

DAVIDSON MEDIA STATION WACM LICENSEE, LLC

Radio Station WACM
West Springfield, Massachusetts
Proposed Auxiliary Operation
1490 kHz, 1 kW-D, 0.85 kW-N, U

ENGINEERING STATEMENT

This engineering statement, together with the attached figures, has been prepared in response to an FCC letter of November 17, 2008, on behalf of Davidson Media Station WACM Licensee, LLC, licensee of AM radio station WACM, West Springfield, MA, in support of a minor change in licensed facility to construct and auxiliary transmitter site adjacent the WACM studio building at 34 Sylvan Street, West Springfield, MA. This proposal specifies operation on 1490 kHz with 1 kW daytime and nighttime power reduced to 0.85 kW from an 98.2 degree non-directional antenna.

Since the proposed WACM auxiliary antenna will only be 55.8 meters (183 feet) above ground level, antenna structure registration is not required.

ENVIRONMENTAL CONSIDERATIONS

The Commission's Rules implementing the Environmental Policy Act does not categorize this proposal as a major action, as it does not involve any of the facilities or actions listed under §1.305 or §1.307 of the Rules.

Regarding the non-ionizing radiofrequency emission from the proposed antenna, Table 2 on page 4 of O.E.T. Bulletin No. 65 lists the distance in meters at which fields from AM stations are predicted to fall below the FCC and ANSI maximum. Assuming a worst-case of 1000 watts being fed by WACM into the auxiliary tower, Table 2 on Page 4 requires the fence to be at least 1 meter from the tower face. The applicant proposes a fence at least 2 meters from the tower face.

Since the applicant proposes fencing well within agreement with O.E.T. Bulletin No. 65, this proposal will comply with both FCC and ANSI standards regarding radiofrequency exposure.

Should any maintenance worker require access to the tower, WACM will either reduce power or operate from the main transmitter site until workers are outside the tower fence. Appropriate RF warning signs will be placed on all sides of the fences and it may be assumed that there will be no significant effect on the human environment with regard to exposure of the general public.

DAYTIME ALLOCATION CONSIDERATIONS

A simplified study has been made of the proposed WACM auxiliary 0.5 mV/m and 0.025 mV/m contours superimposed on the licensed WACM 0.5 mV/m and 0.025 mV/m contours. In no case do the auxiliary contours extend beyond the authorized contours.

These contours are depicted in Figure 5. Location of contours for this station employed notified inverse fields in conjunction with FCC M-3 soil conductivity. WACM conductivity is tabulated in Figures 6A and 6B.

NIGHTTIME ALLOCATION CONSIDERATIONS

Figure 7A Amended is a nighttime limit study data sheet showing the 50% RSS of 25.953 mV/m and the 25% RSS of 40.626 mV/m at the WACM auxiliary site. Figure 7B is a 50% and 25% RSS study of WSAR (1480 kHz), Fall River, MA documenting the WACM proposal does not enter into the 25% RSS. Figure 7C is a 50% and 25% RSS study of WZRC (1480 kHz), New York, NY and also documents that the WACM proposal does not enter into the 25% RSS. Regarding WFED (1500 kHz), paragraph 5 of WFED license BL-20030221ACN clearly states that the nighttime groundwave contour is limited by co-channel facility KSTP, St. Paul, MN to 2.5 mV/m. On a first adjacent channel basis, the maximum permitted skywave from WACM would be 1.25 mV/m. This contour will fall outside of the WFED 2.5 mV/m groundwave contour.

Figure 8 Amended is a map depicting nighttime service of the 25.953 mV/m and 5 mV/m contours from the WACM auxiliary site.

PROPOSED SERVICE CONTOURS

It is noted that the licensed and auxiliary sites are in such proximity that the daytime 5 mV/m contour and nighttime 25.953 mV/m interference-free contours are essentially identical. While the WACM auxiliary site is intended only for emergencies, service to the WACM audience will be preserved.

December 11, 2008

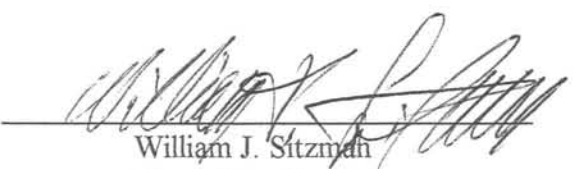
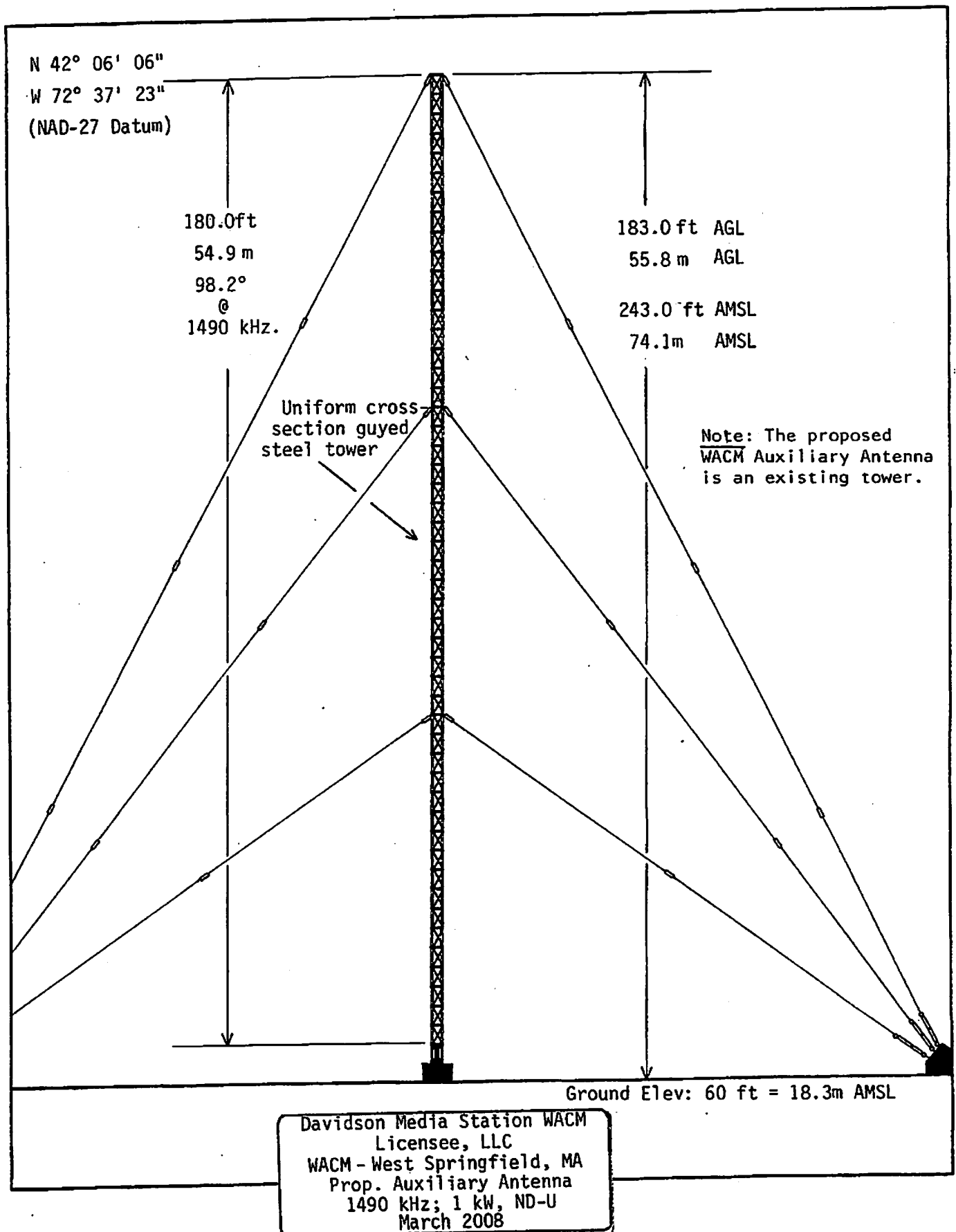

William J. Sitzman
Consulting Engineer

FIGURE 1

VERTICAL PLAN SKETCH OF PROPOSED WACM AUXILIARY ANTENNA



N 42-06-06
W 72-37-23
(NAD-27)

PLAT OF PROPERTY, TOWER LOCATION AND GROUND SYSTEM
PROPOSED WACM AUXILIARY ANTENNA

Ground system consists of 120 copper radials with maximum length of 125' or 38.1 meters, shortened as needed to property boundaries; average radial length of 89.2' (27.2m) or 0.135 wavelength @ 1490 kHz.

Ground system dimensions:
250 ft. x 100 ft.
(76.2m x 30.5m)

Street frontage: 449' = 136.8m

Sylvan Street

Extent of Ground system

Adjacent Property

Adjacent Property

Adjacent Property

Adjacent Property

100.3 ft = 30.6m

50' = 15.2m

50' = 15.2m

50' = 15.2m

50' = 15.2m

150' = 45.7m

Total this side: 350' = 106.6m

63' = 19.2m

69.5' = 21.2m

36.7' = 11.2m

Davidson Media Station WACM
Licensee, LLC
WACM - West Springfield, MA
Prop. Auxiliary Antenna
1490 kHz; 1 kW, ND-U
March 2008

0 51' 102' 153' 204' 255'

TRUE NORTH

Davidson Media Station WACM
Licensee, LLC
WACM - West Springfield, MA
Prop. Auxiliary Antenna
1490 kHz; 1 kW, ND-U
March 2008



TRUE
NORTH

FIGURE 2B



FIGURE 3

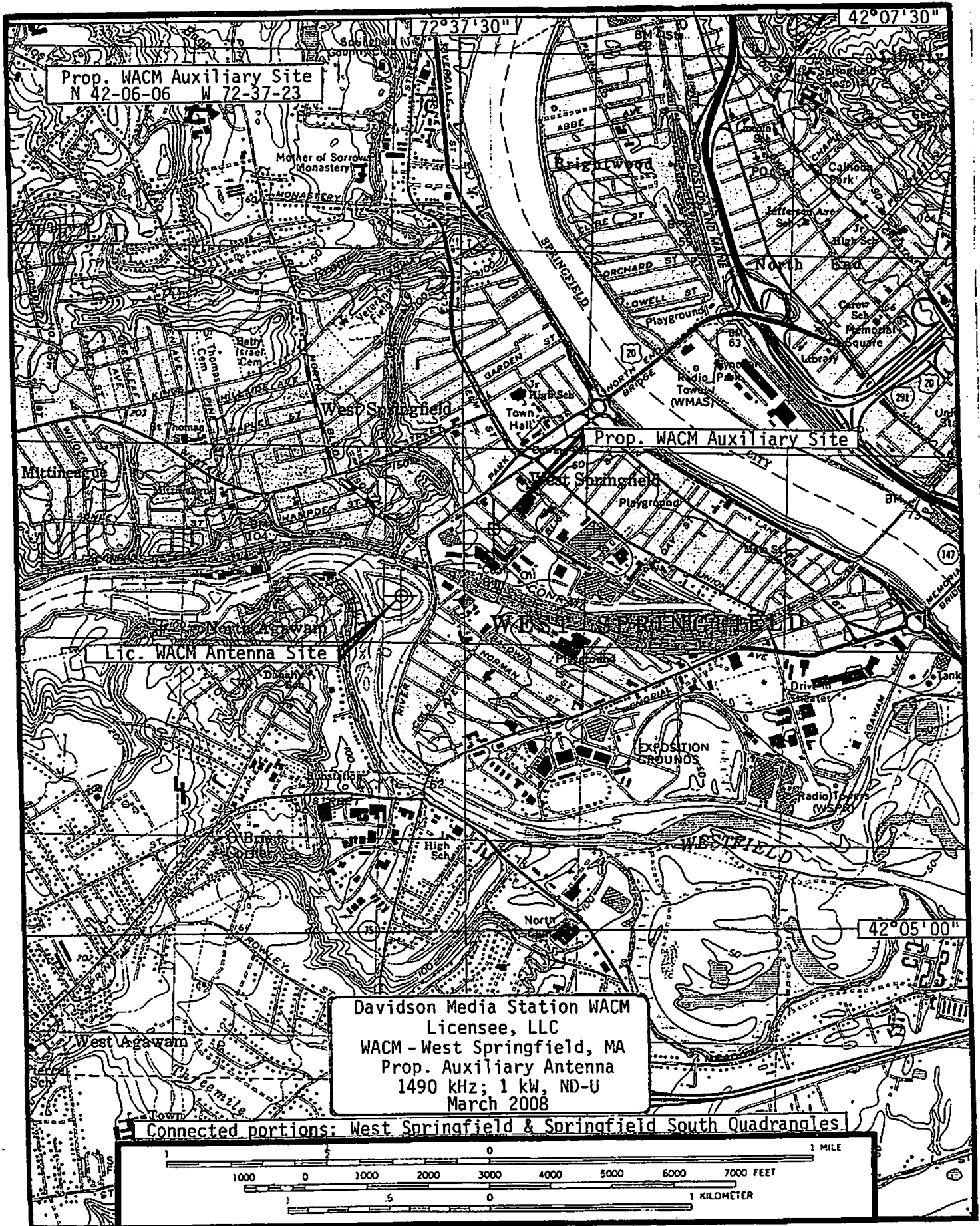


FIGURE 4

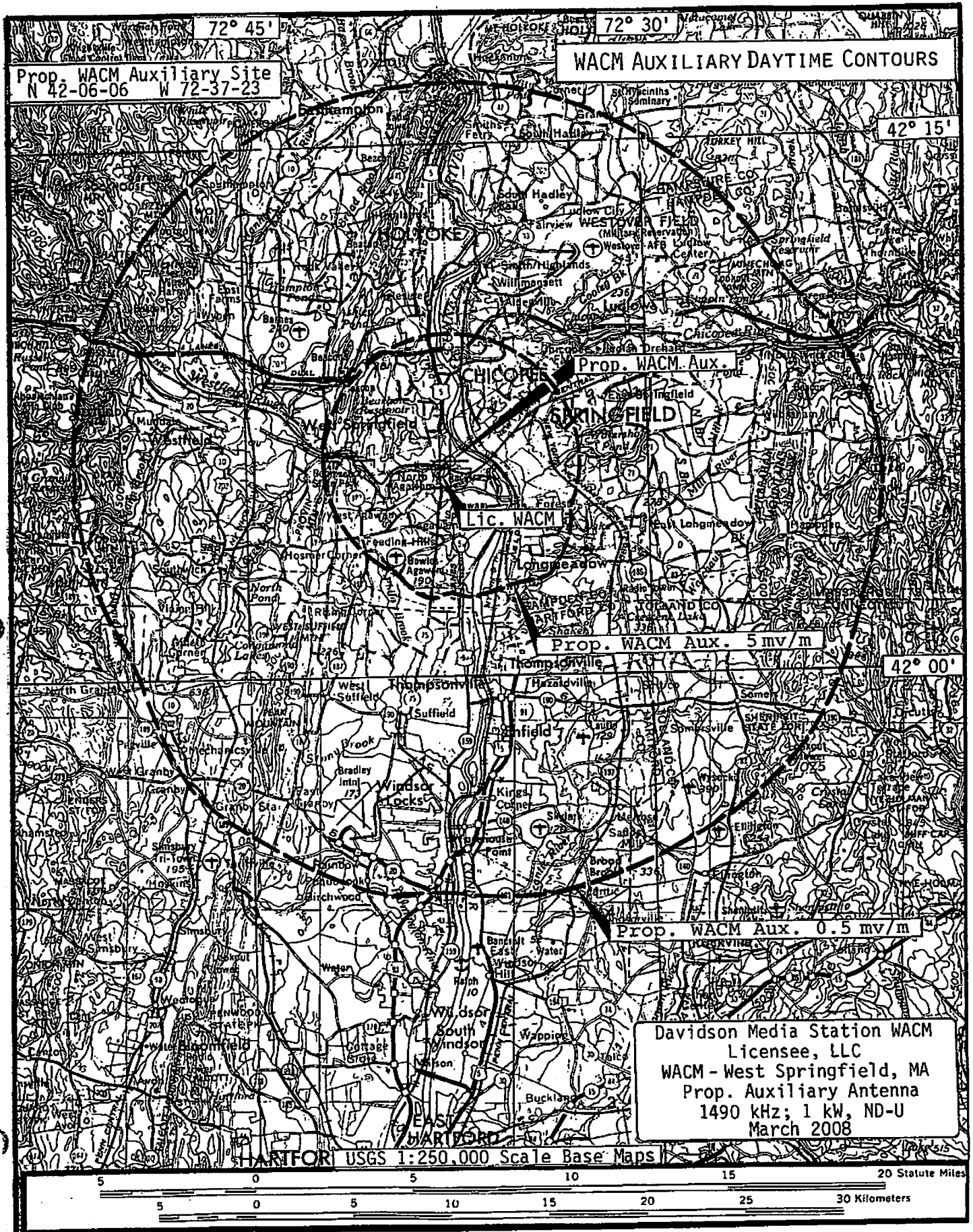


FIGURE 5

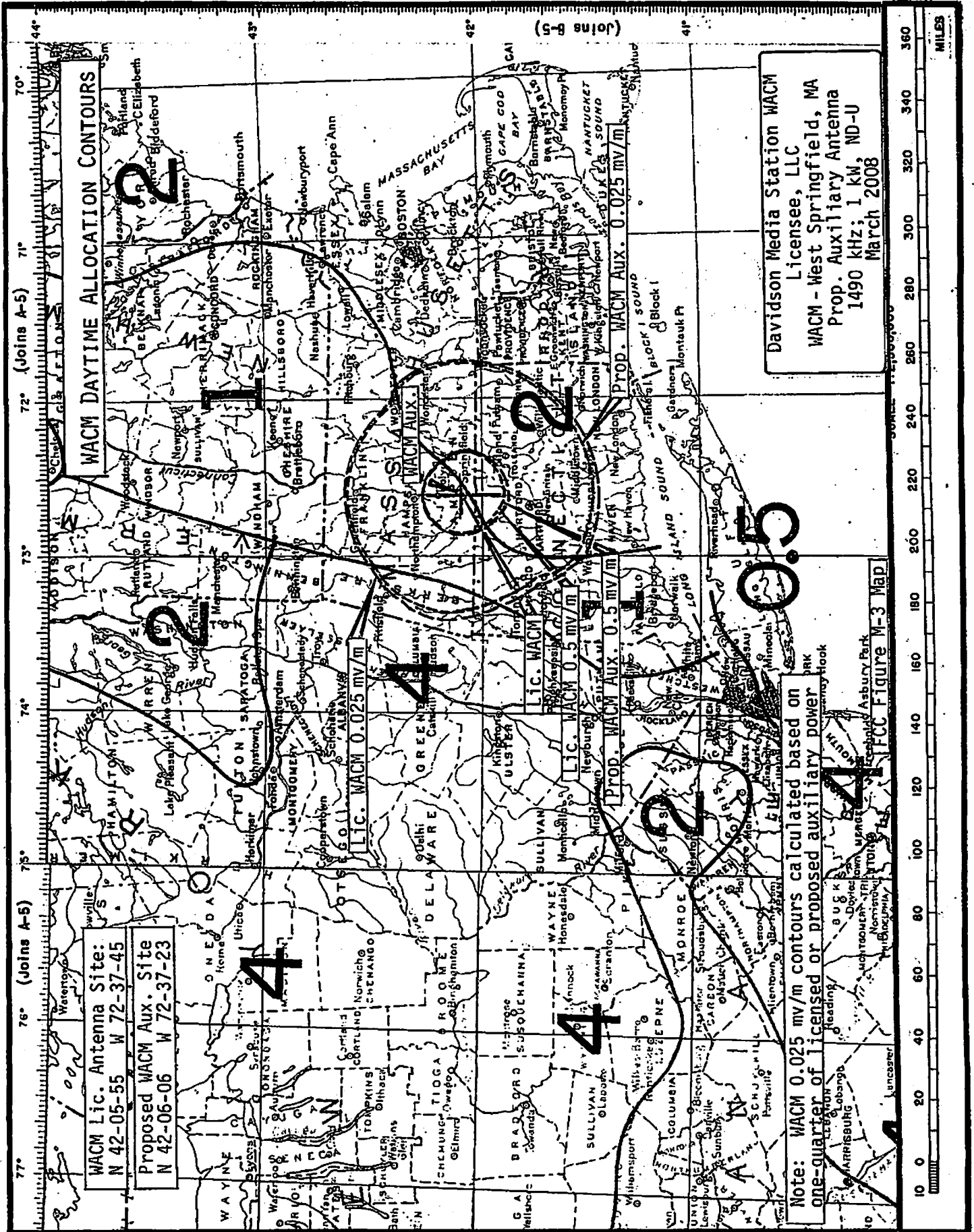


TABLE OF AZIMUTHS, INVERSE FIELDS AND SOIL CONDUCTIVITIES

WACM - West Springfield, MA
(Prop. Auxiliary Facility)

1490 kHz; 1.00 kW, ND-U
Prop. Inverse field: 276.52 mv/m/km @ 1 kW*

<u>Azimuth</u>	<u>Soil Conductivity (mS/m)</u>
0°T	M-3: 1-- 166.9 km, 2 - Remainder
10°T	M-3: 1 - Total distance
20°T	M-3: 1 - Total distance
30°T	M-3: 1 - Total distance
40°T	M-3: 1 - Total distance
50°T	M-3: 1 - Total distance
60°T	M-3: 1 - 20.4 km, 2 - 64.5 km, 1 - 143.7 km, 2 - 170.6 km, 5000 - Rem.
70°T	M-3: 1 - 12.1 km, 2 - 174.3 km, 5000 - Remainder
80°T	M-3: 1 - 9.3 km, 2 - 133.6 km, 5000 - Remainder
90°T	M-3: 1 - 7.2 km, 2 - 160.9 km, 5000 - Remainder
100°T	M-3: 1 - 6.8 km, 2 - 172.7 km, 5000 - Remainder
110°T	M-3: 1 - 6.3 km, 2 - Remainder
120°T	M-3: 1 - 4.8 km, 2 - 139.0 km, 5000 - Remainder
130°T	M-3: 1 - 2.9 km, 2 - 117.2 km, 5000 - Remainder
140°T	M-3: 1 - 2.7 km, 2 - 108.0 km, 5000 - Remainder
150°T	M-3: 1 - 2.9 km, 2 - 96.9 km, 5000 - Remainder
160°T	M-3: 1 - 3.2 km, 2 - 91.6 km, 5000 - 124.7 km, 0.5 - 129.4 km, 5000 - Rem.
170°T	M-3: 1 - 3.4 km, 2 - 90.4 km, 5000 - 109.0 km, 0.5 - 112.7 km, 5000 - 120.9 km, 0.5 - 134.7 km, 5000 - Remainder
180°T	M-3: 1 - 4.5 km, 2 - 90.9 km, 5000 - 120.9 km, 0.5 - 140.8 km, 5000 - Rem.
190°T	M-3: 1 - 3.7 km, 2 - 92.4 km, 5000 - 126.0 km, 0.5 - 154.7 km, 5000 - Rem.
200°T	M-3: 1 - 5.1 km, 2 - 85.8 km, 1 - 102.5 km, 5000 - 136.2 km, 0.5 - 170.8 km, 5000 - Remainder
210°T	M-3: 1 - 6.3 km, 2 - 63.2 km, 1 - 127.1 km, 5000 - 149.0 km, 4 - 159.3 km, 0.5 - Remainder
220°T	M-3: 1 - 8.9 km, 2 - 49.1 km, 1 - 140.8 km, 4 - Remainder
230°T	M-3: 1 - 14.6 km, 2 - 35.4 km, 1 - 123.0 km, 4 - Remainder
240°T	M-3: 1 - 80.5 km, 4 - 159.8 km, 2 - Remainder
250°T	M-3: 1 - 61.5 km, 4 - Remainder
260°T	M-3: 1 - 52.0 km, 4 - Remainder
270°T	M-3: 1 - 48.3 km, 4 - Remainder
280°T	M-3: 1 - 44.9 km, 4 - Remainder
290°T	M-3: 1 - 45.5 km, 4 - Remainder
300°T	M-3: 1 - 46.8 km, 4 - Remainder

TABLE OF AZIMUTHS, INVERSE FIELDS AND SOIL CONDUCTIVITIES

WACM - West Springfield, MA
(Prop. Auxiliary Facility)

1490 kHz; 1.00 kW, ND-U
Prop. Inverse field: 276.52 mv/m/km @ 1 kW*

<u>Azimuth</u>	<u>Soil Conductivity (mS/m)</u>
310°T	M-3: 1 - 49.9 km, 4 - 149.5 km, 2 - Remainder
320°T	M-3: 1 - 55.0 km, 4 - 134.1 km, 2 - Remainder
330°T	M-3: 1 - 64.4 km, 4 - 118.8 km, 2 - Remainder
340°T	M-3: 1 - 80.5 km, 4 - 105.3 km, 2 - Remainder
350°T	M-3: 1 - 108.6 km, 2 - Remainder

* Proposed inverse field from auxiliary antenna calculated for 1 kW. of power based on the proposed truncated ground system.

Note: Given the close proximity of the licensed WACM antenna site and that proposed for this auxiliary facility, Figure M-3 soil conductivities are essentially identical for the licensed and auxiliary WACM sites at all azimuths.

TABLE OF AZIMUTHS, INVERSE FIELDS AND SOIL CONDUCTIVITIES

WACM - West Springfield, MA
(Licensed Facility)

1490 kHz; 0.47 kW, ND-U
Inverse field: 297.9 mv/m/km @ 0.47 kW.

<u>Azimuth</u>	<u>Soil Conductivity (mS/m)</u>
0°T	M-3: 1 - 166.9 km, 2 - Remainder
10°T	M-3: 1 - Total distance
20°T	M-3: 1 - Total distance
30°T	M-3: 1 - Total distance
40°T	M-3: 1 - Total distance
50°T	M-3: 1 - Total distance
60°T	M-3: 1 - 20.4 km, 2 - 64.5 km, 1 - 143.7 km, 2 - 170.6 km, 5000 - Rem.
70°T	M-3: 1 - 12.1 km, 2 - 174.3 km, 5000 - Remainder
80°T	M-3: 1 - 9.3 km, 2 - 133.6 km, 5000 - Remainder
90°T	M-3: 1 - 7.2 km, 2 - 160.9 km, 5000 - Remainder
100°T	M-3: 1 - 6.8 km, 2 - 172.7 km, 5000 - Remainder
110°T	M-3: 1 - 6.3 km, 2 - Remainder
120°T	M-3: 1 - 4.8 km, 2 - 139.0 km, 5000 - Remainder
130°T	M-3: 1 - 2.9 km, 2 - 117.2 km, 5000 - Remainder
140°T	M-3: 1 - 2.7 km, 2 - 108.0 km, 5000 - Remainder
150°T	M-3: 1 - 2.9 km, 2 - 96.9 km, 5000 - Remainder
160°T	M-3: 1 - 3.2 km, 2 - 91.6 km, 5000 - 124.7 km, 0.5 - 129.4 km, 5000 - Rem.
170°T	M-3: 1 - 3.4 km, 2 - 90.4 km, 5000 - 109.0 km, 0.5 - 112.7 km, 5000 - 120.9 km, 0.5 - 134.7 km, 5000 - Remainder
180°T	M-3: 1 - 4.5 km, 2 - 90.9 km, 5000 - 120.9 km, 0.5 - 140.8 km, 5000 - Rem.
190°T	M-3: 1 - 3.7 km, 2 - 92.4 km, 5000 - 126.0 km, 0.5 - 154.7 km, 5000 - Rem.
200°T	M-3: 1 - 5.1 km, 2 - 85.8 km, 1 - 102.5 km, 5000 - 136.2 km, 0.5 - 170.8 km, 5000 - Remainder
210°T	M-3: 1 - 6.3 km, 2 - 63.2 km, 1 - 127.1 km, 5000 - 149.0 km, 4 - 159.3 km, 0.5 - Remainder
220°T	M-3: 1 - 8.9 km, 2 - 49.1 km, 1 - 140.8 km, 4 - Remainder
230°T	M-3: 1 - 14.6 km, 2 - 35.4 km, 1 - 123.0 km, 4 - Remainder
240°T	M-3: 1 - 80.5 km, 4 - 159.8 km, 2 - Remainder
250°T	M-3: 1 - 61.5 km, 4 - Remainder
260°T	M-3: 1 - 52.0 km, 4 - Remainder
270°T	M-3: 1 - 48.3 km, 4 - Remainder
280°T	M-3: 1 - 44.9 km, 4 - Remainder
290°T	M-3: 1 - 45.5 km, 4 - Remainder
300°T	M-3: 1 - 46.8 km, 4 - Remainder

TABLE OF AZIMUTHS, INVERSE FIELDS AND SOIL CONDUCTIVITIES

WACM - West Springfield, MA
(Licensed Facility)

1490 kHz; 0.47 kW, ND-U
Inverse field: 297.9 mv/m/km @ 0.47 kW.

<u>Azimuth</u>	<u>Soil Conductivity (mS/m)</u>
310°T	M-3: 1 - 49.9 km, 4 - 149.5 km, 2 - Remainder
320°T	M-3: 1 - 55.0 km, 4 - 134.1 km, 2 - Remainder
330°T	M-3: 1 - 64.4 km, 4 - 118.8 km, 2 - Remainder
340°T	M-3: 1 - 80.5 km, 4 - 105.3 km, 2 - Remainder
350°T	M-3: 1 - 108.6 km, 2 - Remainder

AM Allocation study

Coordinates : 42-06-06.0 N 72-37-23.0 W
 Frequency : 1490
 Initial Pwr: 0.850
 Initial Inv Field: 254.94 mV/m

NIGHTTIME LIMIT STUDY: WACM, West Springfield, MA
Proposed Auxiliary Antenna Site

SITE INFO		COUNTRY	CITY	ST	DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS 50%	RSS 25%
CALL	FRQ																
WCSS	1490	US	AMSTERDAM	NY	159.1	C	255.6	54.0	126.4	307.4	41.8	56.0	204.9	0.324829	13.308	13.308	13.308
WDLG	1490	US	PORT JERVIS	NY	189.2	C	275.3	53.2	63.6	300.9	36.8	51.2	225.0	0.295350	13.289	18.807	18.807
WEMJ	1490	US	LACONIA	NH	185.9	C	273.1	54.3	211.0	300.9	37.3	51.7	223.2	0.293100	13.082	22.909	22.909
WFAD	1490	US	MIDDLEBURY	VT	215.4	C	293.9	54.5	168.1	299.3	33.3	47.5	233.2	0.261512	12.195	25.953	25.953
WCOM	1490	US	HAVERHILL	MA	145.5	C	247.3	53.9	239.7	333.1	44.4	58.3	175.1	0.341055	11.944	0.000	28.569
WCDO	1490	US	SIDNEY	NY	228.6	C	303.7	53.7	95.3	282.0	31.7	45.8	225.9	0.253472	11.449	0.000	30.778
WMRC	1490	US	MILFORD	MA	91.6	C	220.0	53.6	267.9	302.6	57.3	68.8	141.1	0.405292	11.434	0.000	32.834
WBAE	1490	US	PORTLAND	ME	258.5	C	326.9	54.4	228.6	359.0	28.5	42.2	245.0	0.223465	10.951	0.000	34.612
WGCH	1490	US	GREENWICH	CT	146.1	C	247.7	53.0	34.8	241.4	44.2	58.2	157.6	0.344929	10.871	0.000	36.279
WKVT	1490	US	BRATTLEBORO	VT	83.0	C	216.5	53.9	182.3	300.9	59.8	70.7	131.0	0.412500	10.804	0.000	37.853
WBCB	1490	US	LEVITOWN	PA	283.7	C	347.1	52.6	40.0	294.5	26.3	39.5	254.5	0.211860	10.784	0.000	39.359
WOLF	1490	US	SYRACUSE	NY	309.0	C	368.0	54.0	108.9	383.0	24.3	37.0	267.9	0.187820	10.065	0.000	40.626
WRTN	1490	US	BERLIN	NH	289.4	C	351.8	54.8	204.3	282.7	25.8	38.9	245.9	0.197536	9.713	0.000	0.000
WIKI	1490	US	NEWPORT	VT	317.3	C	375.1	55.0	185.9	307.4	23.7	36.3	270.3	0.177573	9.600	0.000	0.000
WICY	1490	US	MALONE	NY	332.7	C	388.2	54.9	155.9	325.1	22.6	34.9	280.0	0.168471	9.433	0.000	0.000
WTVL	1490	US	WATERVILLE	ME	366.4	C	417.5	54.8	222.7	326.7	20.6	32.3	287.6	0.150520	8.659	0.000	0.000
WUVR	1490	US	LEBANON	NH	175.3	C	266.0	54.4	190.4	292.2	39.0	53.3	135.3	0.304433	8.241	0.000	0.000

Nighttime 50% Interference-Free RSS @ Proposed Auxiliary Site:

25.953 mV/m

Interference Contributors: WCSS=13.308 mV/m
 WDLG=13.289 mV/m
 WEMJ=13.082 mV/m
 WFAD=12.195 mV/m

Nighttime 25% RSS @ Proposed Auxiliary Site:

40.626 mV/m

WSAR 50% & 25% RSS with WACH-AUX.TXT

AM Allocation Study

Coordinates : 41-43-26.0 N 71-11-21.0 W
 Frequency : 1480
 Initial PWR: 5.000
 Initial Inv Field: 902.80 mV/M

SITE INFO																	
CALL	FRQ	COUNTRY	CITY	ST	DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS 50%	RSS 25%
WZRC	1480	US	NEW YORK	NY	255.9	B	324.8	52.8	66.6	79.6	28.8	42.5	45.6	0.233268	2.127	2.127	2.127
WMDD	1480	US	FAJARDO	PR	2650.1	B	2657.6	41.6	349.7	975.2	0.0	0.0	975.2	0.008643	1.686	2.714	2.714
WKVT	1490	US	BRATTLEBORO	VT	169.5	C	262.2	53.8	137.0	300.9	39.9	54.3	213.3	0.314198	1.340	0.000	3.027
WEMJ	1490	US	LACONIA	NH	203.3	C	285.2	54.1	173.6	300.9	34.8	49.1	232.2	0.275857	1.281	0.000	3.287
WKNY	1490	US	KINGSTON	NY	234.7	C	308.4	53.3	94.8	362.1	31.0	45.0	228.5	0.249453	1.140	0.000	3.479
WBAE	1490	US	PORTLAND	ME	228.3	C	303.5	54.2	199.5	359.0	31.7	45.8	224.0	0.251033	1.125	0.000	3.656
WKAP	1470	US	ALLENTOWN	PA	379.2	B	428.7	52.7	70.0	446.7	19.9	31.4	366.4	0.153210	1.123	0.000	3.824
WHBC	1480	US	CANTON	OH	864.0	B	886.9	52.7	79.2	129.4	7.5	13.5	121.9	0.045320	1.105	0.000	3.981
WAZN	1470	US	MARLBOROUGH	MA	76.7	B	214.2	53.6	178.6	1138.1	61.8	72.0	130.9	0.420976	1.102	0.000	4.131
WCSS	1490	US	AMSTERDAM	NY	281.4	C	345.2	53.8	118.3	307.4	26.5	39.7	261.8	0.208277	1.090	0.000	4.272
WCCM	1490	US	HAVERHILL	MA	116.8	C	231.6	53.7	183.6	333.1	50.7	63.7	144.1	0.375853	1.083	0.000	4.407
WDLC	1490	US	PORT JERVIS	NY	293.0	C	354.8	53.0	81.0	300.9	25.5	38.5	262.3	0.203270	1.066	0.000	0.000
WACH	1490	US	WEST SPRINGFIELD	MA	125.8	C	236.3	53.4	109.0	254.9	48.5	61.9	143.2	0.367036	1.051	0.000	0.000

WZRC 50% & 25% RSS with WACM-AUX.TXT

AM Allocation Study

Coordinates : 40-50-42.0 N 74-01-12.0 W
 Frequency : 1480
 Initial Pwr: 5.000
 Initial Inv Field: 764.44 mV/M

SITE INFO																										
CALL	FRQ	COUNTRY	CITY	ST	DIST	CLASS	SLANT	DIST	GEOMAG	MID	AZIMUTH	GND	RAD	MIN	ELEV	MAX	ELEV	MAX	RAD	SWAVE	FLO	LIMITATION	RSS	50%	RSS	25%
WDAS	1480	US	PHILADELPHIA	PA	138.0	B	243.0	51.9	46.6	40.8	45.9	59.7	25.6	0.359170	1.841	1.841	1.841									
WMDD	1480	US	FAJARDO	PR	2624.3	B	2631.9	41.2	344.0	975.2	0.0	0.0	975.2	0.008906	1.737	2.531	2.531									
WKAP	1470	US	ALLENTOWN	PA	125.6	B	236.2	52.2	78.9	683.1	48.6	62.0	196.9	0.372703	1.468	2.926	2.926									
WHBC	1480	US	CANTON	OH	624.7	B	655.9	52.2	86.3	98.5	11.6	19.5	86.8	0.078134	1.356	0.000	3.225									
WSAR	1480	US	FALL RIVER	MA	255.9	B	324.8	52.8	248.5	140.9	28.8	42.5	28.6	0.233268	1.332	0.000	3.489									
WCSS	1490	US	AMSTERDAM	NY	235.6	C	309.1	53.3	176.8	307.4	30.9	44.9	246.8	0.248469	1.227	0.000	3.699									
WCDO	1490	US	SIDNEY	NY	199.6	C	282.6	53.0	145.0	282.0	35.3	49.7	213.7	0.285139	1.219	0.000	3.894									
WBCB	1490	US	LEVITTOWN	PA	102.0	C	224.5	51.9	42.3	294.5	54.4	66.7	150.8	0.400873	1.209	0.000	4.078									
WMRC	1490	US	MILFORD	MA	253.3	C	322.8	53.0	236.3	302.6	29.0	42.8	252.1	0.234577	1.183	0.000	4.246									
WKVT	1490	US	BRATTLEBORO	VT	252.5	C	322.1	53.3	208.6	300.9	29.1	42.9	251.4	0.233796	1.175	0.000	4.405									
WACM	1490	US	WEST SPRINGFIEL	MA	181.8	C	270.3	52.9	220.3	254.9	38.0	52.3	180.2	0.304537	1.097	0.000	0.000									

FIGURE 7C

FIGURE 8 Amended