STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

November 22, 2002

Stephen J. Humes
LeBoeuf, Lamb, Greene & MacRae
Goodwin Square
225 Asylum Street
Hartford, CT 06103

RE: **TS-T-MOBILE-085-021104** - T-Mobile USA, Inc. d/b/a T-Mobile request for an order to approve tower sharing at an existing telecommunications facility located at St. John's Cemetery, 500 Moose Hill Road, Monroe, Connecticut.

Dear Attorney Humes:

At a public meeting held November 21, 2002, 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 November 4, 2002.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/DM/laf

c: Honorable Andrew J. Nunn, First Selectman, Town of Monroe
Daniel A. Tuba, Planning Administrator, Town of Monroe
Connecticut Architectural Towers, LLC
Christopher B. Fisher, Esq., Cuddy & Feder & Worby LLP
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP

TS-T-Mobile-085-021104
500 Moose Hill Road
Monroe 11/19/02

STATE OF CONNECTICUT

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Phone: (860) 827-2935 Fax: (860) 827-2950
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Web Site: www.state.ct.us/csc/index.htm

November 4, 2002

Honorable Andrew J. Nunn
First Selectman
Town of Monroe
Town Hall
7 Fan Hill Road
Monroe, CT 06468-1800

RE: **TS-T-MOBILE-085-021104** - T-Mobile USA, Inc. d/b/a T-Mobile request for an order to approve tower sharing at an existing telecommunications facility located at St. John's Cemetery, 500 Moose Hill Road, Monroe, Connecticut.

Dear Mr. Nunn:

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 tentatively scheduled for November 23, 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/slm

Enclosure: Notice of Intent

c: Daniel A. Tuba, Planning Administrator, Town of Monroe

LEBOEUF, LAMB, GREENE & MACRAE
L.L.P.
A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

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225 ASYLUM STREET
HARTFORD, CT 06103
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FACSIMILE: (860) 293-3555

WRITER'S DIRECT DIAL:
(860) 293-3744

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BISHKEK
ALMATY
BEIJING

November 4, 2002

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

Re: **Request by T-Mobile for an Order to Approve the Shared Use of a Tower Facility at St. John's Cemetery, 500 Moose Hill Road, Monroe, Connecticut**

Dear Chairman Gelston and Members of the Council:

Please be advised that LeBoeuf, Lamb, Greene & MacRae, L.L.P. represents Omnipoint Facilities Network 2, L.L.C., a subsidiary of T-Mobile USA, Inc.(hereinafter T-Mobile) in the above-referenced matter. T-Mobile is the successor to VoiceStream Wireless Corp. by virtue of a recent corporate name change and nationwide re-branding strategy. Pursuant to Connecticut General Statutes §16-50aa, T-Mobile hereby requests an order from the Connecticut Siting Council ("Council") approving the proposed shared use by the Applicant of an existing tower located at St. John's Cemetery, 500 Moose Hill Road, Monroe, Connecticut. T-Mobile proposes to install antennas on the existing tower, and the equipment associated with this facility would be located near the base of the tower within and adjacent to the existing compound (see drawings C-3 and C-4 attached as part of Exhibit B). T-Mobile requests that the Council find that the proposed shared use of the tower satisfies the criteria stated in Conn. Gen. Stat. §16-50aa and issue an order approving the proposed use.

Background

Omnipoint Facilities Network 2, L.L.C., under the brand name of T-Mobile, operates "Wideband PCS" licenses for the 2-Ghz PCS frequencies for the greater New York City area, including Fairfield County, Connecticut. Omnipoint is licensed by the Federal Communications

Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation.

The tower at St. John's Cemetery, 500 Moose Hill Road in Monroe is an existing one hundred thirty foot (130') Sabre Communications Corporation monopole. The coordinates for the site are **41°-19'-18" N** and **73°-12'-05" W**. The tower is located at St. John's Cemetery off of Moose Hill Road in the southeastern portion of Monroe. The tower is approximately twelve hundred feet (1,200') east of Moose Hill Road and about three thousand feet (3,000') west of the Shelton town line. The tower is owned by Connecticut Architectural Towers, LLC. T-Mobile and the owner have agreed to mutually acceptable terms and conditions for the proposed shared use of this tower, and the owner has authorized T-Mobile to act on its behalf to apply for all necessary local, state and federal permits, approvals and authorizations which may be required for the proposed shared use of this facility. The tower is designed and built to hold multiple carrier antennas at multiple elevations above ground level ("AGL"). These elevations are shown on the elevation drawing C-3, attached as part of Exhibit B. At its current height of one hundred thirty feet (130'), the tower is designed to hold carriers at the ninety seven foot-eight inch (97'-8") centerline AGL, the one hundred seven foot-eight inch (107'-8") centerline AGL, the one hundred seventeen foot-eight inch (117'-8") centerline AGL (T-Mobile's proposal) and the one hundred twenty-seven foot-eight inch (127'-8") centerline AGL (currently AT&T). Future plans call for the extension of the tower to the one hundred fifty foot (150') elevation AGL, depending on carrier need.

T-Mobile proposes to install an antenna cluster comprised of three (3) sectors, with four (4) antennas per sector for a total of twelve (12) antennas. The model number for each antenna is EMS RR90-17-00 02DP. The proposed antennas would be mounted on a triangular, low-profile antenna platform, set at the one hundred seventeen foot-eight inch (117'-8") centerline AGL. The radio transmission equipment associated with these antennas, three (3) Nortel S8000 BTS cabinets, would be located near the base of the tower on a proposed ten foot by twenty foot (10'-0" x 20'-0") concrete pad. The tower and all of the equipment for all existing and proposed carriers is within an existing gravel compound, surrounded by a gated, eight foot (8') high wooden fence (shown on drawing C-4, attached as part of Exhibit B).

C.G.S. §16-50aa (c) (1) provides in pertinent part 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." The shared use of the tower satisfies those criteria as follows:

A. **Technical Feasibility** - The existing tower and compound were designed to accommodate multiple carriers. A structural analysis of the tower with the proposed T-Mobile installation has been performed and is attached as Exhibit D. The structural analysis concludes that the existing structure meets the requirements per the EIA/TIA-222-F standards and has the capacity to carry the proposed T-Mobile antennas as specified above. The proposed shared use of this tower therefore is technically feasible.

B. **Legal Feasibility** Under C.G.S. § 16-50aa, the Council has been authorized to issue orders approving the proposed shared use of an existing tower facility such as the facility at

Moose Hill Road in Monroe. 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) vests exclusive jurisdiction over these facilities in the Council, which shall "give such consideration to other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of existing tower facilities. Under this statutory authority vested in the Council, an order by the Council approving the shared use would permit the Applicant to obtain a building permit for the proposed installations.

C. Environmental Feasibility The proposed shared use would have minimal environmental effects, if any, for the following reasons:

1. The proposed installations (i.e., three (3) sectors with four (4) antennas per sector) would have an insignificant incremental visual impact, and would not cause any significant change or alteration in the physical or environmental characteristics of the existing site. In particular, T-Mobile's proposed installations would not increase the height of the existing tower, and would not extend the boundaries of the existing compound area. The tower is designed to accommodate multiple carriers

2. The proposed installations would not increase the noise levels at the existing facility by six decibels or more.

3. Operation of antennas at this site would not exceed the total radio frequency electromagnetic radiation power density level adopted by the American National Standards Institute ("ANSI"). The "worst-case" exposure calculated for operation of this facility (i.e., calculated at the base of the tower, which represents the closest publicly accessible point within the broadcast field of the antennas) will be 0.06772 mW/cm2, which is 6.772% of the Maximum Permissible Emission (MPE). The power density calculations from the other current carrier, AT&T, is 0.9800% of the MPE. When combined with the proposed T-Mobile antennas, the combined power density of the antennas on the tower will be 7.7516% of the MPE standard. These calculations are attached as Exhibit E.

4. The proposed installations would not require any water or sanitary facilities, or generate air emissions or discharges to water or sanitary facilities, or generate air emissions or discharges to water bodies. After construction is complete (approximately two (2) weeks in duration), the proposed installations would not generate any traffic other than periodic maintenance visits.

The proposed use of this facility would therefore have a minimal environmental effect, if any, and is environmentally feasible.

D. Economic Feasibility As previously mentioned, the owner and T-Mobile have entered into a mutual agreement to share the use of the existing tower on terms agreeable to the parties. The proposed tower sharing is therefore economically feasible.

E. Public Safety Concerns As stated above, the existing tower is structurally capable of supporting the proposed T-Mobile antennas. The tower stands on a compound accessible from St. John's Cemetery on Moose Hill Road. T-Mobile is not aware of any public

safety concerns relative to the proposed sharing of the existing tower. In fact, the provision of new or improved wireless telephone service through shared use of the existing tower will enhance the safety and welfare of area residents and the public.

Conclusion

For the reasons discussed above, the proposed shared use of the existing tower facility at 500 Moose Hill Road in Monroe, Connecticut satisfies the criteria stated in Conn. Gen. Stat. §16-50aa, and advances the General Assembly's and the Council's goal of preventing the proliferation of towers in Connecticut. T-Mobile therefore respectfully requests that the Council issue an order approving the proposed shared use of this tower.

Thank you for your consideration of this matter.

Respectfully submitted,

T-MOBILE USA, INC.

By: _____

Its Counsel
Diane W. Whitney
Stephen J. Humes

Attachments

cc: Andrew J. Nunn, Selectman, Town of Monroe

Exhibit A

Site Map

CT11-664

St. John's Cemetery

500 Moose Hill Toad

Monroe, Connecticut

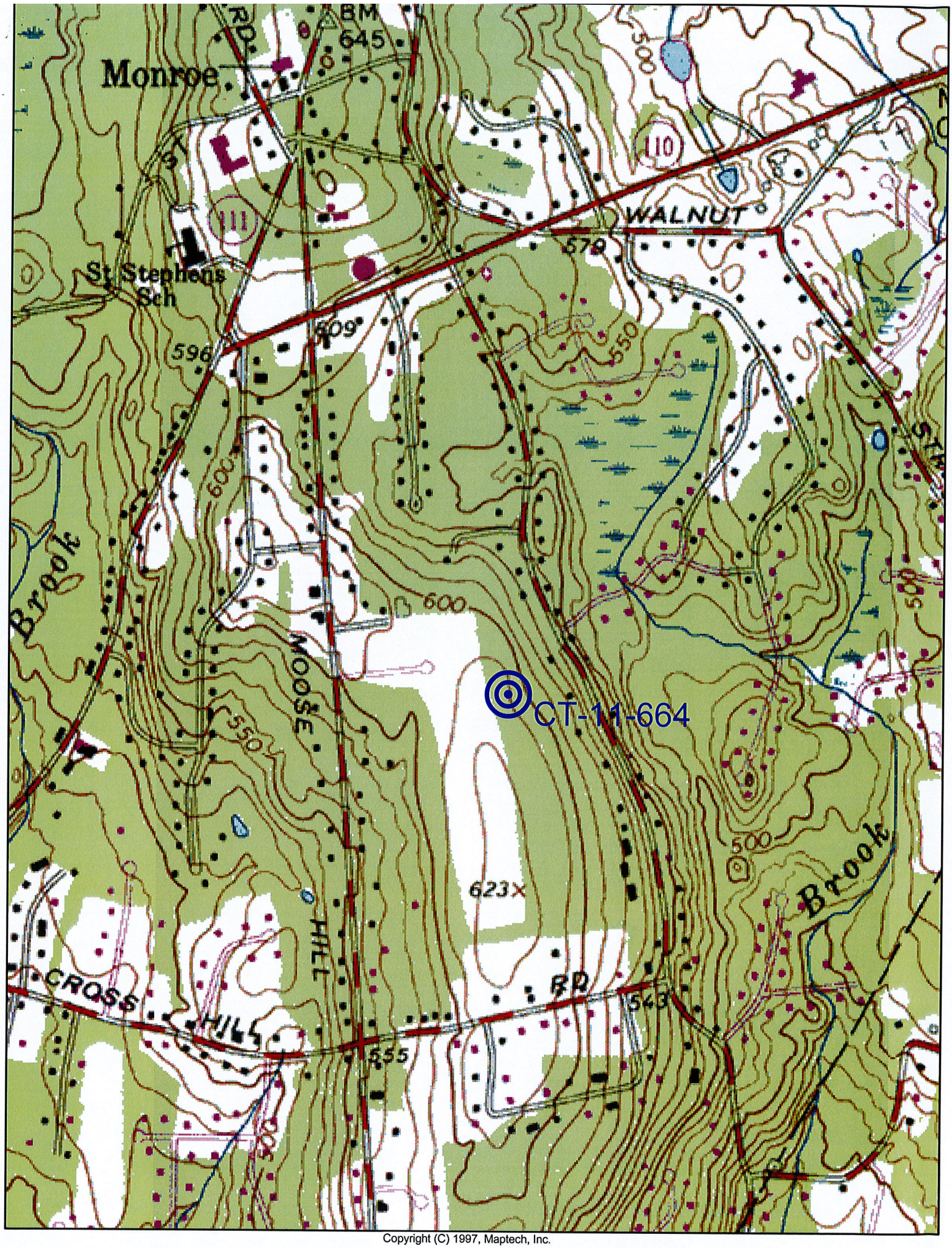


Exhibit B

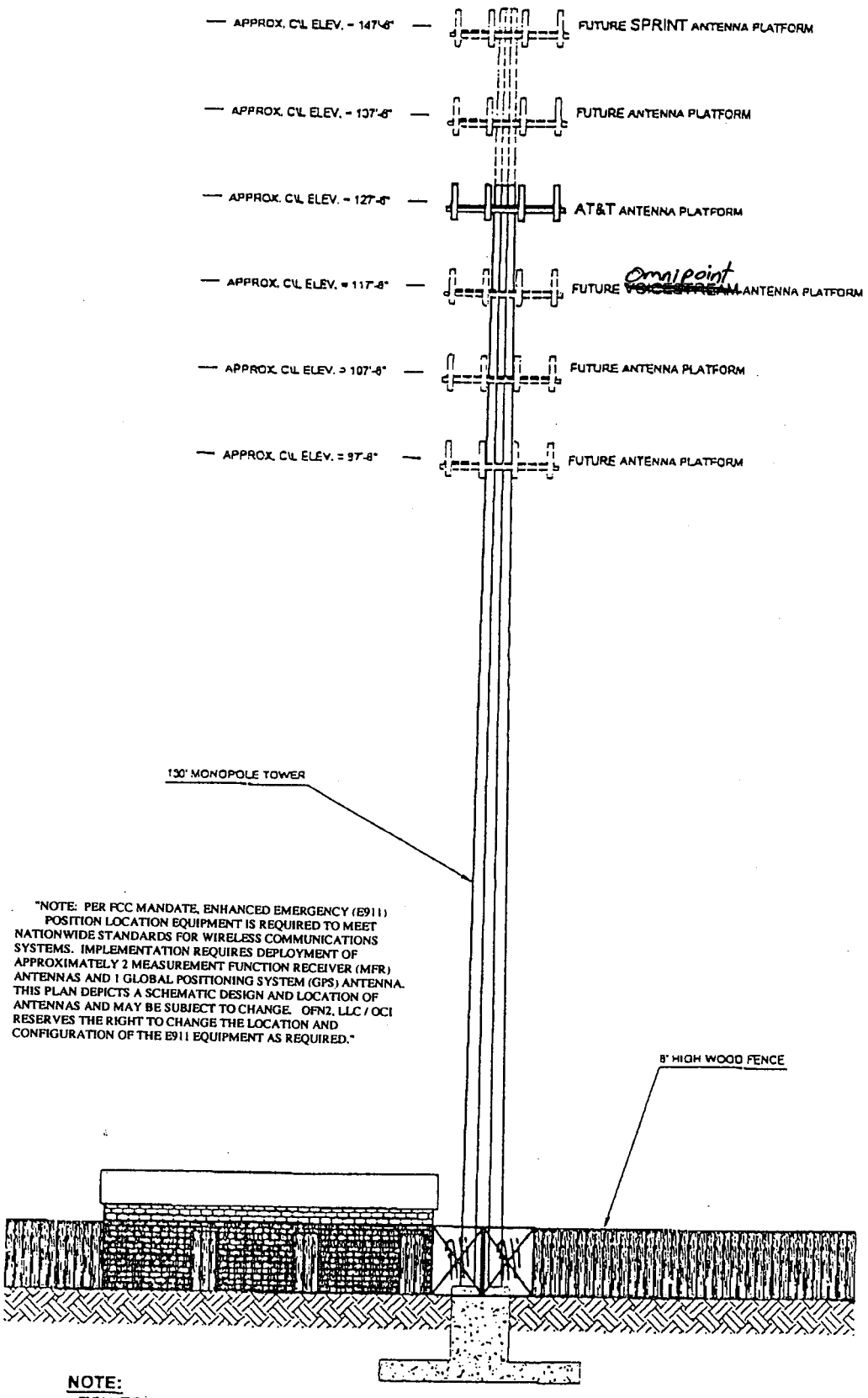
Design Drawings

CT11-664

St. John's Cemetery

500 Moose Hill Toad

Monroe, Connecticut



"NOTE: PER FCC MANDATE, ENHANCED EMERGENCY (E911) POSITION LOCATION EQUIPMENT IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. IMPLEMENTATION REQUIRES DEPLOYMENT OF APPROXIMATELY 2 MEASUREMENT FUNCTION RECEIVER (MFR) ANTENNAS AND 1 GLOBAL POSITIONING SYSTEM (GPS) ANTENNA. THIS PLAN DEPICTS A SCHEMATIC DESIGN AND LOCATION OF ANTENNAS AND MAY BE SUBJECT TO CHANGE. OFN2, LLC / OCI RESERVES THE RIGHT TO CHANGE THE LOCATION AND CONFIGURATION OF THE E911 EQUIPMENT AS REQUIRED."

NOTE:
TOWER STRUCTURAL AND FOUNDATION DIMENSIONS SHOULD BE VERIFIED WITH THE TOWER MANUFATURER. BOTH THE TOWER STRUCTURE AND FOUNDATION HAVE BEEN DESIGNED BY OTHERS. THIS INFORMATION IS SHOWN FOR GENERAL INFORMATION PURPOSES ONLY.

TOWER ELEVATION

SCALE: NO SCALE

JAMES E. DWYER COMPANY, INC.

108 SHERMAN ST.
FAIRFIELD, CT 06430

PHONE# 203-254-3741
FAX# 203-254-3791

PROJECT NO:
DRAWN BY: Y.A.
CHECKED BY: J.D.
APPROVED BY: J.D.

PROPOSED UNMAN--NED WIRELESS TELECOMMUNICA--TIONS FACILITY

COMPOUND ELEVATION

ISSUED FOR

ST. JOHN'S CEMETERY

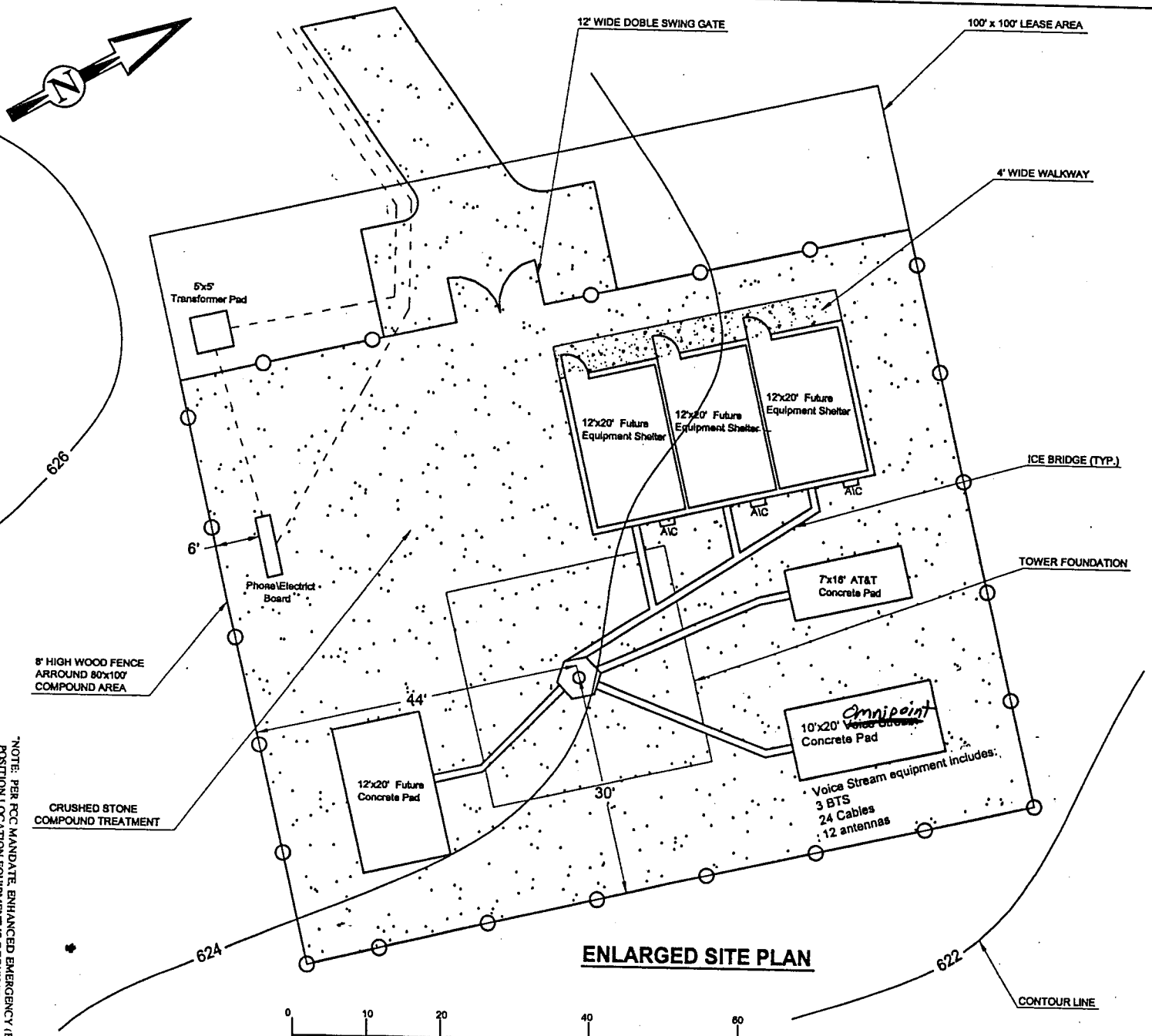
500 MOOSE HILL ROAD
MONROE, CONNECTICUT

DATE:

07\01\2002

DRAWING No.:

C-3



ENLARGED SITE PLAN

SCALE: 1" = 20'-0"

"NOTE: PER FCC MANDATE, ENHANCED EMERGENCY (E911) POSITION LOCATION EQUIPMENT IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. IMPLEMENTATION REQUIRES DEPLOYMENT OF APPROXIMATELY 2 MEASUREMENT FUNCTION RECEIVER (MFR) ANTENNAS AND 1 GLOBAL POSITIONING SYSTEM (GPS) ANTENNA. THIS PLAN DEPICTS A SCHEMATIC DESIGN AND LOCATION OF ANTENNAS AND MAY BE SUBJECT TO CHANGE. OPN2, LLC / OCI RESERVES THE RIGHT TO CHANGE THE LOCATION AND CONFIGURATION OF THE E911 EQUIPMENT AS REQUIRED."

JAMES E. DWYER COMPANY, INC.

108 SHERMAN ST.
FAIRFIELD, CT 06430

PHONE# 203-254-3741
FAX# 203-254-3791

PROJECT NO:
DRAWN BY: Y.A.
CHECKED BY: J.D.
APPROVED BY: J.D.

PROPOSED UNMAN--NED WIRELESS TELECOMMUNICA--TIONS FACILITY

ENLARGED SITE PLAN

ISSUED FOR

ST. JOHN'S CEMETERY

500 MOOSE HILL ROAD
MONROE, CONNECTICUT

DATE:
03\26\2002

DRAWING No.:
C-4

Exhibit C

Equipment Specifications

CT11-664

St. John's Cemetery

500 Moose Hill Toad

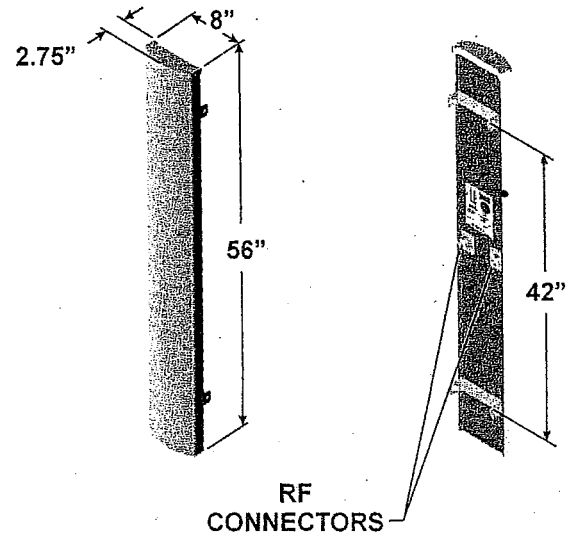
Monroe, Connecticut

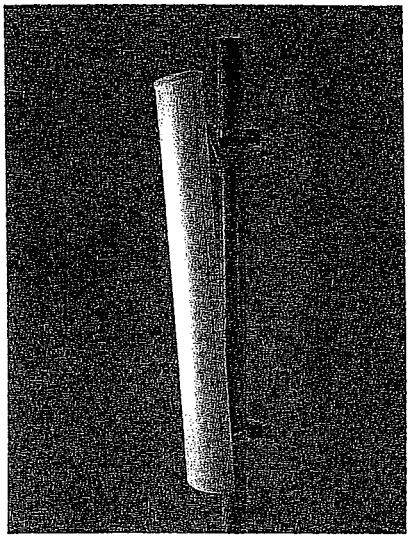
EMS WIRELESS

OptiRange™

RR90-17-XXXP

1850 MHz - 1990 MHz (P)





90° beamwidth

16.5 dBi gain

±45° DualPol™

56 inch

SPECIFICATIONS

Electrical

Azimuth Beamwidth	90°
Elevation Beamwidth	6°
Gain	16.5 dBi (14.4 dBd)
Polarization	Slant, ±45°
Port-to-Port Isolation	≥ 30 dB
Front-to-Back Ratio	≥ 25 dB (≥ 30 dB Typ.)
Electrical Downtilt Options	0°, 2°, 4°, 6°
VSWR	1.35:1 Max
Connectors	2;Type N or 7-16 DIN (female)
Power Handling	250 Watts CW
Passive Intermodulation	<-147 dBc (2 tone @ +43 dBm {20W} ea.)
Lightning Protection	Chassis Ground

Mechanical

Dimensions (L x W x D)	56in x 8in x 2.75in (142 cm x 20.3 cm x 7.0 cm)
Rated Wind Velocity	150 mph (241 km/hr)
Equivalent Flat Plate Area	3.1ft² (.29 m²)
Front Wind Load @ 100 mph (161 kph)	90 lbs (400 N)
Side Wind Load @ 100 mph (161 kph)	31 lbs (139 N)
Weight	18 lbs (8.2 kg)

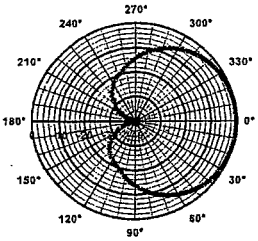
Note: Patent Pending and US Patent number 5, 757, 246.

Values and patterns are representative and variations may occur. Specifications may change without notice due to continuous product enhancements. Digitized pattern data is available from the factory or via the web site www.emswireless.com and reflect all updates.

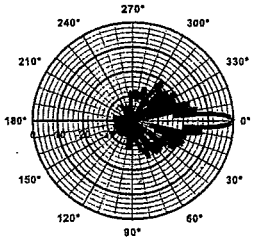
MOUNTING OPTIONS

Model Number	Description	Comments
MTG-P00-10	Standard Mount (Supplied with antenna)	Mounts to Wall or 1.5 inch to 5.0 inch O.D. Pole (3.8 cm to 12.7 cm)
MTG-S02-10	Swivel Mount	Mounting kit providing azimuth adjustment.
MTG-DXX-20*	Mechanical Downtilt Kits	0° - 10° or 0° - 15° Mechanical Downtilt
MTG-CXX-10*	Cluster Mount Kits	3 antennas 120° apart or 2 antennas 180° apart
MTG-C02-10	U-Bolt Cluster Mount Kit	3 antennas 120° apart , 4.5" O.D. pole.
MTG-TXX-10*	Steel Band Mount	Pole diameters 7.5" - 45"

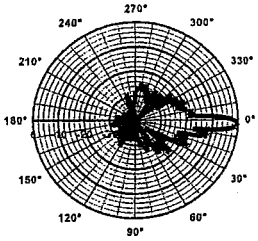
* Model number shown represents a series of products. See mounting options section for specific model number.



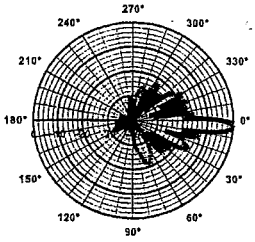
Azimuth



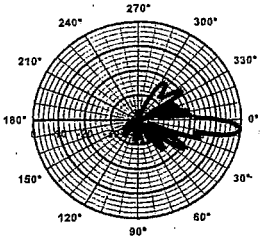
Elevation
0° Downtilt



Elevation
2° Downtilt



Elevation
4° Downtilt

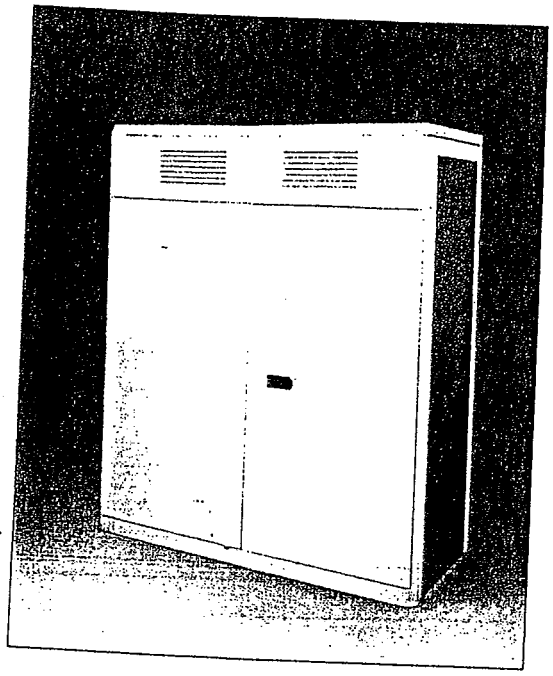


Elevation
6° Downtilt

GSM 900 / DCS 1800 / PCS 1900

NORTEL
NORTHERN TELECOM

S8000 Outdoor Base Transceiver Station



Nortel's S8000 Outdoor Base Transceiver Station has been designed to meet the economic and performance requirements of network operators. Based on a highly integrated RF and digital design, the S8000 Outdoor Base Transceiver Station represents a major technology advancement and delivers all the benefits of a compact, modular, high quality and high performance product.

Nortel's S8000 Outdoor BTS: Radio Performance Leadership - Reduced Site Acquisition and Operating Costs

Installation

- The S8000 Outdoor Base Transceiver Station (BTS) offers compact packaging and requires minimal floor space, only .88 sq m (9.5 sq ft.). Front only access keeps total space required, including maintenance access, to only 1.8 sq m (19.4 sq ft) per cabinet.

Transmission

- Integrated drop and insert connection to the Base Station Controller (BSC) and signaling concentration on the A-bis interface provide significant transmission cost reduction.
- Optional integrated digital microwave radio.

Maintenance

- Highly reliable technology, redundant architecture and integrated battery backup ensure high availability service.
- Front access and interconnections, as well as powerful fault detection, help reduce lifetime maintenance costs.

Industry leading performance

- New RF technology and advanced digital processing techniques provide very high receive sensitivity (-108 dBm guaranteed) and improved diversity gain (up to 6 dB). This provides higher resistance to interference, as well as, improved speech quality and cell coverage.
- Nortel's proven experience in frequency hopping, 1*3 frequency reuse, sophisticated microcellular handover algorithms and support of half-rate vocoders enables the operator to maximize use of available spectrum and deploy fewer cell sites.

Fast network deployment

- The S8000 BTS can be shipped fully equipped and tested, which provides fast network roll out to meet operator time to market requirements.

Modular and flexible configuration

- The S8000 supports eight transceivers (TRX) per cabinet in Omni and sectored configurations. The typical one cabinet S222 configuration may be expanded up to S332 or S422 without an additional cabinet.

• Frequency range		900 MHz GSM
		900 MHz GSM extended
		1800 MHz DCS
		1900 MHz PCS
• Receive sensitivity (guaranteed)		-108 dBm
• Dimensions	Height	1600 mm / 5 ft. 3 in.
	Width	1350 mm / 4 ft. 5 in.
	Depth	650 mm / 2 ft. 1 in.
• Weight	Fully equipped	600 kg / 1300 lbs.
• Capacity		8 TRX per cabinet
		up to 3 cabinets
• Configuration	Trisectorial	up to S888
	Omnidirectional	up to O16
• Amplifier output power		30 W (± 1.5 dB)
• Power control	Static	6 steps of 2 dB
	Dynamic	15 steps of 2 dB
• Frequency hopping		RF synthesized
		baseband
• Supported vocoders		Full rate
		Enhanced full rate
		Half rate
• Encryption algorithms		A5/1 A5/2
• Power supply		230V AC 50/60 Hz
• Power back-up		Integrated battery back-up plus optional battery cabinet allows provisioning up to 8 hours back-up time.
• Operating temperature range		-40°C to +50°C
		-40°F to +122°F

For more information,
please contact your local Nortel account representative.

Publication Reference S8O.INS.0696
Printed in France

NORTEL
NORTHERN TELECOM

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http://www.nortel.com/wireless

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Singapore 1955
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1 place des Frères Montgolfier
78042 Guyancourt Cedex
France
Telephone (33) (1) 34 52 52 52

Nortel Europe
12-12bis rue Jean Jaurès
92807 Puteaux
France
Telephone (33) (1) 46 96 15 15

3 CABINET DESCRIPTION

3.1 PHYSICAL CHARACTERISTICS

3.1.1 S8000 Outdoor BTS

3.1.1.1 BTS cabinet

Dimensions

The BTS S8000 Outdoor has the following dimensions:

- height: 160 cm (63 in.)
- width: 135 cm (52.8 in.)
- depth: 65 cm (25.6 in.)

Weight

The weight of the cabinet when empty, that is, without its battery, fan units or boards, is 164 kg (361 lb). Depending on the configuration, a fully equipped cabinet weighs approximately 480 kg (1056 lb) with ACU unit or 440 kg (968 lb) with DACS unit.

These weights do not include the plinth.

Operating temperature

To operate correctly, the BTS requires a temperature greater than –40°C (–40°F) and less than +50°C (+122°F).

Consumption

BTS input voltage:

- GSM 900/1800
  - nominal voltage contained between 220V AC and 240V AC
  - minimum voltage: 220 – 10% = 198V AC
  - maximum voltage: 240 + 6% = 254V AC
- GSM 1900 (with DACS)
  - nominal voltage: 208V AC to 240V AC
  - minimum voltage: 208 – 10% = 187V AC
  - maximum voltage: 240 + 6% = 254V AC

NON - PREMIUM BTS ONLY

- GSM 1900 (with ACU and/or the power system six–rectifier type)
  - nominal voltage: 240V AC
  - minimum voltage: 240 – 10% = 187V AC
  - maximum voltage: 240 + 6% = 254V AC

Exhibit D

Structural Analysis

CT11-664

St. John's Cemetery

500 Moose Hill Toad

Monroe, Connecticut

URS

October 25, 2002

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

Reference: **Proposed T-Mobile Telecommunications Installation**
St. John's Cemetery
500 Moose Hill Road,
Monroe, Connecticut 06468
T-Mobile Site # CT-11-664C

Dear Mr. Gelston:

This letter supercedes the letter previously issued on October 18, 2002 for this project. URS has performed a review and evaluated the existing 130' high monopole located at 500 Moose Hill Road in Monroe, CT. The purpose of our review was to evaluate the effect of the proposed T-Mobile Inc., USA communication antenna arrangement on the monopole and its foundation designed by Sabre Communications Corporation, Project No. 02-031107 Revision A dated April 2, 2002. The monopole has been designed to accommodate (7) carriers between elevation 90' - 150' including a 20' future extension. The proposed antenna inventory and mounts considered in this evaluation are listed below.

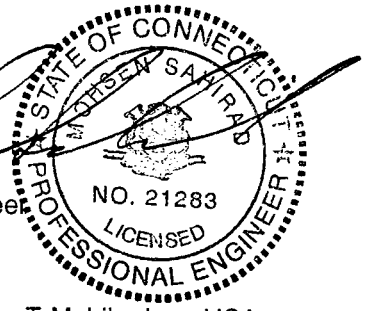
Antennas and Platform		Antenna Center Elevation
(12) EMSRR901702DP on Low Profile Platform and associated (24) 1 5/8" coax cable within monopole	T-Mobile (proposed)	@ 117.75' elevation
(2) Thales PCS VP/360/2 (2) 7/8" coax cable within monopole	T-Mobile (proposed)	@ 50' elevation

This evaluation is based on the 130' monopole without the future extension and the requirement that all carrier antenna cables be placed within the monopole. It is our determination that the existing 130' monopole as designed and its foundation are in compliance with the CT State Building Code and has the capacity to carry the proposed T-Mobile antennas as specified above. The carrier shall verify that ample space remains within the monopole for future carriers' coax cables prior to installation

The above evaluation is based on the requirements of EIA/TIA-222 and the Connecticut State Building Code 1999, latest supplements and amendments.

Sincerely,

URS Corporation AES



Mohsen Sahirad, P.E.
Senior Structural Engineer

MS/mks

cc: Christine Belvin – T-Mobile, Inc., USA
Karina Hansen – T-Mobile, Inc., USA
John Dwyer – James E. Dwyer Construction
Douglas J. Roberts, AIA – URS
CF/Book

URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.529.8882
Fax: 860.529.3991

Exhibit E

Power Density Calculations

CT11-664

St. John's Cemetery

500 Moose Hill Toad

Monroe, Connecticut

VOICESTREAM WIRELESS CORPORATION
76 Progress Drive, Stamford, CT 06902-3600
Phone: (203) 328-8900
Fax: (203) 328-8953

Technical Memo

To: Steve Humes, Esq.
From: Chetan Dhaduk - Radio Frequency Engineer
cc: Roni Zola
Subject: Power Density Report for CT11664 C
Date: October 25, 2002

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the Voicestream Wireless Corporation PCS antenna installation on a Monopole at 500 Moose Hill Road, Monroe, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

1) The emissions from Voicestream Wireless transmitters are in the 1930-1950 MHz frequency band.
2) The antenna array consists of three sectors, with 4 antennas per sector.
3) The model number for each antenna is EMS RR90-17-02DP.
4) The antenna center line height is 117 ft.
5) The maximum transmit power from any sector is 3802.94 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the VoiceStream Wireless Corporation PCS antenna installation on a Monopole at 500 Moose Hill Road, Monroe, CT, is 0.06772 mW/cm^2. This value represents 6.772% of the Maximum Permissible Emission (MPE) standard of 1 milliwatt per square centimeter (mW/cm^2) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for VoiceStream Wireless will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.
The combined Power Density from other carriers is 0.98%. The combined Power Density for the site is 7.752% of the M.P.E. standard.

New York Market
Connecticut
Worst Case Power Density

VoiceStream
Global Wireless by T-Mobile

Site:	**CT11664 C**
Site Address:	**500 Moose Hill Road**
Town:	**Monroe**
Tower Height:	**127' 8"**
Tower Style:	**Monopole**
Base Station TX output	20 W
Number of channels	8
Antenna Model	EMS RR90-17-02DP
Cable Size	1 5/8 in.
Cable Length	150 ft.
Antenna Height	117.0 ft.
Ground Reflection	1.6
Frequency	1935.0 MHz
Jumper & Connector loss	1.00 dB
Antenna Gain	16.5 dBi
Cable Loss per foot	0.0116 dB
Total Cable Loss	1.7400 dB
Total Attenuation	2.7400 dB
Total EIRP per Channel	56.77 dBm
(In Watts)	475.37 W
Total EIRP per Sector	65.80 dBm
(In Watts)	3802.94 W
nsg	13.7600
Power Density (S) =	**0.067716 mW/cm^2**
Voicestream Worst Case % MPE =	**6.7716%**

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	**% of Standard**
Verizon	
Cingular	
Sprint PCS	
AT&T Wireless	0.9800 %
Nextel	
Total Excluding Voicestream	**0.9800 %**
Voicestream	6.7716
Total % MPE for Site	**7.7516%**

Relative Gain Power Density

Antenna Relative Gain Factor	-3.7 dBi
Total Attenuation	2.7400 dB
Total EIRP per Channel	53.07 dBm
(In Watts)	202.78 W
Total EIRP per Sector	62.10 dBm
(In Watts)	1622.26 W
nsg	10.0600
Power Density (S) =	**0.028886 mW/cm^2**
Voicestream Relative Gain % MPE =	**2.8886%**