

Exhibit 18.1 - Tabulation of Proposed Allocation

Munn-Reese, Inc.
Coldwater, MI 49036

WPRR, Inc.
Clyde Township, MI

REFERENCE CH# 211A - 90.1 MHz, Pwr= 5 kW DA, HAAT= 56.7 M, COR= 268 M
42 35 29.0 N. Average Protected F(50-50)= 20.97 km
85 56 07.0 W. Standard Directional

DISPLAY DATES
DATA 10-29-13
SEARCH 10-29-13

CH CI TY	CALL	TYPE STATE	ANT ---	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
211A	WXPZ	LIC DEX		262.8	22.44	42 33 57.0	1.500	56.9	16.0	-53.0*	-56.8
	Clyde Township	MI		82.6	BLED20080818AAI	86 12 26.0	74	261	Wprrr, Inc.		
212C1	WBLV	LIC _CN		355.4	106.93	43 33 00.0	100.000	93.8	63.2	0.3	24.8
	Twin Lake	MI		175.3	BLED19901002KB	86 02 34.0	185	427	Blue Lake Fine Arts Camp		
210A	WTHS	LIC DCN		328.3	25.67	42 47 16.0	1.000	13.2	9.5	1.4	0.4
	Holland	MI		148.2	BLED19850425LP	86 06 02.0	47	245	Hope College		
211B	WYBA	LIC DC_		129.5	77.59	42 08 41.0	32.000	65.2	18.8	1.0	18.9
	Coldwater	MI		310.0	BLED20111114AXC	85 12 34.0	77	359	Bible Broadcasting Network		
265A	AL6571«	RSV-A _		124.0	16.47	42 30 31.0	6.000	0.0	0.0	9.5R	7.0M
	Allegan	MI		304.1	RM11267	85 46 08.0	100	329	Livingstone Broadcasting,		
265A	WQXC-FM«	LIC _C_		123.8	16.49	42 30 32.0	3.000	0.0	0.0	9.5R	7.0M
	Allegan	MI		303.9	BLH20061006AAE	85 46 06.0	100	328	Forum Communications, Inc.		
265A	WQXC-FM«	CP _CX		122.9	17.24	42 30 26.0	3.000	0.0	0.0	9.5R	7.7M
	Allegan	MI		303.0	BPH20111221ADH	85 45 32.0	100	331	Forum Communications, Inc.		
211B	WMBI -FM	LIC _C_		247.3	185.72	41 55 41.0	100.000	154.8	58.4	9.5	53.7
	Chicago	IL		65.9	BLED19970613KA	88 00 25.0	135	350	The Moody Bible Institute		
210A	WAYG	LIC DCX		32.7	51.12	42 58 40.0	4.900	20.3	13.6	16.0	15.4
	Grand Rapids	MI		212.9	BLED20050809ACJ	85 35 44.0	63	288	Cornerstone University		
210A	WKDS	LIC _CN		142.3	48.85	42 14 36.0	0.140	9.2	6.4	26.3	22.6
	Kalamazoo	MI		322.5	BLED19830204AK	85 34 19.0	38	303	Kalamazoo Public Schools		
210A	WAYO	LIC _CX		211.9	67.93	42 04 19.0	0.250	18.2	12.3	28.0	23.3
	Benton Harbor	MI		31.6	BLED20100326ACF	86 22 14.0	102	305	Cornerstone University		
214B	WAUS	LIC _CN		206.1	77.90	41 57 42.0	50.000	5.8	51.3	50.1	24.4
	Berrien Springs	MI		25.9	BLED19920424KA	86 21 02.0	150	366	Andrews Broadcasting Corp.		
209A	WAYG	CP DCX		32.7	51.12	42 58 40.0	3.200	2.2	23.0	34.1	26.5
	Grand Rapids	MI		212.9	BPED20110726AES	85 35 44.0	74	299	Cornerstone University		
208B1	WOFR	LIC DCX		154.9	58.96	42 06 38.0	10.000	1.6	15.0	43.6	42.4
	Schoolcraft	MI		335.1	BMLED20130530AMJ	85 37 57.0	42	305	Family Stations, Inc.		
209A	WSPB	LIC _HX		109.5	56.44	42 25 13.0	0.205	1.0	6.7	45.4	48.1
	Bedford	MI		289.9	BLED20121108AMV	85 17 13.0	16	294	Catholic Radio Network, In		

Terrain database is USGS 03 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= - Zone 1, 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.
« = Station meets FCC minimum distance spacing for its class.
< = Contour Overlap
Reference station has protected zone issue:

Exhibit 18.2(a)

WXPZ Protection to WBLV
Clyde Township, MI

Protection to WBLV - Twin Lake, MI

FMCommander Single Allocation Study - 11-05-2013 - USGS 03 SEC
WXPZ's Overlaps (In= 0.34 km, Out= 24.82 km)

WXPZ CH 211 A DA
Lat= 42 35 29.0, Lng= 85 56 07.0
5.0 kW 58.7 M HAAT, 268 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WBLV CH 212 C1 BLED19901002KB
Lat= 43 33 00.0, Lng= 86 02 34.0
100.0 kW 185 M HAAT, 427 M COR
Prot.= 60 dBu, Intef.= 54 dBu

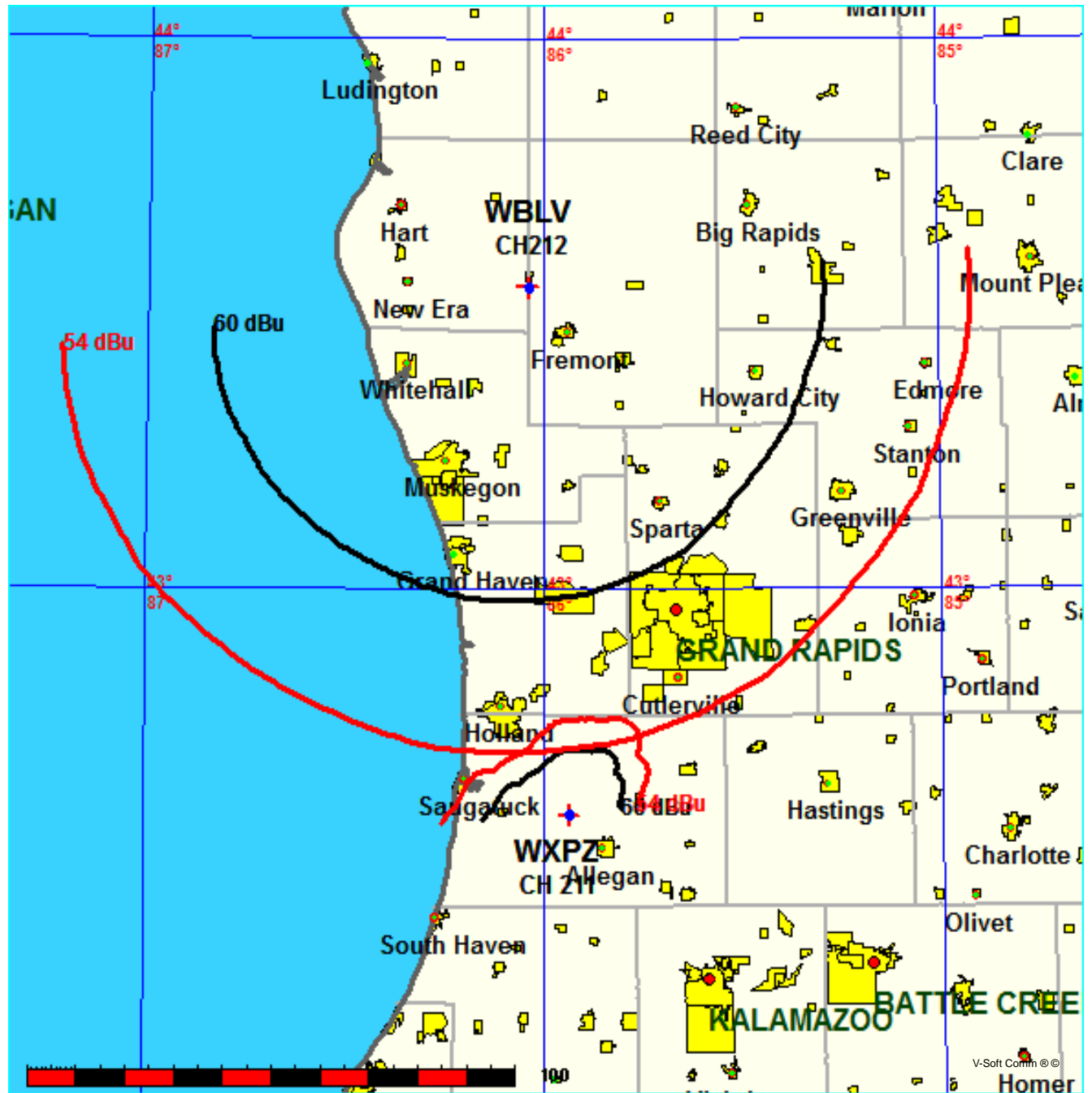


Exhibit 18.2(b) - Protection to WBLV - Twin Lake, MI

11-05-2013

Terrain Data: USGS 03 SEC

FMOVer Analysis

WXPZ

WBLV BLED19901002KB

Channel = 211A

Max ERP = 5 kW

RCAMSL = 268 M

N. Lat. 42 35 29.0

W. Lng. 85 56 07.0

Protected

60 dBu

Channel = 212C1

Max ERP = 100 kW

RCAMSL = 427 M

N. Lat. 43 33 00.0

W. Lng. 86 02 34.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
295.0	000.4515	0082.3	013.5	182.0	100.0000	0196.5	100.9	52.04	
296.0	000.4310	0081.5	013.3	181.8	100.0000	0196.3	100.8	52.07	
297.0	000.4110	0080.1	013.0	181.6	100.0000	0196.2	100.7	52.10	
298.0	000.3914	0078.4	012.8	181.4	100.0000	0196.1	100.6	52.11	
299.0	000.3724	0075.1	012.4	181.1	100.0000	0195.9	100.6	52.11	
300.0	000.3538	0072.4	012.0	180.9	100.0000	0195.7	100.6	52.11	
301.0	000.3538	0072.0	012.0	180.8	100.0000	0195.7	100.4	52.16	
302.0	000.3538	0072.8	012.0	180.8	100.0000	0195.6	100.2	52.21	
303.0	000.3538	0072.3	012.0	180.7	100.0000	0195.6	100.1	52.26	
304.0	000.3538	0071.2	011.9	180.6	100.0000	0195.5	099.9	52.29	
305.0	000.3538	0070.5	011.9	180.5	100.0000	0195.4	099.8	52.33	
306.0	000.3538	0069.7	011.8	180.4	100.0000	0195.3	099.6	52.36	
307.0	000.3538	0069.1	011.8	180.3	100.0000	0195.3	099.5	52.40	
308.0	000.3538	0068.0	011.7	180.2	100.0000	0195.2	099.4	52.43	
309.0	000.3538	0067.8	011.7	180.2	100.0000	0195.1	099.2	52.47	
310.0	000.3538	0067.6	011.7	180.1	100.0000	0195.0	099.1	52.51	
311.0	000.3469	0067.7	011.6	180.0	100.0000	0194.9	099.0	52.54	
312.0	000.3401	0067.9	011.6	179.9	100.0000	0194.8	098.8	52.57	
313.0	000.3333	0067.9	011.5	179.8	100.0000	0194.7	098.7	52.60	
314.0	000.3267	0067.9	011.5	179.7	100.0000	0194.7	098.6	52.63	
315.0	000.3200	0067.3	011.4	179.6	100.0000	0194.6	098.6	52.65	
316.0	000.3135	0067.2	011.3	179.5	100.0000	0194.6	098.5	52.67	
317.0	000.3070	0067.5	011.3	179.4	100.0000	0194.6	098.4	52.70	
318.0	000.3006	0067.7	011.2	179.3	100.0000	0194.5	098.3	52.73	
319.0	000.2943	0067.1	011.1	179.1	100.0000	0194.6	098.2	52.75	
320.0	000.2880	0066.8	011.0	179.0	100.0000	0194.6	098.1	52.77	
321.0	000.2904	0066.3	011.0	178.9	100.0000	0194.6	098.0	52.80	
322.0	000.2928	0065.9	011.0	178.8	100.0000	0194.6	097.9	52.83	
323.0	000.2952	0065.6	011.0	178.7	100.0000	0194.6	097.8	52.86	
324.0	000.2977	0065.3	011.0	178.6	100.0000	0194.6	097.7	52.89	
325.0	000.3001	0064.7	011.0	178.5	100.0000	0194.6	097.6	52.92	
326.0	000.3026	0064.1	011.0	178.4	100.0000	0194.7	097.5	52.94	
327.0	000.3050	0064.3	011.0	178.4	100.0000	0194.7	097.4	52.98	
328.0	000.3075	0064.6	011.0	178.3	100.0000	0194.7	097.3	53.02	
329.0	000.3100	0064.5	011.1	178.2	100.0000	0194.7	097.1	53.06	
330.0	000.3125	0064.6	011.1	178.1	100.0000	0194.7	097.0	53.09	

Exhibit 18.2(b) - Protection to WBLV - Twin Lake, MI

FMOver Analysis

Page # 2

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
331.0	000.3251	0064.5	011.2	178.0	100.0000	0194.7	096.9	53.14
332.0	000.3380	0064.4	011.3	177.9	100.0000	0194.7	096.7	53.19
333.0	000.3511	0064.2	011.4	177.8	100.0000	0194.7	096.5	53.24
334.0	000.3645	0063.7	011.4	177.8	100.0000	0194.7	096.4	53.28
335.0	000.3781	0063.1	011.5	177.7	100.0000	0194.7	096.2	53.32
336.0	000.3920	0062.6	011.5	177.6	100.0000	0194.6	096.1	53.35
337.0	000.4061	0061.9	011.6	177.5	100.0000	0194.6	096.0	53.38
338.0	000.4205	0061.5	011.7	177.4	100.0000	0194.6	095.9	53.42
339.0	000.4351	0061.0	011.7	177.3	100.0000	0194.5	095.8	53.45
340.0	000.4500	0060.6	011.8	177.1	100.0000	0194.5	095.6	53.49
341.0	000.4575	0060.2	011.8	177.0	100.0000	0194.5	095.6	53.51
342.0	000.4651	0060.2	011.8	176.9	100.0000	0194.5	095.5	53.54
343.0	000.4728	0060.4	011.9	176.8	100.0000	0194.5	095.4	53.57
344.0	000.4805	0061.2	012.0	176.7	100.0000	0194.5	095.2	53.62
345.0	000.4883	0061.7	012.1	176.6	100.0000	0194.4	095.1	53.65
346.0	000.4961	0062.5	012.2	176.5	100.0000	0194.3	094.9	53.69
347.0	000.5040	0063.5	012.3	176.4	100.0000	0194.2	094.8	53.74
348.0	000.5120	0063.9	012.4	176.2	100.0000	0194.2	094.6	53.77
349.0	000.5200	0063.9	012.5	176.1	100.0000	0194.1	094.6	53.79
350.0	000.5281	0064.2	012.5	176.0	100.0000	0194.0	094.5	53.81
351.0	000.5379	0065.0	012.6	175.9	100.0000	0194.0	094.3	53.85
352.0	000.5478	0065.2	012.7	175.7	100.0000	0193.9	094.2	53.88
353.0	000.5578	0064.9	012.7	175.6	100.0000	0193.8	094.2	53.88
354.0	000.5678	0064.5	012.8	175.5	100.0000	0193.8	094.2	53.89
355.0	000.5780	0064.1	012.8	175.3	100.0000	0193.7	094.2	53.90
356.0	000.5882	0063.9	012.8	175.2	100.0000	0193.6	094.1	53.90
357.0	000.5986	0063.3	012.8	175.1	100.0000	0193.6	094.1	53.90
358.0	000.6090	0062.9	012.8	174.9	100.0000	0193.5	094.1	53.90
359.0	000.6195	0062.3	012.8	174.8	100.0000	0193.5	094.1	53.90
000.0	000.6301	0061.9	012.9	174.6	100.0000	0193.4	094.1	53.89
001.0	000.6301	0062.2	012.9	174.5	100.0000	0193.4	094.1	53.89
002.0	000.6301	0062.0	012.9	174.4	100.0000	0193.5	094.2	53.88
003.0	000.6301	0062.2	012.9	174.2	100.0000	0193.4	094.2	53.88
004.0	000.6301	0062.1	012.9	174.1	100.0000	0193.5	094.2	53.86
005.0	000.6301	0062.4	012.9	174.0	100.0000	0193.5	094.2	53.86
006.0	000.6301	0063.4	013.0	173.8	100.0000	0193.5	094.2	53.87
007.0	000.6301	0064.0	013.0	173.7	100.0000	0193.4	094.2	53.87
008.0	000.6301	0064.3	013.1	173.5	100.0000	0193.4	094.2	53.86
009.0	000.6301	0064.4	013.1	173.4	100.0000	0193.4	094.3	53.85
010.0	000.6301	0064.8	013.1	173.3	100.0000	0193.4	094.3	53.84
011.0	000.6458	0065.3	013.2	173.1	100.0000	0193.4	094.3	53.85
012.0	000.6618	0065.5	013.3	173.0	100.0000	0193.5	094.2	53.86
013.0	000.6779	0064.9	013.3	172.8	100.0000	0193.4	094.3	53.84
014.0	000.6942	0063.4	013.3	172.7	100.0000	0193.4	094.4	53.80
015.0	000.7106	0062.6	013.3	172.6	100.0000	0193.4	094.5	53.77
016.0	000.7273	0062.1	013.3	172.4	100.0000	0193.4	094.6	53.75
017.0	000.7442	0061.6	013.3	172.3	100.0000	0193.4	094.7	53.73
018.0	000.7613	0061.4	013.4	172.2	100.0000	0193.4	094.7	53.72
019.0	000.7785	0061.1	013.4	172.0	100.0000	0193.4	094.8	53.70
020.0	000.7960	0060.8	013.5	171.9	100.0000	0193.4	094.9	53.68
021.0	000.8376	0061.0	013.7	171.7	100.0000	0193.4	094.8	53.69

Exhibit 18.2(b) - Protection to WBLV - Twin Lake, MI

FMOver Analysis

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Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
022.0	000.8803	0060.9	013.8	171.5	100.0000	0193.5	094.8	53.70
023.0	000.9241	0061.1	014.0	171.3	100.0000	0193.5	094.8	53.71
024.0	000.9689	0060.9	014.1	171.2	100.0000	0193.6	094.8	53.71
025.0	001.0148	0060.5	014.3	171.0	100.0000	0193.7	094.8	53.71
026.0	001.0617	0060.1	014.4	170.8	100.0000	0193.8	094.8	53.69
027.0	001.1097	0060.4	014.6	170.7	100.0000	0193.9	094.8	53.70
028.0	001.1587	0059.7	014.7	170.5	100.0000	0193.9	094.9	53.68
029.0	001.2088	0058.9	014.7	170.4	100.0000	0193.9	095.0	53.65
030.0	001.2600	0057.9	014.8	170.2	100.0000	0193.9	095.2	53.60
031.0	001.3261	0056.6	014.8	170.1	100.0000	0193.9	095.3	53.56
032.0	001.3939	0055.4	014.8	170.0	100.0000	0193.9	095.5	53.52
033.0	001.4634	0054.2	014.8	169.8	100.0000	0193.9	095.6	53.47
034.0	001.5346	0053.0	014.8	169.7	100.0000	0193.8	095.8	53.42
035.0	001.6074	0051.6	014.8	169.6	100.0000	0193.8	096.0	53.35
036.0	001.6820	0050.4	014.8	169.5	100.0000	0193.8	096.2	53.30
037.0	001.7582	0049.2	014.8	169.4	100.0000	0193.7	096.4	53.24
038.0	001.8362	0048.2	014.8	169.3	100.0000	0193.7	096.6	53.18
039.0	001.9158	0046.9	014.7	169.3	100.0000	0193.7	096.8	53.11
040.0	001.9971	0045.4	014.6	169.2	100.0000	0193.7	097.1	53.03
041.0	002.0461	0043.5	014.4	169.2	100.0000	0193.7	097.4	52.93
042.0	002.0956	0042.2	014.2	169.2	100.0000	0193.7	097.7	52.85
043.0	002.1458	0040.9	014.1	169.2	100.0000	0193.7	098.0	52.77
044.0	002.1965	0039.5	013.9	169.2	100.0000	0193.7	098.3	52.69
045.0	002.2479	0037.7	013.7	169.2	100.0000	0193.7	098.6	52.59
046.0	002.2998	0035.3	013.3	169.3	100.0000	0193.7	099.0	52.48
047.0	002.3523	0033.4	013.0	169.4	100.0000	0193.7	099.4	52.39
048.0	002.4054	0031.9	012.9	169.4	100.0000	0193.7	099.7	52.31
049.0	002.4591	0029.8	012.6	169.5	100.0000	0193.8	100.0	52.22
050.0	002.5134	0028.4	012.7	169.4	100.0000	0193.7	100.1	52.17
051.0	002.5134	0026.0	012.7	169.3	100.0000	0193.7	100.3	52.12
052.0	002.5134	0023.4	012.7	169.2	100.0000	0193.7	100.5	52.06
053.0	002.5134	0021.3	012.7	169.2	100.0000	0193.7	100.7	52.01
054.0	002.5134	0020.2	012.7	169.1	100.0000	0193.6	100.9	51.95

Exhibit 18.2(b) - Protection to WBLV - Twin Lake, MI

11-05-2013 Terrain Data: USGS 03 SEC FMOver Analysis

WBLV BLED19901002KB

WXPZ

Channel = 212C1
Max ERP = 100 kW
RCAMSL = 427 M
N. Lat. 43 33 00.0
W. Lng. 86 02 34.0
Protected
60 dBu

Channel = 211A
Max ERP = 5 kW
RCAMSL = 268 M
N. Lat. 42 35 29.0
W. Lng. 85 56 07.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
115.0	100.0000	0162.4	060.0	029.4	001.2284	0058.5	093.1	29.56	
116.0	100.0000	0163.6	060.2	029.5	001.2354	0058.3	092.1	29.82	
117.0	100.0000	0164.2	060.2	029.6	001.2392	0058.3	091.0	30.08	
118.0	100.0000	0164.2	060.2	029.6	001.2404	0058.2	090.0	30.33	
119.0	100.0000	0163.5	060.2	029.6	001.2385	0058.3	088.9	30.58	
120.0	100.0000	0163.0	060.1	029.5	001.2363	0058.3	087.9	30.83	
121.0	100.0000	0162.7	060.1	029.5	001.2345	0058.3	086.9	31.09	
122.0	100.0000	0162.5	060.0	029.5	001.2325	0058.4	085.8	31.34	
123.0	100.0000	0162.4	060.0	029.4	001.2301	0058.4	084.8	31.59	
124.0	100.0000	0161.9	060.0	029.3	001.2253	0058.5	083.7	31.84	
125.0	100.0000	0161.4	059.9	029.2	001.2201	0058.7	082.7	32.09	
126.0	100.0000	0161.3	059.9	029.1	001.2153	0058.8	081.6	32.33	
127.0	100.0000	0161.5	059.9	029.0	001.2112	0058.9	080.6	32.58	
128.0	100.0000	0161.5	059.9	028.9	001.2057	0059.0	079.6	32.82	
129.0	100.0000	0161.3	059.9	028.8	001.1982	0059.1	078.5	33.06	
130.0	100.0000	0161.3	059.9	028.6	001.1910	0059.2	077.5	33.29	
131.0	100.0000	0161.4	059.9	028.5	001.1833	0059.3	076.5	33.53	
132.0	100.0000	0162.2	060.0	028.4	001.1778	0059.4	075.5	33.77	
133.0	100.0000	0162.9	060.1	028.2	001.1710	0059.5	074.4	34.01	
134.0	100.0000	0164.6	060.3	028.2	001.1679	0059.6	073.4	34.27	
135.0	100.0000	0165.1	060.3	028.0	001.1584	0059.7	072.3	34.51	
136.0	100.0000	0165.5	060.4	027.8	001.1474	0059.9	071.3	34.73	
137.0	100.0000	0166.1	060.4	027.5	001.1364	0060.1	070.3	34.96	
138.0	100.0000	0167.0	060.5	027.3	001.1253	0060.2	069.3	35.19	
139.0	100.0000	0168.3	060.7	027.1	001.1155	0060.3	068.2	35.43	
140.0	100.0000	0170.1	060.9	026.9	001.1059	0060.4	067.2	35.67	
141.0	100.0000	0171.9	061.1	026.7	001.0957	0060.4	066.1	35.90	
142.0	100.0000	0173.4	061.2	026.4	001.0828	0060.2	065.1	36.10	
143.0	100.0000	0175.0	061.4	026.2	001.0691	0060.1	064.0	36.31	
144.0	100.0000	0177.0	061.6	025.9	001.0554	0060.1	063.0	36.54	
145.0	100.0000	0178.8	061.8	025.5	001.0398	0060.2	062.0	36.77	
146.0	100.0000	0180.3	061.9	025.1	001.0214	0060.4	061.0	36.99	
147.0	100.0000	0181.8	062.1	024.7	001.0020	0060.6	060.0	37.22	

Exhibit 18.2(b) - Protection to WBLV - Twin Lake, MI

FMOver Analysis

Page # 5

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
148.0	100.0000	0183.0	062.2	024.2	000.9798	0060.8	059.0	37.42
149.0	100.0000	0183.3	062.2	023.7	000.9535	0060.9	058.1	37.59
150.0	100.0000	0183.6	062.3	023.1	000.9263	0061.1	057.2	37.76
151.0	100.0000	0183.6	062.2	022.4	000.8965	0061.0	056.3	37.87
152.0	100.0000	0183.3	062.2	021.6	000.8649	0060.9	055.5	37.96
153.0	100.0000	0183.4	062.2	020.9	000.8337	0061.0	054.7	38.07
154.0	100.0000	0183.8	062.3	020.1	000.8021	0060.8	053.9	38.15
155.0	100.0000	0184.6	062.3	019.4	000.7853	0060.9	053.1	38.33
156.0	100.0000	0186.1	062.5	018.6	000.7722	0061.2	052.2	38.55
157.0	100.0000	0187.4	062.6	017.8	000.7582	0061.4	051.4	38.75
158.0	100.0000	0187.7	062.6	016.9	000.7425	0061.6	050.7	38.91
159.0	100.0000	0187.5	062.6	015.9	000.7257	0062.1	050.0	39.08
160.0	100.0000	0187.7	062.6	014.9	000.7088	0062.7	049.4	39.24
161.0	100.0000	0188.2	062.7	013.9	000.6918	0063.6	048.7	39.43
162.0	100.0000	0188.7	062.7	012.8	000.6744	0065.3	048.1	39.69
163.0	100.0000	0189.4	062.8	011.7	000.6567	0065.5	047.5	39.79
164.0	100.0000	0190.3	062.9	010.6	000.6388	0065.1	046.9	39.83
165.0	100.0000	0191.2	063.0	009.4	000.6301	0064.5	046.4	39.88
166.0	100.0000	0192.2	063.1	008.2	000.6301	0064.3	045.8	40.04
167.0	100.0000	0193.0	063.1	006.9	000.6301	0063.9	045.4	40.16
168.0	100.0000	0193.5	063.2	005.6	000.6301	0062.9	045.0	40.19
169.0	100.0000	0193.6	063.2	004.3	000.6301	0062.1	044.7	40.22
170.0	100.0000	0193.9	063.2	002.9	000.6301	0062.1	044.4	40.32
171.0	100.0000	0193.7	063.2	001.5	000.6301	0062.2	044.2	40.39
172.0	100.0000	0193.4	063.2	000.1	000.6301	0061.9	044.0	40.41
173.0	100.0000	0193.4	063.2	358.6	000.6157	0062.5	043.9	40.43
174.0	100.0000	0193.5	063.2	357.2	000.6007	0063.1	043.8	40.42
175.0	100.0000	0193.5	063.2	355.8	000.5858	0064.0	043.8	40.42
176.0	100.0000	0194.1	063.2	354.3	000.5710	0064.4	043.7	40.36
177.0	100.0000	0194.5	063.3	352.9	000.5564	0064.9	043.7	40.30
178.0	100.0000	0194.7	063.3	351.4	000.5421	0065.1	043.8	40.18
179.0	100.0000	0194.6	063.3	350.0	000.5281	0064.2	044.0	39.91
180.0	100.0000	0194.9	063.3	348.6	000.5166	0063.9	044.1	39.73
181.0	100.0000	0195.7	063.4	347.2	000.5053	0063.6	044.3	39.54
182.0	100.0000	0196.5	063.5	345.8	000.4942	0062.2	044.5	39.21
183.0	100.0000	0197.2	063.5	344.4	000.4834	0061.5	044.8	38.94
184.0	100.0000	0198.1	063.6	343.0	000.4728	0060.4	045.1	38.63
185.0	100.0000	0198.8	063.7	341.7	000.4626	0060.2	045.5	38.39
186.0	100.0000	0199.3	063.7	340.4	000.4528	0060.4	045.9	38.18
187.0	100.0000	0199.9	063.8	339.1	000.4368	0060.9	046.3	37.93
188.0	100.0000	0200.7	063.9	337.9	000.4186	0061.6	046.8	37.66
189.0	100.0000	0201.6	064.0	336.7	000.4012	0062.1	047.3	37.36
190.0	100.0000	0202.4	064.0	335.5	000.3848	0062.9	047.9	37.08
191.0	100.0000	0202.5	064.0	334.4	000.3699	0063.4	048.5	36.76
192.0	100.0000	0202.4	064.0	333.4	000.3560	0064.0	049.2	36.43
193.0	100.0000	0202.3	064.0	332.4	000.3429	0064.4	049.9	36.08
194.0	100.0000	0202.3	064.0	331.4	000.3306	0064.4	050.7	35.68
195.0	100.0000	0202.4	064.0	330.5	000.3189	0064.6	051.4	35.29
196.0	100.0000	0202.3	064.0	329.6	000.3116	0064.6	052.2	34.93
197.0	100.0000	0202.3	064.0	328.8	000.3096	0064.5	053.0	34.63
198.0	100.0000	0202.4	064.0	328.0	000.3076	0064.6	053.9	34.33

Exhibit 18.2(b) - Protection to WBLV - Twin Lake, MI

FMOver Analysis

Page # 6

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
199.0	100.0000	0202.4	064.0	327.3	000.3058	0064.4	054.8	34.00
200.0	100.0000	0202.5	064.0	326.6	000.3040	0064.1	055.6	33.67
201.0	100.0000	0202.3	064.0	325.9	000.3024	0064.1	056.6	33.35
202.0	100.0000	0202.2	064.0	325.3	000.3009	0064.5	057.5	33.07
203.0	100.0000	0202.0	064.0	324.7	000.2995	0064.9	058.4	32.78
204.0	100.0000	0201.7	064.0	324.2	000.2982	0065.2	059.4	32.48
205.0	100.0000	0201.8	064.0	323.7	000.2969	0065.5	060.4	32.20
206.0	100.0000	0202.1	064.0	323.2	000.2956	0065.6	061.4	31.90
207.0	100.0000	0202.3	064.0	322.7	000.2945	0065.7	062.3	31.60
208.0	100.0000	0203.3	064.1	322.2	000.2932	0065.8	063.3	31.31
209.0	100.0000	0204.0	064.2	321.7	000.2921	0066.0	064.3	31.04
210.0	100.0000	0204.3	064.2	321.3	000.2912	0066.2	065.3	30.76
211.0	100.0000	0204.6	064.2	321.0	000.2903	0066.3	066.4	30.48
212.0	100.0000	0204.6	064.2	320.6	000.2895	0066.5	067.4	30.19
213.0	100.0000	0205.2	064.3	320.3	000.2887	0066.6	068.5	29.91
214.0	100.0000	0206.6	064.4	319.9	000.2884	0066.8	069.5	29.65
215.0	100.0000	0207.9	064.5	319.6	000.2905	0067.0	070.6	29.42
216.0	100.0000	0208.5	064.6	319.3	000.2922	0067.0	071.7	29.16
217.0	100.0000	0208.5	064.6	319.1	000.2934	0067.0	072.8	28.89
218.0	100.0000	0208.5	064.6	319.0	000.2945	0067.1	073.9	28.62
219.0	100.0000	0209.0	064.6	318.8	000.2957	0067.3	075.0	28.37
220.0	100.0000	0209.5	064.7	318.6	000.2968	0067.5	076.1	28.10
221.0	100.0000	0210.0	064.7	318.5	000.2978	0067.6	077.2	27.84
222.0	100.0000	0210.5	064.8	318.3	000.2986	0067.6	078.3	27.57
223.0	100.0000	0210.9	064.8	318.2	000.2993	0067.7	079.4	27.29
224.0	100.0000	0211.2	064.9	318.1	000.2998	0067.7	080.6	27.01
225.0	100.0000	0211.6	064.9	318.0	000.3003	0067.7	081.7	26.73
226.0	100.0000	0211.9	064.9	318.0	000.3006	0067.7	082.8	26.45
227.0	100.0000	0212.7	065.0	317.9	000.3011	0067.7	084.0	26.16
228.0	100.0000	0213.8	065.1	317.9	000.3016	0067.7	085.1	25.88
229.0	100.0000	0216.0	065.3	317.7	000.3023	0067.7	086.2	25.59
230.0	100.0000	0218.7	065.5	317.6	000.3032	0067.7	087.4	25.31
231.0	100.0000	0219.8	065.7	317.6	000.3034	0067.6	088.5	25.02
232.0	100.0000	0220.1	065.7	317.6	000.3032	0067.7	089.7	24.73
233.0	100.0000	0220.8	065.7	317.6	000.3031	0067.7	090.8	24.45
234.0	100.0000	0221.3	065.8	317.7	000.3028	0067.7	092.0	24.16

Exhibit 18.3(a)

WXPZ Protection to WTHS
Clyde Township, MI

Protection to WTHS - Holland, MI

FMCommander Single Allocation Study - 11-05-2013 - USGS 03 SEC
WXPZ's Overlaps (In= 1.38 km, Out= 0.4 km)

WXPZ CH 211 A DA
Lat= 42 35 29.0, Lng= 85 56 07.0
5.0 kW 58.7 M HAAT, 268 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WTHS CH 210 A DA BLED19850425LP
Lat= 42 47 16.0, Lng= 86 06 02.0
1.0 kW 47 M HAAT, 245 M COR
Prot.= 60 dBu, Intef.= 54 dBu

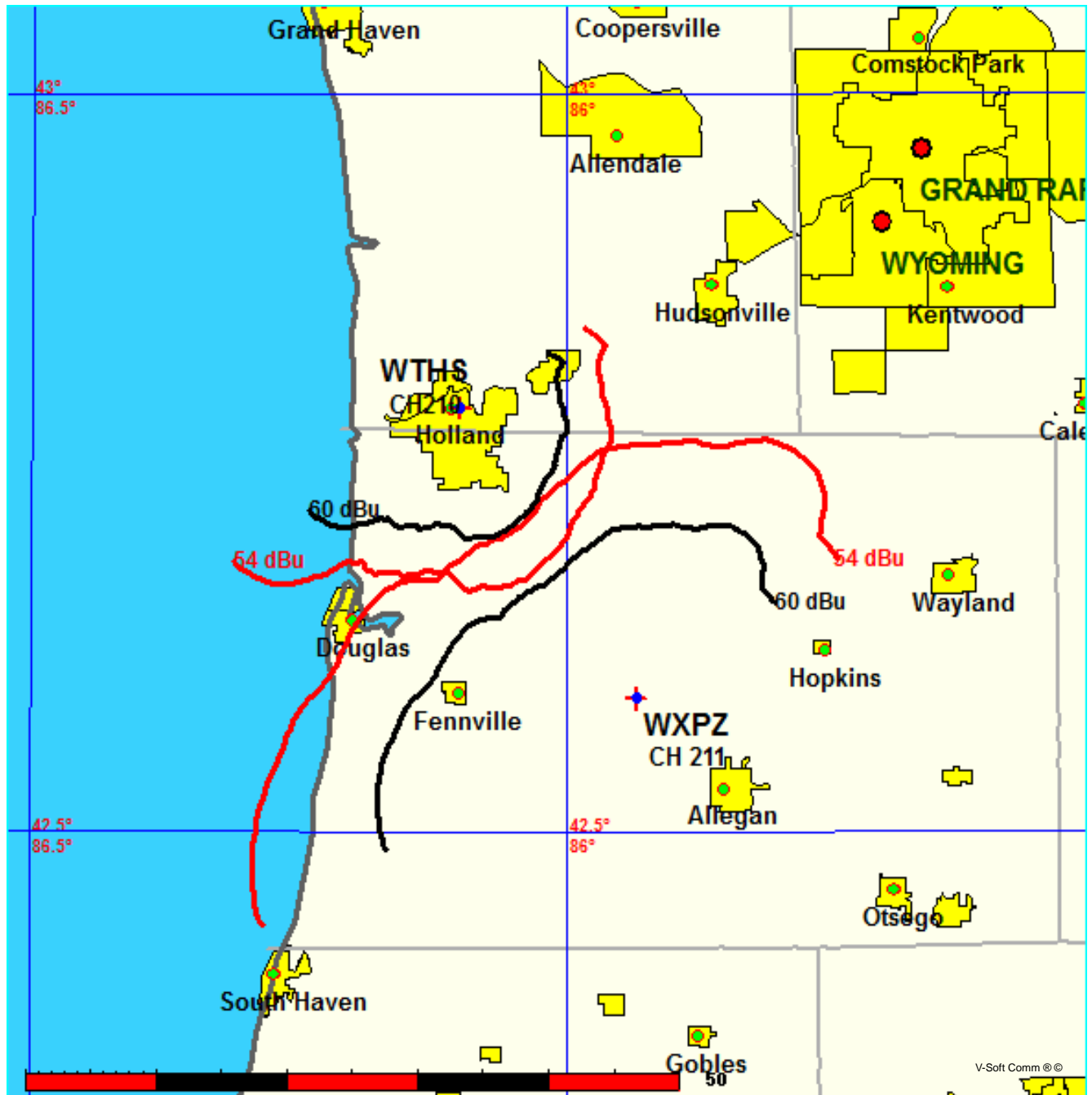


Exhibit 18.3(b) - Protection to WTHS - Holland, MI

11-05-2013

Terrain Data: USGS 03 SEC

FMOVer Analysis

WXPZ

WTHS BLED19850425LP

Channel = 211A

Max ERP = 5 kW

RCAMSL = 268 M

N. Lat. 42 35 29.0

W. Lng. 85 56 07.0

Protected

60 dBu

Channel = 210A

Max ERP = 1 kW

RCAMSL = 245 M

N. Lat. 42 47 16.0

W. Lng. 86 06 02.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
268.0	001.5591	0071.8	017.5	189.9	000.6080	0028.7	022.8	44.55	
269.0	001.4835	0071.5	017.2	189.4	000.6064	0028.9	022.5	44.79	
270.0	001.4098	0070.7	016.8	188.6	000.6040	0029.1	022.1	45.04	
271.0	001.3525	0069.2	016.4	187.7	000.6013	0028.9	021.8	45.27	
272.0	001.2964	0068.4	016.1	187.0	000.5990	0028.9	021.4	45.50	
273.0	001.2415	0068.3	015.9	186.5	000.5974	0029.0	021.2	45.71	
274.0	001.1878	0068.5	015.8	186.1	000.5961	0029.1	020.9	45.92	
275.0	001.1353	0068.8	015.6	185.6	000.5949	0029.2	020.6	46.13	
276.0	001.0839	0069.3	015.5	185.2	000.5936	0029.6	020.3	46.33	
277.0	001.0338	0070.1	015.4	184.9	000.5927	0029.8	020.1	46.54	
278.0	000.9848	0071.6	015.3	184.8	000.5923	0029.9	019.8	46.75	
279.0	000.9370	0072.8	015.3	184.6	000.5915	0030.0	019.5	46.95	
280.0	000.8904	0073.4	015.1	184.1	000.5900	0030.3	019.3	47.23	
281.0	000.8541	0074.3	015.0	183.8	000.5891	0030.5	019.0	47.47	
282.0	000.8185	0075.3	015.0	183.5	000.5882	0030.8	018.8	47.74	
283.0	000.7837	0076.3	014.9	183.1	000.5872	0031.1	018.5	48.01	
284.0	000.7496	0077.2	014.8	182.7	000.5860	0031.7	018.3	48.36	
285.0	000.7163	0077.9	014.7	182.3	000.5845	0032.6	018.0	48.75	
286.0	000.6838	0078.5	014.6	181.7	000.5828	0033.2	017.8	49.09	
287.0	000.6520	0079.4	014.5	181.2	000.5812	0034.1	017.6	49.48	
288.0	000.6209	0080.0	014.4	180.6	000.5794	0034.7	017.4	49.79	
289.0	000.5906	0080.5	014.3	179.9	000.5773	0035.1	017.2	50.04	
290.0	000.5611	0081.3	014.2	179.3	000.5754	0035.8	017.0	50.35	
291.0	000.5382	0082.3	014.1	178.8	000.5739	0037.0	016.8	50.82	
292.0	000.5158	0083.3	014.0	178.3	000.5723	0038.1	016.6	51.23	
293.0	000.4939	0083.4	013.9	177.5	000.5699	0038.5	016.4	51.44	
294.0	000.4725	0082.8	013.7	176.5	000.5669	0038.6	016.3	51.57	
295.0	000.4515	0082.3	013.5	175.5	000.5639	0038.3	016.2	51.57	
296.0	000.4310	0081.5	013.3	174.4	000.5607	0037.8	016.1	51.50	
297.0	000.4110	0080.1	013.0	173.2	000.5570	0037.6	016.0	51.48	
298.0	000.3914	0078.4	012.8	171.9	000.5532	0038.0	016.0	51.56	
299.0	000.3724	0075.1	012.4	170.3	000.5485	0038.8	016.1	51.66	
300.0	000.3538	0072.4	012.0	168.9	000.5442	0039.3	016.1	51.70	
301.0	000.3538	0072.0	012.0	168.3	000.5425	0039.8	016.0	51.90	
302.0	000.3538	0072.8	012.0	167.9	000.5415	0040.0	015.8	52.11	
303.0	000.3538	0072.3	012.0	167.3	000.5396	0039.9	015.7	52.19	

Exhibit 18.3(b) - Protection to WTHS - Holland, MI

FMOver Analysis

Page # 2

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
304.0	000.3538	0071.2	011.9	166.5	000.5374	0039.9	015.6	52.26
305.0	000.3538	0070.5	011.9	165.8	000.5354	0040.2	015.5	52.38
306.0	000.3538	0069.7	011.8	165.1	000.5332	0040.5	015.4	52.52
307.0	000.3538	0069.1	011.8	164.4	000.5312	0040.8	015.3	52.65
308.0	000.3538	0068.0	011.7	163.6	000.5289	0040.6	015.3	52.64
309.0	000.3538	0067.8	011.7	162.9	000.5269	0040.5	015.2	52.68
310.0	000.3538	0067.6	011.7	162.3	000.5250	0040.5	015.1	52.75
311.0	000.3469	0067.7	011.6	161.5	000.5228	0040.3	015.0	52.62
312.0	000.3401	0067.9	011.6	160.8	000.5206	0040.2	014.9	52.66
313.0	000.3333	0067.9	011.5	160.0	000.5183	0040.7	014.9	52.79
314.0	000.3267	0067.9	011.5	159.2	000.5132	0040.9	014.8	52.84
315.0	000.3200	0067.3	011.4	158.3	000.5077	0041.1	014.9	52.83
316.0	000.3135	0067.2	011.3	157.5	000.5026	0041.1	014.8	52.80
317.0	000.3070	0067.5	011.3	156.8	000.4978	0040.5	014.8	52.68
318.0	000.3006	0067.7	011.2	156.0	000.4929	0040.4	014.8	52.63
319.0	000.2943	0067.1	011.1	155.2	000.4876	0040.3	014.8	52.52
320.0	000.2880	0066.8	011.0	154.4	000.4826	0040.0	014.8	52.39
321.0	000.2904	0066.3	011.0	153.6	000.4780	0039.8	014.8	52.33
322.0	000.2928	0065.9	011.0	152.9	000.4734	0039.8	014.8	52.32
323.0	000.2952	0065.6	011.0	152.2	000.4689	0039.6	014.7	52.28
324.0	000.2977	0065.3	011.0	151.4	000.4644	0039.5	014.7	52.24
325.0	000.3001	0064.7	011.0	150.7	000.4598	0039.3	014.7	52.15
326.0	000.3026	0064.1	011.0	149.9	000.4551	0039.2	014.7	52.08
327.0	000.3050	0064.3	011.0	149.2	000.4502	0039.5	014.7	52.16
328.0	000.3075	0064.6	011.0	148.4	000.4452	0039.7	014.6	52.22
329.0	000.3100	0064.5	011.1	147.7	000.4401	0039.9	014.6	52.23
330.0	000.3125	0064.6	011.1	146.9	000.4351	0040.0	014.6	52.21
331.0	000.3251	0064.5	011.2	146.1	000.4299	0040.0	014.5	52.27
332.0	000.3380	0064.4	011.3	145.3	000.4246	0040.2	014.4	52.36
333.0	000.3511	0064.2	011.4	144.5	000.4192	0040.2	014.4	52.37
334.0	000.3645	0063.7	011.4	143.7	000.4139	0039.8	014.3	52.25
335.0	000.3781	0063.1	011.5	142.8	000.4086	0039.5	014.3	52.16
336.0	000.3920	0062.6	011.5	142.0	000.4033	0039.5	014.3	52.11
337.0	000.4061	0061.9	011.6	141.2	000.3981	0039.4	014.3	52.02
338.0	000.4205	0061.5	011.7	140.3	000.3927	0039.4	014.3	51.98
339.0	000.4351	0061.0	011.7	139.5	000.3859	0039.5	014.3	51.90
340.0	000.4500	0060.6	011.8	138.6	000.3780	0039.0	014.4	51.67
341.0	000.4575	0060.2	011.8	137.9	000.3708	0038.5	014.4	51.40
342.0	000.4651	0060.2	011.8	137.0	000.3633	0038.2	014.5	51.21
343.0	000.4728	0060.4	011.9	136.2	000.3558	0038.0	014.5	51.03
344.0	000.4805	0061.2	012.0	135.3	000.3475	0038.1	014.5	50.94
345.0	000.4883	0061.7	012.1	134.4	000.3396	0038.3	014.5	50.85
346.0	000.4961	0062.5	012.2	133.4	000.3314	0038.6	014.5	50.79
347.0	000.5040	0063.5	012.3	132.4	000.3230	0038.9	014.5	50.73
348.0	000.5120	0063.9	012.4	131.6	000.3157	0038.9	014.6	50.56
349.0	000.5200	0063.9	012.5	130.8	000.3091	0038.9	014.7	50.37
350.0	000.5281	0064.2	012.5	130.0	000.3023	0039.1	014.8	50.22
351.0	000.5379	0065.0	012.6	129.0	000.2950	0039.7	014.8	50.17
352.0	000.5478	0065.2	012.7	128.2	000.2888	0040.1	014.9	50.07
353.0	000.5578	0064.9	012.7	127.5	000.2837	0040.4	015.1	50.05
354.0	000.5678	0064.5	012.8	126.9	000.2790	0041.0	015.2	49.98

Exhibit 18.3(b) - Protection to WTHS - Holland, MI

FMOver Analysis

Page # 3

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
355.0	000.5780	0064.1	012.8	126.3	000.2744	0041.7	015.4	49.94
356.0	000.5882	0063.9	012.8	125.6	000.2698	0041.9	015.5	49.80
357.0	000.5986	0063.3	012.8	125.1	000.2660	0042.0	015.7	49.60
358.0	000.6090	0062.9	012.8	124.6	000.2622	0042.1	015.9	49.42
359.0	000.6195	0062.3	012.8	124.1	000.2586	0042.3	016.0	49.24
000.0	000.6301	0061.9	012.9	123.6	000.2552	0042.5	016.2	49.07
001.0	000.6301	0062.2	012.9	123.1	000.2516	0042.7	016.4	48.92
002.0	000.6301	0062.0	012.9	122.7	000.2491	0043.0	016.6	48.77
003.0	000.6301	0062.2	012.9	122.3	000.2461	0043.3	016.8	48.62
004.0	000.6301	0062.1	012.9	121.9	000.2437	0043.6	017.0	48.46
005.0	000.6301	0062.4	012.9	121.5	000.2408	0043.8	017.2	48.30
006.0	000.6301	0063.4	013.0	121.0	000.2369	0043.9	017.3	48.09
007.0	000.6301	0064.0	013.0	120.5	000.2337	0043.6	017.5	47.82
008.0	000.6301	0064.3	013.1	120.1	000.2311	0043.4	017.7	47.55
009.0	000.6301	0064.4	013.1	119.8	000.2296	0043.3	017.9	47.32
010.0	000.6301	0064.8	013.1	119.5	000.2278	0043.3	018.1	47.12
011.0	000.6458	0065.3	013.2	118.9	000.2249	0043.4	018.3	46.95
012.0	000.6618	0065.5	013.3	118.4	000.2226	0043.3	018.5	46.71
013.0	000.6779	0064.9	013.3	118.1	000.2214	0043.3	018.7	46.50
014.0	000.6942	0063.4	013.3	118.1	000.2213	0043.3	018.9	46.29
015.0	000.7106	0062.6	013.3	117.9	000.2206	0043.2	019.2	46.09
016.0	000.7273	0062.1	013.3	117.7	000.2195	0043.3	019.4	45.89
017.0	000.7442	0061.6	013.3	117.5	000.2185	0043.3	019.6	45.70
018.0	000.7613	0061.4	013.4	117.2	000.2173	0043.4	019.8	45.52
019.0	000.7785	0061.1	013.4	117.0	000.2162	0043.5	020.1	45.33
020.0	000.7960	0060.8	013.5	116.8	000.2153	0043.6	020.3	45.14
021.0	000.8376	0061.0	013.7	116.2	000.2125	0043.6	020.5	44.92
022.0	000.8803	0060.9	013.8	115.7	000.2103	0043.7	020.7	44.71
023.0	000.9241	0061.1	014.0	115.2	000.2078	0043.8	021.0	44.50
024.0	000.9689	0060.9	014.1	114.8	000.2060	0043.9	021.2	44.28
025.0	001.0148	0060.5	014.3	114.4	000.2045	0044.0	021.5	44.07
026.0	001.0617	0060.1	014.4	114.1	000.2032	0044.1	021.7	43.87
027.0	001.1097	0060.4	014.6	113.7	000.2010	0044.4	022.0	43.69

Exhibit 18.3(b) - Protection to WTHS - Holland, MI

11-05-2013 Terrain Data: USGS 03 SEC FMOver Analysis

WTHS BLED19850425LP

WXPZ

Channel = 210A

Max ERP = 1 kW

RCAMSL = 245 M

N. Lat. 42 47 16.0

W. Lng. 86 06 02.0

Protected

60 dBu

Channel = 211A

Max ERP = 5 kW

RCAMSL = 268 M

N. Lat. 42 35 29.0

W. Lng. 85 56 07.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
088.0	000.1444	0047.6	007.8	345.5	000.4921	0062.0	022.8	49.87	
089.0	000.1444	0048.0	007.8	345.5	000.4922	0062.0	022.7	49.98	
090.0	000.1444	0048.4	007.8	345.5	000.4922	0062.1	022.5	50.09	
091.0	000.1455	0048.7	007.9	345.5	000.4923	0062.1	022.4	50.20	
092.0	000.1467	0048.7	007.9	345.5	000.4919	0062.0	022.3	50.30	
093.0	000.1478	0048.6	007.9	345.4	000.4913	0062.0	022.1	50.39	
094.0	000.1490	0048.8	007.9	345.4	000.4911	0061.9	022.0	50.50	
095.0	000.1502	0049.5	008.0	345.4	000.4915	0062.0	021.8	50.63	
096.0	000.1513	0050.0	008.1	345.5	000.4920	0062.0	021.7	50.77	
097.0	000.1525	0050.8	008.2	345.6	000.4927	0062.1	021.5	50.91	
098.0	000.1537	0051.1	008.2	345.5	000.4925	0062.1	021.4	51.03	
099.0	000.1548	0051.5	008.3	345.5	000.4924	0062.1	021.2	51.15	
100.0	000.1560	0051.6	008.3	345.4	000.4917	0062.0	021.1	51.25	
101.0	000.1588	0051.6	008.4	345.4	000.4912	0062.0	020.9	51.36	
102.0	000.1616	0051.5	008.4	345.3	000.4903	0061.8	020.8	51.46	
103.0	000.1644	0051.0	008.4	345.0	000.4886	0061.7	020.6	51.53	
104.0	000.1673	0049.7	008.3	344.7	000.4856	0061.6	020.6	51.56	
105.0	000.1702	0048.1	008.2	344.2	000.4818	0061.3	020.5	51.54	
106.0	000.1731	0047.0	008.1	343.8	000.4787	0060.9	020.4	51.52	
107.0	000.1760	0046.4	008.1	343.5	000.4765	0060.6	020.3	51.56	
108.0	000.1789	0046.1	008.1	343.3	000.4750	0060.5	020.2	51.63	
109.0	000.1819	0046.0	008.1	343.1	000.4737	0060.4	020.1	51.71	
110.0	000.1849	0045.9	008.1	342.9	000.4724	0060.4	019.9	51.80	
111.0	000.1892	0045.7	008.2	342.8	000.4710	0060.3	019.8	51.89	
112.0	000.1936	0045.4	008.2	342.5	000.4693	0060.3	019.7	51.97	
113.0	000.1980	0044.8	008.2	342.2	000.4669	0060.3	019.6	52.03	
114.0	000.2025	0044.2	008.2	341.9	000.4646	0060.2	019.5	52.08	
115.0	000.2070	0043.9	008.2	341.7	000.4627	0060.2	019.4	52.16	
116.0	000.2116	0043.6	008.2	341.4	000.4608	0060.2	019.2	52.24	
117.0	000.2162	0043.5	008.2	341.2	000.4591	0060.2	019.1	52.32	
118.0	000.2209	0043.2	008.3	340.9	000.4570	0060.2	019.0	52.41	
119.0	000.2256	0043.4	008.3	340.7	000.4556	0060.3	018.9	52.53	
120.0	000.2304	0043.3	008.4	340.5	000.4536	0060.4	018.7	52.62	

Exhibit 18.3(b) - Protection to WTHS - Holland, MI

FMOver Analysis

Page # 5

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
121.0	000.2372	0043.9	008.5	340.4	000.4529	0060.4	018.5	52.79
122.0	000.2440	0043.6	008.5	340.1	000.4507	0060.5	018.4	52.88
123.0	000.2510	0042.8	008.5	339.7	000.4453	0060.6	018.3	52.90
124.0	000.2581	0042.3	008.5	339.3	000.4399	0060.8	018.3	52.95
125.0	000.2652	0042.0	008.5	339.0	000.4350	0061.0	018.1	53.02
126.0	000.2725	0041.8	008.6	338.7	000.4302	0061.2	018.0	53.09
127.0	000.2798	0040.8	008.5	338.2	000.4229	0061.4	018.0	53.07
128.0	000.2873	0040.2	008.5	337.7	000.4166	0061.6	017.9	53.08
129.0	000.2948	0039.7	008.5	337.3	000.4107	0061.7	017.9	53.10
130.0	000.3025	0039.1	008.5	336.9	000.4045	0062.0	017.8	53.11
131.0	000.3108	0038.9	008.5	336.5	000.3991	0062.2	017.7	53.16
132.0	000.3192	0038.9	008.6	336.2	000.3941	0062.5	017.6	53.25
133.0	000.3278	0038.7	008.6	335.7	000.3885	0062.7	017.5	53.30
134.0	000.3364	0038.4	008.7	335.3	000.3825	0062.9	017.4	53.32
135.0	000.3452	0038.1	008.7	334.9	000.3765	0063.1	017.3	53.35
136.0	000.3540	0038.0	008.7	334.5	000.3706	0063.4	017.2	53.39
137.0	000.3630	0038.2	008.8	334.1	000.3652	0063.6	017.1	53.47
138.0	000.3721	0038.5	008.9	333.6	000.3597	0063.9	017.0	53.55
139.0	000.3813	0039.3	009.1	333.3	000.3546	0064.1	016.8	53.66
140.0	000.3906	0039.4	009.1	332.8	000.3483	0064.3	016.7	53.70
141.0	000.3969	0039.3	009.2	332.3	000.3416	0064.4	016.6	53.69
142.0	000.4032	0039.5	009.2	331.8	000.3349	0064.4	016.5	53.67
143.0	000.4096	0039.6	009.3	331.2	000.3282	0064.4	016.5	53.66
144.0	000.4160	0039.9	009.3	330.7	000.3214	0064.5	016.4	53.66
145.0	000.4225	0040.3	009.4	330.2	000.3146	0064.6	016.3	53.66
146.0	000.4290	0040.0	009.4	329.6	000.3115	0064.6	016.3	53.64
147.0	000.4356	0040.0	009.5	329.0	000.3100	0064.5	016.2	53.64
148.0	000.4422	0039.9	009.5	328.4	000.3086	0064.6	016.2	53.65
149.0	000.4489	0039.6	009.5	327.8	000.3071	0064.5	016.2	53.63
150.0	000.4556	0039.2	009.5	327.3	000.3057	0064.4	016.2	53.57
151.0	000.4617	0039.4	009.5	326.7	000.3042	0064.1	016.2	53.55
152.0	000.4679	0039.6	009.6	326.1	000.3027	0064.1	016.1	53.56
153.0	000.4740	0039.8	009.6	325.4	000.3012	0064.4	016.1	53.61
154.0	000.4802	0039.9	009.7	324.8	000.2997	0064.8	016.1	53.67
155.0	000.4865	0040.3	009.8	324.2	000.2981	0065.2	016.0	53.73
156.0	000.4928	0040.4	009.8	323.5	000.2966	0065.5	016.0	53.75
157.0	000.4991	0040.7	009.9	322.9	000.2950	0065.6	016.0	53.76
158.0	000.5055	0041.1	010.0	322.2	000.2933	0065.8	015.9	53.79
159.0	000.5119	0040.9	010.0	321.6	000.2919	0066.0	016.0	53.76
160.0	000.5184	0040.7	010.0	321.0	000.2904	0066.3	016.0	53.72
161.0	000.5213	0040.2	009.9	320.5	000.2892	0066.5	016.1	53.64
162.0	000.5242	0040.4	010.0	319.9	000.2888	0066.9	016.2	53.65
163.0	000.5271	0040.5	010.0	319.3	000.2926	0067.0	016.2	53.69
164.0	000.5300	0040.8	010.0	318.6	000.2966	0067.4	016.2	53.77
165.0	000.5329	0040.6	010.0	318.1	000.3000	0067.7	016.3	53.78
166.0	000.5358	0040.1	010.0	317.6	000.3030	0067.7	016.5	53.72
167.0	000.5388	0039.9	010.0	317.1	000.3062	0067.5	016.6	53.66
168.0	000.5417	0039.9	010.0	316.6	000.3097	0067.3	016.6	53.62
169.0	000.5446	0039.3	009.9	316.2	000.3121	0067.2	016.8	53.51
170.0	000.5476	0039.0	009.9	315.7	000.3152	0067.2	016.9	53.45
171.0	000.5506	0038.4	009.8	315.4	000.3174	0067.2	017.0	53.35

Exhibit 18.3(b) - Protection to WTHS - Holland, MI

FMOver Analysis

Page # 6

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
172.0	000.5535	0037.9	009.8	315.0	000.3197	0067.2	017.2	53.26
173.0	000.5565	0037.6	009.8	314.6	000.3224	0067.4	017.3	53.21
174.0	000.5595	0037.6	009.8	314.2	000.3254	0067.7	017.4	53.21
175.0	000.5625	0038.2	009.9	313.6	000.3296	0068.1	017.5	53.27
176.0	000.5655	0038.4	009.9	313.1	000.3330	0067.9	017.5	53.22
177.0	000.5685	0038.6	009.9	312.6	000.3363	0067.8	017.6	53.17
178.0	000.5715	0038.2	009.9	312.3	000.3383	0067.9	017.8	53.07
179.0	000.5746	0036.4	009.7	312.4	000.3374	0067.8	018.1	52.82
180.0	000.5776	0035.0	009.5	312.4	000.3371	0067.8	018.3	52.62
181.0	000.5806	0034.3	009.4	312.3	000.3382	0067.9	018.5	52.49
182.0	000.5837	0032.9	009.2	312.4	000.3377	0067.8	018.7	52.28
183.0	000.5868	0031.3	009.1	312.5	000.3366	0067.8	019.0	52.05
184.0	000.5898	0030.4	008.9	312.5	000.3368	0067.8	019.2	51.89
185.0	000.5929	0029.8	008.9	312.3	000.3381	0067.9	019.3	51.79
186.0	000.5960	0029.1	008.9	312.0	000.3402	0067.9	019.4	51.72
187.0	000.5991	0028.9	008.9	311.7	000.3422	0067.8	019.5	51.64
188.0	000.6022	0028.9	008.9	311.4	000.3441	0067.7	019.7	51.55
189.0	000.6053	0029.2	008.9	311.1	000.3460	0067.7	019.8	51.47
190.0	000.6084	0028.7	009.0	310.9	000.3478	0067.7	019.9	51.39
191.0	000.6115	0029.0	009.0	310.6	000.3495	0067.8	020.0	51.31
192.0	000.6147	0030.0	009.0	310.4	000.3513	0067.7	020.2	51.22
193.0	000.6178	0031.4	009.2	309.7	000.3538	0067.6	020.2	51.19
194.0	000.6209	0032.1	009.3	309.2	000.3538	0067.7	020.3	51.13
195.0	000.6241	0032.5	009.4	308.8	000.3538	0067.9	020.4	51.05
196.0	000.6273	0032.3	009.3	308.7	000.3538	0067.9	020.6	50.93
197.0	000.6304	0033.0	009.4	308.2	000.3538	0067.9	020.7	50.84
198.0	000.6336	0034.0	009.6	307.7	000.3538	0068.3	020.8	50.80
199.0	000.6368	0034.5	009.7	307.4	000.3538	0068.7	020.9	50.73
200.0	000.6400	0033.5	009.5	307.5	000.3538	0068.4	021.1	50.55
201.0	000.6440	0033.4	009.6	307.4	000.3538	0068.6	021.3	50.45
202.0	000.6480	0033.6	009.6	307.2	000.3538	0068.9	021.5	50.36
203.0	000.6521	0033.9	009.6	306.9	000.3538	0069.2	021.6	50.28
204.0	000.6561	0034.5	009.7	306.6	000.3538	0069.5	021.7	50.20
205.0	000.6602	0035.3	009.9	306.2	000.3538	0069.6	021.9	50.10
206.0	000.6642	0036.1	010.0	305.8	000.3538	0069.9	022.0	50.02
207.0	000.6683	0036.8	010.1	305.4	000.3538	0070.2	022.2	49.94

WXPZ Protection to WYBA
Clyde Township, MI

Exhibit 18.4(a)

Protection to WYBA - Coldwater, MI

FMCommander Single Allocation Study - 11-05-2013 - USGS 03 SEC
WXPZ's Overlaps (In= 0.99 km, Out= 18.92 km)

WXPZ CH 211 A DA
Lat= 42 35 29.0, Lng= 85 56 07.0
5.0 kW 58.7 M HAAT, 268 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WYBA CH 211 B DA BLED20111114AXC
Lat= 42 08 41.0, Lng= 85 12 34.0
32.0 kW 77 M HAAT, 359 M COR
Prot.= 60 dBu, Intef.= 40 dBu

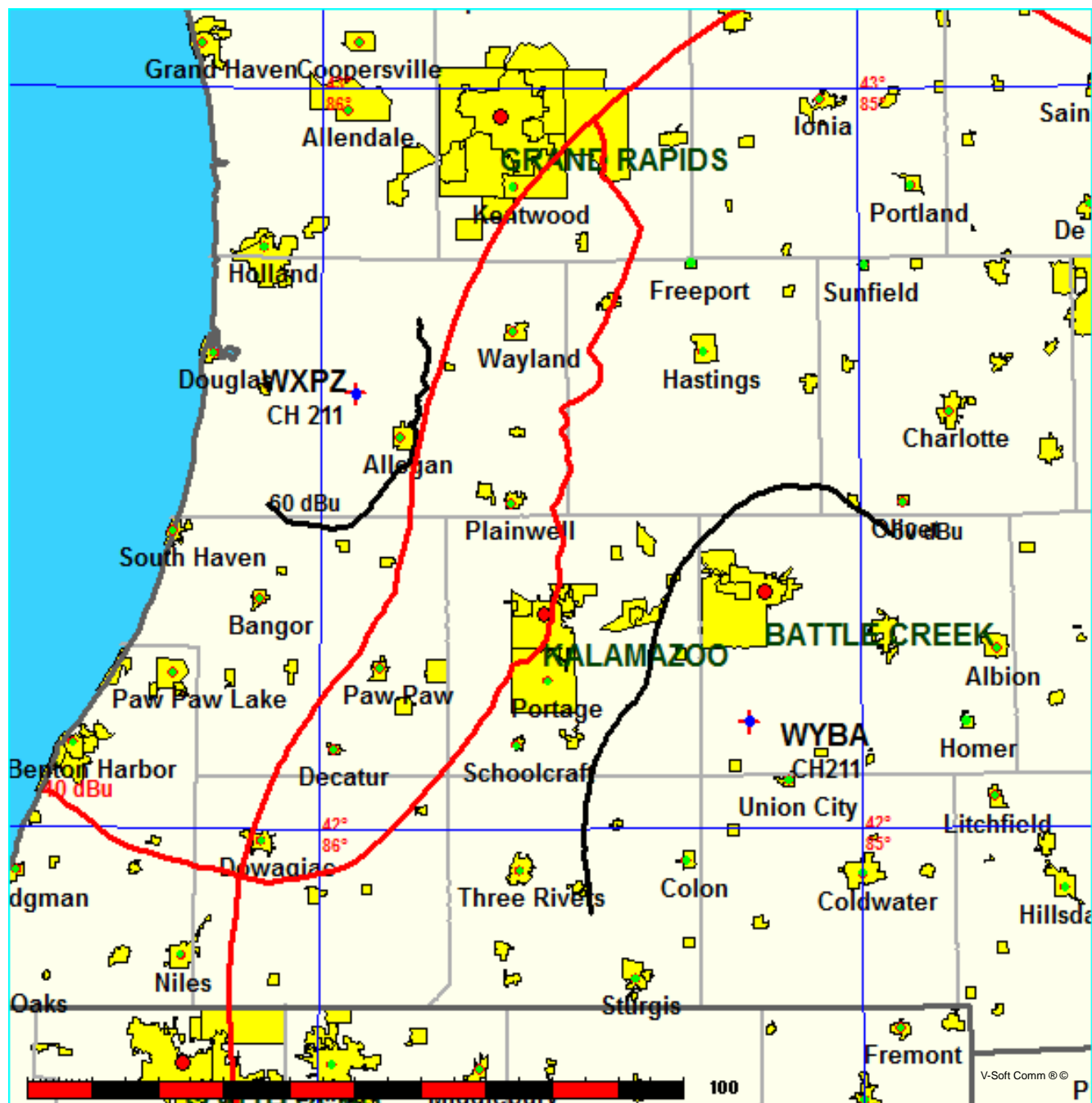


Exhibit 18.4(b) - Protection to WYBA - Coldwater, MI

11-05-2013

Terrain Data: USGS 03 SEC

FMOver Analysis

WXPZ

WYBA BLED20111114AXC

Channel = 211A
Max ERP = 5 kW
RCAMSL = 268 M
N. Lat. 42 35 29.0
W. Lng. 85 56 07.0
Protected
60 dBu

Channel = 211B
Max ERP = 32 kW
RCAMSL = 359 M
N. Lat. 42 08 41.0
W. Lng. 85 12 34.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
070.0	001.5848	0025.2	011.4	317.8	003.4339	0063.5	072.5	39.42	
071.0	001.5202	0024.0	011.2	317.7	003.4130	0063.5	072.4	39.43	
072.0	001.4569	0024.0	011.1	317.5	003.3916	0063.5	072.2	39.44	
073.0	001.3950	0023.8	011.0	317.4	003.3697	0063.6	072.1	39.44	
074.0	001.3344	0023.6	010.9	317.2	003.3479	0063.6	072.0	39.45	
075.0	001.2751	0023.3	010.8	317.1	003.3256	0063.7	071.9	39.45	
076.0	001.2172	0023.6	010.7	316.9	003.3031	0063.7	071.8	39.46	
077.0	001.1607	0025.5	010.5	316.7	003.2801	0063.8	071.7	39.46	
078.0	001.1054	0027.4	010.4	316.6	003.2571	0063.9	071.6	39.45	
079.0	001.0516	0029.1	010.3	316.4	003.2339	0063.9	071.5	39.45	
080.0	000.9990	0030.6	010.2	316.3	003.2186	0064.0	071.4	39.46	
081.0	000.9583	0032.3	010.4	316.3	003.2190	0064.0	071.2	39.52	
082.0	000.9185	0033.4	010.4	316.3	003.2115	0064.0	071.0	39.56	
083.0	000.8795	0034.9	010.5	316.2	003.2087	0064.0	070.8	39.61	
084.0	000.8413	0036.3	010.6	316.2	003.2033	0064.0	070.6	39.65	
085.0	000.8040	0037.2	010.6	316.1	003.1903	0064.1	070.4	39.67	
086.0	000.7675	0038.2	010.6	316.0	003.1787	0064.1	070.3	39.70	
087.0	000.7319	0038.9	010.6	315.9	003.1616	0064.1	070.1	39.71	
088.0	000.6971	0039.5	010.6	315.8	003.1439	0064.2	070.0	39.72	
089.0	000.6632	0039.3	010.4	315.6	003.1166	0064.3	070.0	39.70	
090.0	000.6301	0038.5	010.2	315.3	003.0832	0064.4	070.0	39.65	
091.0	000.6301	0037.6	010.1	315.2	003.0594	0064.5	070.0	39.63	
092.0	000.6301	0035.6	009.8	314.9	003.0240	0064.6	070.1	39.57	
093.0	000.6301	0033.2	009.5	314.6	002.9859	0064.8	070.2	39.49	
094.0	000.6301	0032.0	009.3	314.5	002.9609	0064.9	070.2	39.45	
095.0	000.6301	0031.6	009.3	314.3	002.9435	0064.9	070.2	39.45	
096.0	000.6301	0032.6	009.4	314.3	002.9381	0064.9	070.0	39.49	
097.0	000.6301	0033.4	009.5	314.2	002.9309	0064.9	069.8	39.53	
098.0	000.6301	0033.6	009.5	314.1	002.9179	0065.0	069.7	39.55	
099.0	000.6301	0033.2	009.5	314.0	002.8994	0065.0	069.6	39.54	
100.0	000.6301	0032.2	009.3	313.8	002.8757	0065.1	069.6	39.50	
101.0	000.6376	0032.0	009.3	313.7	002.8608	0065.1	069.5	39.50	
102.0	000.6451	0033.5	009.6	313.7	002.8584	0065.1	069.3	39.57	
103.0	000.6527	0033.7	009.6	313.6	002.8456	0065.1	069.1	39.59	
104.0	000.6603	0033.9	009.7	313.5	002.8330	0065.1	069.0	39.61	
105.0	000.6680	0034.3	009.8	313.4	002.8203	0065.2	068.8	39.63	

Exhibit 18.4(b) - Protection to WYBA - Coldwater, MI

FMOver Analysis

Page # 2

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
106.0	000.6756	0034.3	009.8	313.3	002.8054	0065.3	068.7	39.64
107.0	000.6834	0034.1	009.8	313.2	002.7882	0065.3	068.7	39.64
108.0	000.6912	0034.8	009.9	313.1	002.7766	0065.4	068.5	39.67
109.0	000.6990	0035.3	010.0	313.0	002.7633	0065.4	068.3	39.69
110.0	000.7069	0035.5	010.1	312.9	002.7484	0065.5	068.2	39.71
111.0	000.6915	0035.6	010.0	312.7	002.7288	0065.5	068.2	39.69
112.0	000.6764	0036.0	010.0	312.6	002.7106	0065.6	068.1	39.68
113.0	000.6614	0036.6	010.0	312.4	002.6932	0065.7	068.0	39.67
114.0	000.6466	0036.9	010.0	312.3	002.6748	0065.7	068.0	39.66
115.0	000.6319	0037.5	010.1	312.2	002.6573	0065.8	067.9	39.65
116.0	000.6174	0038.2	010.1	312.0	002.6398	0065.8	067.8	39.65
117.0	000.6031	0038.6	010.1	311.9	002.6212	0065.9	067.8	39.63
118.0	000.5889	0039.0	010.1	311.7	002.6026	0066.0	067.8	39.62
119.0	000.5749	0039.5	010.1	311.6	002.5842	0066.0	067.7	39.60
120.0	000.5611	0039.9	010.1	311.5	002.5656	0066.1	067.7	39.59
121.0	000.5611	0040.8	010.2	311.3	002.5491	0066.2	067.5	39.60
122.0	000.5611	0042.8	010.4	311.2	002.5344	0066.3	067.3	39.66
123.0	000.5611	0044.8	010.7	311.1	002.5186	0066.4	067.0	39.71
124.0	000.5611	0046.6	010.9	310.9	002.5013	0066.4	066.7	39.74
125.0	000.5611	0048.0	011.1	310.8	002.4827	0066.4	066.6	39.76
126.0	000.5611	0049.0	011.2	310.6	002.4630	0066.5	066.4	39.77
127.0	000.5611	0049.6	011.3	310.5	002.4425	0066.6	066.3	39.76
128.0	000.5611	0050.1	011.3	310.3	002.4217	0066.7	066.3	39.75
129.0	000.5611	0050.7	011.4	310.1	002.4008	0066.8	066.2	39.74
130.0	000.5611	0051.9	011.5	310.0	002.3806	0066.9	066.1	39.74
131.0	000.5678	0053.4	011.7	309.8	002.3631	0066.9	065.9	39.77
132.0	000.5746	0055.0	011.9	309.6	002.3450	0067.0	065.7	39.79
133.0	000.5814	0056.2	012.1	309.4	002.3265	0067.1	065.5	39.80
134.0	000.5882	0057.2	012.2	309.2	002.3077	0067.2	065.4	39.80
135.0	000.5951	0058.1	012.3	309.0	002.2887	0067.3	065.3	39.80
136.0	000.6020	0058.1	012.4	308.8	002.2704	0067.4	065.3	39.78
137.0	000.6090	0059.3	012.5	308.6	002.2507	0067.6	065.2	39.78
138.0	000.6160	0061.1	012.7	308.4	002.2299	0067.8	065.0	39.80
139.0	000.6230	0063.3	012.9	308.2	002.2082	0068.1	064.9	39.82
140.0	000.6301	0063.9	013.0	307.9	002.1881	0068.2	064.8	39.80
141.0	000.6632	0063.9	013.2	307.7	002.1667	0068.4	064.7	39.80
142.0	000.6971	0063.5	013.3	307.5	002.1459	0068.5	064.7	39.78
143.0	000.7319	0062.5	013.4	307.3	002.1260	0068.6	064.7	39.75
144.0	000.7675	0061.7	013.4	307.1	002.1059	0068.7	064.7	39.72
145.0	000.8040	0060.4	013.5	306.9	002.0872	0068.8	064.7	39.67
146.0	000.8413	0058.9	013.5	306.7	002.0692	0068.9	064.8	39.62
147.0	000.8795	0057.2	013.4	306.5	002.0525	0069.0	064.9	39.56
148.0	000.9185	0055.0	013.3	306.3	002.0386	0069.0	065.1	39.48
149.0	000.9583	0052.6	013.2	306.2	002.0261	0069.1	065.3	39.40
150.0	000.9990	0052.0	013.2	306.0	002.0079	0069.1	065.4	39.35
151.0	001.0516	0051.9	013.4	305.7	001.9864	0069.2	065.3	39.32
152.0	001.1054	0051.5	013.5	305.5	001.9662	0069.3	065.3	39.28
153.0	001.1607	0050.9	013.6	305.3	001.9473	0069.4	065.4	39.23
154.0	001.2172	0050.0	013.6	305.1	001.9301	0069.5	065.5	39.17
155.0	001.2751	0050.1	013.8	304.8	001.9076	0069.6	065.4	39.14
156.0	001.3344	0050.5	014.0	304.6	001.8838	0069.6	065.4	39.10

Exhibit 18.4(b) - Protection to WYBA - Coldwater, MI

FMOver Analysis

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Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
157.0	001.3950	0050.6	014.1	304.3	001.8613	0069.7	065.4	39.05
158.0	001.4569	0050.5	014.3	304.1	001.8399	0069.6	065.4	38.99
159.0	001.5202	0050.3	014.4	303.8	001.8196	0069.5	065.5	38.93
160.0	001.5848	0050.2	014.5	303.6	001.7983	0069.5	065.5	38.86
161.0	001.6681	0050.3	014.7	303.3	001.7740	0069.5	065.5	38.81
162.0	001.7535	0050.0	014.9	303.0	001.7527	0069.6	065.5	38.74
163.0	001.8410	0049.9	015.0	302.8	001.7299	0069.7	065.6	38.68
164.0	001.9307	0050.0	015.3	302.5	001.7055	0069.8	065.6	38.62
165.0	002.0225	0050.0	015.4	302.2	001.6826	0069.9	065.6	38.56
166.0	002.1164	0050.0	015.6	301.9	001.6589	0070.1	065.7	38.50
167.0	002.2125	0050.0	015.8	301.6	001.6352	0070.2	065.7	38.43
168.0	002.3106	0050.4	016.1	301.3	001.6085	0070.4	065.8	38.37
169.0	002.4110	0050.7	016.3	301.0	001.5819	0070.5	065.8	38.29
170.0	002.5134	0051.0	016.6	300.6	001.5563	0070.7	065.9	38.22
171.0	002.6448	0051.2	016.9	300.3	001.5283	0070.8	065.9	38.14
172.0	002.7796	0051.6	017.2	299.9	001.5043	0071.0	065.9	38.06
173.0	002.9177	0052.2	017.5	299.5	001.4940	0071.0	066.0	38.03
174.0	003.0592	0052.5	017.8	299.2	001.4846	0071.1	066.1	37.98
175.0	003.2040	0052.6	018.0	298.8	001.4761	0071.1	066.2	37.92
176.0	003.3522	0053.2	018.4	298.4	001.4661	0071.2	066.3	37.87
177.0	003.5037	0053.5	018.6	298.1	001.4573	0071.2	066.4	37.81
178.0	003.6585	0054.0	018.9	297.7	001.4476	0071.2	066.6	37.75
179.0	003.8168	0055.0	019.3	297.3	001.4368	0071.3	066.7	37.69
180.0	003.9783	0055.5	019.6	297.0	001.4276	0071.3	066.8	37.62
181.0	004.0752	0056.3	019.9	296.6	001.4192	0071.4	067.0	37.54
182.0	004.1733	0056.8	020.1	296.3	001.4119	0071.4	067.3	37.46
183.0	004.2726	0056.8	020.2	296.1	001.4065	0071.5	067.5	37.37
184.0	004.3730	0056.8	020.3	295.9	001.4016	0071.5	067.8	37.28
185.0	004.4746	0056.8	020.4	295.7	001.3964	0071.6	068.1	37.19
186.0	004.5773	0056.5	020.5	295.6	001.3926	0071.6	068.4	37.09
187.0	004.6812	0056.3	020.6	295.4	001.3886	0071.6	068.8	37.00
188.0	004.7863	0056.3	020.7	295.3	001.3842	0071.7	069.1	36.90
189.0	004.8926	0056.5	020.8	295.1	001.3793	0071.7	069.4	36.81

Exhibit 18.4(b) - Protection to WYBA - Coldwater, MI

11-05-2013 Terrain Data: USGS 03 SEC FMOver Analysis

WYBA BLED20111114AXC

WXPZ

Channel = 211B
Max ERP = 32 kW
RCAMSL = 359 M
N. Lat. 42 08 41.0
W. Lng. 85 12 34.0
Protected
60 dBu

Channel = 211A
Max ERP = 5 kW
RCAMSL = 268 M
N. Lat. 42 35 29.0
W. Lng. 85 56 07.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
250.0	005.9720	0081.0	025.6	148.4	000.9358	0053.8	068.5	34.11	
251.0	005.7284	0081.0	025.4	148.2	000.9248	0054.5	068.1	34.21	
252.0	005.4900	0081.4	025.2	147.9	000.9158	0055.2	067.7	34.32	
253.0	005.2566	0081.5	024.9	147.6	000.9045	0056.0	067.4	34.42	
254.0	005.0283	0080.9	024.6	147.3	000.8902	0056.7	067.0	34.49	
255.0	004.8050	0080.1	024.3	146.9	000.8747	0057.5	066.7	34.55	
256.0	004.5868	0080.2	024.0	146.6	000.8623	0057.9	066.4	34.60	
257.0	004.3737	0080.0	023.7	146.2	000.8490	0058.6	066.1	34.66	
258.0	004.1657	0079.5	023.4	145.8	000.8341	0059.1	065.8	34.70	
259.0	003.9627	0079.2	023.1	145.4	000.8199	0059.7	065.6	34.73	
260.0	003.7648	0079.3	022.8	145.1	000.8070	0060.2	065.3	34.77	
261.0	003.6127	0079.2	022.6	144.7	000.7948	0060.7	065.1	34.81	
262.0	003.4637	0078.7	022.3	144.4	000.7808	0061.2	064.8	34.82	
263.0	003.3179	0078.2	022.0	144.0	000.7669	0061.7	064.6	34.84	
264.0	003.1752	0078.1	021.8	143.6	000.7543	0062.1	064.4	34.85	
265.0	003.0356	0077.9	021.5	143.3	000.7411	0062.2	064.2	34.83	
266.0	002.8992	0077.9	021.3	142.9	000.7284	0062.6	064.0	34.84	
267.0	002.7660	0077.4	021.0	142.5	000.7143	0063.1	063.9	34.83	
268.0	002.6358	0077.2	020.7	142.1	000.7009	0063.4	063.7	34.80	
269.0	002.5088	0077.0	020.4	141.7	000.6874	0063.7	063.6	34.78	
270.0	002.3849	0076.4	020.1	141.3	000.6730	0063.9	063.5	34.72	
271.0	002.2881	0075.9	019.8	140.9	000.6600	0064.0	063.4	34.67	
272.0	002.1933	0075.8	019.6	140.5	000.6482	0063.9	063.3	34.62	
273.0	002.1004	0075.6	019.4	140.2	000.6362	0064.0	063.2	34.57	
274.0	002.0096	0075.5	019.1	139.8	000.6289	0063.9	063.1	34.54	
275.0	001.9208	0075.3	018.9	139.5	000.6262	0063.6	063.1	34.52	
276.0	001.8340	0074.8	018.6	139.1	000.6234	0063.3	063.0	34.48	
277.0	001.7492	0074.4	018.3	138.7	000.6207	0062.6	063.0	34.41	
278.0	001.6664	0074.1	018.1	138.3	000.6181	0061.6	063.0	34.33	
279.0	001.5856	0074.2	017.8	137.9	000.6156	0061.0	063.0	34.27	
280.0	001.5068	0074.1	017.6	137.6	000.6130	0060.4	063.0	34.20	
281.0	001.4806	0074.0	017.5	137.3	000.6111	0059.8	062.9	34.18	
282.0	001.4545	0074.0	017.4	137.0	000.6092	0059.3	062.8	34.15	

Exhibit 18.4(b) - Protection to WYBA - Coldwater, MI

FMOver Analysis

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Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
283.0	001.4287	0073.9	017.3	136.8	000.6073	0059.0	062.7	34.14
284.0	001.4031	0073.7	017.2	136.5	000.6053	0058.5	062.6	34.11
285.0	001.3778	0073.3	017.1	136.2	000.6032	0058.2	062.6	34.07
286.0	001.3527	0072.9	016.9	135.9	000.6012	0058.1	062.5	34.06
287.0	001.3278	0072.6	016.8	135.6	000.5992	0058.3	062.5	34.08
288.0	001.3031	0072.7	016.7	135.3	000.5973	0058.3	062.4	34.08
289.0	001.2787	0072.6	016.6	135.0	000.5954	0058.1	062.4	34.06
290.0	001.2545	0072.4	016.5	134.7	000.5934	0057.9	062.4	34.03
291.0	001.2787	0072.4	016.6	134.5	000.5920	0057.7	062.1	34.06
292.0	001.3031	0072.4	016.7	134.3	000.5905	0057.5	061.9	34.09
293.0	001.3278	0072.2	016.7	134.1	000.5889	0057.3	061.8	34.11
294.0	001.3527	0072.0	016.8	133.9	000.5873	0057.1	061.6	34.12
295.0	001.3778	0071.7	016.9	133.6	000.5857	0056.8	061.5	34.13
296.0	001.4031	0071.5	016.9	133.4	000.5840	0056.6	061.3	34.14
297.0	001.4287	0071.3	017.0	133.1	000.5823	0056.3	061.2	34.14
298.0	001.4545	0071.2	017.0	132.9	000.5806	0056.0	061.0	34.15
299.0	001.4806	0071.1	017.1	132.6	000.5789	0055.8	060.9	34.15
300.0	001.5068	0070.9	017.2	132.4	000.5771	0055.4	060.8	34.14
301.0	001.5856	0070.5	017.4	132.1	000.5755	0055.2	060.5	34.17
302.0	001.6664	0070.0	017.5	131.9	000.5738	0054.8	060.3	34.19
303.0	001.7492	0069.6	017.7	131.6	000.5720	0054.5	060.1	34.21
304.0	001.8340	0069.6	017.9	131.4	000.5702	0054.1	059.8	34.23
305.0	001.9208	0069.5	018.1	131.1	000.5684	0053.5	059.5	34.24
306.0	002.0096	0069.1	018.3	130.8	000.5664	0053.1	059.3	34.24
307.0	002.1004	0068.7	018.5	130.5	000.5644	0052.7	059.2	34.23
308.0	002.1933	0068.2	018.6	130.2	000.5624	0052.2	059.0	34.21
309.0	002.2881	0067.3	018.7	129.9	000.5611	0051.7	058.9	34.17
310.0	002.3849	0066.9	018.8	129.6	000.5611	0051.2	058.8	34.16
311.0	002.5088	0066.4	019.0	129.2	000.5611	0050.9	058.6	34.18
312.0	002.6358	0065.8	019.2	128.9	000.5611	0050.6	058.4	34.19
313.0	002.7660	0065.4	019.3	128.6	000.5611	0050.4	058.3	34.21
314.0	002.8992	0065.0	019.5	128.2	000.5611	0050.2	058.1	34.23
315.0	003.0356	0064.6	019.7	127.9	000.5611	0050.0	058.0	34.24
316.0	003.1752	0064.1	019.8	127.5	000.5611	0049.8	057.9	34.26
317.0	003.3179	0063.7	020.0	127.1	000.5611	0049.7	057.8	34.27
318.0	003.4637	0063.5	020.2	126.8	000.5611	0049.6	057.7	34.29
319.0	003.6127	0063.4	020.4	126.4	000.5611	0049.3	057.5	34.30
320.0	003.7648	0063.7	020.6	126.0	000.5611	0049.0	057.4	34.30
321.0	003.9627	0063.8	020.9	125.6	000.5611	0048.5	057.2	34.30
322.0	004.1657	0063.8	021.2	125.1	000.5611	0048.1	057.1	34.29
323.0	004.3737	0063.9	021.4	124.7	000.5611	0047.6	056.9	34.27
324.0	004.5868	0064.1	021.7	124.3	000.5611	0047.0	056.8	34.24
325.0	004.8050	0064.6	022.0	123.8	000.5611	0046.2	056.6	34.18
326.0	005.0283	0065.0	022.3	123.3	000.5611	0045.3	056.5	34.12
327.0	005.2566	0065.1	022.5	122.9	000.5611	0044.5	056.4	34.04
328.0	005.4900	0065.4	022.8	122.4	000.5611	0043.6	056.3	33.94
329.0	005.7284	0065.8	023.1	121.9	000.5611	0042.6	056.3	33.83
330.0	005.9720	0066.8	023.5	121.3	000.5611	0041.4	056.1	33.72
331.0	006.2856	0067.8	023.9	120.8	000.5611	0040.4	055.9	33.63
332.0	006.6073	0068.1	024.2	120.2	000.5611	0040.0	055.9	33.59
333.0	006.9371	0068.2	024.5	119.7	000.5654	0039.8	055.9	33.60

Exhibit 18.4(b) - Protection to WYBA - Coldwater, MI

FMOver Analysis

Page # 6

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBU)
334.0	007.2748	0068.4	024.8	119.2	000.5728	0039.6	055.8	33.63
335.0	007.6206	0068.8	025.1	118.6	000.5806	0039.4	055.8	33.66
336.0	007.9744	0069.2	025.4	118.0	000.5883	0039.0	055.8	33.67
337.0	008.3363	0069.2	025.7	117.5	000.5958	0038.8	055.9	33.67
338.0	008.7061	0069.3	026.0	117.0	000.6032	0038.6	056.0	33.68
339.0	009.0840	0069.5	026.2	116.5	000.6109	0038.5	056.1	33.69
340.0	009.4700	0069.3	026.5	116.0	000.6181	0038.2	056.2	33.66
341.0	009.9672	0069.1	026.7	115.4	000.6256	0037.8	056.4	33.64
342.0	010.4772	0069.6	027.1	114.8	000.6345	0037.4	056.5	33.63
343.0	010.9999	0069.9	027.5	114.2	000.6431	0037.1	056.6	33.61
344.0	011.5354	0069.9	027.8	113.7	000.6513	0036.8	056.7	33.59
345.0	012.0835	0069.9	028.1	113.1	000.6593	0036.6	056.9	33.57
346.0	012.6444	0069.6	028.3	112.6	000.6666	0036.4	057.2	33.53
347.0	013.2180	0069.5	028.6	112.1	000.6742	0036.1	057.4	33.48
348.0	013.8044	0070.0	028.9	111.6	000.6831	0035.8	057.6	33.45
349.0	014.4034	0070.0	029.2	111.1	000.6908	0035.7	057.9	33.42
350.0	015.0152	0070.0	029.5	110.6	000.6984	0035.7	058.2	33.40
351.0	015.8012	0070.0	029.8	110.0	000.7068	0035.5	058.4	33.37
352.0	016.6072	0070.2	030.2	109.4	000.7023	0035.5	058.7	33.27
353.0	017.4333	0070.5	030.6	108.8	000.6977	0035.2	059.0	33.14
354.0	018.2795	0071.0	031.1	108.2	000.6929	0034.9	059.3	33.01
355.0	019.1457	0071.5	031.5	107.6	000.6881	0034.5	059.6	32.85
356.0	020.0319	0072.0	032.0	107.0	000.6834	0034.1	060.0	32.70
357.0	020.9382	0072.2	032.4	106.5	000.6792	0034.0	060.3	32.57
358.0	021.8646	0072.2	032.7	106.0	000.6756	0034.3	060.8	32.50
359.0	022.8110	0072.2	033.0	105.5	000.6720	0034.4	061.2	32.39
000.0	023.7774	0072.4	033.4	105.0	000.6683	0034.3	061.7	32.25
001.0	024.5448	0072.6	033.7	104.6	000.6651	0034.1	062.1	32.10
002.0	025.3244	0073.0	034.0	104.2	000.6619	0034.0	062.6	31.97
003.0	026.1162	0073.1	034.3	103.9	000.6592	0033.9	063.2	31.83
004.0	026.9202	0073.3	034.6	103.5	000.6566	0033.7	063.7	31.68
005.0	027.7364	0073.6	034.9	103.2	000.6539	0033.7	064.3	31.54
006.0	028.5647	0073.6	035.1	102.9	000.6517	0033.7	064.8	31.41
007.0	029.4052	0074.1	035.5	102.5	000.6490	0033.6	065.4	31.28
008.0	030.2580	0074.2	035.7	102.3	000.6471	0033.6	066.0	31.14
009.0	031.1229	0074.1	035.9	102.0	000.6454	0033.5	066.6	31.00

Exhibit 18.5(a)

WXPZ Protection to WMBI-FM
Clyde Township, MI

Protection to WMBI-FM - Chicago, IL

FMCommander Single Allocation Study - 11-05-2013 - USGS 03 SEC
WXPZ's Overlaps (In= 9.47 km, Out= 53.72 km)

WXPZ CH 211 A DA
Lat= 42 35 29.0, Lng= 85 56 07.0
5.0 kW 58.7 M HAAT, 268 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WMBI-FM CH 211 B BLED19970613KA
Lat= 41 55 41.0, Lng= 88 00 25.0
100.0 kW 135 M HAAT, 350 M COR
Prot.= 60 dBu, Intef.= 40 dBu

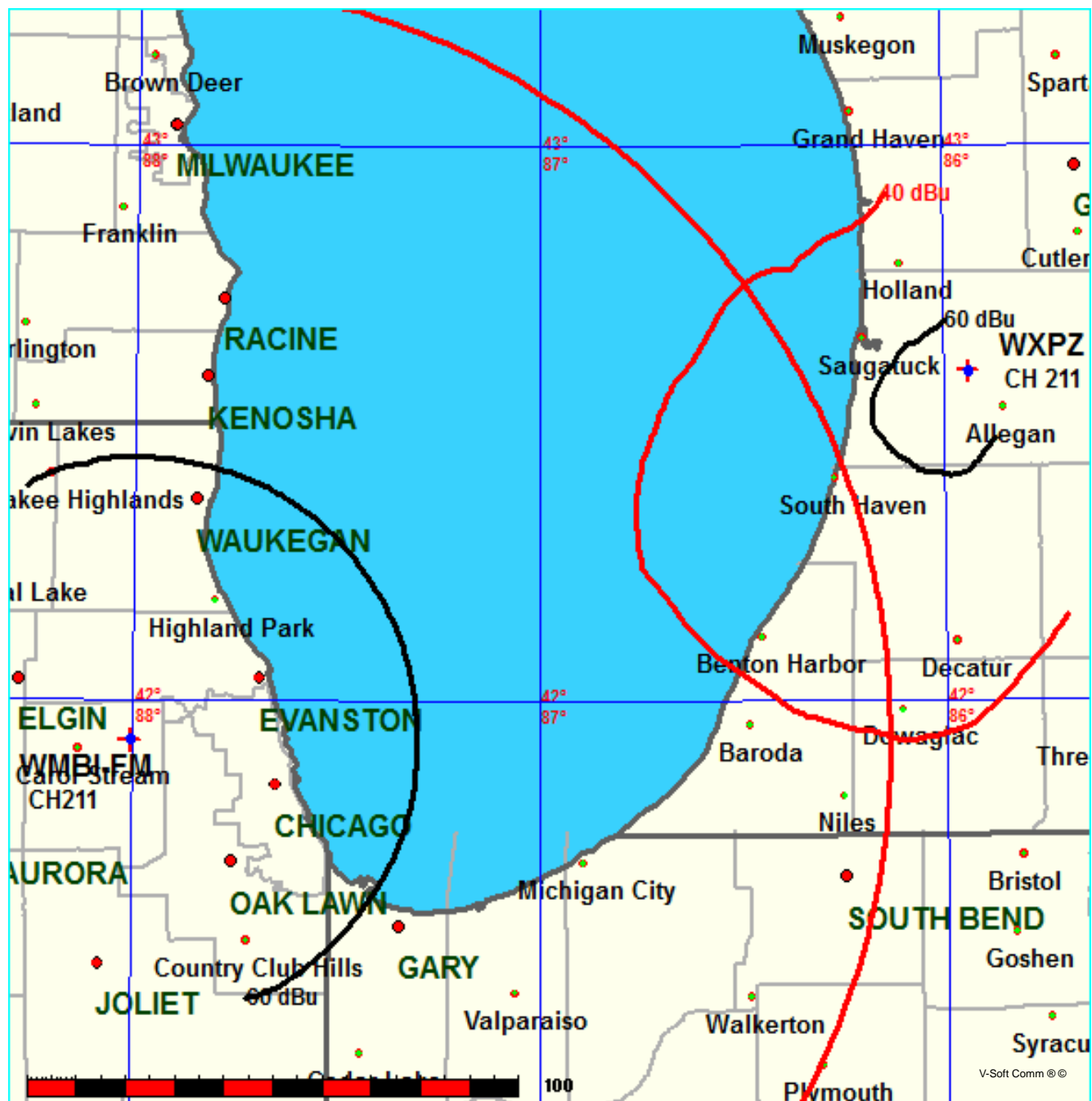


Exhibit 18.5(b) - Protection to WMBI-FM - Chicago, IL

11-05-2013

Terrain Data: USGS 03 SEC

FMOVer Analysis

WXPZ

WMBI-FM BLED19970613KA

Channel = 211A

Max ERP = 5 kW

RCAMSL = 268 M

N. Lat. 42 35 29.0

W. Lng. 85 56 07.0

Protected

60 dBu

Channel = 211B

Max ERP = 100 kW

RCAMSL = 350 M

N. Lat. 41 55 41.0

W. Lng. 88 00 25.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
187.0	004.6812	0056.3	020.6	071.7	100.0000	0149.7	176.4	36.18	
188.0	004.7863	0056.3	020.7	071.7	100.0000	0149.7	176.1	36.24	
189.0	004.8926	0056.5	020.8	071.7	100.0000	0149.7	175.7	36.31	
190.0	005.0000	0056.7	021.0	071.7	100.0000	0149.7	175.3	36.39	
191.0	005.0000	0056.6	021.0	071.6	100.0000	0149.7	175.0	36.44	
192.0	005.0000	0056.6	020.9	071.6	100.0000	0149.7	174.7	36.50	
193.0	005.0000	0056.6	020.9	071.5	100.0000	0149.7	174.3	36.56	
194.0	005.0000	0056.3	020.9	071.4	100.0000	0149.7	174.0	36.61	
195.0	005.0000	0056.2	020.9	071.4	100.0000	0149.7	173.8	36.67	
196.0	005.0000	0056.2	020.9	071.3	100.0000	0149.7	173.4	36.72	
197.0	005.0000	0056.6	021.0	071.3	100.0000	0149.7	173.1	36.78	
198.0	005.0000	0057.9	021.2	071.2	100.0000	0149.7	172.7	36.86	
199.0	005.0000	0058.1	021.2	071.2	100.0000	0149.7	172.4	36.92	
200.0	005.0000	0058.2	021.2	071.1	100.0000	0149.7	172.0	36.98	
201.0	005.0000	0058.9	021.3	071.1	100.0000	0149.7	171.7	37.04	
202.0	005.0000	0060.0	021.5	071.0	100.0000	0149.7	171.3	37.11	
203.0	005.0000	0060.5	021.6	071.0	100.0000	0149.7	170.9	37.18	
204.0	005.0000	0061.0	021.7	070.9	100.0000	0149.7	170.6	37.24	
205.0	005.0000	0061.9	021.8	070.9	100.0000	0149.7	170.2	37.30	
206.0	005.0000	0063.0	022.0	070.8	100.0000	0149.7	169.9	37.37	
207.0	005.0000	0063.6	022.1	070.7	100.0000	0149.7	169.5	37.43	
208.0	005.0000	0063.8	022.1	070.7	100.0000	0149.7	169.2	37.49	
209.0	005.0000	0063.5	022.0	070.5	100.0000	0149.7	169.0	37.53	
210.0	005.0000	0062.8	021.9	070.4	100.0000	0149.7	168.8	37.56	
211.0	005.0000	0062.0	021.8	070.3	100.0000	0149.7	168.6	37.59	
212.0	005.0000	0061.5	021.7	070.2	100.0000	0149.7	168.5	37.62	
213.0	005.0000	0061.1	021.7	070.1	100.0000	0149.7	168.3	37.66	
214.0	005.0000	0060.9	021.7	070.0	100.0000	0149.7	168.1	37.70	
215.0	005.0000	0060.7	021.6	069.9	100.0000	0149.7	167.9	37.73	
216.0	005.0000	0060.7	021.6	069.8	100.0000	0149.6	167.6	37.77	
217.0	005.0000	0061.2	021.7	069.7	100.0000	0149.6	167.4	37.82	
218.0	005.0000	0061.4	021.7	069.6	100.0000	0149.6	167.1	37.87	
219.0	005.0000	0061.9	021.8	069.5	100.0000	0149.6	166.9	37.91	
220.0	005.0000	0062.5	021.9	069.4	100.0000	0149.6	166.6	37.96	
221.0	005.0000	0063.2	022.0	069.3	100.0000	0149.6	166.3	38.01	
222.0	005.0000	0063.6	022.0	069.2	100.0000	0149.6	166.1	38.05	

Exhibit 18.5(b) - Protection to WMBI-FM - Chicago, IL

FMOver Analysis

Page # 2

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
223.0	005.0000	0063.7	022.1	069.1	100.0000	0149.6	165.9	38.09
224.0	005.0000	0063.7	022.1	068.9	100.0000	0149.6	165.7	38.12
225.0	005.0000	0063.8	022.1	068.8	100.0000	0149.5	165.5	38.15
226.0	005.0000	0063.8	022.1	068.7	100.0000	0149.5	165.3	38.18
227.0	005.0000	0063.8	022.1	068.6	100.0000	0149.5	165.2	38.21
228.0	005.0000	0063.8	022.1	068.4	100.0000	0149.5	165.1	38.23
229.0	005.0000	0063.8	022.1	068.3	100.0000	0149.5	164.9	38.26
230.0	005.0000	0063.8	022.1	068.2	100.0000	0149.5	164.8	38.28
231.0	005.0000	0063.6	022.1	068.1	100.0000	0149.5	164.7	38.30
232.0	005.0000	0063.4	022.0	067.9	100.0000	0149.5	164.6	38.32
233.0	005.0000	0063.1	022.0	067.8	100.0000	0149.5	164.5	38.33
234.0	005.0000	0063.0	022.0	067.7	100.0000	0149.5	164.4	38.35
235.0	005.0000	0063.1	022.0	067.5	100.0000	0149.5	164.3	38.37
236.0	005.0000	0063.4	022.0	067.4	100.0000	0149.5	164.2	38.39
237.0	005.0000	0064.2	022.1	067.3	100.0000	0149.5	164.0	38.43
238.0	005.0000	0064.8	022.2	067.2	100.0000	0149.5	163.8	38.45
239.0	005.0000	0065.3	022.3	067.0	100.0000	0149.4	163.7	38.48
240.0	005.0000	0065.7	022.4	066.9	100.0000	0149.4	163.6	38.50
241.0	004.8423	0066.1	022.3	066.8	100.0000	0149.4	163.6	38.49
242.0	004.6871	0066.5	022.1	066.6	100.0000	0149.4	163.7	38.48
243.0	004.5344	0066.8	022.0	066.5	100.0000	0149.3	163.8	38.46
244.0	004.3842	0067.3	021.9	066.4	100.0000	0149.3	163.9	38.45
245.0	004.2366	0067.7	021.8	066.2	100.0000	0149.3	163.9	38.43
246.0	004.0915	0068.1	021.7	066.1	100.0000	0149.3	164.1	38.41
247.0	003.9489	0068.5	021.6	066.0	100.0000	0149.3	164.2	38.39
248.0	003.8089	0068.8	021.4	065.8	100.0000	0149.2	164.3	38.36
249.0	003.6714	0069.2	021.3	065.7	100.0000	0149.2	164.5	38.33
250.0	003.5364	0069.4	021.1	065.6	100.0000	0149.2	164.6	38.30
251.0	003.3924	0069.6	020.9	065.4	100.0000	0149.2	164.8	38.26
252.0	003.2514	0069.8	020.8	065.3	100.0000	0149.2	165.1	38.23
253.0	003.1134	0070.0	020.6	065.2	100.0000	0149.2	165.3	38.19
254.0	002.9784	0070.2	020.4	065.1	100.0000	0149.2	165.5	38.14
255.0	002.8464	0070.3	020.2	065.0	100.0000	0149.2	165.8	38.10
256.0	002.7173	0070.5	020.0	064.9	100.0000	0149.1	166.0	38.05
257.0	002.5913	0070.7	019.8	064.8	100.0000	0149.1	166.3	38.00
258.0	002.4682	0070.7	019.5	064.7	100.0000	0149.1	166.6	37.94
259.0	002.3482	0070.8	019.3	064.6	100.0000	0149.1	166.9	37.89
260.0	002.2311	0070.8	019.0	064.5	100.0000	0149.1	167.2	37.83
261.0	002.1405	0070.8	018.8	064.4	100.0000	0149.1	167.5	37.78
262.0	002.0518	0070.9	018.6	064.3	100.0000	0149.1	167.8	37.73
263.0	001.9650	0071.1	018.5	064.2	100.0000	0149.0	168.0	37.69
264.0	001.8801	0071.3	018.3	064.1	100.0000	0149.0	168.3	37.63
265.0	001.7970	0071.5	018.1	064.0	100.0000	0149.0	168.6	37.58
266.0	001.7158	0071.8	017.9	064.0	100.0000	0149.0	168.9	37.53
267.0	001.6365	0071.9	017.7	063.9	100.0000	0149.0	169.2	37.48
268.0	001.5591	0071.8	017.5	063.8	100.0000	0149.0	169.5	37.42
269.0	001.4835	0071.5	017.2	063.8	100.0000	0149.0	169.9	37.35
270.0	001.4098	0070.7	016.8	063.7	100.0000	0149.0	170.3	37.27
271.0	001.3525	0069.2	016.4	063.7	100.0000	0149.0	170.8	37.18
272.0	001.2964	0068.4	016.1	063.7	100.0000	0149.0	171.2	37.11
273.0	001.2415	0068.3	015.9	063.6	100.0000	0149.0	171.5	37.05

Exhibit 18.5(b) - Protection to WMBI-FM - Chicago, IL

FMOver Analysis

Page # 3

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
274.0	001.1878	0068.5	015.8	063.5	100.0000	0149.0	171.8	37.00
275.0	001.1353	0068.8	015.6	063.5	100.0000	0149.0	172.1	36.95
276.0	001.0839	0069.3	015.5	063.4	100.0000	0149.0	172.3	36.91
277.0	001.0338	0070.1	015.4	063.4	100.0000	0149.0	172.5	36.87
278.0	000.9848	0071.6	015.3	063.3	100.0000	0149.0	172.7	36.83
279.0	000.9370	0072.8	015.3	063.3	100.0000	0149.0	172.9	36.80
280.0	000.8904	0073.4	015.1	063.2	100.0000	0149.0	173.2	36.75
281.0	000.8541	0074.3	015.0	063.2	100.0000	0149.0	173.4	36.71
282.0	000.8185	0075.3	015.0	063.1	100.0000	0149.0	173.6	36.67
283.0	000.7837	0076.3	014.9	063.0	100.0000	0149.0	173.8	36.63
284.0	000.7496	0077.2	014.8	063.0	100.0000	0149.0	174.1	36.59
285.0	000.7163	0077.9	014.7	062.9	100.0000	0149.0	174.3	36.55
286.0	000.6838	0078.5	014.6	062.9	100.0000	0149.0	174.6	36.50
287.0	000.6520	0079.4	014.5	062.9	100.0000	0149.0	174.8	36.46
288.0	000.6209	0080.0	014.4	062.8	100.0000	0149.0	175.1	36.41
289.0	000.5906	0080.5	014.3	062.8	100.0000	0149.0	175.3	36.36
290.0	000.5611	0081.3	014.2	062.8	100.0000	0149.0	175.6	36.31
291.0	000.5382	0082.3	014.1	062.7	100.0000	0149.0	175.8	36.27
292.0	000.5158	0083.3	014.0	062.7	100.0000	0149.0	176.0	36.23
293.0	000.4939	0083.4	013.9	062.7	100.0000	0149.0	176.3	36.18
294.0	000.4725	0082.8	013.7	062.7	100.0000	0149.0	176.6	36.13
295.0	000.4515	0082.3	013.5	062.7	100.0000	0149.0	176.9	36.07
296.0	000.4310	0081.5	013.3	062.7	100.0000	0149.0	177.2	36.01
297.0	000.4110	0080.1	013.0	062.7	100.0000	0149.0	177.6	35.95
298.0	000.3914	0078.4	012.8	062.7	100.0000	0149.0	177.9	35.89
299.0	000.3724	0075.1	012.4	062.8	100.0000	0149.0	178.3	35.81
300.0	000.3538	0072.4	012.0	062.8	100.0000	0149.0	178.7	35.75
301.0	000.3538	0072.0	012.0	062.8	100.0000	0149.0	178.9	35.71
302.0	000.3538	0072.8	012.0	062.8	100.0000	0149.0	179.0	35.68
303.0	000.3538	0072.3	012.0	062.7	100.0000	0149.0	179.2	35.65
304.0	000.3538	0071.2	011.9	062.7	100.0000	0149.0	179.5	35.61
305.0	000.3538	0070.5	011.9	062.7	100.0000	0149.0	179.7	35.57
306.0	000.3538	0069.7	011.8	062.7	100.0000	0149.0	179.9	35.53

Exhibit 18.5(b) - Protection to WMBI-FM - Chicago, IL

11-05-2013 Terrain Data: USGS 03 SEC FMOver Analysis

WMBI-FM BLED19970613KA

WXPZ

Channel = 211B
 Max ERP = 100 kW
 RCAMSL = 350 M
 N. Lat. 41 55 41.0
 W. Lng. 88 00 25.0
 Protected
 60 dBu

Channel = 211A
 Max ERP = 5 kW
 RCAMSL = 268 M
 N. Lat. 42 35 29.0
 W. Lng. 85 56 07.0
 Interfering
 40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
006.0	100.0000	0137.8	056.8	264.7	001.8250	0071.4	164.8	18.42	
007.0	100.0000	0138.1	056.8	264.6	001.8305	0071.4	163.8	18.61	
008.0	100.0000	0138.3	056.9	264.5	001.8366	0071.4	162.8	18.80	
009.0	100.0000	0138.3	056.9	264.4	001.8444	0071.4	161.9	19.00	
010.0	100.0000	0138.3	056.9	264.3	001.8528	0071.4	160.9	19.19	
011.0	100.0000	0138.0	056.8	264.2	001.8629	0071.3	160.0	19.39	
012.0	100.0000	0138.3	056.9	264.1	001.8713	0071.3	159.0	19.58	
013.0	100.0000	0138.8	056.9	264.0	001.8796	0071.3	158.1	19.77	
014.0	100.0000	0139.3	057.0	263.9	001.8885	0071.3	157.1	19.96	
015.0	100.0000	0139.7	057.1	263.8	001.8983	0071.3	156.2	20.15	
016.0	100.0000	0139.8	057.1	263.6	001.9102	0071.2	155.2	20.34	
017.0	100.0000	0140.0	057.1	263.5	001.9221	0071.2	154.3	20.52	
018.0	100.0000	0140.2	057.1	263.3	001.9352	0071.2	153.4	20.71	
019.0	100.0000	0140.5	057.2	263.2	001.9482	0071.2	152.5	20.90	
020.0	100.0000	0140.8	057.2	263.0	001.9621	0071.1	151.6	21.08	
021.0	100.0000	0141.0	057.3	262.9	001.9767	0071.1	150.7	21.27	
022.0	100.0000	0141.4	057.3	262.7	001.9918	0071.0	149.8	21.46	
023.0	100.0000	0141.9	057.4	262.5	002.0073	0071.0	148.9	21.64	
024.0	100.0000	0142.3	057.4	262.3	002.0236	0071.0	148.0	21.83	
025.0	100.0000	0142.7	057.5	262.1	002.0410	0070.9	147.2	22.02	
026.0	100.0000	0143.1	057.5	261.9	002.0591	0070.9	146.3	22.21	
027.0	100.0000	0143.5	057.6	261.7	002.0782	0070.9	145.5	22.40	
028.0	100.0000	0143.8	057.6	261.5	002.0983	0070.8	144.7	22.59	
029.0	100.0000	0143.9	057.6	261.2	002.1200	0070.8	143.9	22.78	
030.0	100.0000	0144.0	057.7	261.0	002.1425	0070.8	143.1	22.97	
031.0	100.0000	0144.2	057.7	260.7	002.1655	0070.7	142.3	23.16	
032.0	100.0000	0144.5	057.7	260.5	002.1895	0070.7	141.5	23.35	
033.0	100.0000	0144.4	057.7	260.2	002.2151	0070.7	140.8	23.54	
034.0	100.0000	0144.8	057.8	259.9	002.2429	0070.8	140.1	23.74	
035.0	100.0000	0145.5	057.9	259.6	002.2743	0070.8	139.3	23.94	
036.0	100.0000	0145.9	057.9	259.3	002.3087	0070.8	138.6	24.15	
037.0	100.0000	0146.0	057.9	259.0	002.3451	0070.8	137.9	24.34	
038.0	100.0000	0146.3	058.0	258.7	002.3824	0070.8	137.2	24.54	

Exhibit 18.5(b) - Protection to WMBI-FM - Chicago, IL

FMOver Analysis

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Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
039.0	100.0000	0146.6	058.0	258.4	002.4210	0070.7	136.5	24.73
040.0	100.0000	0146.8	058.0	258.1	002.4611	0070.7	135.9	24.92
041.0	100.0000	0146.9	058.1	257.7	002.5025	0070.7	135.3	25.11
042.0	100.0000	0147.1	058.1	257.4	002.5455	0070.7	134.7	25.30
043.0	100.0000	0147.3	058.1	257.0	002.5895	0070.7	134.1	25.48
044.0	100.0000	0147.5	058.1	256.7	002.6348	0070.7	133.6	25.66
045.0	100.0000	0147.6	058.2	256.3	002.6816	0070.6	133.0	25.84
046.0	100.0000	0147.7	058.2	255.9	002.7301	0070.5	132.5	26.01
047.0	100.0000	0147.8	058.2	255.5	002.7796	0070.4	132.0	26.18
048.0	100.0000	0148.0	058.2	255.1	002.8303	0070.4	131.6	26.34
049.0	100.0000	0148.0	058.2	254.7	002.8826	0070.3	131.1	26.50
050.0	100.0000	0148.0	058.2	254.3	002.9364	0070.3	130.7	26.66
051.0	100.0000	0148.1	058.2	253.9	002.9912	0070.2	130.3	26.81
052.0	100.0000	0148.1	058.2	253.5	003.0475	0070.1	130.0	26.95
053.0	100.0000	0148.1	058.2	253.1	003.1049	0070.0	129.6	27.09
054.0	100.0000	0148.1	058.2	252.6	003.1634	0069.9	129.3	27.23
055.0	100.0000	0148.2	058.2	252.2	003.2228	0069.8	129.0	27.36
056.0	100.0000	0148.2	058.2	251.8	003.2837	0069.7	128.8	27.49
057.0	100.0000	0148.3	058.2	251.3	003.3455	0069.6	128.5	27.61
058.0	100.0000	0148.4	058.3	250.9	003.4083	0069.5	128.3	27.73
059.0	100.0000	0148.6	058.3	250.4	003.4722	0069.5	128.1	27.85
060.0	100.0000	0148.7	058.3	250.0	003.5371	0069.4	127.9	27.96
061.0	100.0000	0148.8	058.3	249.5	003.5976	0069.3	127.7	28.06
062.0	100.0000	0148.9	058.3	249.1	003.6591	0069.2	127.6	28.15
063.0	100.0000	0149.0	058.3	248.6	003.7212	0069.0	127.5	28.23
064.0	100.0000	0149.0	058.3	248.2	003.7841	0068.8	127.4	28.31
065.0	100.0000	0149.2	058.4	247.7	003.8477	0068.7	127.4	28.39
066.0	100.0000	0149.3	058.4	247.3	003.9118	0068.6	127.4	28.46
067.0	100.0000	0149.4	058.4	246.8	003.9766	0068.4	127.4	28.53
068.0	100.0000	0149.5	058.4	246.3	004.0418	0068.2	127.4	28.59
069.0	100.0000	0149.6	058.4	245.9	004.1075	0068.0	127.4	28.64
070.0	100.0000	0149.7	058.4	245.4	004.1736	0067.9	127.5	28.69
071.0	100.0000	0149.7	058.4	245.0	004.2400	0067.7	127.6	28.73
072.0	100.0000	0149.8	058.4	244.5	004.3067	0067.5	127.8	28.76
073.0	100.0000	0149.7	058.4	244.1	004.3733	0067.3	127.9	28.79
074.0	100.0000	0149.7	058.4	243.6	004.4402	0067.0	128.1	28.81
075.0	100.0000	0149.7	058.4	243.2	004.5071	0066.9	128.4	28.83
076.0	100.0000	0149.6	058.4	242.7	004.5737	0066.7	128.6	28.84
077.0	100.0000	0149.5	058.4	242.3	004.6403	0066.6	128.9	28.85
078.0	100.0000	0149.3	058.4	241.9	004.7064	0066.4	129.2	28.84
079.0	100.0000	0149.2	058.4	241.4	004.7724	0066.2	129.6	28.83
080.0	100.0000	0149.1	058.3	241.0	004.8380	0066.1	129.9	28.82
081.0	100.0000	0148.8	058.3	240.6	004.9029	0065.9	130.3	28.80
082.0	100.0000	0148.7	058.3	240.2	004.9675	0065.8	130.7	28.78
083.0	100.0000	0148.6	058.3	239.8	005.0000	0065.6	131.1	28.72
084.0	100.0000	0148.4	058.2	239.4	005.0000	0065.5	131.6	28.63
085.0	100.0000	0148.2	058.2	239.0	005.0000	0065.3	132.1	28.53
086.0	100.0000	0148.1	058.2	238.6	005.0000	0065.2	132.6	28.44
087.0	100.0000	0148.1	058.2	238.2	005.0000	0064.9	133.1	28.33
088.0	100.0000	0148.1	058.2	237.9	005.0000	0064.7	133.6	28.23
089.0	100.0000	0148.0	058.2	237.5	005.0000	0064.5	134.1	28.12

Exhibit 18.5(b) - Protection to WMBI-FM - Chicago, IL

FMOver Analysis

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Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
090.0	100.0000	0148.2	058.2	237.1	005.0000	0064.3	134.7	28.00
091.0	100.0000	0148.3	058.2	236.8	005.0000	0064.0	135.3	27.89
092.0	100.0000	0148.6	058.3	236.4	005.0000	0063.7	135.8	27.77
093.0	100.0000	0148.7	058.3	236.1	005.0000	0063.4	136.4	27.64
094.0	100.0000	0149.1	058.3	235.7	005.0000	0063.3	137.0	27.53
095.0	100.0000	0149.3	058.4	235.4	005.0000	0063.2	137.7	27.40
096.0	100.0000	0149.8	058.4	235.1	005.0000	0063.1	138.3	27.28
097.0	100.0000	0150.1	058.5	234.8	005.0000	0063.0	139.0	27.15
098.0	100.0000	0150.3	058.5	234.4	005.0000	0063.0	139.7	27.02
099.0	100.0000	0150.6	058.6	234.1	005.0000	0063.0	140.4	26.89
100.0	100.0000	0150.7	058.6	233.9	005.0000	0063.0	141.1	26.75
101.0	100.0000	0150.8	058.6	233.6	005.0000	0063.0	141.9	26.61
102.0	100.0000	0150.9	058.6	233.3	005.0000	0063.1	142.6	26.47
103.0	100.0000	0151.0	058.6	233.0	005.0000	0063.1	143.4	26.33
104.0	100.0000	0151.0	058.6	232.8	005.0000	0063.1	144.2	26.18
105.0	100.0000	0151.1	058.6	232.5	005.0000	0063.2	145.0	26.03
106.0	100.0000	0151.1	058.6	232.3	005.0000	0063.3	145.9	25.88
107.0	100.0000	0151.0	058.6	232.1	005.0000	0063.4	146.7	25.73
108.0	100.0000	0151.0	058.6	231.9	005.0000	0063.4	147.6	25.58
109.0	100.0000	0151.0	058.6	231.7	005.0000	0063.5	148.4	25.43
110.0	100.0000	0150.9	058.6	231.5	005.0000	0063.5	149.3	25.27
111.0	100.0000	0150.9	058.6	231.3	005.0000	0063.6	150.2	25.12
112.0	100.0000	0150.8	058.6	231.1	005.0000	0063.6	151.1	24.96
113.0	100.0000	0150.6	058.6	230.9	005.0000	0063.7	152.0	24.80
114.0	100.0000	0150.6	058.5	230.8	005.0000	0063.7	153.0	24.63
115.0	100.0000	0150.3	058.5	230.6	005.0000	0063.7	153.9	24.47
116.0	100.0000	0150.3	058.5	230.5	005.0000	0063.7	154.8	24.30
117.0	100.0000	0150.2	058.5	230.3	005.0000	0063.8	155.8	24.14
118.0	100.0000	0150.1	058.5	230.2	005.0000	0063.8	156.7	23.97
119.0	100.0000	0150.0	058.5	230.1	005.0000	0063.8	157.7	23.80
120.0	100.0000	0149.9	058.5	229.9	005.0000	0063.8	158.7	23.62
121.0	100.0000	0149.7	058.4	229.8	005.0000	0063.8	159.6	23.44
122.0	100.0000	0149.7	058.4	229.7	005.0000	0063.8	160.6	23.26
123.0	100.0000	0149.5	058.4	229.6	005.0000	0063.8	161.6	23.08
124.0	100.0000	0149.3	058.4	229.6	005.0000	0063.8	162.6	22.89
125.0	100.0000	0149.1	058.3	229.5	005.0000	0063.8	163.6	22.71

Exhibit 18.6 - Proposed Directional Antenna Pattern

WXPZ

10-30-2013

RMS(V) = .607

Graph is Relative Field

Azi	Field	dBk	kW
000	0.355	-02.006	0.630
010	0.355	-02.006	0.630
020	0.399	-00.991	0.796
030	0.502	01.004	1.260
040	0.632	03.004	1.997
050	0.709	04.003	2.513
060	0.709	04.003	2.513
070	0.563	02.000	1.585
080	0.447	-00.004	0.999
090	0.355	-02.006	0.630
100	0.355	-02.006	0.630
110	0.376	-01.507	0.707
120	0.335	-02.509	0.561
130	0.335	-02.509	0.561
140	0.355	-02.006	0.630
150	0.447	-00.004	0.999
160	0.563	02.000	1.585
170	0.709	04.003	2.513
180	0.892	05.997	3.978
190	1.000	06.990	5.000
200	1.000	06.990	5.000
210	1.000	06.990	5.000
220	1.000	06.990	5.000
230	1.000	06.990	5.000
240	1.000	06.990	5.000
250	0.841	05.486	3.536
260	0.668	03.485	2.231
270	0.531	01.492	1.410
280	0.422	-00.504	0.890
290	0.335	-02.509	0.561
300	0.266	-04.513	0.354
310	0.266	-04.513	0.354
320	0.240	-05.406	0.288
330	0.250	-05.051	0.313
340	0.300	-03.468	0.450
350	0.325	-02.773	0.528

