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TENNESSEE MEDIA ASSOCIATES

APPLICATION FOR FILL-IN TRANSLATOR FOR WRJZ(AM)

KNOXVILLE, TN

EXHIBIT 13

CONTOUR OVERLAP

A search of the CDBS revealed five facilities that warranteED detailed study:

Co-channel translator W273DK, 273D, Morristown, TN (Facility ID 200934 – BNPFT-20171211AAT) and co-channel FM station WOWF(FM), 273C3, Crossville, TN (Facility ID 46369 -BLH-20080717AKR);

First-adjacent translator W274BZ, 274D, Lenoir City, TN (Facility ID 156886 – BLFT20170428AAY);

Second-adjacent FM station WWST(FM), 271C1, Sevierville, TN (Facility ID 29727 – BLH-19860519KF) and second-adjacent translator W275AD, 275D, Knoxville, TN (Facility ID 82561 – BLFT-19980729TD and BPFT20170608AAA).

The attached Figure 1 shows the 60 dBu F(50,50) contour from the proposed translator and each of the co-channel facilities. The Figure also shows the 40 dBu F(50,10) contour from the proposed translator and from W273DK.

As Figure 1 demonstrates, the proposed translator 40 dBu F(50,10) contour does not overlap the 60 dBu F(50,50) contour of either co-channel facility and the W273DK 40 dBu F(50,10) contour does not overlap the proposed translator 60 dBu F(50,50) contour. No prohibited contour overlap occurs with co-channel facilities.

The attached Figure 2 shows the protected 60 dBu F(50,50) contour from the proposed translator and from W274BZ. The Figure also shows the 54 dBu F(50,10) contour from the proposed translator and from W274BZ.

As Figure 2 demonstrates, the proposed 40 dBu F(50,10) contour does not overlap the 60 dBu F(50,50) contour of W274BZ and the W274BZ 40 dBu F(50,10) contour does not overlap the Proposed 60 dBu F(50,50) contour. No prohibited contour overlap occurs with first-adjacent channel facilities.

The attached Figure 3 shows the protected 78 dBu F(50,50) contour from WWST(FM), the 90 dBu F(50,50) contour from the W275AD CP and the 100 dBu F(50,50) contour from the proposed translator.

The proposed site is within the 78 dBu contour of WWST(FM) and therefore the +40 dB interference level to WWST(FM) from the proposed operation is 118 dBu. The attached Table 1 shows the calculated free-space field at ground level from the proposed operation. At no location on the ground does the proposed field exceed 118 dBu and so no interference will be caused to WWST(FM).

The proposed site is within the 90 dBu contour of the W275AD CP and therefore the +40 dB interference level to W275AD CP from the proposed operation is 130 dBu. The attached Table 1 shows the calculated free-space field at ground level from the proposed operation. At no location on the ground does the proposed field exceed 130 dBu and so no interference will be caused to the W275CP operation.

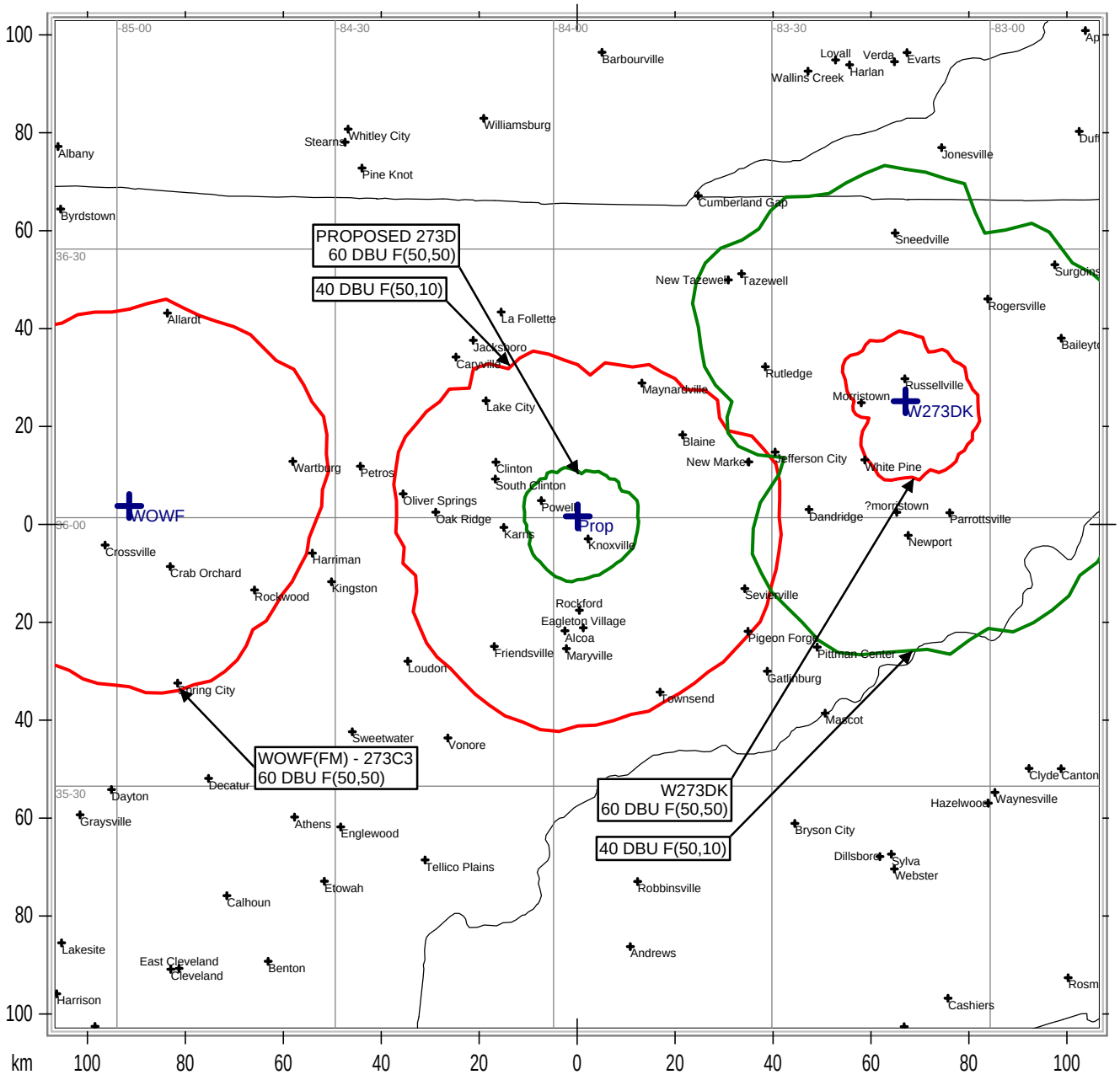
The W275AD CP site is within the 100 dBu contour of the proposed operation and therefore the +40 dB interference level to the proposed operation from the W275AD CP is 140 dBu. The W275AD CP specifies an antenna elevation of 61 meters above ground with an ERP of 10 Watts. The ground level free-space field from this operation is calculated 1/ to be 111.2 dBu and so no interference will be caused to the W275AD CP operation.

The proposed translator will operate from the same site as the antenna for the W275AD licensed operation. The W275AD licensed antenna is mounted at 52 meters above ground with an ERP of 10 Watts. The proposed translator antenna will be mounted at 50 meters above ground with an ERP of 99 Watts. Since the distance to all ground level locations from both facilities is essentially identical and the ERP of the proposed translator is 9.96 dB higher than the ERP of the W275AD licensed operation, it is evident that neither facility will generate a ground level signal 40 dB higher than the other facility. Thus, no actual interference will be caused to the licensed operation of W275AD by the proposed operation and no interference to the proposed operation will be caused by the W275AD licensed operation.

In summary, no prohibited contour overlap will occur with any co-channel, first-adjacent channel or third-adjacent channel facility. Within the protected contours, the proposed signal level will not exceed by 40 dB the signal level of any second-adjacent facility and the signal level from any second-adjacent channel translator will not exceed the proposed signal level by 40 dB. This proposal complies with F.C.C. Rules regarding interference.

1/ Free-space Field = 106.92 + dBk -20*log(Distance in km)

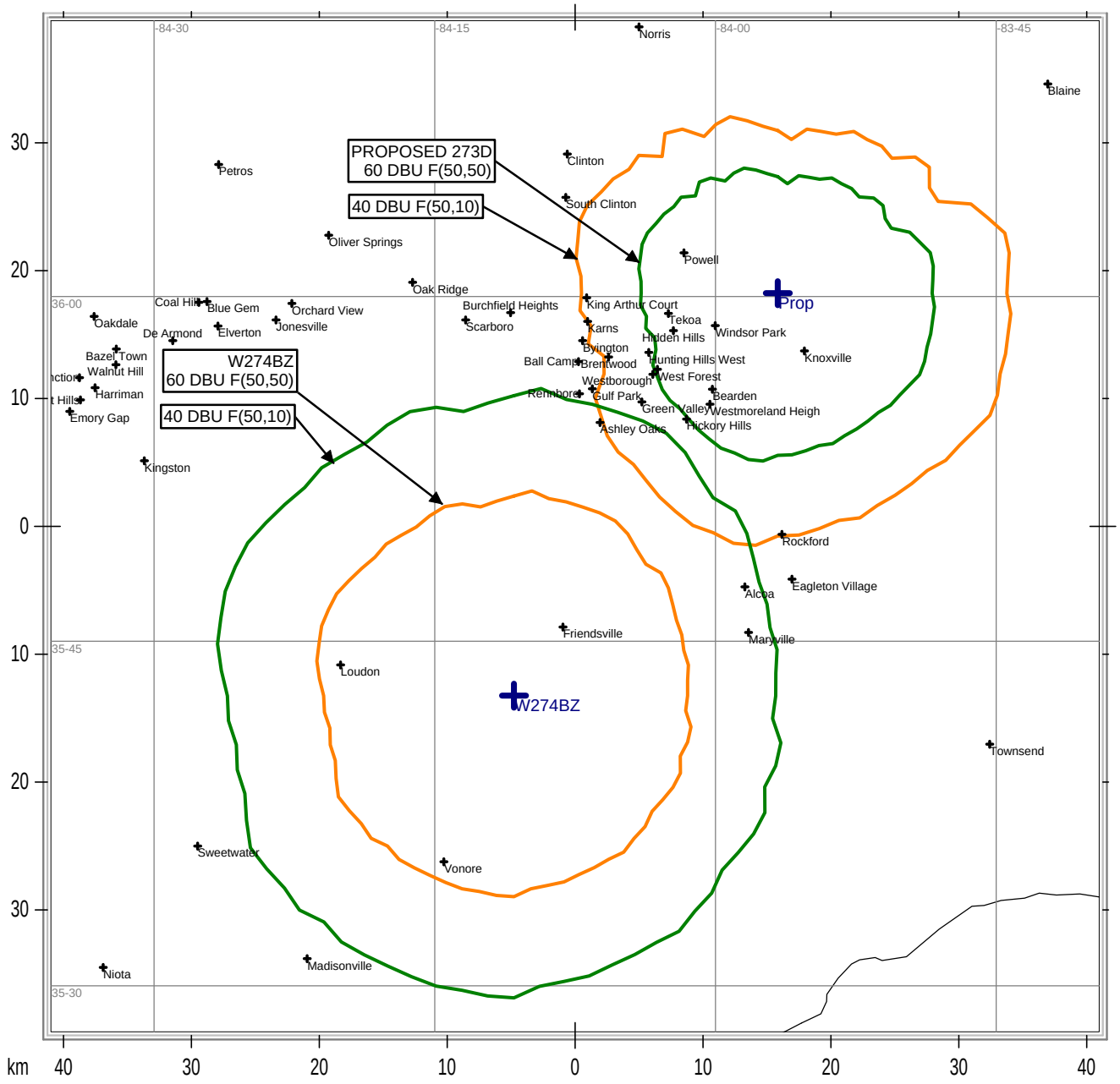
PROPOSED TRANSLATOR FOR WRJZ(AM)- KNOXVILLE, TN



273D - 0.099 KW ERP - C/R 455 METERS AMSL

State Borders Lat/Lon Grid

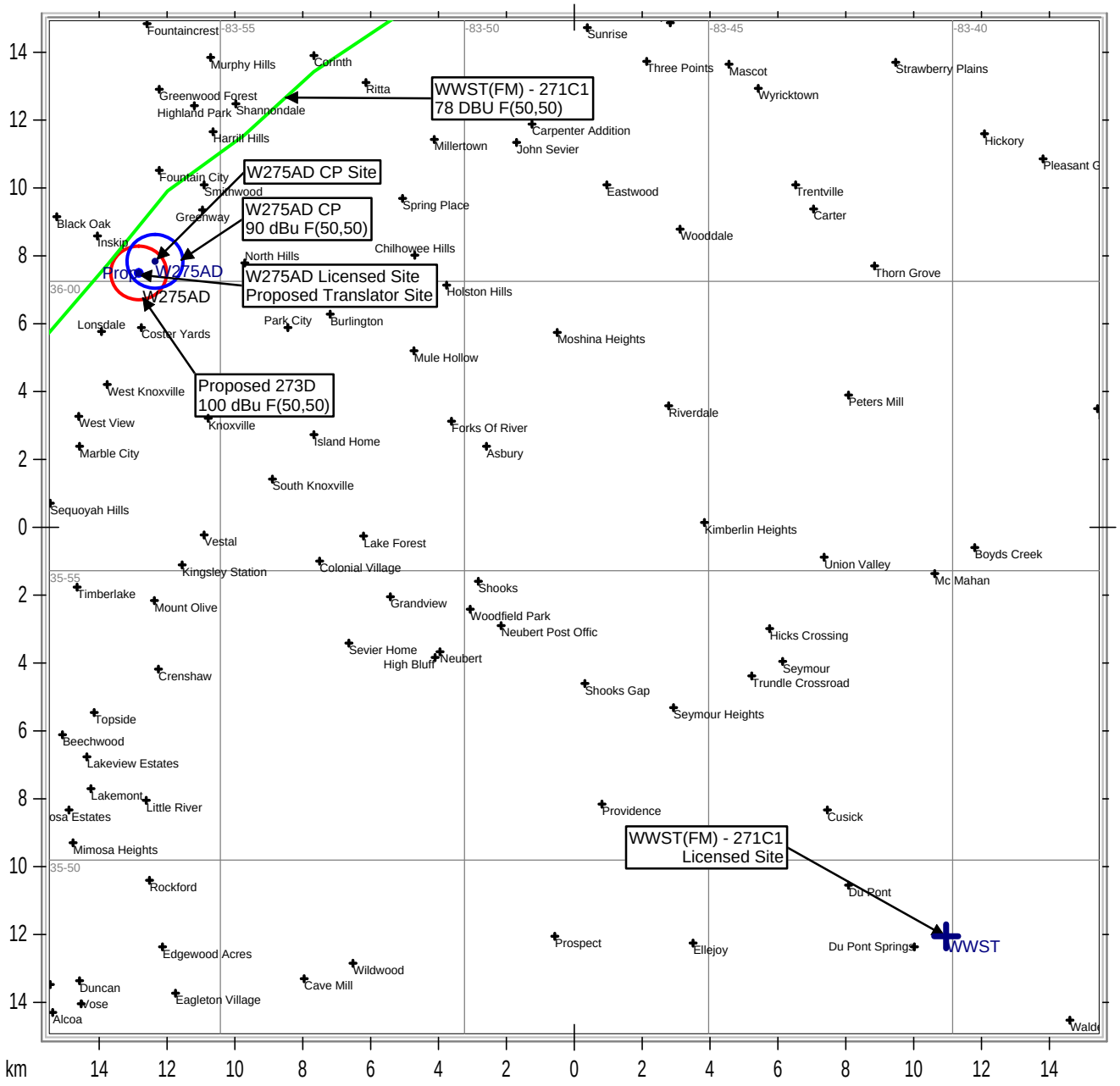
PROPOSED TRANSLATOR FOR WRJZ(AM)- KNOXVILLE, TN



273D - 0.099 KW ERP - C/R 455 METERS AMSL

State Borders Lat/Lon Grid

PROPOSED TRANSLATOR FOR WRJZ(AM)- KNOXVILLE, TN



273D - 0.099 KW ERP - C/R 455 METERS AMSL

State Borders Lat/Lon Grid

TENNESSEE MEDIA ASSOCIATES - PROPOSED TRANSLATOR FOR WRJZ(AM)
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TABLE 1

Antenna Make	SWR	
Antenna Model	FM1-2	0.75 Wavelength spacing between bays
ERP (W)	99	
Antenna C/R AGL (m)	50	

Downward Angle (Deg)	**Horizontal Distance from Antenna (m)**	**Ground Distance from C/R (m)**	**Relative Field**	**ERP (dBk)**	**Free Space Field dBu**
90.0	0.0	50.0	0.08	-31.98	100.96
85.0	4.4	50.2	0.14	-27.12	105.79
80.0	8.8	50.8	0.18	-24.94	107.87
75.0	13.4	51.8	0.21	-23.60	109.04
70.0	18.2	53.2	0.24	-22.44	109.96
65.0	23.3	55.2	0.26	-21.74	110.34
60.0	28.9	57.7	0.24	-22.44	109.25
55.0	35.0	61.0	0.21	-23.60	107.61
50.0	42.0	65.3	0.15	-26.52	104.10
45.0	50.0	70.7	0.09	-30.96	98.97
40.0	59.6	77.8	0.01	-50.04	79.06
35.0	71.4	87.2	0.19	-24.47	103.64
30.0	86.6	100.0	0.32	-19.94	106.98
25.0	107.2	118.3	0.50	-16.06	109.40
20.0	137.4	146.2	0.63	-14.06	109.56
15.0	186.6	193.2	0.76	-12.43	108.77
10.0	283.6	287.9	0.90	-10.96	106.78
5.0	571.5	573.7	0.97	-10.31	101.44

Horizontal Distance =	(TAN(90 - Downward Angle) * C/R AGL)
Ground Distance =	SQRT((C/R AGL)^2) + (Horizontal Distance^2))
Relative Field=	From manufacturer's datasheet
Free Space Field =	106.92 + dBk -20*log(Ground Distance in km)