

Technical Report W250BG Minor Modification

This technical report is submitted for a minor modification to W250BG, FCC file no. BLFT-20080926ACV. A change to channel 251 is submitted. The translator will operate within the 25 mile/40 km radius of WOPI(AM) 1490 kHz at Bristol, VA, FCC facility I.D. 31405 and remain as its fill in.

W250BG Modification Analysis:

An overlap study (exhibit E-1) shows the W250BG modification to channel 251 is within the WTFM(FM) 253C second-adjacent protected contour. A tabulation of the 136.53 +40 dBu F(50-10) contour (exhibit E-2) using the vertical elevation pattern of the SWR FMEC three bay, full wavelength-spaced antenna (exhibit E-3) shows the interfering contour will not reach the ground to affect any population, roads or buildings (exhibit E-4). The 60 dBu contour is contained within a 25 mile/40 km radius of the primary WOPI(AM) tower site (exhibit E-5).

Antenna System:

The W250BG modification is located on the existing tower, ASR 1053535, at coordinates:

36 35 45N 082 09 42W NAD 27.

The SWR FMEC three bay, nondirectional antenna is mounted at a COR AGL of 89 meters, 638 meters AMSL and will continue to operate at 0.250 kW ERP.

RF Exposure Calculation:

The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (height of radiation center in meters -2m)}}$$

Using a worst case vertical (F) factor of 1.0, the RF is calculated to be $2.21 \mu\text{W}/\text{cm}^2$ to the ground, which is below 5% of the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure allowing exclusion from consideration.

Conclusion:

It is concluded that the W250BG modification complies with all Commission rules and policies.

A handwritten signature in black ink, appearing to read 'Christopher Anderson', is written over a horizontal line.

Christopher Anderson March 20, 2017
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E-1 W250BG Mod. to Ch. 251 Overlap Study

REFERENCE		CH#	251D - 98.1 MHz, Pwr= 0.25 kW, HAAT= 77.0 M, COR= 638 M					DISPLAY DATES		
36 35 45.0 N.			Average Protected F(50-50)= 11.37 km					DATA 03-16-17		
82 09 42.0 W.			Omni -di rectional					SEARCH 03-16-17		
CH	CALL	TYPE ANT	AZI	DIST	LAT	PWR(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE	<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
253C	WTFM	LIC ZCY	173.2	18.37	36 25 54.0	74.000	13.9	95.7	-9.8	-78.4*(1)
Kingsport		TN	353.3	BLH19950213KA	82 08 15.0	683	1305	Holston Valley Broadcastin		
251C	WBRF	LIC DEN	91.5	119.53	36 33 34.0	100.000	169.6	72.5	-62.0*	5.8
Galax		VA	272.3	BLH19910423KA	80 49 25.0	535	1149	Blue Ridge Radio, Inc.		
250D	W250BG	LIC _C_	0.0	0.00	36 35 45.0	0.250	10.1	7.1	-17.2*	-17.2*
Bristol		TN	0.0	BLFT20080926ACV	82 09 42.0	77	638	Holston Valley Broadcastin		
249D	W249AH	CP DC_	203.6	39.69	36 16 07.0	0.250	0.2	11.1	23.1	22.7
Johnson City		TN	23.5	BPFT20140218ABM	82 20 21.0		1006	Holston Valley Broadcastin		
249D	W249AH	LIC DC_	203.6	39.69	36 16 07.0	0.040	0.3	14.1	23.0	24.3
Johnson City		TN	23.5	BLFT20080422ABD	82 20 21.0	388	1006	Holston Valley Broadcastin		
249C3	WRI C-FM	LIC NCX	20.7	66.01	37 09 04.0	3.200	3.1	35.8	55.8	27.4
Richlands		VA	200.8	BLH20070509AAM	81 53 56.0	229	922	Rr & Wt Broadcasting, Inc.		
251C0	WHZT	LIC _CX	199.6	224.88	34 41 15.0	100.000	172.3	72.6	36.1	99.3
Williamston		SC	19.1	BLH20120905ACG	82 59 13.0	304	554	Sm-whzt, Lic		
250C3	WKI C	LIC _CX	306.5	112.61	37 11 36.0	2.000	60.9	40.2	41.3	59.6
Hyden		KY	125.8	BLH20111223AAD	83 11 04.0	346	748	Leslie County Broadcasting		
250C	WPEG	LIC DEX	146.3	164.34	35 21 44.0	95.000	108.9	74.0	42.8	71.6
Concord		NC	326.9	BMLH20121024AAF	81 09 19.0	491	727	Wpow License Limited Partn		
250L1	WOFB-LP	LIC ____	230.8	75.10	36 10 03.0	0.029			52.3	45.1
Greeneville		TN	50.5	BLL20160616ABU	82 48 38.0	55	493	Our Father's Business, Inc		

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM										
In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.										
All separation margins (if shown) include rounding.										
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)										
***affixed to 'IN' or 'OUT' values = site inside restricted contour.										
Reference station has protected zone issue: AM tower										

- (1) The W250BG modification to channel 251 +40 dBu 136.53 F(50-10) contour within the WTFM(FM) 253C second-adjacent protected contour does not reach any population, buildings or roads, as shown in the tabulation and aerial photo in exhibits E-2 and E-3.

E-2 W250BG Mod. 136.53 +40 dBu F(50-10) Contour Within WTFM(FM) 253C

W250BG Bristol, TN
74.1204(d) Showing
Translator or LPFM Maximum Licensed ERP = 0.25
Translator or LPFM Antenna Height AG = 89 Meters
W250BG Antenna Model = SWR FMEC-3

Protected Station's Contour = 96.52774 dBu
Translator's or LPFM's full Interference contour 136.52774

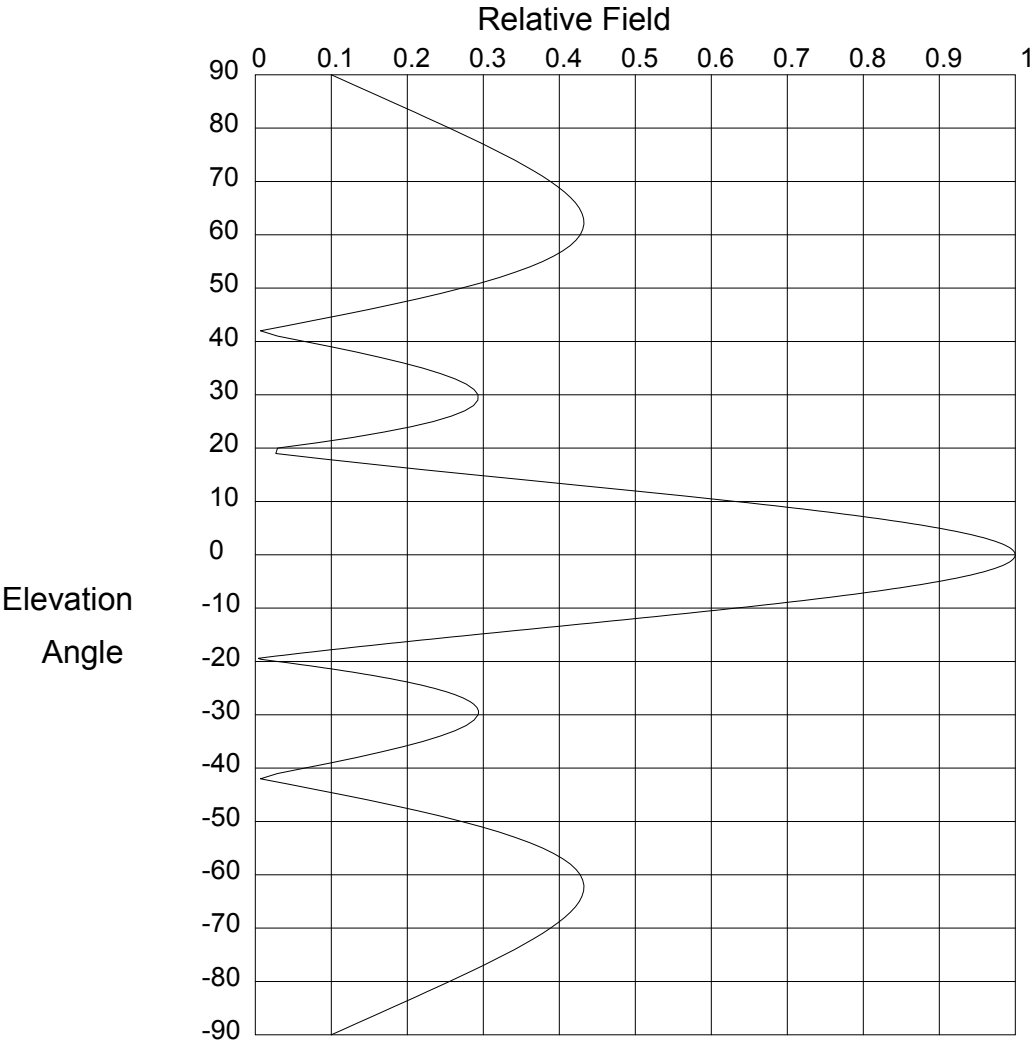
Review Azimuth = 0 Degrees True
Relative Field on the horizon at Review Azimuth = 1.000
Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
Distance between stations = 18.4 km
Protected Station= WTFM, 74 kW, 1305 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	016.5418	016.5418	089.000
01.00	0.996	1.0	0.2480	016.4756	016.4731	088.712
02.00	0.983	1.0	0.2416	016.2606	016.2507	088.433
03.00	0.963	1.0	0.2318	015.9298	015.9079	088.166
04.00	0.935	1.0	0.2186	015.4666	015.4289	087.921
05.00	0.899	1.0	0.2021	014.8711	014.8145	087.704
06.00	0.857	1.0	0.1836	014.1763	014.0987	087.518
07.00	0.808	1.0	0.1632	013.3658	013.2662	087.371
08.00	0.754	1.0	0.1421	012.4725	012.3511	087.264
09.00	0.695	1.0	0.1208	011.4966	011.3550	087.202
10.00	0.632	1.0	0.0999	010.4544	010.2956	087.185
11.00	0.566	1.0	0.0801	009.3627	009.1906	087.214
12.00	0.498	1.0	0.0620	008.2378	008.0578	087.287
13.00	0.428	1.0	0.0458	007.0799	006.8984	087.407
14.00	0.357	1.0	0.0319	005.9054	005.7300	087.571
15.00	0.287	1.0	0.0206	004.7475	004.5857	087.771
16.00	0.219	1.0	0.0120	003.6227	003.4823	088.001
17.00	0.152	1.0	0.0058	002.5144	002.4045	088.265
18.00	0.088	1.0	0.0019	001.4557	001.3844	088.550
19.00	0.027	1.0	0.0002	000.4466	000.4223	088.855
20.00	0.029	1.0	0.0002	000.4797	000.4508	088.836
21.00	0.081	1.0	0.0016	001.3399	001.2509	088.520
22.00	0.125	1.0	0.0039	002.0677	001.9172	088.225
23.00	0.169	1.0	0.0071	002.7956	002.5733	087.908
24.00	0.205	1.0	0.0105	003.3911	003.0979	087.621
25.00	0.234	1.0	0.0137	003.8708	003.5081	087.364
26.00	0.258	1.0	0.0166	004.2678	003.8359	087.129
27.00	0.276	1.0	0.0190	004.5655	004.0679	086.927
28.00	0.287	1.0	0.0206	004.7475	004.1918	086.771
29.00	0.293	1.0	0.0215	004.8468	004.2391	086.650
30.00	0.293	1.0	0.0215	004.8468	004.1974	086.577
31.00	0.288	1.0	0.0207	004.7640	004.0836	086.546
32.00	0.278	1.0	0.0193	004.5986	003.8999	086.563
33.00	0.263	1.0	0.0173	004.3505	003.6486	086.631
34.00	0.243	1.0	0.0148	004.0197	003.3324	086.752
35.00	0.22	1.0	0.0121	003.6392	002.9811	086.913
36.00	0.193	1.0	0.0093	003.1843	002.5762	087.128
37.00	0.165	1.0	0.0068	002.7294	002.1798	087.357
38.00	0.133	1.0	0.0044	002.2001	001.7337	087.646
39.00	0.1	1.0	0.0025	001.6542	001.2855	087.959
40.00	0.065	1.0	0.0011	001.0752	000.8237	088.309
41.00	0.029	1.0	0.0002	000.4797	000.3620	088.685
42.00	0.007	1.0	0.0000	000.1158	000.0861	088.923
43.00	0.043	1.0	0.0005	000.7113	000.5202	088.515
44.00	0.079	1.0	0.0016	001.3068	000.9400	088.092
45.00	0.115	1.0	0.0033	001.9023	001.3451	087.655
46.00	0.149	1.0	0.0056	002.4647	001.7121	087.227
47.00	0.182	1.0	0.0083	003.0106	002.0532	086.798
48.00	0.214	1.0	0.0114	003.5399	002.3687	086.369
49.00	0.244	1.0	0.0149	004.0362	002.6480	085.954
50.00	0.272	1.0	0.0185	004.4994	002.8921	085.553
51.00	0.298	1.0	0.0222	004.9295	003.1022	085.169
52.00	0.321	1.0	0.0258	005.3099	003.2691	084.816
53.00	0.343	1.0	0.0294	005.6738	003.4146	084.469
54.00	0.362	1.0	0.0328	005.9881	003.5197	084.155
55.00	0.378	1.0	0.0357	006.2528	003.5865	083.878
56.00	0.393	1.0	0.0386	006.5009	003.6353	083.610
57.00	0.405	1.0	0.0410	006.6994	003.6488	083.381
58.00	0.415	1.0	0.0431	006.8649	003.6378	083.178
59.00	0.422	1.0	0.0445	006.9806	003.5953	083.016
60.00	0.428	1.0	0.0458	007.0799	003.5399	082.869
61.00	0.431	1.0	0.0464	007.1295	003.4565	082.764
62.00	0.432	1.0	0.0467	007.1461	003.3549	082.690
63.00	0.432	1.0	0.0467	007.1461	003.2442	082.633
64.00	0.43	1.0	0.0462	007.1130	003.1181	082.607 (1)
65.00	0.426	1.0	0.0454	007.0468	002.9781	082.613
66.00	0.421	1.0	0.0443	006.9641	002.8326	082.638
67.00	0.415	1.0	0.0431	006.8649	002.6823	082.681
68.00	0.407	1.0	0.0414	006.7325	002.5220	082.758
69.00	0.398	1.0	0.0396	006.5836	002.3594	082.854
70.00	0.389	1.0	0.0378	006.4348	002.2008	082.953
71.00	0.378	1.0	0.0357	006.2528	002.0357	083.088
72.00	0.366	1.0	0.0335	006.0543	001.8709	083.242
73.00	0.354	1.0	0.0313	005.8558	001.7121	083.400

E-2 W250BG Mod. 136.53 +40 dBu F(50-10) Contour Within WTFM(FM) 253C, cont.

Depression Angle From Horizon (Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
74.00	0.341	1.0	0.0291	005.6408	001.5548	083.578
75.00	0.328	1.0	0.0269	005.4257	001.4043	083.759
76.00	0.314	1.0	0.0246	005.1941	001.2566	083.960
77.00	0.3	1.0	0.0225	004.9625	001.1163	084.165
78.00	0.285	1.0	0.0203	004.7144	000.9802	084.389
79.00	0.271	1.0	0.0184	004.4828	000.8554	084.600
80.00	0.256	1.0	0.0164	004.2347	000.7353	084.830
81.00	0.24	1.0	0.0144	003.9700	000.6211	085.079
82.00	0.225	1.0	0.0127	003.7219	000.5180	085.314
83.00	0.21	1.0	0.0110	003.4738	000.4233	085.552
84.00	0.194	1.0	0.0094	003.2091	000.3354	085.808
85.00	0.178	1.0	0.0079	002.9444	000.2566	086.067
86.00	0.163	1.0	0.0066	002.6963	000.1881	086.310
87.00	0.147	1.0	0.0054	002.4316	000.1273	086.572
88.00	0.131	1.0	0.0043	002.1670	000.0756	086.834
89.00	0.116	1.0	0.0034	001.9188	000.0335	087.081
90.00	0.1	1.0	0.0025	001.6542	000.0000	087.346

(1) The 136.53 dBu F(50-10) contour within the WTFM(FM) 253C second-adjacent protected contour lowest point above the site elevation = 82.61 meters, which does not reach any buildings, roads or population, as shown in the aerial photo in exhibit E-3.



Elevation Pattern

Systems With Reliability

Scale: Linear
Units: Field, Relative

CLIENT:		Date: 3/20/2017	
ANTENNA TYPE: FMEC/3			
FREQUENCY: 98.1 MHz			
PATTERN POL.: Circular			
DIRECTIVITY(Peak): 2.991/4.758 dBd		Beam Tilt (Deg.) :	0
DIRECTIVITY(Horiz): 2.991/4.758 dBd		Null Fill(s)(%) :	0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
90.0	.10 (-20)	52.0	.321 (-9.865)	14.0	.357 (-8.938)
89.0	.116 (-18.733)	51.0	.298 (-10.529)	13.0	.428 (-7.377)
88.0	.131 (-17.628)	50.0	.272 (-11.318)	12.0	.498 (-6.062)
87.0	.147 (-16.648)	49.0	.244 (-12.26)	11.0	.566 (-4.942)
86.0	.163 (-15.769)	48.0	.214 (-13.395)	10.0	.632 (-3.982)
85.0	.178 (-14.972)	47.0	.182 (-14.784)	9.8	.645 (-3.807)
84.0	.194 (-14.244)	46.0	.149 (-16.526)	9.6	.658 (-3.637)
83.0	.21 (-13.575)	45.0	.115 (-18.805)	9.4	.671 (-3.472)
82.0	.225 (-12.957)	44.0	.079 (-22.009)	9.2	.683 (-3.312)
81.0	.24 (-12.385)	43.0	.043 (-27.275)	9.0	.695 (-3.157)
80.0	.256 (-11.852)	42.0	.007 (-43.22)	8.8	.707 (-3.006)
79.0	.271 (-11.356)	41.0	.029 (-30.637)	8.6	.719 (-2.86)
78.0	.285 (-10.893)	40.0	.065 (-23.719)	8.4	.731 (-2.719)
77.0	.30 (-10.462)	39.0	.10 (-19.999)	8.2	.743 (-2.582)
76.0	.314 (-10.06)	38.0	.133 (-17.494)	8.0	.754 (-2.449)
75.0	.328 (-9.686)	37.0	.165 (-15.651)	7.8	.766 (-2.321)
74.0	.341 (-9.339)	36.0	.194 (-14.237)	7.6	.777 (-2.196)
73.0	.354 (-9.018)	35.0	.22 (-13.132)	7.4	.787 (-2.076)
72.0	.366 (-8.724)	34.0	.243 (-12.271)	7.2	.798 (-1.959)
71.0	.378 (-8.455)	33.0	.263 (-11.612)	7.0	.808 (-1.847)
70.0	.389 (-8.211)	32.0	.278 (-11.131)	6.8	.819 (-1.738)
69.0	.398 (-7.995)	31.0	.288 (-10.815)	6.6	.829 (-1.633)
68.0	.407 (-7.804)	30.0	.293 (-10.658)	6.4	.838 (-1.532)
67.0	.415 (-7.642)	29.0	.293 (-10.662)	6.2	.848 (-1.434)
66.0	.421 (-7.507)	28.0	.287 (-10.834)	6.0	.857 (-1.34)
65.0	.426 (-7.403)	27.0	.276 (-11.192)	5.8	.866 (-1.249)
64.0	.43 (-7.329)	26.0	.258 (-11.764)	5.6	.875 (-1.162)
63.0	.432 (-7.287)	25.0	.234 (-12.598)	5.4	.883 (-1.078)
62.0	.432 (-7.281)	24.0	.205 (-13.772)	5.2	.891 (-0.998)
61.0	.431 (-7.31)	23.0	.169 (-15.43)	5.0	.899 (-0.921)
60.0	.428 (-7.38)	22.0	.128 (-17.86)	4.8	.907 (-0.847)
59.0	.422 (-7.491)	21.0	.081 (-21.813)	4.6	.914 (-0.777)
58.0	.415 (-7.648)	20.0	.029 (-30.657)	4.4	.922 (-0.709)
57.0	.405 (-7.856)	19.0	.027 (-31.323)	4.2	.928 (-0.645)
56.0	.393 (-8.119)	18.0	.088 (-21.139)	4.0	.935 (-0.584)
55.0	.378 (-8.442)	17.0	.152 (-16.379)	3.8	.941 (-0.527)
54.0	.362 (-8.835)	16.0	.219 (-13.21)	3.6	.947 (-0.472)
53.0	.343 (-9.305)	15.0	.287 (-10.833)	3.4	.953 (-0.421)

Systems With Reliability

Page 1 of 3

CLIENT:

Date: 3/20/2017

ANTENNA TYPE: FMEC/3

FREQUENCY: 98.1 MHz

PATTERN POL.: Circular

DIRECTIVITY(Peak): 2.991/4.758 dBd

Beam Tilt (Deg.) : 0

DIRECTIVITY(Horiz): 2.991/4.758 dBd

Null Fill(s)(%) : 0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.958 (-0.372)	-4.4	.922 (-0.709)	-12.0	.498 (-6.062)
3.0	.963 (-0.327)	-4.6	.914 (-0.777)	-12.2	.484 (-6.308)
2.8	.968 (-0.284)	-4.8	.907 (-0.847)	-12.4	.47 (-6.562)
2.6	.972 (-0.245)	-5.0	.899 (-0.921)	-12.6	.456 (-6.825)
2.4	.976 (-0.208)	-5.2	.891 (-0.998)	-12.8	.442 (-7.096)
2.2	.98 (-0.175)	-5.4	.883 (-1.078)	-13.0	.428 (-7.377)
2.0	.983 (-0.145)	-5.6	.875 (-1.162)	-13.2	.414 (-7.667)
1.8	.987 (-0.117)	-5.8	.866 (-1.249)	-13.4	.40 (-7.968)
1.6	.989 (-0.092)	-6.0	.857 (-1.34)	-13.6	.385 (-8.28)
1.4	.992 (-0.071)	-6.2	.848 (-1.434)	-13.8	.371 (-8.603)
1.2	.994 (-0.052)	-6.4	.838 (-1.532)	-14.0	.357 (-8.938)
1.0	.996 (-0.036)	-6.6	.829 (-1.633)	-14.2	.343 (-9.287)
.8	.997 (-0.023)	-6.8	.819 (-1.738)	-14.4	.329 (-9.65)
.6	.999 (-0.013)	-7.0	.808 (-1.847)	-14.6	.315 (-10.027)
.4	.999 (-0.006)	-7.2	.798 (-1.959)	-14.8	.301 (-10.421)
.2	1.00 (-0.001)	-7.4	.787 (-2.076)	-15.0	.287 (-10.833)
.0	1.00 (0)	-7.6	.777 (-2.196)	-15.2	.273 (-11.263)
-.2	1.00 (-0.001)	-7.8	.766 (-2.321)	-15.4	.26 (-11.714)
-.4	.999 (-0.006)	-8.0	.754 (-2.449)	-15.6	.246 (-12.187)
-.6	.999 (-0.013)	-8.2	.743 (-2.582)	-15.8	.232 (-12.685)
-.8	.997 (-0.023)	-8.4	.731 (-2.719)	-16.0	.219 (-13.21)
-1.0	.996 (-0.036)	-8.6	.719 (-2.86)	-16.2	.205 (-13.766)
-1.2	.994 (-0.052)	-8.8	.707 (-3.006)	-16.4	.192 (-14.356)
-1.4	.992 (-0.071)	-9.0	.695 (-3.157)	-16.6	.178 (-14.984)
-1.6	.989 (-0.092)	-9.2	.683 (-3.312)	-16.8	.165 (-15.656)
-1.8	.987 (-0.117)	-9.4	.671 (-3.472)	-17.0	.152 (-16.379)
-2.0	.983 (-0.145)	-9.6	.658 (-3.637)	-17.2	.139 (-17.16)
-2.2	.98 (-0.175)	-9.8	.645 (-3.807)	-17.4	.126 (-18.01)
-2.4	.976 (-0.208)	-10.0	.632 (-3.982)	-17.6	.113 (-18.943)
-2.6	.972 (-0.245)	-10.2	.619 (-4.163)	-17.8	.10 (-19.978)
-2.8	.968 (-0.284)	-10.4	.606 (-4.349)	-18.0	.088 (-21.139)
-3.0	.963 (-0.327)	-10.6	.593 (-4.541)	-18.2	.075 (-22.464)
-3.2	.958 (-0.372)	-10.8	.58 (-4.739)	-18.4	.063 (-24.008)
-3.4	.953 (-0.421)	-11.0	.566 (-4.942)	-18.6	.051 (-25.862)
-3.6	.947 (-0.472)	-11.2	.553 (-5.153)	-18.8	.039 (-28.188)
-3.8	.941 (-0.527)	-11.4	.539 (-5.37)	-19.0	.027 (-31.323)
-4.0	.935 (-0.584)	-11.6	.525 (-5.593)	-19.2	.016 (-36.185)
-4.2	.928 (-0.645)	-11.8	.511 (-5.824)	-19.4	.004 (-47.865)

Systems With Reliability

Page 2 of 3

CLIENT:

Date: 3/20/2017

ANTENNA TYPE: FMEC/3

FREQUENCY: 98.1 MHz

PATTERN POL.: Circular

DIRECTIVITY(Peak): 2.991/4.758 dBd

Beam Tilt (Deg.) : 0

DIRECTIVITY(Horiz): 2.991/4.758 dBd

Null Fill(s)(%) : 0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.007 (-42.787)	-27.2	.278 (-11.104)	-54.0	.362 (-8.835)
-19.8	.018 (-34.715)	-27.4	.281 (-11.025)	-55.0	.378 (-8.442)
-20.0	.029 (-30.657)	-27.6	.283 (-10.953)	-56.0	.393 (-8.119)
-20.2	.04 (-27.943)	-27.8	.285 (-10.89)	-57.0	.405 (-7.856)
-20.4	.051 (-25.91)	-28.0	.287 (-10.834)	-58.0	.415 (-7.648)
-20.6	.061 (-24.292)	-28.2	.289 (-10.785)	-59.0	.422 (-7.491)
-20.8	.071 (-22.952)	-28.4	.29 (-10.744)	-60.0	.428 (-7.38)
-21.0	.081 (-21.813)	-28.6	.291 (-10.71)	-61.0	.431 (-7.31)
-21.2	.091 (-20.825)	-28.8	.292 (-10.682)	-62.0	.432 (-7.281)
-21.4	.101 (-19.956)	-29.0	.293 (-10.662)	-63.0	.432 (-7.287)
-21.6	.11 (-19.183)	-29.2	.293 (-10.648)	-64.0	.43 (-7.329)
-21.8	.119 (-18.489)	-29.4	.294 (-10.641)	-65.0	.426 (-7.403)
-22.0	.128 (-17.86)	-29.6	.294 (-10.64)	-66.0	.421 (-7.507)
-22.2	.137 (-17.288)	-29.8	.294 (-10.646)	-67.0	.415 (-7.642)
-22.4	.145 (-16.765)	-30.0	.293 (-10.658)	-68.0	.407 (-7.804)
-22.6	.153 (-16.284)	-31.0	.288 (-10.815)	-69.0	.398 (-7.995)
-22.8	.161 (-15.84)	-32.0	.278 (-11.131)	-70.0	.389 (-8.211)
-23.0	.169 (-15.43)	-33.0	.263 (-11.612)	-71.0	.378 (-8.455)
-23.2	.177 (-15.049)	-34.0	.243 (-12.271)	-72.0	.366 (-8.724)
-23.4	.184 (-14.695)	-35.0	.22 (-13.132)	-73.0	.354 (-9.018)
-23.6	.191 (-14.366)	-36.0	.194 (-14.237)	-74.0	.341 (-9.339)
-23.8	.198 (-14.059)	-37.0	.165 (-15.651)	-75.0	.328 (-9.686)
-24.0	.205 (-13.772)	-38.0	.133 (-17.494)	-76.0	.314 (-10.06)
-24.2	.211 (-13.505)	-39.0	.10 (-19.999)	-77.0	.30 (-10.462)
-24.4	.217 (-13.254)	-40.0	.065 (-23.719)	-78.0	.285 (-10.893)
-24.6	.223 (-13.021)	-41.0	.029 (-30.637)	-79.0	.271 (-11.356)
-24.8	.229 (-12.802)	-42.0	.007 (-43.22)	-80.0	.256 (-11.852)
-25.0	.234 (-12.598)	-43.0	.043 (-27.275)	-81.0	.24 (-12.385)
-25.2	.24 (-12.407)	-44.0	.079 (-22.009)	-82.0	.225 (-12.957)
-25.4	.245 (-12.229)	-45.0	.115 (-18.805)	-83.0	.21 (-13.575)
-25.6	.249 (-12.063)	-46.0	.149 (-16.526)	-84.0	.194 (-14.244)
-25.8	.254 (-11.908)	-47.0	.182 (-14.784)	-85.0	.178 (-14.972)
-26.0	.258 (-11.764)	-48.0	.214 (-13.395)	-86.0	.163 (-15.769)
-26.2	.262 (-11.63)	-49.0	.244 (-12.26)	-87.0	.147 (-16.648)
-26.4	.266 (-11.507)	-50.0	.272 (-11.318)	-88.0	.131 (-17.628)
-26.6	.269 (-11.393)	-51.0	.298 (-10.529)	-89.0	.116 (-18.733)
-26.8	.273 (-11.288)	-52.0	.321 (-9.865)	-90.0	.10 (-20)
-27.0	.276 (-11.192)	-53.0	.343 (-9.305)	90.0	.00 (-50)

Systems With Reliability

Page 3 of 3

CLIENT:

Date: 3/20/2017

ANTENNA TYPE: FMEC/3

FREQUENCY: 98.1 MHz

PATTERN POL.: Circular

DIRECTIVITY(Peak): 2.991/4.758 dBd

Beam Tilt (Deg.) : 0

DIRECTIVITY(Horiz): 2.991/4.758 dBd

Null Fill(s)(%) : 0, 0, 0

E-4 W250BG Mod. 136.53 dBu F(50-10) Contour Aerial Photo

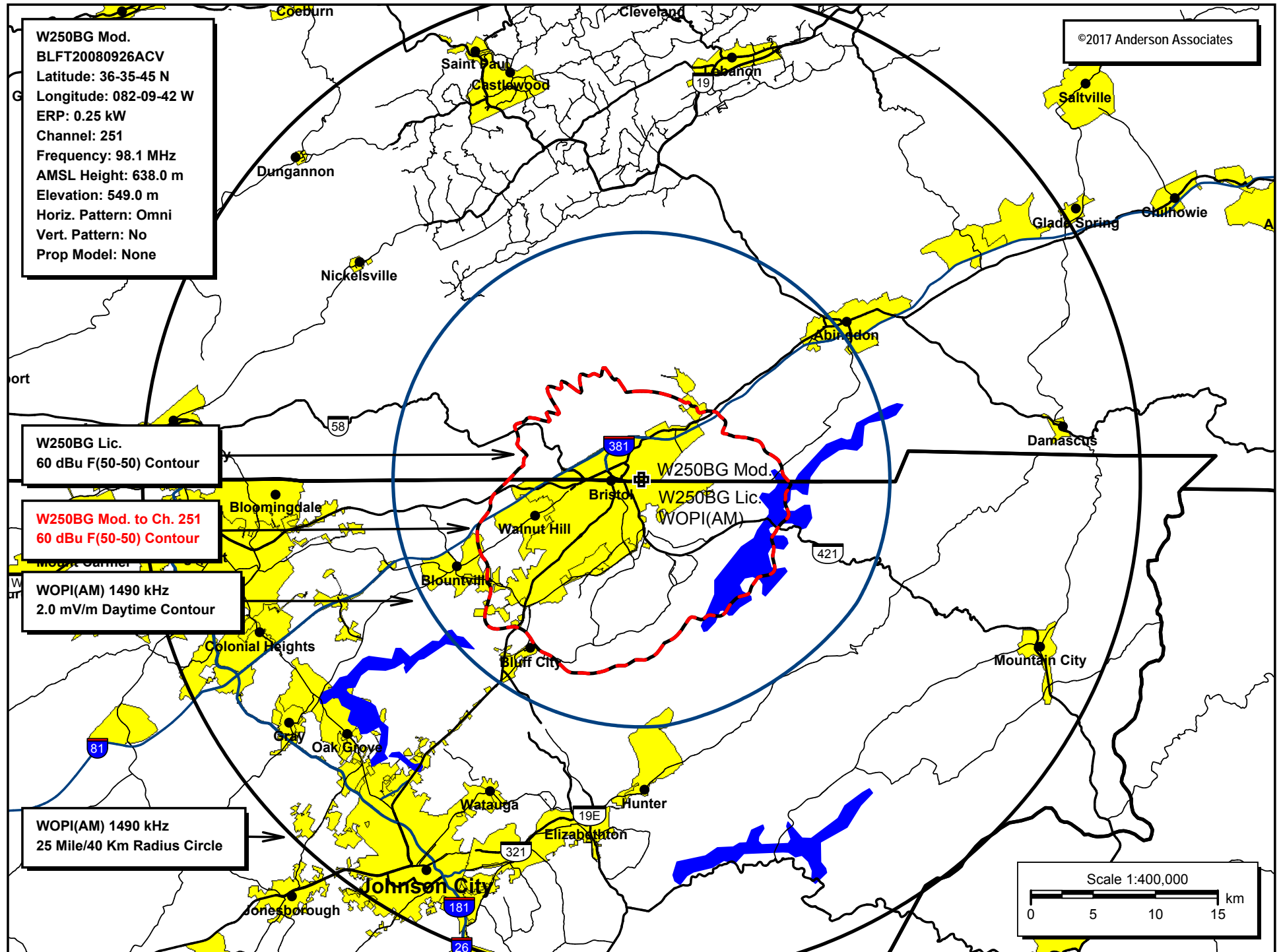


Google Earth

feet
meters



Wise
E-5 W250BG Mod. 60 dBu Contour Plot



E-6 W250BG Tower ASR

ASR Registration 1053535

Registration Detail

Reg Number	1053535	Status	Constructed
File Number	A0062973	Constructed	03/01/1953
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	36-35-45.0 N 082-09-41.0 W	Address	288 DELANEY STREET
City, State	BRISTOL , VA		
Zip	24201	County	BRISTOL CITY
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
548.6	92.8
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
641.4	91.6

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 13

Paint and Light in Accordance with FAA Circular Number 70/7460-1J

FAA Notification

FAA Study	98-AEA-1258-OE	FAA Issue Date	07/04/1998
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Owner & Contact Information

FRN	0001770163	Owner Entity Type
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Owner

HOLSTON VALLEY BROADCASTING
CORPORATION
Attention To: JOHN O. DAVIS
222 COMMERCE STREET
KINGSPORT , TN 37660

P: (423)246-9578
F:
E:

Contact

P:
F:
E:

Last Action Status

Status	Constructed	Received	07/10/1998
Purpose	New	Entered	07/10/1998