

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

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WZMX-FM, channel 229B, Hartford, CT. 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 W290CK.P:	99 watts
The proposed COR for W290CK.P:	66 meters
WZMX-FM F(50/50) contour at proposed site:	57.4dBu
The F(50/10) contour of proposed W290CK.P:	97.4dBu

The predicted maximum distance to the 97.4dbu interfering contour is 941 meters. Exhibit 13-A1 demonstrates the distances to the interfering contour by taking into account the vertical elevation pattern of the Nicom BKG88 six bay .85 wavespaced antenna with an ERP of 99 watts. It has been determined that the interfering contour of 97.4dbu does not extend to any regularly occupied structures.

Exhibit 13-A2 demonstrates the distances to the interfering contour by taking into account the vertical elevation pattern of the Nicom BKG88 six bay .85 wavespaced antenna with an ERP of 78 watts, the power level towards the areas of concern where potential occupied structures are located.

As seen in attachment 13-A3, uniform circle contour distances in .1km increments have been overlaid on Google Earth to a distance of 1km along with the 97.4dbu interfering contour based on the directional antenna array.

Each .1km area has been examined for the highest site elevation within that distance and compared to the height above or below ground for the interfering contour distance. Taking into account the effective radiated power in that direction along with the vertical elevation pattern of the proposed antenna supports the statement that no regularly occupied structures are in the interference areas. The specific areas of study are labeled Area #1 through Area #3 on Exhibit 13-A4 along with the following study results:

The interference elevations above or below ground are based on flat terrain from the base of the tower which in this case is 225.5m. In all areas within the interfering contour, the ground elevations are below the flat terrain basis. These differences in elevation are noted in the study notes that follow. The ERP level at the azimuths to Areas 1, 2, and 3 is 78 watts. Exhibit 13-A2 demonstrates the interfering contour distances utilizing this 78w ERP level :

Area #1: 102m at 130 degrees. ERP = 78w. IX above ground level at 102m = -.072m  
Site elevation drop: 10m = IX above ground level of 9.9m.

Area #2: 110-165m at 170-190 degrees. ERP = 78w. No IX hits the ground at this distance.

Site elevation drop: 15m

Area #3: This structure is an unoccupied transmitter shelter housing the transmitting equipment associated with the proposed tower site.

All other areas within the interfering contour are well below the interfering contour elevations listed in Exhibits 13-A1 for their corresponding power levels.

As can be seen in Exhibit 13-A4, there are no regularly occupied structures at the base of the tower and these study results demonstrate that no interference will occur to any regularly occupied structures within the interfering contour distance.

Therefore a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference is respectfully requested.

EXHIBIT 13 - A1  
74.1204(d) Showing

Danbury, CT

ERP (kw): 0.099  
Height of Antenna above Ground (m): 66  
Translator's IX Contour: 97.4  
Antenna Type: BKG88-6 .85

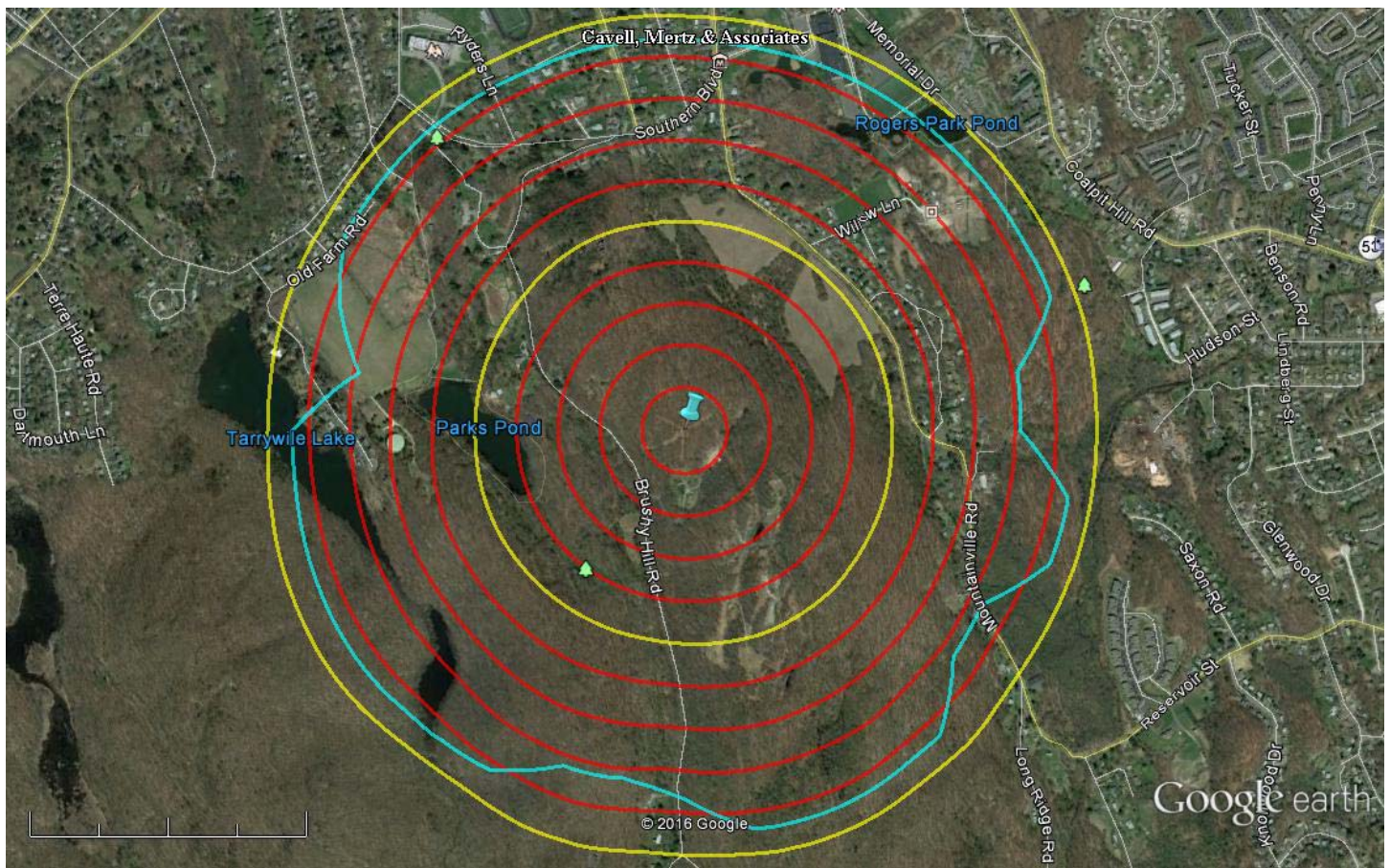
<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.0990	941.4941	66.000
5	0.679	0.0456	639.2745	10.284
10	0.068	0.0005	64.0216	54.883
15	0.229	0.0052	215.6021	10.198
20	0.088	0.0008	82.8515	37.663
25	0.124	0.0015	116.7453	16.661
30	0.116	0.0013	109.2133	11.393
35	0.040	0.0002	37.6598	44.399
40	0.123	0.0015	115.8038	-8.437
45	0.064	0.0004	60.2556	23.393
50	0.048	0.0002	45.1917	31.381
55	0.110	0.0012	103.5643	-18.835
60	0.092	0.0008	86.6175	-9.013
65	0.034	0.0001	32.0108	36.988
70	0.022	0.0000	20.7129	46.536
75	0.055	0.0003	51.7822	15.982
80	0.063	0.0004	59.3141	7.587
85	0.062	0.0004	58.3726	7.849
90	0.062	0.0004	58.3726	7.627

EXHIBIT 13 - A2  
74.1204(d) Showing

Danbury, CT

ERP (kw): 0.078  
Height of Antenna above Ground (m): 66  
Translator's IX Contour: 97.4  
Antenna Type: BKG88-6 .85

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.0780	835.6940	66.000
5	0.679	0.0360	567.4362	16.545
10	0.068	0.0004	56.8272	56.132
15	0.229	0.0041	191.3739	16.469
20	0.088	0.0006	73.5411	40.847
25	0.124	0.0012	103.6261	22.206
30	0.116	0.0010	96.9405	17.530
35	0.040	0.0001	33.4278	46.827
40	0.123	0.0012	102.7904	-0.072
45	0.064	0.0003	53.4844	28.181
50	0.048	0.0002	40.1133	35.271
55	0.110	0.0009	91.9263	-9.302
60	0.092	0.0007	76.8839	-0.583
65	0.034	0.0001	28.4136	40.249
70	0.022	0.0000	18.3853	48.723
75	0.055	0.0002	45.9632	21.603
80	0.063	0.0003	52.6487	14.151
85	0.062	0.0003	51.8130	14.384
90	0.062	0.0003	51.8130	14.187



Google earth

miles 1  
km 1



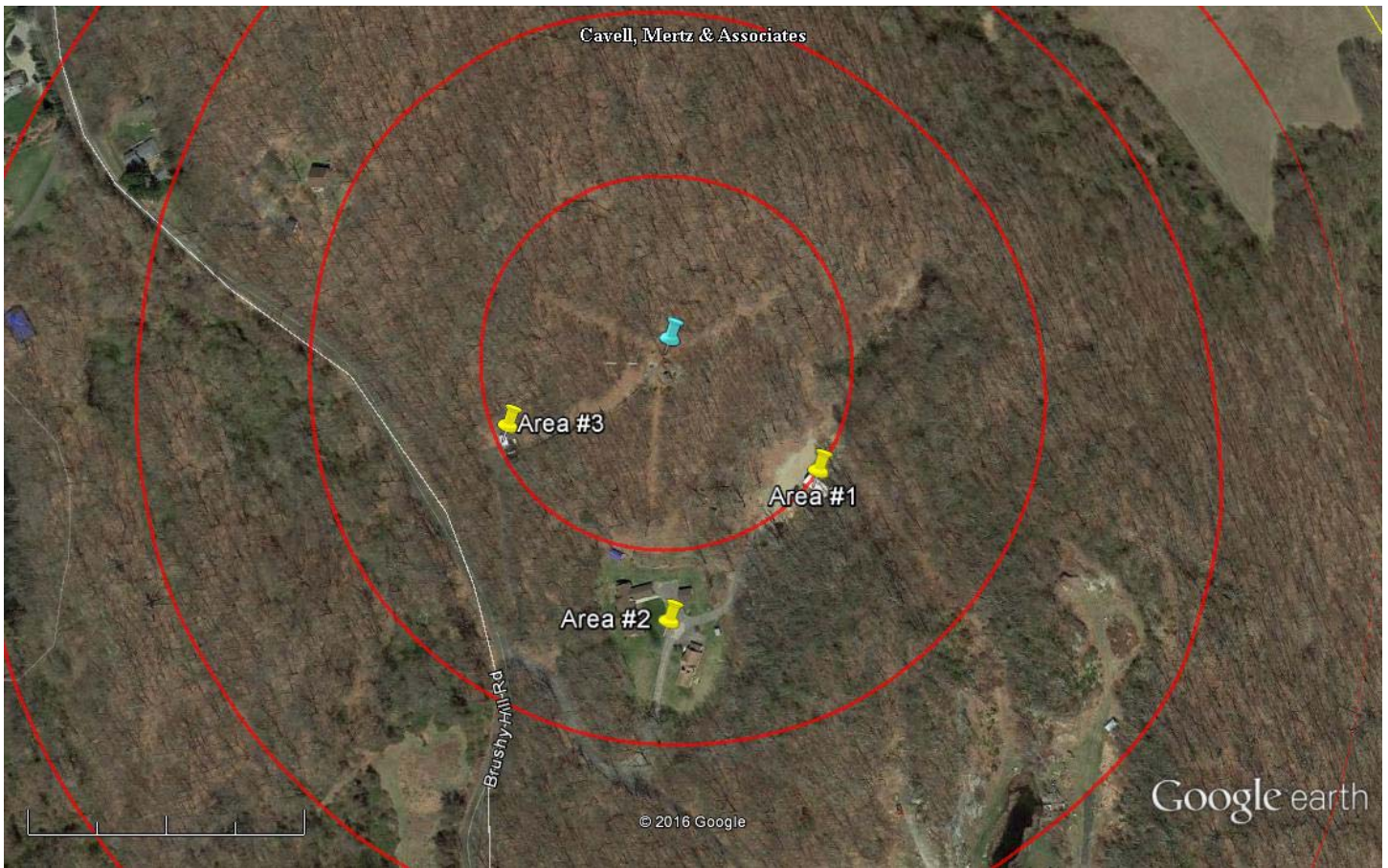
Blue Pin Marker

NAD 27

41-22-27.0 N 73-26-47.0 W

Red and Yellow Uniform Circle Contours are spaced 100m apart to a maximum distance of 1km

Blue Contour - Proposed 97.4dbu(F50-10) interfering contour



Google earth

feet 1000  
meters 300



Blue Pin Marker

NAD 27

41-22-27.0 N 73-26-47.0 W

Red Uniform Circle Contours are spaced at 100 meter intervals

Yellow Pin Markers: Detailed Study Areas 1-3