



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

March 27, 2002

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

RE: **EM-AT&T-014-020301** - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 850 West Main Street, Branford, Connecticut.

Dear Attorney Fisher:

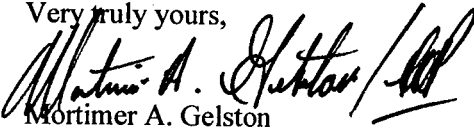
At a public meeting held on March 21, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated February 28, 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.

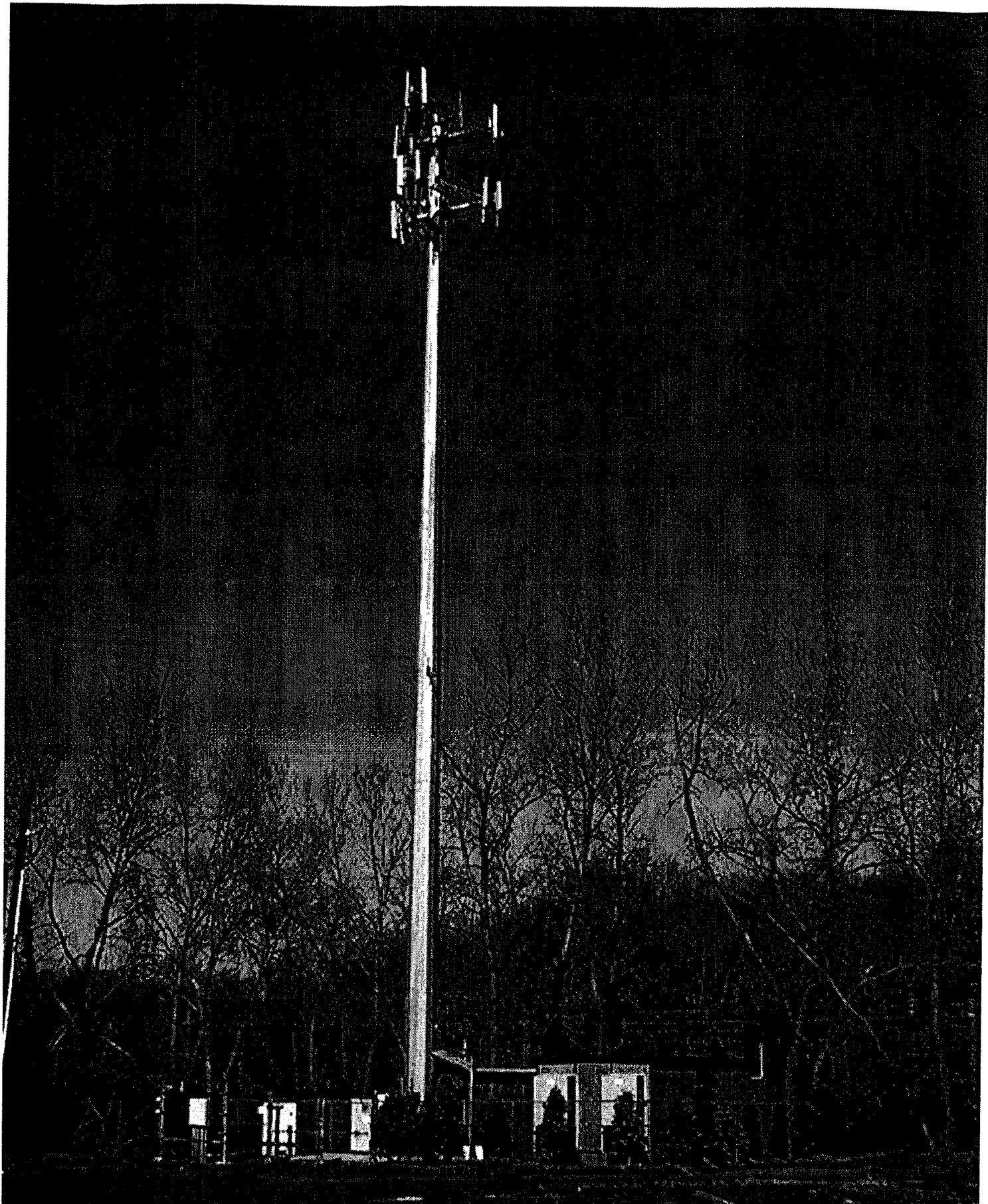
Thank you for your attention and cooperation.

Very truly yours,


Mortimer A. Gelston
Chairman

MAG/RM/laf

c: Honorable Anthony J. DaRos, First Selectman, Town of Branford
Justine K. Gillen, Zoning Enforcement Officer, Town of Branford
Diane Ross, Inland Wetland Enforcement Officer, Town of Branford
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC
Sandy M. Carter, Verizon Wireless



AT&T 850 West Main Street, Branford 3/14/02



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

March 7, 2002

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

RE: **EM-AT&T-014-020301** - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 850 West Main Street, Branford, Connecticut.

Dear Mr. DaRos:

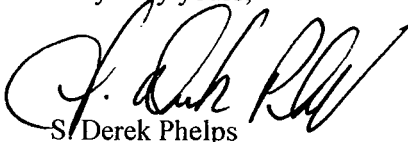
The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for March 20, 2002, at 10:30 a.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/laf

Enclosure: Notice of Intent

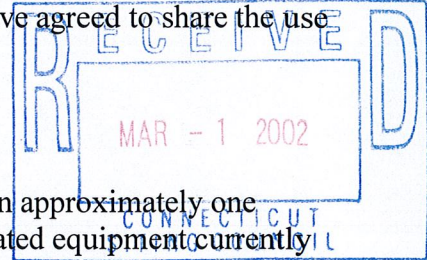
c: Justine K. Gillen, Zoning Enforcement Officer, Town of Branford
Diana Ross, Inland Wetland Enforcement Officer, Town of Branford

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
850 WEST MAIN STREET, BRANFORD, 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, by and through its agent AT&T Wireless PCS, Inc., ("AT&T Wireless") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 850 West Main Street, Branford, Connecticut (the "West Main Street Facility"), owned by Sprint Spectrum, LP ("Sprint"). AT&T Wireless and Sprint have agreed to share the use of the West Main Street Facility, as detailed below.

The West Main Street Facility

The West Main Street Facility in Branford consists of an approximately one hundred twenty (120) foot monopole (the "Tower") and associated equipment currently being used for wireless communications by Sprint and Verizon. A chain link fence surrounds the Tower compound. The current adjacent land uses include Interstate I-95 and commercial uses.



AT&T Wireless' Facility

As shown on the enclosed plans prepared by Scientel, including a site plan and tower elevation of the West Main Street 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 panel antennas at approximately the 100 foot level of the Tower and associated equipment cabinets on a concrete pad. As evidenced in the letter of structural integrity prepared by Scientel, 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

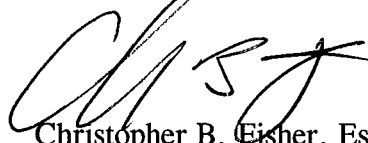
The proposed addition of AT&T Wireless' antennas and equipment to the West Main Street Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas 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 Tarik Ouazzani, 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 West Main Street Facility meets the Council's exemption criteria.

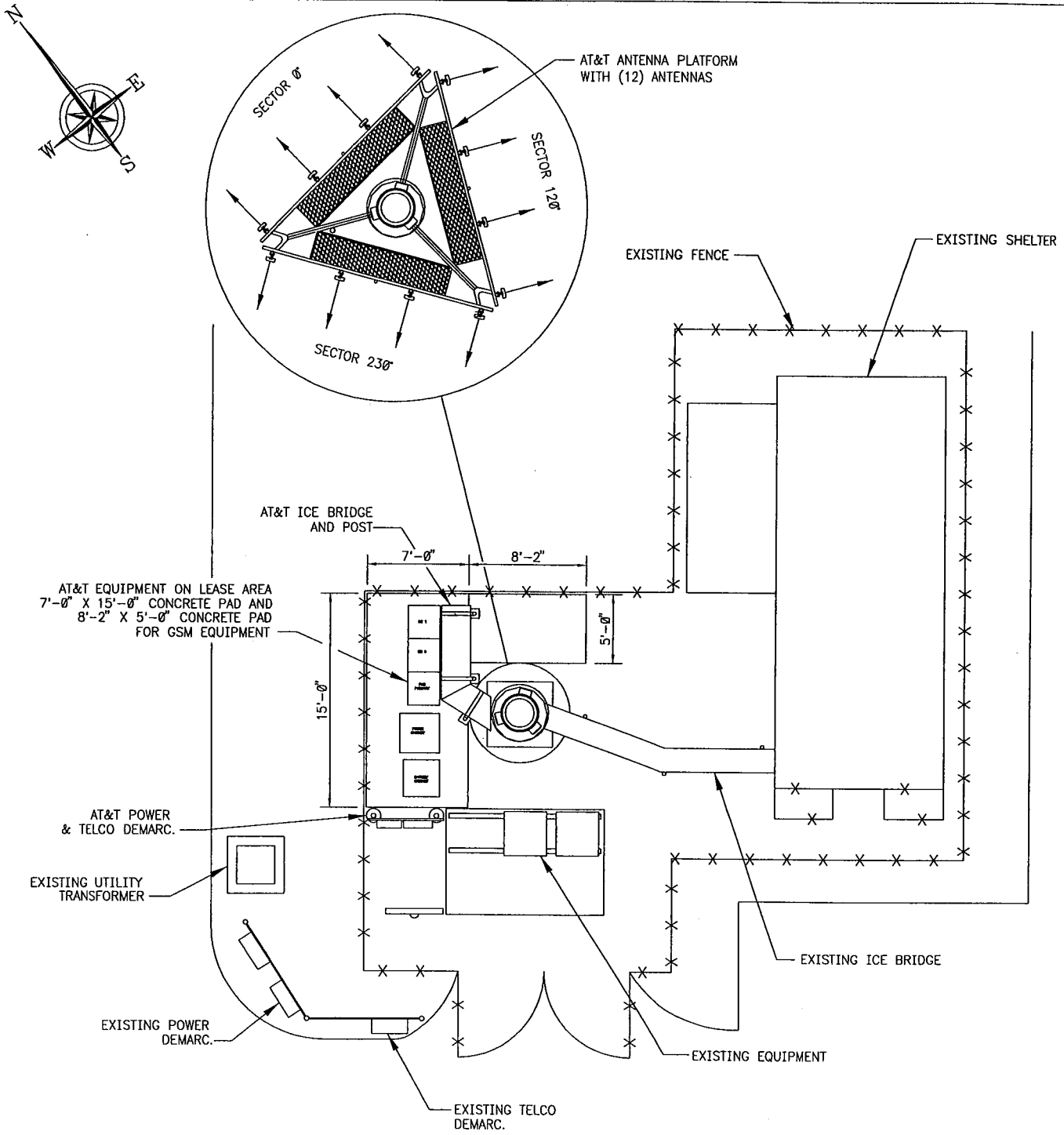
Respectfully Submitted,



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

cc: First Selectman, Town of Branford
Harold Hewett, Bechtel

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NOTE:
EXISTING ANTENNA PLATFORMS NOT SHOWN
FOR CLARITY.

SITE PLAN

SCALE: 1" = 10'-0"

1
SC1



44 SHELTER ROCK ROAD
DANBURY, CT. 06810
TEL: 203-796-5232
FAX: 203-796-5311



AT&T WIRELESS PCS LLC
149 EAST WATER STREET
SOUTH NORWALK, CT. 06854

DRAWING TITLE:

SITING COUNCIL

PROJECT INFORMATION:

BRANFORD-CHERRY HILL (SPRINT TOWER)
CT-197.1
850 WEST MAIN STREET
BRANFORD, CT. 06405

PROPERTY OWNER:

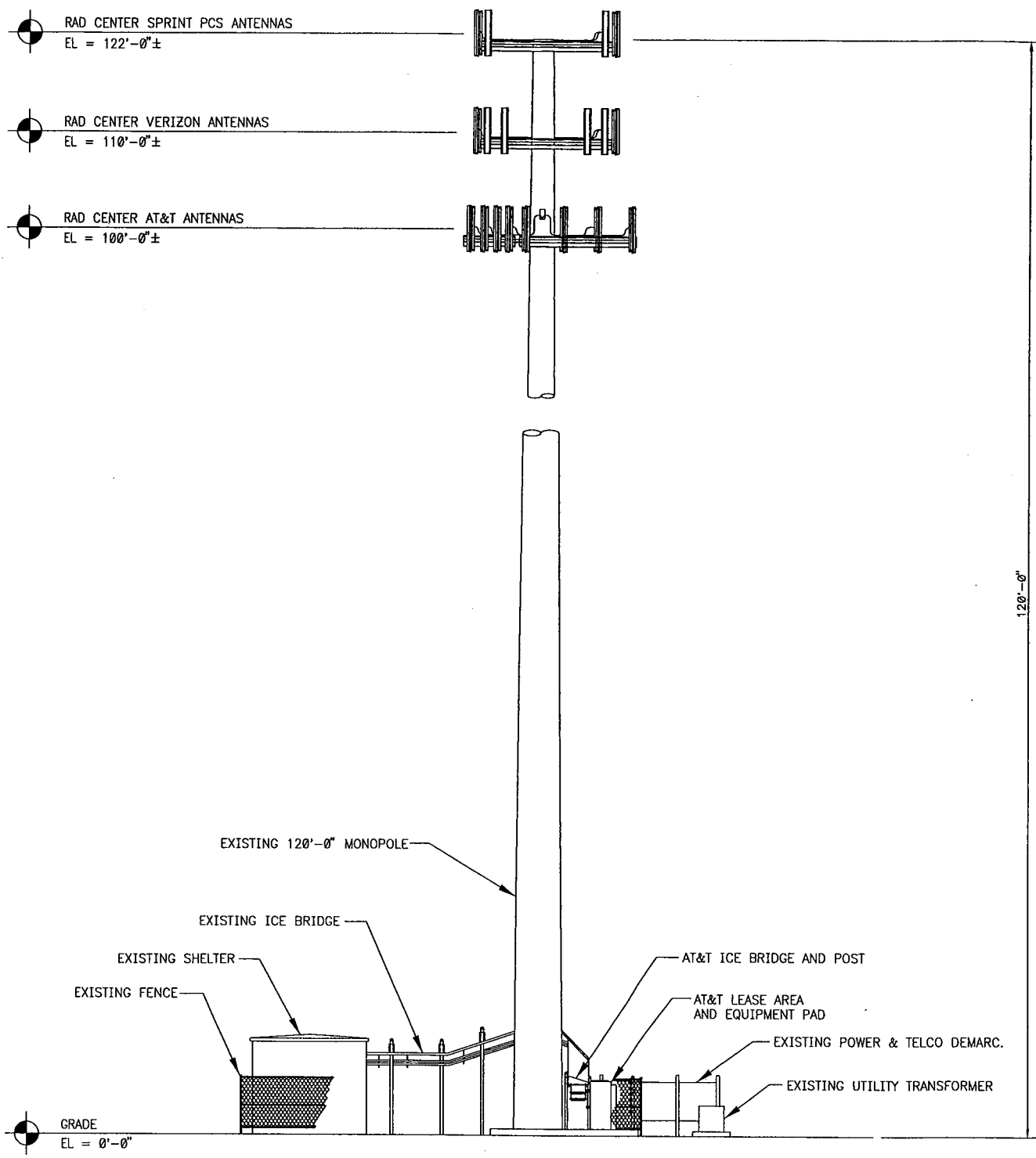
SPRINT PCS (CT03XC048)
535 EAST CRESENT AVENUE
RAMSEY, NJ. 07446

DRAWING NO.

SC1

REVISION NO. A	DRAWN BY: JT
DATE ISSUED: 10/12/01	CHECKED BY: RP
SCALE: 1" = 10'-0"	APPROVED BY: SC
	SHEET NO. 1 OF 2
A/E PROJECT NO: 1718B-0003	



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NORTH ELEVATION

SCALE: 1" = 15'-0"

1
SC2

 <p style="font-size: 0.8em; margin-top: 5px;">44 SHELTER ROCK ROAD DANBURY, CT 06810 Tel: (203) 796-5232 Fax: (203) 796-5311</p>	 <p style="font-size: 0.8em; margin-top: 5px;">AT&T WIRELESS PCS LLC 149 EAST WATER STREET SOUTH NORWALK, CT. 06854</p>	<p style="font-size: 0.8em; margin-top: 5px;"><i>DRAWING TITLE:</i> SITING COUNCIL</p> <p style="font-size: 0.8em; margin-top: 5px;"><i>PROJECT INFORMATION:</i> BRANFORD-CHERRY HILL (SPRINT TOWER) CT-197.1 850 WEST MAIN STREET BRANFORD, CT. 06405</p> <p style="font-size: 0.8em; margin-top: 5px;"><i>PROPERTY OWNER:</i> SPRINT PCS (CT03XC048) 535 EAST CRESENT AVENUE RAMSEY, NJ. 07446</p>	<p style="text-align: center; font-weight: bold; font-size: 0.9em; margin-top: 5px;"><i>DRAWING NO.</i> SC2</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.7em;"> <tr> <td style="width: 50%;">REVISION NO. A</td> <td style="width: 50%;">DRAWN BY: JT</td> </tr> <tr> <td>DATE ISSUED: 10/12/01</td> <td>CHECKED BY: RP</td> </tr> <tr> <td>SCALE: 1" = 15'-0"</td> <td>APPROVED BY: SC</td> </tr> <tr> <td colspan="2" style="text-align: right;">SHEET NO. 2 OF 2</td> </tr> <tr> <td colspan="2">A/E PROJECT NO: 17188-0003</td> </tr> </table>	REVISION NO. A	DRAWN BY: JT	DATE ISSUED: 10/12/01	CHECKED BY: RP	SCALE: 1" = 15'-0"	APPROVED BY: SC	SHEET NO. 2 OF 2		A/E PROJECT NO: 17188-0003	
REVISION NO. A	DRAWN BY: JT												
DATE ISSUED: 10/12/01	CHECKED BY: RP												
SCALE: 1" = 15'-0"	APPROVED BY: SC												
SHEET NO. 2 OF 2													
A/E PROJECT NO: 17188-0003													



October 12, 2001

Mr. Doyle Wolfe
Bechtel 2G CT, A&E Manager
300 Research Parkway, Suite 101
Meriden, CT 06450

SUBJECT: Site Name: Branford – Cherry Hill
 Street Address: 850 West Main Street
 Branford, CT 06404
 Voice Stream Site Number: CT-197.1
 Scientel Project Number: 17188-0003

Dear Mr. Wolfe:

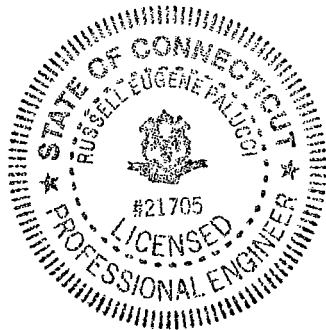
The structural design calculations for the Branford – Cherry Hill site have been prepared under my direct supervision and are in compliance with the governing Building Codes for these jurisdictions, and with accepted recognized engineering design principles.

This design provides for the installation of (12) antennas at a centerline height of 100’ on the existing 120’ Summitt monopole structure. The monopole was analyzed with the current antenna loadings at centerline heights of 122’ and 110’.

Please feel free to call me if you have any further questions or comments. I can be reached directly at 203-796-5366.

Sincerely,
Sciencel, LLC

Russell E. Palucci, P.E.
Engineer



Cc: S. Cook – Sciencel LLC, CT

OCT 16 2001



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

SITE ID: 913-008-197

February 28, 2002

**Prepared by AT&T Wireless Services, Inc.
Satish Bhandare 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 850 W Main St, Branford, CT 06404. 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>Branford Cherry Hill</i>	
Number of simultaneously operating channels	16
Type of antenna	Allgon 7250.02
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	100 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.

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

Where P_{in}/ch = Input power to antenna terminals in watts/ch, R = distance to center of radiation, h = aperture height in meters, α = 3 dB band-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 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 $5.12 \mu\text{W}/\text{cm}^2$ which occurs at 330 feet from the antenna facility. The chart in exhibit A also shows that the power density is only $0.07 \mu\text{W}/\text{cm}^2$ 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	$580 \mu\text{W}/\text{cm}^2$	$2,900 \mu\text{W}/\text{cm}^2$	$5.12 \mu\text{W}/\text{cm}^2$
PCS	$1000 \mu\text{W}/\text{cm}^2$	$5,000 \mu\text{W}/\text{cm}^2$	

The maximum power density at the proposed facility represents only 0.07% of the public MPE limit.

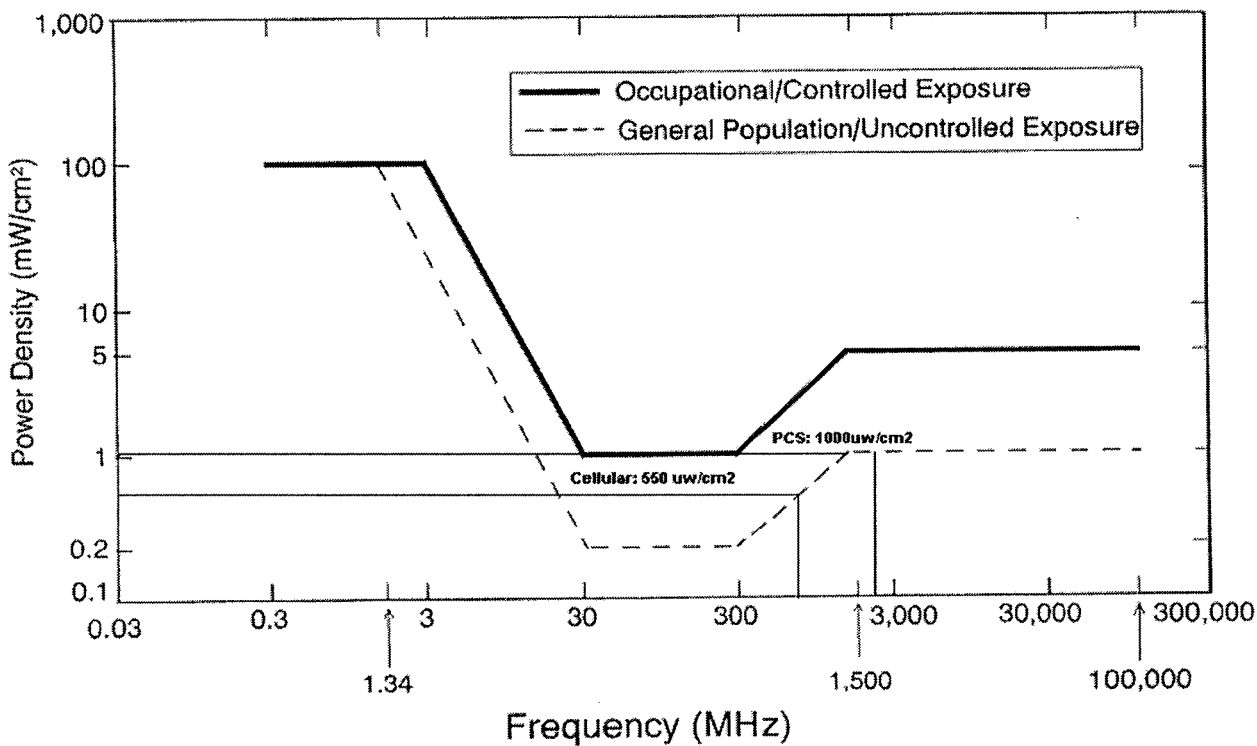
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is $5.12 \mu\text{W}/\text{cm}^2$, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

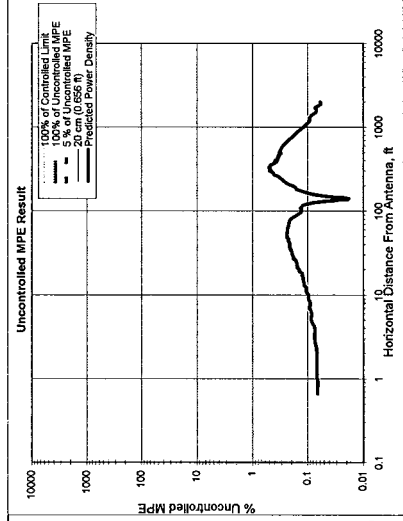
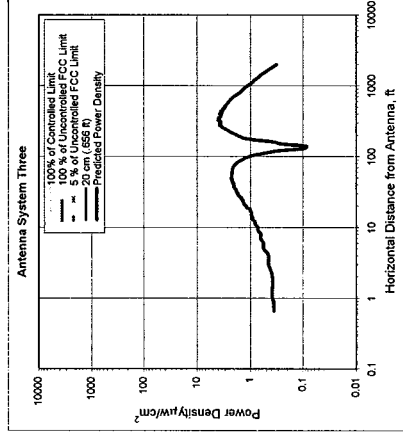
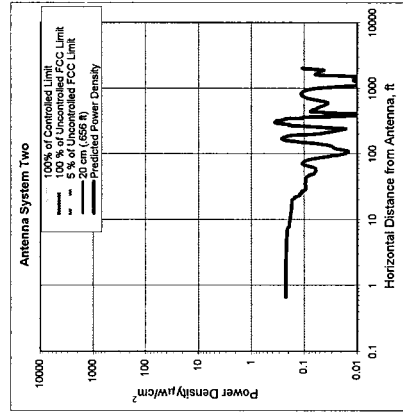
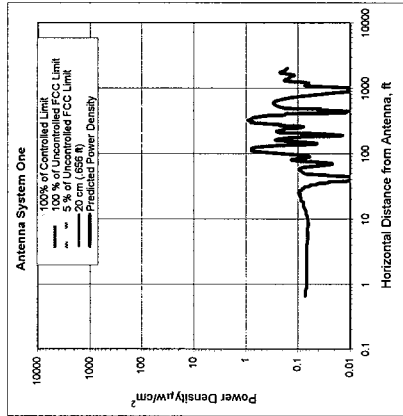
² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such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



8. Exhibit A



Antenna System One

units	Value
Frequency	1945
MHz	1945
# of Channels	16
Max ERP/Ch	250
Watts	250
Max Pwr/Ch Into Ant.	5.587
Watts	5.587
BS Height	100
feet	100
Calculation Point	0
(Center of Radiator)	0
(above ground or	
roof surface)	
Antenna Model No	Aligon 7250.02
Max Ant Gain	16.5
dBd	16.5
Down tilt	0
degrees	0
Miscellaneous Ant	0
Height or Base #	1
feet	1
Ant tilt	65
degrees	65
Distance to Ant	97.445
feet	97.445
WCS7	Y/N?
	n

Antenna System Two

units	Value
Frequency	1965
MHz	1965
# of Channels	16
Max ERP/Ch	250
Watts	250
Max Pwr/Ch Into Ant.	7.726
Watts	7.726
BS Height	122
feet	122
Calculation Point	0
(Center of Radiator)	0
(above ground or	
roof surface)	
Antenna Model No	DS90H90
Max Ant Gain	15.1
dBd	15.1
Down tilt	0
degrees	0
Miscellaneous Ant	0
Height or Base #	0
feet	0
Ant tilt	90
degrees	90
Distance to Ant	119.5
feet	119.5
WCS7	Y/N?
	n

Antenna System Three

units	Value
Frequency	680
MHz	680
# of Channels	16
Max ERP/Ch	250
Watts	250
Max Pwr/Ch Into Ant.	36.978
Watts	36.978
BS Height	110
feet	110
Calculation Point	0
(Center of Radiator)	0
(above ground or	
roof surface)	
Antenna Model No	ALP9011
Max Ant Gain	8.3
dBd	8.3
Down tilt	0
degrees	0
Miscellaneous Ant	0
Height or Base #	2
feet	2
Ant tilt	90
degrees	90
Distance to Ant	109
feet	109
WCS7	Y/N?
	n

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.

Maximum Power Density =	MW/cm²	µW/cm²	Power Density @ 20cm Dist.
195.24 times lower than the MPE limit for uncontrolled environment	5.12	0.51	330.00
Composable Power (ERP) =	12,020.00	Watts	

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

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

Site ID: 913-008-197
Site Name: Branford Cherry Hill
Site Location: 850 W Main St, Branford, CT 06404

Ant System Three Owner: Verizon
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
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.