



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

June 24, 2003

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

RE: **EM-T-MOBILE-047-030612** - Omnipoint Communications, Inc. notice of intent to modify an existing telecommunications facility located at 232 South Main Street, East Windsor, Connecticut.

Dear Attorney Humes:

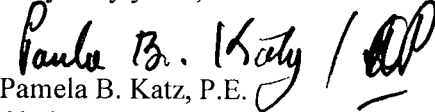
At a public meeting held on June 19, 2003, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated June 12, 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,


Pamela B. Katz, P.E.

Chairman

PBK/laf

c: Honorable Linda L. Roberts, First Selectman, Town of East Windsor
Donald Poland, Town Planner, Town of East Windsor
Balch Communications
Sandy M. Carter, Verizon Wireless
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Thomas F. Flynn III, Nextel Communications
Michele G. Briggs, Southwestern Bell Mobile Systems

LEBOEUF, LAMB, GREENE & MACRAE
L.L.P.

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GOODWIN SQUARE
225 ASYLUM STREET
HARTFORD, CT 06103
(860) 293-3500
FACSIMILE: (860) 293-3555

WRITER'S DIRECT DIA
(860) 293-3744

EM-T-MOBILE-047-030612

LONDON
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June 12, 2003
RECEIVED
JUN 12 2003
CONNECTICUT
SITING COUNCIL

Pamela Katz, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Notice of Exempt Modification
232 South Main Street, East Windsor, Connecticut

Dear Chairman Katz and Members of the Council:

Please be advised that LeBoeuf, Lamb, Greene & MacRae, L.L.P. represents Omnipoint Communications, Inc., a subsidiary of T-Mobile USA, Inc. (hereinafter T-Mobile) in the above-referenced matter. T-Mobile intends to add three antennas to its existing six antenna array currently mounted on pipe-mounts and T-frames on the existing lattice tower facility in East Windsor. Please accept this letter as notification, pursuant to R.C.S.A. § 16-50j-73, of construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the First Selectman of East Windsor, Linda L. Roberts.

Background

T-Mobile holds the "A block" "Wideband PCS" license for the 2-GHz PCS frequencies for the greater New York City area, including the entire State of Connecticut. T-Mobile 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.

Discussion

The existing facility consists of a one hundred ninety foot (190'-0") lattice tower (see design drawing 3, A-1 attached as Exhibit B) and surrounding compound. The coordinates for the site are **Lat: 41.87712** and **Long: 72.6106**. The tower is on the west side of South Main Street (Route 5) approximately nine hundred feet (900') south of the intersection with Abbe Road in the southwestern portion of East Windsor (see site location map, attached as exhibit A). The site is accessed from a drive off of South Main Street.

T-Mobile's proposes to add three (3) panel antennas to its six (6) antenna array for a total of nine (9) antennas. The proposed configuration is a cluster of three sectors with three antennas per sector mounted on existing pipe mounts and T-frames at the one hundred fifty-five foot (155') centerline above ground level ("AGL"). A structure elevation is shown as part of Exhibit B. The model number for the replacement antennas is EMS-RR90-17-02DP. A new structural analysis and design calculations of the tower has been completed and is attached as Exhibit D. As stated in the structural analysis, the existing tower structure is capable of supporting the proposed T-Mobile installation. Two new Nortel S8000 equipment cabinets will be installed on a five foot by ten foot (5' x 10') concrete pad adjacent to an existing four foot by six foot (4' x 6') concrete pad currently supporting one Nortel S8000 equipment cabinet (see pad detail on drawing 3, A-1 attached as part of Exhibit B). A proposed T-Mobile ice bridge for cables would run under the existing Cingular ice bridge. The proposed T-Mobile ground equipment is all within a leased one hundred forty square foot (140') area. The existing fenced compound will not be altered in any way by the T-Mobile proposal (compound detail shown on drawing 1, A-1). Utilities will be run via underground conduit from those currently in place.

The planned modifications to the East Windsor facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).


1. The proposed modification will not increase the height of T-Mobile's approved antennas on the tower and will not extend the boundaries of the existing compound area. The enclosed tower drawings confirm that the planned changes will not increase the overall height of the tower.
2. The installation of T-Mobile equipment, as reflected on the attached site plan, will not require an extension of the site boundaries.
3. The proposed modification to the facility will not increase the noise levels at the existing facility by six decibels or more. T-Mobile's equipment is self-contained and requires no additional heating, ventilation or cooling equipment.
4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at or above the applicable standard. The "worst-case" RF power density calculations, for a point at the site boundary, are attached hereto as Exhibit F.

For the foregoing reasons, T-Mobile respectfully submits that the proposed addition of antennas and equipment at the East Windsor facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Thank you for your consideration of this matter.

Respectfully submitted,

OMNIPOINT COMMUNICATIONS, INC.

By: 
Its Counsel
Stephen J. Humes

cc: First Selectman Linda L. Roberts

Exhibit A
Site Map
232 South Main Street
East Windsor, Connecticut



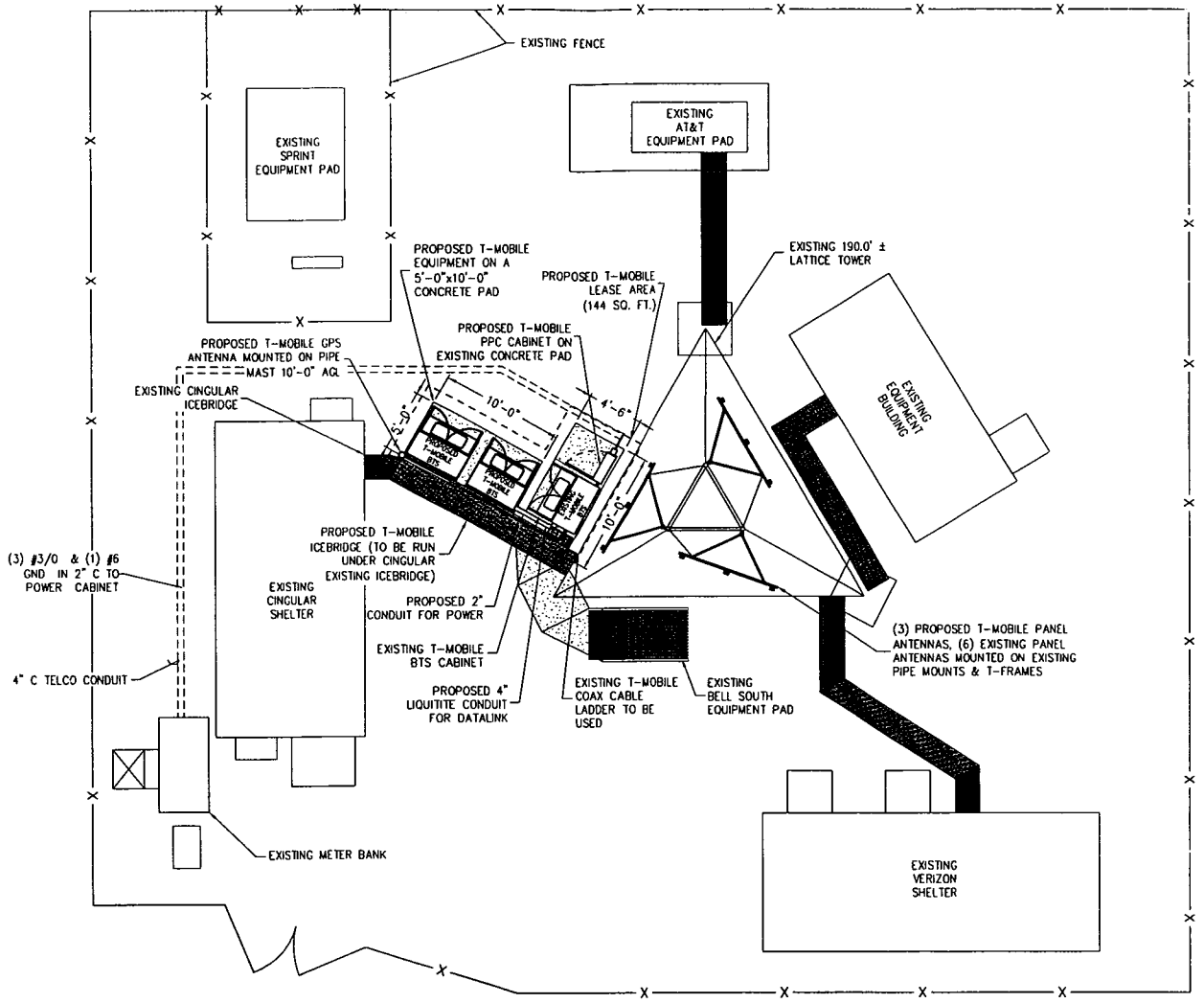
Exhibit B

Design Drawings

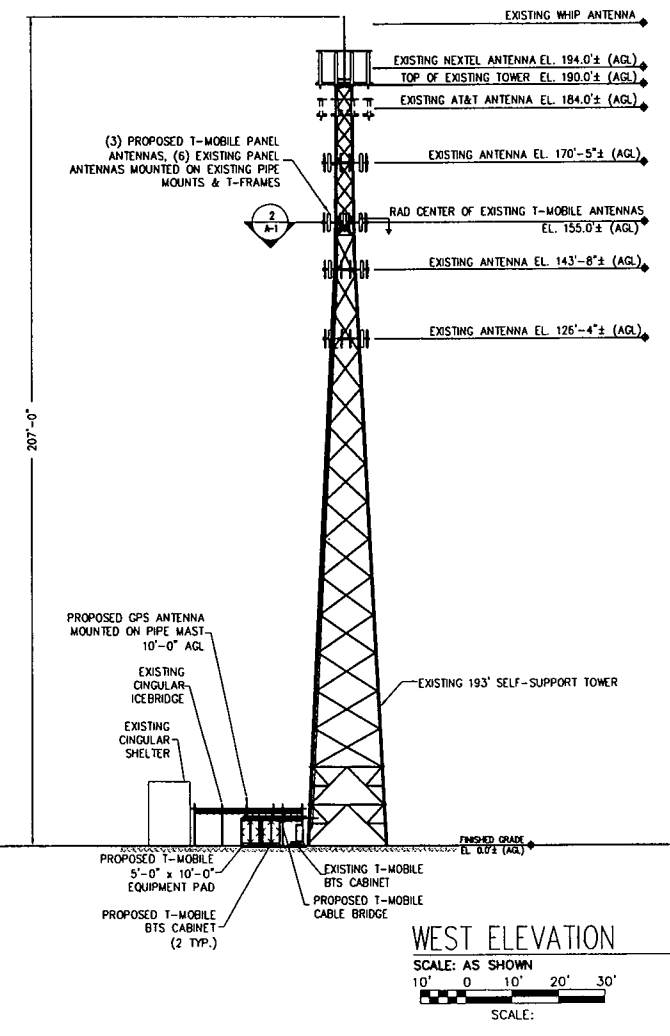
**232 South Main Street
East Windsor, Connecticut**

NOTES:

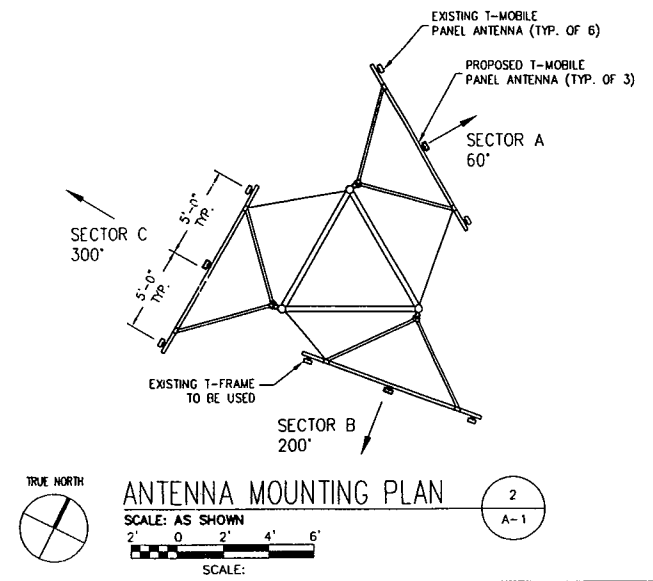
- ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECTS THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH OWNER PRIOR TO CONSTRUCTION.
- NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY TRUE NORTH AND INFORM CONSTRUCTION MANAGER OF ANY DISCREPANCIES BEFORE STARTING CONSTRUCTION.
- THE GENERAL CONTRACTOR AND OR HIS SUB CONSULTANT SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
- ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.
- COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE ATTACHMENT K). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
- ANY EQUIPMENT THAT IS TO BE PAINTED SHALL BE PAINTED TO MATCH EXISTING. PAINT SHALL BE SHERWIN WILLIAMS, COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AND OMIPOINT GUIDELINES.
- COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- EQUIPMENT WILL BE INDEPENDENTLY POWERED WITH SEPARATE METER.
- PRIOR TO EXCAVATION NEAR (E)TOWER, CONTRACTOR TO CONTACT AND COORDINATE WITH PROPERTY OWNER.
- ALL (E)ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
- ALL (E)INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING.
- THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH.
- THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES DURING CONSTRUCTION.
- ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
- PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS FOR WIRELESS COMMUNICATIONS SYSTEMS. T-MOBILE IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. T-MOBILE RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.



NOTES:
 PLOT PLAN BASED ON SITE PLAN BY CLOUGH, HARBOUR AND ASSOCIATES, LLP, DATED 10/10/02.
 SETBACKS ARE TAKEN FROM PROPOSED EQUIPMENT TO EXISTING PROPERTY LINES.
SITE PLAN/EQUIPMENT PLAN
 SCALE: AS SHOWN
 5' 0 5' 10' 15'
 SCALE:



WEST ELEVATION
 SCALE: AS SHOWN
 10' 0 10' 20' 30'
 SCALE:



ANTENNA MOUNTING PLAN
 SCALE: AS SHOWN
 2' 0 2' 4' 6'
 SCALE:

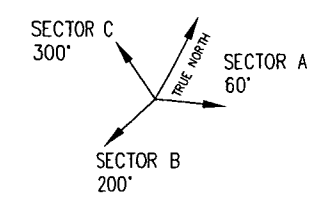
ABBREVIATIONS

ADJ	ADJUSTABLE	SF	SQUARE FOOT
APPROX	APPROXIMATE	SHT	SHEET
C	CONDUIT	SM	SIMILAR
CONC	CONCRETE	STL	STEEL
CONT	CONTINUOUS	TOC	TOP OF CONCRETE
CJ	CONSTRUCTION JOINT	TOM	TOP OF MASONRY
DIA	DIAMETER	TYP	TYPICAL
DWG	DRAWING	VF	VERIFY IN FIELD
EGB	EQUIPMENT GROUND BAR	UON	UNLESS OTHERWISE NOTED
EA	EACH	WMF	WELDED WIRE FABRIC
ELEC	ELECTRICAL	W/	WITH
EL	ELEVATION	BTS	BASE TRANSMISSION STATION
EO	EQUAL	LNA	LOW NOISE AMPLIFIER
EQUIP	EQUIPMENT	PCS	PERSONAL COMMUNICATIONS SERVICES
(E)	(E)	A-1	ANTENNA MARK NO.
EXT	EXTERIOR	PL	PLATE
FF	FINISHED FLOOR	&	AND
FG	FINISHED GRADE	@	AT
GA	GAUGE		
GALV	GALVANIZED		
GC	GENERAL CONTRACTOR		
LG	LONG		
MAX	MAXIMUM		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MGB	MASTER GROUND BAR		
MIN	MINIMUM		
MTL	METAL		
NC	NOT IN CONTRACT		
NTS	NOT TO SCALE		
OC	ON CENTER		
OPP	OPPOSITE		

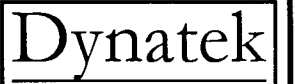
SYMBOLS AND MATERIALS

[Symbol]	NEW ANTENNA	[Symbol]	GROUT OR PLASTER
[Symbol]	EXISTING ANTENNAS	[Symbol]	(E)BRICK
[Symbol]	ASPHALT	[Symbol]	(E)MASONRY
[Symbol]	NEW ACCESS EASEMENT	[Symbol]	CONCRETE
[Symbol]	CONCRETE	[Symbol]	EARTH
[Symbol]	ELECTRIC BOX	[Symbol]	GRAVEL
[Symbol]	LIGHT POLE	[Symbol]	PLYWOOD
[Symbol]	FND. MONUMENT	[Symbol]	SAND
[Symbol]	SPOT ELEVATION	[Symbol]	WOOD CONT.
[Symbol]	SET POINT	[Symbol]	WOOD BLOCKING
[Symbol]	REVISION	[Symbol]	STEEL
[Symbol]	GRID REFERENCE	[Symbol]	CENTER LINE
[Symbol]	DETAIL REFERENCE	[Symbol]	PROPERTY LINE
[Symbol]	ELEVATION	[Symbol]	STEPPED FOOTING
[Symbol]	SECTIONS & DETAILS	[Symbol]	MATCH LINE
		[Symbol]	WORK POINT
		[Symbol]	GROUND WIRE
		[Symbol]	COAXIAL CABLE

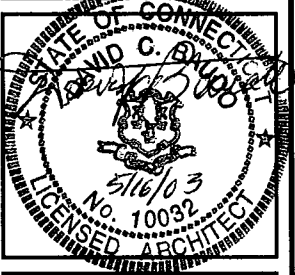
ANTENNA ORIENTATION KEY



100 FILLEY STREET
 BLOOMFIELD, CT 06002
 OFFICE: (860)-794-4300
 FAX: (860)-692-7159



TELECOMMUNICATIONS SERVICES
 5170 Belmont Avenue
 Youngstown, Ohio 44505
 Phone: 800-838-3224
 Fax: (330) 759-8471
 www.dynatektelecom.com



APPROVALS

LANDLORD _____
 LEASING _____
 R.F. _____
 ZONING _____
 CONSTRUCTION _____
 A/E _____

PROJECT NO: 4469

DRAWN BY: M.N.T.

CHECKED BY: D.C.B.

SUBMITTALS

1	3/25/03	CONSTRUCTION REVISIONS
0	2/6/03	CONSTRUCTION

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**CT-11-402A
 EAST WINDSOR
 LATTICE TOWER**
 232 SOUTH MAIN STREET
 EAST WINDSOR, CT 06088

SHEET TITLE
 PLANS AND ELEVATIONS

SHEET NUMBER
A-1

Exhibit C

Equipment Specifications

232 South Main Street

East Windsor, Connecticut

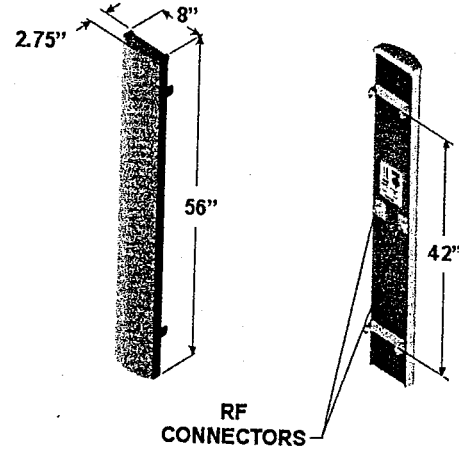


RR90-17-XXDP

DualPol® Polarization
1850 MHz - 1990 MHz

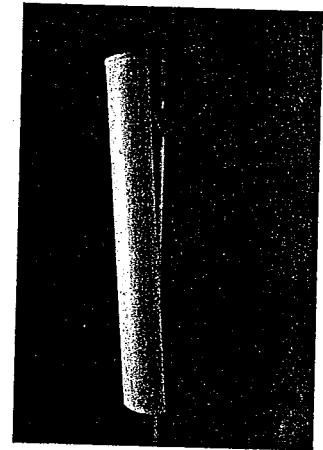
Electrical Specifications

Azimuth Beamwidth	90°
Elevation Beamwidth	6°
Gain	16.5 dBi (14.4 dBd)
Polarization	Dual Linear Slant ($\pm 45^\circ$)
Port-to-Port Isolation	≥ 30 dB
Front-to-Back Ratio	≥ 28 dB (≥ 30 dB Typ.)
Electrical Downtilt Options	0°, 2°, 4°, 6°
VSWR	1.35:1 Max
Connectors	2; 7-16 DIN (female)
Power Handling	250 Watts CW
Passive Intermodulation	≤ -150 dBc
Lightning Protection	[2 x 20 W (+ 43 dBm)] Chassis Ground



Mechanical Specifications

Dimensions (L x W x D)	56 in x 8 in x 2.75 in (142 cm x 20.3 cm x 7.0 cm)
Rated Wind Velocity	150 mph (241 km/hr)
Equivalent Flat Plate Area	3.1ft ² (.29 m ²)
Front Wind Load @ 100 mph (161 kph)	90 lbs (400 N)
Side Wind Load @ 100 mph (161 kph)	31lbs (139 N)
Weight	18 lbs (8.2 kg)

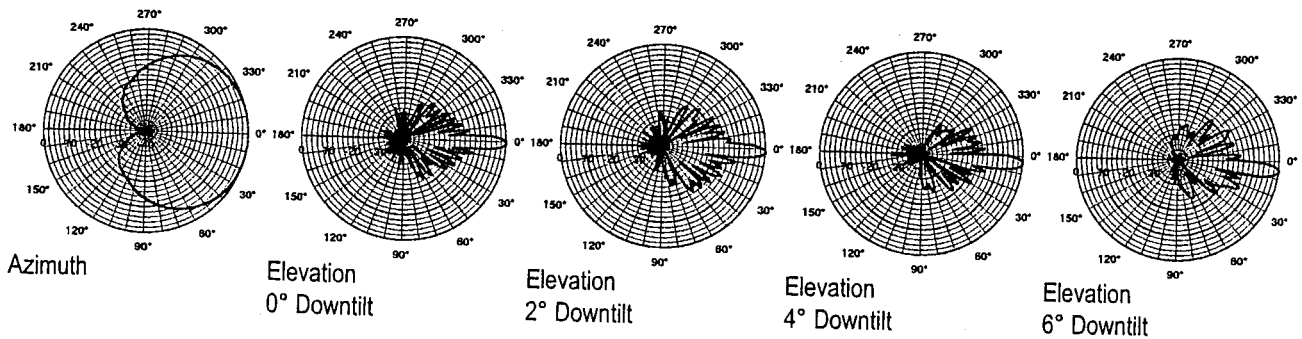


Mounting Options

MTG-P00-10, MTG-S02-10, MTG-DXX-20*, MTG-CXX-10*, MTG-C02-10, MTG-TXX-10*

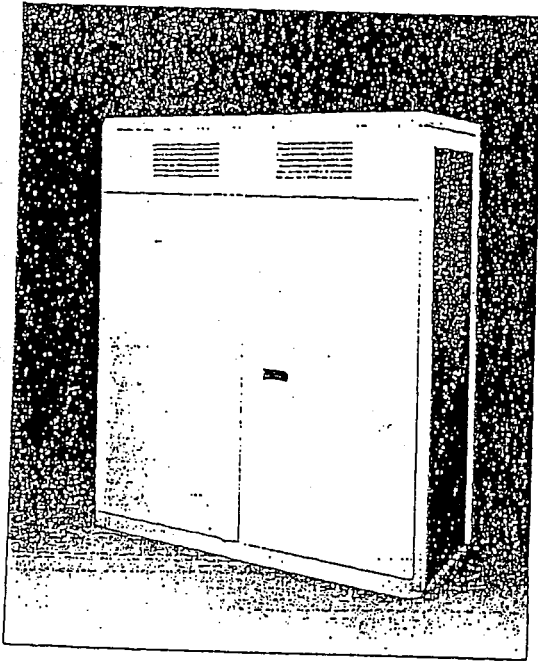
Note: *Model number shown represents a series of products. See Mounting Options section for specific model number.

Patterns



Revised 04/05/02

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
		up to S888
• 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.

In the USA:
Northern Telecom
2221 Lakeside Boulevard
Richardson TX 75082
USA
Telephone: 1-800-4 NORTEL
1-800-466-7838 or (214) 684-5935 -
<http://www.nortel.com/wireless>

In Canada:
Northern Telecom
2920 Matheson Boulevard East
Mississauga ON L4W 4N7
Canada
Telephone: 1-800-4 NORTEL

In the Caribbean and Latin America:
Northern Telecom (CALA) Corporation
1500 Concord Terrace
Sunrise FL 33323
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Telephone: (305) 851-8400

In Asia:
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Singapore 1955
Telephone: (65) 287-2877

Nortel China Ltd.
34th Floor, Central Plaza
18 Harbour Road, Wanchai
Hong Kong
Telephone (852) 2585 2888

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Nortel Limited
Stafferton Way
Maidenhead
Berkshire SL6 1AY
England
Telephone: (44) (1628) 812000

Nortel Matra Cellular
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1 place des Frères Montgullier
78042 Guyancourt Cedex
France
Telephone (33) (1) 34 52 52 52

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

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Information subject to change. Northern
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changes, without notice, in equipment
design as engineering or manufacturing
methods warrant.

NORTEL
NORTHERN TELECOM

Exhibit D

Structural Analysis

**232 South Main Street
East Windsor, Connecticut**

C7H402A UPGRADE



ENGINEERING REPORT

TO: Dynatek Telecommunications Services
5170 Belmont Avenue
Youngstown, OH 44505

DATE: February 11, 2003

CBC NO: 4457-1-0203-05

ATTN: Mr. Mark Thompson

Re: Evaluation of 188' Rohn Self Support Tower with Nine (9) Proposed T-Mobile Antennas;
East Windsor, Hartford County, Connecticut; CBC Report No. 4457-1-0203-05

The purpose of this report is to evaluate the above referenced tower for the addition of nine (9) – 72" x 12" x 4" antennas at the 155 foot level. Based on our review of the original (Rohn) calculations for the tower, the tower was originally designed for a total of twelve (12) antennas with a total surface area of 80 square feet at the 155 foot level. The proposed nine (9) antennas at the 155 foot level will have a total surface area of only 54 square feet and therefore, the existing tower is designed to carry the proposed antennas. The reviewed calculations are attached.

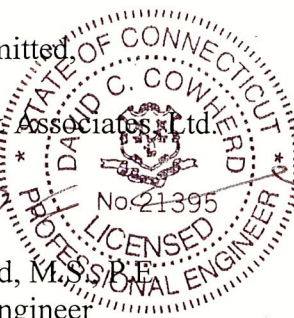
Our review indicates the tower and foundation with the proposed antennas meet the requirements of EIA/TIA-222, revision F; the BOCA National Building Code (including section 3108), and the 1999 Connecticut State Building Code Supplement (including section 1609.1).

If you have any questions please contact me.

Respectfully submitted,

CBC Engineers & Associates, Ltd.

David C. Cowherd, M.S., P.E.
CEO and Chief Engineer



DCC/av
4-Client
1-File

Exhibit E

Power Density Calculations

232 South Main Street

East Windsor, Connecticut



T-Mobile USA Inc.
100 Filley St, Bloomfield, CT 06002-1853
Phone: (860) 692-7100
Fax: (860) 692-7159

Technical Memo

To: Marie Burbank
From: Hassan Syed - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11402
Date: May 29, 2003

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a Monopole at 232 South Main Street, East Windsor, 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 T-Mobile transmitters are in the 1935-1945 MHz frequency band.
- 2) The antenna array consists of three sectors, with 3 antennas per sector.
- 3) The model number for each antenna is EMS RR90-17-02DP.
- 4) The antenna center line height is 155 ft.
- 5) The maximum transmit power from any sector is 3244.61 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 T-Mobile PCS antenna installation on a Monopole at 232 South Main Street, East Windsor, CT, is 0.03206 mW/cm^2 . This value represents 3.206% 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 T-Mobile 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 13.31%. The combined Power Density for the site is 16.516% of the M.P.E. standard.

New England Market



Connecticut Worst Case Power Density

Site:	CT11402
Site Address:	232 South Main Street
Town:	East Windsor
Tower Height:	155 ft.
Tower Style:	Monopole
Base Station TX output	18 W
Number of channels	8
Antenna Model	EMS RR90-17-02DP
Cable Size	1 5/8 in.
Cable Length	170 ft.
Antenna Height	155.0 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	1.9720 dB
Total Attenuation	2.9720 dB
Total EIRP per Channel	56.08 dBm
(In Watts)	405.58 W
Total EIRP per Sector	65.11 dBm
(In Watts)	3244.61 W
nsg	13.5280
Power Density (S) =	0.032063 mW/cm ²
Voicestream Worst Case % MPE =	3.2063%
Equation Used:	$S = \frac{(1000)(grf)^2 (Power) * 10^{(nsg/10)}}{4 \pi (R)^2}$
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Co-Location Total	
Carrier	% of Standard
Verizon	
Cingular	
Sprint PCS	9.0600 %
AT&T Wireless	4.2500 %
Nextel	
Total Excluding Voicestream	13.3100 %
Voicestream	3.2063
Total % MPE for Site	16.5163%