

June 28, 2002

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

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

RE: **EM-AT&T-030-020530** - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 14 Thompson Hill Road, Columbia, Connecticut.

Dear Attorney Fisher:

At a public meeting held on June 25, 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 May 30, 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 Adella G. Urban, First Selectman, Town of Columbia
Carl S. Fontneau, Town Planner, Town of Columbia
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC
Thomas F. Flynn III, Nextel Communications
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae
Sandy M. Carter, Verizon Wireless

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
14 THOMPSON HILL ROAD, COLUMBIA, CONNECTICUT**

RECEIVED
MAY 30 2002
CONNECTICUT
SITING COUNCIL

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 14 Thompson Hill Road, Columbia, Connecticut (the "Thompson Hill Road Facility"), owned by Sprint Sites USA ("Sprint"). AT&T Wireless and Sprint have agreed to share the use of the Thompson Hill Road Facility, as detailed below.

The Thompson Hill Road Facility

The Thompson Hill Road Facility consists of an approximately one hundred eighty (180) foot monopole (the "Tower") and associated equipment currently being used and/or leased for wireless communications by Sprint, Nextel, VoiceStream and Verizon. A chain link fence surrounds the Tower compound. The current surrounding land uses include residences and undeveloped property.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Corporation, including a site plan and tower elevation of the Thompson Hill Road Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and equipment cabinets needed to provide personal communications services ("PCS") within the existing fenced compound. AT&T Wireless will install 6 panel antennas at approximately the 140 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76"H x 30" W x 30" D) on a concrete pad. As evidenced in the letter of structural integrity prepared by URS Corporation, 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 Thompson Hill 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. 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 Galen Belen, Radio Frequency 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

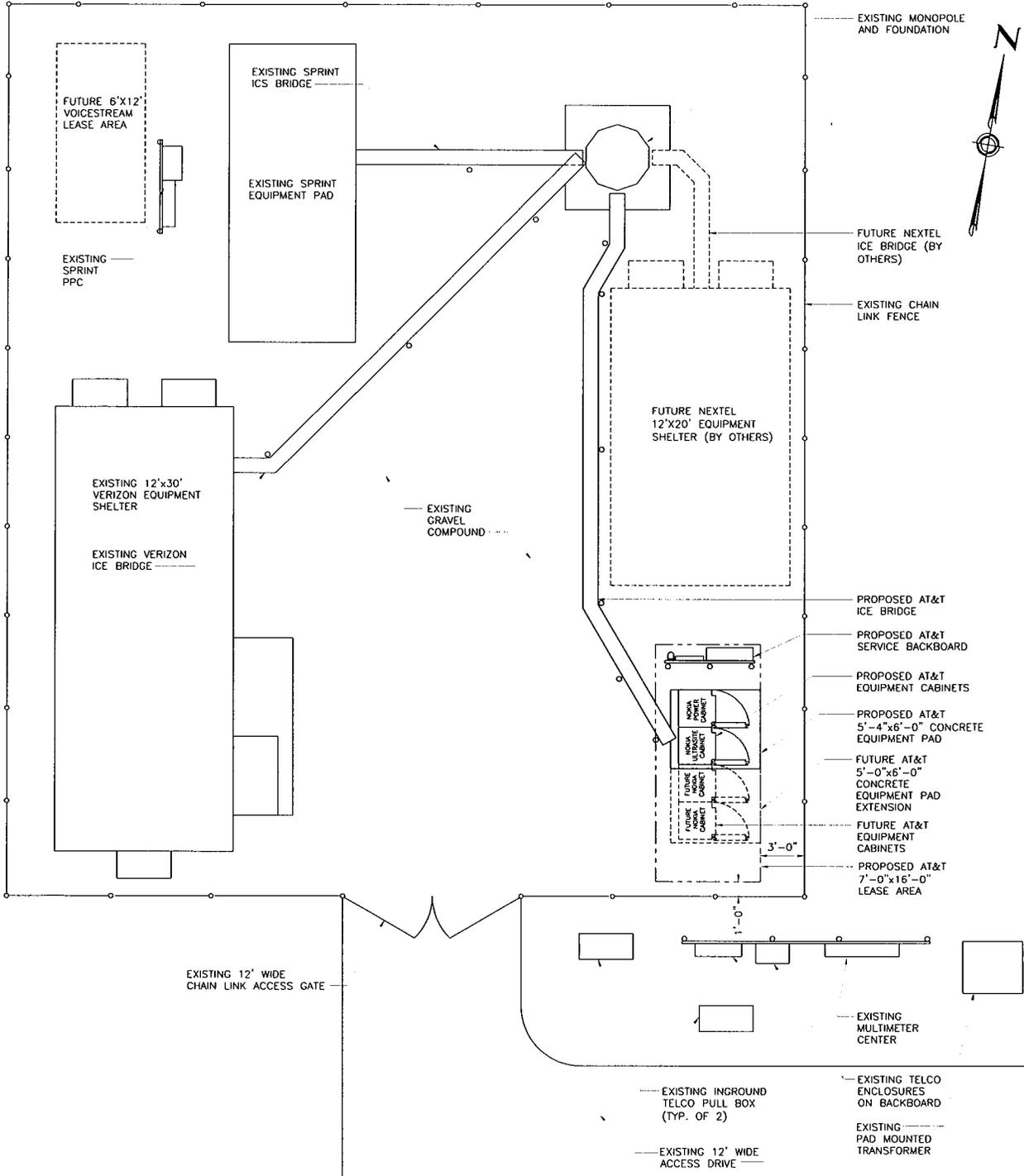
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Thompson Hill Road Facility meets the Council's exemption criteria.

Respectfully Submitted,

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

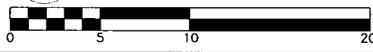
Christopher B. Fisher, Esq.
On behalf of AT&T Wireless

cc: First Selectman, Town of Columbia
Joanne Desjardins, Pinnacle



1 COMPOUND PLAN

SC-1 SCALE: 1" = 10'-0"



ISSUED FOR SITING COUNCIL

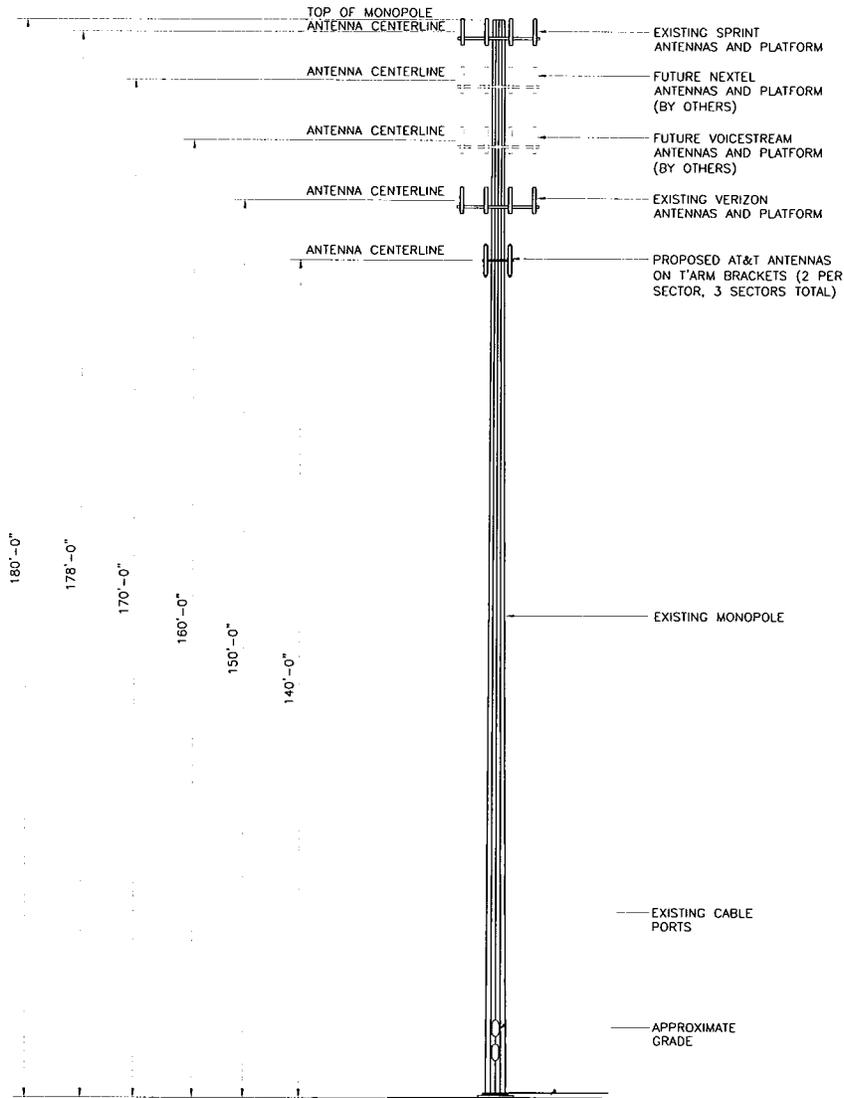
LATITUDE: 41.71762 (NAD 83)
 LONGITUDE: 72.29975 (NAD 83)

URS
 URS CORPORATION-AES
 795 BROOK STREET, BLDG 5
 ROCKY HILL, CT. 06067
 1-(860)-529-8882
 1-(860)-529-5566 (FAX)

 **AT&T**
 AT&T WIRELESS PCS LLC
 12 OMEGA DRIVE
 STAMFORD, CONNECTICUT 06902

DRAWING TITLE:
 COMPOUND PLAN
 PROJECT INFORMATION:
 COLUMBIA - NORTH
 CT-861
 14 THOMPSON HILL ROAD
 COLUMBIA, CT
 PROPERTY OWNER:
 SPRINT SITES USA
 535 CRESCENT AVENUE
 RAMSEY, NY 07746

DRAWING TITLE	
907-007-861A-SC1	
REVISION NO. 0	DRAWN BY: RB
DATE ISSUED: 05/02/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
	SHEET NO. 1 OF 2
URS JOB NO.: F302224.33	



1 TOWER ELEVATION
 SC-2 SCALE: 1" = 30'-0"

ISSUED FOR SITING COUNCIL

LATITUDE:	41.71762 (NAD 83)
LONGITUDE:	72.29975 (NAD 83)

URS
 URS CORPORATION-AES
 795 BROOK STREET, BLDG 5
 ROCKY HILL, CT. 06067
 1-(860)-529-8882
 1-(860)-529-5566 (FAX)

AT&T
 AT&T WIRELESS PCS LLC
 12 OMEGA DRIVE
 STAMFORD, CONNECTICUT 06902

DRAWING TITLE: TOWER ELEVATION
PROJECT INFORMATION: COLUMBIA NORTH
 CT-861
 14 THOMPSON HILL ROAD
 COLUMBIA, CT
PROPERTY OWNER: SPRINT SITES USA
 535 CRESCENT AVENUE
 RAMSEY, NY 07746

DRAWING TITLE: 907-007-861A-SC2	
REVISION NO. 0	DRAWN BY: RB
DATE ISSUED: 05/02/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
	SHEET NO. 2 OF 2
URS JOB NO.: F302224.33	



May 17, 2002

Mr. Mortimer A. Gelston
Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

**Reference: Proposed Telecommunications Facility
AT&T Site No. CT-861
14 Thompsan Hill Road
Columbia, Connecticut
F300002224.33**

Dear Mr. Gelston:

URS Corporation AES (URS) conducted a review and evaluated the existing 180' monopole structure located at 14 Thompsan Hill Road in Columbia, Connecticut. The purpose of this review was to evaluate the affect of the proposed AT&T Wireless antennas and mount on the existing monopole structure. The monopole and its foundation were designed by Engineered Endeavors Inc. job no. 99-1429 dated November 22, 1999. The monopole and its foundation were originally designed to support six telecommunications carriers between the elevations of 130' - 180'. The monopole currently is supporting four carriers between elevation 150' - 180'. The proposed AT&T Wireless antennas and mount considered in this review are as listed below:

Antenna and Mount	Carrier	Antenna Center Elevation
(6) Allgon 7250 on low profile platform and (12) 1-5/8" coax cables within the monopole	AT&T	140'

It is our determination that the existing monopole and its foundation have sufficient structural capacity to support the two installed carriers, the two future carriers and the AT&T Wireless installation as specified above. This evaluation is based on requirements of the TIA/EIA-222-F dated March 1996 and the Connecticut State Building Code dated 1999 and the latest supplement and amendments.

If you should have any questions, please call.

Sincerely,

URS Corporation AES

Mohsen Sahirad, P.E.
Senior Structural Engineer



MS/rmn

cc: Don Huntley – Bechtel
Naish Artaiz – URS
Doug Roberts – URS
Alitz Abadjian – URS
CF/Book

URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.529.8882
Fax: 860.529.3991



File 18446cc

May 17, 2002

Mr. Mortimer A. Gelston
Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

**Reference: Proposed Telecommunications Facility
AT&T Site No. CT-861
14 Thompsan Hill Road
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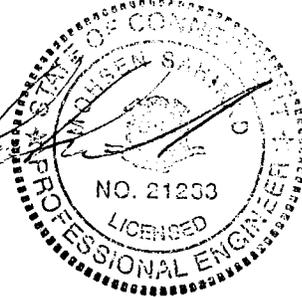
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If you should have any questions, please call.

Sincerely,

URS Corporation AES

Mohsen Sakirad, P.E.
Senior Structural Engineer



MS/rmn

cc: Don Huntley – Bechtel
Naish Artaiz – URS
Doug Roberts – URS
Alitz Abadjian – URS
CF/Book

URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.529.8882
Fax: 860.529.3991



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

SITE ID: 907-007-861

May 21, 2002

Prepared by AT&T Wireless Services, Inc.
Galen Belen 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 14 Thompson Hill Rd. Columbia CT 06237. 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: Columbia-North	
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)	140.00 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 RC (Radiation Center) of antenna, 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.

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

Where P_m/ch = Input power to antenna terminals in watts/ch, R = distance to center of radiation, 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 (μW), 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.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 0.002682 mW/cm² which occurs at 160 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000100 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 radiation

Frequency	Public/Uncontrolled	Occupational/controlled	Maximum power density at Accessible location
Cellular	.580 mW/cm ²	2.9 mW/cm ²	0.002682 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.70% of the public MPE limit for PCS frequencies.

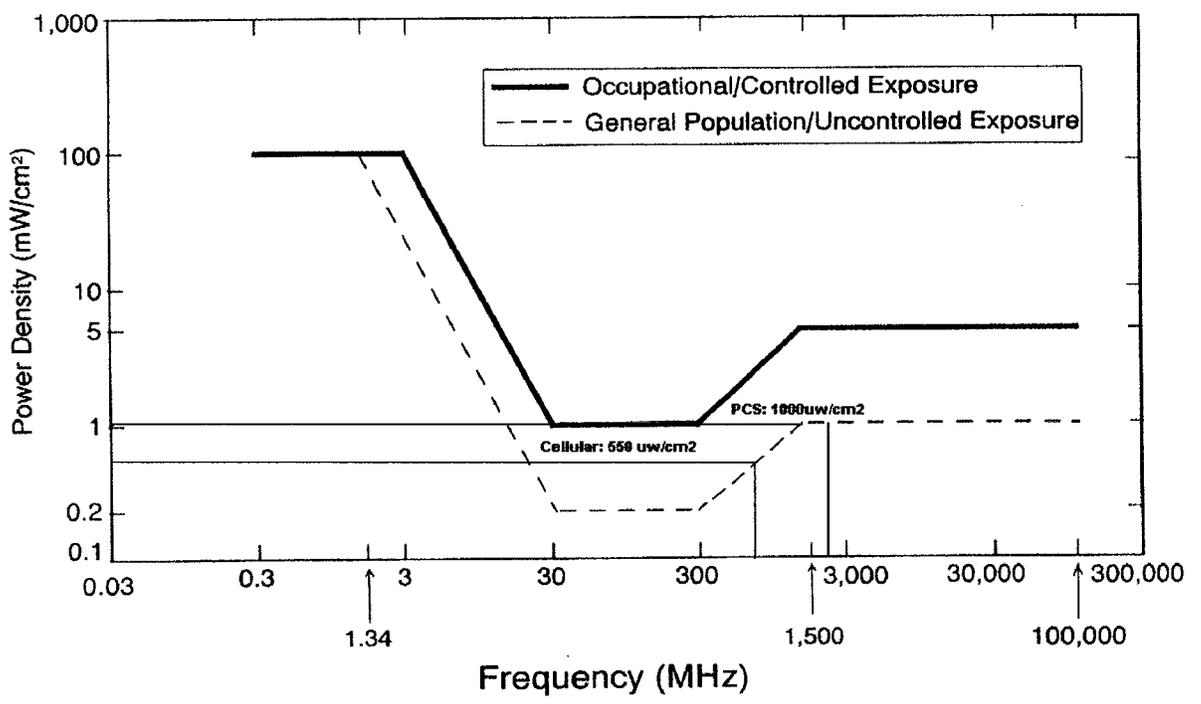
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.002682 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.”

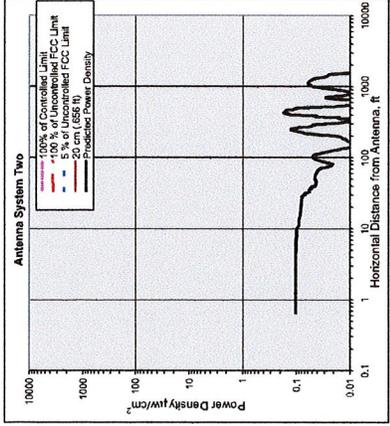
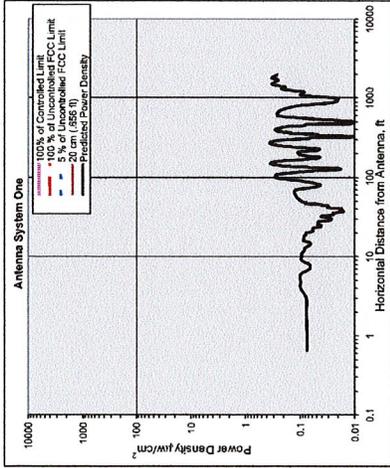
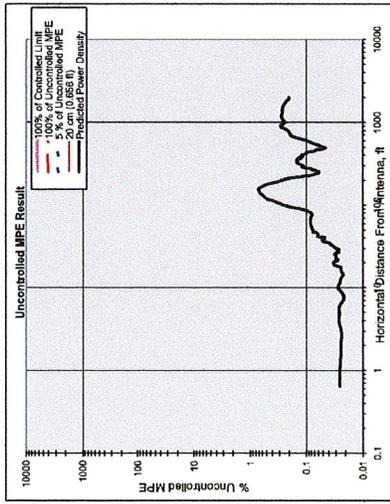
7. FCC Limits for Maximum Permissible Exposure

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



AT&T Wireless Services, Inc.

8. Exhibit A



Number of Antenna Systems: 5

Meets FCC Controlled Limits for The Antennas Systems.

Meets FCC Uncontrolled Limits for The Antenna Systems.

Meets 8% of FCC Uncontrolled Limits for The Antenna Systems.

No Further Maximum Permissible Exposure (MPE) Analysis Required.

Power Density	0.002852	160.00
Maximum Power Density	0.002852	160.00
Composite Power [ERP]	20,000.00	Watts
142.34 times lower than the MPE limit for uncontrolled environment	0.70	

Site ID: 907-007-8817
 Site Name: Columbia-North
 Site Location: 14 Thompson Hill Rd
 Columbia, CT 06237

Performed By: Galen Belien
 Date: 5/21/2002

Antenna System One

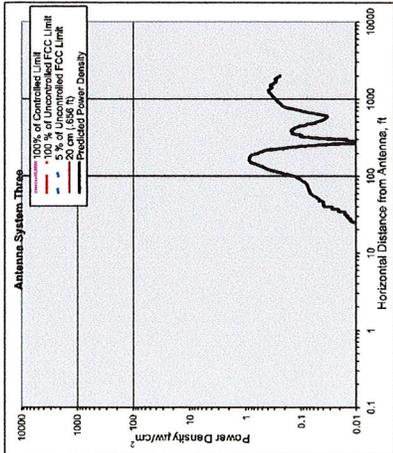
Frequency	MHz	Value
# of Channels	#	16
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	5.88
(Center of Radiator)	feet	140.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No		Aligon 7250.03
Max Ant Gain	dBd	16.30
Down tilt	degrees	0.00
Miscellaneous Att	dB	0.00
Height of aperture	feet	5.11
Ant H/W	degrees	65.00
Distance to Ant	feet	137.45
WOS?	Y/N?	n

Ant System ONE Owner: AT&T
 Sector: 3
 Azimuth: 0/120/240

Antenna System Two

Frequency	MHz	Value
# of Channels	#	16
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	7.73
(Center of Radiator)	feet	176.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No		DB980G90E-M
Max Ant Gain	dBd	15.10
Down tilt	degrees	0.00
Miscellaneous Att	dB	0.00
Height of aperture	feet	5.00
Ant H/W	degrees	90.00
Distance to Ant	feet	175.50
WOS?	Y/N?	n

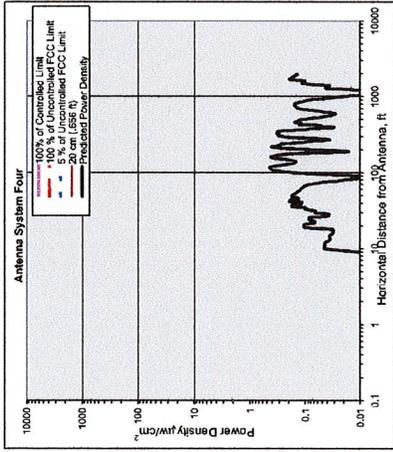
Ant System TWO Owner: Sprint
 Sector: 3
 Azimuth: 30/150/270



Antenna System Three

Parameter	Value
Frequency	850.00
units	MHz
# of Channels	16
Max ERP/Ch	250.00
Watts	
Max Pwr/Ch Into Ant.	15.77
Watts	
(Center of Radiator)	170.00
feet	
Calculation Point	0.00
(above ground or	
roof surface)	0.00
Antenna Model No.	DB844H90-XY
Max Ant Gain	12.00
degrees	
Down tilt	0.00
degrees	
Miscellaneous Att.	0.00
dB	
Height of aperture	4.00
feet	
Ant HBW	90.00
degrees	
Distance to Antenna	168.00
feet	
WOS?	Y/N?
	n

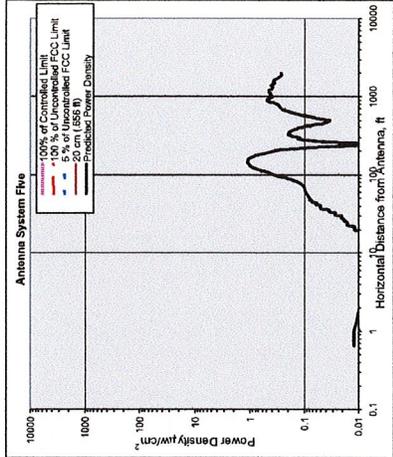
Ant System Three Owner: Nextel
Sector: 3
Azimuth: 45/165/285



Antenna System Four

Parameter	Value
Frequency	1900.00
units	MHz
# of Channels	16
Max ERP/Ch	250.00
Watts	
Max Pwr/Ch Into Ant.	9.08
Watts	
(Center of Radiator)	160.00
feet	
Calculation Point	0.00
(above ground or	
roof surface)	0.00
Antenna Model No.	RR901702
Max Ant Gain	14.40
degrees	
Down tilt	0.00
degrees	
Miscellaneous Att.	0.00
dB	
Height of aperture	4.86
feet	
Ant HBW	90.00
degrees	
Distance to Antenna	157.87
feet	
WOS?	Y/N?
	n

Ant System Four Owner: Voicestream
Sector: 3
Azimuth: 30/150/270



Antenna System Five

Parameter	Value
Frequency	33.00
units	MHz
# of Channels	16
Max ERP/Ch	250.00
Watts	
Max Pwr/Ch Into Ant.	15.77
Watts	
(Center of Radiator)	150.00
feet	
Calculation Point	0.00
(above ground or	
roof surface)	0.00
Antenna Model No.	DB844H90-XY
Max Ant Gain	12.00
degrees	
Down tilt	0.00
degrees	
Miscellaneous Att.	0.00
dB	
Height of aperture	4.00
feet	
Ant HBW	90.00
degrees	
Distance to Antenna	148.00
feet	
WOS?	Y/N?
	n

Ant System Five Owner: Verizon
Sector: 3
Azimuth: 30/150/270

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.