STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

March 6, 2000

J. Brendon Sharkey, Esq.
Omnipoint Communications, Inc.
100 Filley Street
Bloomfield, CT 06002

RE: TS-OCI-011-000208 - Omnipoint Communications request for an order to approve tower sharing at an existing telecommunications facility located at 28 Brewer Drive in Bloomfield, Connecticut.

Dear Mr. Sharkey:

At a public meeting held March 1, 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 change is under the exclusive jurisdiction of the Council. Any additional change to this facility will require an explicit request to this agency pursuant to § 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 February 8, 2000.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/RKE/jlh

c: Honorable Faith McMahon, Mayor, Town of Bloomfield
Peter W. van Wilgen, Springwich Cellular Limited Partnership

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

February 17, 2000

Honorable Faith McMahon
Mayor
Town of Bloomfield
Town Hall
800 Bloomfield Avenue
P. O. Box 337
Bloomfield, CT 06002-0337

RE: TS-OCI-011-000208 - Omnipoint Communications request for an order to approve tower sharing at an existing telecommunications facility located at 28 Brewer Drive in Bloomfield, Connecticut.

Dear Ms. McMahon:

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 Wednesday, March 1, 2000, 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/jlh

Enclosure: Notice of Tower Sharing

c: Mr. Louie Chapman, Jr, Town Manager


TS-Omni-011-000208
28 Brewer Dr. -- Bloomfield Cemetery
Bloomfield, CT
February 10, 2000 S. Levine
file townno\011omni

OMNIPOINT
COMMUNICATIONS INC.

100 Filley Street, Bloomfield, CT 06002
(860) 692-7154 phone
(860) 692-7159 fax

8 February, 2000

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

Re: Request by Omnipoint Communications, Inc. for an Order to Approve the Shared Use of a Tower Facility
28 Brewer Drive, Bloomfield, Connecticut

Dear Chairman Gelston and Members of the Council:

Pursuant to Connecticut General Statutes §16-50aa, Omnipoint Communications, Inc. ("Omnipoint") hereby requests an order from the Connecticut Siting Council ("Council") to approve the proposed shared use by the Applicant of an existing tower located at 28 Brewer Drive in Bloomfield, Connecticut. The tower is owned and operated by Sprint Spectrum. L.P. ("Sprint"). Omnipoint proposes to install antennas on the existing tower located within Sprint's leased compound area, and the equipment associated with this facility would be located near the base of the tower within the existing compound (see "Exhibit A"). The Applicant requests that the Council find that the proposed shared use of the tower satisfies the criteria stated in §16-50aa and issue an order approving the proposed use.

Background

Omnipoint Communications, Inc. is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telephone service in the State of Connecticut, which includes the area to be served by Omnipoint's proposed installation.

The Sprint tower at 28 Brewer Drive in Bloomfield is a 120-foot monopole located on an approximately 2000 sq. ft. compound within the grounds of the Bloomfield Cemetery. The coordinates for the site are **41-50-04 N** and **72-44-30 W**. The tower currently holds Sprint's antennas at the top level and those of Springwich Cellular Limited Partnership ("SNET") at the 100-foot level. The Town of Bloomfield also has antennas at the 70-foot and 60-foot levels. Omnipoint and Sprint have agreed to the proposed shared use of this tower pursuant to mutually acceptable terms and conditions, and Sprint has authorized Omnipoint 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.

Omnipoint proposes to install three (3) EMS RR 90-1702 DP antennas at the 110-foot level. The radio transmission equipment associated with these antennas, a Nortel S8000 cabinet, would be located near the base of the tower on an existing concrete pad. Exhibit B contains specifications for the proposed antennas and equipment cabinet.

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

A. **Technical Feasibility** The existing tower is structurally sound and capable of supporting the proposed Omnipoint antennas. A structural analysis of the tower with the proposed Omnipoint installation has been performed and is attached as Exhibit C. 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 on Brewer Drive in Bloomfield. 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 towers 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 a minimal environmental effect, for the following reasons:

1. The proposed installations 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, the proposed installations would not increase the height of the existing tower, and would not extend the boundaries of the existing Sprint compound area.

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), with the Sprint, SNET, Omnipoint and Town of Bloomfield antennas, would be 32.8287% of the ANSI standard. These calculations are attached as Exhibit D.

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 weeks), 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, and is environmentally feasible.

E. **Economic Feasibility** As previously mentioned, Sprint and Omnipoint 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.

F. **Public Safety Concerns** As stated above, the existing tower is structurally capable of supporting the proposed Omnipoint antennas. The tower stands on a compound accessible from an existing drive through the cemetery off Brewer Drive. Omnipoint is not aware of any other public safety concerns relative to the proposed sharing of the existing tower. In fact, the tower was initially approved by the Bloomfield Planning and Zoning Commission with an eye toward public health and safety concerns, and the provision of new or improved phone service through shared use of the existing tower will enhance the safety and welfare of area residents.

Conclusion

For the reasons discussed above, the proposed shared use of the existing tower facility at Brewer Drive in Bloomfield, Connecticut satisfies the criteria stated 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 Connecticut. The Applicant therefore requests that the Siting Council issue an order approving the proposed shared use.

Thank you for your consideration of this matter.

Sincerely,

J. Brendan Sharkey
for Omnipoint Communications, Inc.

Attachments
cc: Faith McMahon, Mayor of Bloomfield

OMNIPOINT
COMMUNICATIONS INC.

Exhibit A

Design Drawings
28 Brewer Drive
Bloomfield, CT

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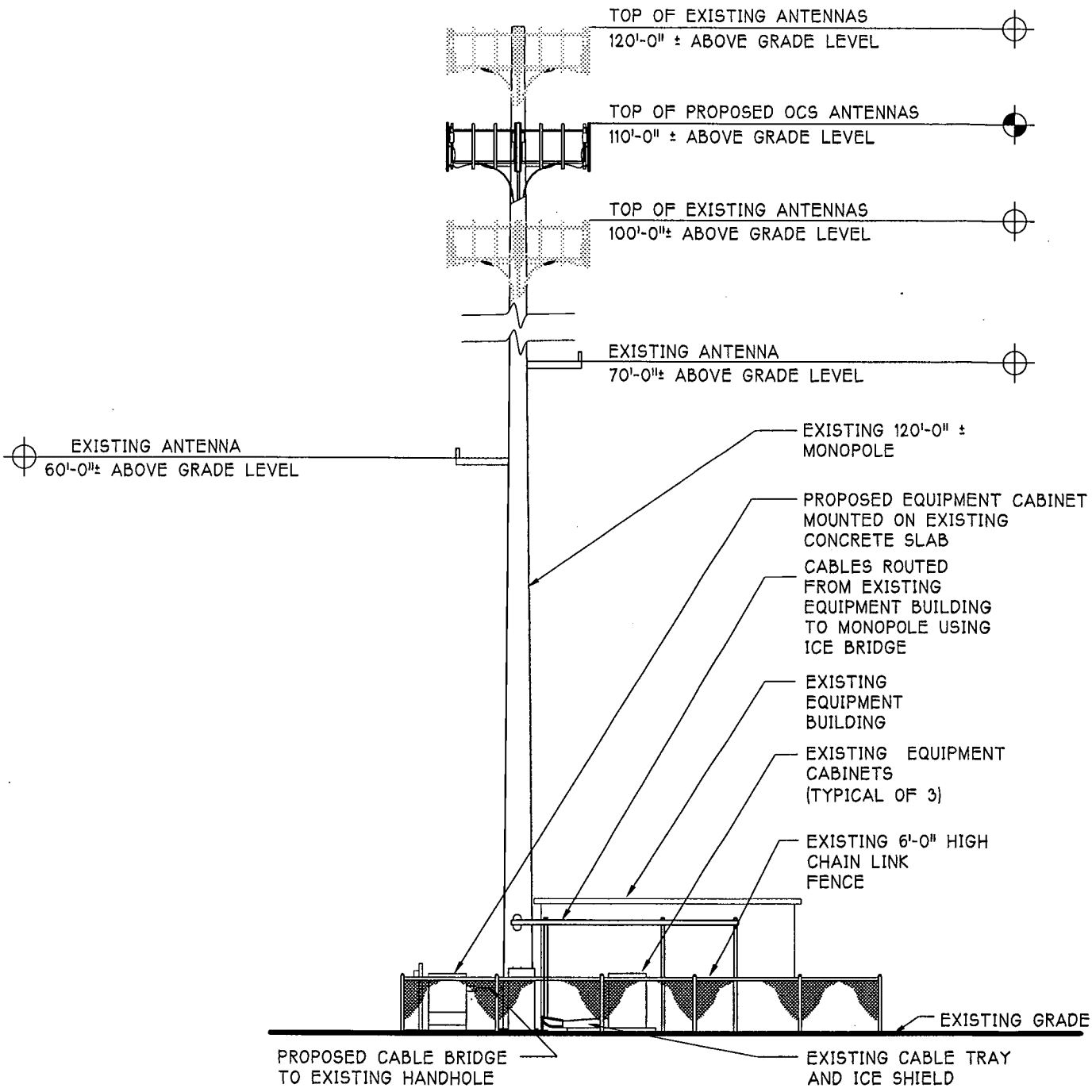


1 / LE-2 ELEVATION

SCALE: 1/16" = 1'-0"

NOTE: EXHIBITS SUBMITTED ARE A CONCEPTUAL REPRESENTATION OF THE LEASE AGREEMENT ONLY. ACTUAL CONSTRUCTION DOCUMENTATION MAY VARY TO COMPLY WITH ALL APPLICABLE CODES.

ARCNET ARCHITECTS, INC.
670 North Beers Street, Building 2, Holmdel, NJ 07733
Tel: 732.739.3200 Fax: 732.739.0440

P.C.:	P.C. Chkd.:	Chkd. by:
JDi		

Drawing Title: ELEVATION

Client: OCS

ARCNET Project No.	Drawn:	Date:
A99-506-852A	RSa	5/12/99

Project: **SPRINT BLOOMFIELD**

Address: 24 BREWER DRIVE
BLOOMFIELD, CT

Search Area: BLOOMFIELD

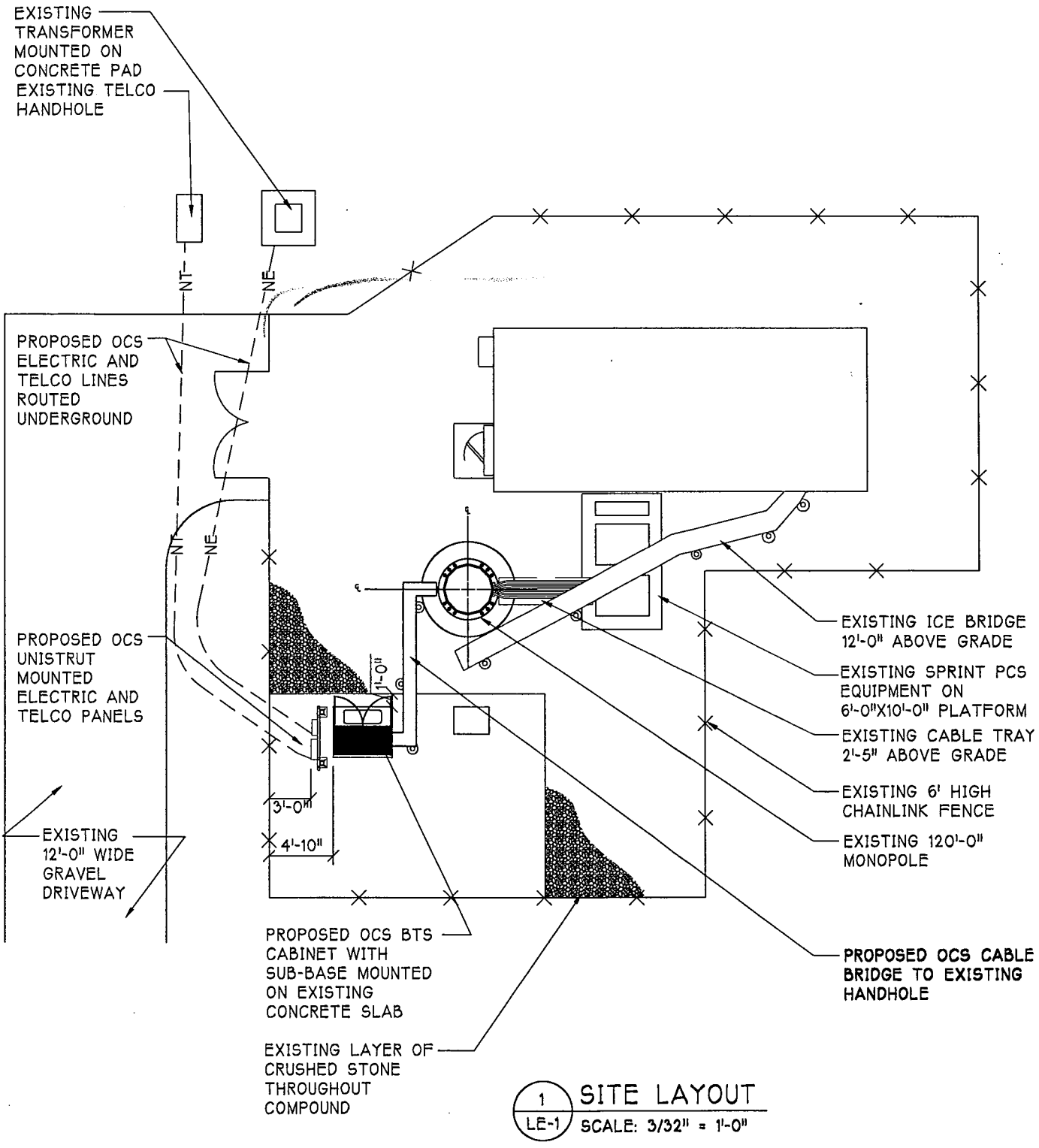
Site ID No.: CT-11-278A

Approved By:
CLIENT:_____ DATE: _____

Revision No.	Date:

Drawing No. **LE-2**

C:\nfmwork\852A\852a_le-1.dwg Thu May 13 16:42:56 1999 KBa



1 / LE-1 SITE LAYOUT

SCALE: 3/32" = 1'-0"

NOTE: EXHIBITS SUBMITTED ARE A CONCEPTUAL REPRESENTATION OF THE LEASE AGREEMENT ONLY. ACTUAL CONSTRUCTION DOCUMENTATION MAY VARY TO COMPLY WITH ALL APPLICABLE CODES.

ARCNET ARCHITECTS, INC.
670 North Beers Street, Building 2, Holmdel, NJ 07733
Tel: 732.739.3200 Fax: 732.739.0440

Drawing Title: SITE LAYOUT

Client: OCS

Project: SPRINT BLOOMFIELD

Address: 28 BREWER DRIVE BLOOMFIELD, CT

Search Area: BLOOMFIELD

Site ID No.: CT-11-278A

P.C.:	P.C. Chkd:	Chkd. by:	ARCNET Project No.	Drawn:	Date:
JDi			A99-506-852A	RSa	5/12/99

Approved By: CLIENT: _____ DATE: _____

Revision No. | Date:

Drawing No. LE-1

OMNIPOINT COMMUNICATIONS INC.

Exhibit B

Equipment Specifications

28 Brewer Drive

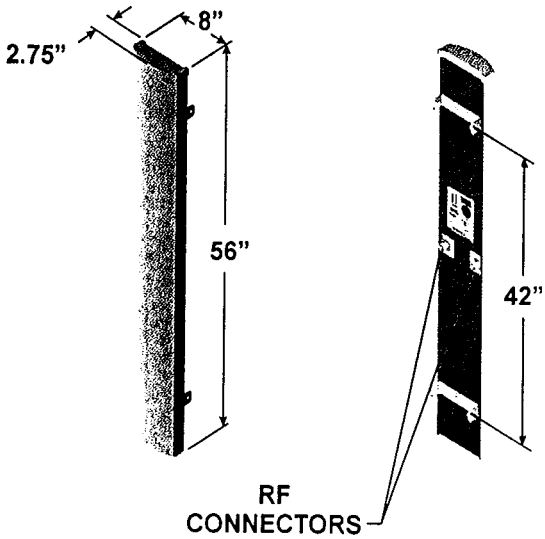
Bloomfield, CT

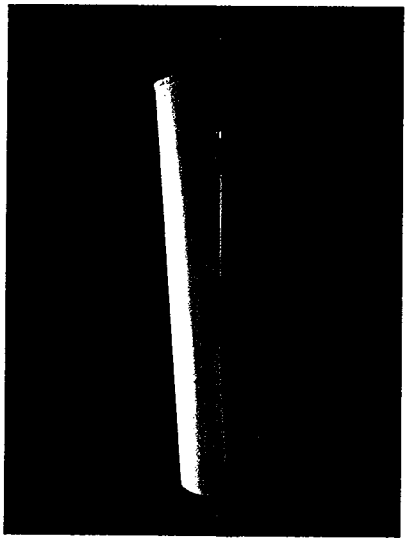
EMS WIRELESS

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	3.1ft (.29 m)
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)

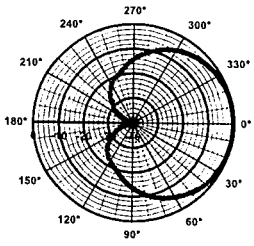
Note: Patent Pending and US Patent number 5, 757, 246.

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.

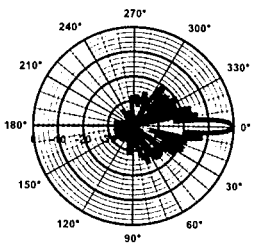
MOUNTING OPTIONS

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"

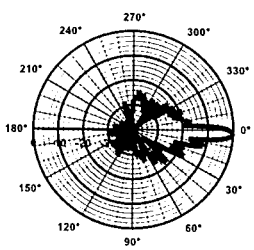
* Model number shown represents a series of products. See mounting options section for specific model number.



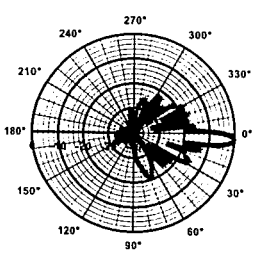
Azimuth



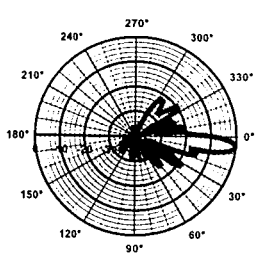
Elevation
0° Downtilt



Elevation
2° Downtilt



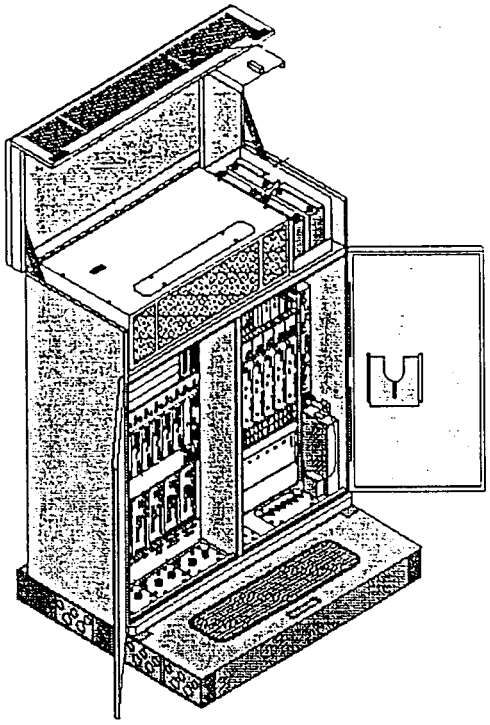
Elevation
4° Downtilt

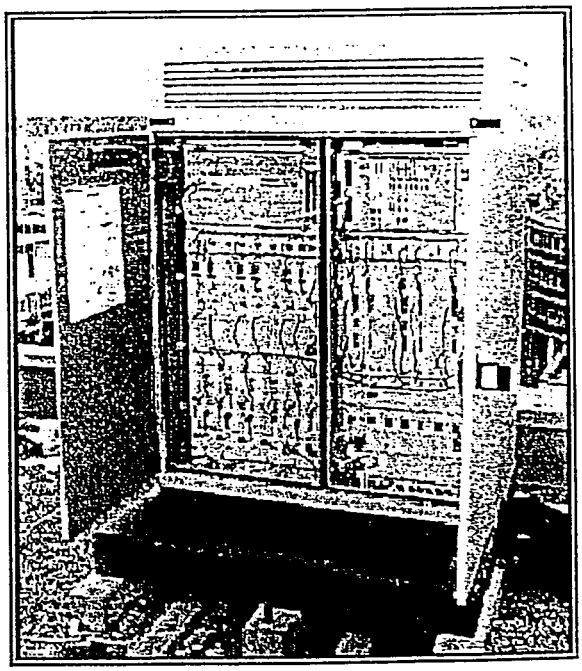


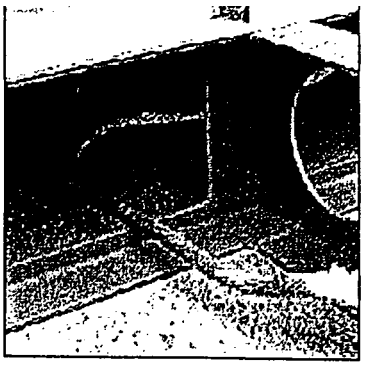
Elevation
6° Downtilt

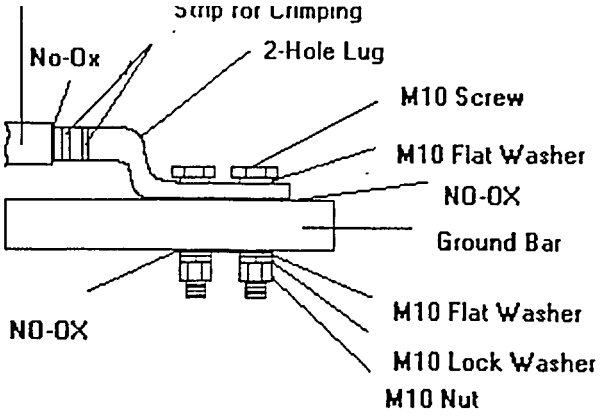
NORTEL NETWORKS™

S8000 BTS
Site Specifications









Apply a light coating of No Oxidation (NO-OX) to the ground bar area.

Dimensions, Weights & Clearances

BTS

Weight: 915 pounds
Dimensions: 53.2"W x 26"D x 63"H

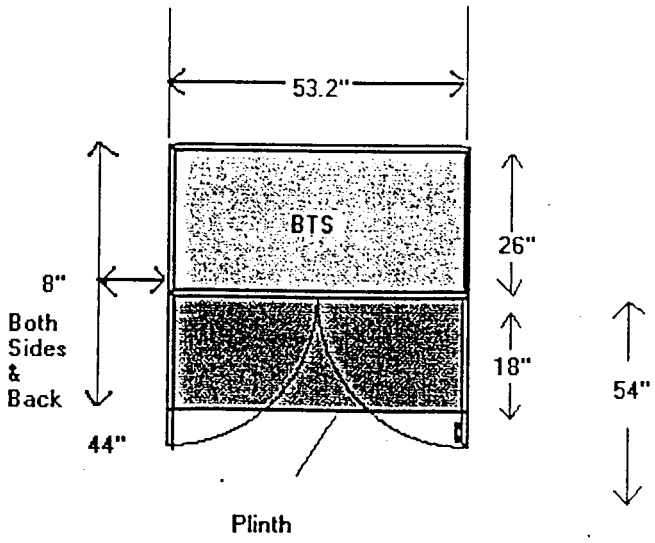
Clearances while transporting in building:
- Door Access:
  - Height: 6.6 feet
  - Width 3 feet
- Corridor Access:
  - Height: 6.6 feet
  - Width: 3.6 feet (straight), 6.6 feet (right angle)

Clearances when installed:
- Above: 28 inches for opening of hood
- Rear: 8 inches for installation of outer skin
- Sides: 8 inches for adjustment of door hinges
- Front: 54 inches to open door and technician access

Plinth

Weight:
87 pounds

Dimensions:
53.2"W x 44"D x 10.2"H



Floor Characteristics

Minimum Floor Resistance:
123 pounds/foot^2

Flatness:
¼ inch over 78 inches

Electrical Specifications

Split Single-Phase

3 wires plus ground

L1: Black 6 gauge

L2: Red 6 gauge

Neutral: White 6 gauge

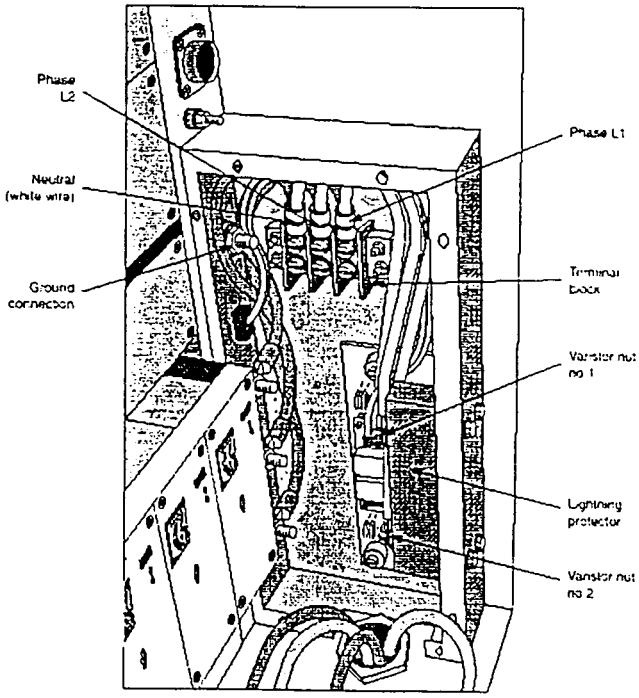
Ground: Yellow/Green 6 gauge

Maximum distance between AC box and BTS: 105 feet

187 ~ 254 VAC between L1 and L2

99 ~ 127 VAC between Neutral and L1 or L2

45 ~ 65 Hertz



AC connection to BTS located at the front, lower, right-hand side of BTS

Circuit Breaker in AC Box

Up to 4 transmitters

30 A, bipolar, C curve

5 or more transmitters

40A, bipolar, C curve

BTS to Ground connection

Minimum 2 AWG, run in most direct route as possible towards true earth, minimizing bends. No bend shall be less than 90 degrees.

OMNIPOINT COMMUNICATIONS INC.

Exhibit C

Structural Analysis

28 Brewer Drive

Bloomfield, CT

H. Edmund Bergeron
Civil Engineers

P.O. Box 440
20 Swett Street
North Conway, NH 03860
(603) 356-6936
(603) 356-7715 (fax)

65 W. Commercial Street
Portland, ME 04101
(207) 780-1100
(207) 780-1101 (fax)

HEB

STRUCTURAL ANALYSIS REPORT
OF
120' ROHN MONOPOLE TOWER
BLOOMFIELD, CONNECTICUT
Omnipoint Site #CT-11-278A
Sprint PCS #CT03XC076
Prepared for ARCNET Architects

July 30, 1999

Prepared by: H. Edmund Bergeron Civil Engineers, P.A.
P.O. Box 440, 20 Swett Street
North Conway, NH 03860
HEB Project No. 97057A

H. Edmund Bergeron
Civil Engineers

P.O. Box 440
20 Swett Street
North Conway, NH 03860
(603) 356-6936
(603) 356-7715 (fax)

65 W. Commercial Street
Portland, ME 04101
(207) 780-1100
(207) 780-1101 (fax)

HEB

STRUCTURAL ANALYSIS REPORT
of
SPRINT PCS'
120' MONOPOLE TOWER
BLOOMFIELD, CONNECTICUT
prepared for ARCNET

Omnipoint Site No. CT-11-278A

EXECUTIVE SUMMARY:

H. Edmund Bergeron Civil Engineers, P.A. (HEB) performed a structural analysis of this 120-foot monopole tower. The analysis was performed with the addition of Omnipoint Communications' proposed three-panel antenna array mounted on a 12-foot platform at the 110-foot elevation of the tower.

Our analysis indicates this tower and foundation are capable of supporting the proposed antennas.

INTRODUCTION:

An analysis of this communications tower was performed by H. Edmund Bergeron Civil Engineers, P.A. (HEB) for Sprint PCS. No site inspection was performed by HEB. The analysis relied on information provided by Sprint PCS and ARCNET Architects, which included the following:

- ROHN tower assembly and assembly detail drawings prepared for Sprint Spectrum dated October 23, 1997;
- Antenna information, site layout, and mounting details provided by ARCNET Architects.

The structure is a 120-foot monopole tower manufactured by UNR-ROHN. The analysis of the tower was performed with the following antennas:

- (9) DB980-H90 panel antennas mounted on a platform at 120',
- (1) 6-foot whip antenna mounted on a 3-foot sidearm at 120',
- (9) Allgon 7120 panel antennas mounted on a platform at 100',
- (1) DB536 whip antenna mounted on a three foot sidearm at 75',
- (3) EMS Wireless RR90-17-02DP antennas mounted on a platform at 110'.

HEB

The proposed EMS Wireless panel antennas will be served by six 1-5/8-inch waveguide cables, which are to be installed inside the pole.

STRUCTURAL ANALYSIS:

Methodology:

The structural analysis was done in accordance with TIA/EIA-222-F, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures; and the American Institute of Steel Construction (AISC), Manual of Steel Construction, Allowable Stress Design, Ninth Edition.

The analysis was conducted using a wind speed of 85 miles per hour and one-half inch of radial ice over the entire structure and all appurtenances. The TIA/EIA Standard requires a minimum of 80 mph wind load for Hartford County, Connecticut. The tower was analyzed by calculating the resultant wind loading and associated maximum bending moments and axial loads. The moments and forces were used to calculate compressive and shear stresses in the pole, which were compared to allowable stresses according to AISC.

Two loading conditions were evaluated in accordance with TIA/EIA-222-F to determine the tower's capacity. The higher stresses resulting from the two cases is used to calculate the tower capacity:

- Case 1 = Wind Load (without ice) + Tower Dead Load (controls)
- Case 2 = **0.75** Wind Load (with ice) + Ice Load + Tower Dead Load

Two analytical methods were used to evaluate the structure: a two-dimensional linear model using spreadsheet programs developed by HEB, and a P-delta analysis using CSTRAAD finite element software distributed by ECOM Associates. The HEB 2-D model was used to generate dead loads of the tower and all of its appurtenances, radial ice loads, and the resultant wind loading. The maximum bending moments and axial loads were used to calculate combined axial and bending stresses at intervals on the monopole, which were compared to allowable stresses according to AISC and EIA.

Loads generated in the 2-D model were input into the CSTRAAD program to evaluate secondary bending moments induced during deflection of the structure under load, and to independently evaluate stresses of the linear analysis. Evaluation of secondary bending moments is required by EIA paragraph 3.1.15.

HEB

Our analysis indicates that the secondary moments exceed those of the linear condition, and therefore govern in determining the capacity of the structure.

The TIA/EIA standard permits a one-third increase in allowable stresses for towers less than 700-feet tall. Allowable stresses of tower members were increased by one-third in computing the load capacity values indicated herein.

Analysis Results:

Our analysis determined the tower will support the proposed antennae in addition to its current loading. Supporting calculations are provided in Appendix A.

The following table summarizes the capacity of the tower based on combined axial and bending stresses of the monopole:

Tower Capacity

Elevation	Capacity
0-30'	98%
30'-60'	94%
60'-90'	83%
90'-120'	44%

Evaluation of the tower foundation was performed by comparing design reactions to calculated maximum values under the proposed loading. We calculated overturning moment and axial loads to be less than ROHN's design values. HEB's calculated shear reaction slightly exceeds the design value, however in our experience shear does not govern in foundation design. Our evaluation indicates the foundation is adequate to support the proposed loads.

CONCLUSIONS AND SUGGESTIONS:

As detailed above, our analysis indicates that the existing 120' ROHN monopole tower is capable of supporting the additional loading proposed by Omnipoint Communications.

HEB

LIMITATIONS:

This report is based on the following:

1. Tower is properly installed and maintained.
2. All members are in new condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Weep holes on tube and pipe members are open.
6. Tower is in plumb condition.
7. All members are galvanized.
8. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
9. Foundations were properly constructed to support design loads.

H. Edmund Bergeron Civil Engineers, P.A. (HEB) is not responsible for any modifications completed prior to or hereafter which HEB is not or was not directly involved. Modifications include but are not limited to:

1. Reinforcing vertical members in any manner.
2. Adding or relocating stabilizers.
3. Installing antenna mounting gates or side arms.
4. Extending tower.

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OMNIPOINT
COMMUNICATIONS INC.

Exhibit D

Power Density Calculations

28 Brewer Drive

Bloomfield, CT

OMNIPOINT COMMUNICATIONS
100 Filley St
Bloomfield, CT 06002
Phone: (860) 692-7131
Fax: (860) 692 - 7159

Technical Memo

To: Brendan Sharkey
From: Haider Syed (Radio Engineering Consultant)
cc: Mike Fulton
Subject: Power Density Report for CT11278C
Date: 02/07/2000

1. Introduction:
This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the proposed OMNIPOINT Communications Inc. PCS antenna installation on proposed Sprint PCS monopole at 28 Brewer Street, Bloomfield, CT. This study incorporates the most conservative considerations for determining the practical combined worst case power density levels that would be theoretically encountered from several locations surrounding the transmitting location.

2. Discussion:
The following assumptions were used in the calculations:

1) The emissions from the OCI transmitters are in the 1930-1950 MHZ frequency band.
2) The antenna cluster consists of three sectors, with two antenna per sector. The model number for each antenna is EMS RR901702DP
3) The antenna height is 107.667 feet Center Line.
4) The maximum transmit power from each sector is 2060.11 Watts Effective Isotropic Radiated Power (EiRP) assuming four channel capacity.
5) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
6) 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.
7) The average ground level of the studied area does not significantly change 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 worse case assumptions, the power density calculations from the proposed OMNIPOINT Communications Inc., PCS antenna installation are on the order of **1,000** to **10,000** times less than the FCC/ANSI/IEEE C95.1-1991 standard of 1000 microwatts per square centimeter ($\mu w/cm^2$). Details are shown in the attachment. Furthermore, the proposed antenna location for Omnipoint Communications on on proposed Tower at 467 Quaker Ln in West Hartford, CT will not interfere with existing public safety telecommunications, AM band and FM band radio broadcast, TV, Police Communication, HAM Radio communications and other signals in the area.

Worst Case Power Density for installation on Sprint Monopole@ 28 Brewer St, Bloomfield, CT

Region 11 - Connecticut
Power Density Calculation - Worst Case

Base Station TX output	20 W		43.01	
Number of channels	4			
Antenna Model	EMS: RR-90-17/ RV-90-17			
Antenna Gain	16.5 dBi			
Cable Size	1 5/8"			
Cable Length	120 ft			
Jumper & Connector loss	1 dB			
Cable Loss per foot	0.0116			
Total Cable Loss	1.392 dB			
Total Attenuation	2.392 dB			
Total EIRP per channel	57.12 dB		515.03	W
Total EIRP per sector	63.14 dB		2060.11	W
Ground Reflection	1.6			
Frequency	1930 MHz			
Antenna Height	120 ft		3657.6	cm
nsg	14.108			
Power Density (S) =	**0.031387 mW / cm^2**			
% MPE =	**3.1387%**			

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

SNET CELLULAR MPE %	21.55
SPRINT PCS MPE%	3.35
TOWN OF BLOOMFIELD MPE %	4.79
OMNIPOINT MPE%	3.1387
TOTAL MPE%	32.8287