

Channel Study

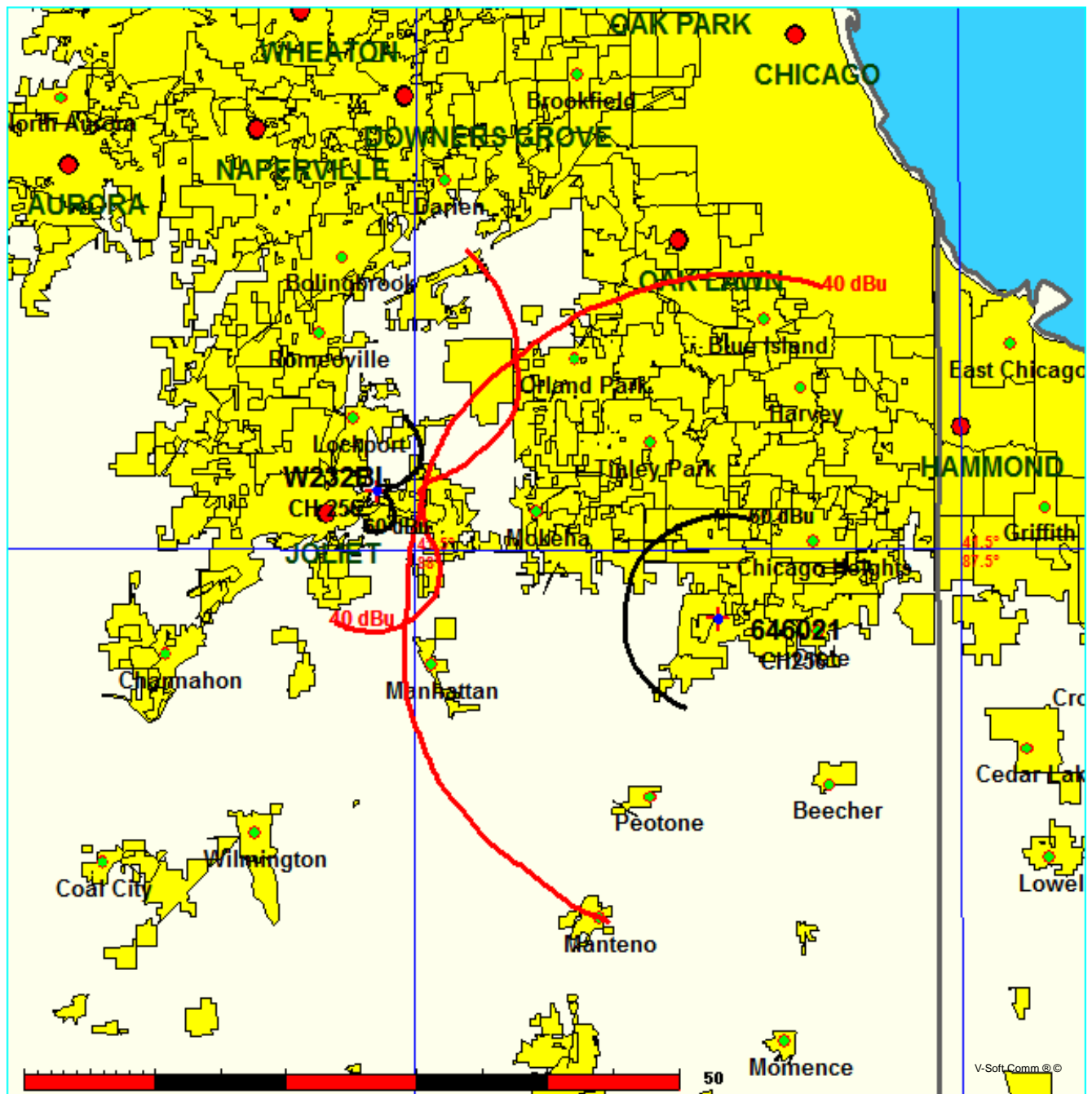
REFERENCE		CH# 256D - 99.1 MHz, Pwr= 0.01 kW DA, HAAT= 130.9 M, COR= 328 M								DISPLAY DATES	
41 32 26.0 N.		Average Protected F(50-50)= 6.6 km								DATA 02-11-13	
88 02 08.0 W.		Standard Directional								SEARCH 02-11-13	
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
254B Chicago	WFMT	LIC	NC IL	41.3 221.6	50.20 BMLH20090415AAX	41 52 44.0 87 38 08.0	6.000 470	4.7 651	69.5 Window To The World Commun	40.5	-19.6*<
258B Chicago	WUSN	LIC	CX IL	40.5 220.8	52.55 BLH20030611AAT	41 53 56.0 87 37 23.0	5.700 425	4.5 606	66.0 Cbs Radio Inc. Of Chicago	43.0	-13.8*<
256D Park Forest	646021	APP	C IL	110.1 290.3	27.82 BNPFT20030317EUO	41 27 14.9 87 43 21.8	0.010 163	24.2 382	7.2 Edgewater Broadcasting, In	2.8	16.9
256B Milwaukee	WMYX-FM	LIC	CN WI	359.2 179.2	156.07 BMLH19860225KC	42 56 44.0 88 03 39.0	50.000 137	135.2 377	62.5 Entercom Milwaukee License	14.2	62.1
256B Savoy	WYXY	LIC	CX IL	171.8 352.0	156.21 BLH20090317AAM	40 08 53.0 87 46 21.0	50.000 152	137.5 354	64.9 Saga Communications Of Ill	15.6	76.7
255A Dwight	WJEZ	LIC	CN IL	210.9 30.6	65.40 BLH19980901KE	41 02 06.0 88 26 10.0	1.300 149	37.5 352	25.0 Cumulus Licensing Llc	25.1	36.2
257B1 La Salle	WAJK	LIC	CN IL	262.6 81.8	104.58 BLH19891026KC	41 24 47.0 89 16 34.0	11.000 149	58.3 352	45.0 La Salle County Broadcasti	45.6	58.0
255D Dekalb	W255BN	LIC	C IL	306.9 126.5	74.11 BLFT20120604ABM	41 56 18.0 88 45 03.0	0.250	13.6 316	9.8 American Education Foundat	55.6	57.3

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
Reference station has protected zone issue:

FMCommander Single Allocation Study - 02-11-2013 - NGDC 30 SEC
W232BL's Overlaps (In= 2.78 km, Out= 16.92 km)

W232BL CH 256 D DA
Lat= 41 32 26.0, Lng= 88 02 08.0
0.01 kW 130.9 M HAAT, 328 M COR
Prot.= 60 dBu, Intef.= 40 dBu

646021 CH 256 D BNPFT20030317EUO
Lat= 41 27 14.9, Lng= 87 43 21.8
0.01 kW 162.5 M HAAT, 381.7 M COR
Prot.= 60 dBu, Intef.= 40 dBu



Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WUSN, channel 258B, Chicago, IL. 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 W232BL.P:	10 watts
The proposed COR for W232BL.P:	130 meters
WUSN F(50/50) contour at proposed site:	60.0dBu
The F(50/10) contour of proposed W232BL:	100.0dBu

The predicted distance to the 100.0dbu interfering contour is 221.9 meters. Taking into account the vertical elevation pattern for the Scala CA2-CP single bay antenna and the height above ground of 130M, it has been determined that the interfering contour of 100.0dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 28.05M above ground.

As can be seen in Exhibit 13-A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 28.05 meter aperture.

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
W232BL
Joliet, IN

ERP (kw): 0.01
Height of Antenna above Ground (m): 130
Translator's IX Contour: 100
Antenna Type: Scala CA2-CP

<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	0.0100	221.8196	130.000
5	0.990	0.0098	219.6014	110.860
10	0.979	0.0096	217.1614	92.290
15	0.952	0.0091	211.1723	75.345
20	0.920	0.0085	204.0741	60.203
25	0.877	0.0077	194.5358	47.786
30	0.829	0.0069	183.8885	38.056
35	0.772	0.0060	171.2448	31.778
40	0.715	0.0051	158.6010	28.053
45	0.647	0.0042	143.5173	28.518
50	0.570	0.0032	126.4372	33.143
55	0.487	0.0024	108.0262	41.510
60	0.388	0.0015	86.0660	55.465
65	0.292	0.0009	64.7713	71.297
70	0.187	0.0003	41.4803	91.021
75	0.095	0.0001	21.0729	109.645
80	0.045	0.0000	9.9819	120.170
85	0.032	0.0000	7.0982	122.929
90	0.030	0.0000	6.6546	123.345

Compliance with C.F.R. 74.1204

The proposed FM Translator is also located within the protected 54dBu contour of second adjacent channel station WFMT, channel 254B, Chicago, IL. 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 W232BL.P:	10 watts
The proposed COR for W232BL.P:	130 meters
WFMT F(50/50) contour at proposed site:	62.3dBu
The F(50/10) contour of proposed W232BL:	102.3dBu

The predicted distance to the 102.3dbu interfering contour is 170.2 meters. Taking into account the vertical elevation pattern for the Scala CA2-CP single bay antenna and the height above ground of 130M, it has been determined that the interfering contour of 102.3dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 51.77M above ground.

As can be seen in Exhibit 13-A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 51.77 meter aperture.

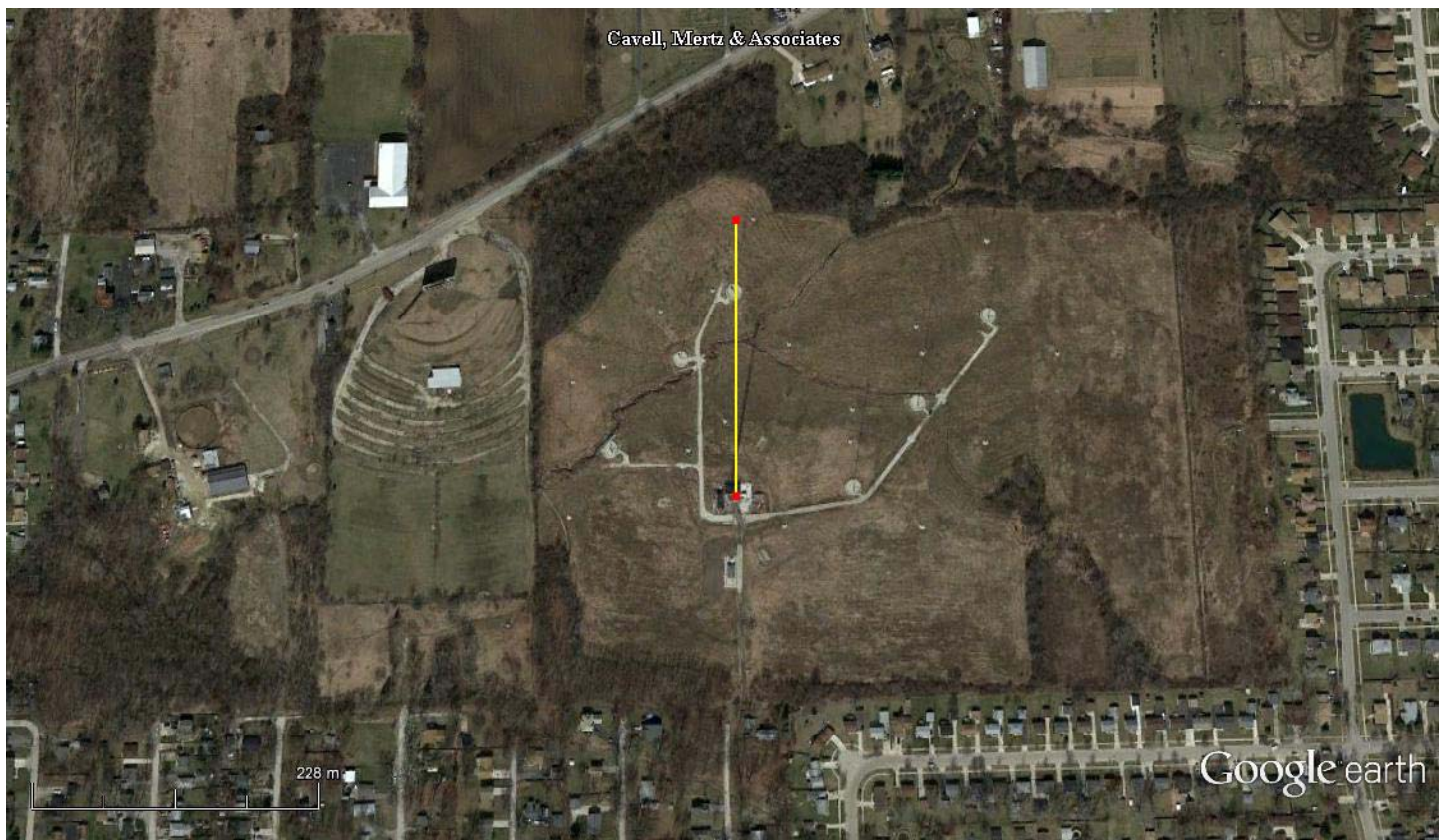
Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
W232BL
Joliet, IN

ERP (kw): 0.01
Height of Antenna above Ground (m): 130
Translator's IX Contour: 102.3
Antenna Type: Scala CA2-CP

<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	0.0100	170.2159	130.000
5	0.990	0.0098	168.5137	115.313
10	0.979	0.0096	166.6413	101.063
15	0.952	0.0091	162.0455	88.060
20	0.920	0.0085	156.5986	76.440
25	0.877	0.0077	149.2793	66.912
30	0.829	0.0069	141.1089	59.446
35	0.772	0.0060	131.4066	54.628
40	0.715	0.0051	121.7043	51.770
45	0.647	0.0042	110.1297	52.127
50	0.570	0.0032	97.0230	55.676
55	0.487	0.0024	82.8951	62.096
60	0.388	0.0015	66.0438	72.804
65	0.292	0.0009	49.7030	84.954
70	0.187	0.0003	31.8304	100.089
75	0.095	0.0001	16.1705	114.380
80	0.045	0.0000	7.6597	122.457
85	0.032	0.0000	5.4469	124.574
90	0.030	0.0000	5.1065	124.894

Exhibit A-2



Google earth

feet 1000
meters 500



NAD27

41 32' 26.0" N

88 02' 08.0" W

Marker: 221.9M at zero degree true north