STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

January 24, 1997

George L. Davis
Engineer of Telecommunications
Department of Public Safety
Division of State Police
P.O. Box 2794
Middletown, CT 06457-9294

Re: Department of Public Safety, Division of State Police, notice of intent to modify an existing telecommunications facility located off Interstate Route 84 in the Town of Middlebury, Connecticut.

Dear Mr. Davis:

At a public meeting held on January 22, 1997, the Connecticut Siting Council (Council) acknowledged your notice to modify an existing telecommunications facility in Middlebury, Connecticut, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modification is to be implemented as specified in your notice dated January 10, 1997. The modification is 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 change has been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequency now used and proposed for use 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 Science 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/JMR/ss

c: The Honorable Edward B. St. John, First Selectman, Town of Middlebury

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STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC SAFETY
1111 Country Club Road
P.O. Box 2794
Middletown , CT 06457-9294

January 10, 1997

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

SUBJECT; EXEMPT MODIFICATION - CTS SITE 20 MIDDLEBURY

Dear Chairman Gelston:

Attached please find an original and 20 copies of a Notice of Intent to Erect Exempt Telecommunications Associated Equipment pursuant to Connecticut General Statutes 16-50g et. Seq. and Section 16-50j-73 of the Regulations of the Connecticut Siting Council.

The Council's acknowledgment of the attached Notice would be appreciated.

Sincerely,

George L. Davis
Public Safety Engineer
of Telecommunications

cc: P. Seaha
File

STATE OF CONNECTICUT
SITING COUNCIL

NOTICE OF INTENT TO ERECT EXEMPT
TELECOMMUNICATIONS ASSOCIATED EQUIPMENT

Pursuant to Connecticut General Statute 16-50g et. Seq. and Section 16-50j-73 of the Regulations of the Connecticut Siting Council. The Division of State Police hereby gives Notice of its intent to erect Exempt Telecommunications Associated Equipment at its Middlebury site located on Interstate Route 84 in Middlebury, Connecticut.

The site is currently occupied by an existing, active 160 foot three legged self supporting Telecommunications tower. Equipment on the existing tower or previously proposed to the Council consists of fourteen (14) antennas. The Division of State Police proposes to allow Sprint Spectrum Limited Partnership (SSLP) to install nine (9) Panel antennas on the tower. All current and proposed antennas are depicted in the Tower Elevation Drawing attached as ATTACHMENT A. This project is part of a Division of State Police effort to share tower space with other users.

The Division of State Police believes that this project is exempt from the need to obtain a Certificate of Environmental Compatibility and Public Need pursuant to Siting Council Reg. Sec. 16-50j-72(b) for the following reasons:

1. Existing Tower Site
The proposed location is currently occupied by an existing, active, one hundred sixty foot three-legged self supporting lattice type tower and equipment shelter.

2. Site Boundaries
As depicted in ATTACHMENT B, the property boundaries at the site will not be extended. No three cutting or extensive grading will be conducted at the site.

3. Tower Height
The existing one hundred sixty foot lattice tower will be retained and the height will not change.

4. Noise Levels
The proposed antenna addition will not increase noise levels at the existing facility by six decibels or more.

5, Radiation Power Density
The radio frequency sending or receiving capability of the additional antennas will not increase the total radio frequency electromagnetic radiation power density measured at the tower site boundary to or above the standard considered by the State Department of Environmental Protection (DEP). The current ANSI standard applicable to the Division of State Police facility and the total radio frequency electromagnetic radiation power density calculated for the tower site boundary are set forth in ATTACHMENT C.

CONCLUSION

For all of the above stated reasons, the Division of State Police requests the Siting Council to rule that this Notice is in compliance with the exception criteria for changes to an existing facility pursuant to Reg. Sec. 16-50j-72 (b).

Dated at Middletown CT this day of January, 1997.

by: _____

George L. Davis
Public Safety Engineer
of Telecommunications
P.O. Box 2794
Middletown, CT 06457-9294

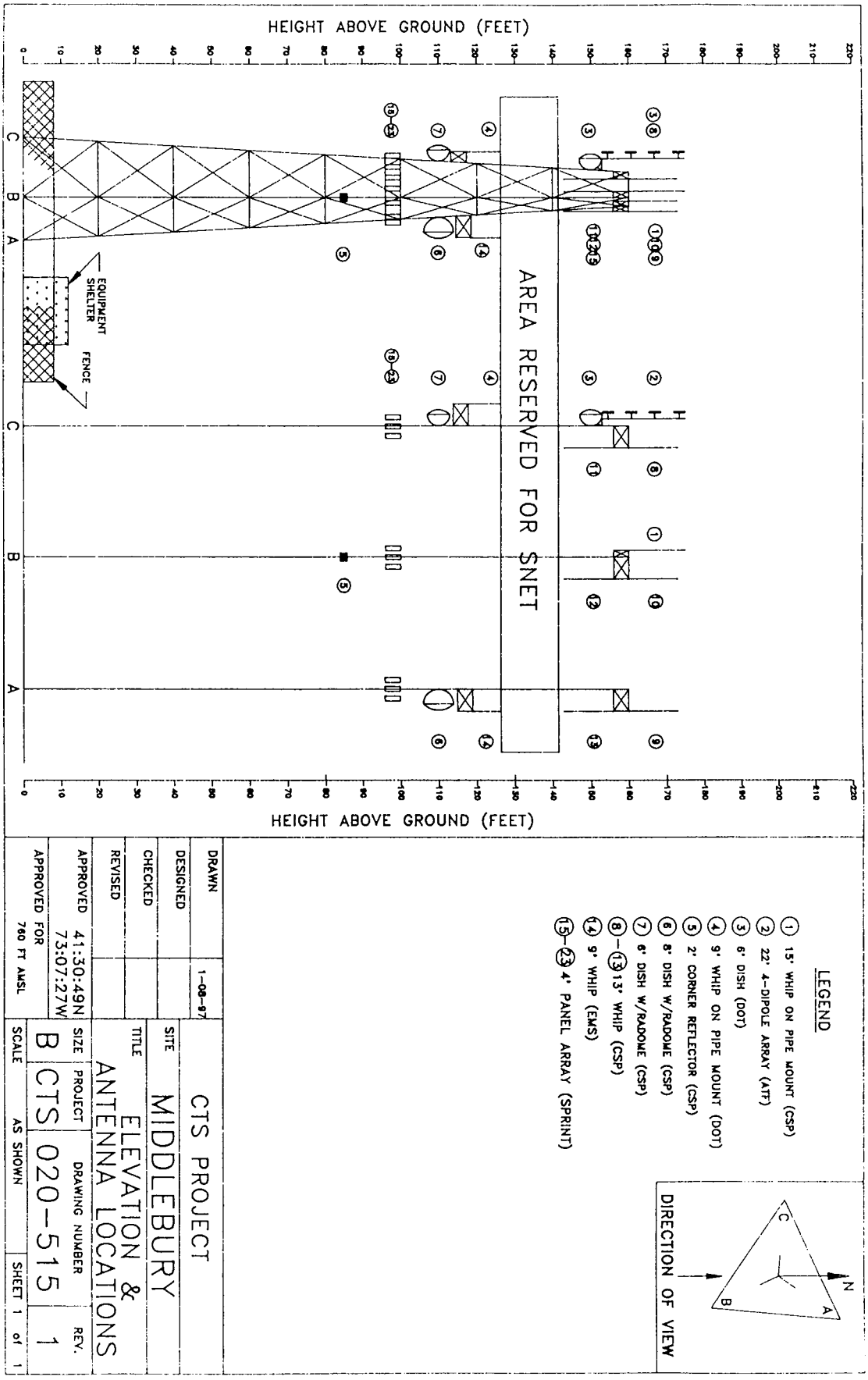
CERTIFICATION

The undersigned hereby certifies that a copy of the foregoing Notice of Intent to Erect Telecommunications Associated Equipment was mailed this day of January 1997, to the below named chief elected official in Middlebury, Connecticut pursuant to Reg. Sec. 16-50j-73.

Edward B. St. John
First Selectman
Town Hall
1212 Whittemore Rd.
P.O. Box 392
Middlebury, Connecticut 06762

by: _____
George L. Davis
Public Safety Engineer
of Telecommunications
P.O. Box 2794
Middletown, CT 06457-9294

ATTACHMENT A



DRAWN	
DESIGNED	1-08-97
CHECKED	
REVISED	
APPROVED	41:30:49N 73:07:27W
APPROVED FOR	760 FT AMSL

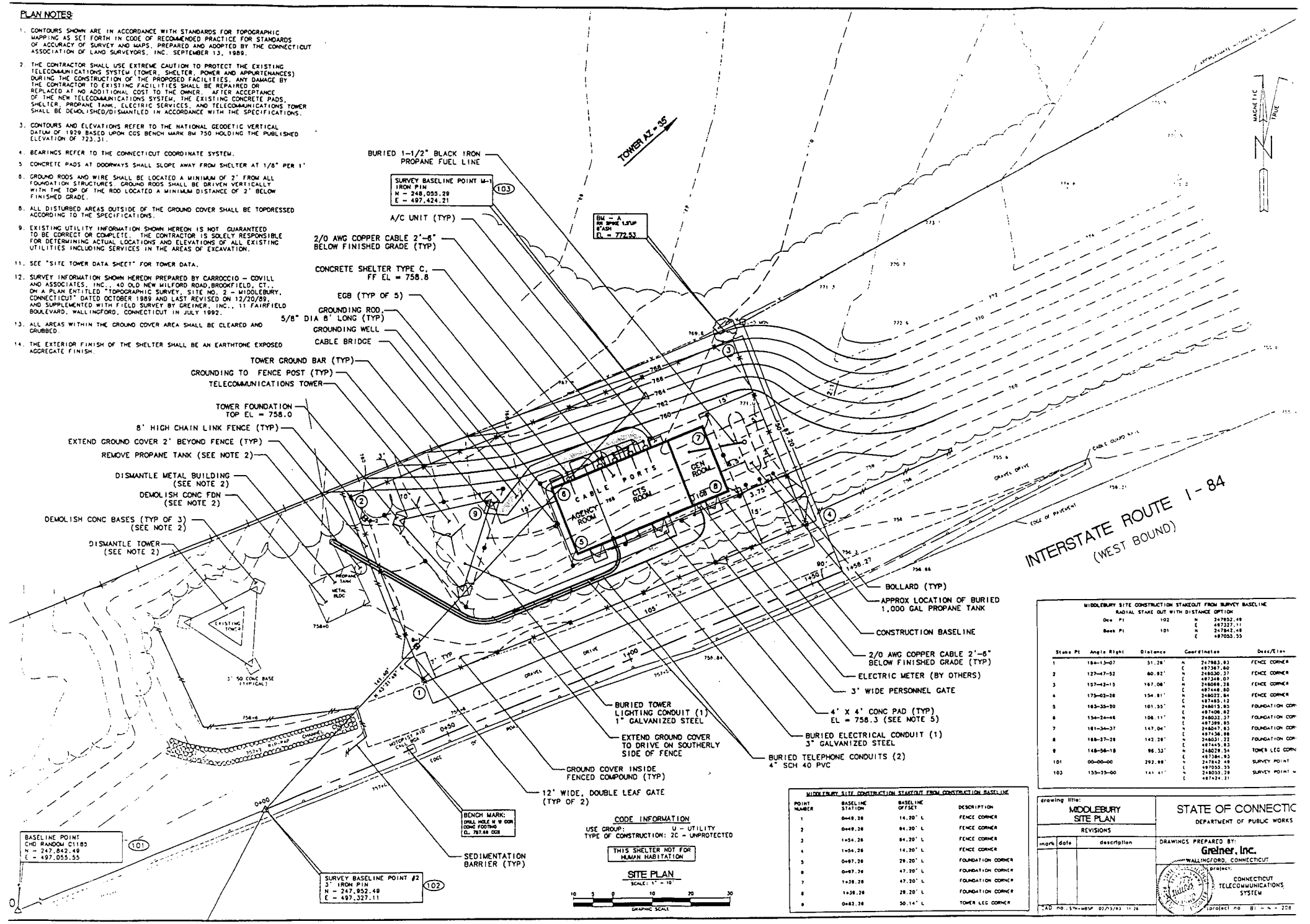
CTS PROJECT

SITE: MIDDLEBURY

TITLE: ELEVATION & ANTENNA LOCATIONS

SIZE	PROJECT	DRAWING NUMBER	REV.
B	CTS	020-515	1
SCALE	AS SHOWN	SHEET	1 of 1

ATTCHMENT B



MIDDLEBURY SITE CONSTRUCTION STAKEOUT FROM SURVEY BASELINE
RADIAL STAKE OUT WITH DISTANCE OPTION

Occ Pt	102	N	247952.49	
		E	497327.11	
Back Pt	101	N	247842.49	
		E	497055.55	

Stake Pt	Angle Right	Distance	Coordinates		Desc/Elev
1	184-13-07	51.28'	N	247983.83	FENCE CORNER
			E	497367.60	
2	127-47-52	80.82'	N	248030.37	FENCE CORNER
			E	497348.07	
3	157-42-15	167.08'	N	248086.28	FENCE CORNER
			E	497448.80	
4	175-03-28	154.81'	N	248022.84	FENCE CORNER
			E	497485.63	
5	183-35-20	101.55'	N	248015.83	FOUNDATION CORNER
			E	497408.82	
6	134-24-46	108.11'	N	248032.37	FOUNDATION CORNER
			E	497388.85	
7	181-34-37	147.04'	N	248047.83	FOUNDATION CORNER
			E	497436.88	
8	188-37-28	142.28'	N	248031.22	FOUNDATION CORNER
			E	497445.93	
9	148-56-18	96.53'	N	248079.34	TOWER LEG CORNER
			E	497384.93	
101	00-00-00	292.88'	N	247842.49	SURVEY POINT
			E	497055.55	
103	155-35-00	141.41'	N	248055.29	SURVEY POINT M-1
			E	497424.21	

MIDDLEBURY SITE CONSTRUCTION STAKEOUT FROM CONSTRUCTION BASELINE

POINT NUMBER	BASELINE STATION	BASELINE OFFSET	DESCRIPTION
1	0+48.28	14.20' L	FENCE CORNER
2	0+48.28	84.20' L	FENCE CORNER
3	1+54.28	84.20' L	FENCE CORNER
4	1+54.28	14.20' L	FENCE CORNER
5	0+97.28	29.20' L	FOUNDATION CORNER
6	0+97.28	47.20' L	FOUNDATION CORNER
7	1+38.28	47.20' L	FOUNDATION CORNER
8	1+38.28	29.20' L	FOUNDATION CORNER
9	0+82.28	30.14' L	TOWER LEG CORNER

drawing title: MIDDLEBURY SITE PLAN

REVISIONS

mark	date	description

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC WORKS

DRAWINGS PREPARED BY:
Greiner, Inc.
WALLINGFORD, CONNECTICUT

project: CONNECTICUT TELECOMMUNICATIONS SYSTEM

CAD no.: S7N-MBSP 02/03/93 11:26

project no. 81 – N – 208

ATTACHMENT C

RADIO/ANTENNA SYSTEMS DATA

SITE NAME: MIDDLEBURY PREPARED BY: D.P.S.
TOWER HEIGHT: 160 FEET ON DATE: 01-09-1997

No	OPERATING FREQUENCY (MHz)	TRANSMIT POWER (WATTS)	ANTENNA HEIGHT (FEET)	ANTENNA TYPE	ANTENNA VERTICAL SIZE (FT)	ANTENNA GAIN (dB)	ERP (W)
1	42.0400	330	160	WHIP ON PIPE MOUNT	15	0.0	330
2	166.0000	250	153	FOUR DIPOLE ARRAY	22	6.0	995
3	2192.0000	3	150	SOLID DISH W/RADOME	6	29.9	1795
4	47.0000	100	122	WHIP ON PIPE MOUNT	18	0.0	100
5	460.3000	10	85	CORNER REFLECTOR	2	8.5	71
6	6700.0000	1	110	SOLID DISH W/RADOME	8	42.1	9939
7	6700.0000	1	110	SOLID DISH W/RADOME	6	39.6	5591
8	867.5000	5 x 25	160	WHIP	13	9.0	1000
9	867.0000	5 x 25	160	WHIP	13	9.0	1000
10	867.0000	5 x 25	160	WHIP	13	9.0	1000
11	822.5000	0	147	WHIP	13	9.0	0
12	822.5000	0	147	WHIP	13	9.0	0
13	822.5000	0	147	WHIP	13	9.0	0
14	458.0750	0	120	WHIP	22	10.0	0
15	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
16	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
17	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
18	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
19	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
20	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
21	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
22	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814
23	1957.5000	11 x 2	97	PANEL ANTENNA	4	15.0	814

NOTES: 1. TRANSMIT POWER ENTRIES SHOWN AS '5 x 25' SHOULD BE INTERPRETED AS '5 TRANSMITTERS, EACH HAVING A POWER OF 25 WATTS'.
ENTRIES OF '0' MEAN 'RECEIVE ONLY'- i.e. NO TRANSMITTER.
ALL OTHER ENTRIES REFER TO ONE TRANSMITTER WITH THE POWER SHOWN.

2. ERP (EFFECTIVE RADIATED POWER) IS THE PRODUCT OF ALL TRANSMITTER POWERS AND THE NUMERICAL VALUE OF THE GAIN (ANTILOG OF dB) RELATIVE TO A DIPOLE ANTENNA.

ATTACHMENT C

POWER DENSITY ANALYSIS

POWER DENSITY (% OF MAX. EXPOSURE VS DISTANCE FROM THE TOWER BASE

SITE NAME:	MIDDLEBURY	PREPARED BY:	D.P.S.
TOWER HEIGHT:	160 FEET	ON DATE:	01-09-1997

DISTANCE (FEET)	POWER DENSITY (% OF MAX. EXPOSURE
0	6.1396
50	5.4134
100	4.6243
150	3.6917
200	2.8708
250	2.2264
300	1.7480
350	1.3935
400	1.1290
450	0.9290
500	0.7755
550	0.7101
600	0.6599
650	0.6133
700	0.5692
750	0.5276
800	0.4888
850	0.4528
900	0.4197
950	0.3893
1000	0.3615
1050	0.3362
1100	0.3215
1150	0.3077
1200	0.2945
1250	0.2819

ATTACHMENT C

POWER DENSITY ANALYSIS

AT THE TOWER BASE, FOR EACH RADIO/ANTENNA SYSTEM

SITE NAME: MIDDLEBURY
TOWER HEIGHT: 160 FEET

PREPARED BY: D.P.S.
ON DATE: 01-09-1997

No	OPERATING FREQUENCY (MHz)	EIRP (WATTS)	DISTANCE TO BASE OF TOWER (FEET)	MAXIMUM PERMISSIBLE EXPOSURE (MW/SQ-CM)	AT THE BASE OF THE TOWER: POWER DENSITY (MW/SQ-CM)	AT THE BASE OF THE TOWER: PERCENT OF MAX. EXPOSURE
1	42.0400	541	168	0.200	0.0006608	0.3304
2	166.0000	1633	164	0.200	0.0020791	1.0395
3	2192.0000	2945	150	1.461	0.0000149	0.0010
4	47.0000	164	131	0.200	0.0003274	0.1637
5	460.3000	116	85	0.306	0.0005505	0.1799
6	6700.0000	16305	110	4.466	0.0004666	0.0104
7	6700.0000	9172	110	4.466	0.0004666	0.0104
8	867.5000	1641	167	0.578	0.0020267	0.3506
9	867.0000	1641	167	0.578	0.0020267	0.3506
10	867.0000	1641	167	0.578	0.0020267	0.3506
11	822.5000	0	154	0.548	0.0000000	0.0000
12	822.5000	0	154	0.548	0.0000000	0.0000
13	822.5000	0	154	0.548	0.0000000	0.0000
14	458.0750	0	131	0.305	0.0000000	0.0000
15	1957.5000	1335	97	1.305	0.0048607	0.3725
16	1957.5000	1335	97	1.305	0.0048607	0.3725
17	1957.5000	1335	97	1.305	0.0048607	0.3725
18	1957.5000	1335	97	1.305	0.0048607	0.3725
19	1957.5000	1335	97	1.305	0.0048607	0.3725
20	1957.5000	1335	97	1.305	0.0048607	0.3725
21	1957.5000	1335	97	1.305	0.0048607	0.3725
22	1957.5000	1335	97	1.305	0.0048607	0.3725
23	1957.5000	1335	97	1.305	0.0048607	0.3725
						6.1396

TOTAL PERCENT OF MAXIMUM PERMISSIBLE EXPOSURE FOR UNCONTROLLED ENVIRONMENTS FOR ALL 23 RADIO SYSTEMS = 6.1396

NOTES:
1. THE POWER DENSITIES REPRESENTING THE 'MAXIMUM PERMISSIBLE EXPOSURE FOR UNCONTROLLED ENVIRONMENTS' ARE CALCULATED IN ACCORDANCE WITH IEEE C95.1-1991 (REVISION OF ANSI C95.1-1982).
2. POWER DENSITIES ARE CALCULATED IN ACCORDANCE WITH THE METHODS DEFINED IN FCC DOCUMENT 'OST BULLETIN NO. 65', OCTOBER 1985.
3. EIRP (EFFECTIVE ISOTROPICALLY RADIATED POWER) REFERENCES THE RADIATED POWER TO A POINT SOURCE, WHICH YIELDS POWERS 1.6406 TIMES HIGHER THAN ERP.