

Technical Exhibit  
W205BG  
235m RC-AMSL 68.2m Highest Radial  
49m AGL  
55 Watts

TABLE OF CONTENTS

Figure 1	Interference Study Table
Figure 2	74.1204(d) Showing
Figure 3	Translator Overlap
Figure 4	HAAT

### Interference Compliance

Contour protection, as required by C.F.R. Section 74.1204 to co-channel and first, second and third adjacent channels is demonstrated herein by Figure 1.

### 74.1204(d) Showing

The instant application is currently authorized pursuant to d/u ratios with respect to WQNA, Springfield, IL, a third adjacent station. The instant application proposes a move closer to WQNA while maintaining no actual interference will occur due to a lack of population within the interference area since the interfering contour will not reach the ground or any building.

Figure 2 is a tabular layout of the computations of the protected and interfering contours utilizing V-Soft's X-Field program at 0 degrees with a two-bay half-wave spaced antenna. Since the instant application proposes a nondirectional antenna, the same propagation is assumed for all azimuths.

Figure 2-1 illustrates the vertical elevation of the interfering contour of W205BG.

Figure 2-2 is a satellite Google map showing no tall buildings within the interference area.

### Overlap

Pursuant to 47 CFR 74.1232 (b) the applicant certifies that it does not have any interest in an application or an authorization for an FM translator station that serves substantially the same area and rebroadcasts the same signal as the proposed FM translator station.

Covenant Network operates W243CR in Williamsville, IL and is the permittee of channel 293 in Williamsville, IL.

Figure 3 demonstrates there is no substantial overlap amongst the 60 dBu F(50,50) contours of the three facilities.

### Height Above Average Terrain

The proposed HAAT and the predicted 60 dBu contours were calculated in accordance with Section 47 C.F.R. 73.313. The average terrain elevations were calculated along 12 radials using the NED 03 Sec terrain database.

Figure 4 shows the HAAT of the 12 radials. The highest radial is 68.2m above average terrain.

### RF Electromagnetic Exposure Analysis

The proposed facility will not have a significant environmental impact and complies with maximum permissible radio frequency electromagnetic exposure limits for a controlled environment, in accordance with OET Bulletin No. 65.

Using a worst case assumption of maximum downward radiation ( $F=1.0$ ) the RF exposure at 2m above ground level is  $1.66068 \mu\text{W}/\text{cm}^2$  or 0.2% of the controlled standard. With the addition of this RF the site remains within the limits of the controlled standard.

The site is fenced and RF warning signs are posted. The power will be reduced or shut off to allow necessary access to the tower.

Figure 1

REFERENCE	CH#	Minor Modification of W205BG							DISPLAY DATES		
39 45 55.8 N.	205D	- 88.9 MHz, Pwr= 0.055 kW, HAAT= 58.7 M, COR= 235 M							DATA 06-20-13		
89 39 46.6 W.		Average Protected F(50-50)= 6.77 km							SEARCH 06-30-13		
		Omni-directional									
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*
205D	W205BG	LIC	_C_	18.4	4.62	39 48 18.0	0.010	13.7	4.4	-15.9*	-24.2
	Springfield	IL	IL	198.4	BLFT20010511ABI	89 38 45.0	72	238	Covenant	Network	
202A	WONA	LIC	_C_	148.9	4.06	39 44 03.0	0.250	1.1	11.6	-3.8*	-8.0*
	Springfield	IL	IL	328.9	BLED20020919ABA	89 38 18.0	78	254	Capital	Area Career Center	
205A	WLNX	LIC	_C_	30.5	50.49	40 09 23.0	0.225	23.1	6.9	20.5	20.9
	Lincoln	IL	IL	210.7	BLED20111208DLZ	89 21 40.0	21	203	Lincoln	University	
205A	WDCR	LIC	DCX	74.7	70.83	39 55 49.9	1.100	40.5	11.4	23.4	33.7
	Oreana	IL	IL	255.2	BLED20110316ACJ	88 51 41.0	50	257	St. Mary's	Hospital, Decat	
204B	WSIE	LIC	DEN	194.4	112.50	38 47 06.0	50.000	78.1	52.2	27.8	50.6
	Edwardsville	IL	IL	14.2	BLED19860115KB	89 59 10.0	152	302	Board Of	Trustees, Souther	
207B	WI PA	LIC	DCN	267.3	87.56	39 43 25.0	50.000	5.5	49.6	75.9	36.9
	Pittsfield	IL	IL	86.6	BLED19921221KB	90 41 09.0	150	316	The Board Of	Trustees Of T	
208A	WJMU	LIC	_CN	81.6	59.38	39 50 30.0	1.650	1.6	12.7	50.6	45.1
	Decatur	IL	IL	262.0	BLED19940228KZ	88 58 29.0	26	230	Millikin	University	
206D	W206AN	LIC	_C_	204.8	60.11	39 16 28.0	0.080	7.7	5.4	46.0	45.2
	Carlinville	IL	IL	24.7	BLFT20100218AAH	89 57 23.0	45	227	Family	Worship Center Chur	
203B	WBNH	LIC	DCX	5.2	98.53	40 38 53.0	48.000	5.6	49.9	85.9	47.4
	Pekin	IL	IL	185.3	BLED20060906AAM	89 33 26.0	154	339	Central	Illinois Radio Fel	
06+2C	KWOCTV	LI	_HY	341.2	209.60	41 32 49.0	100.000	0.5	23.8	139.5R	70.1M
	Davenport	IA	IA	160.6	BLCT19821108KN	83 90 28 35.0	408	0	Young	Broadcasting Of Dave	
06-T	W06BD	LI	_HN	130.2	237.69	38 21 56.0	0.014	0.5	23.8	139.5R	98.2M
	Princeton	IN	IN	311.6	BLTVL19901115IC	0 87 34 54.0	89	0	North	Gibson School Corpor	
06+2C	WPSDTV	LI	_HY	168.1	292.20	37 11 31.0	100.000	0.5	23.8	139.5R	152.7M
	Paducah	KY	KY	348.5	BMLCT20040227ABE04	88 58 53.0	482	0	Wpsd-tv,	Lic	
06Z1C	WRTV	LI	_HY	86.0	295.92	39 53 56.5	100.000	0.5	23.8	139.5R	156.4M
	Indianapolis	IN	IN	268.2	BMLCT20050414ABE05	86 12 03.7	279	0	Mcgraw-hill	Broadcasting C	
06Z2E	KMOSTV	LI	_HY	246.4	303.73	38 37 36.0	100.000	0.5	23.8	139.5R	164.2M
	Sedalia	MO	MO	64.4	BLET20010926ACE	2 92 52 03.0	602	0	Board Of	Governors Of Cent	
06Z1C	WITI	LI	_N	21.1	397.87	43 05 26.0	100.000	0.5	23.8	139.5R	258.4M
	Milwaukee	WI	WI	202.3	BLCT19990129KT	99 87 53 50.0	305	0	Witi	License, inc.	

Terrain database is NED 03 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 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.

Figure 2

W205BG Springfield, IL  
 Translator 74.1204(d) Showing  
 Translator Maximum Licensed ERP = 0.055  
 Translator Antenna Height AG = 49 Meters  
 W205BG Antenna Model = SHPX2H

Protected Station's Contour = 78.0633 dBu  
 Translator's full Interference contour 118.0633

Review Azimuth = 0 Degrees True  
 Horizontal Relative Field at Review Azimuth = 1.000  
 Horizontal Translator ERP at Review Azimuth = 0.055 kW  
 Distance between stations = 4.1  
 Protected Station= WQNA, .25 kW, 254 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.0550	065.0154	065.0154	049.000
05.00	0.984	1.0	0.0533	063.9752	063.7317	043.424
10.00	0.938	1.0	0.0484	060.9845	060.0580	038.410
15.00	0.865	1.0	0.0412	056.2383	054.3221	034.444
20.00	0.772	1.0	0.0328	050.1919	047.1650	031.833
25.00	0.665	1.0	0.0243	043.2353	039.1844	030.728
30.00	0.553	1.0	0.0168	035.9535	031.1367	031.023
35.00	0.442	1.0	0.0107	028.7368	023.5398	032.517
40.00	0.339	1.0	0.0063	022.0402	016.8838	034.833
45.00	0.248	1.0	0.0034	016.1238	011.4013	037.599
50.00	0.172	1.0	0.0016	011.1827	007.1881	040.434
55.00	0.112	1.0	0.0007	007.2817	004.1766	043.035
60.00	0.068	1.0	0.0003	004.4210	002.2105	045.171
65.00	0.037	1.0	0.0001	002.4056	001.0166	046.820
70.00	0.018	1.0	0.0000	001.1703	000.4003	047.900
75.00	0.007	1.0	0.0000	000.4551	000.1178	048.560
80.00	0.002	1.0	0.0000	000.1300	000.0226	048.872
85.00	0.001	1.0	0.0000	000.0650	000.0057	048.935

90.00

0.0

1.0

0.0000

Figure 2  
000.0065

000.0000

048.993

Figure 2-1

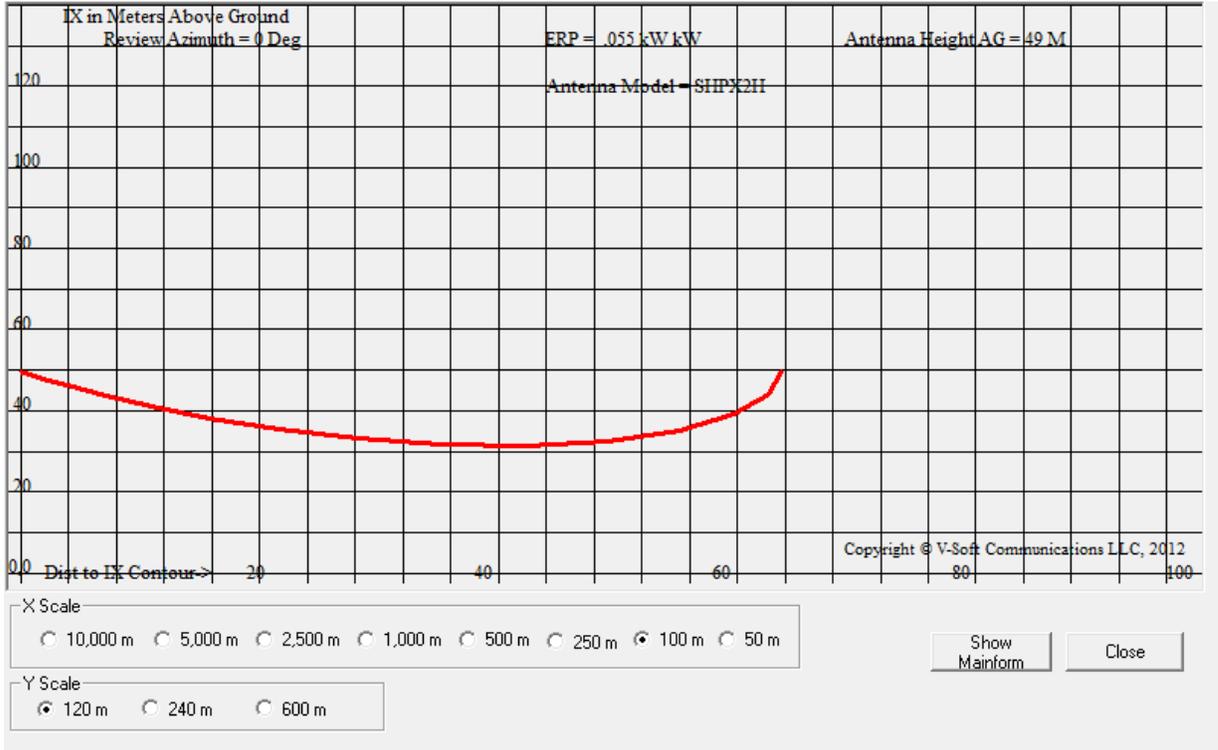


Figure 2-2



Figure 3

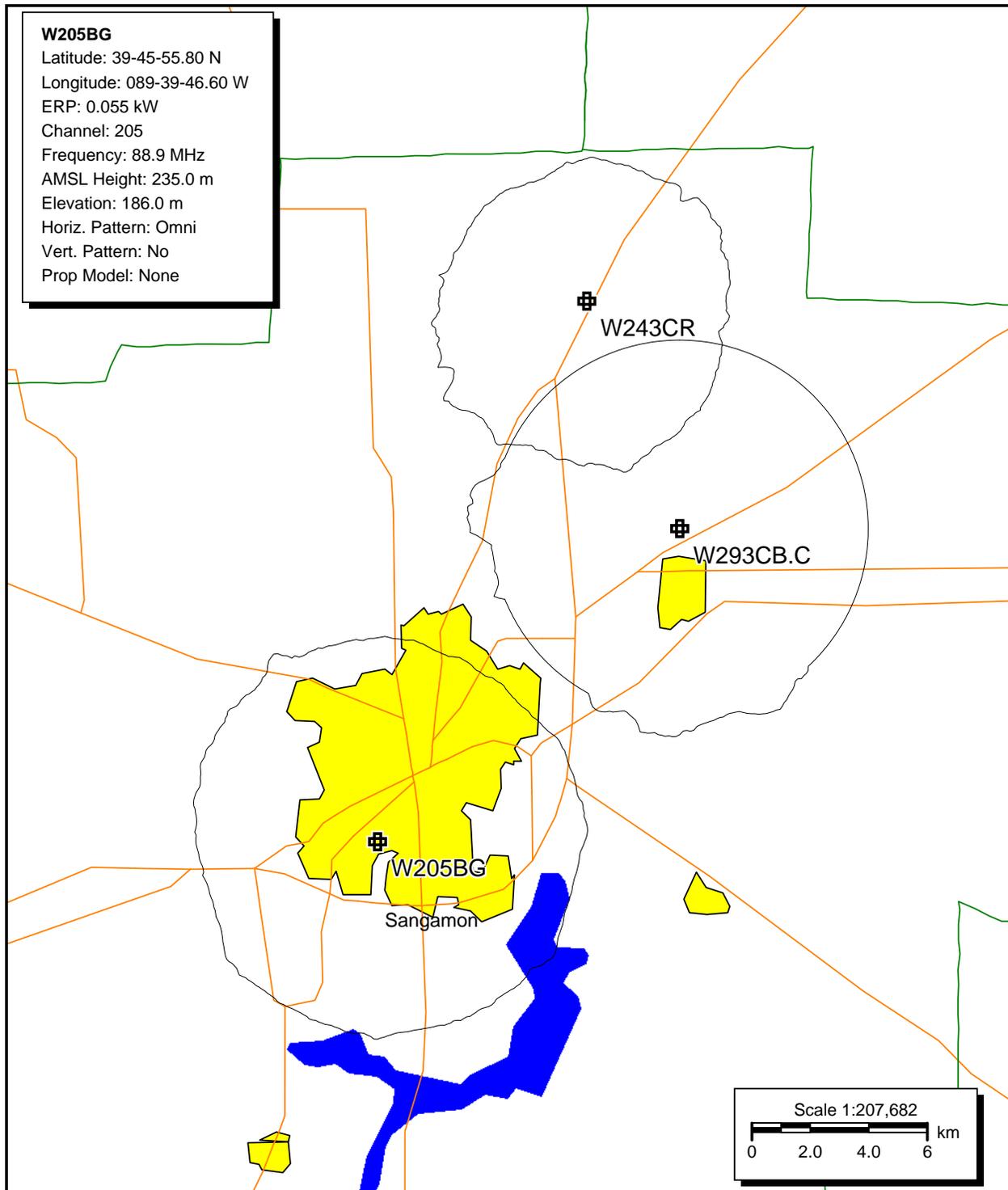


Figure 4

