



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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E-Mail: siting.council@po.state.ct.us

Web Site: www.state.ct.us/csc/index.htm

May 11, 2001

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

RE: **TS-AT&T-137-010501** - AT&T Wireless PCS LLC request for an order to approve tower sharing at an existing telecommunications facility located at 37-55 Taugwank Spur Road, Stonington, Connecticut.

Dear Attorney Fisher:

At a public meeting held May 10, 2001, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. 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.

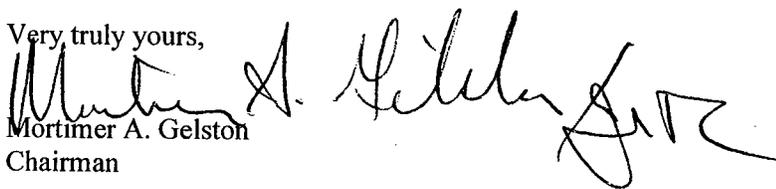
This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point 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.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letters dated April 30, 2001, and May 4, 2001.

Thank you for your attention and cooperation.

Very truly yours,


Mortimer A. Gelston
Chairman

MAG/RKE/laf

c: Honorable Donald R. Maranell, First Selectman, Town of Stonington
Edward Donnelly, Town Planner, Town of Stonington
Esther McNany, SBA, Inc.
Ronald C. Clark, Nextel Communications
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC

CUDDY & FEDER & WORBY LLP

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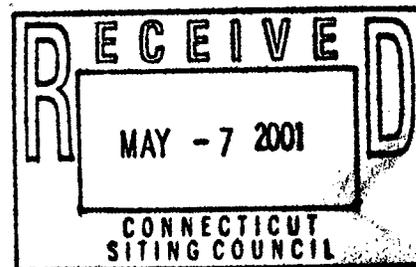
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JOSHUA E. KIMERLING (also CT)
DANIEL F. LEARY (also CT)
BARRY E. LONG**

May 4, 2001

VIA FEDERAL EXPRESS

Mr. Robert Erling
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: AT&T Wireless - Revised Emissions Reports



Dear Mr. Erling:

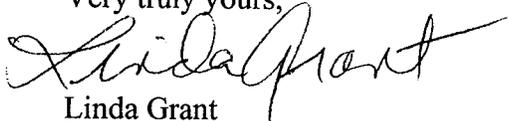
As discussed, enclosed please find revised emissions reports for the following Requests for Tower Sharing:

1. 72 Jerry Brown Road, Stonington;
2. 86 Voluntown Road, Stonington;
3. 37-55 Taugwank Spur Road, Stonington;
4. 1605 Durham Road, Wallingford;
5. 53 Dayton Road, Waterford; and
6. 45 Fargo Road, Waterford.

Please do not hesitate to contact us should you have any questions or require any additional information.

Thank you for your continued assistance on these matters.

Very truly yours,


Linda Grant

CUDDY & FEDER & WORBY LLP

May 4, 2001

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Encls.

cc: Christopher B. Fisher, Esq.

A. Owner of the structure on which the antenna is located and the location of the antenna:

Name of owner of the structure on which the antenna is located:	
Owner of Structure:	SBA
Address of structure:	37 – 55 Taugwonk Spur Road
	Stonington, CT
Latitude:	41° 22' 56.1" N
Longitude:	71° 54' 12.4" W

B. Owner of the antenna:

Name of the owner of the antenna:	AT&T Wireless Services
Address of antenna owner:	12 Omega Drive
	Stamford, CT 06907
Telephone number:	(203) 602-7000

C. Technical specifications:

FCC class (or type) of service:	PCS (IS-136)
Operating frequency of transmitter:	1965-1970MHz
Peak power output of transmitter:	8 Watts/per channel
Power into the antenna:	4 watts
Antenna manufacturer:	EMS
Antenna model:	RR90-17-00
Antenna type:	Panel
Gain of the antenna:	14.4 dBd
Antenna radiating pattern:	H-plane - 90°±3° E-plane -6°±1°
Polarization of radiation from antenna:	Vertical 180°
Effective radiating power:	881.4 watts ERP at centerline (maximum)



D. Power density information:

The power density values presented in the attached studies were achieved according to FCC OET-65 using the following formula:

$$S = \frac{33.4 \times P}{R^2} \quad (\text{Equation 9, FCC OET-65})$$

Where: S = Power density in $\mu\text{W}/\text{cm}^2$
P = Power (watts) ERP (effective radiated power)
R = Distance (meters)

Five measurements were taken for this structure. Besides the AT&T carrier information, the measurements for Verizon, Voicestream, the Town of Stonington, and Nextel were also included for the purposes of this study. Given the above equation, the worse case ground scenario is located at the base of the tower.

The results of this analysis indicate that the maximum level of RF energy in areas normally accessible to the public is below all applicable health and safety limits. Specifically, the maximum level of RF energy associated with simultaneous and continuous operation of all proposed transmitters will be less than 6.73% of the safety criteria adopted by the Federal Communication Commission as mandated by the Telecommunications Act of 1996. The Telecommunications Act of 1996 is the applicable Federal law with respect to consideration of the environmental effects of RF emissions in the siting of personal wireless facilities. The maximum level of RF energy will also be less than 6.73% of the exposure limits of ANSI, IEEE, NCRP, and the limits used by all states that regulate RF exposure.

Carrier	Power Density ($\mu\text{W}/\text{cm}^2$)	Maximum Allowable ($\mu\text{W}/\text{cm}^2$)	Percentage of Maximum
Town Public Safety	0.76	200	0.38%
Nextel	8.96	566.7	1.58%
Voicestream	12.17	1000	1.22%
AT&T	12.38	1000	1.24%
Sprint	23.14	1000	2.31%
Total	57.41		6.73%

The calculations of these values are shown on the attached spreadsheets.

To the best of my knowledge, the statements made and information disclosed in this study are true, complete, and correct.

9 Apr 01 David P. Cotton
Date David Cotton, Senior RF Engineer



AT&T WIRELESS SERVICES

Date: April 9, 2001

CT-229
Base of tower

ERP Calculator		AT&T		ERP Calculator		Town of Stonington			
Max Power to Ant port (dBm)	45.051500	Ant Gain on determined lobe (dBd)	14.4	ERP (dbm)	59.451500	Max Power to Ant port (dBm)	49.030900	ERP (dbm)	49.030900
(watts per channel)	4.000000	Maximum Number of Channels	8	(watts)	881.353185	(watts per channel)	80.000000	(watts)	80.000000

ERP Calculator		Voicestream		ERP Calculator		ERP Calculator			
Max Power to Ant port (dBm)	49.030900	Ant Gain on determined lobe (dBd)	10.9	ERP (dbm)	59.930900	Max Power to Ant port (dBm)	0.000000	ERP (dbm)	0.000000
(watts per channel)	10.000000	Maximum Number of Channels	8	(watts)	984.215017	(watts per channel)	0.000000	(watts)	0.000000

ERP Calculator		Sprint		ERP Calculator		ERP Calculator			
Max Power to Ant port (dBm)	50.413927	Ant Gain on determined lobe (dBd)	10.9	ERP (dbm)	61.313927	Max Power to Ant port (dBm)	0.000000	ERP (dbm)	0.000000
(watts per channel)	10.000000	Maximum Number of Channels	11	(watts)	1353.295648	(watts per channel)	0.000000	(watts)	0.000000

ERP Calculator		Nextel		ERP Calculator		ERP Calculator			
Max Power to Ant port (dBm)	49.542425	Ant Gain on determined lobe (dBd)	10	ERP (dbm)	59.542425	Max Power to Ant port (dBm)	0.000000	ERP (dbm)	0.000000
(watts per channel)	10.000000	Maximum Number of Channels	9	(watts)	900.000000	(watts per channel)	0.000000	(watts)	0.000000

Field density		AT&T		Voicestream		Sprint		Nextel	
BAND/FREQUENCY (MHz)	1900	1900	1900	1900	1900	1900	850	850	850
Signal Level (E.R.P. dbm)	59.451500	59.930900	61.313927	59.542425	59.542425	57.812000	57.812000	57.812000	57.812000
Antenna Centerline Height (ft)	160	170.5	145	145	145	190	190	190	190
Antenna Centerline Height (m)	48.768000	51.968400	44.196000	44.196000	44.196000	55.120000	55.120000	55.120000	55.120000
Signal Level (E.R.P. Watts)	881.353185	984.215017	1353.295648	984.215017	984.215017	8.962968	8.962968	8.962968	8.962968
Field Density (uW/cm2)	12.377318	12.377318	23.140526	23.140526	23.140526	56.652695	56.652695	56.652695	56.652695
Cumulative Density (uW/cm2)	1000.000000	1000.000000	1000.000000	1000.000000	1000.000000	566.666667	566.666667	566.666667	566.666667
Maximum Density OET-65 (uW/cm2)	1.24%	1.22%	2.31%	2.31%	2.31%	1.58%	1.58%	1.58%	1.58%
% of Maximum Density	1.24%	1.22%	4.77%	4.77%	4.77%	6.35%	6.35%	6.35%	6.35%
Cumulative Percentage	1.24%	2.45%	4.77%	4.77%	4.77%	6.35%	6.35%	6.35%	6.35%

Town of Stonington		(none)		(none)		(none)	
BAND/FREQUENCY (MHz)	155.52	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Signal Level (E.R.P. dbm)	49.030900	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Antenna Centerline Height (ft)	195	0	0	0	0	0	0
Antenna Centerline Height (m)	59.436000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Feet converted to (m)->	80.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Signal Level (E.R.P. Watts)	0.756375	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Cumulative Density (uW/cm2)	57.409070	57.409070	57.409070	57.409070	57.409070	57.409070	57.409070
Maximum Density OET-65 (uW/cm2)	200.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
% of Maximum Density	0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative Percentage	6.73%	6.73%	6.73%	6.73%	6.73%	6.73%	6.73%

Percentage of Maximum _____

57.41 uW/cm2 Cumulative Density
6.73% of maximum allowable level.

AT&T Taugwank Spur Rd Stonington 5/04/01





STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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May 1, 2001

Honorable Donald R. Maranell
First Selectman
Town of Stonington
Town Hall
152 Elm Street
P. O. Box 352
Stonington, CT 06378

RE: **TS-AT&T-137-010501** - AT&T Wireless PCS LLC request for an order to approve tower sharing at an existing telecommunications facility located at 37-55 Taugwank Spur Road, Stonington, Connecticut.

Dear Mr. Maranell:

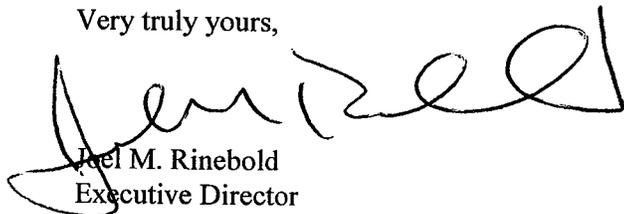
The Connecticut Siting Council (Council) received this request for tower sharing, pursuant to Connecticut General Statutes § 16-50aa.

The Council will consider this item at the next meeting scheduled for May 10, 2001, 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,



Joel M. Rinebold
Executive Director

JMR/laf

Enclosure: Notice of Tower Sharing

c: Edward Donnelly, Town Planner, Town of Stonington

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April 30, 2001

VIA FEDERAL EXPRESS

Mr. Joel Rinebold
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051



Re: Tower Sharing Request by AT&T Wireless -
Existing SBA Tower Facility at
37-55 Taugwank Spur Road, Stonington, Connecticut

Dear Mr. Rinebold:

On behalf of AT&T Wireless PCS, LLC d/b/a AT&T Wireless Services, we respectfully enclose an original and twenty copies of its request for the shared use of an existing tower with respect to the above mentioned facility, together with a check for \$500.00, the filing fee. We would appreciate it if this matter were placed on the next available agenda by the Council to approve the application and issue an order for shared use by AT&T. Should the Council or staff have any questions regarding this matter, please do not hesitate to contact us.

Very truly yours,

Linda Grant

Encls.

cc: Christopher B. Fisher, Esq.

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April 30, 2001

VIA FEDERAL EXPRESS

Hon. Mortimer Gelston, Chairman and Members
of the Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051



Re: Tower Sharing Request by AT&T Wireless -
Existing SBA Tower Facility at
37-55 Taugwank Spur Road, Stonington, Connecticut

Hon. Mortimer Gelston, Chairman and Members of the Siting Council:

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50aa, AT&T Wireless PCS LLC, by and through its agent AT&T Wireless Services, Inc., ("AT&T Wireless") hereby requests an order from the Connecticut Siting Council (the "Council") to approve the proposed shared use of an existing communications tower, located at 37-55 Taugwank Spur Road in the Town of Stonington (the "Taugwank Spur Road Facility"), owned by SBA Towers, Inc., ("SBA"). AT&T Wireless has entered into an agreement with the tower owner to permit the installation of a wireless communications facility at the existing Taugwank Spur Road Facility. See license signature page annexed hereto as Exhibit A.

The Taugwank Spur Road Facility

The Taugwank Spur Road Facility consists of an approximately one hundred ninety (190) foot high monopole tower (the "Tower") and equipment currently being used for wireless communications by Nextel Communications, VoiceStream Communications, Sprint PCS and the

April 30, 2001

Page 2

Town of Stonington. A chain link fence surrounds the Taugwank Spur Road Facility. Current adjacent land uses include commercial/industrial development and I-95.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by Natcomm, LLC, including a site plan and tower elevation of the Taugwank Spur Road Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and equipment needed to provide personal communications services ("PCS") within the existing fenced compound. AT&T Wireless will install up to twelve (12) panel antennas at approximately the 160 foot level of the Tower and a 12' x 20' equipment shelter. The equipment shelter will be located within the existing fenced compound.

Connecticut General Statutes § 16-50aa provides that, upon written request for shared use approval, an order approving such use shall be issued, "if the council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns." (C.G.S. § 16-50aa(c)(1).) Further, upon approval of such shared use, it is exclusive and no local zoning or land use approvals are required C.G.S. § 16-50x. Shared use of the Taugwank Spur Road Facility satisfies the approval criteria set forth in C.G.S. § 16-50aa as follows:

- A. Technical Feasibility AT&T has confirmed that the tower is structurally capable of supporting the addition of AT&T Wireless' antennas as set forth in a letter from Natcomm, LLC annexed hereto as Exhibit B. The proposed shared use of this tower is therefore technically feasible.
- B. Legal Feasibility Pursuant to C.G.S. § 16-50aa, the Council has been authorized to issue an order approving shared use of the existing Taugwank Spur Road Facility. (C.G.S. § 16-50aa(c)(1)). Under the authority vested in the Council by C.G.S. § 16-50aa, an order by the Council approving the shared use of a tower would permit the Applicant to obtain a building permit for the proposed installation.
- C. Environmental Feasibility The proposed shared use would have a minimal environmental effect, for the following reasons:

April 30, 2001

Page 3

1. 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;
 2. The proposed installation by AT&T Wireless would not increase the height of the tower or extend the boundaries of the Taugwank Spur Road Facility;
 3. The proposed installation would not increase the noise levels at the existing facility boundaries by six decibels or more;
 4. Operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. The "worst case" exposure calculated for the operation of this facility for all carriers, would be approximately 5.74% of the standard. See Cumulative Emissions Compliance Report dated April 9, 2001, prepared by David Cotton Jr., AT&T Senior Radio Frequency Engineer, annexed hereto as Exhibit C;
 5. The proposed shared use of the Taugwank Spur Road Facility would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. Further, the installation will not generate any traffic other than for periodic maintenance visits.
- D. Economic Feasibility As evidenced in Exhibit A annexed hereto, the Applicant and the tower owner have entered into a mutual agreement to share use of the Taugwank Spur Road Facility on terms agreeable to both parties. The proposed tower sharing is therefore economically feasible.
- E. Public Safety As stated above and evidenced in the Cumulative Emissions Compliance Report annexed hereto as Exhibit C, the operation of AT&T Wireless' antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the FCC and Connecticut Department of Health. Further, the addition of AT&T Wireless' telecommunications service in the Stonington area through shared use of the Taugwank Spur Road Facility is expected to enhance the safety and welfare of

April 30, 2001

Page 4

local residents and travelers through the area resulting in an improvement to public safety in this area of Stonington.

Conclusion

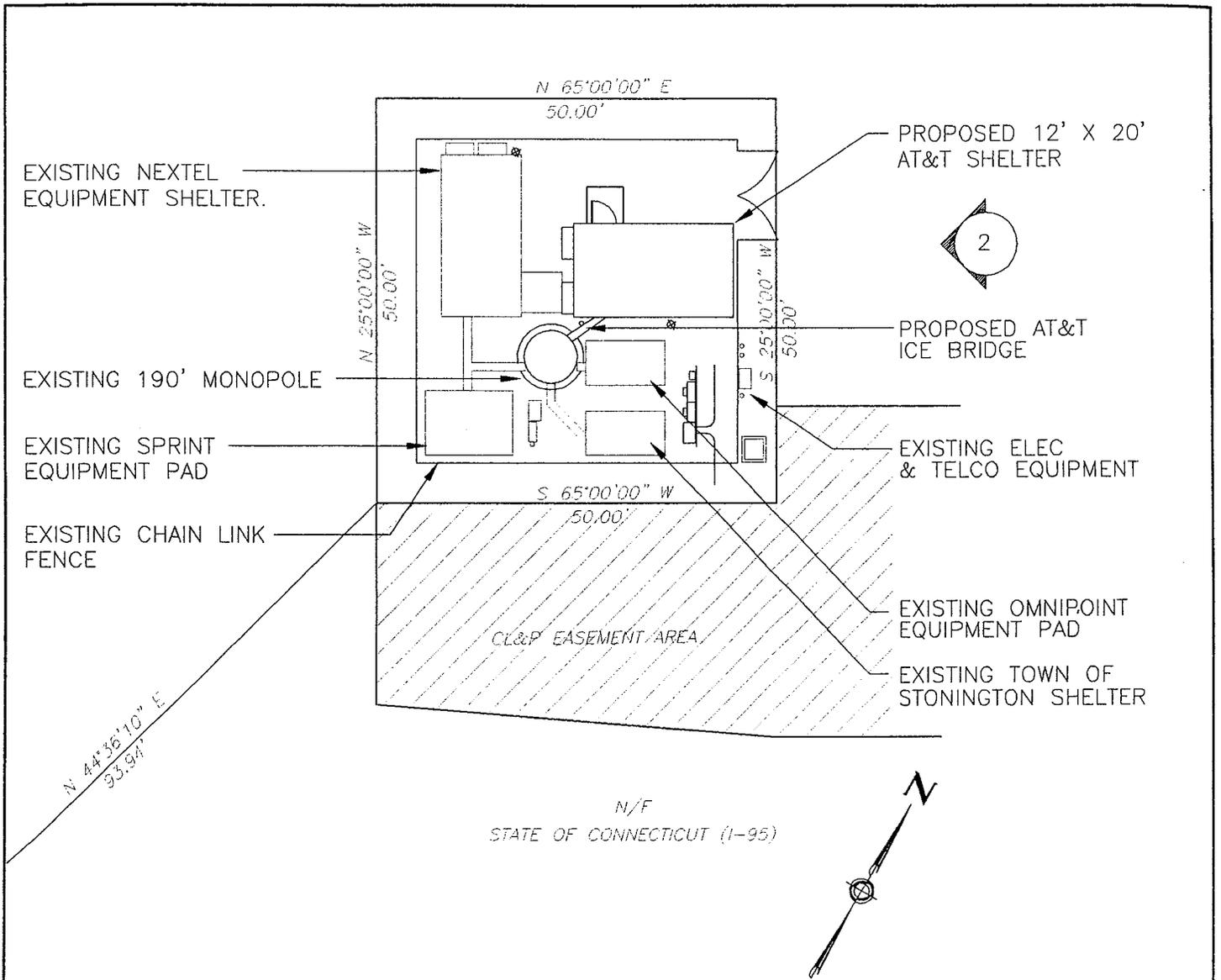
As delineated above, the proposed shared use of the Taugwank Spur Road Facility satisfies the criteria set forth in C.G.S. § 16-50aa, and advances the General Assembly's and the Siting Council's goal of preventing the proliferation of towers in the State of Connecticut. AT&T Wireless therefore requests the Siting Council issue an order approving the proposed shared use of the Taugwank Spur Road Facility.

Respectfully submitted,



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

cc: First Selectman, Town of Stonington
Carmen Chapman, AT&T Wireless
Jennifer Gaudet, Pinnacle Site Development
Connie Lamberes, Bechtel Telecommunications



1 **SITE PLAN**
SCALE: 1' = 20'

COORDINATES:	
LATITUDE	41° 22' 55"N (NAD27)
LONGITUDE	71° 54' 11"W (NAD27)
AMSL (FT)	42

Natcomm, L.L.C.
53-2 North Brentford Road
Brentford, Connecticut 06408
Tel: (203) 448-0080
Fax: (203) 448-9587
Consulting Engineers/Project Managers
Civil Structures/Telecommunications

AT&T WIRELESS PCS LLC
12 OMEGA DRIVE
STAMFORD, CONNECTICUT 06907

DRAWING TITLE:
SITING COUNCIL

PROJECT INFORMATION:
STONINGTON
CT-229
TAUGHANK SPUR ROAD
STONINGTON, CT 06378

PROPERTY OWNER:
SBA
80 EASTERN BLVD.
GLASTONBURY, CT 06033

DRAWING NO. SC-1	
REVISION NO. 1	DRAWN BY: P.A.M.
DATE ISSUED: 04/23/01	CHECKED BY: JJP
SCALE: AS NOTED	APPROVED BY: CFC
SHEET NO. 1 OF 2	
A/E PROJECT NO:	352A

199'-0"± EXISTING WHIP ANTENNA
TOWN OF STONINGTON POLICE DEPARTMENT

190'-0"± EXISTING NEXTEL ANTENNAS

180'-0"± FUTURE ANTENNAS

170'-6"± EXISTING VOICESTREAM ANTENNAS

160'-0"± PROPOSED AT&T ANTENNAS

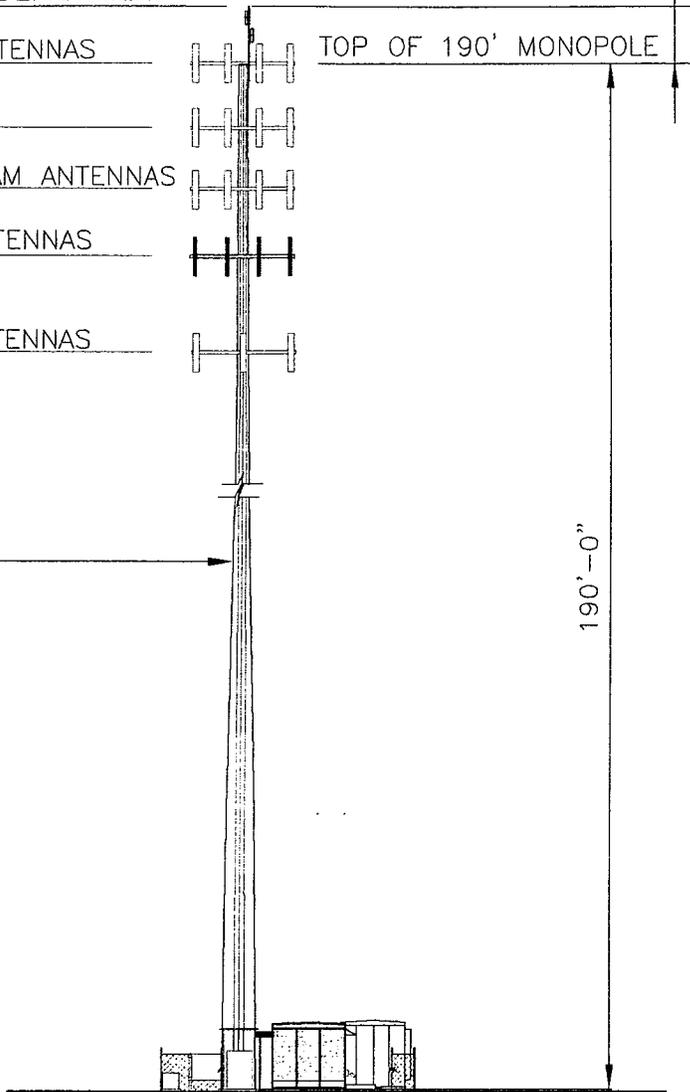
145'-0"± EXISTING SPRINT ANTENNAS

EXISTING 190' MONOPOLE

TOP OF 190' MONOPOLE

9'-0"

190'-0"



2

TOWER ELEVATION

SCALE: 1" = 30'

Natcomm, L.L.C.
 512 North Branford Road
 Branford, Connecticut 06405
 Tel: (203) 438-6500
 Fax: (203) 438-6587
 Consulting Engineers/Project Management
 Civil/Structural/Mechanical/Electrical

AT&T
AT&T WIRELESS PCS LLC
 12 OMEGA DRIVE
 STAMFORD, CONNECTICUT 06907

DRAWING TITLE: SITING COUNCIL
PROJECT INFORMATION: STONINGTON CT-229 TAUGWANK SPUR ROAD STONINGTON, CT 06378
PROPERTY OWNER: SBA 80 EASTERN BLVD. GLASTONBURY, CT 06033

DRAWING NO.	
SC-2	
REVISION NO. 1	DRAWN BY: P.A.M.
DATE ISSUED: 04/23/01	CHECKED BY: JJP
SCALE: AS NOTED	APPROVED BY: CFC
SHEET NO. 2 OF 2	
A/E PROJECT NO:	352A

12. Tenant Contact for Emergency: Network Operations Center 1-800-832-6662

13. Tenant's Address for Notice Purposes: AT&T Wireless Services, Inc.
15 East Midland Avenue
Paramus, NJ 06752

With Copies to: AT&T Wireless Services, Inc.
149 Water Street
Norwalk, CT 06854
Attn: Legal Department

Owner's Address for Notice Purposes: SBA Towers, Inc.
One Town Center Road, 3rd Floor
Boca Raton, FL 33486
Attn: Site Administration

Rental Payments to: SBA Towers, Inc.
Dept. #215595
Miami, FL 33121-5595

14. The Ground Lease relating to the Property is attached hereto and made a part hereof as **Schedule 7**.

15. Notwithstanding the terms of the Master Antenna Site Agreement, this Site Lease shall be governed by and construed in accordance with the laws of the State in which the Site is located.

16. This Site Lease may not be amended, supplemented or modified in any respect, except pursuant to written agreement duly executed by the parties in the same manner in which this Site Lease was executed.

IN WITNESS WHEREOF, the parties hereto have set their hands as of the date set forth above.

OWNER:

SBA Towers, Inc.

By: 

Name: Jason Silberstein
Title: Director, Property Management
Address: One Town Center Road, 3rd Floor
Boca Raton, FL. 33486

Site I.D.: CT0235-S-04
Site Name: Stony Brook

Tenant Site I.D.:
Tenant Site Name:

TENANT: AT&T WIRELESS PCS LLC, by and through its
agent AT&T Wireless Services, Inc.

By:  12/28/99

Name: Paul A. Spurlock

Title: System Development Manager

Address: 15 East Midland Avenue
Paramus, NJ 06752



April 16, 2001

Mr. Chris Fisher
Cuddy, Feder & Worby
90 Maple Avenue
White Plains, NY 10601

Re: *AT&T ~ Site No. CT229*
Taugwank Spur Road
Stonington, CT 06378

Natcomm, LLC Project No. 352A

Dear Chris,

We have completed a review of the structural assessment and loading conditions for the existing SBA tower at the above referenced site. The review was performed to determine the adequacy of the 190 ft. self supported monopole tower for carrying additional loads from the proposed AT&T antennas and mounting platform. The analysis is in compliance with local state and federal codes and regulations.

The calculations are based on the proposed equipment being installed at 160 ft. above the tower base plate elevation. The dead loads of the existing, proposed and future equipment, as well as live loads from wind forces and ice buildup on the monopole and the equipment were considered.

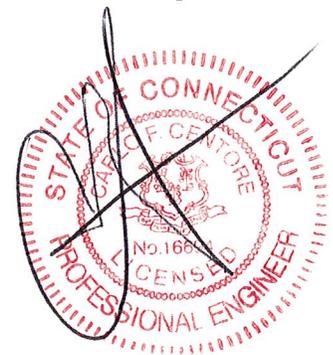
Review of the structural analysis report completed by SBA dated February 22,2001 has shown that the tower is adequate to support the proposed equipment loading. Since the proposed model of antenna (EMS RR90-17-02DP) has less weight and exposed area to wind than the specified model (DB896) by the structural report.

Therefore the proposed equipment will impose less wind load on the tower and will ultimately reduced the overturning moment at the base of the structure. This evaluation is based on information provided by the antenna manufacturers.

In conclusion, the existing monopole tower located at Taugwank Spur Road, CT is suitable for installation of the proposed AT&T equipment based on loading conditions of the Co-locating carriers as shown in the structural report. If there are any questions regarding this matter, please feel free to call.

Sincerely,

Emad M. Mourad, P.E.
Structural Engineer



c.c. J. Pintek, Natcomm, LLC.
C.F. Centore, Natcomm, LLC.

A. Owner of the structure on which the antenna is located and the location of the antenna:

Name of owner of the structure on which the antenna is located:	
Owner of Structure:	SBA
Address of structure:	37 – 55 Taugwonk Spur Road
	Stonington, CT

Latitude:	41° 22' 56.1" N
Longitude:	71° 54' 12.4" W

B. Owner of the antenna:

Name of the owner of the antenna:	AT&T Wireless Services
Address of antenna owner:	12 Omega Drive
	Stamford, CT 06907
Telephone number:	(203) 602-7000

C. Technical specifications:

FCC class (or type) of service:	PCS (IS-136)
Operating frequency of transmitter:	1965-1970MHz
Peak power output of transmitter:	8 Watts/per channel
Power into the antenna:	4 watts
Antenna manufacturer:	EMS
Antenna model:	RR90-17-00
Antenna type:	Panel
Gain of the antenna:	14.4 dBd
Antenna radiating pattern:	H-plane - 90°±3° E-plane -6°±1°
Polarization of radiation from antenna:	Vertical 180°
Effective radiating power:	881.4 watts ERP at centerline (maximum)

D. Power density information:

The power density values presented in the attached studies were achieved according to FCC OET-65 using the following formula:

$$S = \frac{33.4 \times P}{R^2} \quad (\text{Equation 9, FCC OET-65})$$

Where: S = Power density in $\mu\text{W}/\text{cm}^2$
P = Power (watts) ERP (effective radiated power)
R = Distance (meters)

Five measurements were taken for this structure. Besides the AT&T carrier information, the measurements for Verizon, Voicestream, the Town of Stonington, and Nextel were also included for the purposes of this study. Given the above equation, the worse case ground scenario is located at the base of the tower.

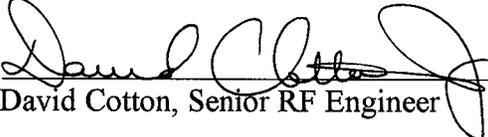
The results of this analysis indicate that the maximum level of RF energy in areas normally accessible to the public is below all applicable health and safety limits. Specifically, the maximum level of RF energy associated with simultaneous and continuous operation of all proposed transmitters will be less than 5.74% of the safety criteria adopted by the Federal Communication Commission as mandated by the Telecommunications Act of 1996. The Telecommunications Act of 1996 is the applicable Federal law with respect to consideration of the environmental effects of RF emissions in the siting of personal wireless facilities. The maximum level of RF energy will also be less than 5.74% of the exposure limits of ANSI, IEEE, NCRP, and the limits used by all states that regulate RF exposure.

Carrier	Power Density ($\mu\text{W}/\text{cm}^2$)	Maximum Allowable ($\mu\text{W}/\text{cm}^2$)	Percentage of Maximum
Town Public Safety	0.76	1000	0.08%
Nextel	8.96	1000	0.90%
Voicestream	12.17	1000	1.22%
AT&T	12.38	1000	1.24%
Sprint	23.14	1000	2.31%
Total	57.41	1000	5.74%

The calculations of these values are shown on the attached spreadsheets.

To the best of my knowledge, the statements made and information disclosed in this study are true, complete, and correct.

9 Apr 2001
Date



David Cotton, Senior RF Engineer



WIRELESS SERVICES

Date: April 9, 2001

CT-229
Base of tower

ERP Calculator		AT&T		ERP Calculator		Town of Stonington	
Max Power to Ant port (dbm)	45,051500	Ant Gain on determined lobe (dBd)	14.4	ERP (dbm)	59,451500	Max Power to Ant port (dbm)	49,030900
(watts per channel)	4,000000	Maximum Number of Channels	8	(watts)	881,353195	(watts per channel)	80,000000
						Maximum Number of Channels	1
							80,000000

ERP Calculator		Voicestream		ERP Calculator		ERP Calculator	
Max Power to Ant port (dbm)	49,030900	Ant Gain on determined lobe (dBd)	10.9	ERP (dbm)	59,930900	Max Power to Ant port (dbm)	0,000000
(watts per channel)	10,000000	Maximum Number of Channels	8	(watts)	984,215017	(watts per channel)	0,000000
						Maximum Number of Channels	0
							0,000000

ERP Calculator		Sprint		ERP Calculator		ERP Calculator	
Max Power to Ant port (dbm)	50,413927	Ant Gain on determined lobe (dBd)	10.9	ERP (dbm)	61,313927	Max Power to Ant port (dbm)	0,000000
(watts per channel)	10,000000	Maximum Number of Channels	11	(watts)	1353,295648	(watts per channel)	0,000000
						Maximum Number of Channels	0
							0,000000

ERP Calculator		Nextel		ERP Calculator		ERP Calculator	
Max Power to Ant port (dbm)	49,542425	Ant Gain on determined lobe (dBd)	10	ERP (dbm)	59,542425	Max Power to Ant port (dbm)	0,000000
(watts per channel)	10,000000	Maximum Number of Channels	9	(watts)	900,000000	(watts per channel)	0,000000
						Maximum Number of Channels	0
							0,000000

Field density		AT&T		Voicestream		Sprint		Nextel	
Signal Level (E.R.P. dbm)	59,451500	59,930900	170.5	51,968400	44,196600	57,312000	59,542425	190	190
Antenna Centerline Height (ft)	160	48,768000	881,353185	984,215017	12,171883	23,140526	8,952968	900,000000	8,952968
Antenna Centerline Height (m)	48,768000	12,377318	24,549201	47,689727			56,552695		
Signal Level (E.R.P. Watts)	881,353185								
Field Density (µW/cm2)	12,377318								
Cumulative Density (µW/cm2)	12,377318								

Town of Stonington		(none)		(none)		(none)	
Signal Level (E.R.P. dbm)	49,030900	0,000000	0	0,000000	0,000000	0,000000	0,000000
Antenna Centerline Height (ft)	195	0	0	0,000000	0,000000	0,000000	0,000000
Antenna Centerline Height (m)	59,436000	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000
Signal Level (E.R.P. Watts)	80,000000	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000
Field Density (mW/cm2)	0,755375	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000
Cumulative Density (mW/cm2)	0,755375	0,000000	0,000000	0,000000	0,000000	0,000000	0,000000

Percentage of Maximum

57.41 µW/cm2 Cumulative Density
5.74 % of maximum allowable level.

FCC OET-65 Standard
Max allowable: 1000 µW/cm2