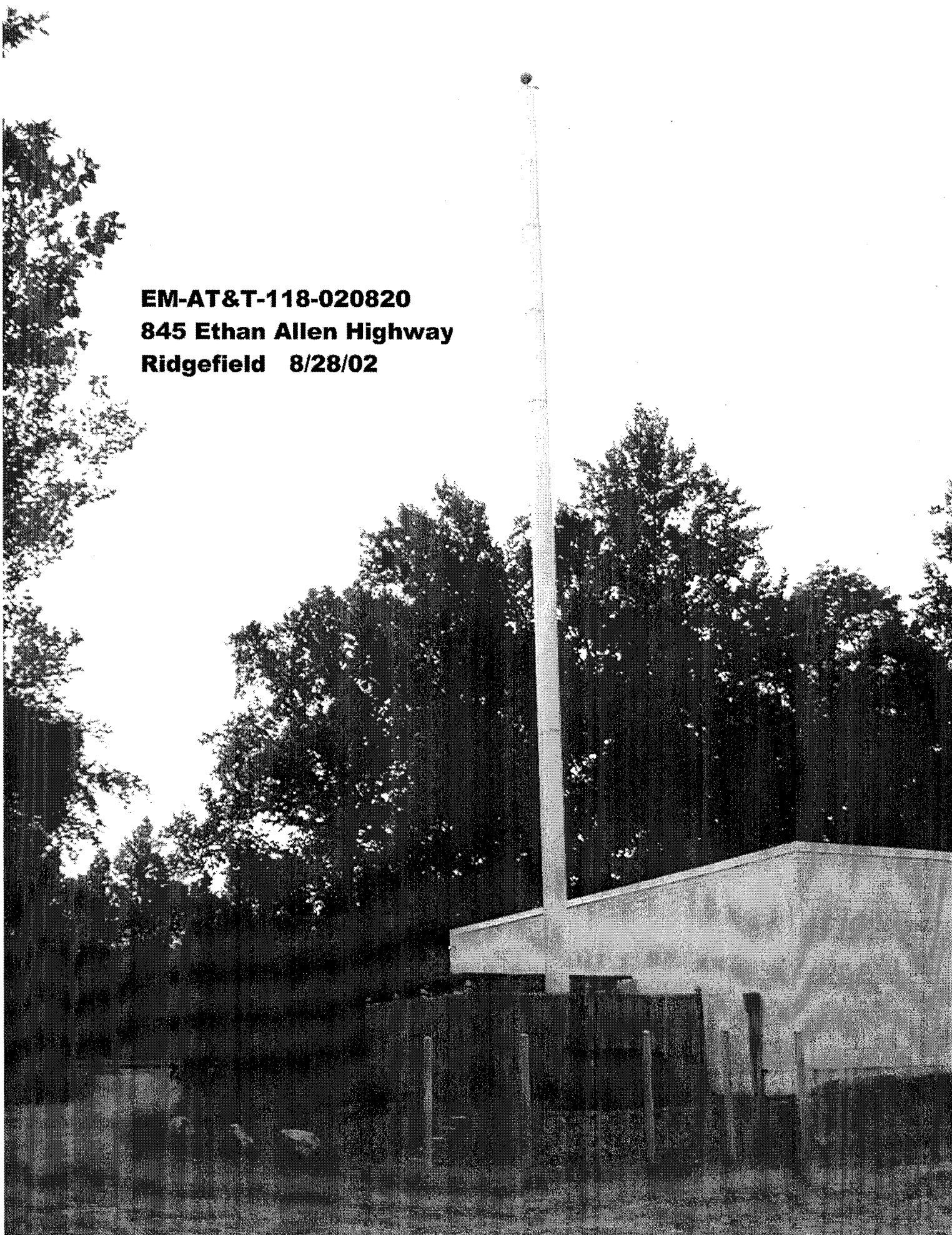
Very truly yours,

  
Mortimer A. Gelston  
Chairman

MAG/laf

c: Honorable Rudolph P. Marconi, First Selectman, Town of Ridgefield  
Oswald Inglese, Town Planner, Town of Ridgefield  
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae  
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC

**EM-AT&T-118-020820**  
**845 Ethan Allen Highway**  
**Ridgefield 8/28/02**





# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@po.state.ct.us](mailto:siting.council@po.state.ct.us)

Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

August 21, 2002

Honorable Rudolph P. Marconi  
First Selectman  
Town of Ridgefield  
400 Main Street  
Ridgefield, CT 06877

RE: **EM-AT&T-118-010820** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 845 Ethan Allen Highway, Ridgefield, Connecticut.

Dear Mr. Marconi:

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 tentatively scheduled for September 5, 2002, at 1:30 p.m. in Hearing Room One, 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/slm

Enclosure: Notice of Intent

c: Oswald Inglese, Town Planner, Town of Ridgefield

**RECEIVED**

AUG 20 2002

**NOTICE OF INTENT TO MODIFY AN  
EXISTING TELECOMMUNICATIONS FACILITY  
845 ETHAN ALLEN HIGHWAY, RIDGEFIELD, 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 845 Ethan Allen Highway, Ridgefield, Connecticut (the "Ethan Allen Highway Facility"), owned by VoiceStream Wireless Communications ("VoiceStream"). AT&T Wireless and VoiceStream have agreed to share the use of the Ethan Allen Highway Facility, as detailed below.

**The Ethan Allen Highway Facility**

The Ethan Allen Highway Facility consists of an approximately one hundred (100) foot flagpole/monopole (the "Tower") and associated equipment currently being used for wireless communications by VoiceStream and Sprint. The surrounding land uses are predominantly business commercial.

**AT&T Wireless' Facility**

As shown on the enclosed plans prepared by ScienTel, including a site plan and tower elevation of the 845 Ethan Allen Highway Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and equipment cabinets at grade needed to provide personal communications services ("PCS"). AT&T Wireless will install 3 panel antennas within the flagpole at approximately the 70 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 expanded fenced compound. The expansion of the fenced compound is within VoiceStream's lease parcel and will not extend the existing Tower Facility site boundaries. As evidenced in the structural evaluation prepared by SpectraSite, 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 Ethan Allen Highway 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. 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 Frank Wentink, 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 Ethan Allen Highway Facility meets the Council's exemption criteria.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'CB Fisher', is written over the printed name.

Christopher B. Fisher, Esq.

On behalf of AT&T Wireless

cc: Rudolph Marconi, First Selectman, Town of Ridgefield  
RJ Wetzel, Bechtel

TOP FLAG POLE  
EL =  $\pm 100'-0"$

VOICESTREAM ANTENNAS  
EL =  $\pm 97'-6"$

VOICESTREAM ANTENNAS  
EL =  $\pm 87'-6"$

SPRINT ANTENNAS  
EL =  $\pm 79'-6"$

AT&T ANTENNAS  
EL =  $70'-0"$

$\pm 100'-0"$  FLAG POLE  
SPRINT ICE BRIDGE  
SPRINT EQUIPMENT  
EXISTING BUILDING

AT&T POWER & TELCO  
AT&T GPS AND  
LMU ANTENNA  
AT&T ICE BRIDGE  
AT&T EQUIPMENT ON CONCRETE PAD  
8' HIGH FENCE  
CONCRETE BOLLARD (TYP.)

GRADE  
EL =  $0'-0"$

EAST ELEVATION

SCALE: 1" = 15'-0"

1  
SC2



THE BLEACHERY  
143 WEST STREET  
NEW MILFORD, CT. 06776  
Tel: (860) 210-3020  
Fax: (860) 210-3047



AT&T WIRELESS SERVICES, INC.  
149 EAST RIVER STREET  
SOUTH NORWALK, CT. 06855

DRAWING TITLE:

SITING COUNCIL

PROJECT INFORMATION:

RIDGEFIELD NE  
CT-244  
845 ETHAN ALLEN HIGHWAY  
RIDGEFIELD, CT. 06877

PROPERTY OWNER:

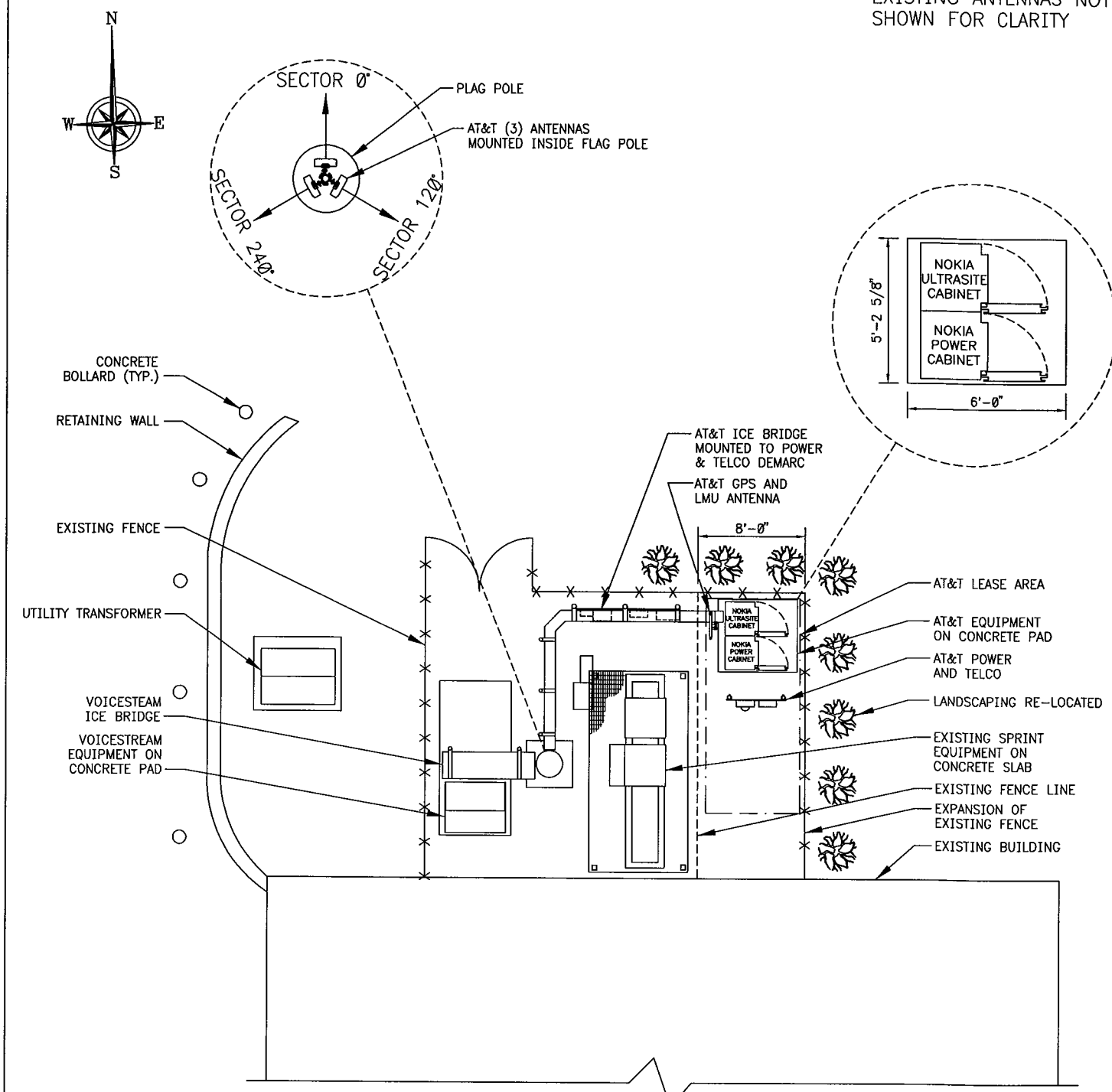
VOICESTREAM WIRELESS  
100 FILLEY STREET  
BLOOMFIELD, CT. 06002

DRAWING NO.

SC2

REVISION NO.	A	DRAWN BY:	JT
DATE ISSUED:	07/10/02	CHECKED BY:	KW
SCALE:	1" = 15'-0"	APPROVED BY:	SC
		SHEET NO.	2 OF 2
A/E PROJECT NO:	17447-0012		



NOTE:  
EXISTING ANTENNAS NOT  
SHOWN FOR CLARITY



# SITE PLAN

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

1  
SC1

<div> <b>SCIENTEL.</b></div> <div>THE BLEACHERY 143 WEST STREET NEW MILFORD, CT. 06776 Tel: (860) 210-3020 Fax: (860) 210-3047</div>	<div> <b>AT&amp;T</b></div> <div><b>AT&amp;T WIRELESS SERVICES, INC.</b> 149 EAST WATER STREET SOUTH NORWALK, CT. 06855</div>	<b>DRAWING TITLE:</b> SITING COUNCIL	<b>DRAWING NO.</b> <b>SC1</b>	
		<b>PROJECT INFORMATION:</b> RIDGEFIELD NE CT-244 845 ETHAN ALLEN HIGHWAY RIDGEFIELD, CT. 06877		
		<b>PROPERTY OWNER:</b> VOICESTREAM WIRELESS 100 FILLEY STREET BLOOMFIELD, CT. 06002	REVISION NO. A	DRAWN BY: JT
			DATE ISSUED: 07/10/02	CHECKED BY: KW
			SCALE: 3/32" = 1'-0"	APPROVED BY: SC
		SHEET NO. 1 OF 2		
	A/E PROJECT NO:	17447-0012		

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

**SEMAAN ENGINEERING SOLUTIONS**

**100 ft PIROD Flagpole  
Structural Analysis**

Prepared for:  
**VoiceStream Wireless**  
**12920 SE 38th Street**  
**Bellevue, WA 98006**

**received**  
7.25.02 *JS*

**Site: CT11112H / Redding - Rte 7 / AT&T**  
**Ridgefield, CT**

**July 23, 2002**



Mr. Joseph Laurenzano  
VoiceStream Wireless  
12920 SE 38th Street  
Bellevue, WA 98006

**Re: Site Number CT11112H – Redding - Rte 7, Ridgefield, CT.**

Dear Mr. Laurenzano:

We have completed the structural analysis for the existing flag 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 100 ft PIROD flagpole.

Refer to PIROD drawing 153438-B dated February 14, 2001 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. It also treats guys as exact cable elements and therefore is ideal for guyed towers. The analysis was performed in conformance with **EIA/TIA-222-F for 85 mph with 1/2" radial ice**. 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
97.5	3	RR65-19-00DP w/ Airtech LNA's Mounted Inside Fiberglass Shroud	(6) 1-5/8	VoiceStream
87.5	3	RR65-19-00DP w/ Airtech LNA's Mounted Inside Fiberglass Shroud	(6) 1-5/8	VoiceStream
79.5	3	FR65-17-00DP Mounted Inside Fiberglass Shroud	(6) 1-1/4	Sprint
69.5	3	<b>DAPA 58210 Mounted Inside Fiberglass Shroud</b>	<b>(3) 1-1/4</b>	<b>AT&amp;T</b>
100.0	1	12 ft x 20 ft Flag		

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.

All antennas must be mounted fully within the fiberglass shroud.

**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: 53.2%.

**Foundation:**

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	254.70	237.53	93.3

The structure base reactions resulting from this analysis do not exceed the ones shown on the original structure drawings.

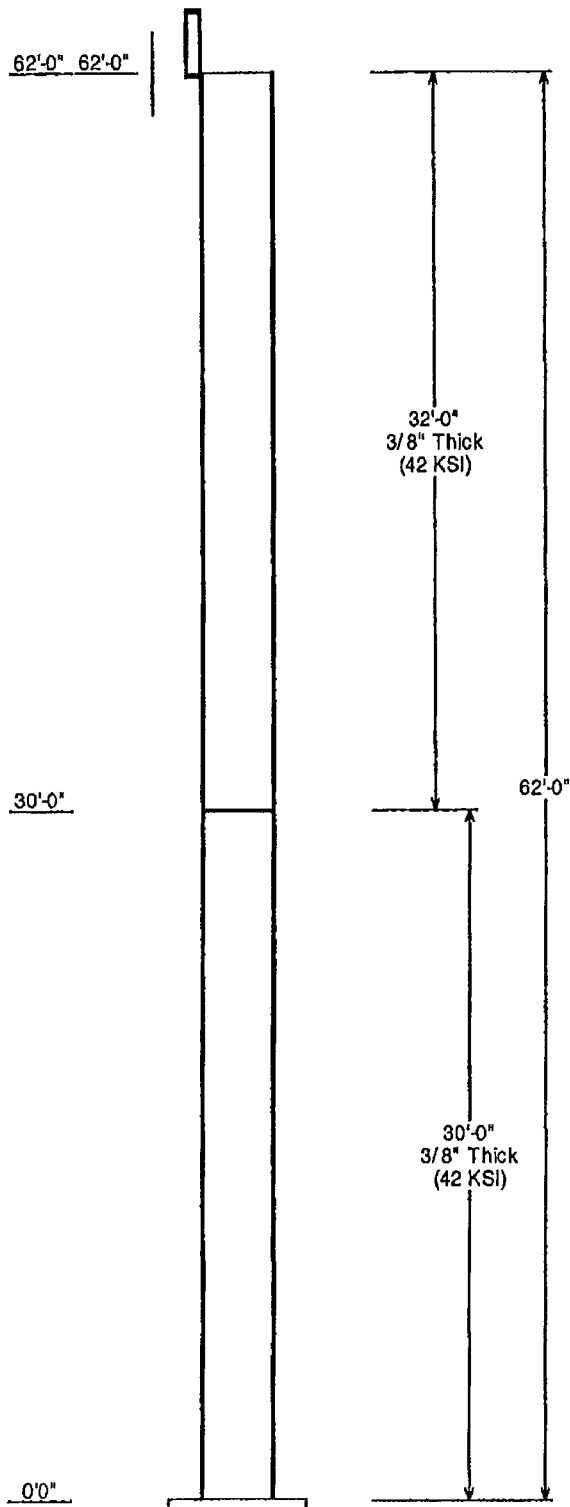
**Review and Recommendations:**

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 with 1/2" radial ice.

**SEMAAN ENGINEERING SOLUTIONS**

1047 N.204<sup>th</sup> Avenue  
Elkhorn, NE 68022  
Phone: 402-289-1888  
Fax: 402-289-1861

Copyright Semaan Engineering Solutions, Inc

**Job Information**

Pole : CT11112H  
Description :  
Client : VoiceStream Wireless-WA  
Location : Redding - Rte 7, Ridgefield, CT  
Type : Round Stepped Pole  
Height : (ft) 62.000 Taper: 0.0000 (in/ft)

**Sections Properties**

Section	Length (ft)	Diameter (in) Across Flats		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade (ksi)
1	30.000	24.00	24.00	0.375		0.000	42
2	32.000	24.00	24.00	0.375	Butt Joint	0.000	42

**Discrete Appurtenance**

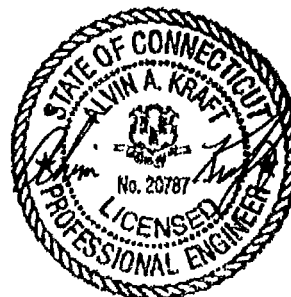
Attach Elev (ft)	Force Elev (ft)	Type	Qty	Description
97.500	97.500	Panel	3	RR65-19-00DP
87.500	87.500	Panel	3	RR65-19-00DP
79.500	79.500	Panel	3	FR65-17-00DP
69.500	69.500	Panel	3	DAPA 58210
62.000	100.000	Panel	1	12 ft x 20 ft Flag
62.000	62.000	Whip	1	Fiberglass Shroud

**Load Cases / Deflections**

Load Case	Attach Elev (ft)	Translation (in)	Rotation (deg)
<u>No Ice</u>	<u>No Ice Wind Speed = 85.00 mph w/ No Ice</u>		
	62.000	8.95	-1.042
<u>Ice</u>	<u>Ice Wind Speed = 73.61 mph w/ Ice 0.50 In Thick</u>		
	62.000	6.68	-0.777

**Reactions**

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	237.527	4.606	-7.115
Ice	177.912	3.478	-8.545



7-24-02



---

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

SITE ID: 913-010-244

July 9, 2002

**Prepared by AT&T Wireless Services, Inc.**  
Frank Wentink **RF Engineer**

## Table of Contents

1. INTRODUCTION .....	3
2. SITE DATA.....	3
3. RF EXPOSURE PREDICTION.....	3
4. FCC GUIDELINES FOR EVALUATING THE ENVIRONMENTAL EFFECTS OF RF RADIATION .....	4
5. COMPARISON WITH STANDARDS .....	4
6. CONCLUSION.....	4
7. FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE.....	5
8. EXHIBIT A.....	6
9. FOR FURTHER INFORMATION.....	7
10. REFERENCES .....	7

## 1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 845 Ethan Allen Highway, Ridgefield, CT 06877. 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: Ridgefield NE	
Number of simultaneously operating channels	16
Type of antenna	PCSX065-18-0
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	70.00 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 facility<sup>1</sup>:

$$PowerDensity = \frac{0.64 * 1.64 * N * ERP(\theta)}{\pi * R^2} (mW/cm^2) \quad Eq. 1-Far-field$$

Where,  $N$ = Number of channels,  $R$ = distance in cm from the RC (Radiation Center) of antenna, and  $ERP(\theta)$  = The power of a half wave dipole expressed in milliwatts in the direction of prediction point. This is the correct equation for antennas which have their gain expressed in dBd.

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

Where  $P_{in}/ch$  = Input power to antenna terminals in watts/ch,  $R$  = distance to center of radiation,  $h$  = aperture height in meters,  $\alpha$  = 3 dB beam-width of horizontal pattern.

<sup>1</sup> RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts ( $\mu$ 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 Radiation

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.<sup>2</sup> 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 0.002154 mW/cm<sup>2</sup> which occurs at 200 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000964 mW/cm<sup>2</sup> 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 radiation*

<i>Frequency</i>	<i>Public/Uncontrolled</i>	<i>Occupational/controlled</i>	<i>Maximum power density at Accessible location</i>
Cellular	.580 mW/cm <sup>2</sup>	2.9 mW/cm <sup>2</sup>	0.002154 mW/cm <sup>2</sup>
PCS	1 mW/cm <sup>2</sup>	5 mW/cm <sup>2</sup>	

The maximum power density at the proposed facility represents only 0.22% of the public MPE limit for PCS frequencies.

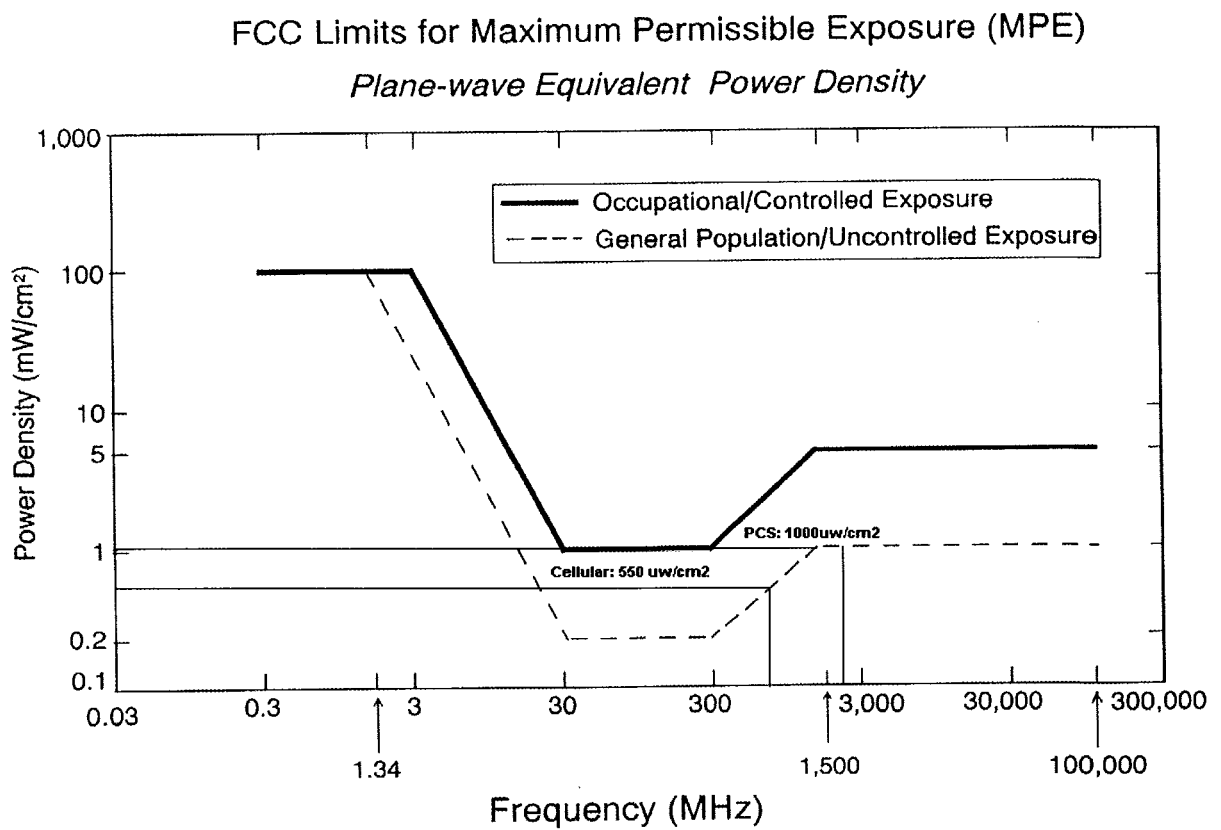
#### 6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.002154 mW/cm<sup>2</sup>, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

---

<sup>2</sup> 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.”

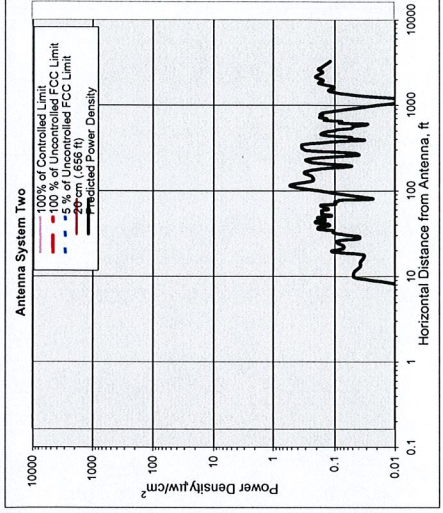
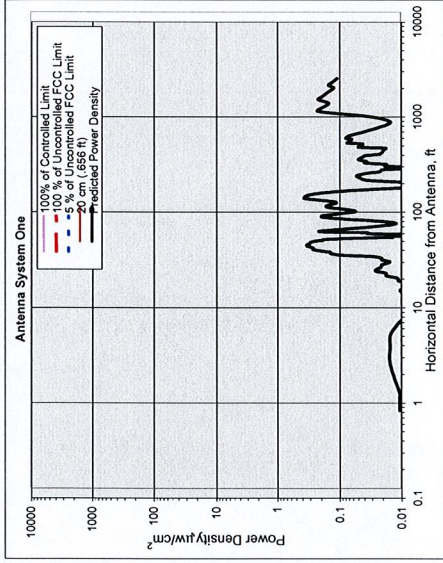
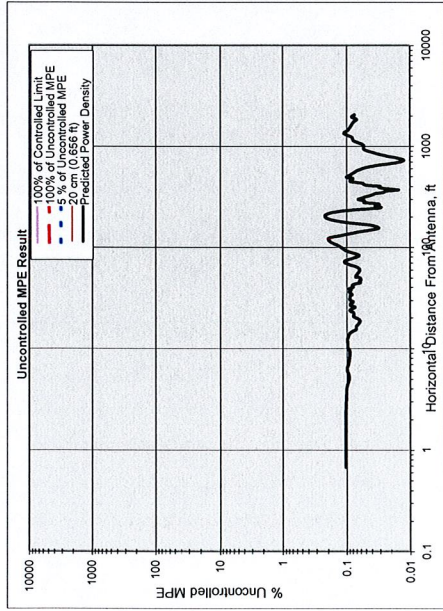
## 7. FCC Limits for Maximum Permissible Exposure



*AT&T Wireless Services, Inc.*

**8. Exhibit A**





Number of Antenna Systems: 4

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 Analysis Required.

Power Density		@ Horiz. Dist. feet
mW/cm²	% of limit	
Maximum Power Density =	0.002154	200.00
464.27 times lower than the MPE limit for uncontrolled environment	0.22	
Composite Power (ERP) =	12,000.00	Watts

Site ID: 913-010-244  
Site Name: Ridgefield NE  
Site Location: 845 Ethan Allen Highway  
Ridgefield, CT 06877

Performed By: Frank C. Wentink

Date: 7/9/02

Antenna System One

	units	Value
Frequency	MHz	1945.00
# of Channels	#	6
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	5.73
(Center of Radiator)	feet	70.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		PCSX065-18-0
Max Ant Gain	dBd	16.40
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.75
Ant HBW	degrees	65.00
Distance to Ant <sub>location</sub>	feet	67.13
WOS?	Y/N?	n

Antenna System Two

	units	Value
Frequency	MHz	1865.00
# of Channels	#	6
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	9.08
(Center of Radiator)	feet	97.50
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		RR-90-17-02
Max Ant Gain	dBd	14.40
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	4.66
Ant HBW	degrees	90.00
Distance to Ant <sub>location</sub>	feet	95.17
WOS?	Y/N?	n

Ant System TWO Owner: Voicestream

Sector: 3

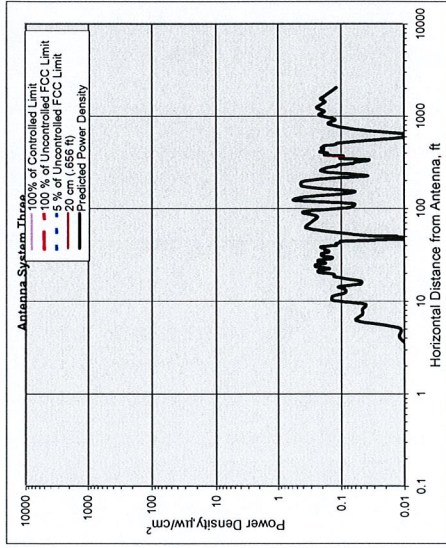
Azimuth: 01/20/240

Ant System ONE Owner: AT&T

Sector: 3

Azimuth: 01/20/240

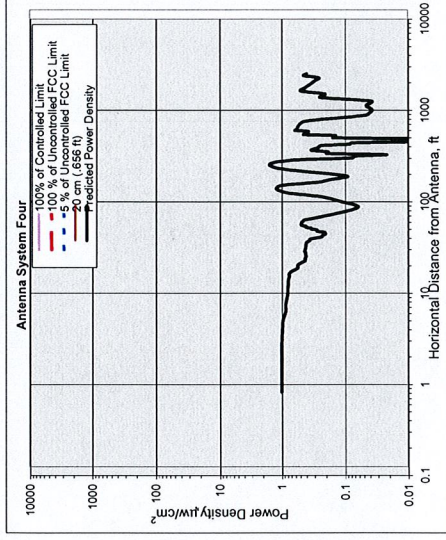




Antenna System Three

Frequency	units	Value
1865.00	MHz	6
# of Channels	#	250.00
Max ERP/Ch	Watts	9.08
Max Pwr/Ch into Ant.	Watts	87.50
(Center of Radiator)	feet	0.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		RR-90-17-02
Max Ant Gain	dBd	14.40
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	4.66
Ant HBW	degrees	90.00
Distance to Ant <sub>Bottom</sub>	feet	85.17
WOS?	Y/N?	n

Ant System Three Owner: Voicestream (expansion)  
Sector: 3  
Azimuth: 0/120/240



Antenna System Four

Frequency	units	Value
1950.00	MHz	15
# of Channels	#	500.00
Max ERP/Ch	Watts	15.45
Max Pwr/Ch into Ant.	Watts	79.50
(Center of Radiator)	feet	0.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		D8980G90
Max Ant Gain	dBd	15.10
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.00
Ant HBW	degrees	90.00
Distance to Ant <sub>Bottom</sub>	feet	77.00
WOS?	Y/N?	n

Ant System Four Owner: Sprint  
Sector: 3  
Azimuth: 0/120/240

## 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](mailto:rfsafety@fcc.gov)  
RF Safety Web Site: [www.fcc.gov/oet/rfsafety](http://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.