



# 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.ct.gov/csc](http://www.ct.gov/csc)

March 12, 2004

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

RE: **EM-AT&T-043-040130** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 2 Prestige Park Road, East Hartford, Connecticut.

Dear Attorney Fisher:

At a public meeting held on March 4, 2004, 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 with the condition that the tower structure be reinforced as specified on drawing CT-0009-M1 of the engineering report sealed by Stephen Yeo, P.E.

The proposed modifications are to be implemented as specified here and in your notice received in our office on January 30, 2004. 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.

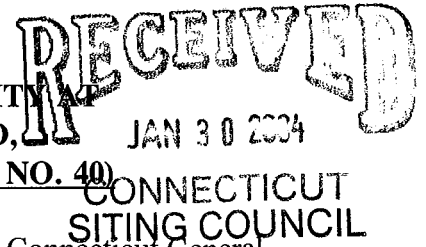
Very truly yours,

Pamela B. Katz, P.E.  
Chairman

PBK/laf

c: Honorable Timothy D. Larson, Mayor, Town of East Hartford  
Michael J. Dayton, Town Planner, Town of East Hartford  
Eric Rabon, Spectrasite Communications  
Michele J. Briggs, Southwestern Bell Mobile Systems  
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP

**NOTICE OF INTENT TO MODIFY AN  
EXISTING TELECOMMUNICATIONS FACILITY  
2 (a/k/a 284-310) PRESTIGE PARK ROAD,  
EAST HARTFORD, CONNECTICUT (DOCKET NO. 40)**



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 2 (A/K/A 284-310) Prestige Park Road, East Hartford, Connecticut (the “Prestige Park Road Facility”), owned by SpectraSite Communications, Inc. (“Spectrasite”). AT&T Wireless and Spectrasite have agreed to share the use of the Prestige Park Road Facility, as detailed below.

**The Prestige Park Road Facility**

The Prestige Park Road Facility consists of an approximately one hundred and fifty (150) foot monopole (the “Tower”) and associated equipment currently being used for wireless communications use by Pagenet, Cingular and Sprint. The compound which is not fenced consists of an area adjacent to an industrial building.

**AT&T Wireless’ Facility**

As shown on the enclosed plans prepared by Dewberry-Goodkind, Inc., 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 6 panel antennas at approximately the 146 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 the existing compound area at the base of the pole and adjacent to the building. As evidenced in the letter of structural integrity prepared by Spectrasite, annexed hereto as Exhibit A, AT&T has confirmed that upon certain structural modifications, the tower is capable of supporting the addition of AT&T Wireless’ antennas. All modifications as outlined in the structural report will be completed by AT&T as part of its construction and shared use of the Facility.

**AT&T Wireless’ Facility Constitutes An Exempt Modification**

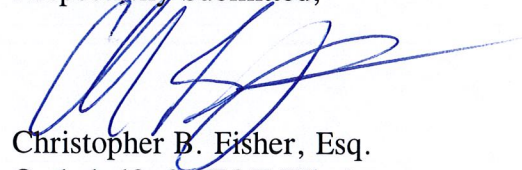
The proposed addition of AT&T Wireless’ antennas and equipment to the Prestige Park Road Facility constitutes an exempt “modification” of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless’ 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, 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 Prestige Park Road Facility meets the Council's exemption criteria.

Respectfully Submitted,

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

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

cc: Mayor Timothy D. Larsen, Town of East Hartford  
Timothy Parks, Optasite (CT-320)



# AT&T

## AT&T WIRELESS PCS, LLC SITE NUMBER: CT-320 SITE NAME: EAST HARTFORD NORTH EAST

### DRAWING INDEX

REV.	DESCRIPTION
0	TITLE SHEET
0	DETAILED SITE LAYOUT PLAN & ELEVATION VIEW

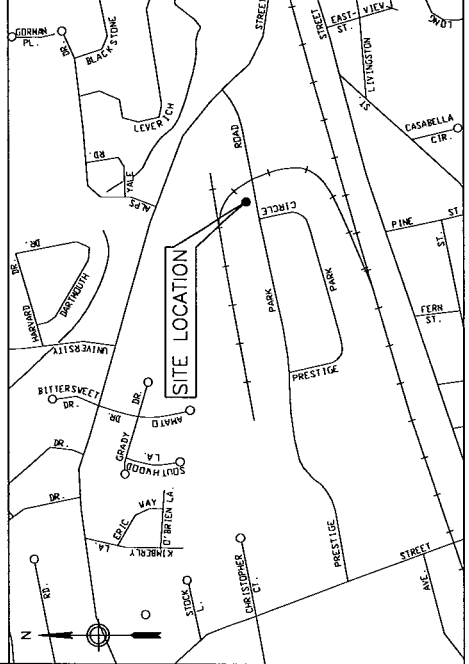
#### STRUCTURAL NOTE:

NEW CONSTRUCTION REPRESENTED ON THESE PLANS IS PROPOSED PREDICATED ON THE REQUIREMENT THAT A STRUCTURAL ANALYSIS BE PERFORMED BY A LICENSED CONNECTICUT PROFESSIONAL STRUCTURAL ENGINEER. ALL EXISTING AND PROPOSED ANTENNAS AND APURTINANCES SUPPORTED BY THE TOWER AND ANY REQUIRED IMPROVEMENTS AND REINFORCEMENTS HAVE SUFFICIENT STRUCTURAL CAPACITY AND COMPLY WITH THE CONNECTICUT BUILDING CODE AND ALL APPLICABLE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND APPROVALS WITHOUT CONFIRMATION OF THIS CERTIFICATION.

NOTE: DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

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### VICINITY MAP



### LOCATION MAP

SCALE: 1" = 500'



**EAST HARTFORD NORTH EAST**  
**SITE NO. CT-320**  
 284-310 PRESTIGE PARK  
 EAST HARTFORD, CT 06118

#### Dewberry-Goodkind, Inc.

A Dewberry Company  
 Engineers  
 Planners  
 Surveyors  
 59 Elm Street, Suite 101  
 New Haven, CT 06510  
 P. (203) 776-2277  
 F. (203) 776-2288

### PROJECT INFORMATION

SCOPE OF WORK: OUTDOOR TELECOMMUNICATIONS EQUIPMENT AND ANTENNAS INSTALLED ON EXISTING MONOPOLE

SITE ADDRESS: 284-310 PRESTIGE PARK  
 EAST HARTFORD, CT 06118

TAX ID NUMBER: 09-1025/5

ZONING DISTRICT: LOCAL BUSINESS--HISTORICAL DISTRICT (LB-HO)

CONTACT PERSON: TIM PARKS

PROPERTY OWNER: 284-310 PRESTIGE PARK  
 EAST HARTFORD, CT 06118

APPLICANTS: AT&T WIRELESS PSC, LLC  
 100 WASHINGTON STREET  
 STAMFORD, CT 06907

MAO: 83

N 41.7884'

W 72.8005'

GROUND ELEVATION: 110' ± AMSL

TELECOMMUNICATIONS FACILITY

PROPOSED USE:

### SITE QUALIFICATION PARTICIPANTS

TITLE	NAME	COMPANY	NUMBER
PM	JAMES HOSACK	BECHTEL	(203) 630-9042
CM	JASON PLUMB	BECHTEL	(203) 630-3947
RF	KUMAR RUCHOORUR	BECHTEL	(203) 630-9930
SAC	TIM PARKS	SITE ACQUISITION CONSULTANTS	(203) 241-0262
A/E	WOODNEY CHRISTOPHE	DEWBERRY-GOODKIND, INC.	(203) 776-2277

### TITLE SHEET

REV.	DATE	BY	CHK	APP'D
0				

JOB NO.	DRAWING NUMBER
2448	907-009-320-T01





Structural Analysis Summary	
Tower Site	CT-0009 EHFR-Prestige Park
Address	2 Prestige Park Road East Hartford, CT 06108-1919
Tower Height & Type	150 ft ITT Meyer Type "B" Monopole
Building Code	ANSI/TIA/EIA-222-F (1996) 80 mph (Hartford County) w/ 1/2" radial ice 1996 Building Officials and Code Administrators (BOCA) 80 mph w/ 1/2" radial ice

Tower Information	
Tower Geometry	ITT Meyer Type "B" Standard
Foundation	Girard & Company Engineers job number 38904, dated 04/20/83
Geotechnical	GeoTechnologies project number 1-02-1122-EA, dated 09/06/02

Results Summary*	
Tower Structure	<i>Inadequate; See Conclusions</i>
Flange Bolts	<i>Inadequate; See Conclusions</i>
Flange Plates	<i>Adequate</i>
Anchor Bolts	<i>Inadequate; See Conclusions</i>
Base Plate	<i>Adequate</i>
Foundation	<i>Adequate</i>

\*See following pages for detailed analysis results

Analysis prepared by:  
Jason R. Manners, E.I.  
Engineering Associate  
Contact (919) 466-4833  
with any questions.



Stephen Yeo, P.E.  
Structural Design Manager

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Connecticut.

## 1.0 Introduction

A structural analysis was performed on the above noted tower for the addition of proposed antennas as listed. The analysis consisted of applying the forces caused by the existing and proposed loads, and determining the resulting stresses in the structure and its foundation.

### 1.1 Existing and Proposed Antennas

ELEVATION ( <i>FLAGL</i> )	ANTENNA	CARRIER	COAX	IO*	NOTES
157 154	(1) 10' Omni (10) CSS DUO1417-8686 on Platform w/ Handrails	Pagenet Cingular	(1) 1-5/8" (10) 7/8"	I	Existing
146	(6) Algon 7250.03 on T-Arm Mounts	AT&T	(12) 1-5/8"	O	Proposed
137	(4) Decibel DB950F85-M (2) Decibel DB980F65T2E-M (2) Decibel DB950F85-M (1) Decibel DB980F65T2E-M on T-Arm Mounts	Sprint	(4) 1-5/8" (2) 1-5/8" (8) 1-5/8" (4) 1-5/8"	I	Existing Existing Reserved Reserved

\* IO denotes coax installed inside or outside of monopole respectively.

## 2.0 Detailed Analysis Results

### 2.1 Monopole Member Stress Levels

ELEVATION ( <i>FLAGL</i> )	STRESS RATIO*
150 to 110	1.33**
Flange Bolts	1.27**
Flange Plates	0.79
110 to 73.5	1.40**
73.5 to 35.7	1.34**
35.7 to 0	1.24**
Anchor Bolts	1.49**
Base Plate	0.70

\* Maximum Stress Ratio: 1.00=Full Allowable

\*\* Overstressed; reinforcing required.

## 2.2 Foundation Reactions

BASE REACTIONS	REACTIONS	RESULTS*
Moment ( <i>kip-ft</i> )	2141.3	<i>Adequate</i>
Compression ( <i>kips</i> )	18.6	<i>Adequate</i>
Shear ( <i>kips</i> )	20.3	<i>Adequate</i>

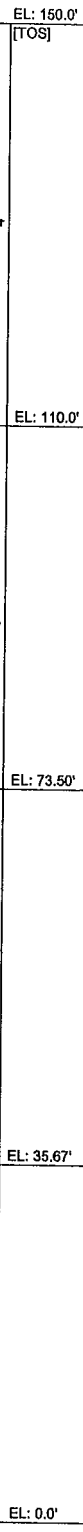
\*Based on foundation analysis

## 3.0 Conclusions and Recommendations

1. The monopole, flange bolts, and anchor bolts are not structurally adequate to accommodate the existing and proposed antenna and transmission line loading used in this analysis.
2. The monopole, flange bolts, flange plates, anchor bolts, base plate, and foundation are structurally adequate to accommodate the existing and proposed antenna and transmission lines loading used in this analysis after being modified as per the attached drawing CT-0009-M1.
3. Any future changes in loading must be reviewed by the SpectraSite Engineering Department.



SECTION



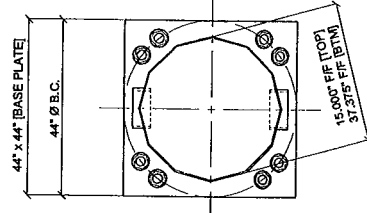
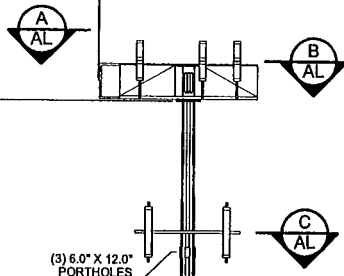
(2) 10.5" x 25.5" PORTHOLES  
EL: 8.0'

(2) 10.5" x 25.5" PORTHOLES  
EL: 3.0'

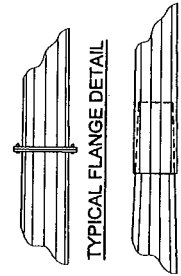
(3) 6.0" x 12.0" PORTHOLES  
EL: 135.0'

SPLICE LENGTH  
DESIGN: 42"

SPLICE LENGTH  
DESIGN: 50"



PLAN VIEW



TYPICAL FLANGE DETAIL

TYPICAL SPLICE DETAIL

FLANGE SPECIFICATIONS			
ELEV. THICKNESS (IN)	DIA (IN)	BOLT CIRCLE (IN)	BOLTS
110.0'	1.0	28.50	80 (12) 1 1/2"
TOP	BTM	1.0	28.50
1.0	1.0	28.50	80 (12) 1 1/2"

POLE MATERIAL SPECIFICATIONS	
TAPER:	0.155 (IN/FT)
SHAFT STEEL:	65 KSI
BASE PLATE STEEL:	SQUARE PL 2.50" x 44" x 44" 60 KSI
ANCHOR BOLTS:	(8) 2.4879 ASTM A615, GR. 75 44.0" Ø B.C.

SHAFT SPECIFICATIONS							
SHAFT SECTION	SECTION LENGTH (FT)	# SIDES	THICKNESS (IN)	GRADE (KSI)	OVERLAP (IN)	DIAMETER ACROSS FLATS (IN)	
						BOTTOM	TOP
1	35.67	12	0.375	65	50	37.38	31.85
2	42.00	12	0.313	65	42	33.10	26.55
3	40.00	12	0.250	65	0	27.61	21.25
4	40.00	12	0.188	65	0	21.25	15.00

DESIGN SPECIFICATIONS	
CODE:	ANSI/WA14-222-F 1988 BUILDING OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL (BOCA)
WIND:	80 MPH (HARTFORD COUNTY EIA) 80 MPH (1988 BOCA)
ICE:	1/2" RADIAL

TOWER IDENTIFICATION	
MANUFACTURER:	ITT-MEYER
IDENTIFICATION No.:	CT-0008, TYPE "B"

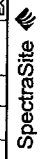
ANTENNA INFORMATION			
NO. / ELEV. (FT)	ANTENNA TYPE / TOWER	ANT. DIMS. (LxWxD)	ANTENNA STATUS
A 1157.0'	(10) CSS (U) 0141-8898	10' x 24' x 9'	PLATFORM W/ HANDRAILS (1) 1-58"
B 1154.0'	(4) DECEBEL DB850F85ZEM	48" x 14" x 3"	PLATFORM W/ HANDRAILS (1) 0.78"
C 1137.0'	(2) DECEBEL DB850F85ZEM	60" x 14" x 3"	PLATFORM W/ HANDRAILS (1) 1-58"
		60" x 14" x 3"	SHRINT (4) 1-58"
		60" x 14" x 3"	SHRINT (2) 1-58"

\* COAX INSTALLED INSIDE MONOPOLE

EXISTING ELEVATION 237.9' (± 3.0') AMSL NAVD88  
(ELEVATION REFLECTS HIGHEST POINT OF STRUCTURE AND APPURTENANCES FOR EXISTING MONOPOLE TOWER)

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REV./DRAWN	CHKD	DATE	DESCRIPTION
4	PAT	JRM 09/04/03	MODIFICATIONS EXISTING, SPRINT EXISTING, NEW BORDER



400 RESERVOIR FOREST DRIVE  
PHOENIX, ARIZONA 85028  
PHONE: 602.998.0100 FAX: 602.998.0122

TITLE: DESIGN PROFILE  
PROJECT: 150.0' ITT MEYER MONOPOLE - TYPE "B"  
SITE: E H F R - PRESTIGE PARK

DATE: 6/12/02  
OWN: SCK  
CHK: CGG  
SITE #:  
DWG #:  
REV: D1

SECTION

EL: 0.0'

EL: 35.67'

EL: 73.50'

EL: 110.0'

EL: 125' ±

EL: 150.0'  
[TOS]

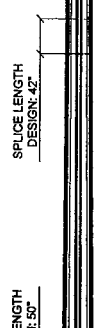
MODIFICATION  
FLANGE BOLTS  
REINFORCEMENT  
ANCHOR BOLTS

ADDITIONAL ANCHOR BOLTS - DESIGN BY OTHERS

FLAT PLATE REINFORCEMENT - DESIGNED BY OTHERS

N/A

BOLT 1-1/8" Ø



(2) 10.5" x 25.5"  
P.L. FOR HOLES  
E.L. 8.0'

(2) 10.5" x 25.5"  
P.L. FOR HOLES  
E.L. 3.0'

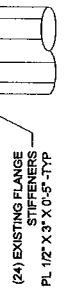
FLANGE SPECIFICATIONS			
ELEV. THICKNESS (IN)	DIA (IN)	BOLT CIRCLE (IN)	BOLTS A325
110.0'	1.0	28.50	25.75 60 (12) 1 1/2"

POLE MATERIAL SPECIFICATIONS

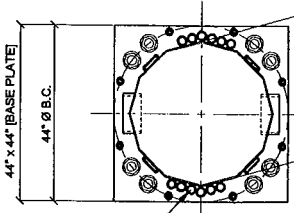
TAPER:	0.155 (IN/FT)
SHAFT STEEL:	65 KSI
BASE PLATE STEEL:	SQUARE PL 2.50" x 44" x 44" 80 KSI
ANCHOR BOLTS:	(8) 2.50" ANSI/AIA 222-F, GR. 75 44.0" Ø B.C.

SHAFT SPECIFICATIONS

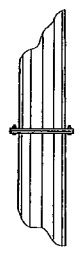
SHAFT SECTION	SECTION LENGTH (FT)	# SIDES	THICKNESS (IN)	GRADE (KSI)	OVERLAP (IN)	DIAMETER ACROSS FLATS (IN)	
						BOTTOM	TOP
1	35.67	12	0.375	65	50	37.38	31.85
2	42.00	12	0.313	65	42	33.10	28.55
3	40.00	12	0.250	65	0	27.81	21.25
4	40.00	12	0.188	65	0	21.25	15.00



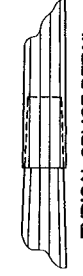
DETAIL "A"



PLAN VIEW



TYPICAL FLANGE DETAIL



TYPICAL SPLICE DETAIL

DESIGN SPECIFICATIONS	
CODE:	ANSI/AIA 222-F 1888 B.O.C.A.
WIND:	80 MPH (HARTFORD COUNTY) 80 MPH (1888 B.O.C.A.)
ICE:	1/2" RADIAL

TOWER IDENTIFICATION	
MANUFACTURER:	ITT-MEYER
IDENTIFICATION No.:	CT-0009

ANTENNA INFORMATION

No. / ELEV.	ANTENNA TYPE	ANT. DIMS. (LxWxD)	AZIMUTH	MOUNT	CUSTOMER	STATUS
A 152.0'	(1) OMNIDIRECTIONAL	10" x 2.2" x 9"	110°	PLATFORM WITH HANDRAILS	PAGERNET	E
B 146.0'	(10) CSST	48" x 4.4" x 9"	23°	PLATFORM WITH HANDRAILS	CINGULAR	E
C 137.0'	(6) ALL-GON	60" x 4.4" x 7"	60°	T-ARM	ATTN	E
C 137.0'	(4) DECIBEL	60" x 4.4" x 7"	60°	T-ARM	SPRINT	E
R1 137.0'	(2) DECIBEL	60" x 4.4" x 7"	60°	T-ARM	SPRINT	R
R1 137.0'	(1) DECIBEL	60" x 4.4" x 7"	60°	T-ARM	SPRINT	R

\* [B], [R] DENOTES COAX INSTALLED INSIDE OR OUTSIDE MONOPOLE RESPECTIVELY.

ANTENNA STATUS	STATUS	DEFINITION
E	EXISTING	
P	PROPOSED	
R	RESERVED	
T	TEMPORARY	

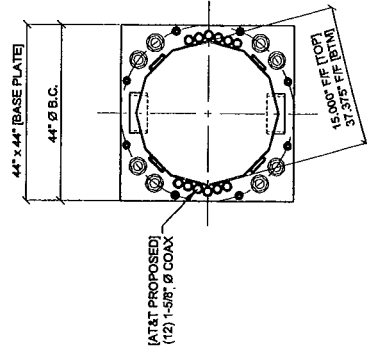
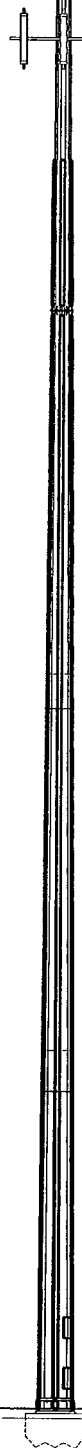
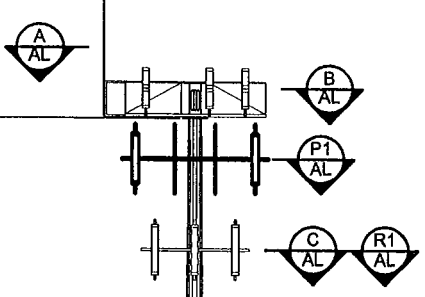
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Connecticut.  
**SpectraSite**  
 400 REGENCY FOREST DRIVE  
 CARY, NORTH CAROLINA 27511  
 PHONE: (919) 966-1127 FAX: (919) 966-8822  
 E-MAIL: info@spectrasite.com  
 S. REVISED TOWER AND MODIFICATION 10/09/03 (KAM)

TITLE: MODIFICATION DRAWING  
 PROJECT: 150' ITT MEYER MONOPOLE TYPE B  
 SITE: E.H.F.R. PRESTIGE PARK, CT  
 DATE: 9/28/02  
 DRAWN BY: JMB  
 CHECKED BY: DMB  
 SCALE: CT-0009  
 SHEET # 11  
 REV: 5

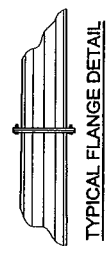
MODIFICATIONS PER SPECTRASITE STRUCTURAL ANALYSIS  
 DATED: 08-15-03  
 SEAL:

EL: 150.0'  
[TOS]

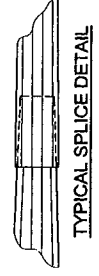
EL: 0.0'



PLAN VIEW



TYPICAL FLANGE DETAIL



TYPICAL SPLICE DETAIL

No.	ELEV.	ANTENNA TYPE	ANT. DIMS. (LxWxD)	AZIMUTH	MOUNT	TX-LINE *	CUSTOMER	STATUS
A	157.0'	(1) OMNI	10' x 2.4' x 9'	110°	PLATFORM W/ HANDRAILS	(1) 1-5/8" II	PAGERNET	E
B	154.0'	(10) CS1 D80147-8888	48" x 14" x 8"	23°, 143°, 268°	PLATFORM W/ HANDRAILS	(10) 7/8" II	CINGULAR	E
C	137.0'	(4) DECIBEL DB880F651E-M	60" x 4" x 2.2"	80°, 160°, 240°	T-ARM	(12) 1-5/8" II	AT&T	P
R1	137.0'	(2) DECIBEL DB880F651E-M	60" x 4" x 3"	50°, 150°	T-ARM	(2) 1-5/8" II	SPRINT	E
R1	137.0'	(2) DECIBEL DB880F651E-M	60" x 4" x 7"	50°, 150°	T-ARM	(2) 1-5/8" II	SPRINT	R
R1	137.0'	(1) DECIBEL DB880F651E-M	60" x 6" x 3"	280°	T-ARM	(4) 1-5/8" II	SPRINT	R

\* II, OR (O) DENOTES COAX INSTALLED INSIDE OR OUTSIDE MONOPOLE RESPECTIVELY.

ANTENNA STATUS	DEFINITION
E	EXISTING
F	FUTURE
I	INQUIRY
P	PROPOSED
R	RESERVED
T	TEMPORARY

REV DESCRIPTION DATE DWN/CHK  
 5 REV'D TOWER AND MODIFICATION 08/15/03 KMM  
 SpectraSite  
 400 REGENCY FOREST DRIVE  
 PHOENIX, AZ 85028-1127 FAX: 602/952-4822  
 TITLE: TOWER PROFILE  
 PROJECT: 150.0' TTT MEYER MONOPOLE - TYPE "B"  
 SITE: E H R - PRESTIGE PARK  
 DATE: 6/12/02 DWN: CGG SITE # AM CT-0009 TP 10

































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

**907-007-320-C01**

December 5, 2003

**Prepared by Bechtel Telecommunication  
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 284-310 Prestige Park, East Hartford, CT 06118. 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>East Hartford Northeast</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)	146.00 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>:

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

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.

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

Where *P<sub>in</sub>/ch* = Input power to antenna terminals in watts/ch, *R* = distance to antenna centerline, *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<sup>2</sup>). 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. 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 0.001956 mW/cm<sup>2</sup> which occurs at 270 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000545 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>	0.001956 mW/cm <sup>2</sup>
PCS	1 mW/cm <sup>2</sup>	5.0 mW/cm <sup>2</sup>	

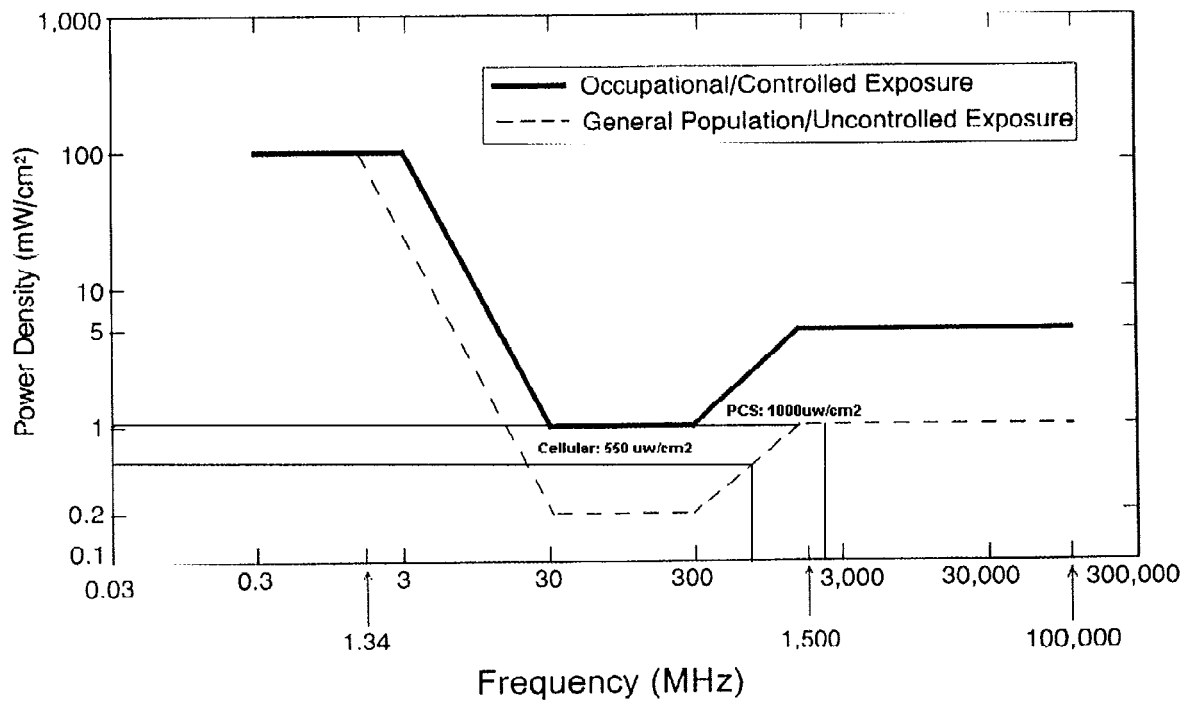
From the attached calculations, it is seen that the total exposure for this site will be 0.22% of MPE for uncontrolled (general public) exposure.

#### 5. Conclusion

This analysis shows that the maximum power density in accessible areas at this location will be 0.22 % of MPE, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

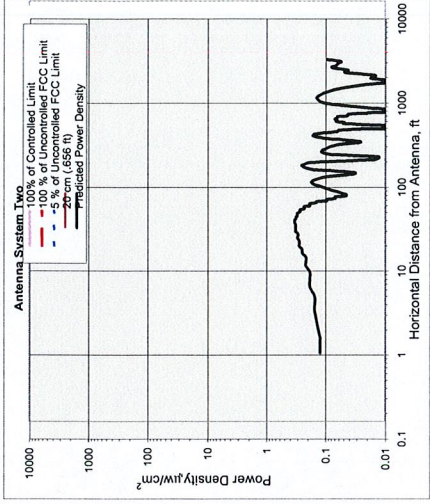
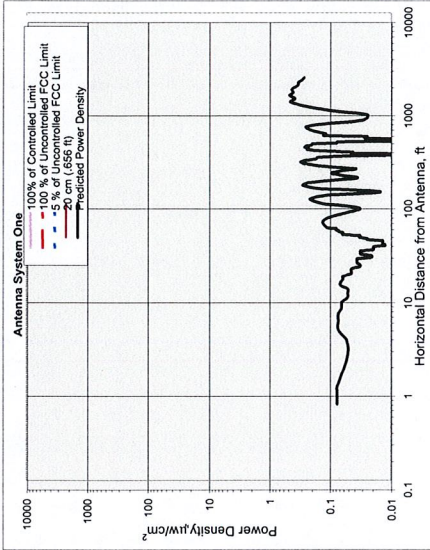
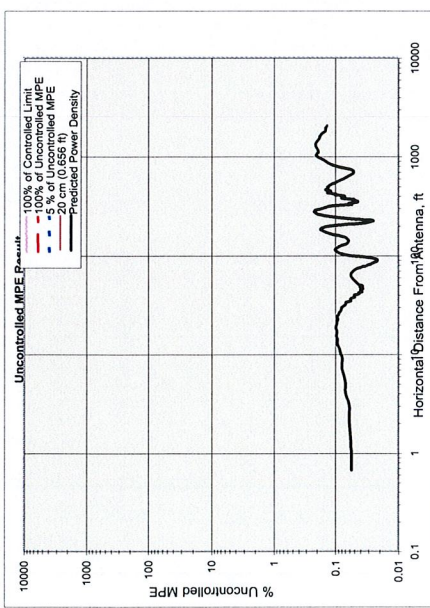
## 6. FCC Limits for Maximum Permissible Exposure

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





**7. 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.

Maximum Power Density =	mW/cm <sup>2</sup>	Power Density	@Horiz. Dist.
0.001956	0.22	% of limit	feet
462.77 times lower than the MPE limit for uncontrolled environment			270.00
Composite Power (ERP) =	14,500.00	Watts	

Site ID: 907-007-320-C01  
 Site Name: East Hartford Northeast  
 Site Location: 284-310 Prestige Park  
 East Hartford, CT 06118

Performed By: Galen Belen  
 Date: 12/4/2003

Antenna System One

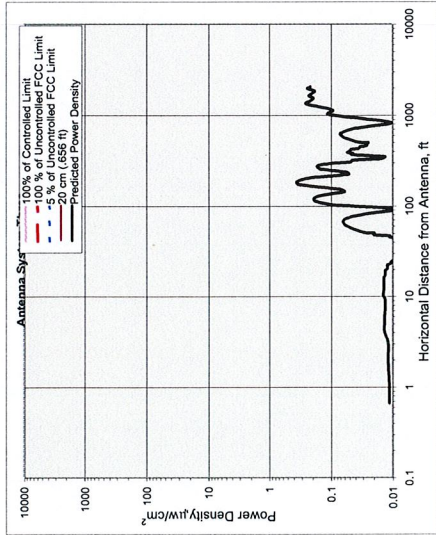
Frequency	MHz	Value
# of Channels		12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	5.86
Calculation Point (Center of Radiator)	feet	146.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		Aligon 7250.03
Max Ant Gain	dBd	16.30
Down tilt	degrees	2.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.11
Ant.HBW	degrees	65.00
Distance to Ant.Location	feet	137.45
WOS?	Y/N?	n

Ant System ONE Owner: AT&T  
 Sector: 3  
 Azimuth: 30/150/270

Antenna System Two

Frequency	MHz	Value
# of Channels		5
Max ERP/Ch	Watts	500.00
Max Pwr/Ch Into Ant.	Watts	62.95
Calculation Point (Center of Radiator)	feet	157.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		DB609K
Max Ant Gain	dBd	9.00
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	12.00
Ant.HBW	degrees	360.00
Distance to Ant.Location	feet	145.00
WOS?	Y/N?	n

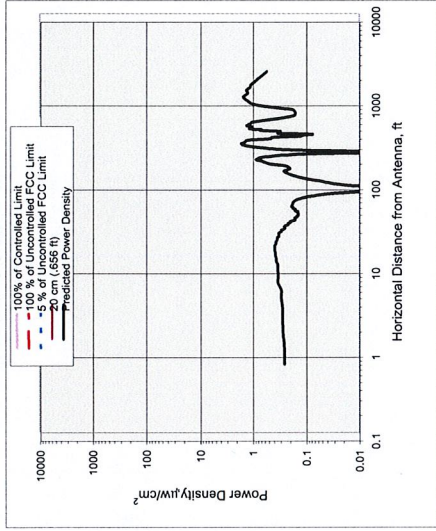
Ant System TWO Owner: Pagenet  
 Sector: 1  
 Azimuth: Omni



Antenna System Three

Frequency	units	Value
# of Channels	MHz	835.00
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant. (Center of Radiator)	Watts	7.55
Calculation Point (above ground or roof surface)	feet	154.00
Antenna Model No.		0.00
Max Ant Gain	dBd	0.00
Down tilt	degrees	DB878H63-X
Miscellaneous Att.	dB	15.20
Height of aperture	feet	2.00
Ant HBW	degrees	0.00
Distance to Ant <sub>top</sub>	feet	12.00
Distance to Ant <sub>bottom</sub>	feet	83.00
WOS?	Y/N?	142.00
		n

Ant System Three Owner: Cingular  
Sector: 3  
Azimuth: 01/20/240



Antenna System Four

Frequency	units	Value
# of Channels	MHz	1990.00
Max ERP/Ch	Watts	12
Max Pwr/Ch Into Ant. (Center of Radiator)	Watts	500.00
Calculation Point (above ground or roof surface)	feet	17.74
Antenna Model No.		6.00
Max Ant Gain	dBd	0.00
Down tilt	degrees	Allgon 7184.14
Miscellaneous Att.	dB	14.50
Height of aperture	feet	2.00
Ant HBW	degrees	0.00
Distance to Ant <sub>top</sub>	feet	4.27
Distance to Ant <sub>bottom</sub>	feet	90.00
WOS?	Y/N?	128.87
		n

Ant System Four Owner: Sprint  
Sector: 3  
Azimuth: 01/20/240



## 8. 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)

## 9. References

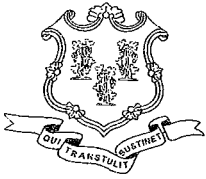
[1] The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section 332 (c)(7)(B)(iv).

[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.



# 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.ct.gov/csc](http://www.ct.gov/csc)

February 2, 2004

Honorable Timothy D. Larson  
Mayor  
Town of East Hartford  
740 Main Street  
East Hartford, CT 06108-3114

RE: **EM-AT&T-043-040130** – AT&T Wireless PCS,LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 2 Prestige Park Road, East Hartford, Connecticut.

Dear Mayor Larson:

The Connecticut Siting Council (Council) received this request to modify and 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 February 18, 2004, 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/cm

Enclosure: Notice of Intent

c: Michael J. Dayton, Town Planner, Town of East Hartford

EM-AT&T-043-040130  
2 Prestige Park Road  
East Hartford 3/3/04





EM-AT&T-043-040130  
2 Prestige Park Road  
East Hartford 3/3/04

