



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

September 4, 2000

Susan J. Bellion
Senior Real Estate & Zoning Manager
Nextel Communications
100 Corporate Place
Rocky Hill, CT 06067

RE: TS-NEXTEL-143-000817 - Nextel Communications request for an order to approve tower sharing at an existing telecommunications facility located at 1210 Highland Avenue in Torrington, CT.

Dear Ms. Bellion:

At a public meeting held August 31, 2000, 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 letter dated August 16, 2000.

Thank you for your attention and cooperation.

Very truly yours,


Mortimer A. Gelston
Chairman

MAG/RKE/laf

c: Honorable Mary Jane Gryniuk, Mayor, City of Torrington
SBA, Inc.

Nextel Communications
100 Corporate Place, Rocky Hill, CT 06067
860 513-5400 FAX 860 513-5444

TS- NEXTEL® 143-000817

August 16, 2000

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

RECEIVED

AUG 17 2000

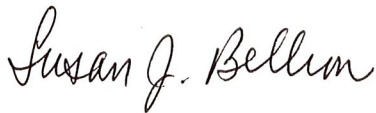
CONNECTICUT
SITING COUNCIL

Dear Chairman Gelston:

Pursuant to Connecticut General Statutes (C.G.S.) § 16-50-aa, Nextel Communications (Nextel), respectfully requests to make shared use of its existing telecommunications tower located at 1210 Highland Avenue in Torrington, Connecticut. The facility (formerly owned by Mr. Hugo S. Gerbi) is currently owned by SBA, Inc. Nextel Communications proposes to add twelve (12) directional antennas to the 240-foot tall-guyed lattice tower and place a pre-fabricated equipment shelter near the tower base. Nextel would much prefer to share use of this existing tower rather than construct a new communications tower in the area.

Nextel respectfully asks that 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.

Sincerely,



Susan J. Bellion
Senior Real Estate & Zoning Manager

CC: Honorable Mary Jane Gryniuk, Mayor, City of Torrington
SBA, Inc.

NEXTEL COMMUNICATIONS
TOWER SHARING
1210 HIGHLAND AVENUE
TORRINGTON, CONNECTICUT

BACKGROUND

Nextel Communications (Nextel) is licensed by the Federal Communications Commission (FCC) to provide wireless communications services in the State of Connecticut, including the City of Torrington.

Nextel respectfully proposes to mount its antennas on an existing 240-foot guyed lattice tower owned by SBA, Inc. (tower was formerly owned by Mr. Hugo S. Gerbi) and locate a pre-fabricated equipment shelter near the base of the tower. The facility is located at 1210 Highland Avenue in Torrington and is currently shared by numerous other users. Nextel would prefer to make use of this existing tower, rather than construct another tower in the general area.

NEXTEL'S PROPOSED INSTALLATION

Nextel seeks to install twelve (12) model ALP 9212 directional panel antennas, center-mounted at the 200-foot level of the tower. (See Attachment A)

A 10-foot by 20-foot pre-fabricated equipment shelter is proposed to be placed adjacent to the tower base (see Attachment B).

POWER DENSITY INFORMATION

Nextel measured the RF fields present at the existing wireless communications facility at 1210 Highland Avenue, Torrington, CT. in accordance with FCC Rule Section 1.1307 and related OET Bulletin No. 65 governing the procedure for measuring radio-frequency ("RF") fields and associated emission levels. The IEEE/ANSI approved measurement procedure and instrumentation (calibrated Wandel & Goltermann EMR-300 EM Radiation Meter) were utilized. Numerous measurements of Maximum Permissible Exposure ("MPE") levels were taken within the compound, and the highest measured value within the compound was 3.41% of the federal MPE limits. Attached (See Attachment C) are the power density calculations of the proposed Nextel Facility showing the proposed Nextel antennas will add 1.67 % (.009451 mW/cm²) and the

combined total power density level of the existing transmitters plus the proposed Nextel antennas will be 5.08%.

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:

- A. **Technical Feasibility.** A structural analysis of the tower was performed to evaluate the feasibility of Nextel’s proposed installation. The report (see Attachment D) concluded that this tower is structurally capable of supporting Nextel’s antennas and associated tower mounted hardware. The proposed shared use of this tower therefore is technically feasible.
- B. **Legal Feasibility.** 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 applicant to obtain a building permit for the proposed installation.
- C. **Environmental Feasibility.** The shared use of this facility would have a minimal environmental effect for the following reasons:
 1. The proposed installation would have an insignificant incremental visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics in or around the area.
 2. The installation would not increase the noise levels at the existing facility by six decibels or more.
 3. Operations of antennas at this site would not exceed the total radio frequency electromagnetic radiation power density levels adopted by the State of Connecticut and the FCC. The “worst-case” exposure levels have been calculated for ground level. The combined power density levels for all users at ground level is only 9.44 % of both the State and FCC standards for exposure in an

uncontrolled environment. As such, the facility would be operated in full and complete compliance with the Federal Telecommunications Act of 1996.

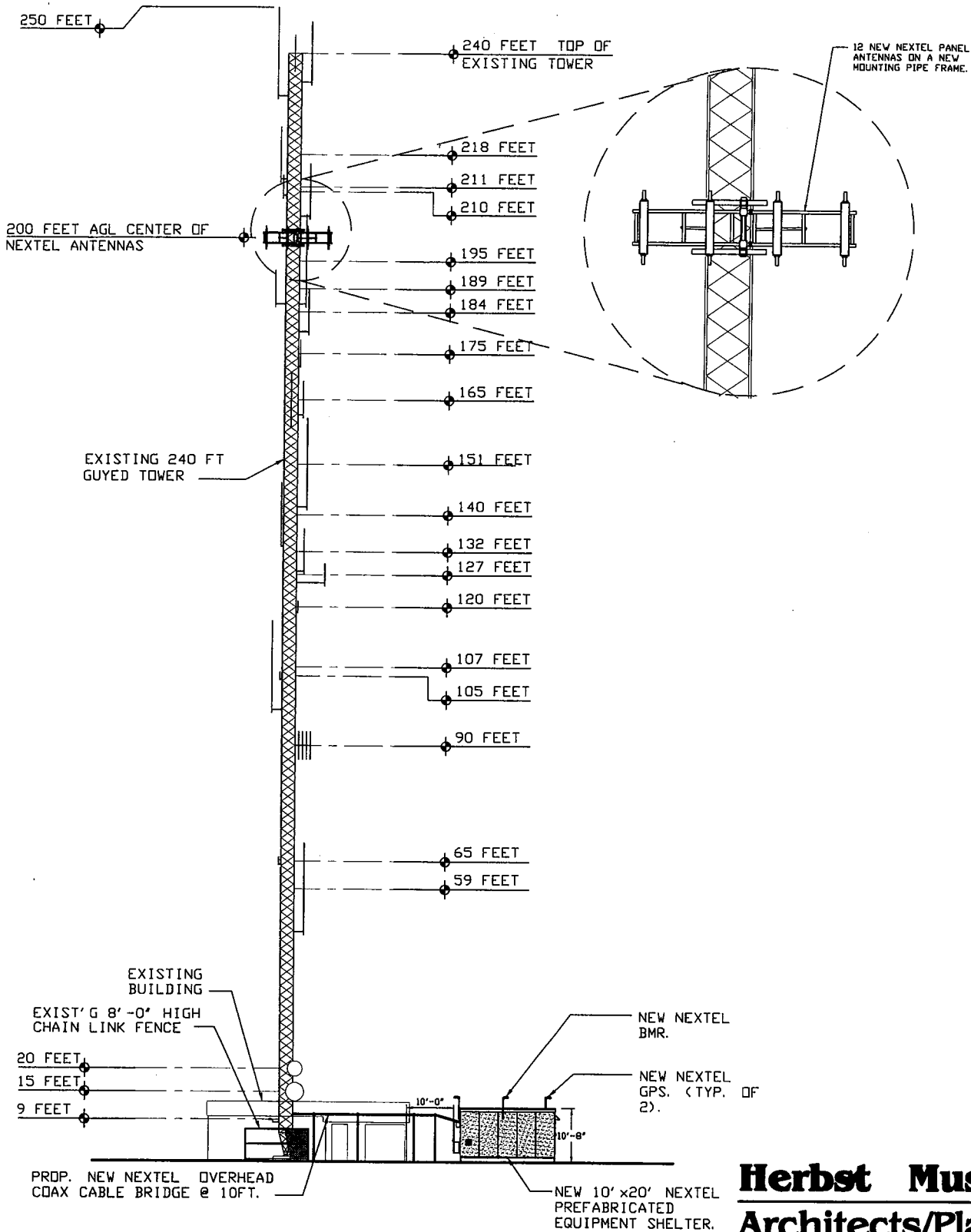
The proposed installation would not require any water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is completed (approximately four weeks in duration), the installation would not generate any vehicular traffic other than from periodic maintenance visits by a radio technician. The shared use of the facility would therefore have a minimal environmental effect and is indeed, environmentally feasible.

- D. **Economic Feasibility.** Nextel has entered into an agreement with SBA, Inc, the site owner, to share use of the facility. The proposed tower sharing is therefore economically feasible.
- E. **Public Safety Concerns.** As stated previously, the tower is structurally capable of supporting the proposed antennas and radio frequency emissions fall well within the appropriate State/Federal standards. Nextel is not aware of any other public safety issue(s) relative to the sharing of this facility. In fact, the provision of additional wireless system coverage is expected to enhance the safety, security and welfare of local residents, as well as those traveling in the area. The simple fact that *more than one-half million* wireless 911 calls were made in Connecticut during 1998, clearly demonstrates the positive impact this form of communications has had on public safety in the State. The public safety benefits of wireless service are further illustrated by the decision of many law enforcement authorities here, and in other parts of the Country, to provide mobile phones to residents to improve public safety by enhancing/expanding emergency communications capabilities in their communities. The proposed-shared use of this facility would likewise improve public safety in and around Torrington.

CONCLUSION

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

Attachment A



1 SOUTH ELEVATION
SCALE: 1/32" = 1'-0"

**Herbst Musciano
Architects/Planners**

NEXTEL OF NEW YORK, Inc
dba: NEXTEL COMMUNICATIONS
1 NORTH BROADWAY
WHITE PLAINS, N.Y. 10601
(914) 421-2800

CT-0314
TORRINGTON
1210 HIGHLAND AVENUE
TORRINGTON, CT
06790

NO.:	DATE:	REVISIONS ▼
1	08.10.00	FOR REVIEW
NO.:	DATE:	SUBMISSIONS ▲

DATE:
06.27.00

PROJECT NO.:
4972

DRAWING NO.:

SP2

Attachment B

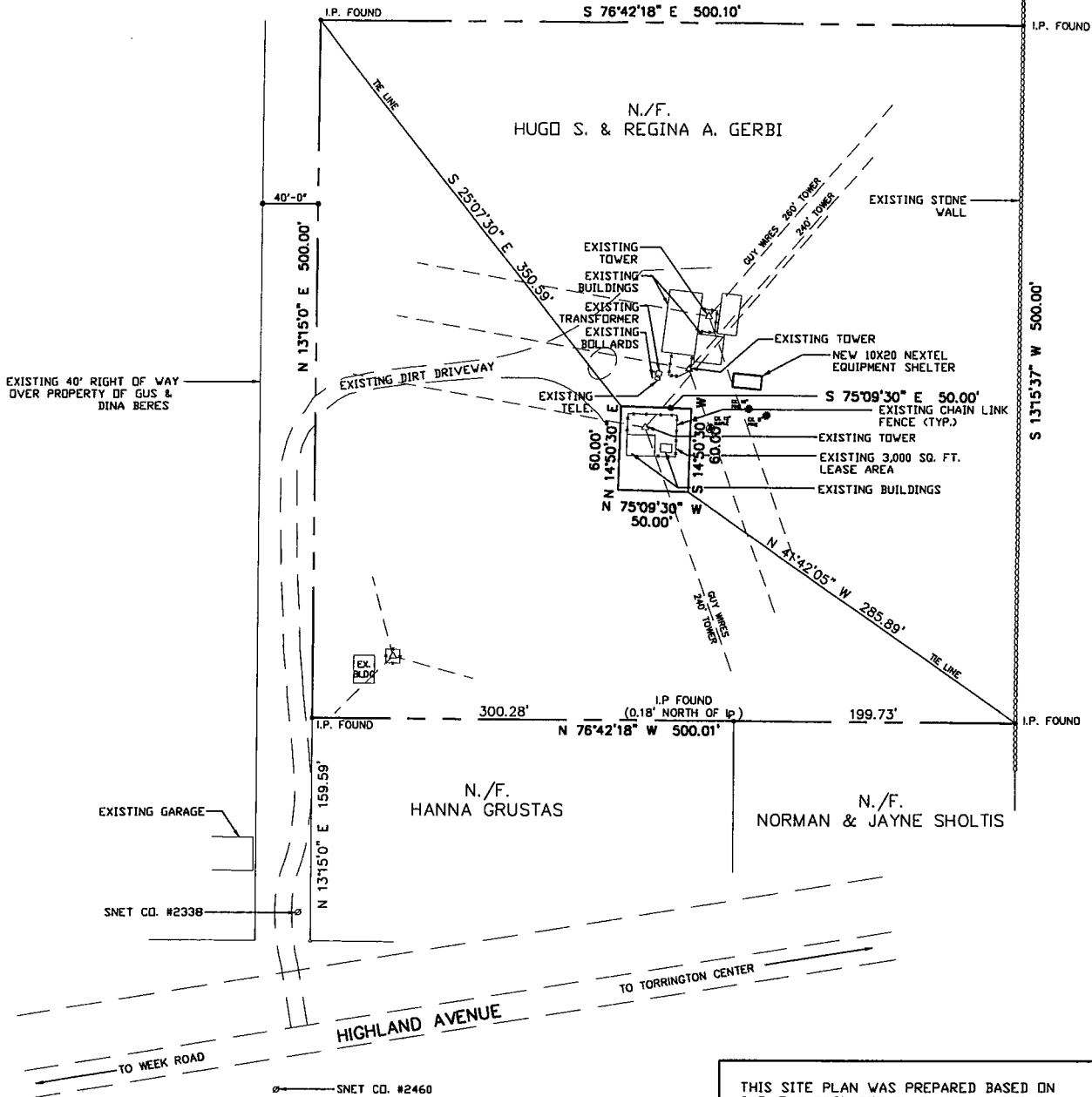
N./F.
GUS & DINA BERES

N./F.
HUGO S. & REGINA A. GERBI

N./F.
JUDITH McELHONE

N./F.
HANNA GRUSTAS

N./F.
NORMAN & JAYNE SHOLTIS



THIS SITE PLAN WAS PREPARED BASED ON SURVEYS PREPARED BY DAVID J. LITTLE CONNECTICUT LICENSED LAND SURVEYOR # 13303 DATED MAY 31, 1991 AND BY SAMUEL P. BERTACCINI, JR. CONNECTICUT LICENSED LAND SURVEYOR # 10380 DATED APRIL 2000

 SITE PLAN
NORTH



Herbst • Musciano Architects/Planners

NEXTEL OF NEW YORK, Inc
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NO.:	DATE:	REVISIONS ▼
1	08.10.00	FOR REVIEW
NO.:	DATE:	SUBMISSIONS ▲

DATE:
06.27.00

PROJECT NO.:

4972

DRAWING NO.:

SP1

Attachment C

CT0314 Torrington - Proposed Nextel Co-location on Existing SBA Tower (1210 Highland Ave.)

Power Density Calculations

Nextel Communications Directional ESMR Antennas - 851 MHz at centerline 200' AGL - Proposed

Note: Power densities are in mW/ cm²

Transmitter:	Frequency in Mhz	CT Standard mW/ cm ²	Number of Channels	ERP (Watts) per channel	Center line of Tx antennas AGL (ft.)	Power density calculated at the tower base
Nextel Directional ESMR Antennas - Proposed	851	0.567333333	9	100	200	0.008087
Nextel Directional Antennas - % of FCC & CT Standard						1.43%

Total % of CT and FCC Standard

1.43%

Attachment D



August 10, 2000

Mr. Rick Neller
Nextel Communications
100 Corporate Place
Rocky Hill, CT 06067

**Re: Structural Analysis of the Torrington 240' Guyed Tower
Located in Torrington, CT
CHA Project No.: 7061.41.80
Nextel Site No: CT- 0314
Revision # 1**

Dear Mr. Neller:

As requested, Clough, Harbour & Associates LLP (CHA) has performed an analysis of the above referenced tower superstructure. Our analysis is based on information provided by Herbst – Musciano, original construction documents dated July 24, 1996, and tower climb information provided by Northeast Towers, Inc. dated June 26, 2000. With this information, we were able to conclude that the tower superstructure is structurally capable of supporting the existing loads.

The analysis includes data for all existing and proposed antennas and appurtenances. For a detailed list of all existing antennas, please see the force calculations in this report. The analysis is based on the following proposed loads:

- (12) ALP-E 9011 panel antennas with (12) 1 5/8" coaxial cables at an elevation of 200' AGL.

With this information, and the current code, ANSI/TIA/EIA-222-F, *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures*, the analysis was performed to determine the structural integrity of the tower. Based on the data provided, section properties, member strengths, projected areas, and applicable loads were calculated. Knowing the projected area of the tower and all of its appurtenances, wind loads were calculated with and without the code defined ice load. These wind and ice loads were then reduced to member forces in the tower components through the STAAD-PRO structural analysis software. The member forces were then compared to the maximum allowable stress for each member type.



Mr. Rick Neller
Nextel Communications

Page 2
July 21, 2000

The analysis indicates that the existing tower superstructure is structurally capable of supporting the existing loads providing the cables are attached to the tower as shown on the cable layout diagram.

As requested, we have included a copy of the structural analysis calculations referenced above for your review and use. If you have any questions or if we can be of further assistance, please call.

Very truly yours,



Clough, Harbour & Associates LLP
*Engineers, Surveyors, Planners
& Landscape Architects*

A handwritten signature in black ink that reads "Kenneth E. Zyga".

Kenneth Zyga, P.E.
Associate

KZ/jpc

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EXECUTIVE SUMMARY

Information Provided: Herbst – Musciano
Tower Climb information provided by Northeast Towers, Inc.

Tower Data: Original drawings provided by Herbst - Musciano
Tower Manufacturer: Pirod
Tower Height: 240 feet

Existing Antenna Data:

See the force calculations for a detailed list of all antennas and cables.

Proposed Antenna Data:

(12) ALP-E 9011 panel antennas with (12) 1 5-8" coaxial cables at an elevation of 200' AGL.

Code Data: Applicable Code: ANSI/EIA/TIA-222-F, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

Wind Velocity: 80 mph for Litchfield, CT per ANSI/EIA/TIA-222-F code

- Load Cases: (1) Weight of Tower, Antennas, and Appurtenances plus Wind Load without radial ice.
(2) Weight of Tower, Antennas, and Appurtenances plus reduced Wind Load on iced tower plus weight of 1/2" radial ice.

Tower Leg Members: 50 ksi steel

0' to 140': 1.75" Dia. Solid Rod
140' to 240': 1.5" Dia. Solid Rod

Tower Diagonal Members: 50 ksi steel

0' to 240': 3/4" Dia. Solid Rod

Tower Horizontal Members: 50 ksi steel

0' to 240': 3/4" Dia. Solid Rod

Guy Cables:

Level 1: 3 – 9/16" EHS cables @ 70'
Level 2: 6 – 1/2" EHS cables @ 135'
Level 3: 3 – 11/16" EHS cables @ 180'
Level 3: 6 – 1/2" EHS cables @ 240'

Conclusion: Tower superstructure is structurally capable of supporting the existing loads providing the cables are attached to the tower as shown on the cable layout diagram.