

August 22, 2001

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



Dear Chairman Gelston:

Pursuant to Connecticut General Statutes ("C.G.S.") § 16-50-aa, Nextel Communications, Inc., ("Nextel") respectfully requests Siting Council approval to install antennas on an existing communications tower located at 36 Sugar Hollow Lake Road in Danbury, Connecticut and place a radio equipment shelter at the tower base. The facility is owned by Voicestream Wireless Communications and is currently used by Voicestream and AT&T Wireless to provide system coverage. Nextel desires to share use of this facility and thus avoid the potential need to construct an additional telecommunications tower in the area. Nextel respectfully asks the Council find the proposed shared use of the facility satisfies the criteria stated in C.G.S. § 16-50-aa and issue an order approving the shared use of this facility by Nextel.

Thank you for your consideration.

Respectfully,

Ronald C. Clark

Manager Real Estate Operations

cc: Honorable Gene F. Eriquez, Mayor

City of Danbury

Mr. Mike Fulton, Voicestream Wireless

#### TOWER SHARING

## 36 Sugar Hollow Lake Road Danbury, Connecticut

#### **BACKGROUND**

Nextel Communications, Inc. ("Nextel") is licensed by the Federal Communications Commission to provide wireless communication services in the State of Connecticut, including the City of Danbury.

Nextel proposes to install panel antennas on an existing 105-foot self-supporting monopole tower and placing an equipment shelter at the tower base. The facility is owned/used by Voicestream Wireless and is located at 36 Sugar Hollow Lake Road in Danbury. The site is also shared by AT&T Wireless. Nextel requests to share use of this existing facility and potentially avoid the need to construct an additional telecommunications tower in the general area.

#### **NEXTEL INSTALLATION**

Nextel proposes to install twelve (12) panel antennas at the 85-foot centerline level of the 105-foot tower (See Attachment A) and place a 12-foot by 20-foot pre-fabricated equipment shelter at the base of the tower (see Attachment B).

#### POWER DENSITY INFORMATION

The operation of Nextel's antennas will not increase the total radio frequency electromagnetic power density measured at the based of the tower, to a level at (or even near) the State and Federal Government standard. "Worst case" calculations (see Attachment C) for a point at the tower base indicate a Power Density level of 0.04476955 mW/cm², or 17.2315% of the allowable State/Federal Standard.

#### OTHER RELEVANT INFORMATION

C.G.S. § 16-50-aa provides that, upon written request for approval of a proposed shared use, "if the Council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the Council shall issue an order approving such shared use." (C.G.S. § 16-50-aa(c)(1).)

The shared use of the tower satisfies the criteria stated in C.G.S. § 16-50-aa as follows:

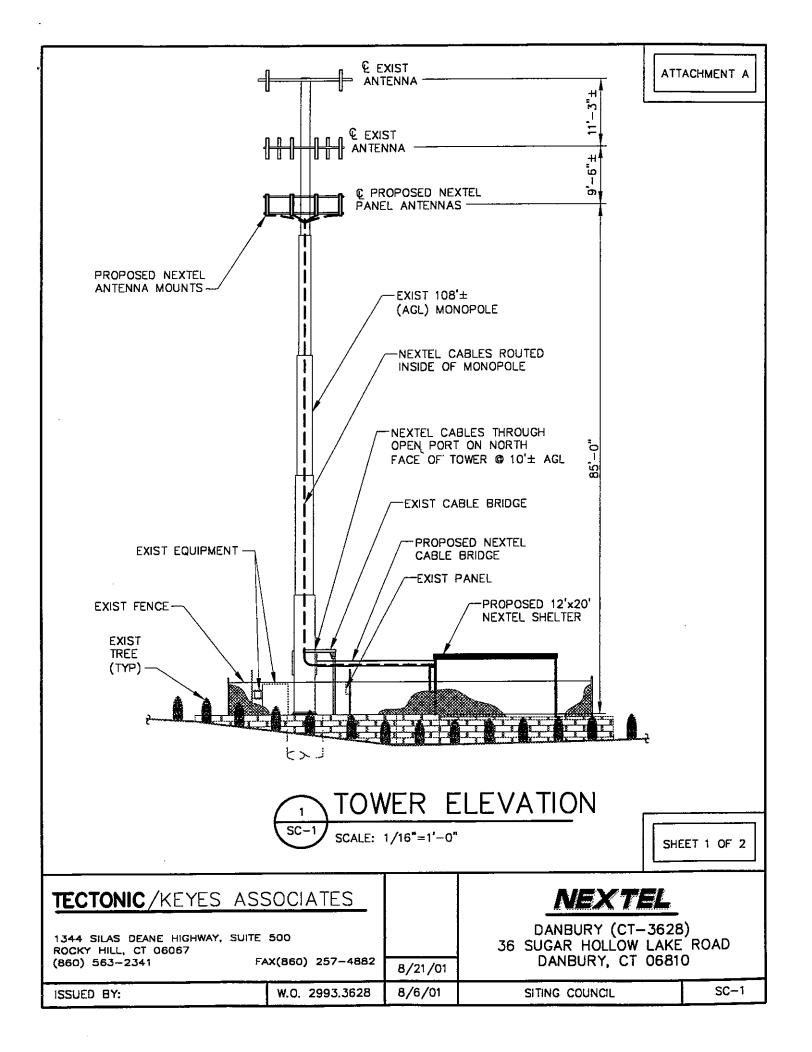
- <u>Technical Feasibility.</u> A structural analysis of the monopole was performed to evaluate Nextel's proposed installation. The analysis found the monopole is structurally capable of supporting Nextel's antennas and associated tower mounted hardware (see Attachment D). The proposed-shared use of the pole is therefore technically feasible.
- <u>Legal Feasibility.</u> Under C.G.S. § 16-50-aa, the Council has been authorized to issue an order approving the proposed-shared use of an existing tower facility. (C.G.S. § 16-50-aa(c)(1).) This authority complements the Council's prior-existing authority under C.G.S. § 16-50p to issue orders approving the construction of new towers that are subject to the Council's jurisdiction. C.G.S. § 16-50x(a) directs the Council to "give such consideration to other state laws and municipal regulations as it shall deem appropriate" on ruling of requests for the shared use of existing tower facilities. Under the authority vested in the Council by C.G.S. § 16-50-aa, an order by the Council approving the shared use would permit the Nextel to obtain a Building Permit for the proposed installation.
- Environmental Feasibility. The proposed shared use of the tower would have a minimal environmental effect, for the following reasons:
  - 1. The installation of Nextel's antennas would have an insignificant incremental visual impact and would not cause a significant change or alteration in the physical or environmental characteristics of the area.
  - 2. The proposed installation would not increase the noise levels at the site boundary by six decibels or more.
  - 3. The combined operation of Nextel's proposed antennas with the existing antennas would not exceed the total radio frequency electromagnetic radiation power density level standard adopted by the State of Connecticut and the Federal Government. As such, The facility will operate in compliance with the Telecommunications act of 1996.
  - 4. The proposed installation would not require water or sanitary facilities, generate any air emissions, or create discharges into any bodies of water. After construction is completed (approximately four weeks from start-to-finish), the installation would not generate any vehicular traffic, other than from a periodic maintenance visit by a Nextel service technician. The proposed use of the facility would therefore have a minimal environment effect and would be considered environmentally feasible.
- Economic Feasibility. Nextel has entered into an agreement with Voicestream to share use of the facility on mutually agreed upon terms. The proposed tower sharing is therefore economically feasible.
- <u>Public Safety Concerns.</u> As stated previously, the tower is structurally capable of supporting Nextel's proposed antennas and the combined radio emissions fall well

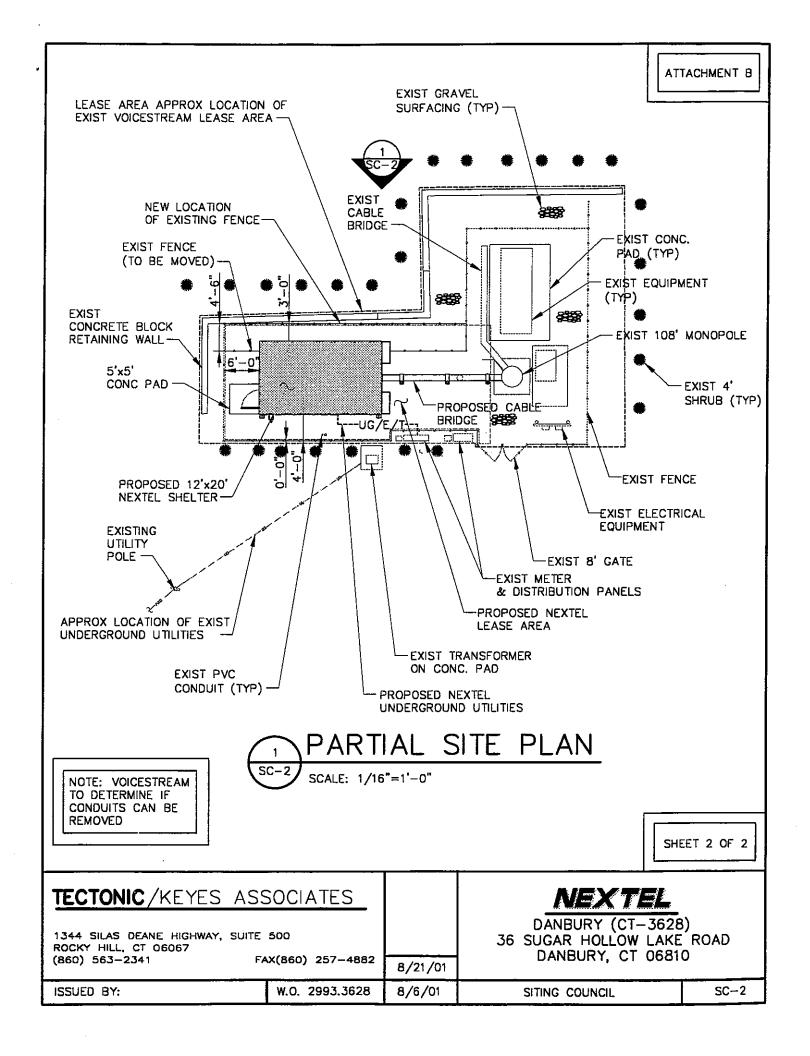
below State/Federal Standards. Nextel is not aware of any other public safety issue(s) relative to the proposed sharing of this facility.

In reality, the provision of additional wireless system coverage should actually enhance the safety and security of local residents, as well as for those traveling through the area. The simple fact that more than one-half *million* wireless 911 calls were made in Connecticut during the year 2000 alone, clearly attests to the positive impact wireless communications has had on public safety in the State. The safety related benefits of wireless service are further illustrated by the decision of many local law enforcement authorities here, and in other parts of the country, to supply mobile phones to local resident groups, civic organizations, etc. to improve public safety by enhancing/expanding emergency communications reporting capabilities. The proposed-shared use of this facility would likewise improve public safety and security in this section of Danbury.

### **CONCLUSION**

For the reasons discussed above, the proposed shared use of this existing tower facility satisfies the criteria stated in C.G.S. § 16-50-aa, and advances the Connecticut General Assembly's and the Siting Council's objective of minimizing the proliferation of towers in the State. Nextel therefore respectfully requests the Siting Council to issue an order approving the shared use of this facility.





# ATTACHMENT C

Danbury, CT (36 Sugar Hollow Lake Road) - CT Siting Council Power Density Calculations	CI Siting Coun	cil Power Den	sify Calculatic	suc			
VoiceStream - centerline 105' AGL - Existing							
AT&T Wireless - centerline 95' AGL - Existing							
Nextel Directional Antennas ESMR - centerline 85' AGL - Proposed	GL - Proposed						
					Note: Power den	Note: Power densities are in mW/ cm²	
		Number of	ERP (W)	Centerline of	Power density		İ
Transmitters:	CT Standard	Channels	per channel	Tx antennas	calculated at	% of CT Standard	
	mW/ cm²			AGL (ff.)	base of tower		
VoiceStream	1.0	4	471.99	105	0.061544927	6.1545%	l i
AT&T Wireless - Existing	1.0	80	100	95	0.031858172	3,1858%	
Nextel Digital ESMR	0.5673	6	100	85	0.04476955	7.8912%	
Total % of CT Standard						17.03160/	
						17.231376	1

### ATTACHMENT D

## TECTONIC / KEYES ASSOCIATES

Division of TECTONIC Engineering Consultants P.C.

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August 21, 2001

RE:

W.O. 2993.3628

DANBURY (CT-3628)

VOICESTREAM MONOPOLE 36 SUGAR HOLLOW LAKE ROAD

DANBURY, CT

**SUMMARY OF STRUCTURAL REVIEW** 

Dear Ron:

Tectonic/Keyes Associates has performed a structural review of the proposed Nextel antenna installation at the above referenced site. The review consisted of a field inspection at ground level of the existing 106' monopole tower and a check of the designer's loading criteria to verify the capacity of the tower. We were provided with the monopole shop drawings, foundation drawings and design criteria prepared by Pirod, Inc., dated November 1999.

The tower was designed to support a total of three (3) antenna mounting platforms at elevations 105', 95, and 85'. The platform at elevation 105' was designed to hold 6 antennas with the platforms at 95' and 85' designed to hold 12 antennas each. All design criteria, including the foundation design, is in accordance with the EIA/TIA-222-F antenna code for structural loads.

The proposed Nextel antennas will be the third installation on the tower. Currently, Voicestream has 3 antennas mounted on a platform at elevation 105'+/- and AT&T has 9 antennas mounted on a platform at 95'+/-. Nextel proposes to install 12 antennas on low-profile side arm mounts at elevation 85'.

The additional loads imposed by the Nextel installation are within the limits of the design criteria established by the tower manufacturer. Based on this review, we conclude that the existing tower is adequate to support the proposed Nextel installation. If you have any further questions with regard to this site, please feel free to contact us.

Sincerely,

TECTONIC ENGINEERING CONSULTANTS, P.C.

John D. Fuller, P.E.

**Telecommunications Manager** 

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