STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

August 18, 1999

J. Brendan Sharkey
Omnipoint Communications
100 Filley Street
Bloomfield, CT 06002

Re: EM-SNET-103-990728 - Southern New England Telephone notice of intent to modify an existing telecommunications facility located at 10 Willard Road in Norwalk, Connecticut.

Dear Mr. Sharkey:

At a public meeting held on August 16, 1999, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility in Norwalk, 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 July 28, 1999. 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. 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

Mortimer A. Gelston
Chairman

MAG/RKE/tsg

c: Honorable Frank J. Esposito, Mayor, City of Norwalk

OMNIPOINT
COMMUNICATIONS INC.

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

28 July, 1999

Joel Rinebold, Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Revision To Site Plan
SNET Landline Tower
10 Willard Road, Norwalk

Dear Joel:

On October 22, 1997, the Siting Council approved an application from Omnipoint to install three panel antennas on an existing 350-foot lattice tower owned by Southern New England Telephone ("SNET") at 10 Willard Road in Norwalk. At the time, Omnipoint's antennas were installed at 200 feet AGL, with a centerline at 198 feet AGL.

Omnipoint and SNET have recently entered into a modification agreement which would allow Omnipoint to relocate its existing antennas to a centerline of 262 feet AGL. There would be no change to any of the existing equipment at the site, as Omnipoint would simply move the antennas already on the tower to the higher location and extend its cable run to the same BTS cabinet as is currently on site. With this antenna relocation, power densities for the site would only decrease at the base of the tower, and no other external changes would be necessary.

I have enclosed the proposed new design as well as a "before and after" power density analysis for your review. Please advise as to whether you believe this antenna relocation requires review by the Council, or whether it may be considered a *de minimis* adjustment. Omnipoint will promptly follow your direction in either case.

Thank you for your attention to this matter.

Sincerely,

J. Brendan Sharkey, Esq.
for Omnipoint Communications

enclosures

OMNIPOINT
COMMUNICATIONS INC.

Original Power Density

Worst Case Current Power Density for installation on SNET LL Tower @ 10 Willard Road, Norwalk, CT

Region 11 - Connecticut Power Density Calculation - Worst Case			
Base Station TX output	20 W	43.01	
Number of channels	2		
Antenna Model	EMS: RR-90-17/ RV-90-17		
Antanna Gain	16.5 dBi		
Cable Size	1 5/8"		
Cable Length	234.9 ft		
Jumper & Connector loss	1.5 dB		
Cable Loss per foot	0.0116		
Total Cable Loss	2.72484 dB		
Total Attenuation	4.22484 dB		
Total EIRP per channel	55.29 dB	337.71	W
Total EIRP per sector	58.30 dB	675.42	W
Ground Reflection	1.6		
Frequency	1930 MHz		
Antenna Height	200 ft	6096	cm
nsg	12.27516		
Power Density (S) =	**0.003705 mW / cm^2**		
% MPE =	**0.3705%**		

Equation Used :

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

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

Current Power Density Calculation for SNET LL Tower @ 10 Willard Road, Norwalk, CT

Inputted Parameters

Antenna Type: EMS_RR901702DP

Antenna Centerline Height (Feet): 200

Mechanical Downtilt (Degrees): 0

Base Station TX Power (dBm): 43.01

Coax and Connector Loss (dB): 4.22484

Number of Channels per Sector (TXs): 2

Power per Sector (EiRP Watts)	Distance from Base to Location (ft)	Height at Location, Relative to Base (ft)	Number of Times Below Federal Safety Limit of 1.0 mW/cm²
675.42	1	5	1,022,100
675.42	10	5	162,000
675.42	100	5	3,162,600
675.42	500	5	134,200
675.42	1000	5	47,300
675.42	5000	5	84,500

Notes: Equations given in "FCC OET Bulletin 65, Edition 97-01", in conjunction with manufactures specific antenna data were used in the field strength calculations. The resultant values represent worst case levels for field strength intensity.

OMNIPOINT
COMMUNICATIONS INC.

Revised Power Density

Worst Case New Power Density for installation on SNET LL Tower @ 10 Willard Road, Norwalk, CT

Region 11 - Connecticut Power Density Calculation - Worst Case				
Base Station TX output	20 W		43.01	
Number of channels	2			
Antenna Model	EMS: RR-90-17/ RV-90-17			
Antanna Gain	16.5 dBi			
Cable Size	1 5/8"			
Cable Length	310 ft			
Jumper & Connector loss	1.5 dB			
Cable Loss per foot	0.0116			
Total Cable Loss	3.596 dB			
Total Attenuation	5.096 dB			
Total EIRP per channel	54.41 dB		276.33	W
Total EIRP per sector	57.42 dB		552.66	W
Ground Reflection	1.6			
Frequency	1930 MHz			
Antenna Height	200 ft		6096	cm
nsg	11.404			
Power Density (S) =	0.003031 mW / cm^2			
% MPE =	0.3031%			

Equation Used :

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

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

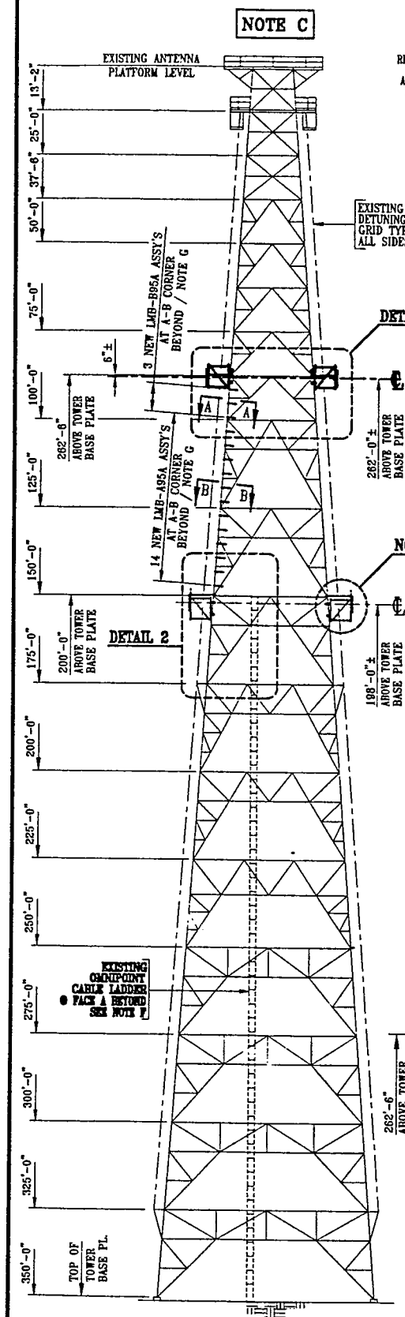
New Power Density Calculation for SNET LL Tower @ 10 Willard Road, Norwalk, CT

Inputted Parameters

Antenna Type: EMS_RR901702DP
Antenna Centerline Height (Feet): 260
Mechanical Downtilt (Degrees): 0
Base Station TX Power (dBm): 43.01
Coax and Connector Loss (dB): 5.096
Number of Channels per Sector (TXs): 2

Power per Sector (EiRP Watts)	Distance from Base to Location (ft)	Height at Location, Relative to Base (ft)	Number of Times Below Federal Safety Limit of 1.0 mW/cm²
552.66	1	5	2,130,300
552.66	10	5	1,620,100
552.66	100	5	104,900
552.66	500	5	48,300
552.66	1000	5	191,900
552.66	5000	5	121,600

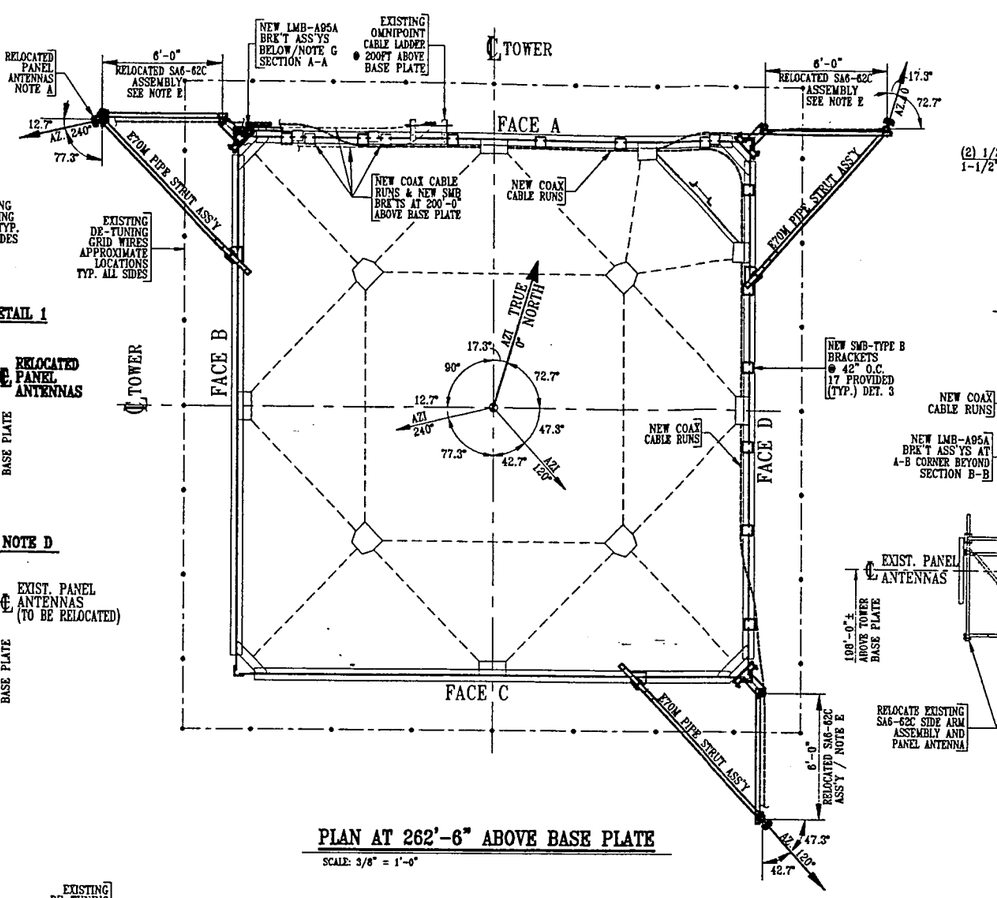
Notes: Equations given in "FCC OET Bulletin 65, Edition 97-01", in conjunction with manufactures specific antenna data were used in the field strength calculations. The resultant values represent worst case levels for field strength intensity.



TOWER ELEVATION – FACE C

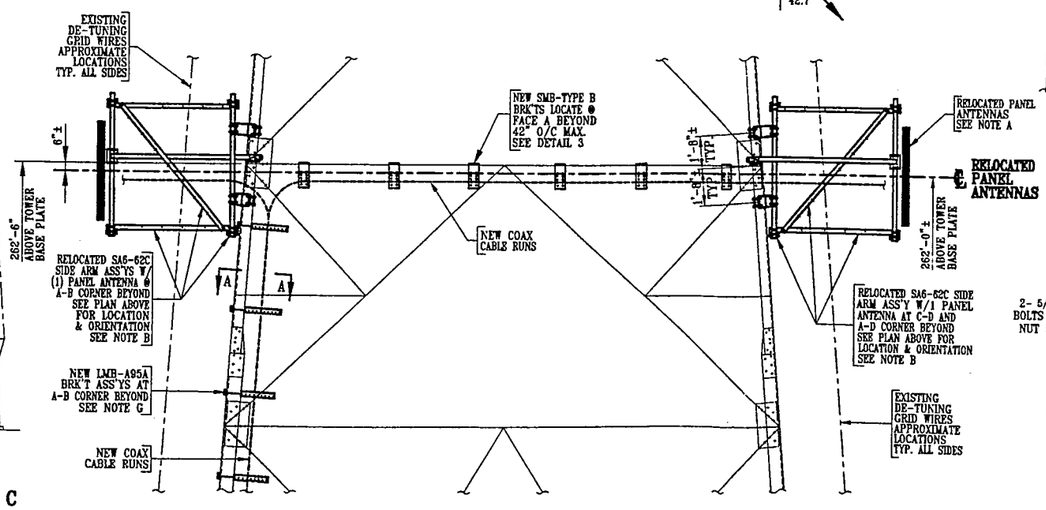
EXISTING 350'-0" TYPE "L" TOWER

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



PLAN AT 262'-6" ABOVE BASE PLATE

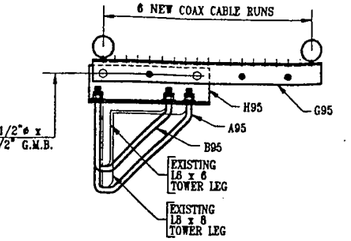
SCALE: 3/8" = 1'-0"



DETAIL 1

PARTIAL ELEVATION – FACE C (AS SHOWN)

SCALE: 3/8" = 1'-0"

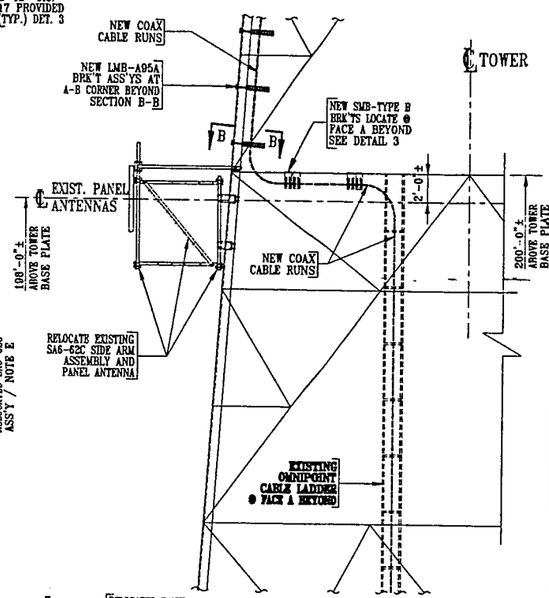


SECTION A – A

ASSEMBLY LMB-B95A

SECTION B – B

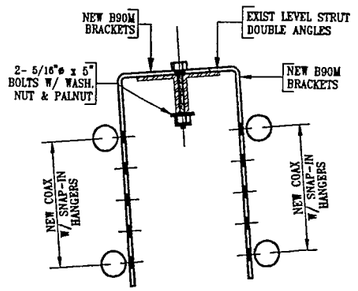
ASSEMBLY LMB-A95A



DETAIL 2

PARTIAL ELEVATION – FACE C (AS SHOWN)

SCALE: 1/4" = 1'-0"



DETAIL – 3

SMB-TYPE B BRACKETS

PLAN NOTES

A. EXISTING PANEL ANTENNAS TO BE RE-USED ARE EMS # RR90-17-02-DP W/ (2) 1-5/8"ø COAX RUNS PER ANTENNA.

B. RELOCATED ALL THREE EXISTING PANEL ANTENNAS & SA6-62C SIDE ARM ASSEMBLIES. THE CENTERLINES OF RELOCATED ANTENNAS ARE TO BE 262'-0" ABOVE BASE PLATE LEVEL. USE 12 NEW 5/8"ø x 4" GALVANIZED HIGH STRENGTH BOLTS TO MOUNT SA6-62C SIDE ARM ASSEMBLIES.

C. EXISTING ANTENNAS & WAVEGUIDE WHICH ARE NOT A PART OF THE PRESENT WORK ARE NOT SHOWN ON THESE DRAWINGS.

D. SEE DRAWINGS LMB-95A AND SMB-90 FOR ADDITIONAL ERECTION AND INSTALLATION INFORMATION.

E. IF POSITION SHOWN FOR NEW SA6 SIDE-ARMS DOES NOT CLEAR THE EXISTING DETUNING GRID WIRES, ROTATE THE SIDE-ARMS THE MINIMUM DIMENSION NEEDED FOR CLEARANCE.

F. USE EXISTING OMNIPOINT CABLE SUPPORT LADDER TO NEW COAX FROM 200'-0" ABOVE BASE PLATE LEVEL TO TOWER BASE.

G. NEW LEG MOUNTED BRACKETS TO SUPPORT VERTICAL COAX RUNS TO BE TYPE LMB-95A. INSTALL APPROPRIATE BRK'TS CORRESPONDING TO TOWER LEG SIZE AT APPROXIMATELY 50 INCHES ON CENTER BETWEEN 262'-6" ABOVE BASE PLATE AND 200'-0" ABOVE BASE PLATE LEVEL.

STRUCTURAL GENERAL NOTES

1. ALL NEW STRUCTURAL STEEL SHALL CONFORM WITH ASTM A-36. STRUCTURAL STEEL PIPE SHALL COMPLY WITH ASTM A-53, GRADE B WITH Fy = 35 KSI.

2. ALL NEW MATERIAL INCLUDING FASTENERS, SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A-123 AND A-153.

3. ALL NEW MATERIAL SHOWN ON THIS DRAWING IS INTENDED TO BE INSTALLED WITHOUT FIELD DRILLING OR CUTTING OF ANY EXISTING TOWER STEEL. FIELD DRILLING OR CUTTING OF EXISTING STEEL MAY BE DONE ONLY WITH THE PERMISSION OF THE OWNER. NEAT FIELD CUTTING OF EXISTING GRATING IS PERMITTED AT LOCATIONS DESIGNATED.

4. THE SELECTION OF CONSTRUCTION MEANS AND METHODS AS WELL AS SAFETY IN ON OR ABOUT THE WORK SITE ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR(S) PERFORMING THE WORK. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

SCHEDULE OF NEW MATERIAL REQUIRED

DESCRIPTION	PART NUMBER	QUANTITY REQUIRED
LEG MOUNTED BRK'TS	LMB-B95A	3
LEG MOUNTED BRK'TS	LMB-A95A	14
STRUT MOUNTED BRK'TS	SMB-B90M	17

12 – 5/8"ø x 4" GALVANIZED A325 HIGH STRENGTH BOLTS WITH HEAVY HEX NUTS HARDENED WASHERS AND PALNUTS

NEW MATERIAL IN ABOVE SCHEDULE IS AVAILABLE FROM:

TOWER COMPONENTS
2110 SOUTH ADAMS RD.
SAND SPRINGS, OK. 74063
(918) 241-9487

ALLOW 3 WEEKS (MIN.) FOR FABRICATION AND DELIVERY. ALL PARTS TO INCLUDE ALL NECESSARY FIELD BOLTS, U-BOLTS AND V-BOLTS.

STRUCTURAL DRAWING LIST

DWG. NO.	TITLE
ST-5	TOWER ELEVATION AND PLANS
FIELD INSTALLATION DRAWINGS	
LMB-95A	LEG MOUNTED BRACKETS FOR TRANSMISSION LINE SUPPORT
SMB-90	STRUT MOUNTED BRACKETS FOR TRANSMISSION LINE SUPPORT

Communication Structures Engineering, Inc.
245 Herodian Way, Suite 102
Smyrna, Georgia 30080
(770) 951-8080

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

Drawing Title: TOWER ELEVATION AND PLANS
Client: OCS
Project: SNET / LL-NORWALK
Address: WILLARD ROAD NORWALK, CT
Approved By: PROJ. MGR: _____ DATE: _____ R.F. ENGR: _____ DATE: _____ SAC: _____ DATE: _____ OWNER: _____ DATE: _____
Search No.: SNET/LL-NORWALK
Site ID No.: CT-11-011-0
P.C.: RVD
P.C. Date:
Dsn. By:
ARCNET Project No.: A-99.506.427A
Dwn. By: B.B.
Date: 4/24/98
Revision No.
Date: 4/20/99
Drawing No.: ST-5