



THE OLD STONE HOUSE

# TOWN OF GUILFORD

ZONING ENFORCEMENT OFFICER

50 BOSTON STREET

GUILFORD, CONNECTICUT 06437

SETTLED IN 1639

TELEPHONE (203) 453-8

FAX (203) 453-8

RECEIVED  
JAN 13 2005  
CONNECTICUT  
ZONING COUNCIL

January 11, 2005

## CEASE AND DESIST ORDER ZONING ENFORCEMENT

**CERTIFIED MAIL RRR AND REGULAR MAIL**  
**CERTIFIED NUMBER 7003 1680 0001 4434 8658**

Hank Lindsey  
AT&T Broad Band CT SI LLC  
Comcast  
44 North Branford Rd.  
N. Branford, CT 06471

Re: Violation of §273-47, §273-75 L. and § 273-75. M. Site maintenance. Dumping of construction material, 551 Route 80, Property of AT&T Broad Band CT SI LLC, Map 106, Lot 70-A, Zone R-8

Dear Mr. Lindsey:

In response to a complaint, I inspected 551 Route 80 on September 16, 2004, and found that a load of toys, rugs, mattresses, sofas, videos, shingles and tar paper had been dumped on the site (pictures enclosed). In addition, the site has not received any landscape treatment in some time as evidenced by the overgrown weeds in the pictures. A call to your representative on September 22, 2004, disclosed that the cable company was going to remove the two buildings on the site within the next 30 days and the debris would be cleaned up at that time. An inspection on November 18, 2004 revealed that a full dumpster was on site and shingles were stripped off the rear building. To date that is all that has happened and the pile of debris still languishes on site.

**It is my duty to direct that you have the debris removed from the site and you must do so within ten (10) days of receipt of this Order, per Connecticut General Statutes Section 8-12.**

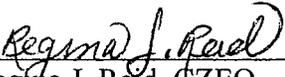
RECEIVED  
05 JAN 18 PM 2:40  
D.P.-U.C.  
EXECUTIVE SECRETARY

AT&T Broad Band CT SI LLC  
551 Route 80  
Violation of site maintenance  
January 11, 2005  
Page 2 of 2

Your immediate attention to this matter is hereby advised and directed. Questions regarding compliance should be directed to Regina J. Reid (203) 453-8031. Failure to comply with this order within ten (10) days of receipt will result in further enforcement action and may include the imposition of a citation fine of \$150 or, in some cases, \$150 per each day of violation, as provided by Guilford Town Code Article II, § 1-12 and pursuant to Section 8-12(a) of the Connecticut General Statutes, Rev. 1958, as amended.

You may consult Regina J. Reid if there is any question as to the manner and time of establishing compliance. If you feel that this Order had been issued in error, you have the right to appeal it to the Town of Guilford Zoning Board of Appeals within thirty (30) days of receipt of this Order. Failure to appeal will constitute a waiver of any defenses, which were capable of being heard and decided by the Guilford Zoning Board of Appeals.

I thank you in advance for your anticipated cooperation in resolving this matter.

  
\_\_\_\_\_  
Regina J. Reid, CZEO  
Certified Zoning Enforcement Officer

cc: Town Counsel – Information only  
Richard Collins, 21 Northwood Drive, Guilford, CT 06437  
Police Chief Terribile  
Police Sgt. Renchy  
State of Connecticut Siting Council, Ten Franklin Square, New Britain, CT 06051

## § 273-46. Unregistered motor vehicles.

[AMENDED JULY 16, 2003]

Not more than one unregistered or unlicensed motor vehicle, not stored in an enclosed garage, in good condition shall be stored or parked on any part of any lot in any residential district. This shall not apply to farm equipment or motorized equipment necessary for the upkeep of the premises and/or not designed for use on public highways.

✓ § 273-47. Site maintenance; temporary display of merchandise. [Amended ~~4-7-1999~~ 7-16-2003]

**§ 273-47. Site maintenance; temporary display of merchandise.** No commercial truck, trailer, van or van body or temporary shelter, storage container or building shall be located on any lot for the purpose of an office or storage or processing of construction materials in connection with a construction project on the lot or the storage, sale and/or display of supplies, merchandise, equipment or refuse, except in an area, of a type, for a purpose and for a limited period of time as approved by the Commission.

~~time approved by the Commission.~~ Temporary displays of merchandise for sale on sidewalks or other areas of the site immediately adjoining a retail outlet may be approved by the Commission, provided that the following conditions are met:

- A. Notification, in writing, designating the location, date and hours for such display and the type of merchandise to be displayed shall be provided.
- B. The display does not obstruct safe pedestrian access on the sidewalk location. A minimum of 1/2 the sidewalk width shall be kept free of merchandise.
- C. All such displays will be removed to interior storage at the close of store operating hours on each day.
- D. No lighting shall be used that will be directly visible from streets, vehicular access lanes or any motor vehicle traffic circulation areas.
- E. The total days of said display shall not exceed three days at any one time nor more than six days in any one calendar year.
- F. No equipment in motion shall be displayed, nor shall engine or motor-operated equipment be made operative while on display.
- G. Only products customarily sold at the retail outlet may be displayed.

**§ 273-48. Total ground coverage in commercial districts.**

In any C-2, C-3 or C-4 District, the total ground coverage by buildings and other structures, outside storage areas, paving, parking and other imperious surfaces shall not exceed 80% of the area of the lot. Storm drainage shall be discharged to vegetated surfaces, unless measures and maintenance programs are provided for control and containment of runoff from parking and other paved areas.

litter by means of receptacles, fences, a program for site maintenance and cleaning and other means approved by the Commission.

- (3) The site plan shall demonstrate how any toxic or hazardous substances are to be managed in accordance with applicable law and so as to avoid danger to the public health and degradation of surface and ground waters and tidal and inland wetlands.
- (4) Proper provision shall be made for any aboveground or in-ground storage of fuels, deicing salts and chemicals in a manner that protects stratified drift groundwater aquifers having potential for significant water supply.

(L) Outside storage. Outside storage (including any sales or display of merchandise, any storage of supplies, wastes, machinery, equipment and other materials and any manufacture, processing or assembling of goods not in an enclosed building, but excluding the parking of registered motor vehicles in daily use) shall conform to requirements of § 273-47 and otherwise shall be located in areas of the lot as shown on the site plan and shall be limited and screened in commercial, marine recreation and industrial districts as follows:

- (1) All outside storage areas shall be screened on all sides by a building, fence, wall, embankment or other suitable device not less than six feet in height. This provision, however, does not apply to areas designated on the site plan and approved for outside sale or display or to storage in connection with marine facilities and services permitted on Line No. 16 of Table 2B (§ 273-20).
- (2) No outside storage shall be located in the area required for setback from a street line or residential district boundary line.
- (3) No outside storage shall be located on sidewalks, pedestrianways, driveways or paved areas designated on the site plan for off-street parking and loading.

(M) Landscaping. Landscaping shall be provided and permanently maintained on the lot to conform to the standards of Subsections A, B and L and to the following:

- (1) All portions of the lot not covered by buildings and other structures, outside storage areas, areas for off-street parking, loading and driveways and approved paved areas shall be suitably landscaped with trees, shrubs, lawns or other suitable landscaping or, if not disturbed by filling, grading, excavation, or other construction activity, may be left as natural terrain when having a location, size and shape that supports the landscaping plan for the lot.
- (2) In any C, I, PV, TS, or MU/C Zone District, the area required for setback from a residential district boundary line shall be suitably landscaped with evergreen shrubs or trees, or such evergreens in combination with embankments, fences and/or walls, so as to provide a transition from such districts to the residential district. Suitable natural terrain and existing evergreen trees and shrubs shall be preserved and shall be augmented with new evergreens and other vegetation, if existing vegetation does not include an adequate screen during all seasons between the districts. If the setback or other buffer zone does not provide an adequate screen of evergreens, the industrial or commercial edge of the setback shall be landscaped to

create an all-season screen. Unless otherwise approved by the Commission pursuant to Article X, the setback area specified in Table 3, Line No. 9, shall contain no off-street parking, loading spaces or driveways. Where new landscaping is required, the Commission shall require the posting of a bond in order to guarantee the survival of the plantings during their grow-in period. [Amended 1-7-1998; 12-17-2001]

- (3) All off-street parking areas of 50 car spaces or more shall include at least one tree for every 10 parking spaces or fraction thereof. Such trees shall be at least two inches in caliper and 10 feet in height when planted and shall be located, planted and protected so as to prevent damage by normal parking and traffic circulation. Planting required in setback areas from residential district boundary lines is not counted as parking area trees.
  - (4) Each lot shall be provided with a landscaped strip, 15 feet or more in width, along the street line. The strip shall be landscaped and maintained with lawn, shrubs, trees and other suitable landscaping and shall be separated from any adjoining off-street parking or loading area, driveway or outside storage area by a curb six inches in height. Necessary driveways may be provided through and in the strip.
  - (5) All off-street loading docks located in commercial and industrial districts and visible from a state highway or residential district shall be suitably screened by a building, fence, wall, embankment or other suitable device.
  - (6) All landscaping, trees, shrubs and lawns on an approved site plan shall be well maintained and trees and shrubs that die or are destroyed shall be replaced with similar trees and shrubs within one year.
  - (7) All plant and other landscaping materials shall be provided in accordance with good landscaping practice and shall be subject to the approval of the Commission.
- N. Signs. Signs shall conform to the requirements of Article VII and shall be of a design, including size, location, shape, color and illumination, as to harmonize with the building and other elements of the site plan.
- O. Lighting.
- (1) The location, height, design, direction and brightness of outdoor illumination (area lighting and floodlighting) shall be arranged and maintained as follows:
    - (a) To provide sufficient illumination for safety, convenience and security.
    - (b) To minimize sky glow.
    - (c) To safeguard against discomfort glare and disability veiling glare in any street and upon pedestrianways and vehicular parking, loading and circulation areas on the lot where located or any other lot.
    - (d) To harmonize with the neighborhood and avoid glare on any other lot.
  - (2) Unless otherwise approved by the Commission as appropriate for the site, area lighting shall be provided by cut-off-type luminaires. Floodlight luminaires shall be

**§ 1-9. Changes in previously adopted ordinances.**

- A. In compiling and preparing the ordinances of the Town of Guilford for adoption and revision as part of the Code, certain grammatical and other minor changes were made in one or more of said ordinances. It is the intention of the Board of Selectmen that all such changes be adopted as part of the Code as if the ordinances so changed had been previously formally adopted to read as such.
- B. In addition, the following changes, amendments or revisions are made herewith, to become effective upon the effective date of this ordinance, as set forth in Schedule A<sup>1</sup> attached hereto and made a part hereof. (Chapter and section number references are to the ordinances as they have been renumbered and appear in the Code.)

**§ 1-10. Incorporation of provisions into Code.**

The provisions of this ordinance are hereby made Article I of Chapter 1 of the Code of the Town of Guilford, and the sections shall be numbered §§ 1-1 through 1-11, inclusive.

**§ 1-11. When effective.**

All provisions of the Code shall be in full force and effect on and after the effective date of this ordinance.

**ARTICLE II****Penalties for Offenses**

[Adopted 12-2-1996 by the Board of Selectmen]

**§ 1-12. Violation of zoning regulations.<sup>2</sup>**

- A. Citations for zoning violations. The Zoning Enforcement Officer is authorized to issue citations for violations of the Zoning Regulations of the Town of Guilford to the extent and in the manner provided by this section. The Zoning Enforcement Officer may issue such citations only after approval by the Guilford Planning and Zoning Commission. Any such citation may be served either by hand delivery or by certified mail, return receipt requested, to the person named in the citation. If the person named in the citation sent by certified mail refuses to accept such mail, the citation may be sent by regular United States Mail.
- B. Zoning violations for which citation shall be issued. A citation may be issued for any violation of the zoning regulations of the Town of Guilford.

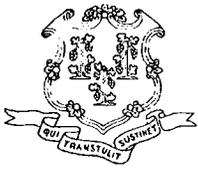
<sup>1</sup> Editor's Note: In accordance with § 1-9B, the chapters, parts and sections which were added, amended, adopted or deleted by this ordinance are indicated throughout the Code by a footnote referring to Chapter 1, General Provisions, Article I. During routine supplementation, footnotes indicating amendments, additions or deletions will be replaced with the following history: "Amended (added, deleted) 6-2-1997 by the Board of Selectmen." Schedule A, which contains a complete description of all changes, is on file in the town offices.

<sup>2</sup> Editor's Note: See Ch. 273, Zoning.

- C. Amount of fine for zoning violation citations. The fine for each citation shall be \$150, payable to the Treasurer of the Town of Guilford.
- D. Time period by which a fine must be paid if not contested. A person receiving a citation shall be allowed a period of 30 days from his or her receipt of the citation to make an uncontested payment of the fine specified in the citation to the Treasurer. If the citation has been sent by regular mail pursuant to the provision of Subsection A of this section, the day of receipt of the citation shall be deemed to be three business days after the day of mailing of the citation.
- E. Hearing procedure for citations. Any person issued a citation shall be entitled to a hearing to contest the citation. The procedures for hearing, disposition and enforcement shall be as is set forth in the Connecticut General Statutes, Section 7-152c, Hearing Procedure for Citations, and Public Act No. 96-210,<sup>3</sup> as the same may be amended from time to time by the General Assembly.
- F. Selection of hearing officers. The First Selectman shall appoint one or more citation hearing officers to conduct the hearings necessary to effect this section. Neither the Zoning Enforcement Officer, Building Official nor any employee or member of the Guilford Planning and Zoning Commission may be appointed as a hearing officer pursuant to this section. [Amended 6-2-1997]

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<sup>3</sup> Editor's Note: Said Act amends Section 8-12a of the Connecticut General Statutes.



# 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)

October 24, 2002

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

RE: **EM-AT&T-060-021001** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 331 Killingworth Road, Guilford, Connecticut.

Dear Attorney Fisher:

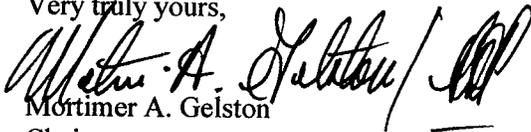
At a public meeting held on October 23, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice received in our office on October 1, 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.

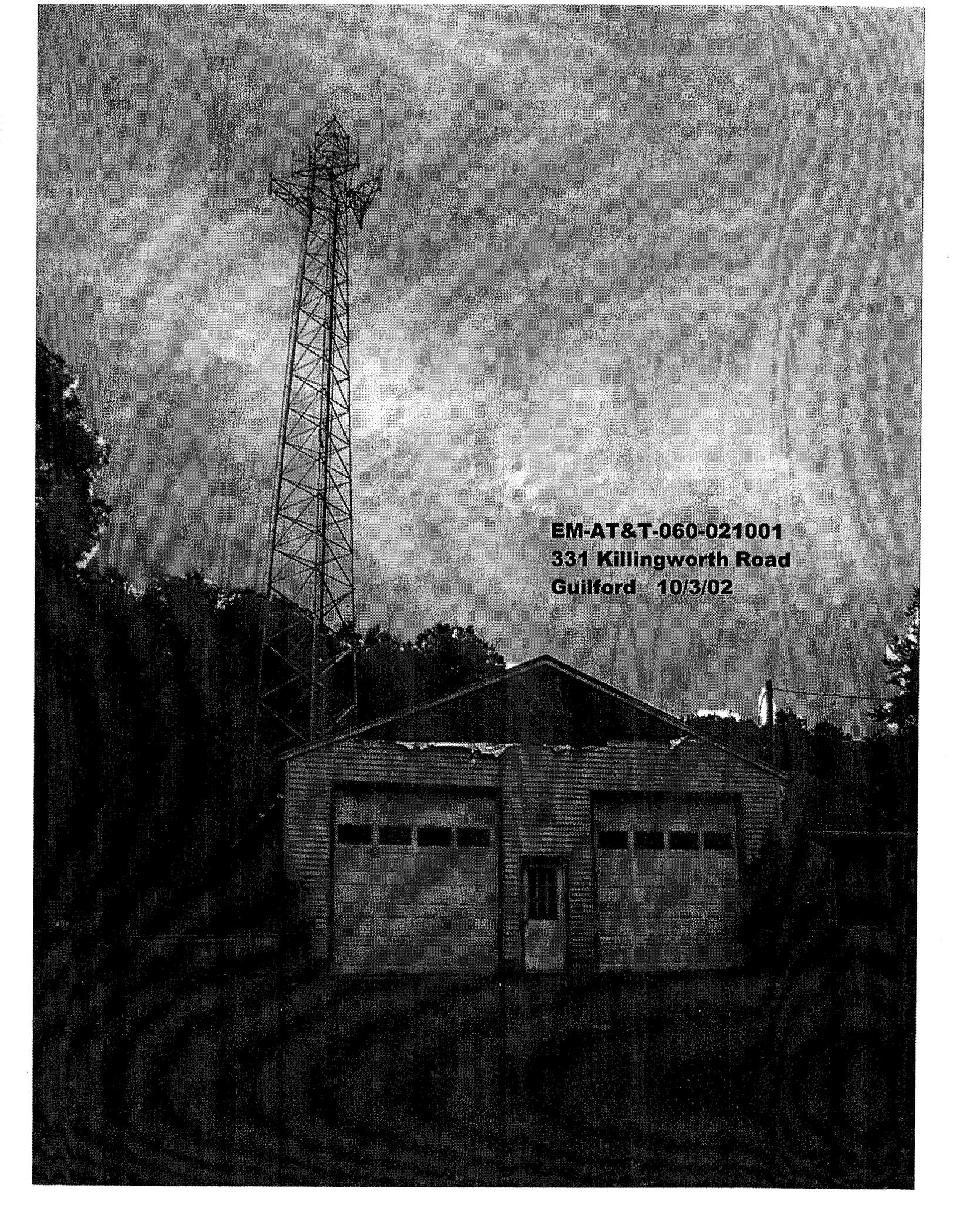
Thank you for your attention and cooperation.

Very truly yours,

  
Mortimer A. Gelston  
Chairman

MAG/laf

c: Honorable Carl A. Balestracci, Jr., First Selectman, Town of Guilford  
M. William McAvoy, Jr., Zoning Enforcement Officer, Town of Guilford  
Julie Donaldson Kohler, Esq., Hurwitz & Sagarin LLC



**EM-AT&T-060-021001**  
**331 Killingworth Road**  
**Guilford 10/3/02**

**INTENT TO MODIFY AN  
EXISTING TELECOMMUNICATIONS FACILITY AT  
331 KILLINGWORTH ROAD, GUILFORD, 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 331 Killingworth Road, Guilford, Connecticut (the "Killingworth Road Facility"), owned by AT&T Broadband (the "Tower Owner"). AT&T Wireless and the Tower Owner have agreed to share the use of the Killingworth Road Facility, as detailed below.

**RECEIVED**  
OCT - 1 2002

**The Killingworth Road Facility**

**CONNECTICUT  
SITING COUNCIL**

The Killingworth Road Facility consists of an approximately one hundred fifty (150) foot lattice tower (the "Tower") and associated equipment currently being used by Sprint and the municipality. The surrounding land uses include sparse residential uses 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 Killingworth Road 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 6 panel antennas at approximately the 150 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 located within an expanded fenced compound still within the site boundaries. As evidenced in the structural evaluation prepared by H.E. Bergeron Engineers, PA, 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 Killingworth 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<sup>1</sup> prepared by

<sup>1</sup> There is a whip antenna mounted at the top of the tower belonging to the local police department which we are advised is a receive only antenna and has been excluded from the calculations. See page 4 of the Emissions Report.

Prabhakar Kumar Rughoobur, 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**

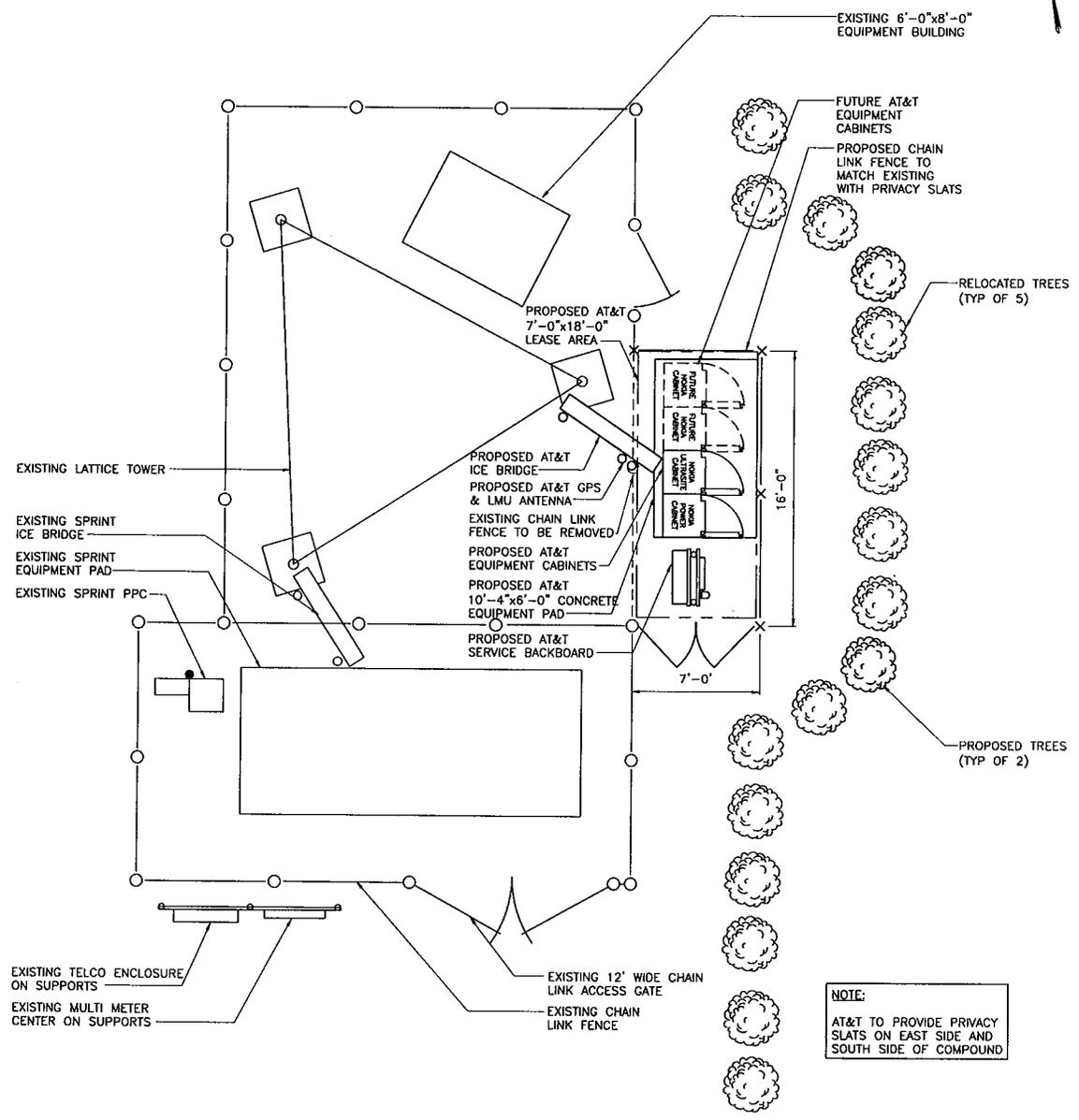
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Killingworth Road Facility meets the Council's exemption criteria.

Respectfully Submitted,



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

cc: First Selectman, Town of Guildford  
RJ Wetzel, Bechtel



**NOTE:**  
AT&T TO PROVIDE PRIVACY SLATS ON EAST SIDE AND SOUTH SIDE OF COMPOUND

**1** COMPOUND PLAN  
SC-1 SCALE: 1" = 10'-0"



ISSUED FOR SITING COUNCIL

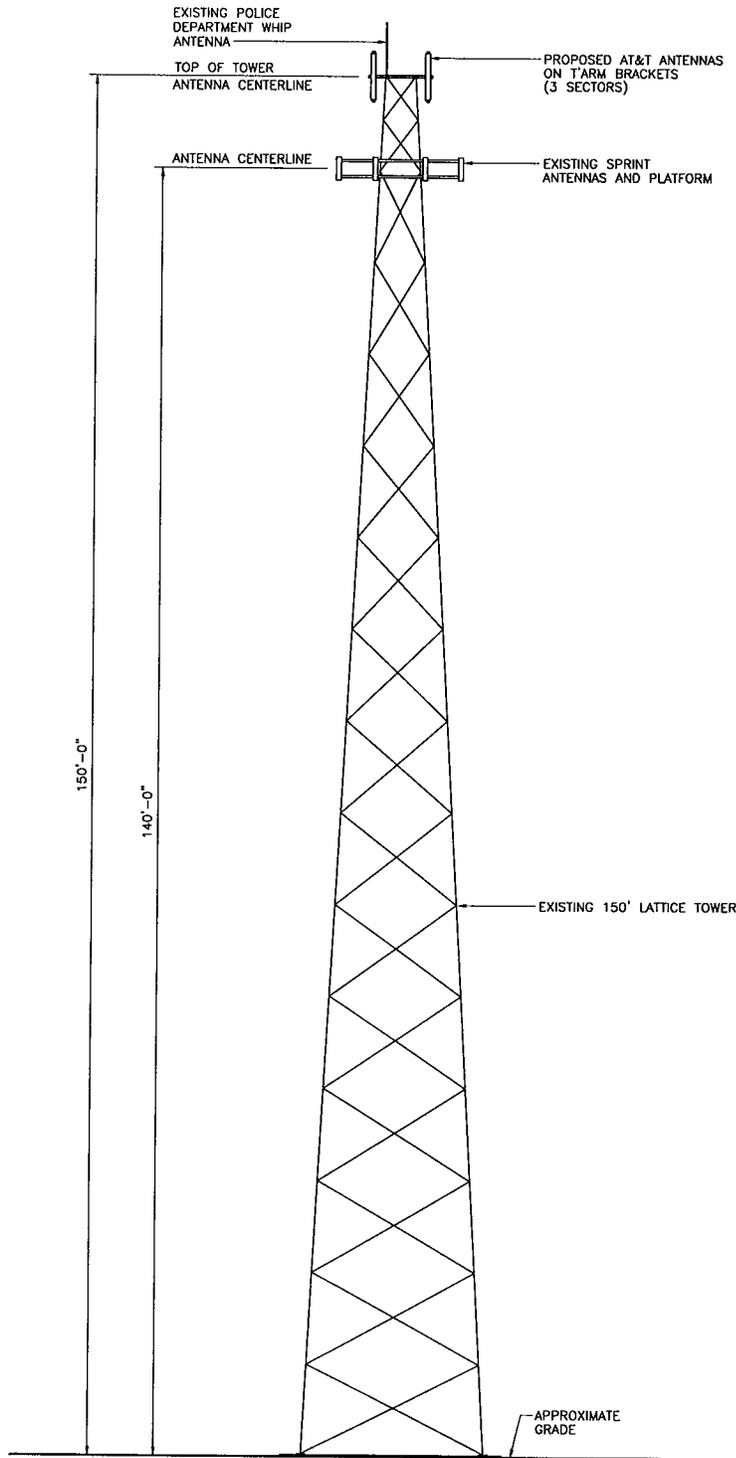
LATITUDE:	45.3527 (NAD 83)
LONGITUDE:	72.6881 (NAD 83)

**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:** GUILFORD WEST  
CT-641  
331 KILLINGWORTH ROAD  
GUILFORD, CONNECTICUT  
**PROPERTY OWNER:** DAVID & KATHLEEN ACAMPORA  
331 KILLINGWORTH ROAD  
GUILFORD, CONNECTICUT

<b>DRAWING TITLE:</b> 913-008-641A-SC1	
REVISION NO. 0	DRAWN BY: RB
DATE ISSUED: 09/25/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
SHEET NO. 1 OF 2	
URS JOB NO.: F302224.42	



1 TOWER ELEVATION  
 SC-2 SCALE: 1" = 20'-0"



ISSUED FOR SITING COUNCIL

LATITUDE: 45.3527 (NAD 83)  
 LONGITUDE: 72.6881 (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:  
 GUILFORD WEST  
 CT-641  
 331 KILLINGWORTH ROAD  
 GUILFORD, CONNECTICUT  
 PROPERTY OWNER:  
 DAVID & KATHLEEN ACAMPORA  
 331 KILLINGWORTH ROAD  
 GUILFORD, CONNECTICUT

DRAWING TITLE: 913-008-641A-SC2	
REVISION NO. 0	DRAWN BY: RB
DATE ISSUED: 09/25/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
	SHEET NO. 2 OF 2
URS JOB NO.: F302224.42	

**H. E. Bergeron Engineers**

• Civil • Structural • Land Surveying

P.O. Box 440  
2605 White Mountain Highway  
North Conway, NH 03860  
(603) 356-6936  
(603) 356-7715 (fax)

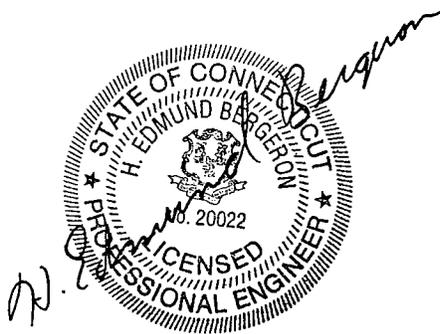
65 W. Commercial Street  
Portland, ME 04101  
(207) 780-1100  
(207) 780-1101 (fax)  
www.hebcivil.com

HEB

**STRUCTURAL ANALYSIS REPORT  
OF  
150' SELF-SUPPORTING TOWER  
NORTH GUILFORD, CONNECTICUT**

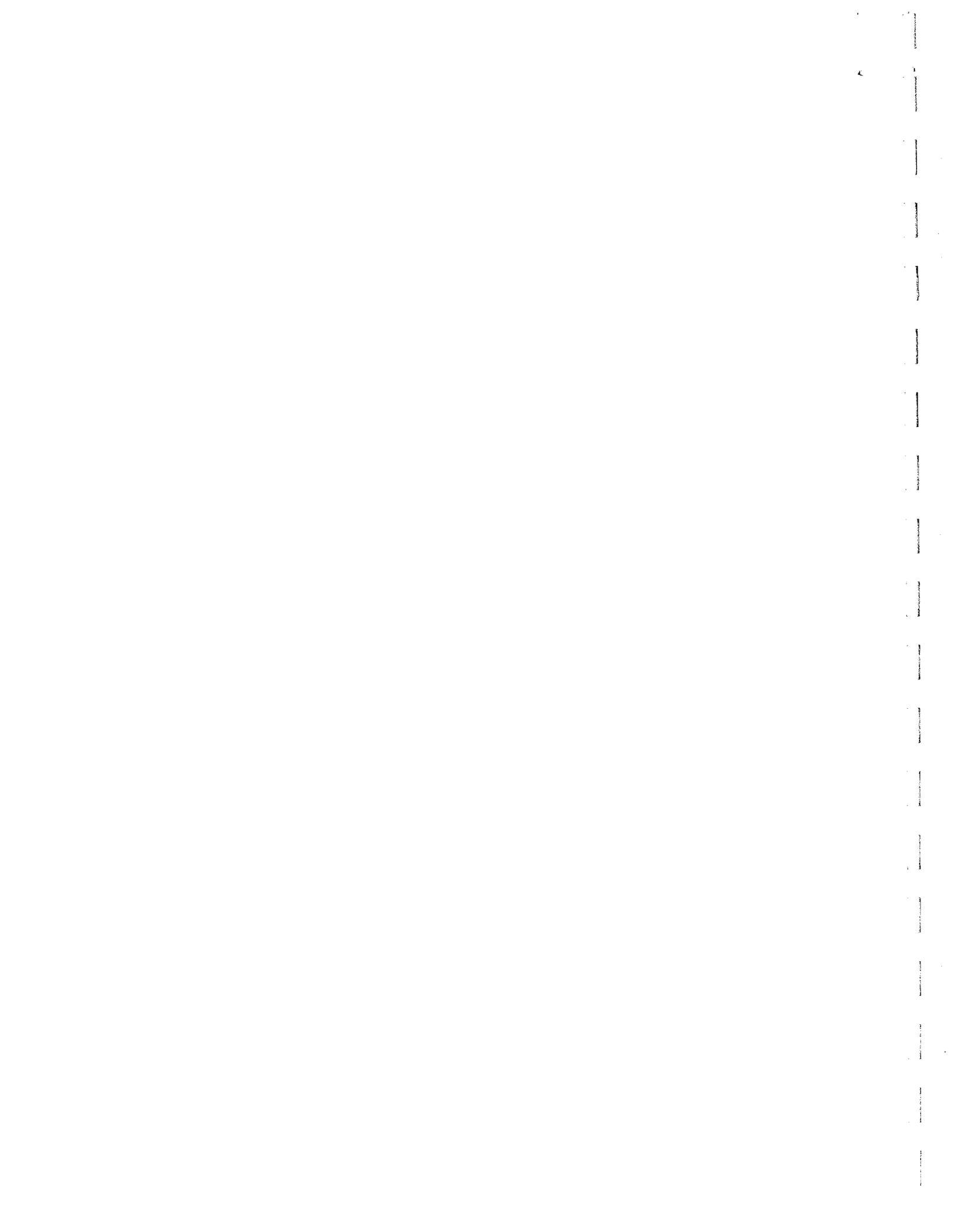
Prepared for URS Corporation  
URS Project #302224.42  
AT&T Site #CT-641

September 20, 2002



**Prepared by:**

H. E. Bergeron Engineers, P.A.  
PO Box 440, 2605 White Mountain Highway  
North Conway, NH 03860  
HEB Project No. 97096A



**H. E. Bergeron Engineers**

• Civil • Structural • Land Surveying

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(207) 780-1101 (fax)  
www.hebcivil.com

HEB

**ANALYSIS REPORT**  
of  
**150' SELF-SUPPORTING TOWER**  
**NORTH GUILFORD, CONNECTICUT**  
**AT&T Site # CT-641**  
**URS # F302224.42**

**INTRODUCTION:**

An analysis was performed on the above-mentioned communications tower by H. E. Bergeron Engineers, P.A. (HEB) for URS Corp. The tower is located in North Guilford, Connecticut. The analysis used information gathered from a previous field inspection performed on July 22, 1997 by Robert Adair, P.E. and Albert Hall, EIT of HEB. Mr. Adair climbed tower in its entirety during the field inspection.

The structure is a 150-foot, galvanized, three-legged, self-supporting tower apparently manufactured by UNR-ROHN. AT&T proposes to install six (6) ALLGON 7250.03 panel antennas at the 150-foot elevation, each fed by two 1 $\frac{5}{8}$ " diameter waveguide cables.

**STRUCTURAL ANALYSIS:**

**Methodology:**

The structural analysis was done in accordance with EIA/TIA-222-F, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures; and the American Institute of Steel Construction (AISC), Manual of Steel Construction, Allowable Stress Design, Ninth Edition.

The analysis was conducted by placing one-half inch of radial ice over the entire structure and all appurtenances, then applying a wind load of 85 miles per hour. The EIA/TIA Standard requires a minimum of 85 miles per hour for Fairfield County, Connecticut. The tower was analyzed by calculating the resultant wind loading and associated maximum bending moments, shear forces, and axial loads. The moments and forces were used to calculate compressive stresses and shear stresses in leg members, which were compared to allowable stresses according to AISC.

Two loading conditions were evaluated in accordance with EIA/TIA-222-F to determine the tower's capacity. The more demanding of the two cases is used to calculate the tower capacity:



HEB

- Case 1 = Wind Load (without ice) + Tower Dead Load
- Case 2 = Ice Load + Tower Dead Load + **0.75** Wind Load (with ice)

In addition, the TIA/EIA standard permits a one-third increase in allowable stresses for towers less than 700-feet tall. Allowable stresses of tower members were increased by one-third when computing the load capacity values shown below.

**Analysis:**

The analysis of the tower was conducted as described above using the antenna inventory included in Appendix A. According to URS Corporation, the proposed antennas will be an ALLGON 7250.03 six panel array mounted on 12-foot boom-mounts and fed by twelve 1½" coaxial cables. The antennas are proposed to be located at the 150-foot elevation.

Our analysis determined the tower is capable of supporting the additional proposed antennae without reinforcement. As can be seen from the table below, sections of the tower are near maximum allowable stresses under the proposed loading condition. The following table summarizes the results of the analysis:

**Tower Capacity**

<b>Section</b>	<b>Elevation</b>	<b>Existing</b>	<b>Proposed</b>
1	0-20	<b>65%</b>	<b>91%</b>
2	20-40	<b>63%</b>	<b>90%</b>
3	40-60	<b>52%</b>	<b>75%</b>
4	60-80	<b>54%</b>	<b>79%</b>
5	80-100	<b>63%</b>	<b>96%</b>
6	100-120	<b>42%</b>	<b>67%</b>
7	120-140	<b>24%</b>	<b>41%</b>
8	140-150	<b>4%</b>	<b>15%</b>

Diagonal bracing was determined to be appropriately-sized, based on a slenderness ratio (effective length divided by the radius of gyration) of 200 or less as required by EIA/TIA-222-F.

Splice plate bolts were determined to be adequately-sized for the proposed loading.

The capability of the existing tower base foundations to support the additional load was not evaluated, since as-built information was not made available to HEB.





## CONCLUSIONS AND RECOMMENDATIONS:

Our visual inspection and analysis determined that the 150-foot self-supporting tower in North Guilford, Connecticut is in very good condition. Our analysis indicates the tower is capable of supporting the proposed antenna loading without additional reinforcement.

## LIMITATIONS:

This report is based on the following:

1. Tower is properly installed and maintained.
2. All members are in new condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower is in plumb condition.
6. All members are galvanized.
7. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.

H. E. Bergeron Engineers, P.A. (HEB) is not responsible for any modifications completed prior to or hereafter which HEB is not or was not directly involved. Modifications include but are not limited to:

1. Replacing or strengthening bracing members.
2. Reinforcing vertical members in any manner.
3. Adding or relocating stabilizers.
4. Installing antenna mounting gates or side arms.
5. Extending tower.

HEB hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which is contrary to that which is contained herein, or you are aware of any defects arising from the original design, material, fabrication and erection deficiencies, you should disregard this report and immediately contact HEB. HEB disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

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

**SITE-ID : 913-008-641**

August 29, 2002

**Prepared by AT&T Wireless Services, Inc.  
Prabhakar Kumar Rughoobur 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 331 Killingworth Rd, Guilford, CT. This analysis uses site-specific engineering data to determine the predicted levels of radio frequency (RF) electromagnetic energy in the vicinity of the proposed facility and compares those levels with the Maximum Permissible Exposure (MPE) limits established by the Federal Communications Commission.

### 2. Site Data

Site Name: <b>Guilford West</b>	
Number of simultaneously operating channels	<b>12</b>
Type of antenna	<b>Allgon 7250.03</b>
Power per channel (Watts ERP)	<b>250.0</b> Watts
Height of antenna (feet AGL)	<b>150</b> feet
Antenna Aperture Length	<b>5</b> 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 RC (Radiation Center) of antenna, and *EIRP(θ)* = The isotropic power expressed in milliwatts in the direction of prediction point.

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

Where *P<sub>in</sub>/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.

<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 (μW), 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. 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 0.000403 mW/cm<sup>2</sup> which occurs at 1400 feet from the antenna facility. The chart in exhibit A also shows that the power density is less than 0.000062 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>	0.000403 mW/cm <sup>2</sup>
PCS	1 mW/cm <sup>2</sup>	5.0 mW/cm <sup>2</sup>	

The maximum power density from AT&T's proposed system at the proposed facility represents only 0.0403 % of the public MPE limit for PCS frequencies. Since there are other transmitters at this site operating at different frequencies, the proper method for evaluating compliance with exposure limits is to find the percentage of MPE for each service, then sum the percentages to reach a total % of MPE for the site. (OET 65, pp 35-37)

From the last filing done by Sprint PCS at the Connecticut Siting Council, the total exposure for this site was 8.3241 % of MPE at their frequency of operation (See : Copy of MPE results attached as Exhibit 1). Adding the energy from the proposed AT&T system brings the total exposure to 8.3644 % of MPE for uncontrolled (general public) exposure. The other existing system on this tower is a whip antenna, belonging to the police department. Since this is a receive system, it has been excluded from the calculations.

<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."

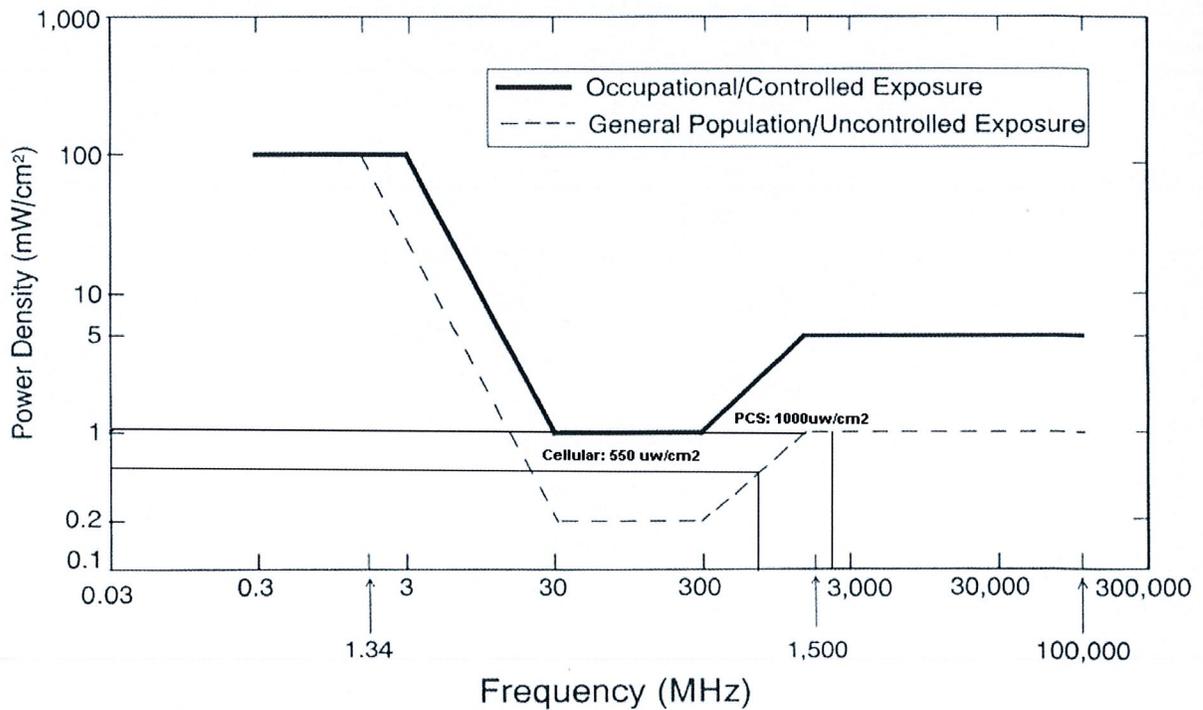
## 6. Conclusion

This analysis show that the maximum power density in accessible areas at this location will be 8.3644 % of MPE, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

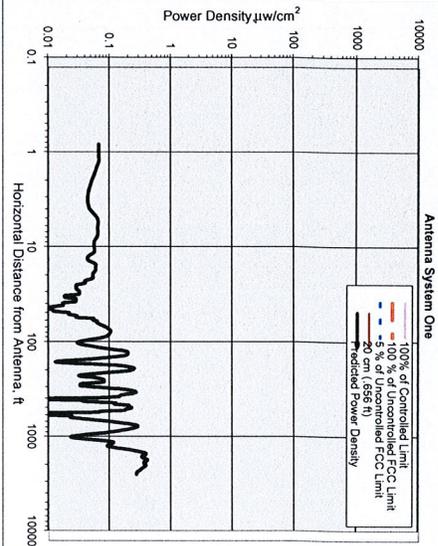
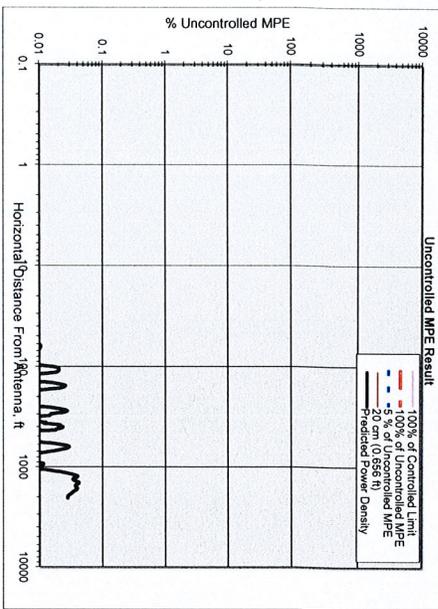
## 7. FCC Limits for Maximum Permissible Exposure

### FCC Limits for Maximum Permissible Exposure (MPE)

#### Plane-wave Equivalent Power Density



**8. Exhibit A**



Number of Antenna Systems: 1

Meets FCC Controlled Limits for The Antenna 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	mW/cm <sup>2</sup>	% of limit	@Horiz. Dist. feet
Maximum Power Density =	0.000403	0.04	1400.00
2.47884 times lower than the MPE limit for uncontrolled environment			
Composite Power (ERP) =	3.000.00	Watts	

Site ID: 913-008-641  
 Site Name: Guilford West  
 Site Location: 331 Killingworth Rd  
 Guilford, CT

Performed By: Pabshakar Kumar Rughodour  
 Date: 8/29/02

Sprint PCS MPE : 8.3241

The combined % MPE when adding AT&T Wireless' antennas will therefore be: 8.364441504

Antenna System One	units	Value
Frequency	MHz	1945.00
# of Channels	#	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	5.86
(Center of Radiator)	feet	150.00
Calculation Point (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 Antenna	feet	147.45
WOST?	Y/N?	n

Ant System ONE Owner: AT&T  
 Sector: 3  
 Azimuth: 70/180/280

## 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.

CT-004  
641

Sprint

CT03XC068 - TCI Tower, North Guilford, CT  
 Worst Case Power Density Analysis of Sprint PCS Antennas @ Base of Tower. Assumes Max ERP & No Antenna Pattern Adjustment

Operating Frequency (MHz)	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Total ERP (Watts)	Antenna Height (Feet)	Distance From Base of Tower (Feet)	Calculated Power Density (mW/cm <sup>2</sup> )	Maximum Permissible Exposure*	%MPE
1962.5	11	412	4532	140	0	0.083241	1	8.3241%
1962.5	11	412	4532	140	50	0.073824	1	7.3824%
1962.5	11	412	4532	140	100	0.055119	1	5.5119%
1962.5	11	412	4532	140	150	0.038753	1	3.8753%
1962.5	11	412	4532	140	200	0.027374	1	2.7374%
1962.5	11	412	4532	140	250	0.019872	1	1.9872%
1962.5	11	412	4532	140	300	0.014886	1	1.4886%
1962.5	11	412	4532	140	350	0.011481	1	1.1481%
1962.5	11	412	4532	140	400	0.009084	1	0.9084%
1962.5	11	412	4532	140	450	0.007346	1	0.7346%
1962.5	11	412	4532	140	500	0.006052	1	0.6052%

\*Requirements set forth in OST Bulletin 65. Based on NCRP Report No. 86 and ANSI/IEEE C95.1-1992

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# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

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

October 3, 2002

Honorable Carl A. Balestracci, Jr.  
First Selectman  
Town of Guilford  
Town Hall  
31 Park Street  
Guilford, CT 06437

RE: **EM-AT&T-060-021001** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 331 Killingworth Road, Guilford, Connecticut.

Dear Mr. Balestracci:

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 October 23, 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: M. William McAvoy, Jr., Zoning Enforcement Officer, Town of Guilford