WHUS Radio
U-8R 2110 Hillside Road
Storrs, CT 06269

FAX Transmittal

To: Paul Aresta

Fax: 860-827-2950

From: John Murphy

Phone: 860-486-0556 Fax: 860-486-2955

Email: whusfm@uconnvm.uconn.edu

Date: 22-Jul-98

Re: Engineering Certification

# of Pages 4 including cover

Original copies of this document will be delivered tomorrow.

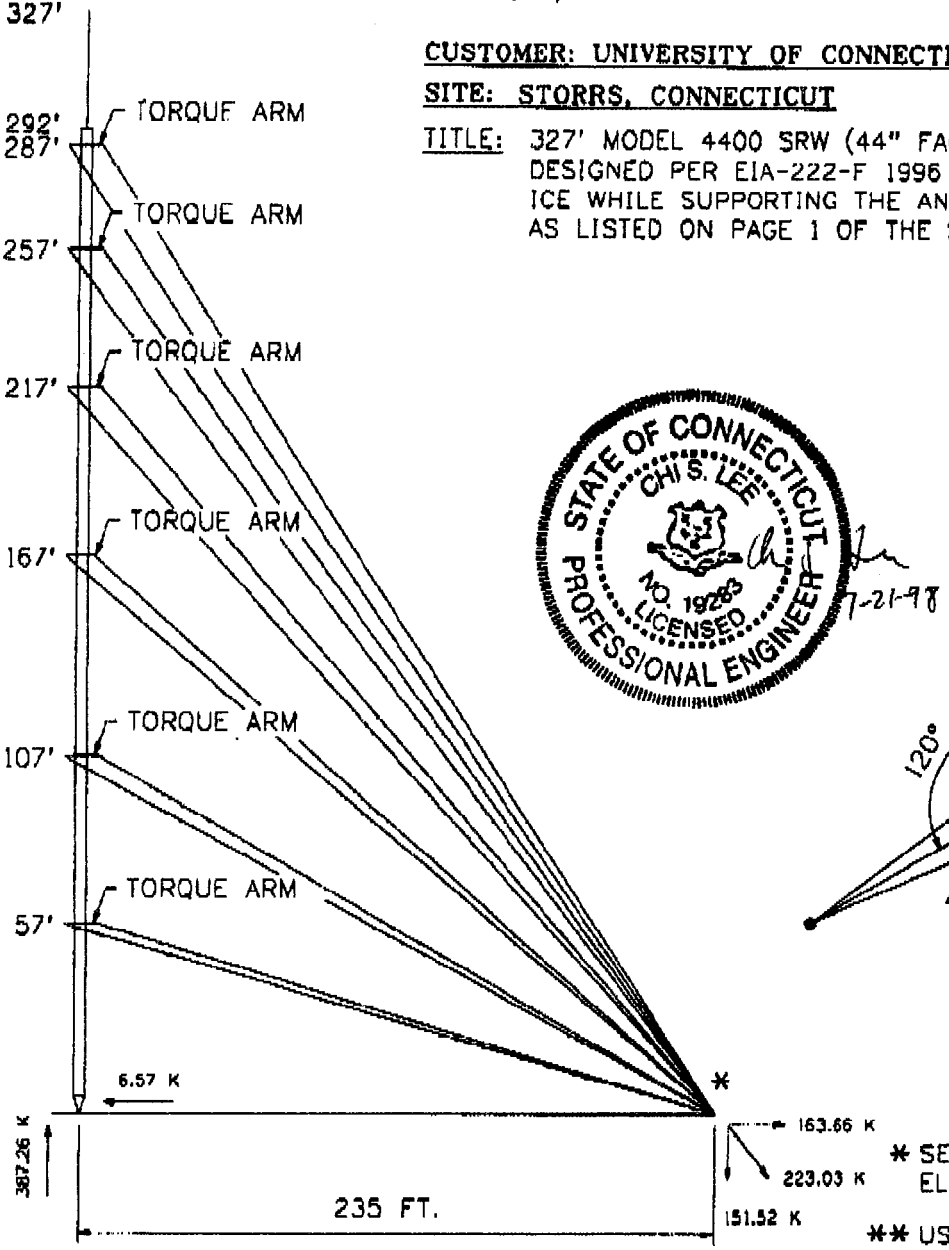
SABRE COMMUNICATIONS CORPORATION
2101 MURRAY P.O. BOX 658 SIOUX CITY, IOWA 51102
PHONE: (712) 258-6690 FAX: (712) 258-8250

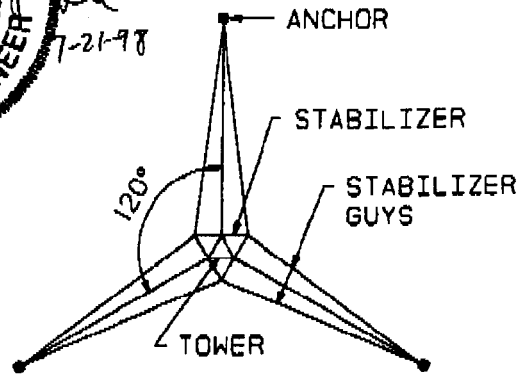
NO. SA1370-G
COVER PAGE 1
DATE 07/21/98
BY LC/DEM

CUSTOMER: UNIVERSITY OF CONNECTICUT

SITE: STORRS, CONNECTICUT

TITLE: 327' MODEL 4400 SRW (44" FACE) GUYED TOWER DESIGNED PER EIA-222-F 1996 AT 90 MPH + 1/2" ICE WHILE SUPPORTING THE ANTENNA LOADING AS AS LISTED ON PAGE 1 OF THE STRESS ANALYSIS.





PLAN

* SEE SITE PLAN FOR ANCHOR ELEVATIONS

** USE 1.00"ø S.R. FOR GIRTS (6 PANELS PER 20' SECTION)

TOWER LEGS (50 KSI)		** BRACE (36 KSI)		BRACE	GUYS		
ELEV.	SIZE	ELEV.	DIAG. SIZE	BOLT	ELEV.	SIZE	I.T.
0'-100'	3.00"ø S.R.	0'-80'	1.25"ø S.R.	WELDED	57'	7/16 EHS	2080#
100'-140'	2.75"ø S.R.	80'-100'	1.375"ø S.R.	WELDED	107'	5/8 EHS	4240#
140'-160'	2.50"ø S.R.	100'-120'	1.50"ø S.R.	WELDED	167'	3/4 EHS	5830#
160'-180'	2.75"ø S.R.	120'-140'	1.25"ø S.R.	WELDED	217'	3/4 EHS	4660#
180'-220'	2.50"ø S.R.	140'-160'	1.375"ø S.R.	WELDED	257'	3/4 EHS	5830#
220'-260'	2.25"ø S.R.	160'-180'	1.50"ø S.R.	WELDED	287	3/4 EHS	5830#
260'-292'	2.00"ø S.R.	180'-200'	1.25"ø S.R.	WELDED			
292' 327'	10.75"ø X 0.843 50K	200'-220'	1.50"ø S.R.	WELDED			
		220'-292'	1.375"ø S.R.	WELDED			
		292'-327'	NONE	NONE			

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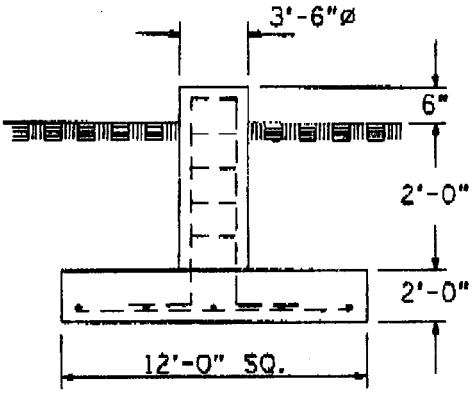
2101 MURRAY P.O. BOX 658 SIOUX CITY, IOWA 51102
PHONE: (712) 258-6690 FAX: (712) 258-6250

NO. SA1370-G
COVER PAGE 2
DATE 07/21/98
BY LC/DEM

CUSTOMER: UNIVERSITY OF CONNECTICUT

SITE: STORRS, CONNECTICUT

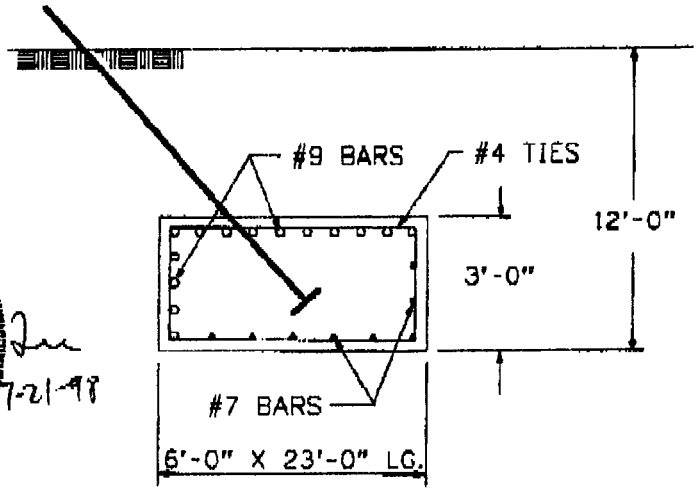
TITLE: 327' MODEL 4400 SRW AT 90 MPH
WIND + 1/2" ICE PER EIA-222-F-1996

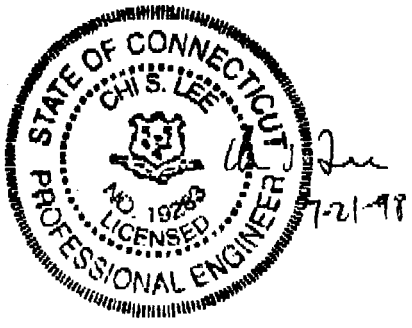


TOWER BASE
(11.56 CU. YDS.)

NOTES:
1.) MINIMUM CONCRETE COMPRESSIVE STRENGTH = 3000 PSI.
2. MIN. CONCRETE COVER = 3"
3. REBAR PER ASTM 615 GR. 60.
4. THIS TOWER FOUNDATION & ANCHOR IS BASED ON NORMAL SOILS PARAMETERS DESCRIBED IN THE EIA-222-F 1996 CODE OF 4000 PSF SOIL BEARING CAPACITY. IF ANY OF THE SOIL CONDITIONS VARY FROM THE NORMAL SOIL CONDITIONS, THIS FOUNDATION & ANCHOR ARE VOID AND A SOILS REPORT SHOULD BE DONE TO DESIGN AN ACCURATE FOUNDATION & ANCHOR.

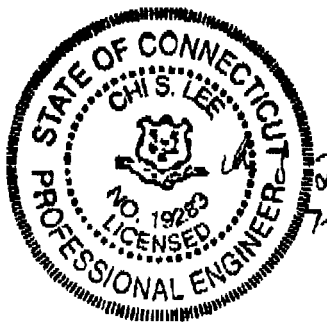
REBAR SCHEDULE	
TOWER BASE	PIER:(12) #7 V-BARS W/#3 TIES @ 12" C-C
	PAD:(20) #7 H-BARS EACH WAY BOTTOM ONLY
TOWER ANCHOR	(14) #9 H-BARS X 22'-6" LONG
	(8) #7 H-BARS X 22'-6" LONG
	(24) #4 BARS BENT CONTINUOUS & EVENLY SPACED





TOWER ANCHOR
(15.33 CU. YDS. EACH)
(3 REQUIRED)

327' MODEL 4400SRW, UNIV. OF CT. 98-0659 7-13-98 KJT
90 MPH + 1/2 IN. ICE CONCURRENT PER EIA-222-F-1996
TOWER WITH LINES CONSIDERED AS SOLID AREA
25% EXTRA CAPACITY FOR EVERYTHING!
INPUT DATA FILE SA1370G.DAT



7-21-98

***** GUYED TOWER *****

TOWER HEIGHT (ft.)	=	292
RADIAL ICE (in.)	=	.5
WIND SPEED (mph)	=	90
NO. OF SET OF ANCHORS	=	1
REQ'ED GUY SAFETY FACTOR	=	2
BASE CONDITION	=	PIVOT
ANCHOR AZIMUTHS (deg)	=	0 , 120 , 240

***** ANTENNA LOADING *****

ELEV. ft.	PROJ. AREA sq.ft.	WIND LOAD kips	DEAD LOAD kips	ANTENNA TORQUE k-ft	DESCRIPTION OF ANTENNA
57	16.0	0.42	0.70	0.0	CHANNEL TORQUE ARM
80	6.0	0.17	0.10	0.0	(1) GPS ANT. + MOUNT
80	71.0	2.07	2.20	0.0	(12) ALP-E9011 PANELS
100	8.0	0.25	0.20	0.0	(1) YAGI
100	25.0	0.78	0.30	0.0	(1) 6' SOLID DISH W/RADOME
107	16.0	0.51	0.70	0.0	CHANNEL TORQUE ARM
125	25.0	0.83	0.30	0.0	(1) 6' SOLID DISH W/RADOME
135	76.0	2.57	0.80	0.0	(2) 8' SOLID DISHES W/RADOME
150	8.0	0.28	0.22	0.0	(1) ASP952 ANT. + MOUNT
160	35.0	1.24	0.85	0.0	(6) PD220 ANT. + MOUNT
167	16.0	0.57	0.70	0.0	CHANNEL TORQUE ARM
180	35.0	1.28	0.85	0.0	(6) PD220 ANT. + MOUNT
190	8.0	0.30	0.20	0.0	(1) YAGI
190	35.0	1.30	0.85	0.0	(6) PD220 ANT. + MOUNT
200	8.0	0.30	0.20	0.0	(1) YAGI
200	12.0	0.45	0.22	0.0	(1) 4 DIPOLE ARRAY
210	35.0	1.34	0.85	0.0	(6) PD220 ANT. + MOUNT
217	16.0	0.62	0.70	0.0	CHANNEL TORQUE ARM
230	75.0	2.95	2.30	0.0	(12) PANELS
240	71.0	2.83	2.20	0.0	(12) ALP-E9011 PANELS
257	16.0	0.65	0.70	0.0	CHANNEL TORQUE ARM
260	41.0	1.67	0.92	0.0	(6) PD220 ANT. + AMPS + MOUNTS
277	8.0	0.33	0.25	0.0	(1) 3' PANEL ANT. + MOUNT
280	35.0	1.46	0.85	0.0	(6) PD220 ANT. + MOUNT
283	8.0	0.33	0.25	0.0	(1) 3' PANEL ANT. + MOUNT
287	14.0	0.59	0.70	0.0	CHANNEL TORQUE ARM
289	8.0	0.34	0.25	0.0	(1) 3' PANEL ANT. + MOUNT
290	8.0	0.34	0.25	0.0	(1) 3' PANEL ANT. + MOUNT
310	108.0	4.63	6.00	0.0	4 BAY FM ON 10.75 OD PIPE
292	33.0	1.39	1.00	0.0	(3) 10' WHIPS + MOUNT

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

November 17, 1997

Sharon Burrows
Project Director
Omnipoint Communications, Inc.
1515 Summer Street, 4th Floor
Stamford, CT 06905-5111

Re: Omnipoint Communications, Inc. notice of intent to modify an existing telecommunications facility located on North Eagleville Road in Storrs, Connecticut.

Dear Ms. Burrows:

At a public meeting held on November 12, 1997, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility in Storrs, Connecticut, 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 October 29, 1997. 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 frequency 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 been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequency now used on this tower. The Council strongly encourages the removal of all unused antennas on this tower, as described in your notice of October 29, 1997. 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 No. 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,

Mortimer A. Gelston
Chairman

MAG/RKE/sg

c: Honorable Fred A. Cazel, Mayor, Town of Mansfield

OMNIPOINT®

OMNIPOINT COMMUNICATIONS SERVICES

ORIGINAL

RECEIVED

OCT 29 1997

CONNECTICUT
SITING COUNCIL

October 29, 1997

Mr. Mortimer A. Gelston, Chairman
Connecticut Siting Council
136 Main Street, Suite 401
New Britain, CT 06051

Dear Chairman Gelston,

Enclosed is a notice of intent to Modify and Exempt the telecommunications tower and associated equipment for facilities owned and operated by the Southern New England Telephone Company (SNET) on North Eagleville Road in Storrs, Connecticut.

The proposed modification can be generally described as the addition of a "cellular type" PCS antenna array for OmniPoint Communications, consisting of sectorized antennas and base station equipment. OmniPoint Communications holds the "A Block" 1900 MHz "Wideband" PCS license for the entire State of Connecticut. The Omnipoint PCS wireless service is a voice-data system which will provide paging, data and voice communications services.

The top of the proposed antennas will be below the top of the existing tower. No changes will be made to the tower structure. The base station equipment will be housed inside the existing equipment building.

The attached pages detail the required information for this location. As shown in the attachments, the proposed addition meets all the necessary criteria established in the Regulations of Connecticut State Agencies Section 16-50j-72 (b) (2), and is an exempt facility pursuant to Section 16-50j-73.

Please record me as the contact for OmniPoint Communications in this matter and in all correspondence from the Council, except technical questions which may be directed to Mike Clarson of RCC Consulting, ph 732-404-2467.

Thank you in advance for your cooperation.

Sincerely,

Sharon Burrows

Sharon Burrows
Project Director
Omnipoint Communications Inc.

cc: Chandler Montgomery, SNET Real Estate
Jeff Randolph, Trammell Crow
Mike Clarson, RCC Consultants

UCONN Campus, Route 195, Storrs, Connecticut

Pursuant to Section 16-50i (a) (5) of the Connecticut General Statutes and Section 16-50j-72 (b) (2), as amended, of the Regulations of Connecticut State Agencies, Omnipoint Communications, Inc. and the Southern New England Telephone Company (SNET) hereby notifies the Connecticut Siting Council that they intend to modify an existing communications facility by permitting the installation of a Personal Communications Services (PCS) antenna system as specified below to an existing communications tower. This antenna will be owned, operated and maintained by Omnipoint Communications. Associated communications hardware will be located on a 5' X 10' concrete slab adjacent to the tower. See site plan, attached. The site is located off Route 195 on the UCONN Campus in Storrs, Connecticut.

Background

The proposed modifications are at the site of a self supporting 80 foot communications tower with an existing top mounted antennas and existing communications equipment shelters. Shelters and the tower are owned and operated by SNET. The tower was formally used as a microwave tower for SNET's telecommunications network, and is currently used as indicated on the power density chart, below.

Discussion

A structural determination is being made, and, if necessary, unused microwave antennas will be removed. Omnipoint proposes to install three (6) panel antennas (3 transmit and three receive) configured as a three sector array. The highest point at the tip of the antennas will measure 66.5 feet above grade. Lowest point of this antenna will be at 59 feet. The power density this antenna contributes at this site is tabulated below. The purpose of this modification is to serve the public with Wideband PCS services. The make and model number of the proposed antennas are Celwave APN199015-2T0 panels. The frequencies used are in the 1900 MHz PCS band.

Below is a power density chart which represents calculated existing and proposed non ionizing radiation levels. The levels shown indicate the maximum total power density in milliwatts per square centimeter. These levels have been calculated at both the tower base, and at the site boundary.

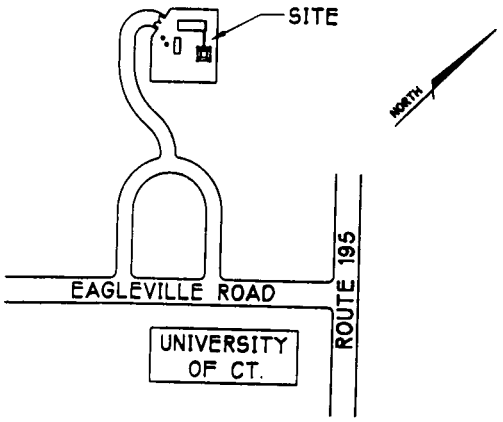
Service	Power Density @ Site Boundary mW/cm^2	Power Density @ Tower Base mW/cm^2	Top of Antenna Height (feet)	CT/ANSI Standard mW/cm^2	% of Standard @Site Boundary
State Ploice 1	0.0008375	0.0008375	72	1	0.08375
State Police 2	0.0008356	0.0008356	72	1	0.08356
State Ploice 3	0.0008375	0.0008375	72	1	0.08375
SNET Mobility (Cellular)	0.3964	0.4179	87	0.6	66.1
TMRS	0.0124	0.0126	92	0.3	4.13
Omnipoint PCS (proposed)	0.0448	0.0461	66.5	1	4.48
Totals	0.4561106	0.4791106	-----	-----	74.961

The more stringent of either the current Connecticut (and ANSI/IEEE) or FCC power density level standards for non-ionizing radiation are shown above. A ground reflection coefficient of 1.6 was used. The levels identified in this case are below the standards. These calculations conform to the procedures described by FCC OET Bulletin No. 65, 1997 revision.

Conclusion

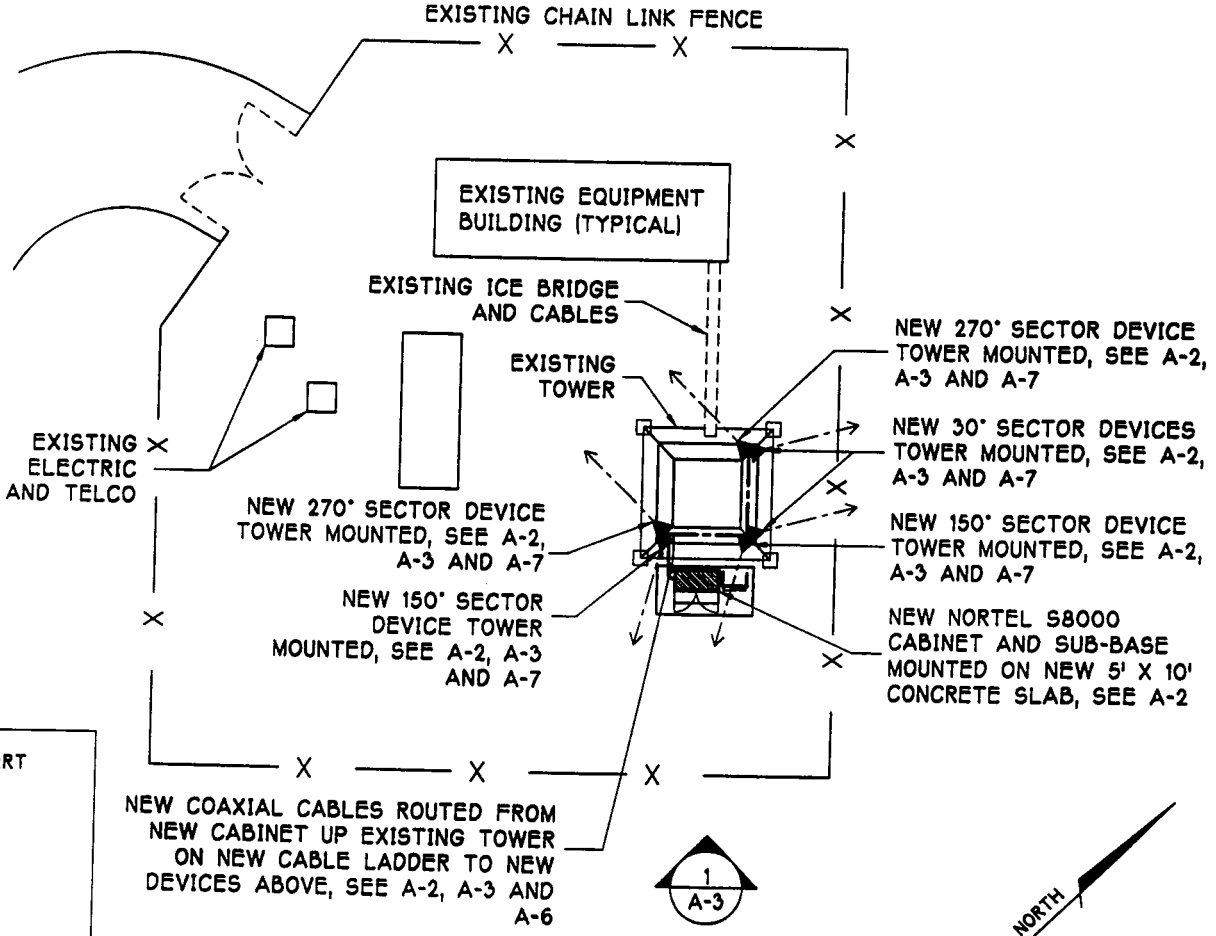
The proposed additions do not constitute a "modification" of an existing facility as defined in the Connecticut General Statutes Section 16-50i(d). There will be no change to the tower height or extension of the boundaries of the site. The tower is structurally sufficient to support the proposed antennas. Unused microwave dish antennas will be removed as necessary. There will be no increase in noise levels at the site's boundary by six (6) decibels or more and the total radio frequency electromagnetic radiation is not at or above the standard set forth in Section 22(a)-162 of the Connecticut General Statutes. This addition will not have a substantially adverse environment effect.

For these reasons, Omnipoint and SNET request that the Council acknowledge that this Notice of Modification meets the Council's exemption criteria.



2 / A-1 KEY MAP
NOT TO SCALE

NOTE: TRUE NORTH DETERMINED BY MEASURING MAGNETIC NORTH MINUS 15° FOR VARIATION



1 / A-1 ROOF PLAN
1" = 20'-0"

NOTE: REFER TO NOTE #11, SHEET A-10 FOR A LIST OF EQUIPMENT TO BE PROVIDED BY OTHERS.

ROBERT P. JUENGERT

CT-04-208

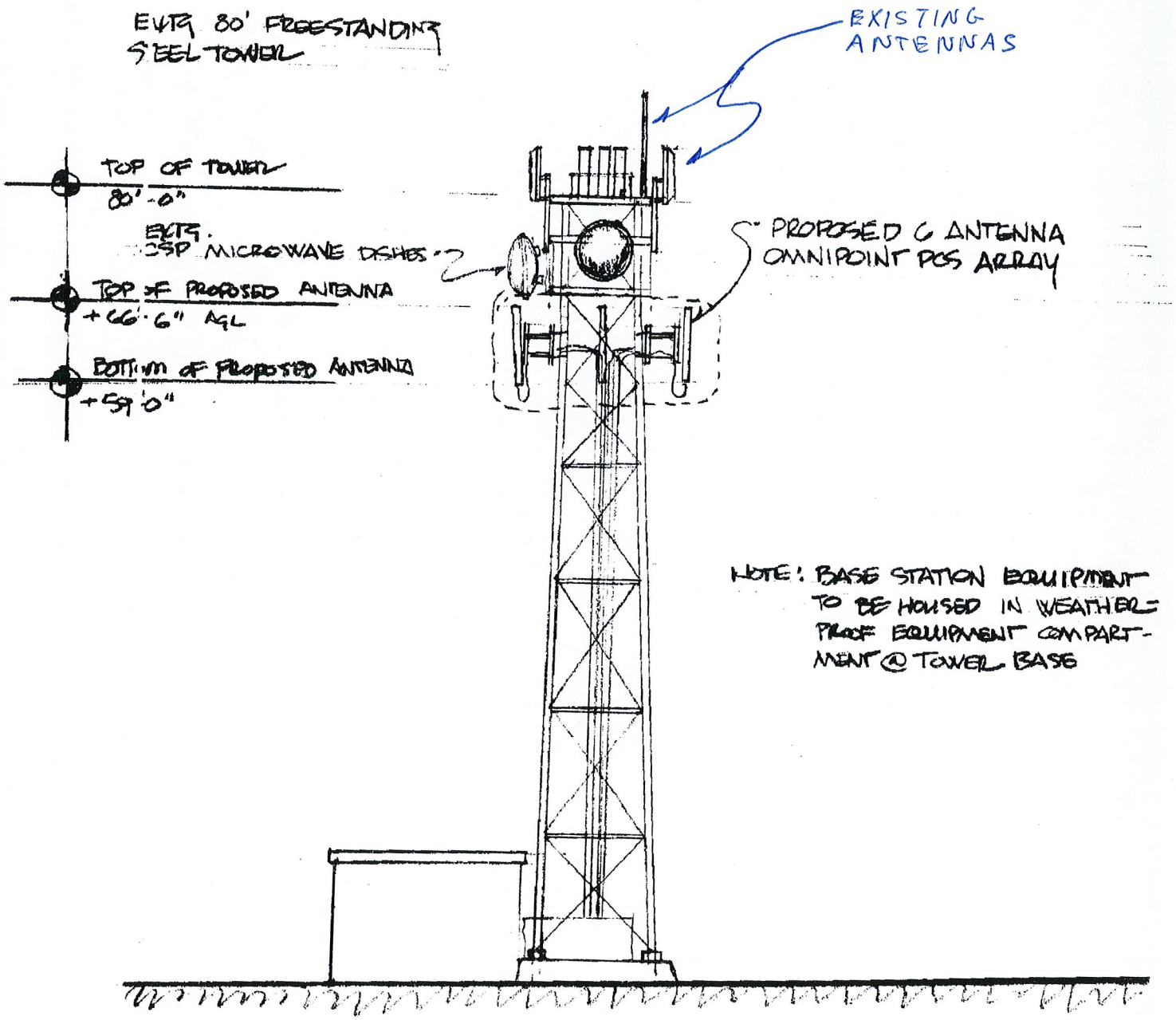
ARCNET ARCHITECTS, INC.
670 North Beers Street, Building 2, Holmdel, NJ 07733
Tel: 732.739.3200 Fax: 732.739.0440

Drawing Title: PLANS
Client: OCS
Project: SNET-MANSFIELD
Address: ROUTE 195 STORRS, CT
Approved By:
PROJ. MGR: _____ DATE: _____
R.F. ENGR: _____ DATE: _____
SAC: _____ DATE: _____
OWNER: _____ DATE: _____

Approved Arcnet	P.C.	P.C. Chkd.	Chkd. by	ARCNET Project No.	Drawn	Date
SNET-MANSFIELD Rev. 10 No. CT-11-303-A	JL			A96.506.435A	AS	10/7/97

Revision No. | Date:

Drawing No. A-1



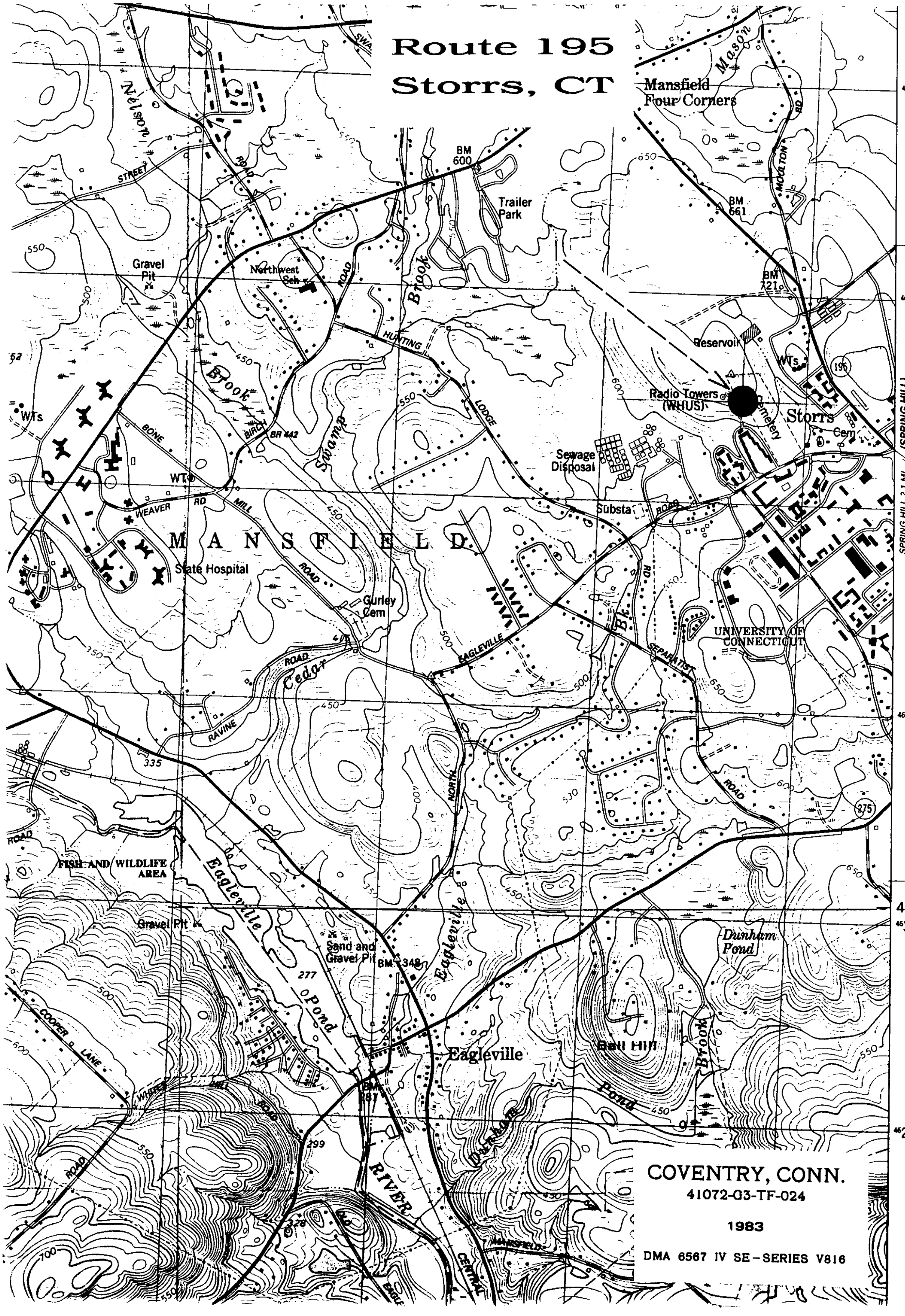
NOTE: BASE STATION EQUIPMENT TO BE HOUSED IN WEATHER-PROOF EQUIPMENT COMPARTMENT @ TOWER BASE

SCALE: 1" = 16'-0" +/-
DATE: 10/28/97

TRANMELL CROW/ RCC INC.

SNET TOWER SITE

NORTH EAGLEVILLE ROAD
STORRS, CT


Route 195
Storrs, CT
Mansfield
Four Corners
Mason
Moulton Rd
Nelson Road
Street
BM 600
Trailer Park
BM 661
BM 721
Gravel Pit
Northwest Sch
Brook
Hunting Lodge
Road
Reservoir
WTs
Radio Towers
(WHUS)
Cemetery
Storrs
Cem
196
(SPRING HILL)
6567 I SW
SPRING HILL 2.1 MI.
WILLIMANTIC 8 MI.
Bone
Birch
BR 442
Swamp
Sewage Disposal
WT
Weaver Rd
Mill
Substa
Road
MANSFIELD
State Hospital
Gurley Cem
Eagleville
Separatist
UNIVERSITY OF CONNECTICUT
Cedar
Ravine
North
Road
275
Fish and Wildlife Area
Eagleville Pond
Gravel Pit
Sand and Gravel Pit
BM 348
Dunham Pond
Cooper Lane
Whites Hill Road
Eagleville
Ball Hill
Brook
Pond
River
Central
Mansfield
Road
BM 261
47'30"
4634
4633
4631
4630
4629
COVENTRY, CONN.
41072-G3-TF-024
1983
DMA 6567 IV SE-SERIES V816

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

October 30, 1997

Honorable Fred A. Cazel
Mayor
Town of Mansfield
4 South Eagleville Road
Mansfield, CT 06268

RE: Omnipoint Communications, Inc. notice of intent to modify an existing telecommunications facility located on North Eagleville Road in Storrs, Connecticut.

Dear Mayor Cazel:

On October 29, 1997, the Connecticut Siting Council (Council) received a request from Omnipoint Communications, Inc. to modify an existing telecommunications facility located on North Eagleville Road in Storrs, Connecticut, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for Wednesday, November 12, 1997, at 2:00 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this modification of an existing facility.

Thank you for your cooperation and consideration.

Very truly yours,

Joel M. Rinebold
Executive Director

JMR/sg

Enclosure: Notice of Intent

c: John Murphy, WHUS
Paul Shapiro, Assistant Attorney General