

**Channel Study**

| REFERENCE              |         | CH# 250D - 97.9 MHz, Pwr= 0.25 kW, HAAT= 77.6 M, COR= 255 M |     |                |                           |                          |                    |                   |                                    | DISPLAY DATES           |        |
|------------------------|---------|---|-----|----------------|---------------------------|--------------------------|--------------------|-------------------|------------------------------------|-------------------------|--------|
| 38 09 54.0 N.          |         | Average Protected F(50-50)= 11.4 km                         |     |                |                           |                          |                    |                   |                                    | DATA 04-25-12           |        |
| 85 35 50.0 W.          |         | Omni-directional  |     |                |                           |                          |                    |                   |                                    | SEARCH 04-25-12         |        |
| CH<br>CITY             | CALL    | TYPE<br>STATE   | ANT | AZI.<br><--    | DIST<br>FILE #            | LAT.<br>LNG.             | Pwr(kW)<br>HAAT(M) | INT(km)<br>COR(M) | PRO(km)<br>LICENSEE                | *IN*<br>(Overlap in km) | *OUT*  |
| 248C1<br>Louisville    | WAMZ    | APP<br>KY   | CX  | 66.1<br>246.2  | 7.39<br>BPH20120419AAB    | 38 11 30.8<br>85 31 11.2 | 100.000<br>157     | 7.7<br>353        | 61.3<br>Cc Licenses, Llc           | -10.3*                  | -55.0* |
| 248C1<br>Louisville    | WAMZ    | LIC<br>KY   | CX  | 226.2<br>46.1  | 16.23<br>BMLH20080402AAP  | 38 03 50.0<br>85 43 52.0 | 100.000<br>205     | 8.1<br>372        | 63.2<br>Cc Licenses, Llc           | -3.8                    | -48.1* |
| 250D<br>Louisville     | W250BD  | LIC<br>KY   | C   | 0.0<br>0.0     | 0.00<br>BLFT20070907ACW   | 38 09 54.0<br>85 35 50.0 | 0.019<br>78        | 19.3<br>255       | 5.9<br>Educational Media Foundati  | -30.5*                  | -43.9* |
| 250A<br>Salem          | WSLM-FM | LIC<br>IN   | CN  | 316.2<br>135.8 | 72.69<br>BLH19920528KA    | 38 38 07.0<br>86 10 37.0 | 3.000<br>100       | 74.4<br>330       | 23.2<br>Rebecca L. White           | -14.9*                  | 4.0    |
| 251C1<br>Lexington     | WBUL-FM | LIC<br>KY   | CX  | 97.8<br>278.5  | 101.35<br>BMLH20031218ACF | 38 02 07.0<br>84 27 02.0 | 100.000<br>171     | 92.7<br>467       | 62.4<br>Citicasters Licenses, Inc. | -2.2                    | 23.7   |
| 252C3<br>Elizabethtown | WQXE    | LIC<br>KY   | NC  | 218.1<br>37.8  | 62.53<br>BLH20010802ABD   | 37 43 18.0<br>86 02 10.0 | 8.500<br>162       | 3.8<br>389        | 38.6<br>Skytower Communications-e' | 47.2                    | 22.7   |

Terrain database is 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 3rdadjacent.  
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 protected contour.

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WAMZ, channel 248C1, Louisville, Kentucky. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

|   |           |
|---|-----------|
| The proposed ERP for W250BD:            | 250 watts |
| The proposed COR for W250BD:            | 41 meters |
| WAMZ F(50/50) contour at proposed site: | 87.9 dBu  |
| The F(50/10) contour of proposed W250BD | 127.9 dBu |

By taking into account the antenna vertical elevation pattern for the Nicom BKG/77 it has been determined that based on the height of the antenna (41m) and the distance of the nearest populated area (22.4m) from the base of the tower, the angle of suppression is 60 degrees. According to the chart in Exhibit 13-A1 the relative field at the angle of suppression is 0.450. The distance from the antenna to the ground is 47 meters. The result is the height of the interfering contour above ground is predicted to be 26 meters and will not actually reach the ground. Please see Exhibit 13-A2 for an aerial photo of the area.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1  
74.1204(d) Showing  
W250BD  
LOUISVILLE, KY

ERP (kw): 0.25  
Height of Antenna above Ground (m): 41  
Translator's IX Contour: 127.9  
Antenna Type: Nicom BKG77

| <b>Depression Angle<br/>from Horizon</b> | <b>Antenna<br/>Relative Field</b> | <b>ERP (kw)<br/>from the Antenna RF</b> | <b>Dist. To IX Contour (m)</b> | <b>Height IX Contour Above<br/>Ground (m)</b> |
|--|-----------------------------------|---|--------------------------------|---|
| 0  | 1.000                             | 0.2500                                  | 44.6653                        | 41.000  |
| 5  | 0.999                             | 0.2495                                  | 44.6206                        | 37.111  |
| 10                                       | 0.982                             | 0.2411                                  | 43.8613                        | 33.384  |
| 15                                       | 0.954                             | 0.2275                                  | 42.6107                        | 29.972  |
| 20                                       | 0.918                             | 0.2107                                  | 41.0027                        | 26.976  |
| 25                                       | 0.872                             | 0.1901                                  | 38.9481                        | 24.540  |
| 30                                       | 0.818                             | 0.1671                                  | 36.5139                        | 22.743  |
| 35                                       | 0.758                             | 0.1436                                  | 33.8563                        | 21.581  |
| 40                                       | 0.691                             | 0.1194                                  | 30.8637                        | 21.161  |
| 45                                       | 0.616                             | 0.0949                                  | 27.5138                        | 21.545  |
| 50                                       | 0.538                             | 0.0724                                  | 24.0299                        | 22.592  |
| 55                                       | 0.465                             | 0.0541                                  | 20.7694                        | 23.987  |
| 60                                       | 0.391                             | 0.0382                                  | 17.4641                        | 25.876  |
| 65                                       | 0.313                             | 0.0245                                  | 13.9802                        | 28.330  |
| 70                                       | 0.239                             | 0.0143                                  | 10.6750                        | 30.969  |
| 75                                       | 0.176                             | 0.0077                                  | 7.8611                         | 33.407  |
| 80                                       | 0.129                             | 0.0042                                  | 5.7618                         | 35.326  |
| 85                                       | 0.103                             | 0.0027                                  | 4.6005                         | 36.417  |
| 90                                       | 0.001                             | 0.0000                                  | 0.0447                         | 40.955  |

Cavell, Mertz & Associates



Google earth

feet  
meters



COORDINATES (NAD27):

38 09 54 N

085 35 50 W

LINE MEASURE: 22.4M AT 273.99 DEGREES

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WAMZ.A, channel 248C1, Louisville, Kentucky. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

|   |           |
|---|-----------|
| The proposed ERP for W250BD:              | 250 watts |
| The proposed COR for W250BD:              | 41 meters |
| WAMZ.A F(50/50) contour at proposed site: | 100.6 dBu |
| The F(50/10) contour of proposed W250BD   | 140.6 dBu |

By taking into account the antenna vertical elevation pattern for the Nicom BKG/77 it has been determined that based on the height of the antenna (41m) and the distance of the nearest populated area (22.4m) from the base of the tower, the angle of suppression is 60 degrees. According to the chart in Exhibit 13-B1 the relative field at the angle of suppression is 0.450. The distance from the antenna to the ground is 47 meters. The result is the height of the interfering contour above ground is predicted to be 37 meters and will not actually reach the ground. Please see Exhibit 13-A2 for an aerial photo of the area.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - B1  
74.1204(d) Showing  
W250BD  
LOUISVILLE, KY

ERP (kw): 0.25  
Height of Antenna above Ground (m): 41  
Translator's IX Contour: 140.6  
Antenna Type: Nicom BKG77

| <b>Depression Angle<br/>from Horizon</b> | <b>Antenna<br/>Relative Field</b> | <b>ERP (kw)<br/>from the Antenna RF</b> | <b>Dist. To IX Contour (m)</b> | <b>Height IX Contour Above<br/>Ground (m)</b> |
|--|-----------------------------------|---|--------------------------------|---|
| 0  | 1.000                             | 0.2500                                  | 10.3507                        | 41.000  |
| 5  | 0.999                             | 0.2495                                  | 10.3404                        | 40.099  |
| 10                                       | 0.982                             | 0.2411                                  | 10.1644                        | 39.235  |
| 15                                       | 0.954                             | 0.2275                                  | 9.8746                         | 38.444  |
| 20                                       | 0.918                             | 0.2107                                  | 9.5019                         | 37.750  |
| 25                                       | 0.872                             | 0.1901                                  | 9.0258                         | 37.186  |
| 30                                       | 0.818                             | 0.1671                                  | 8.4617                         | 36.769  |
| 35                                       | 0.758                             | 0.1436                                  | 7.8458                         | 36.500  |
| 40                                       | 0.691                             | 0.1194                                  | 7.1523                         | 36.403  |
| 45                                       | 0.616                             | 0.0949                                  | 6.3760                         | 36.491  |
| 50                                       | 0.538                             | 0.0724                                  | 5.5687                         | 36.734  |
| 55                                       | 0.465                             | 0.0541                                  | 4.8131                         | 37.057  |
| 60                                       | 0.391                             | 0.0382                                  | 4.0471                         | 37.495  |
| 65                                       | 0.313                             | 0.0245                                  | 3.2398                         | 38.064  |
| 70                                       | 0.239                             | 0.0143                                  | 2.4738                         | 38.675  |
| 75                                       | 0.176                             | 0.0077                                  | 1.8217                         | 39.240  |
| 80                                       | 0.129                             | 0.0042                                  | 1.3352                         | 39.685  |
| 85                                       | 0.103                             | 0.0027                                  | 1.0661                         | 39.938  |
| 90                                       | 0.001                             | 0.0000                                  | 0.0104                         | 40.990  |