

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

December 20, 2002

Thomas F. Flynn III
Nextel Communications Inc.
100 Corporate Place
Rocky Hill, CT 06067

RE: **EM-NEXTEL-008-021209** - Nextel Communications Inc. notice of intent to modify an existing telecommunications facility located at 93 Old Amity Road, Bethany, Connecticut.

Dear Mr. Flynn:

At a public meeting held on December 19, 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 with the condition that Nextel's installation be in accordance with the conditions listed in the structural analysis prepared by James E. Boltz, P.E.

The proposed modifications are to be implemented as specified here and in your notice dated December 9, 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.

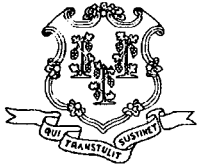
Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/laf

- c: Honorable Craig A. Stahl, First Selectman, Town of Bethany
Robert H. Brinton, Zoning Enforcement Officer, Town of Bethany
Jeremy McDavitt, Co-Location Manager, American Tower Corporation
Julie Donaldson Kohler, Esq., Hurwitz & Sagarin LLC
Sandy M. Carter, Verizon Wireless
Christopher B. Fisher, Esq., Cuddy & Feder & Worby LLP



STATE OF CONNECTICUT

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Ten Franklin Square, New Britain, CT 06051

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

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

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

December 10, 2002

Honorable Craig A. Stahl
First Selectman
Town of Bethany
Town Hall
40 Peck Road
Bethany, CT 06524-3338

RE: **EM-NEXTEL-008-021209** - Nextel Communications Inc. notice of intent to modify an existing telecommunications facility located at 93 Old Amity Road, Bethany, Connecticut.

Dear Mr. Stahl:

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 scheduled for December 19, 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/laf

Enclosure: Notice of Intent

c: Robert H. Brinton, Zoning Enforcement Officer, Town of Bethany

Nextel Communications

100 Corporate Place, 1st Floor, Rocky Hill, CT 06067
860 513-5400 FAX 860 513-5444

NEXTEL

December 9, 2002

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

RECEIVED

DEC - 9 2002

CONNECTICUT
SITING COUNCIL

Dear Chairman Gelston:

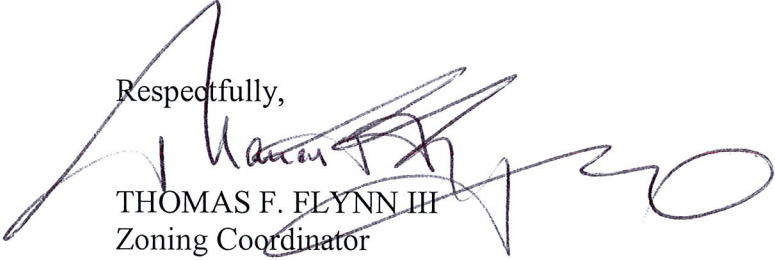
Please find enclosed and respectfully submitted, a request from Nextel Communications Inc. ("Nextel") to Modify an Exempt Tower and Associated Equipment at an existing telecommunications facility located on 93 Old Amity Road, Bethany, Connecticut. This facility is located on property owned by American Tower Corporation. The tower is owned by ATC and is currently used by Nextel Communications to provide wireless coverage.

Nextel wishes to share use of this facility in order to improve/expand wireless its system coverage and to avoid the possibility of constructing another telecommunications tower in the general area. Nextel currently uses the tower and wishes to replace its omni-directional antennas with panel antennas.

The attached information details how the addition of the proposed antennas and associated equipment at the tower site meet the criteria set forth in Section 16-50j-72(b)(2) of the Regulations of Connecticut State Agencies and therefore is an Exempt Modification pursuant to Section 16-50j-73 of the Regulation.

Thank you for your consideration in this matter.

Respectfully,



THOMAS F. FLYNN III
Zoning Coordinator
Nextel Communications Inc.

Enclosure

Cc:

Town of Bethany

**EXEMPT MODIFICATION
93 OLD AMITYROAD
BETHANY, CONNECTICUT**

Pursuant to Section 16-50i(a)(5) of the Connecticut General Statutes and Section 16-50j-72(b)(2), as amended, of the Regulations of Connecticut State Agencies, Nextel Communications Inc., ("Nextel") hereby notifies the Connecticut Siting Council of its intent to modify an existing telecommunications facility located at 93 Old Amity Road, Bethany, Connecticut.

BACKGROUND

This existing facility, located at 93 Old Amity Road Road, Bethany, Connecticut consists of a 338-foot tall, self-supporting lattice tower that is owned by American Tower Corporation and is located on property also owned by ATC. The tower is currently used by Nextel Communications and other telecommunication companies to provide service and coverage to this section of Bethany, Routes 63,69 and 42.

Nextel desires to share use of this facility and thus avoid the potential need to construct an additional tower in the general area.

DISCUSSION

Nextel plans to install twelve (12) panel antennas center-lined at the 250-foot level of the tower (see Attachment A) and use the existing ATC equipment shelter inside the compound (see Attachment B). The tower has been structurally analyzed and found to be fully capable of supporting Nextel's antennas and its tower mounted hardware (Attachment C).

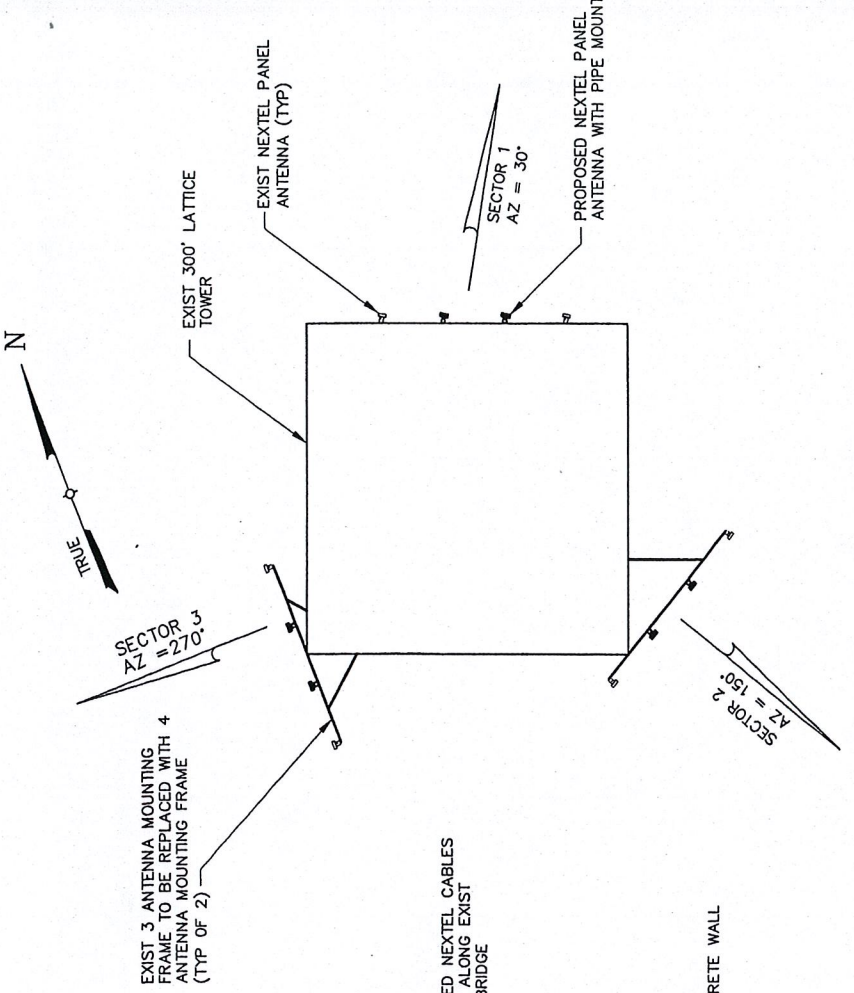
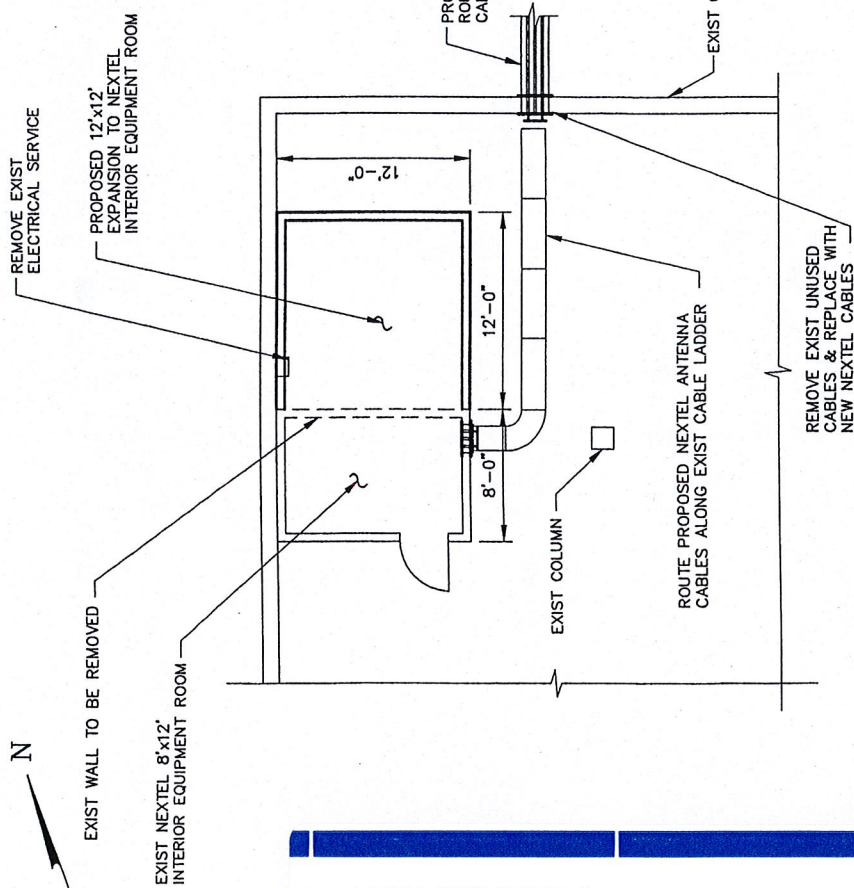
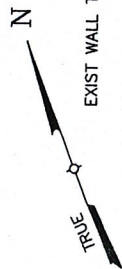
POWER DENSITY INFORMATION

The operation of Nextel's antennas will not increase the total radio frequency electromagnetic power density level to a level at (or even near) existing State and Federal Standards. "Worst case" calculations, measured to a point at the base of the tower, show the combined power levels for the existing telecommunications carriers and proposed Nextel antennas reach just 7.83 % of the State/Federal standard in an uncontrolled access environment. (See Attachment D).

CONCLUSION

The proposed additions do not constitute a “modification” of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and are consistent with the exception criteria found in Section 16-50j-72(b)(2) of the Regulations of Connecticut State Agencies in that the addition of Nextel’s antennas and equipment will not increase the existing tower height or extend the boundaries of the site; will not increase noise levels by six (6) decibels or more at the site’s boundaries; and will not increase the total radio frequency electromagnetic radiation above the Standard set forth in Section 22(a)–162 of the Connecticut General Statutes. In summary, this proposed addition would not have a substantial adverse environmental effect.

For the reasons discussed above, Nextel respectfully requests that the Council acknowledge that this Notice of Modification meets the Council’s exemption criteria, and permit Nextel to share use of this facility.



ATTACHMENT A

EQUIPMENT ROOM PLAN

ANTENNA MOUNTING PLAN

SCALE: 1/8" = 1'-0"

SCALE: NTS

2
L-3

SHEET 3 OF 3

NO.	DATE	ISSUE
0	1/25/02	FOR COMMENT
1	2/22/02	FOR APPROVAL

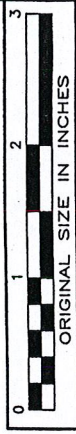
OWNER APPROVAL: _____ DATE: _____

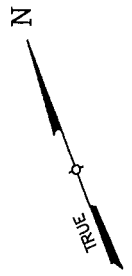
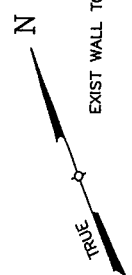
TECTONIC/KEYES ASSOCIATES
 1344 SILAS DEANE HIGHWAY, SUITE 500
 ROCKY HILL, CT 06067
 (860) 563-2341
 FAX(860) 257-4882

NEXTEL
 BETHANY - (CT-0927)
 93 OLD AMITY ROAD
 BETHANY, CT 06524

ISSUED BY: _____ W.O. 3276.0927

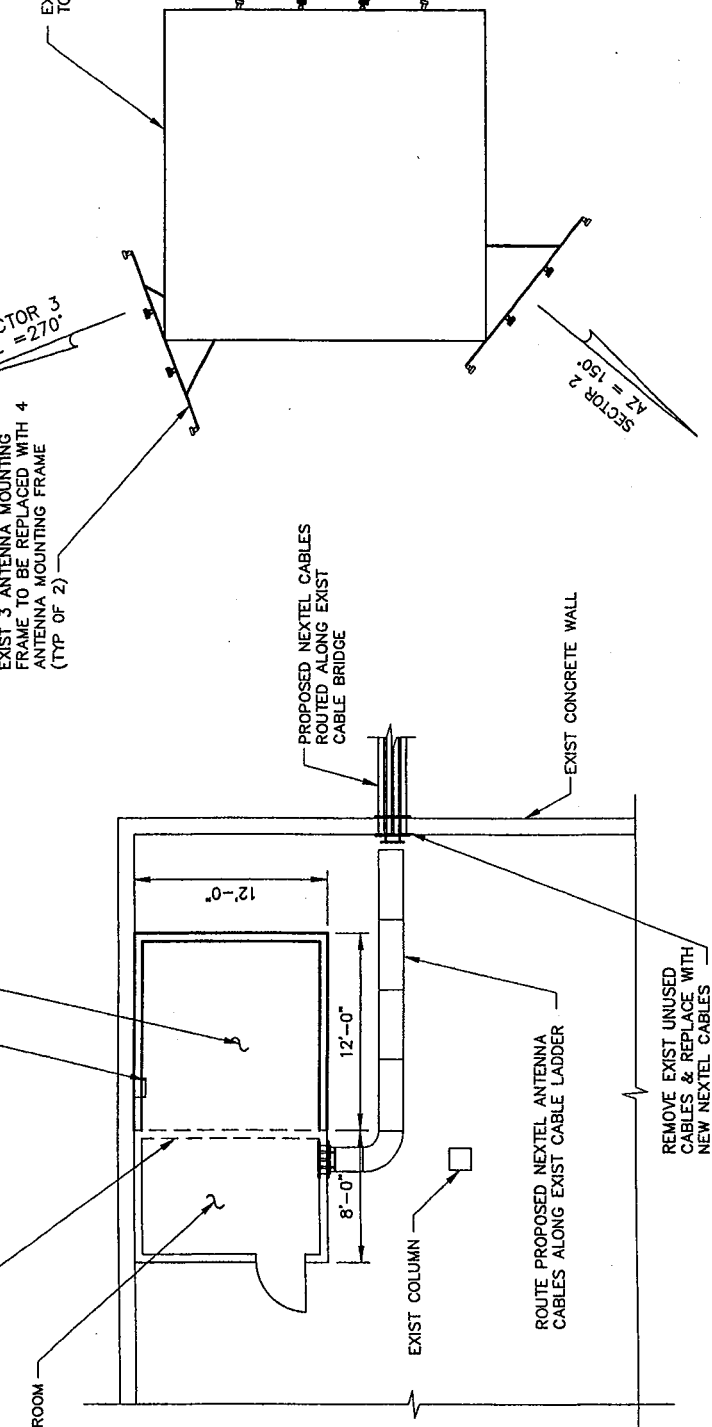
LEASE EXHIBIT L-3





EXIST WALL TO BE REMOVED
 EXIST NEXTEL 8'x12'
 INTERIOR EQUIPMENT ROOM

REMOVE EXIST
 ELECTRICAL SERVICE
 PROPOSED 12'x12'
 EXPANSION TO NEXTEL
 INTERIOR EQUIPMENT ROOM



EQUIPMENT ROOM PLAN

SCALE: 1/8" = 1'-0"



ANTENNA MOUNTING PLAN

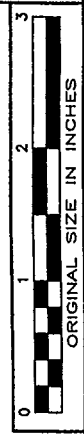
SCALE: NTS

NO.	DATE	ISSUE
0	1/25/02	FOR COMMENT
1	2/22/02	FOR APPROVAL

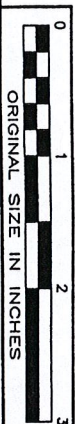
OWNER APPROVAL: _____ DATE: _____

TECTONIC/KEYES ASSOCIATES
 1344 SILAS DEANE HIGHWAY, SUITE 500
 ROCKY HILL, CT 06067
 (860) 563-2341 FAX(860) 257-4882

NEXTEL
 BETHANY - (CT-0927)
 93 OLD AMITY ROAD
 BETHANY, CT 06524



ISSUED BY: _____ W.O. 3276.0927 LEASE EXHIBIT L-3



NO.	DATE	ISSUE
0	1/25/02	FOR COMMENT
1	2/22/02	FOR APPROVAL

OWNER APPROVAL: _____

TECTONIC/KEYES ASSOCIATES

1344 SILAS DEANE HIGHWAY, SUITE 500
 ROCKY HILL, CT 06067
 (860) 563-2341

ISSUED BY: _____

FAX(860) 257-4882

DATE: _____

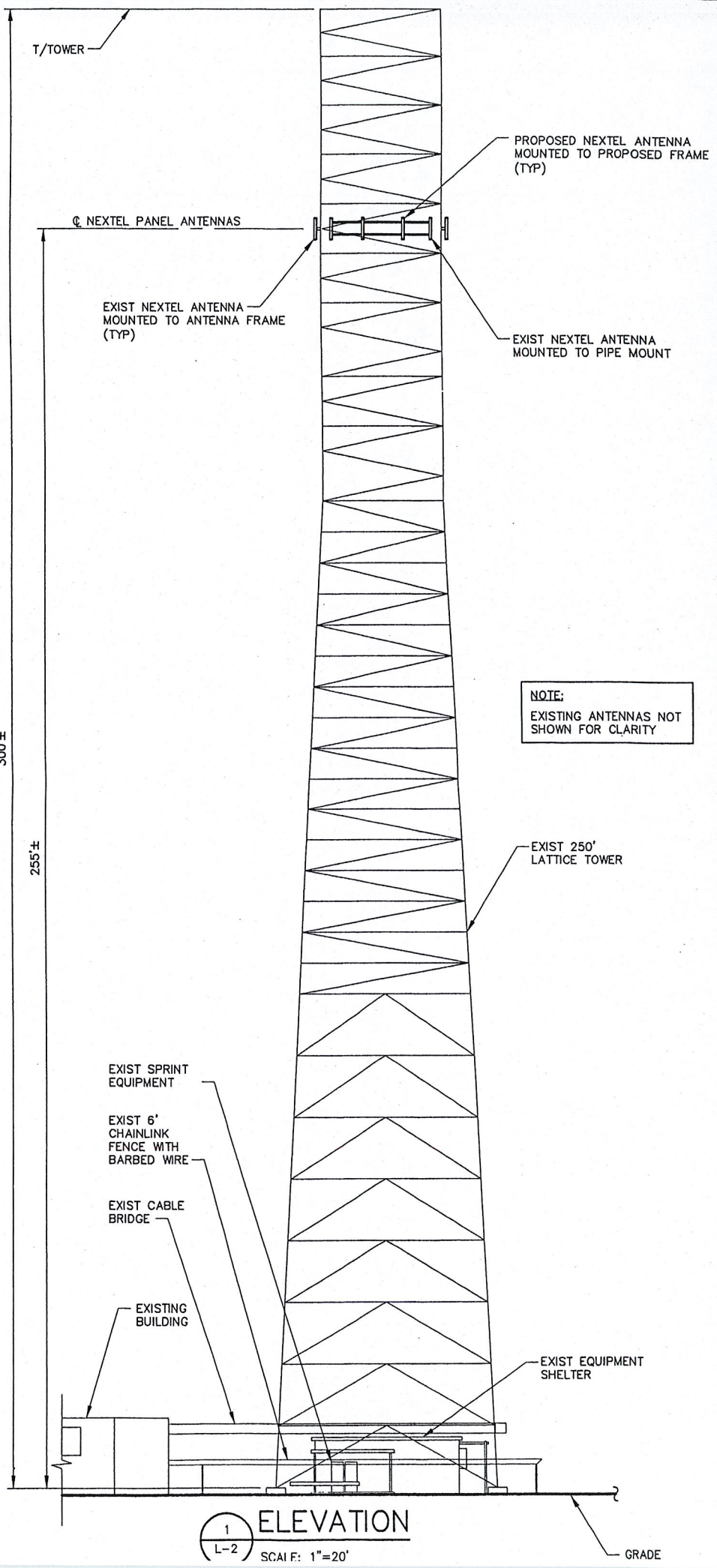
NEXTEL

BETHANY - (CT-0927)
 93 OLD AMITY ROAD
 BETHANY, CT 06524

LEASE EXHIBIT

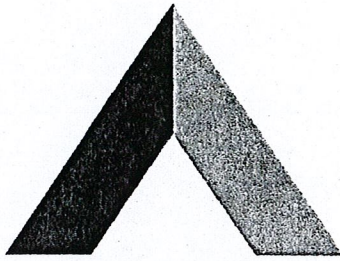
L-2

SHEET 2 OF 3



1 ELEVATION
 L-2
 SCALE: 1"=20'

ATTACHMENT B



AMERICAN TOWER

Structural Analysis Report

Structure : Existing 338 ft. Self Supporting Tower
ATC Site Name : Bethany, CT
ATC Site Number : 88008
Proposed Carrier : Nextel
Carrier Site Name : N/A
Carrier Site Number : N/A
County : New Haven
Project Number : 16798
Eng. Number : 73115069
Date : November 4, 2002

ATC ENGINEERING

S E R V I C E S [™]

11312 South Pipeline Road

Eules, Texas 76040

Phone: (817) 355-4100

Fax: (817) 858-0398



Mr. Victor Rodriguez
American Tower Corporation
11312 South Pipeline Rd.; Eules, TX 76040

November 1, 2002

Re: Structural Review of ATC's Bethany, CT Lattice Tower
American Tower Site No: 88008 , New Haven County, CT
Located: 93 Old Amity Road, Bethany, CT

Dear Mr. Rodriguez,

Communication Structures Engineering, Inc. (CSEI) has completed a review of American Tower Corporation's existing 337.5-ft Modified Type 'H' tower located at ATC's site known as Bethany, CT. In accordance with your request, we have performed a structural analysis of this tower to check its capability to support the existing tower, antenna and equipment loads as well as the new loads from the Nextel Communication proposed additions. The specific loading criteria that we utilized were those prescribed by the national standard "ANSI/TIA/EIA-222-F", "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures." In accordance with this Standard the "basic wind speed" that we utilized for the analysis of this structure was the "fastest-mile velocity" of 85-mph specified for New Haven County, CT. The tower was also reviewed in accordance with "ANSI/TIA/EIA-222-F" for loads resulting from the combined effect of 75% wind load + 1/2-inch of radial ice loads. However, the full 85mph basic wind load without radial ice was found to be the controlling criteria for the design of this structure.

EXISTING TOWER INFORMATION & HISTORY

The 337.5-ft Modified Type 'H' tower at this site was originally built in 1966 for AT&T by Flint Steel Corporation to support four AT&T Horn Antennas. The primary tower framing has not been modified since the original 1966 construction. The Four AT&T Horn antennas were removed in 1995 when Nextel added their three BMR antennas. Sprint PCS added six panel antennas in 1996. Nextel added six panel antennas in 1998. Verizon added 12 panel antennas in 2000. AWS is currently in the process of mounting twelve panel antennas.

CSEI utilized all of the engineering drawings for the original tower and subsequent tower modifications to conduct this structural review. In 1998 a CSEI engineer visited this site and climbed, photographed & reviewed the condition of the existing tower structure and confirmed equipment locations. Recent 2002 photos were used to help confirm the antenna & equipment configuration for this structure. The "Customer Tower Loading List", which was provided to us by ATC, was used to determine the most current tower loading.

DESIGN CRITERIA

See the attached page for the applicable Design Criteria and Antenna Configuration that were used for this structural analysis.

STRUCTURAL ANALYSIS PROCEDURE

The above referenced design standards combined with wind tunnel test data from extensive tests conducted on Type 'H' towers were utilized to determine the applicable loads for this structure. A frame analysis was performed utilizing the above wind loads and a computer model of the tower framing modeled on STAAD III software. The load carrying frame members of this structure were then reviewed to check their compliance with the AISC ASD "Specification for Structural Steel Buildings".

RESULTS OF STRUCTURAL ANALYSIS

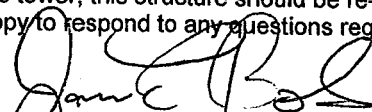
The majority of the existing tower members had maximum stress levels that were less than the allowable stresses permitted by the AISC Specification. A few tower members had maximum stress levels that were slightly above (less than 5% above) the allowable AISC stress levels. It is our opinion that a 5% stress variation is within the range of accuracy of our analysis and does not constitute an overstress situation that requires tower member strengthening at this time. Our analysis did determine that some of the existing tower bolts will now need to be removed & replaced to enable this structure to support Nextel's new equipment. This bolt replacement is needed at the connections of some of the tower face braces. At each of these connections the three existing 3/4-inch diameter bolts must be replaced with three new 3/4-inch diameter ASTM A325 high-strength galvanized bolts. The specific locations where bolt replacements are necessary and the bolts to be used are specified on CSEI drawing TS-1, which is included with this letter. After the bolt replacement work is properly completed, this structure will be capable of supporting the loads from both the existing equipment and Nextel's proposed additions, in compliance with the ANSI/TIA/EIA-222-F design criteria.

The following conditions that were utilized in our structural analysis must be upheld or the results of our analysis will be invalid.

- 1.) The AT&T Wireless Services & Verizon coaxial cables must be installed in conformance with the CSEI letter dated 8/14/02.
- 2.) The six new Nextel Communications 1-5/8" diameter coaxial cables must be stacked behind the six existing Nextel Communications 1-5/8" diameter cables, so that a maximum of six coaxial cables are exposed and six coaxial cables are shielded from wind loading.
- 3.) Forty-eight existing tower bolts must now be replaced in accordance with CSEI drawing TS-1.

If any co-location customers add any future additional antennas or equipment to this tower, this structure should be re-analyzed at that time. CSEI would be happy to respond to any questions regarding this structural analysis.

Sincerely,


James E. Boltz, P.E. (CT P.E. # 20122)



Attachments: 1.) Design Criteria 2.) CSEI Drawing TS-1 3.) Structural Calculations

November 1, 2002

DESIGN CRITERIA

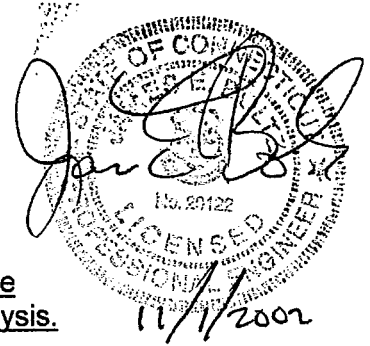
American Tower Site: Bethany, CT

ATC Site No. 88008

Located: 93 Old Amity Rd.

New Haven County, CT

Latitude N 41° 24' 17", Longitude W 72° 59' 59"



In addition to the loads from the existing tower framing and platforms the loads from the following antennas and their associated transmission lines were considered in the analysis.

ANTENNA CONFIGURATION (Used for Structural Analysis)

Existing Antennas & Transmission Lines

1.) Industrial Communications

Three Celwave BMR12 Omni antennas at 350-ft & 360-ft AGL each w/ one run of 1-5/8 inch coaxial cable.

2.) Nextel Communications

Six Decibel DB844H90E-XY panel antennas at 250-ft AGL each w/ one run of 1-5/8 inch coaxial cable.

3.) Sprint PCS

Six DAPA 58000 panel antennas at 240.5-ft AGL each w/ one run of 1-5/8 inch cable.

4.) Verizon

Twelve ALP 9212 panel antennas at 180-ft AGL each w/ one run of 1-5/8 inch coaxial cable.

One GPS KS24019 antenna w/ one run of 7/8 inch coaxial cable.

5.) AT&T Wireless Services

Six Allgon 7250.03 Panel Antennas at 165-ft AGL each w/ two runs of 1-1/4 inch coaxial cable.

New Nextel Communications Antenna & Transmission Line Additions

- 1.) Six Decibel DB844H90E-XY panel antennas at centerline of 250-ft above tower base plate and six associated runs of 1.625 inch diameter coaxial cable.

Design Assumptions for Nextel and AT&T Wireless installation (Used for Structural Analysis)

In order to minimize the wind loads on this structure, the following conditions were assumed.

If these conditions are not upheld the results of our structural analysis will be invalid.

- 1.) The AT&T Wireless Services antennas and cables must be installed in conformance with CSEI letter dated 8/14/2002. These cables must be located on the North tower face near a tower leg and must be stacked in two rows of 6 cables.
- 2.) The twelve existing Verizon cables must be stacked in two rows of six cables with one row directly behind the other.
- 3.) The six new Nextel Communications 1-5/8" diameter coaxial cables must be stacked behind the six existing Nextel communications 1-5/8" diameter coaxial cables, so that a maximum of six coaxial cables are exposed and six coaxial cables are shielded from wind loading.
- 4.) The forty-eight existing tower bolts designated on CSEI drawing TS-1 must now be replaced with new 3/4-inch A325 Bolts.

Customer Antenna & Cable Mounts and Their Connections to Tower

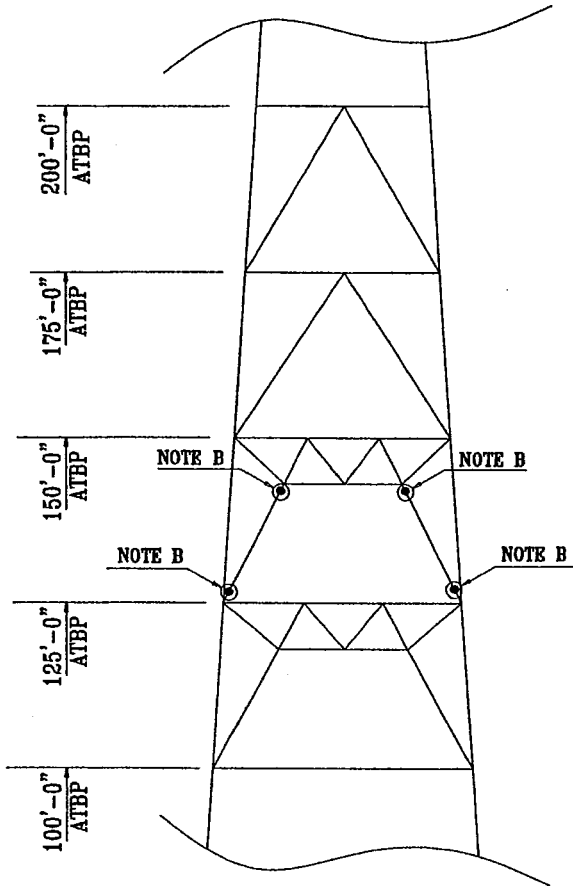
The loads stated above include the applicable overall tower dead and wind loads from the listed customer antennas and transmission lines that were provided to CSEI. CSEI's structural analysis applies these loads at the tower truss panel points (joints where tower braces connect) that are closest to the customer equipment location. CSEI's structural analysis of this overall tower structure does not include tower stresses that could occur from improper customer equipment attachments that may locally stress individual tower braces. The attachment of the individual customer's equipment is not a part of CSEI's scope of work. CSEI assumes that these attachments, in accordance with good engineering practice, will be designed and installed to properly connect close to the tower panel points in such a manner as to not introduce significant local stresses to the existing tower bracing members. Improperly connected customer equipment can significantly stress individual tower members and consequently reduce the overall load capacity of the entire tower structure.

The design and installation of all customers' antenna & cable mounts and their proper connections to this tower are the responsibility of the individual customers and their engineers, suppliers and contractors.



BOLT REPLACEMENT NOTES

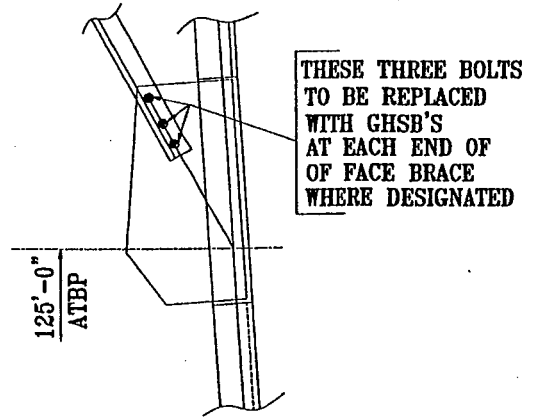
- A. PARTIAL TOWER ELEVATION SHOWN FOR CLARITY.
- B. REPLACE THREE FACE BRACE CONNECTION BOLTS AT ALL FACES WITH THREE 3/4" DIA X 2 1/4" GALV. A325 GHSB.



PARTIAL TOWER ELEVATION

FIELD BOLTS REQUIRED	
QTY	DESCRIPTION
48	3/4" DIA X 2 1/4" GHSB (NOTE B)

GHSB = GALVANIZED A325 HIGH STRENGTH BOLT WITH HEAVY HEX NUT, HARDENED WASHER AND PALNUT.
 ATBP = ABOVE TOWER BASE PLATE



DETAIL A
TYPICAL BOLT REPLACEMENT

REQUIRED BOLT REPLACEMENTS

EXISTING 337'-6" MODIFIED TYPE "H" TOWER

TYPICAL ALL FACES

Professional Engineer Seal for the State of Connecticut, No. 26159, signed by J. E. Boltz, dated 11/1/02.

<p>Communication Structures Engineering, Inc. 2430 Herodian Way, Suite 102 Smyrna, Georgia 30080 (770) 951-8080</p>	Designed by: A. K. PADMAN Drawn by: A. K. PADMAN Checked by: J. E. BOLTZ	Date: NOVEMBER 2002
		CSRT Project: 02239 ATC SITE #: 88008 SHEET No: TS-1
ORIGINAL ISSUE	11/01/02	BETHANY, CT ATC SITE #88008 TOWER STRENGTHENING

Bethany, CT (Old Amity Rd.) - CT Siting Council Power Density Calculations

Nextel Directional Antennas ESMR - 851 MHz at centerline 255' AGL							Note: Power densities are in mW/ cm ²	
Transmitters:	Frequency in MHz	CT Standard mW/ cm ²	Number of Channels	ERP (W) per channel	Centerline of Tx antennas AGL (ft.)	Power density calculated at base of tower	% of CT Standard	
AT&T repeater system	451	0.3007	10	100	347	0.002984827	0.99%	
Industrial Communications SMR	855	0.5700	3	1000	345	0.009058601	1.59%	
Nextel Digital ESMR - Proposed	851	0.5673	9	100	255	0.004974394	0.88%	
Verizon (from Verizon submission)	870	0.5800				0.0211	3.61%	
Sprint	1962	1.0000	11	111	240	0.007618531	0.7619%	
Total % of CT Standard							7.83%	