



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

September 9, 2002

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

RE: EM-OMNI-015-020822 – Omnipoint Communications, Inc. d/b/a T-Mobile notice of intent to modify an existing telecommunications facility located at 280 Oxbrook Drive, Bridgeport, Connecticut.

Dear Attorney Humes:

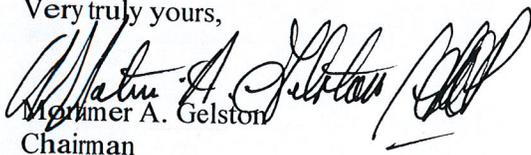
At a public meeting held on September 5, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the condition that the tower's foundation be reinforced prior to the proposed installation and that a professional engineer certifies to the Council the adequacy of the reinforcements made.

The proposed modifications are to be implemented as specified here and in your notice dated August 22, 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,


Matthew A. Gelston
Chairman

MAG/laf

c: Honorable Joseph P. Ganim, Mayor, City of Bridgeport
Michael P. Nidoh, City Planner, City of Bridgeport
Melanie J. Howlett, Assistant City Attorney, City of Bridgeport
Salvatore Giuliano, Manager of Real Estate and Land Planning, Northeast Utilities

CITY ATTORNEY
Mark T. Anastasi

DEPUTY CITY ATTORNEY
Salvatore C. DePiano

ASSOCIATE CITY ATTORNEYS
John H. Barton
John P. Bohannon, Jr.
Barbara Brazzel-Massaró
Russell D. Liskov
John R. Mitola
Ronald J. Pacacha

CITY OF BRIDGEPORT
OFFICE OF THE CITY ATTORNEY

999 Broad Street
Bridgeport, Connecticut 06610-4328

ASSISTANT CITY ATTORNEYS

Melanie J. Howlett
Arthur C. Laske III
R. Christopher Meyer
John J. Robacynski
Stephen J. Sedensky, Jr.

LEGAL ADMINISTRATOR
Kathleen Pacacha

Telephone (203) 576-7647
Facsimile (203) 576-8252



RECEIVED
SEP - 6 2002
CONNECTICUT
SITING COUNCIL

Via Facsimile and First Class Mail

September 5, 2002

S. Derek Phelps
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: EM-OMNI-015-020822-Omnipoint Communications d/b/a T-Mobile notice of intent to modify an existing telecommunications facility located at 280 Oxbrook Drive, Bridgeport, CT

Dear Mr. Phelps:

The City of Bridgeport ("City") is in receipt on August 23, 2002, of an application from Omnipoint Communications d/b/a T-Mobile USA, Inc. for a ruling that its plans to upgrade an existing facility located at 280 Oxbrook Drive in Bridgeport, Connecticut, owned by Connecticut Light and Power ("CL&P") is exempt from the need to file a new tower sharing application, pursuant to Section 16-50j-73 of the General Statutes of Connecticut. As filed, Omnipoint plans to remove its three (3) existing antennas and install twelve (12) new panel antennas. Please enter my appearance in this matter on behalf the City.

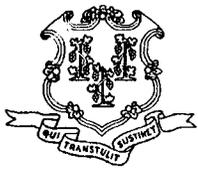
The City has reviewed the application, which includes a structural analysis of the existing facility, and has no object to Omnipoint's request. However, Omnipoint will be required to obtain a building permit prior to the removal and installation of this equipment. The company will also be required to obtain and maintain a Surety Bond for the future removal of the newly installed equipment in an amount to be determined by this office.

If there are any questions regarding this matter, please do not hesitate to contact me.

Sincerely,


Melanie J. Howlett
Assistant City Attorney

Cc: Stephen Humes, T-Mobile USA, Inc.
William Shaw, Clerk/Planning and Zoning Commission



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

MEMORANDUM

To: S. Derek Phelps, Executive Director

From: David Martin

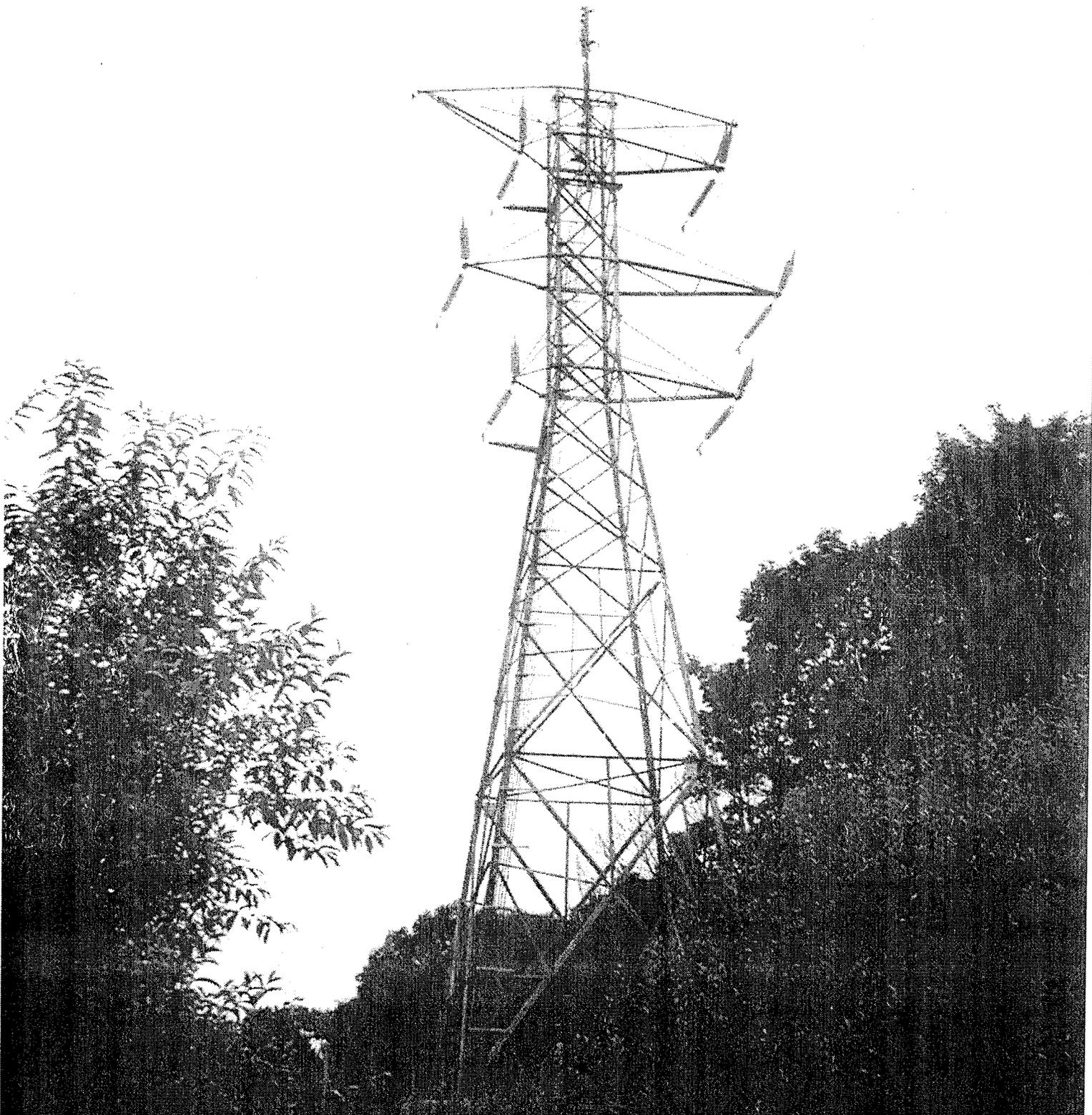
Re: Omnipoint Exempt Modification, 280 Oxbrook Drive, Bridgeport

Date: September 3, 2002

This notice of exempt modification is for an 86' tall power tower for which a pipe mast extension was approved by the Council under Petition 406 on December 17, 1998. The extension was to install three flush mounted panel antennas with a centerline at approximately 93' AGL. There is also a small (5'6" x 10') equipment pad enclosed by a chain link fence at the base of the tower. The tower is within a power line right-of-way in a middle-class residential neighborhood consisting mostly of small single-family homes.

Under this filing, Omnipoint seeks to replace the pipe mast extension with a 94' tall PowerMount pole (a monopole that would be erected within and braced to the power tower). This would enable Omnipoint to replace the three existing antennas mounted on the pipe mast extension with 12 new panel antennas that would be mounted on a triangular platform at the top of the PowerMount pole. The centerline of the 12 new antennas would be 94' AGL. As part of this filing, the existing fenced enclosure would be expanded 10'6" to enclose a new pad that would hold additional equipment cabinets.

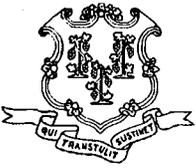
At the risk of making more out of this filing than needed, I do have a couple of concerns that make me wonder if this filing might be more properly considered as another type of application. One concern is the height. There is only a foot of difference between the existing antennas' centerline and that of the proposed antennas. Just a foot, but still a difference in height. Is it enough to worry about? For me, a more important concern is the larger profile the new antennas would have. The current antennas are scarcely noticeable and might, with a quick glance, seem part of the power tower. The proposed antennas would be on a triangular platform that would certainly have a greater visual presence. My last concern is the expanded equipment area. The area would still be within the power line ROW and would be well screened from neighbors by existing vegetation along the edges of the ROW. But it is an expansion, and where do we draw the line?



EM-OMNI-015-020822
280 Oxbrook Drive
Bridgeport 8/28/02

EM-OMNI-015-020822
280 Oxbrook Drive
Bridgeport 8/28/82





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

August 22, 2002

Honorable Joseph P. Ganim
Mayor
City of Bridgeport
City Hall
999 Broad Street
Bridgeport, CT 06604

RE: **EM-OMNI-015-020822** – Omnipoint Communications, Inc. d/b/a T-Mobile notice of intent to modify an existing telecommunications facility located at 280 Oxbrook Drive, Bridgeport, Connecticut.

Dear Mr. Ganim:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting tentatively scheduled for September 5, 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: Michael P. Nidoh, City Planner, City of Bridgeport
Melanie J. Howlett, Assistant City Attorney, City of Bridgeport

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

A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

NEW YORK
WASHINGTON, D.C.
ALBANY
BOSTON
DENVER
HARRISBURG
HARTFORD
HOUSTON
JACKSONVILLE
LOS ANGELES
NEWARK
PITTSBURGH
SALT LAKE CITY
SAN FRANCISCO

GOODWIN SQUARE
225 ASYLUM STREET
HARTFORD, CT 06103

(860) 293-3500

FACSIMILE: (860) 293-3555

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

LONDON
(A LONDON-BASED
MULTINATIONAL PARTNERSHIP)

PARIS

BRUSSELS

JOHANNESBURG
(PTY) LTD.

MOSCOW

RIYADH
(AFFILIATED OFFICE)

TASHKENT

BISHKEK

ALMATY

BEIJING

RECEIVED

AUG 22 2002

CONNECTICUT
SITING COUNCIL

August 22, 2002

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

Re: Notice of Exempt Modification
280 Oxbrook Drive, Bridgeport, 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.¹ T-Mobile intends to remove its three (3) existing antennas at the above-referenced site, an electric transmission structure owned by Connecticut Light & Power (CL&P). T-Mobile proposes to replace its existing pipe mast antenna configuration with twelve (12) new panel antennas by mounting them on a newly installed PowerMount pole which will be braced through the middle of the existing transmission structure at the existing facility in Bridgeport. 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). T-Mobile has received authorization from CL&P for this project as evidenced by their authorization letter (made part of the attached notice as Exhibit A). A structural analysis of the tower has been completed and is included within this notice. In accordance with R.C.S.A. § 16-50j-73, the chief elected official and Assistant City Attorney of Bridgeport have been sent copies of this notice by first class mail.

Background Omnipoint Communications, Inc. operates 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. Widely known until recently as VoiceStream, the T-Mobile wireless service is a voice-data system that is capable of providing to the consumer state-of-the-art communications service with privacy to users, and

¹ Until recently, the company provided wireless services nationally under the brand name VoiceStream Wireless. VoiceStream Wireless Corporation also recently changed its corporate name to T-Mobile USA, Inc.

EM-OMNI-015-020822

the convenience of a pager, answering machine, and modem in one phone, and the proposed modification is in support of T-Mobile's PCS network. The public need for "Wideband PCS" facilities has been determined by the FCC to be sufficient to allow the operation of up to six competing companies with overlapping coverage areas.

Discussion

The existing facility consists of an eighty-six foot (86'-0") electric transmission tower, owned by CL&P (see design drawing 2, C-2 attached as Exhibit C). The coordinates for the site are 41°-12'-23" N and 73°-13'-21" W. The tower is approximately thirty-three hundred (3,300) feet south of the Merritt Parkway (Route 15) and approximately one thousand feet (1,000') west of Main Street in the northern portion of Bridgeport. The tower is approximately fifteen hundred feet (1,500') south of the Trumbull town line (see site location topo map, attached as Exhibit B). The facility is accessed by a gated, gravel access road off of Oxbrook Drive, roughly fifty feet (50') west of its intersection with Anton Drive. The CL&P overhead transmission wires run east-west from the facility (see site plan 1, C-1, attached as part of Exhibit C).

Currently, the tower holds T-Mobile equipment at the ninety-three foot (93'-0") centerline above ground level ("AGL"). T-Mobile's proposal calls for the removal of its existing three (3) panel antenna array, currently mounted on a clamp-on pipe mast configuration. This configuration would be replaced by twelve (12) new panel antennas mounted on a triangular, low-profile platform, attached to the top of a PowerMount pole. The antenna configuration is a cluster of three (3) sectors with four (4) antennas per sector. A tower elevation is shown in drawing 2, C-2, attached as part of Exhibit C. The PowerMount pole is designed and installed by Tectonic Engineering and CL&P to assure compatibility with CL&P structures and equipment. The model number for the replacement antennas is EMS RR90-17-02DP. A structural analysis 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 without any modification to the tower. According to the structural analysis, foundation reinforcement will be required. This reinforcement is shown in drawing 2, C-2, attached as part of Exhibit C. Two (2) new Nortel S8000 equipment cabinets will be installed adjacent to, and slightly south of the existing cabinet. To accommodate the new cabinets the existing fence will be extended ten feet six inches (10'-6") to the south and a new nine foot by twelve foot (9' x 12') concrete pad will be installed (see pad detail on drawing 2, S-3, attached as part of Exhibit C). All of these proposed modifications will take place in the CL&P right-of-way, immediately adjacent to the base of the existing CL&P tower (see site plan 1, C-1, attached as part of Exhibit C).

The planned modifications to the Bridgeport 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 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. While the fenced equipment area will be modified slightly, the area is within the CL&P right-of-way and beneath the overhead transmission wires.
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 E.

For the foregoing reasons, T-Mobile respectfully submits that the proposed addition of antennas and equipment at the Bridgeport 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,

T-MOBILE USA, INC.

By: 
Its Counsel
Stephen J. Humes
Diane W. Whitney

cc: Bridgeport Mayor, Joseph P. Ganim
Bridgeport Assistant City Attorney, Melanie J. Howlett

Exhibit A

CL&P Letter of Authorization

**280 Oxbrook Drive
Bridgeport, Connecticut**



**Northeast
Utilities System**

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270
(860) 665-5000

July 16, 2002

Voicestream Wireless
c/o Stephen J. Humes, Esq.
100 Philley Street
Bloomfield, CT 06002

Re: Site Permitting Authorization

Dear Mr. Humes:

Authorization is hereby given to Voicestream Wireless, its employees and its duly authorized agents and independent contractors (hereinafter collectively referred to as "Voicestream"), to apply for any and all local municipal, state and federal licenses, permits and approvals, including but not limited to Connecticut Siting Council, building permits, zoning variances, zoning special exceptions, site plan and subdivision approvals, driveway, wetlands and terrain alteration permits, which are or may be necessary or required for Voicestream to construct, operate and maintain a wireless communications system (PCS System), and/or antenna site on the following property over which The Connecticut Light & Power Company (CL&P) has easement rights:

Oxbrook Road
Bridgeport, Connecticut

The foregoing authorization is given subject to the following conditions:

1. This authorization shall be nonexclusive. Nothing herein shall prevent or restrict CL&P from authorizing any other person or entity to apply for any similar licenses, permits or approvals to construct, operate and maintain any other communication system or facility of any type on the property at any time.
2. This authorization shall not obligate CL&P to pay for or reimburse any costs or expenses or to provide any assistance of any kind in connection with any applications, or bind or obligate CL&P to agree or be responsible for any on-site or off-site improvements, development restrictions, impact fees or assessments, capital improvement charges, bonds or other security, or any other fee, assessment, charge or expense imposed or required as a condition of any license, permit or approval. Voicestream shall be solely and fully responsible for all fees, charges costs and expenses of any kind in connection with any applications. CL&P agrees to reasonably cooperate with Voicestream in signing such applications or other similar documents as may be required in order for Voicestream to apply for any license, permit or approval.

3. This authorization shall not be deemed or construed to grant or transfer to Voicestream any interest in the property, whatsoever, and shall not in any respect obligate or require CL&P to sell, lease or license the Property to Voicestream or otherwise allow Voicestream to use or occupy the property for any purpose, regardless of whether any licenses, permits and approvals applied for by Voicestream for the property are granted. Voicestream understands and acknowledges that any and all applications filed by Voicestream for the property at Voicestream's sole risk and without any enforceable expectation that the property will be made available for Voicestream's use.
4. Voicestream shall be required to supply to CL&P, free of charge and contemporaneous with Voicestream's filing of same, a complete copy of any and all applications, plans, reports and other public filings made by Voicestream with any local, municipal, state or federal governmental or regulatory officer, agency board, bureau, commission or other person or body for any licenses, permits or approvals for the property, and to keep CL&P fully informed on a regular basis of the status of Voicestream's applications.
5. This authorization shall automatically expire six (6) months after the date of this letter, unless extended in writing by mutual agreement of CL&P and Voicestream.

Very truly yours,



Salvatore Giuliano, Manager
Real Estate and Land Planning

**AGREED TO ON BEHALF OF
VOICESTREAM WIRELESS**

By: _____
Duly Authorized

Date: _____

RWO/

K:\Dept\data\Real_Est\Real Estate Operations\RWO\Site Permits\
Voicestream - Bridgeport site 424.doc

Exhibit B

Site Map

**280 Oxbrook Drive
Bridgeport, Connecticut**

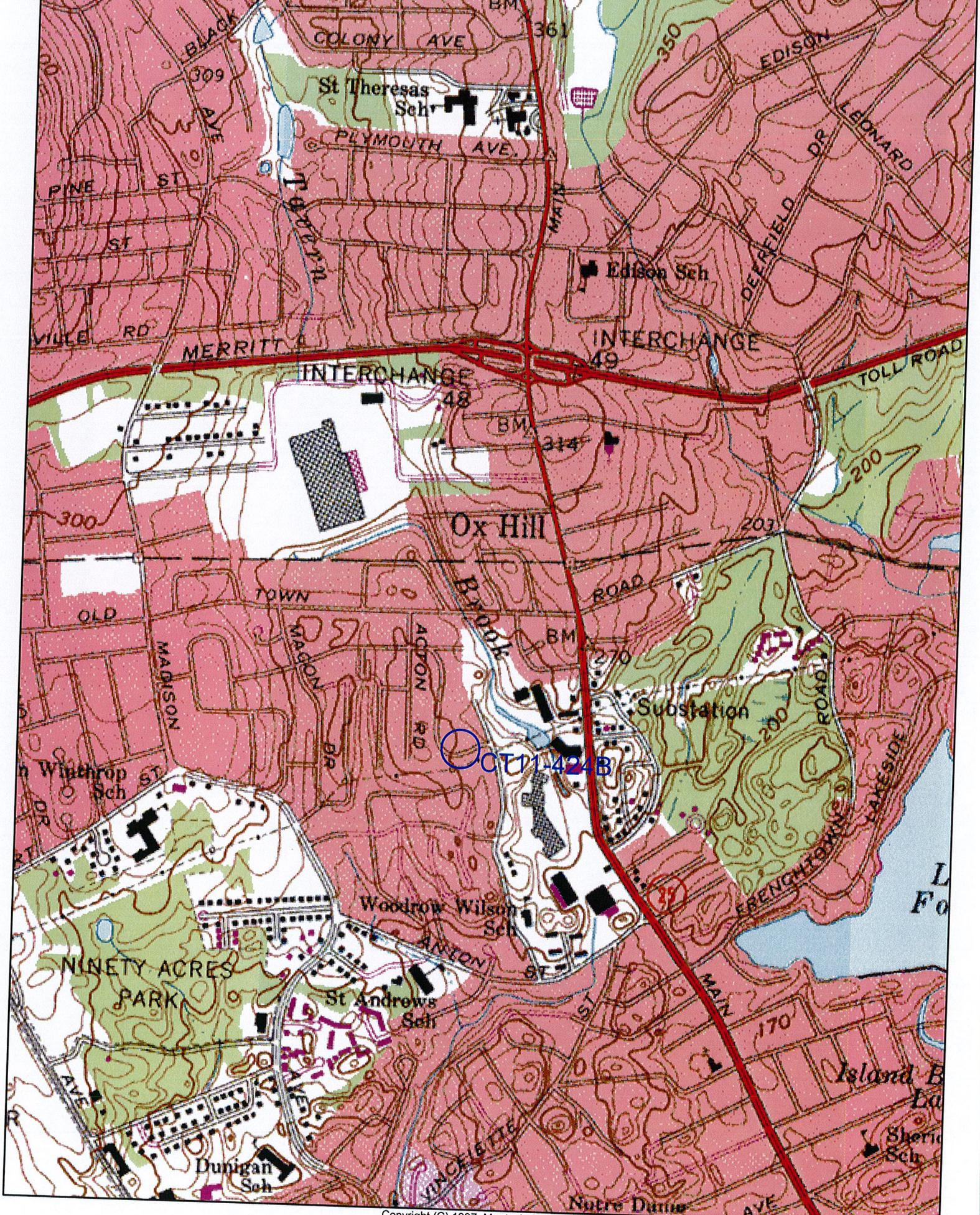
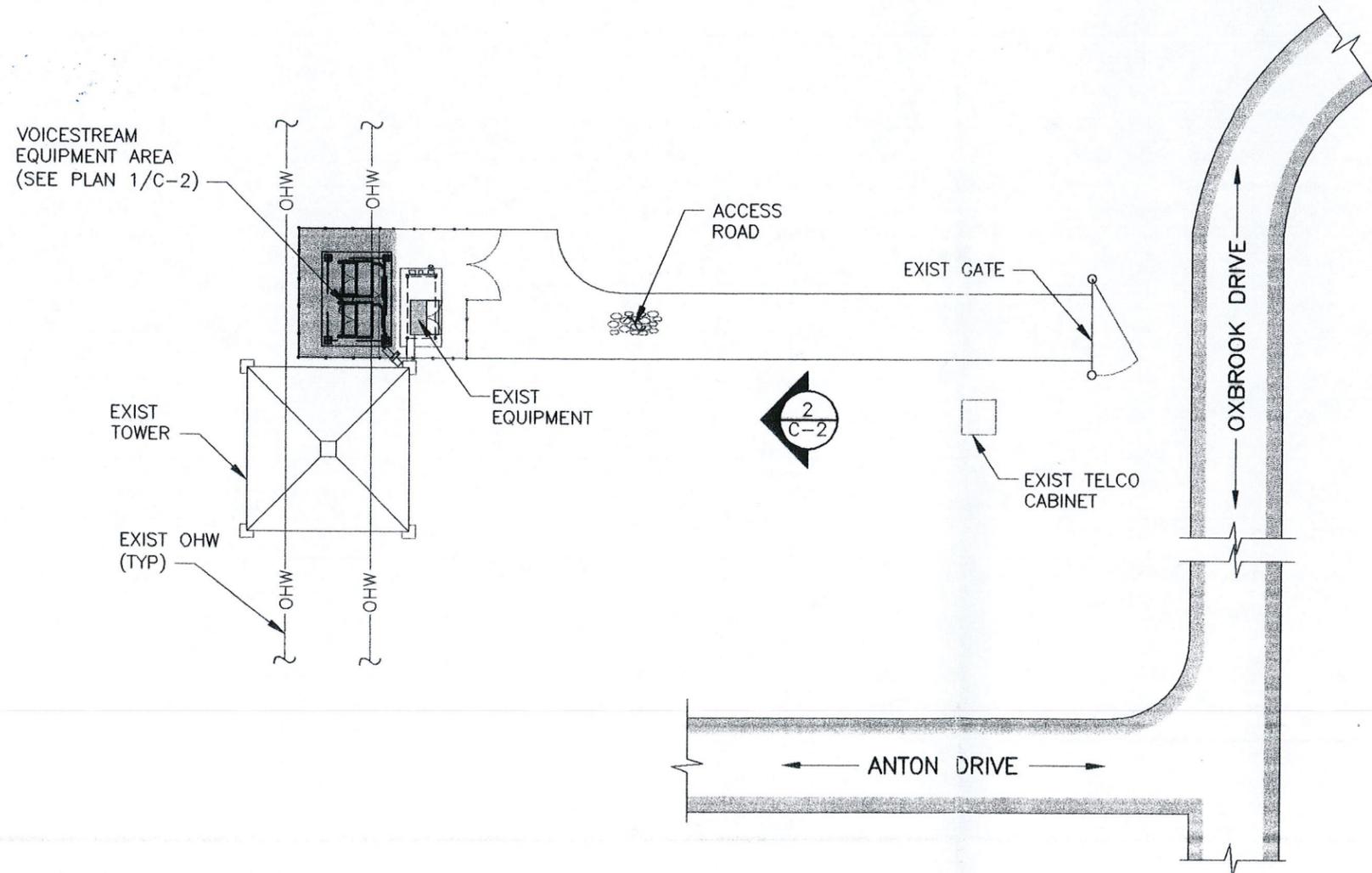


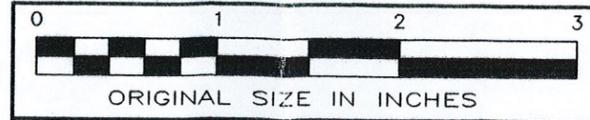
Exhibit C

Design Drawings and Equipment Specifications

**280 Oxbrook Drive
Bridgeport, Connecticut**



1
C-1 SITE PLAN
SCALE: 1" = 20'



COPIES FROM THE ORIGINAL OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL OF THE STAMP OR EMBOSSED SEAL OF THE PROFESSIONAL ENGINEER/LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.

TECTONIC ENGINEERING CONSULTANTS P.C.
 955 LITTLE BRITAIN ROAD
 NEW WINDSOR, NY 12553
 OFFICE: (845) 567-6656
 FAX: (845) 567-8703

OMNIPPOINT COMMUNICATIONS INC.
 a subsidiary of
VoiceStream WIRELESS
 OMNIPPOINT WIRELESS OFFICE: (203) 855-5431
 25 VAN ZANT STREET EAST NORWALK, CT 06855 FAX: (203) 855-5482

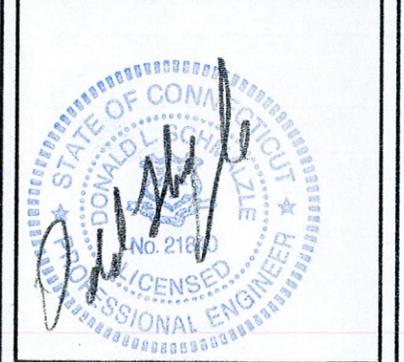
APPROVALS

OMNIPPOINT _____
 LANDLORD _____
 RF _____
 CONSTRUCTION _____

PROJECT NUMBER 2356.11424 DESIGNED BY CB

REV	DATE	REVISION	DRAWN BY
0	8/7/01	FOR COMMENTS	KSW
1	8/9/01	PER COMMENTS	LKL
2	11/5/01	FOR REVIEW	KSW
3	8/12/02	FOR CONSTRUCTION	KSW

ISSUED BY *J. Schell* DATE 8/12/02

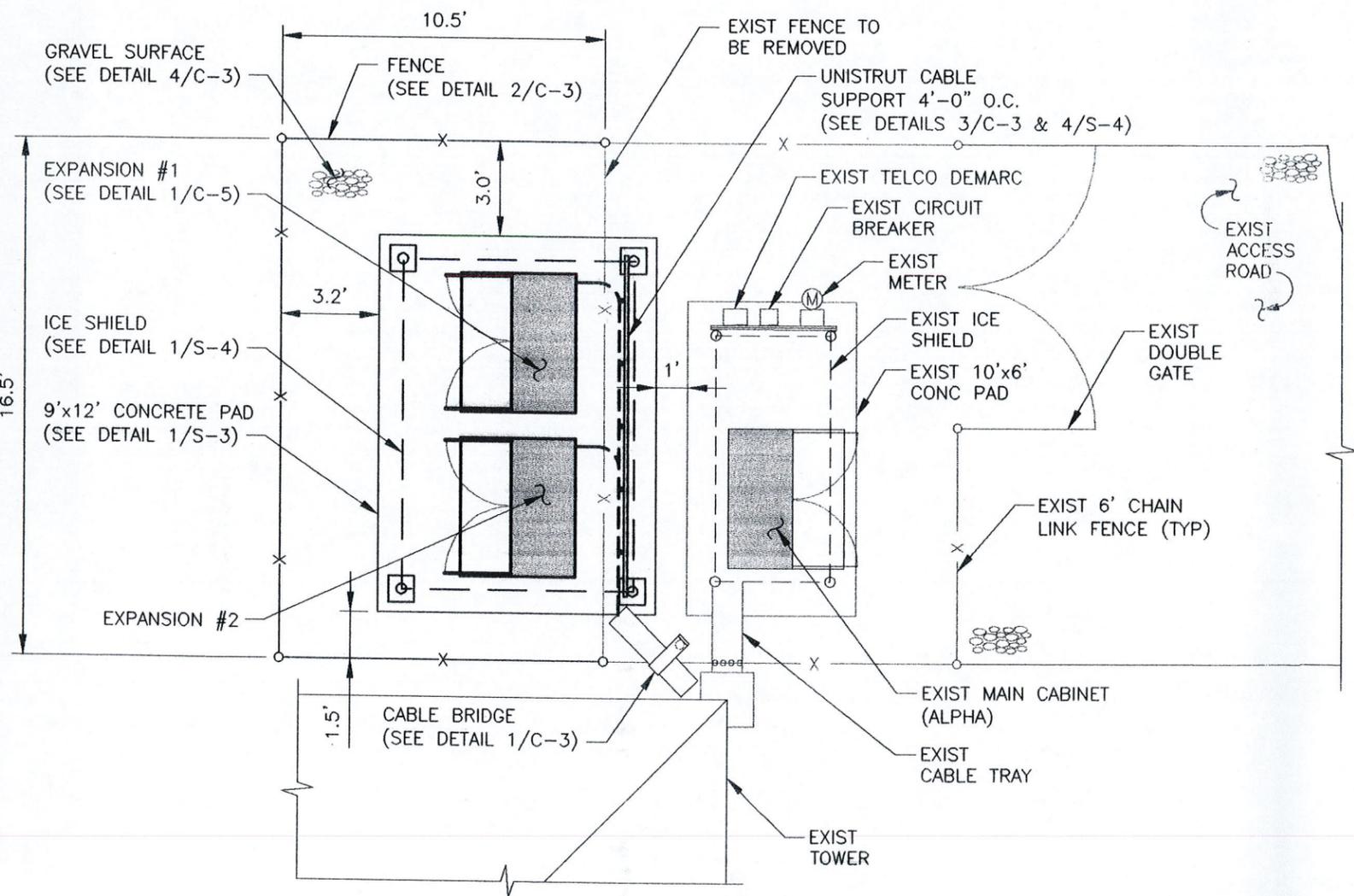


SITE INFORMATION

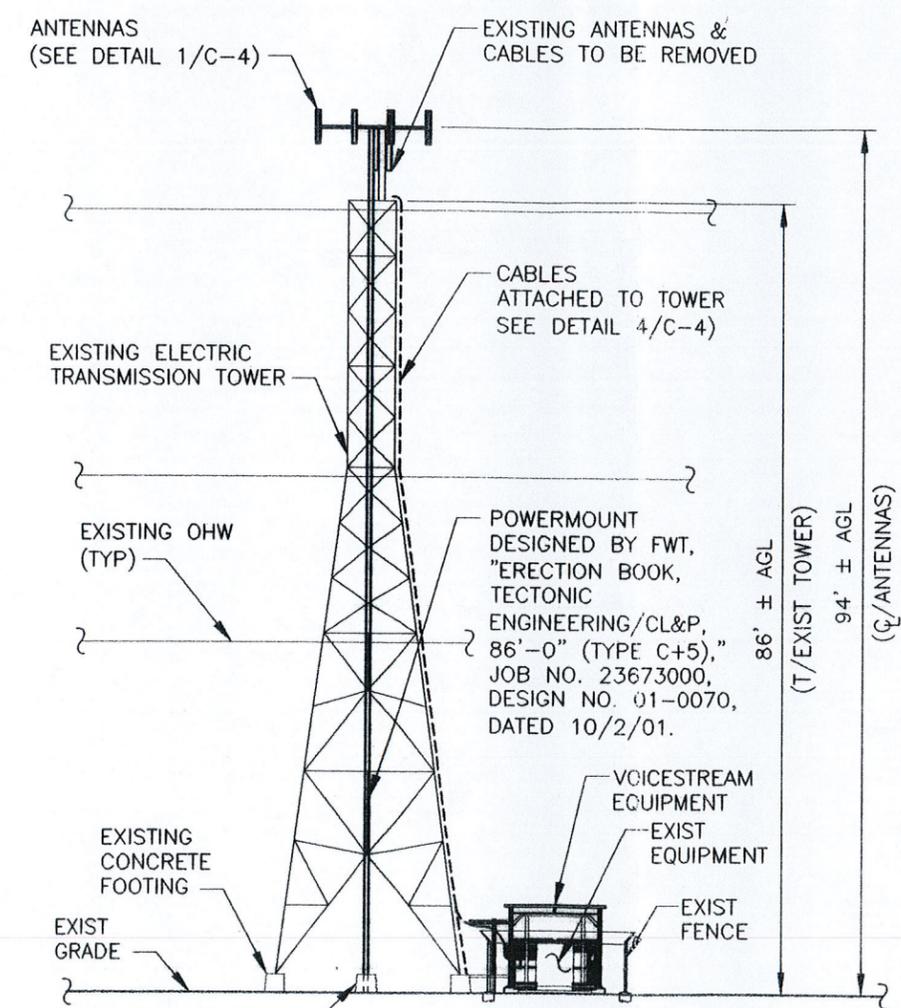
CT-11-424-B
 TRUMBULL/MP/X49
 280 OXBROOK DRIVE
 CL&P #860
 BRIDGEPORT, CT

SHEET TITLE
 PARTIAL SITE PLAN

SHEET NUMBER
 C-1

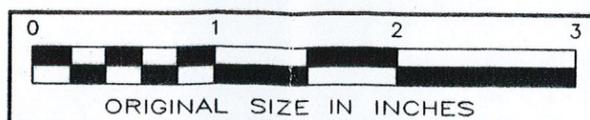


1 SITE DETAIL PLAN
C-2 SCALE: 1" = 5'



POWERMOUNT FOUNDATION DESIGNED BY FWT, "ERECTION BOOK, TECTONIC ENGINEERING/CL&P, 86'-0" (TYPE C+5)," JOB NO. 23673000, DESIGN NO. 01-0070, DATED 10/2/01.

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



COPIES FROM THE ORIGINAL OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL OF THE LAND OR EMBOSSED SEAL OF THE PROFESSIONAL ENGINEER/LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.

TECTONIC ENGINEERING CONSULTANTS P.C.
955 LITTLE BRITAIN ROAD OFFICE: (845) 567-8656
NEW WINDSOR, NY 12553 FAX: (845) 567-8703

OMNIPONT COMMUNICATIONS INC.
a subsidiary of
VoiceStream WIRELESS
OMNIPONT WIRELESS OFFICE: (203) 855-5431
25 VAN ZANT STREET FAX: (203) 855-5482
EAST NORWALK, CT 06855

APPROVALS

OMNIPONT _____
LANDLORD _____
RF _____
CONSTRUCTION _____

PROJECT NUMBER 2356.11424 DESIGNED BY CB

REV	DATE	REVISION	DRAWN BY
△	8/7/01	FOR COMMENTS	KSW
△	8/9/01	PER COMMENTS	LKL
△	11/5/01	FOR REVIEW	KSW
△	8/12/02	FOR CONSTRUCTION	KSW

ISSUED BY *JCF* DATE 8/12/02



SITE INFORMATION

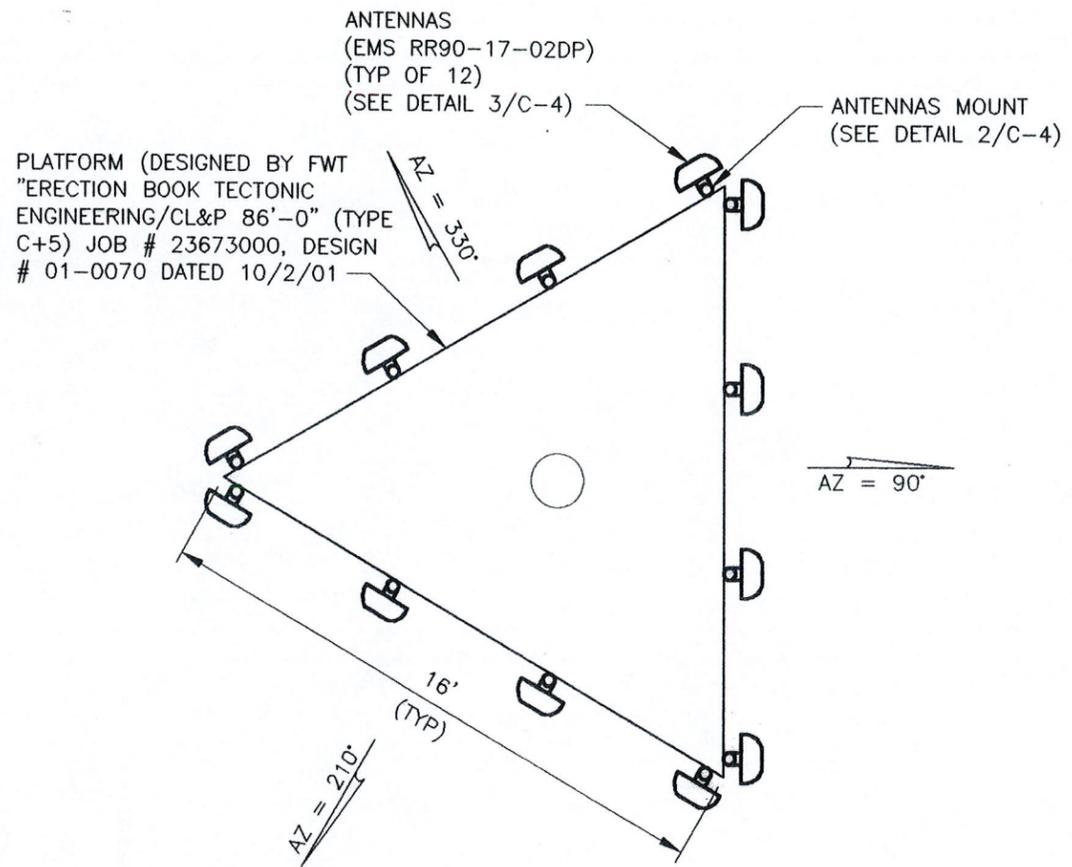
CT-11-424-B
TRUMBULL/MP/X49
280 OXBROOK DRIVE
CL&P #860
BRIDGEPORT, CT

SHEET TITLE

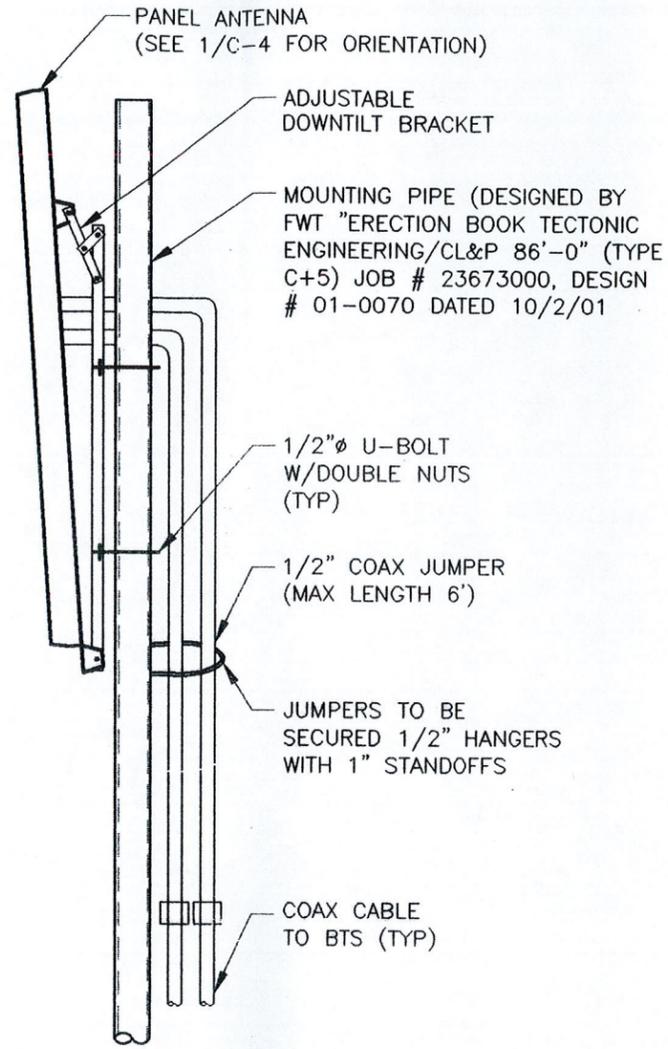
SITE DETAIL PLAN & ELEVATION

SHEET NUMBER

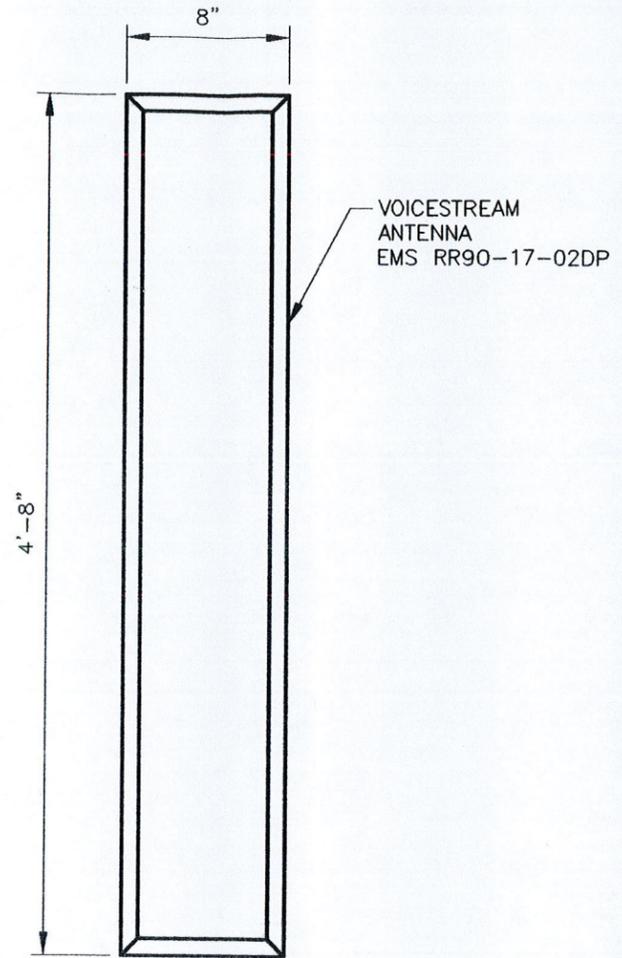
C-2



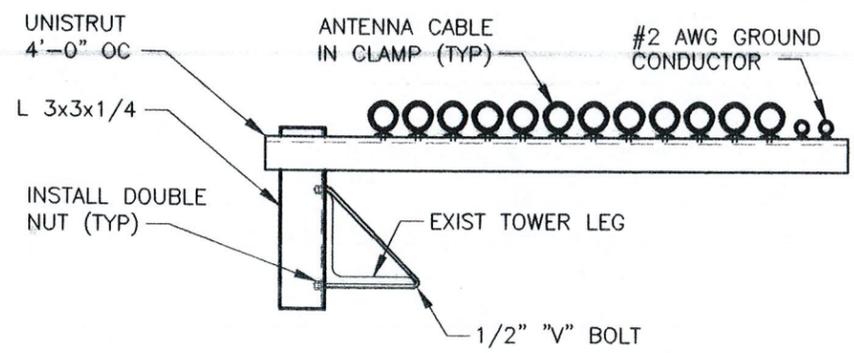
1 ANTENNA PLAN
C-4 SCALE: 1" = 5'



2 ANTENNA POLE
C-4 SCALE: 3/4" = 1'-0"

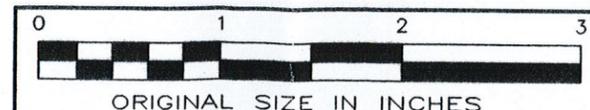


3 DETAIL
C-4 SCALE: 1" = 1'-0"



4 DETAIL
C-4 SCALE: 1"=1'-0"

- NOTES:
1. INSTALL STEEL FORMED PLATE TO EXISTING TOWER LEG AT LOCATIONS THAT DO NOT INTERFERE WITH EXISTING BRACING MEMBERS.
 2. ANTENNA CABLE AND HANGER TO BE PAINTED TO MATCH COLOR OF TOWER
 3. DO NOT INSTALL COAX SUPPORTS ON CLIMBING LEG.



COPIES FROM THE ORIGINAL OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL OF THE STAMP OR EMBOSSED SEAL OF THE PROFESSIONAL ENGINEER/LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.

TECTONIC ENGINEERING CONSULTANTS P.C.
855 LITTLE BRITAIN ROAD OFFICE: (845) 567-6656
NEW WINDSOR, NY 12553 FAX: (845) 567-8703

OMNIPONT COMMUNICATIONS INC.
a subsidiary of
VoiceStream WIRELESS
OMNIPONT WIRELESS OFFICE: (203) 855-5431
25 VAN ZANT STREET FAX: (203) 855-5482
EAST NORWALK, CT 06855

APPROVALS
OMNIPONT _____
LANDLORD _____
RF _____
CONSTRUCTION _____

PROJECT NUMBER 2356.11424 DESIGNED BY CB

REV	DATE	REVISION	DRAWN BY
0	8/7/01	FOR COMMENTS	KSW
1	8/9/01	PER COMMENTS	LKL
2	11/5/01	FOR REVIEW	KSW
3	8/12/02	FOR CONSTRUCTION	KSW

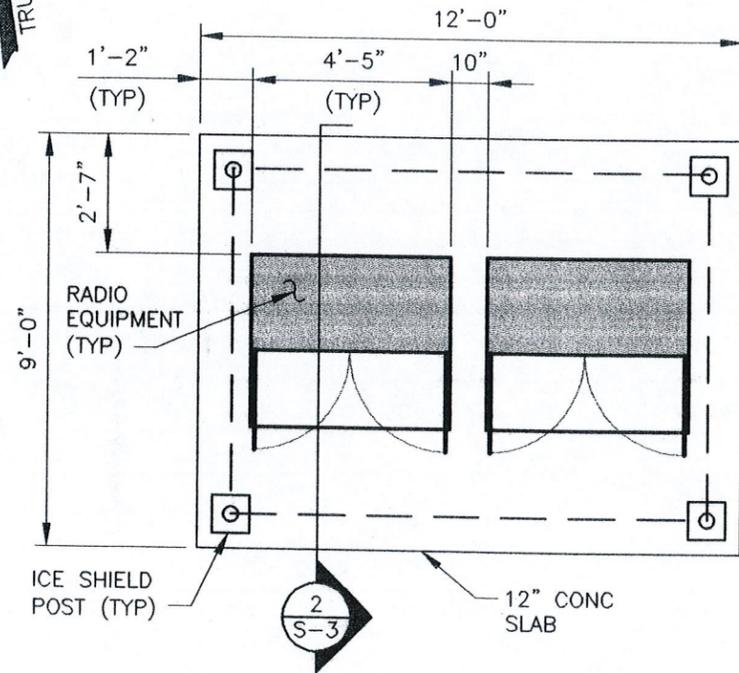
ISSUED BY: *[Signature]* DATE: 8/12/02



SITE INFORMATION
CT-11-424-B
TRUMBULL/MP/X49
280 OXBROOK DRIVE
CL&P #860
BRIDGEPORT, CT

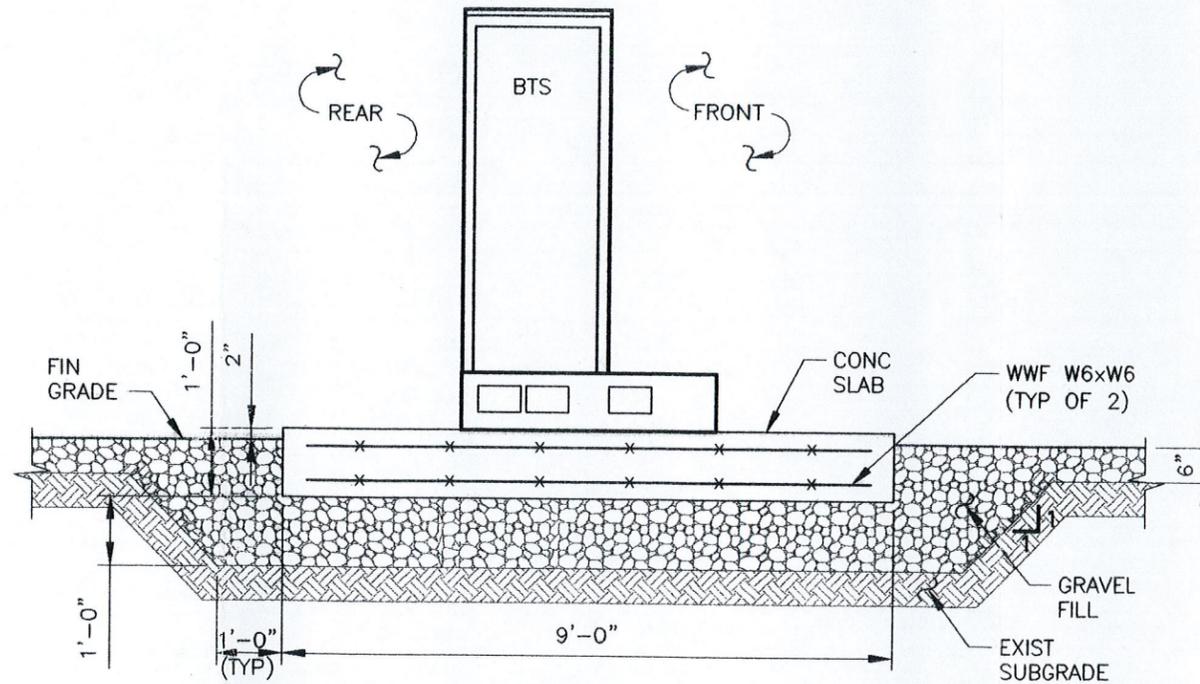
SHEET TITLE
ANTENNA DETAIL

SHEET NUMBER
C-4



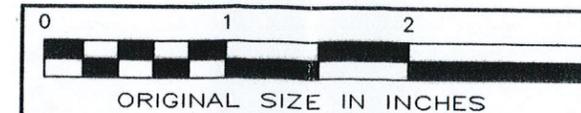
- NOTE:
 1. COORDINATE ALL EQUIPMENT CABINET DIMENSIONS WITH MANUFACTURER.
 2. REFER TO SITE PLAN FOR EQUIPMENT ORIENTATION.

1 EQUIPMENT SLAB PLAN
 S-3 SCALE: 1/4" = 1'-0"



- NOTE:
 SLAB ON GRADE SHALL BE PLACED OVER A MIN OF 12" GRAVEL TO BE AASHTO NO. 57 OR MID CR-6 ON UNDISTURBED OR WELL COMPACTED SOIL TO BEARING PRESSURE OF 2000 PSF MIN.

2 BTS FOUNDATION
 S-3 SCALE: 3/8" = 1'-0"



COPIES FROM THE ORIGINAL OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL OF THE STAMP OR EMBOSSED SEAL OF THE PROFESSIONAL ENGINEER/LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.

TECTONIC ENGINEERING CONSULTANTS P.C.
 955 LITTLE BRITAIN ROAD NEW WINDSOR, NY 12553 OFFICE: (845) 567-6666 FAX: (845) 567-8703

OMNIPPOINT COMMUNICATIONS INC.
 a subsidiary of
VoiceStream WIRELESS
 OMNIPPOINT WIRELESS OFFICE: (203) 855-5431
 25 VAN ZANT STREET FAX: (203) 855-5482
 EAST NORWALK, CT 06855

APPROVALS

OMNIPPOINT _____
 LANDLORD _____
 RF _____
 CONSTRUCTION _____

PROJECT NUMBER 2356.11424 DESIGNED BY CB

REV	DATE	REVISION	DRAWN BY
△	8/7/01	FOR COMMENTS	KSW
△	8/9/01	PER COMMENTS	LKL
△	11/5/01	FOR REVIEW	KSW
△	8/12/02	FOR CONSTRUCTION	KSW

ISSUED BY JCS/LL DATE 8/17/02



SITE INFORMATION

CT-11-424-B
 TRUMBULL/MP/X49
 280 OXBROOK DRIVE
 CL&P #860
 BRIDGEPORT, CT

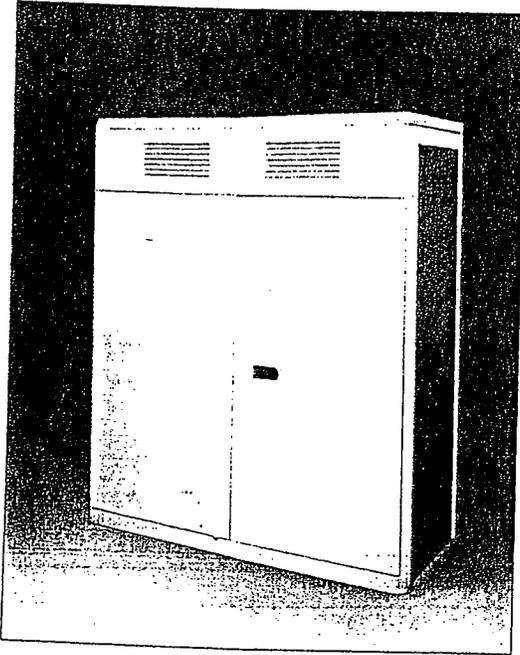
SHEET TITLE

EQUIPMENT LAYOUT & FOUNDATION

SHEET NUMBER

S-3

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.

• Technical Data

• 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.

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>

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

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

Nortel Matra Cellular
BP 50
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

In Canada:
Northern Telecom
2920 Matheson Boulevard East
Mississauga ON L4W 4M7
Canada
Telephone: 1-800-4 NORTEL

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

In Asia:
Northern Telecom (Asia) Limited
151 Lorong Chuan
#02-01 New Tech Park
Singapore 1955
Telephone: (65) 287-2877

©1996 Northern Telecom Limited
Publication Reference S80.INS.0696
Printed in France

*Nortel and A World of Networks are
trademarks of Northern Telecom Limited.

Information subject to change. Northern
Telecom reserves the right to make
changes, without notice, in equipment
design as engineering or manufacturing
methods warrant.

NORTEL
NORTHERN TELECOM

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 $+50^{\circ}\text{C}$ ($+122^{\circ}\text{F}$).

Consumption

BTS input voltage:

- GSM 900/1800
 - nominal voltage contained between 220V AC and 240V AC
 - minimum voltage: $220 - 10\% = 198\text{V AC}$
 - maximum voltage: $240 + 6\% = 254\text{V AC}$
- GSM 1900 (with DACS)
 - nominal voltage: 208V AC to 240V AC
 - minimum voltage: $208 - 10\% = 187\text{V AC}$
 - maximum voltage: $240 + 6\% = 254\text{V AC}$
- GSM 1900 (with ACU and/or the power system six-rectifier type)
 - nominal voltage: 240V AC
 - minimum voltage: $240 - 10\% = 187\text{V AC}$
 - maximum voltage: $240 + 6\% = 254\text{V AC}$

NON - PREMIUM
BTS ONLY

Exhibit D

Structural Analysis

**280 Oxbrook Drive
Bridgeport, Connecticut**

VOICESTREAM WIRELESS: TRUMBULL/MP/X49
SITE ID No. CT-11-424B
W.O. 2356.11424
EXISTING 86' TRANSMISSION TOWER #860
BRIDGEPORT, CT
STRUCTURAL ANALYSIS REPORT – REVISION 3
OCTOBER 9, 2001

1.0 INTRODUCTION

The existing Northeast Utilities transmission tower no. #860 is located at 280 Oxbrook Drive in Bridgeport, CT. VoiceStream Wireless anticipates upgrading its existing antenna installation on this tower in the near future.

Tectonic Engineering Consultants, P.C. has performed a structural analysis of the tower. The analysis was to verify the adequacy of the tower for supporting the proposed installation in accordance with requirements provided by Northeast Utilities.

This report summarizes the results of our analysis and provides recommendations for the proposed installation.

This revision incorporates corrected reactions from the PowerMount, as provided by the manufacturer.

1.1 Information Provided

For the purpose of the analysis, Tectonic was furnished with the following drawings by American Bridge Company:

1. Angle Tower "B", Angle Tower "C", drawing no. T-7962, inquiry no. T-4525, contract no. J-6125, dated 10/21/49.
2. Diagram of Angle Tower "C", customers order no. 20406, order no. J6125, sheet E5, dated 11/14/49.
3. Bolts – Washers etc. Required for One Structure, customers order no. 20406, order no. J6125, sheet nos. B13 and B22, not dated.
4. Anchor for Susp. Tower "C", customers order no. 20406, order no. J6125, sheet no. F3, dated 8/16/49.
5. Flexible Hangers, Tower B&C, customers order no. 20406, order no. J6125, sheet nos. F6 and F7, dated 11/14/49.
6. Tower details, customers order no. 20406, order no. J6125, various dates, (total 7 sheets).

In addition to the above, the following information was also provided:

7. LE Tech Visit Summary Sign-Off, site I.D. #: CT-11-424B, site name: Line 1730, #860, by VoiceStream Wireless, dated 12/12/00.
8. "Site Layout", prepared by Arcnet Architects, Inc. for Omnipoint

- Communications, Arcnet project no. A98.506-789A, drawing no. A-1, dated 10/22/98.
9. "Equipment Layout", prepared by Arcnet Architects, Inc. for Omnipoint Communications, Arcnet project no. A98.506-789A, drawing no. A-2, dated 10/22/98.
 10. "North Elevation", prepared by Arcnet Architects, Inc. for Omnipoint Communications, Arcnet project no. A98.506-789A, drawing no. A-3, dated 10/22/98.
 11. "PJF – Transmission Platform", by Paul J. Ford and Company, drawing no. 41, not dated.
 12. Email from VoiceStream, Subject: A&E for CT11-424B, dated 3/21/01.
 13. Wire load calculations for Str. #860, by Northeast Utilities, dated 11/13/98, (3 pages).
 14. Criteria for Design of PCS Facilities on or Extending above Metal Electric Transmission Towers and Analysis of Transmission Towers Supporting PCS Masts, by Northeast Utilities, dated 7/20/99.
 15. Design Criteria Table Converting TIA/EIA Requirements to Equivalent Northeast Utility Design Requirements, by Northeast Utilities, dated 7/27/99.
 16. "Erection Book, Tectonic Engineering / CL&P", by FWT, Inc., job no. 23673000, design no. 01-0070, revision 1, dated 10/2/01.
 17. Comments from R. Drasdis, Northeast Utilities, dated 8/20/01 and 10/1/01.
 18. "PowerMount Pipe Reactions", by FWT, Inc., FWT Design P01-0070, FWT Job #23673000, revision 3, dated 10/5/01.

2.0 ORIGINAL TOWER DESIGN

2.1 Tower Structure

The tower was originally designed by American Bridge Company in 1949 for The Connecticut Light & Power Co., and was designated as Angle Tower "C".

The existing tower #860 is a four-legged, self-supporting, double circuit square tower. It consists of an 81'-0" long body divided into five (5) sub-sections of various lengths and 5'-0" leg extensions on each leg at the base for a total height of 86'-0". The top portion of the tower includes three (3) cross arms, each having conductor attachments, and a shield wire peak at the top.

The tower is approximately 21'-4" wide (back to back of legs) at the base, tapering uniformly to a width of approximately 5'-0" at the bottom cross arm level, which is 59' above the base. The tower has a uniform width of 5'-0" from the 59' level to the 86' level. The bottom, middle and top cross arms are located at the 59', 69' and 81' levels.

The tower is X-braced for its entire height. Horizontal members are present at various elevations. The tower utilizes single steel angles for all members, except for the hangers of the cross arms, which are steel bars. All connections are bolted.

A diagram of the structure is presented in Figure 1, attached.

2.2 Loading Criteria

The original design loads are listed on the American Bridge Company drawing provided. However, no specific information regarding the original design criteria was made available.

2.3 Tower Foundation

No information on the original tower foundation design or site soil parameters was made available. The exposed portion of foundation is an approximately 2' square block extending approximately 3' above grade at each leg. A single stub angle cast in the concrete block connects with tower leg.

The exposed portion of the existing foundation appears to be in generally good condition.

3.0 EXISTING CONFIGURATION

According to the information listed in the wire load calculations provided, the existing tower is currently installed at a line angle of 18.36°, a wind span of 648' and a weight span of 800'. The maximum designed line angle, wind span and weight span were not provided.

The existing tower is supporting one (1) 7#9 CW shield wire and one (1) OPGW96 fiber optic cable at the top, and six (6) 556 MCM ACSR conductors.

The existing tower is also supporting the following items:

- 3 EMS RR90-17-00DP or similar panel antennas at approximately the 93' level (centerline), mounted on a clamp-on pipe mast at the top of the existing tower
- 6 1-1/4" diameter coaxial cables on a waveguide ladder to the 123' level
- 1 1' square microwave antenna at approximately the 88' level
- 1 7/8" diameter coaxial cable on the same waveguide ladder to the 88' level

4.0 PROPOSED INSTALLATION

It is our understanding that the existing antennas, mast, and coaxial cables will be

removed, and the following items are proposed to be added to the tower by VoiceStream Wireless:

- 1 12.75" diameter by approximately 94' tall PowerMount pole, braced to the tower at various elevations
- 12 EMS RR90-17-02DP antennas at the 94' level (centerline), mounted four (4) per sector on a 16' wide platform on top of the PowerMount
- 24 1-1/4" diameter cables on the existing waveguide ladder to the 94' level

Although it is common practice to route the cables up through the PowerMount pole, we expect that sufficient space will not be available within the pole for the required quantity of cables.

5.0 STRUCTURAL ANALYSIS

5.1 Current Loading Criteria

The design of electrical transmission line structures is governed by the National Electrical Safety Code (NESC) and ASCE 10-97 "Design of Latticed Steel Transmission Structures". Additional design constraints are imposed by the electrical utilities to account for special design considerations.

The design of antenna supports is governed by ANSI/TIA/EIA-222-F-1996 "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". From this document, a basic wind speed of 85 mph applies to Fairfield County, CT where the tower is located. The 1999 Connecticut supplement to the BOCA National Building Code – 1996 requires a wind speed of 80 mph within the Town of Bridgeport, which will not govern the design. Ice loads have been established based on a 0.5" radial ice thickness in accordance with industry standard practice. A reduced wind speed of 74 mph is used in conjunction with this ice load.

The loading conditions considered in our analysis of the tower including all the applicable code requirements and the requirements stipulated by the utility are summarized as follows:

Loading Condition (LC)	Pressure (psf)		Radial Ice (in)		Overload Factors		
	Wire	Tower	Wire	Tower	Wind	Weight	Wire Tension
1. NESC Heavy	4	4	0.5	0	2.50	1.50	1.65
2. Heavy Ice	0	0	1.0	0	1.15	1.15	1.15
3. Extreme Wind	20	21	0	0	1.15	1.15	1.15
Note: Wind force on the tower is calculated based on 2.0 times the net projected area of one tower face, and a shape factor of 1.6.							

Loads acting on the conductors, shield wire and the fiber optic cable for each loading condition were provided by Northeast Utilities.

5.2 Procedure

The tower has been analyzed with PLS – Tower, a specialized, three-dimensional structural analysis program, using the dimensions and member sizes indicated in the American Bridge Company drawings provided.

The analysis included the tower with the existing conductors, shield wire and fiber optic cable along with the proposed installation described in Section 4.0, using the loading criteria summarized above.

The total loads on the tower under different load cases are listed in the following table:

LC	Conductor (lbs)		Shield Wire (lbs)		Fiber Optic Cable (lbs)		Proposed Installation (lbs)	
	Trans.	Vertical	Trans.	Vertical	Trans.	Vertical	Trans.	Vertical
1	4726	1984	2621	937	4097	1545	2193	0
2	3281	2909	1752	1773	2815	2465	0	0
3	3102	705	1212	236	2529	477	5753	0

The revised loads due to the proposed PowerMount, as provided by FWT, are applied at various levels of the existing tower.

5.3 Assumptions

Several assumptions were made in order to perform the analysis. We consider each of these to be both reasonable and consistent with current standards of practice.

1. Redundant members which are not intended to carry loads are not included in the model.
2. Member sizes and material properties are as indicated on the American Bridge Company drawings furnished.
3. Connections are assumed to be pinned. Details of connections are not modeled.
4. The wind loads applied to the tower due to the antenna installation are conservatively based on the full projected area of all antennas and mounts.
5. The connection of the tower to its foundation is considered as pinned.

5.4 Results

Tower member forces have been calculated and the member capacities have

been determined using current design criteria. The maximum usage of the most critical member in terms of its capacity under the proposed configuration (including antennas, cables and mounts) is summarized in the following table:

Loading Condition	Maximum Usage (%)	Critical Member Label	Member Type	Elevation (ft)
1	83	1101X	X-Bracing	27 - 42
2	96	1102XY	X-Bracing	27 - 42
3	82	1101X	X-Bracing	27 - 42

Details of all member forces are included in the computer analysis output attached to this report.

The maximum foundation reactions (per tower leg) result from the NESC Heavy loading condition (LC1), and are summarized as follows:

<u>Direction</u>	<u>Reaction</u>
Uplift	61.5 kips
Download	78.7 kips
Shear (transverse)	12.7 kips
Shear (longitudinal)	11.0 kips

6.0 CONCLUSIONS AND RECOMMENDATIONS

As a result of our analysis, we conclude that the existing tower has sufficient capacity to support the proposed installation. No structural problems for the tower are anticipated, and no modifications are necessary.

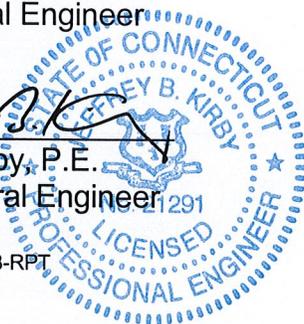
According to calculations recently performed by Northeast Utilities, the maximum uplift reaction will exceed the capacity of the existing foundation. Foundation reinforcement will be required.

Any further changes to the antenna configuration or other appurtenances should be reviewed with respect to their effect on structural loads prior to implementation.

Prepared by: Richard J. Dyer
Richard J. Dyer, E.I.T.
Staff Structural Engineer

Reviewed by: Jeffrey B. Kirby
Jeffrey B. Kirby, P.E.
Chief Structural Engineer

Date: 10/9/01



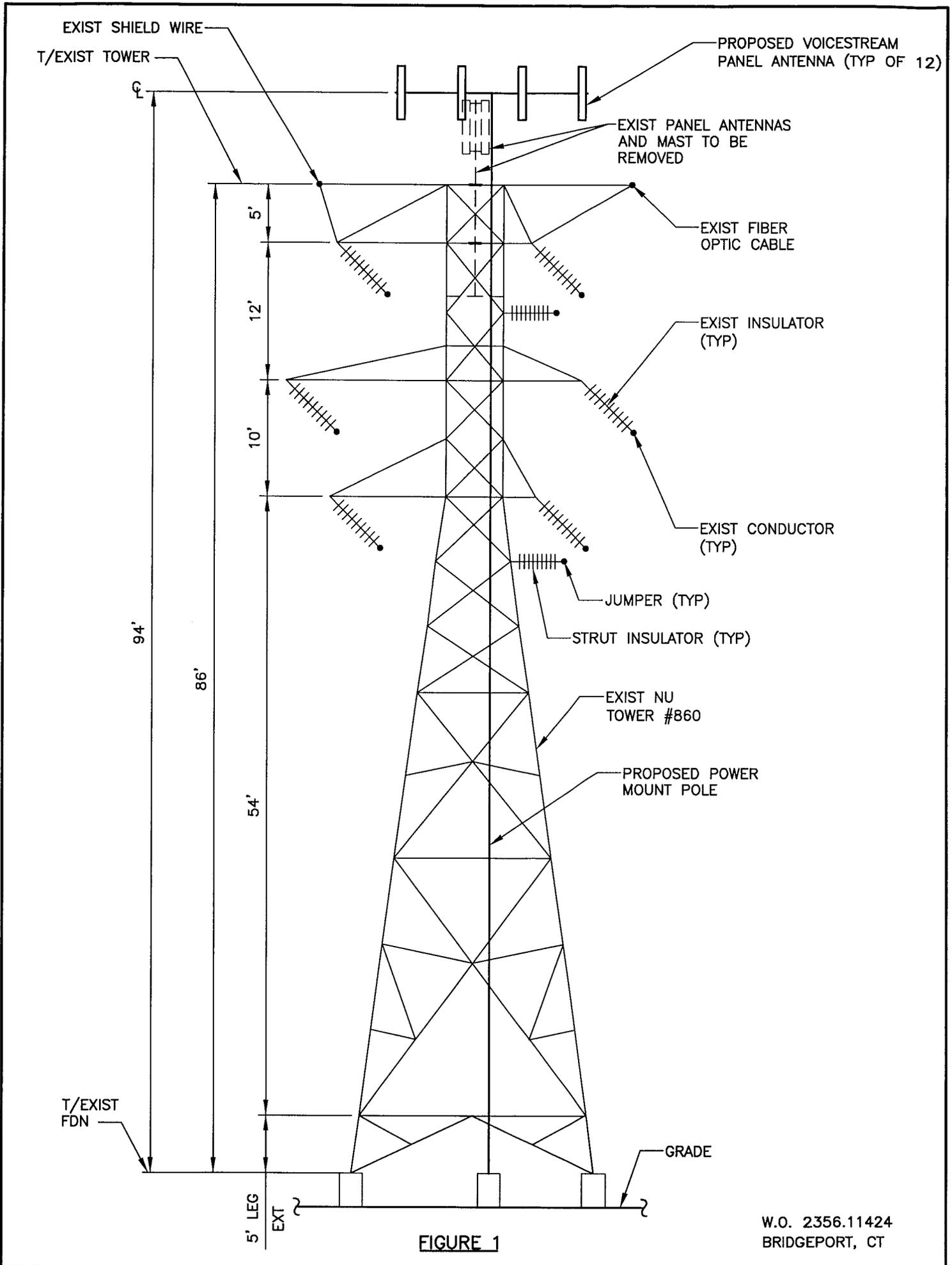


FIGURE 1

W.O. 2356.11424
BRIDGEPORT, CT

Exhibit E

Power Density Calculations

**280 Oxbrook Drive
Bridgeport, Connecticut**

Technical Memo

To: Karina Hansen

From: Solomon Berhe Radio Engineering Consultant

Subject: Power Density Report for CT-11-424B

Date: August 15, 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 Utility Pole at 290 Oxbrook Drive, Bridgeport, CT. This study incorporates the most conservative consideration 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:

1000

- 1) The emissions from Voicestream Wireless transmitters are in the 1930-1950 MHz frequency band.
- 2) The antenna cluster consists of three sectors, with 4 antennas per sector. The model number for each antenna is EMS EMS-RR90-17-02DP.
- 3) The antenna height is 94 ft.
- 4) The maximum transmit power from each sector is 1441.62 Watts Effective Radiated Power (EIRP), assuming 4 channels per sector.
- 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 VoiceStream Wireless Corporation PCS antenna installation on a Utility Pole at 290 Oxbrook Drive, Bridgeport, CT, is 0.035794 mw/cm^2 . This value represents only 3.5795% of the Maximum Permissible Emission (MPE) standard of 1000 microwatts per square centimeter (uw/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 telecommunications, AM band and FM band radio broadcast, TV, Police Communication, HAM Radio communications and other signals in the area.

Worst Case Power Density

Region 11 - Connecticut
Power Density Calculation

Site: CT-11-424B
Site Address: 290 Oxbrook Drive
Town: Bridgeport
Pole Height: 86FT
Tower Style: a Utility Pole

Base Station TX output	20 W
Number of channels	4
Antenna Model	EMS-RR90-17-02DP
Cable Size	1.5/8 "
Cable Length	114.0 ft
Antenna Height	94.0 ft
Ground Reflection	1
Frequency	1930.00 MHz
Jumper & Connector loss	2.62 dB
Antenna Gain	16.5 dBi
Cable Loss per foot	0.0116 Loss per/ft
Total Cable Loss	1.3224 dB
Total Attenuation	3.9424 dB
Total EIRP per channel (in Watts)	55.57 dB
Total EIRP per sector (in Watts)	360.40 W
	61.59 dB
	1441.62 W
	12.5576

Power Density (S) =	0.035794 mW / cm ²
% MPE =	3.5794%

Equation Used:

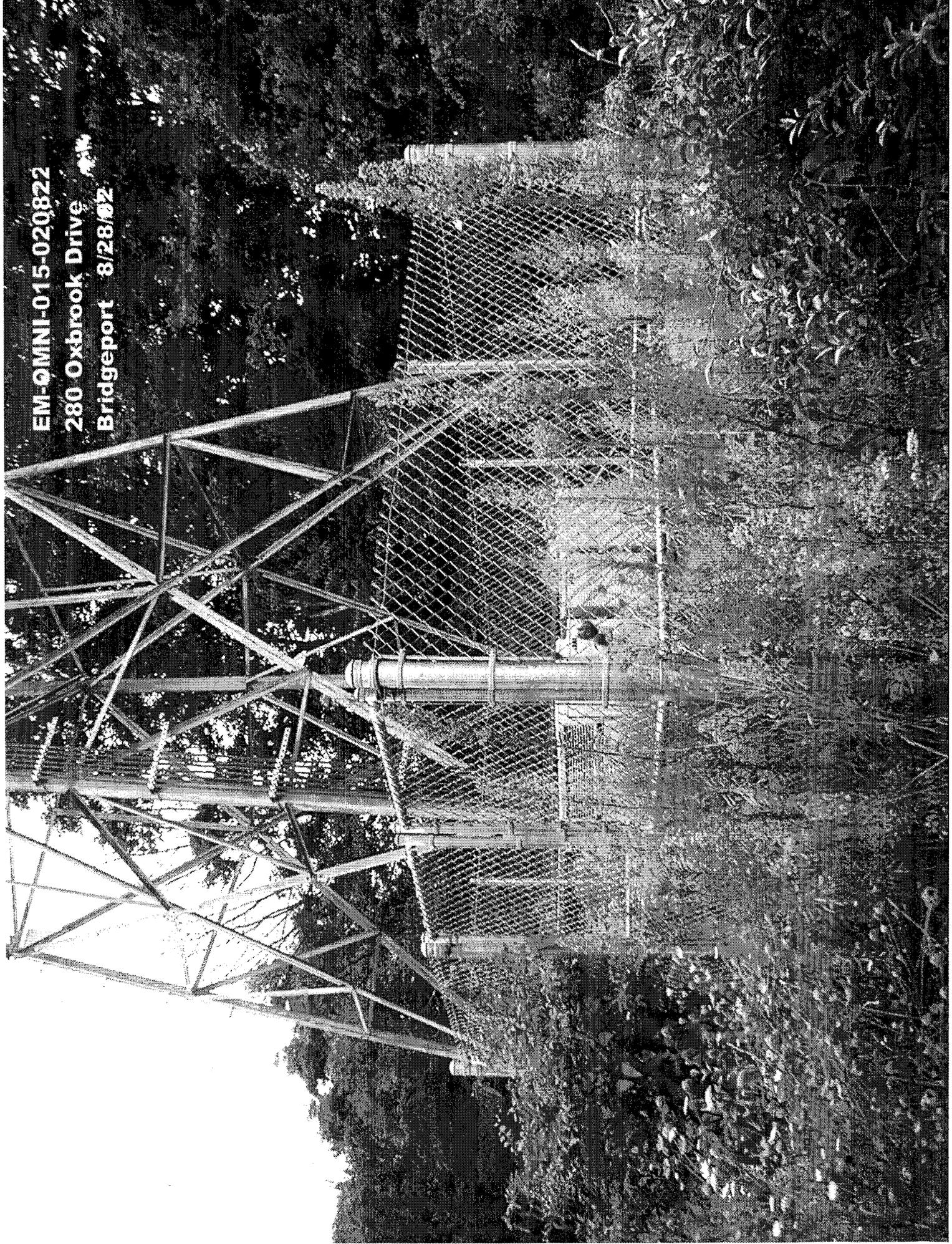
$$S = \frac{(1000)(gr)^2 (Power)^{10}}{4\pi (R)^2}$$

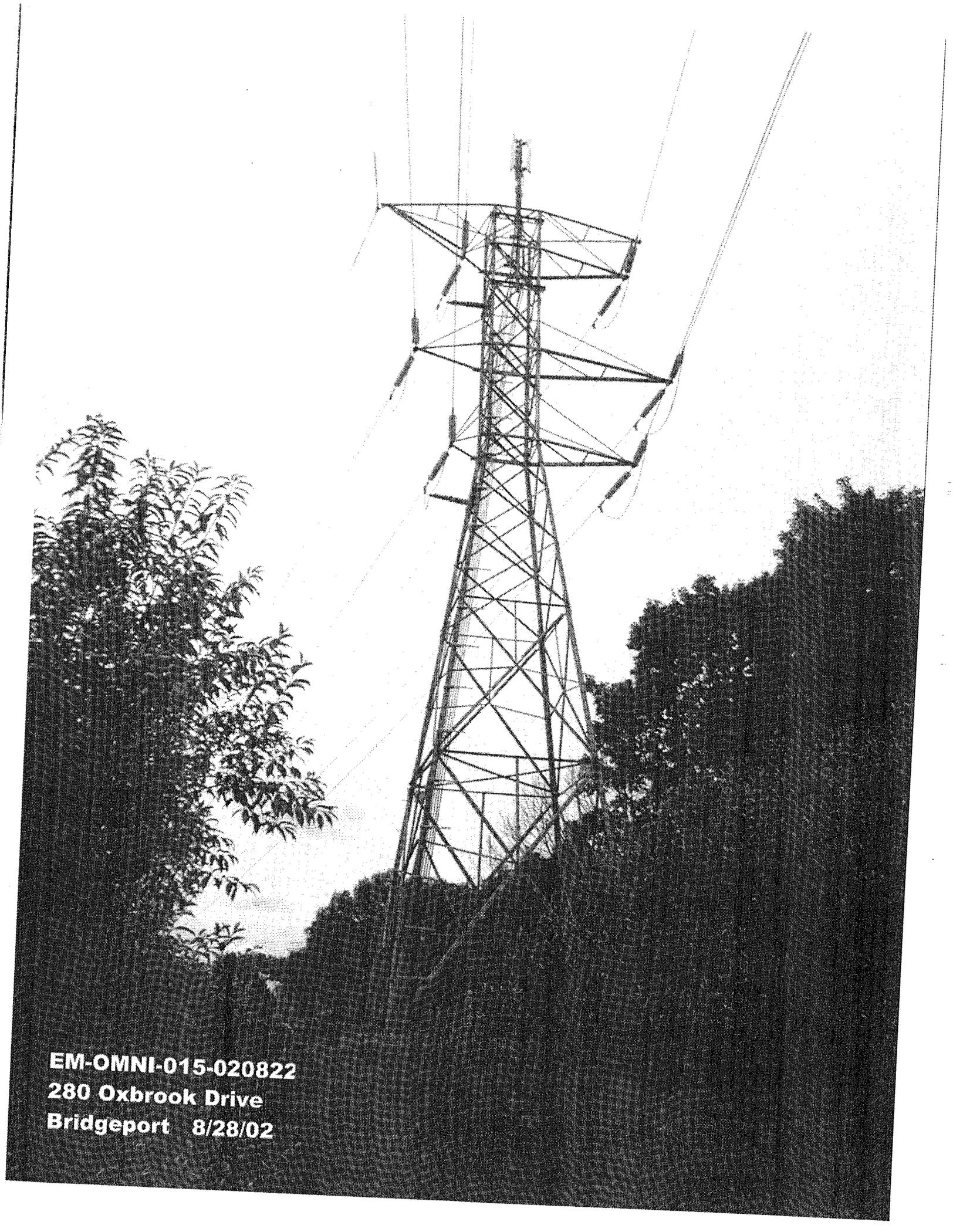
Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

EM-0MNI-015-020822

280 Oxbrook Drive

Bridgeport 8/28/02





EM-OMNI-015-020822
280 Oxbrook Drive
Bridgeport 8/28/02