

**Channel Study**

REFERENCE		CH# 248D - 97.5 MHz, Pwr= 0.24 kW, HAAT= 213.8 M, COR= 455 M								DISPLAY DATES	
39 40 06.0 N.		Average Protected F(50-50)= 18.9 km								DATA 07-30-13	
86 01 44.0 W.		Omni-directional								SEARCH 08-01-13	
CH CITY	CALL	TYPE STATE	ANT IN	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
246B Shelbyville	WLHK	LIC	CX IN	0.0 0.0	0.00 BMLH20070501AGZ	39 40 06.0 86 01 44.0	23.000 223	5.5 463	63.2 Emmis Radio License, Llc	-23.7*<	-65.1*<
248D Indianapolis	W248AW	APP	DC IN	329.0 148.9	29.32 BPFT20130307ABO	39 53 40.0 86 12 21.0	0.250	66.9 519	22.1 Educational Media Foundati	-56.1*	-50.9
248D Franklin	W248AW	LIC	C IN	191.0 11.0	17.59 BLFT20070919ABX	39 30 46.0 86 04 05.0	0.035 40	13.7 274	4.3 Educational Media Foundati	-14.8*	-45.2
250B Anderson	WGNR-FM	LIC	C IN	31.8 212.0	51.54 BMLE20030908ADX	40 03 43.0 85 42 34.0	50.000 149	5.7 405	63.5 The Moody Bible Institute	27.2	-13.8*<
248C1 Louisville	WAMZ	CP	CX KY	164.9 345.2	169.68 BPH20120419AAB	38 11 30.8 85 31 21.2	100.000 169	156.1 367	59.4 Cc Licenses, Llc	-5.7<	50.3
248C1 Louisville	WAMZ	LIC	CX KY	171.7 351.9	179.97 BMLH20080402AAP	38 03 50.0 85 43 52.0	100.000 205	165.8 372	67.1 Cc Licenses, Llc	-5.0<	53.3
249A Spencer	WCLS	LIC	CX IN	227.0 46.7	72.48 BLH20051110ADE	39 13 22.0 86 38 40.0	6.000 100	43.9 321	28.4 Mid-america Radio Of India	10.0	16.5
248D Batesville	W248AF	LIC	C IN	119.8 300.3	80.48 BLFT20070518ABA	39 18 23.0 85 13 06.0	0.120 20	19.6 308	5.9 Good Shepherd Radio, Inc	41.7	14.7
248D Frankfort	1548797	APP	C IN	328.4 148.1	81.08 BNPFT20030317GYA	40 17 19.0 86 31 48.0	0.140	20.4 294	6.1 Kaspar Broadcasting Co, In	42.1	16.8
248A Union City	WTGR	LIC	ZCN OH	60.5 241.3	120.12 BLH19941118KA	40 11 32.0 84 47 58.0	6.000 99	83.6 426	25.8 Positive Radio Group, Inc.	17.8	35.7
248D Crawfordsville	W248BR	CP	C IN	300.4 119.8	94.10 BNPFT20130326AAY	40 05 31.0 86 58 54.0	0.038	22.5 302	6.7 Friends Of Christian Radio	52.3	27.3
251D Greensburg	W251BS	CP	C IN	130.0 310.4	60.89 BNPFT20130328AQT	39 18 54.0 85 29 15.0	0.055	0.5 318	6.4 The Trustees Of Indiana Un	40.7	53.4
248B Champaign	WHMS-FM	LIC	CN IL	284.4 103.0	195.38 BLH19911022KB	40 05 04.0 88 14 53.0	50.000 109	133.4 328	60.4 D.w.s., Inc.	42.5	57.0
249D Cofax	1550262	APP	C IN	318.7 138.3	77.97 BNPFT20030314ATH	40 11 36.0 86 38 05.0	0.007	5.7 326	4.1 Friends Of Christian Radio	53.3	45.8
251D Bloomington	W251AG	LIC	DCN IN	218.0 37.6	70.76 BLFT19960205TA	39 09 56.0 86 32 02.0	0.250 27	0.8 255	5.9 Bloomington Community Radi	51.5	63.8
248D Delphi	1564177	APP	C IN	322.5 141.9	122.73 BNPFT20030314BJJ	40 32 25.0 86 54 49.0	0.027	22.2 263	6.7 Friends Of Christian Radio	81.7	57.3
247D Bedford	W247AY	LIC	C IN	204.4 24.1	97.38 BLFT20060817AEJ	38 52 08.0 86 29 36.0	0.027 64	8.2 250	5.8 Educational Media Foundati	70.8	64.2

Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM

Contour distances are on direct line to and from reference station. 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 protected contour.

< = Contour Overlap

**Educational Media Foundation**

5700 W Oaks Blvd  
Rocklin, CA 95765

*Exhibit 13-A  
Indianapolis, IN*

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

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WGNR-FM, channel 250B, Anderson, IN. 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 W248AW.P:	240 watts
The proposed COR for W248AW.P:	197 meters
WGRN-FM F(50/50) contour at proposed site:	59.6dBu
The F(50/10) contour of proposed W248AW.P:	99.6dBu

The predicted distance to the 99.6dbu interfering contour is 1137.9 meters. Taking into account the vertical elevation pattern of the SWR three bay antenna utilizing .75 wavelength spacing, and the height above ground of 197M, it has been determined that the interfering contour of 99.6dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 6.305M above ground at an angle of 40 degrees. The distance from the base of the tower at the 40 degree angle is 234M. Exhibit 13-A2 demonstrates the distance of 234M from the base of the tower and the lack of occupied structures that are tall enough to enter into the interfering distance above ground. At an angle of 45 degrees, the distance from the base of the tower is 197M. There are no occupied structures within the 197M distance.

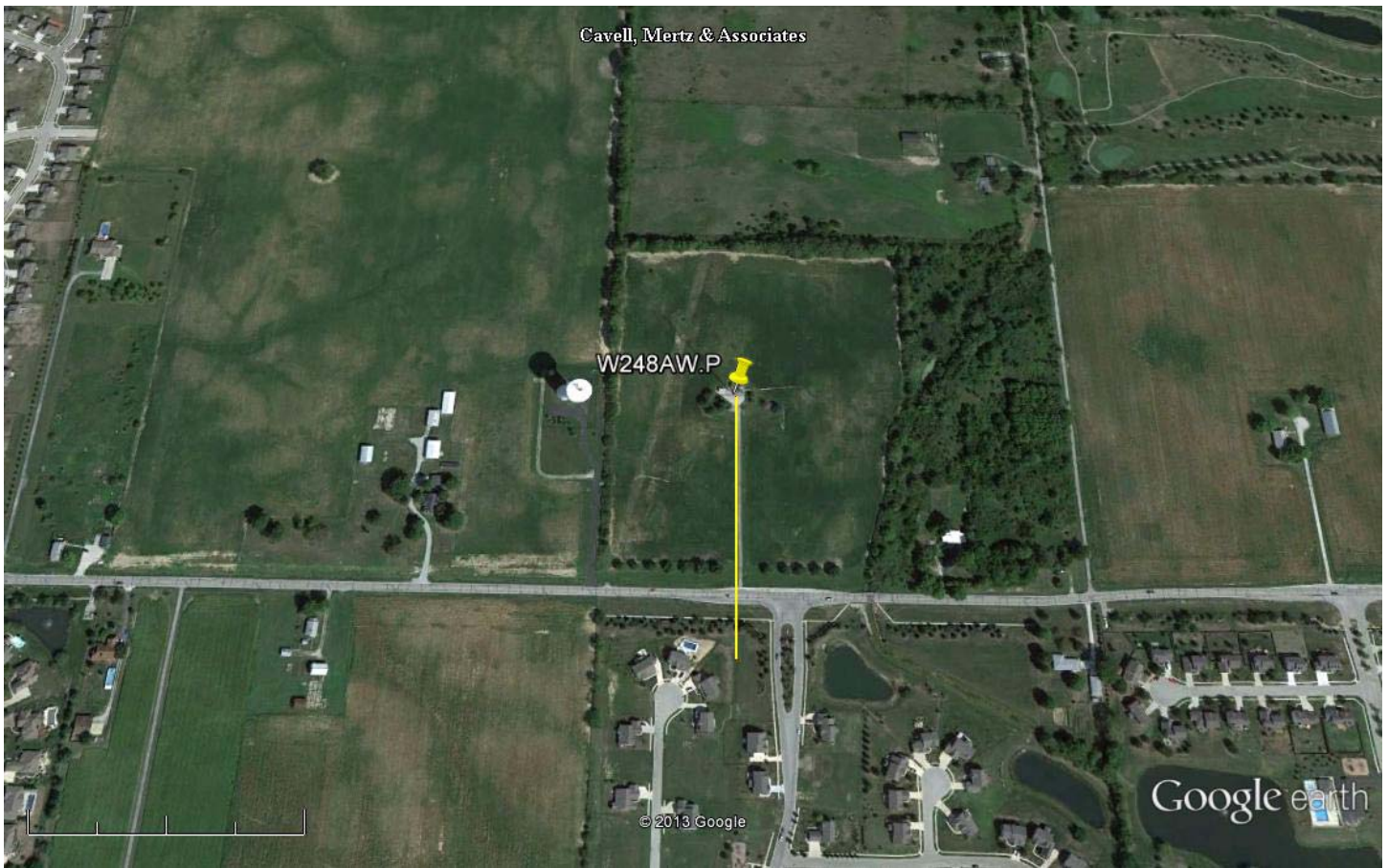
As can be seen in Exhibit 13–A1, all other angles provide ample distances above ground for the interfering contour.

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  
W248AW  
Franklin, IL

ERP (kw): 0.24  
Height of Antenna above Ground (m): 197  
Translator's IX Contour: 99.6  
Antenna Type: SWR 3 bay .75

<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	0.2400	1137.9040	197.000
5	0.941	0.2125	1070.7677	103.676
10	0.778	0.1453	885.2893	43.271
15	0.545	0.0713	620.1577	36.491
20	0.289	0.0200	328.8543	84.525
25	0.056	0.0008	63.7226	170.070
30	0.121	0.0035	137.6864	128.157
35	0.226	0.0123	257.1663	49.495
40	0.260	0.0162	295.8550	6.828
45	0.237	0.0135	269.6832	6.305
50	0.177	0.0075	201.4090	42.712
55	0.104	0.0026	118.3420	100.060
60	0.033	0.0003	37.5508	164.480
65	0.023	0.0001	26.1718	173.280
70	0.060	0.0009	68.2742	132.843
75	0.075	0.0014	85.3428	114.565
80	0.073	0.0013	83.0670	115.195
85	0.057	0.0008	64.8605	132.386
90	0.033	0.0003	37.5508	159.449



Google earth

feet  
meters



Yellow Pin:

NAD27 39 40' 06" N 86 01' 44" W

Yellow Line: 234M at 180 degree true

**Educational Media Foundation**

5700 W Oaks Blvd  
Rocklin, CA 95765

*Exhibit 13-A  
Indianapolis, IN*

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

The proposed FM Translator is located within the protected 60dBu contour of second adjacent channel station WLHK, channel 246B, Shelbyville, IN. 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 W248AWP:	240 watts
The proposed COR for W248AW.P:	197 meters
WLHK F(50/50) contour at proposed site:	162dBu
The F(50/10) contour of proposed New 630069.P:	202dBu

The proposed W248AW antenna will be located 8 meters below the WLHK antenna. The signal level at the proposed antenna level from the WLHK antenna is 162dbu. The predicted distance to the 202dbu interfering contour is 0 meters, therefore there is no interference level to take into account.

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