

Waynco Radio, Inc.
April 2019 Application for Minor Modification of CP
W245DI -- Sodus, NY -- Facility ID 202421

Exhibit 12C -- 2nd-Adjacent Protection of WCMF-FM

As shown in Exhibit 12D, the F(50,50) 64.7 dBu service contour of WCMF-FM, Rochester, NY, operating on Channel 243B, falls just east of the proposed translator site; therefore, the translator's second-adjacent interference contour has a value 40 dB greater, 104.7 dBu. Free-space propagation has been assumed in the calculations below and in Exhibit 12H.

Exhibit 12E identifies two residences which are close enough to the proposed tower site to require detailed analysis. See also the recent satellite image in Exhibit 12F showing land use in the vicinity of the site.

Residence #1, between 76 and 99 meters from the tower in the horizontal plane (detailed in Exhibit 12J) is located within the first elevation null of the proposed antenna, between 20 and 25.3 degrees below the horizon. The manufacturer's elevation pattern data tabulation for the proposed SWR FMEC/3-0.85WS is attached as Exhibit 12G, and calculated distances to the interference contour elevation at various depression angles are provided in Exhibit 12H. The roof elevation of Residence #1 is less than 206 meters AMSL, so the translator's signal is not expected to exceed 104.7 dBu within the building. Note also that this null is shown centered at an approximate horizontal distance of 85 meters in the "FM Model" plot attached as Exhibit 17A.

Residence #2, a two story structure, is located approximately 482 meters south of the tower at an azimuth of 160 degrees. The ground elevation at this point is 179 meters AMSL, and the rooftop of this house was assumed not to exceed 188 meters AMSL. The calculated depression angle to the closest point of the roof is 6.4 degrees below horizon, where the relative field of the elevation pattern is 0.88. At 160 degrees azimuth, the translator's effective radiated power in the horizontal plane will not exceed 177 watts and at 6.4 degrees below horizon it will be further reduced to 137 watts. Slant distance to the 104.7 dBu contour at this angle is 478 meters; therefore, no interference to WCMF-FM is expected within the building.

As shown in Exhibit 12E, several buildings are located in the valley just east of Brantling Hill. Ground elevations in this area are approximately 100 meters below the proposed antenna, so the 104.7 dBu contour clears all structures at these distances and depression angles.

Waynco Radio recognizes its obligation to resolve objectionable interference to WCMF-FM in the unlikely event that any actual cases are reported.