

Request of Sprint PCS for approval of the shared use of the existing telecommunications facility located at 66 Sugar Hollow Road Danbury, Connecticut.



Dated: March 15, 2001 in Milford, CT

Introduction

Sprint Spectrum, L.P. ("Sprint PCS") seeks to share a telecommunications tower located at 66 Sugar Hollow Road Danbury, Connecticut ("Facility") and owned by AT&T Wireless Service, 12 Omega Drive, Stamford, Connecticut 06907 ("AT&T"). Sprint PCS hereby requests a finding from the Connecticut Siting Council ("Council") that the shared use of this Facility is technically, legally, environmentally and economically feasible and meets public safety concerns in accordance with Section 16-50aa of the Connecticut General Statutes ("C.G.S.") and an order approving the proposed shared use of the Facility.

Background

The subject site, owned by AT&T, is located at 66 Sugar Hollow Road Danbury, Connecticut. (See location map included in Exhibit A.) The site currently supports a 106 foot steel self-supporting monopole ("Existing Tower") and appurtenant equipment building.

Tower Sharing Proposal

The purpose of this Tower Sharing Proposal is to utilize an existing facility rather than to construct a new tower in the City of Danbury. This Facility is the most viable co-location opportunity for Sprint PCS in the area. Sprint PCS has entered into an agreement with AT&T for the placement of antennas and associated equipment.

A. Existing Tower as a "Facility"

For the purposes of this Tower Sharing Proposal and pursuant to Section 16-50aa of the Connecticut General Statutes, "... Facility means a tower owned or operated for a commercial or public purpose by a person, firm, corporation or a public agency which uses such tower for transmitting or receiving signals in the electromagnetic spectrum pursuant to a Federal Communications Commission license." The Existing Tower was built to support multiple carriers. Sprint PCS will be the second wireless carrier to locate on the Existing Tower.

B. Project Description

Sprint PCS is licensed by the Federal Communications Commission ("FCC") to provide PCS wireless service throughout the State of Connecticut, including the Danbury area.

Sprint proposes to install as many as nine (9) panel antennas on the Existing Tower at an antenna centerline of 90 feet and a small global positioning system (GPS) antenna at an antenna height of 75 feet AGL. (See Tower Elevation attached hereto as Exhibit A). A low profile platform with PCS antennas mounted on it will be attached to the Existing Tower with an antenna rad center of 90 feet. The base station equipment

associated with the antennas would be located near the base of the Existing Tower, as depicted in Exhibit A.

C. Compliance with C.G.S. § 16-50aa

Pursuant to C.G.S. § 16-50aa, “The General Assembly finds that the sharing of towers for fair consideration whenever technically, legally, environmentally and economically feasible, and whenever such sharing meets public safety concerns, will avoid the unnecessary proliferation of towers and is in the public interest.” A discussion of how the proposed co-location by Sprint PCS will be in conformance with C.G.S. § 16-50aa is outlined below:

1. *Technical Analysis*

Sprint PCS has reviewed the technical parameters of the existing communications facilities and determined it is extremely unlikely that the proposed Sprint PCS antennas will result in interference, due to the sectorized positioning of the antenna, vertical separation, and low power. Sprint PCS does not intend to cause interference, and will correct any interference in the unlikely event that it does occur.

The Existing Tower was designed to accommodate multiple carriers. An engineering letter dated March 1, 2001 evidencing the structural capability of the Existing Tower to accommodate the proposed Sprint installation is attached hereto as Exhibit B. As indicated in the letter, the Existing Tower is capable of supporting the installation proposed by Sprint PCS.

2. *Legal Feasibility*

Sprint PCS has entered into a lease agreement with AT&T for the purposes of locating antenna on the Existing Tower and associated equipment adjacent to the base of

the Existing Tower. The Council has the authority pursuant to C.G.S. §16-50aa to issue orders approving the proposed shared use of the Facility by Sprint PCS.

3. *Environmental Feasibility*

The proposed shared use would have a minimal environmental effect for the following reasons:

- This proposed shared use will not increase the height of the Existing Tower.
- This proposed shared use will not expand the compound area beyond that already approved.
- The proposed installations by Sprint PCS will have an insignificant visual impact and will not cause any significant change or alteration in the physical or environmental characteristics of the Site.
- This proposed shared use will not increase noise levels at the Facility site boundary by six decibels.
- This proposed shared use, including operation of the Sprint PCS antennas, will not increase the total radio frequency electromagnetic radiation of the power density measured at the site to or above the standard adopted by the Federal Communications Commission. The engineering exhibit attached as Exhibit C evidences the worst-case power density for the proposed installation, calculated at the base of the Existing Tower, is .261976 mW/cm² and the MPE is 26.20 %, which results in a total percentage of maximum permissible exposure of 26.22 %, based on the NCRP standard. These calculations show that Sprint PCS will be well below the FCC-

mandated limits in all locations around the Existing Tower, even with extremely conservative assumptions.

- The proposed installations by Sprint PCS will not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is complete, the proposed Sprint PCS installation will not generate any traffic other than periodic maintenance visits.

The proposed installation would have a de minimis visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the existing facility. The proposed shared use of the Existing Tower by Sprint PCS is thus environmentally feasible.

4. Economic Feasibility

As previously mentioned, Sprint PCS and AT&T have agreed upon acceptable terms and entered into an agreement with one another. The proposed shared use of the Facility is therefore economically feasible.

5. Public Safety Concerns

There are no known public safety concerns associated with this Tower Sharing Proposal. As stated above, the Existing Tower is structurally capable of supporting the Sprint PCS antennas. Sprint PCS anticipates that the provision of new or improved phone service made possible by the shared use of the Facility will enhance the safety and welfare of area residents.

Conclusions

The above Tower Sharing Proposal satisfies all of the criteria set forth in Section 16-50aa of the Connecticut General Statutes, including technical, legal, environmental and economic feasibility, and meets public safety concerns. Sprint PCS respectfully requests that the Council issue an order approving the proposed shared use.

PROJECT SUMMARY

SITE NAME: DANBURY

SITE NUMBER: CT33XC523

SITE ADDRESS: 68 SUGAR HOLLOW ROAD
DANBURY, CONNECTICUT

PROPERTY OWNER: AT&T WIRELESS SERVICE
12 OMEGA DRIVE
STAMFORD, CONNECTICUT 06907

TENANT: SPRINT SPECTRUM LP
1 INTERNATIONAL BLVD.~SUITE 300
MAHWAH, NJ 07495

CENTER OF TOWER: LATITUDE: 41° 20' 10.0"
LONGITUDE: 73° 28' 12.0"
GROUND ELEVATION: 528'± AMSL

SITE DIRECTIONS

TAKE I-87S/NEW YORK STATE THRUWAY SOUTH/I-287 RAMP TOWARDS TAPPAN ZEE BR/NEW YORK CITY. MERGE ONTO NEW YORK STATE TRWY. TAKE THE I-287 E/CROSS WESTCHESTER EXPWY EXIT #8 TOWARDS WHITE PLAINS. TAKE THE I-684/WESTCHESTER AVE. EXIT #9A, TOWARDS BREWSTER. KEEP LEFT AT THE FORK IN THE RAMP. MERGE ONTO I-684 N. TAKE I-84 EXIT #9E TOWARDS DANBURY. MERGE ONTO I-84 E. TAKE US-7 SOUTH EXIT #3 TOWARDS NORWALK. TAKE THE EXIT TOWARDS DANBURY AIRPORT. TURN LEFT ONTO SUGAR HOLLOW ROAD.

LEGEND

SYMBOL	DESCRIPTION
	SECTION OR DETAIL NUMBER
	SHEET WHERE DETAIL/SECTION OCCURS
	ELEVATION NUMBER
	SHEET WHERE ELEVATION OCCURS

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
C-1	PARTIAL SITE PLAN AND ELEVATION	0



Natcomm, L.L.C.
 63-2 North Branford Road
 Branford, Connecticut 06405
 Tel. (203) 488-0580
 Fax (203) 488-8587
 Consulting Engineers • Project Management •
 Civil • Structural • Mechanical • Electrical

DATE: 01/09/01

PROFESSIONAL ENGINEER SEAL

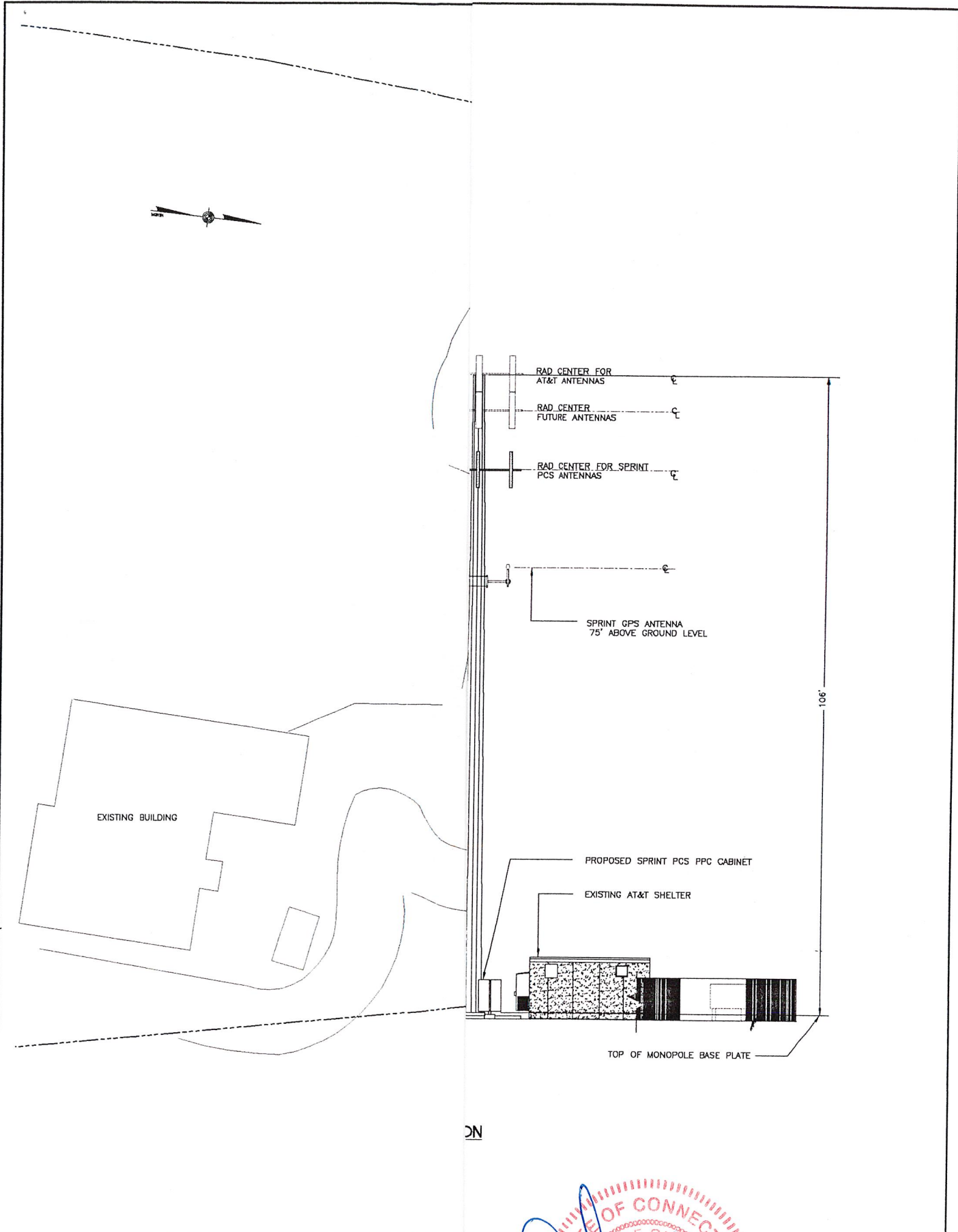
Sprint Spectrum LP

TITLE SHEET

JOB NO.	DRAWING NUMBER	REV.
295A	T-1	1

2003/05/08 2-2-01 10:37:05 AM EST

295AS001.dwg 2-1-01 3:58:39 pm EST



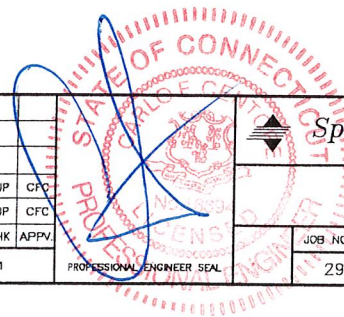
Natcomm, L.L.C.
 63-2 North Branford Road
 Branford, Connecticut 08405
 Tel: (203) 488-0580
 Fax: (203) 488-6587
 Consulting Engineers • Project Management
 Civil • Structural • Mechanical • Electrical

P.A.M.	JJP	CFC	
P.A.M.	JJP	CFC	
BY	CHK	APPV	
E: 01/09/01	PROFESSIONAL ENGINEER SEAL		

Sprint Spectrum LP

PARTIAL SITE PLAN AND ELEVATION

JOB NO.	DRAWING NUMBER	REV.
295A	C-1	1





March 1, 2001

Ms. Laura Thoman
Sprint PCS
1 International Boulevard, Suite 300
Mahwah, NJ 07495

*Re.: Sprint ~ Site No. CT33XC523
66 Sugar Hollow Road, Danbury, CT
Natcomm, LLC Project No. 295*

Dear Ms. Thoman:

We have completed a review of the structural assessment and loading conditions for the existing AT&T Wireless tower at the above referenced site. The review was performed to determine the adequacy of the 108 ft. monopole tower for carrying additional loads from the proposed Sprint antennas and 14 ft. clamp-on low profile platform. The analysis is in compliance with local codes and regulations.

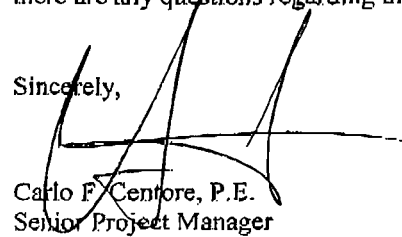
The calculations are based on the proposed equipment being installed at 90 ft. above the tower base plate elevation. The dead loads of the proposed equipment, as well as live loads from wind forces and ice build-up on the tower and equipment were considered. Existing and future equipment were considered in the analysis, however, there are no current inventories available for the co-locating carriers to compare against the design parameters.

Review of the structural analysis report completed by Summit Manufacturing, LLC dated March 16, 2000 has shown that the tower is adequate to support the proposed Sprint equipment loading with the existing and future loading as indicated in the report. The structural report specifies a total of 12 Allgon 7184.03 antennas at this elevation. The proposed quantity and model to be installed is nine (9) DB980F65E-M. The number of antennas has therefore been reduced from the design value of 12 to a total of 9 at the 90 ft. elevation.

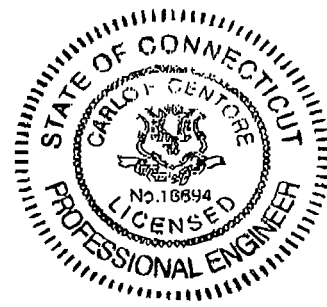
A comparison of the specifications for the various antenna models has shown that the proposed equipment will impose less wind load on the tower and will ultimately reduce the reactions at the base of the structure. This evaluation is based on information provided by the antenna manufacturers. The antenna mounts shall be a 14 ft. clamp-on low profile platform.

In conclusion, the existing monopole tower located at 66 Sugar Hollow Road in Danbury, CT is suitable for installation of the proposed Sprint equipment based on the antenna model used for existing and future carriers. If there are any questions regarding this matter, please feel free to call.

Sincerely,



Carlo F. Centore, P.E.
Senior Project Manager



c.c. J. Pintek, Natcomm, LLC.

CT33XC523 - AT&T Monopole, 66 Sugar Hallow Road, Danbury, 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 ²)	Maximum Permissible Exposure*	%MPE
1962.5	11	535.86	5894.46	90	0	0.261976	1	26.1976%
1962.5	11	535.86	5894.46	90	50	0.200189	1	20.0189%
1962.5	11	535.86	5894.46	90	100	0.117238	1	11.7238%
1962.5	11	535.86	5894.46	90	150	0.069347	1	6.9347%
1962.5	11	535.86	5894.46	90	200	0.044117	1	4.4117%
1962.5	11	535.86	5894.46	90	250	0.030057	1	3.0057%
1962.5	11	535.86	5894.46	90	300	0.021631	1	2.1631%
1962.5	11	535.86	5894.46	90	350	0.016248	1	1.6248%
1962.5	11	535.86	5894.46	90	400	0.012623	1	1.2623%
1962.5	11	535.86	5894.46	90	450	0.010076	1	1.0076%
1962.5	11	535.86	5894.46	90	500	0.008222	1	0.8222%

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

CT33XC523 - AT&T Tower, 66 Sugar Hallow Road, Danbury, CT

Cumulative Worst Case Power Density Analysis of Sprint PCS and AT&T antennas

Operator	Operating Frequency (MHz)	Distance to Target (feet)	Calculated Power Density (mW/cm ²)	Maximum Permissible Exposure* (mW/cm ²)	Fraction of MPE (%)
AT&T wireless	1930	110	0.000220	1.00	0.02%
Sprint PCS	1962.5	90	0.261976	1.00	26.20%
Total Percentage of Maximum Permissible Exposure					26.22%

^a Based on information provided by AT&T wireless.

03/27/01 TUE 12:02 [SLL ON RX/LX NO 7745]

PCS Site CT-069.1.1: Danbury, CT - 9

Table 1: Engineering Specifications for the Proposed PCS System
Danbury, CT

Site Specifications	AT&T Wireless
maximum ERP ¹ per channel	100 watts
actual radiated power per channel	4 watts
actual total radiated power per sector	32 watts
number of transmit antennas	1 per sector
number of receive antennas	2 per sector
maximum number of transmitters	8 per sector
antenna centerline height above grade	150 ft
number of sectors configured	3
antenna manufacturer	Allgon
model number	7184-05
gain	16.15 dBi
type	directional
downlink	2 nd (electrical)



¹ Effective Radiated Power - ERP is a measure of how well an antenna concentrates RF energy. It is not the actual power radiated from the antenna. To illustrate the difference, compare the brightness of an ordinary 100-watt light bulb with that from a 100-watt spot-light. Even though both are 100 watts, the spot-light appears brighter, because it concentrates the light in one direction. In this direction, the spot-light effectively appears to be emitting more than 100 watts. In other directions, there is almost no light emitted by the spot-light and it effectively appears to be much less than 100 watts.

Table 2: Calculated Maximal Levels and the Levels as a Percentage of 1996 FCC MPEs*
for the Proposed PCS Antennas, Danbury, CT

Provider	Power Density ($\mu\text{W}/\text{cm}^2$)		% of MPEs*	
	6 ft AMGL†	16 ft AMGL†	6 ft AMGL†	16 ft AMGL†
AT&T Wireless	< 0.22	< 0.25	0.03%	0.03%

* MPE: The FCC limits for maximum permissible exposure (MPE) as 1996 NCRP limits at the frequencies of interest)

† AMGL: above mean grade level

HURWITZ & SAGARIN, LLC

Facsimile Cover Sheet



To: Bob Ehrling
Company: Connecticut Siting Council
Telephone: 860-827-2935
Fax: 860-827-2950

From: Julie M. Donaldson
Company: Hurwitz & Sagarin, LLC
Phone: 203-877-8000
Fax: 203-878-9800

Date: 3/27/2001

RE: Sprint Towersharing Application
66 Sugar Hollow Road Danbury
AT&T information

SUPPLEMENTAL MESSAGE:

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copy of this communication is strictly prohibited. If you have received this communication in error, please notice us immediately by telephone and return the original message to us at the above address via the U.S. Postal Service. Thank you.

Sprint 66 Sugar Hollow Rd Danbury 03/23/01



HURWITZ & SAGARIN LLC

March 15, 2001

Via Hand Delivery

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



Dear Chairman Gelston:

On behalf of the applicant, Sprint Spectrum L.P. ("Sprint PCS") I am pleased to submit this Tower Sharing Proposal for the shared use of the existing AT&T telecommunications facility located at 66 Sugar Hollow Road, Danbury, Connecticut.

Enclosed are one (1) original and twenty (20) copies of this Tower Sharing Proposal requesting shared use of this facility. A check in the amount of \$500.00 to cover the filing fee is also enclosed. The Mayor of the Town of Danbury has been sent notice of this Tower Sharing Proposal by certified mail.

Sincerely,

A handwritten signature in blue ink that reads "Julie M. Donaldson". The signature is written in a cursive style.

JULIE M. DONALDSON
JMD/dsw
Enclosures

cc: Mayor Gene Eriquez, Danbury
Kim Filomia, Sprint PCS