

# Channel-Six TV Protection Study

KBJR-TV LI 06+ 2C Dom 100.000 kW 302 M HAAT VHY  
Superior WI 603.8 M COR AMSL  
Lat= 46 47 21.0, Lng= 92 06 51.0  
Kbjr License, Inc. BLCT20000517AEX  
Fac ID# 33658  
Dist.=123.4 km, Azi=189.7°, Rev Azi=9.5°

Direct line HAAT Grade B, 47 dBu= 93.16 km & Grade A= 46.27 km

Distance from reference to Grade B = 30.24 km

Cutoff Dist from Full Service or Class CA= 196

Maximum Co-located power= 12 kW

KBJR-TV Signal Contour at Reference location = 36.8 dBu

CH. 207, U/D ratio = 26.3 dB, Maximum FM signal = 73.3 dBu , 6 dB credit added

## TV/FM D to U values

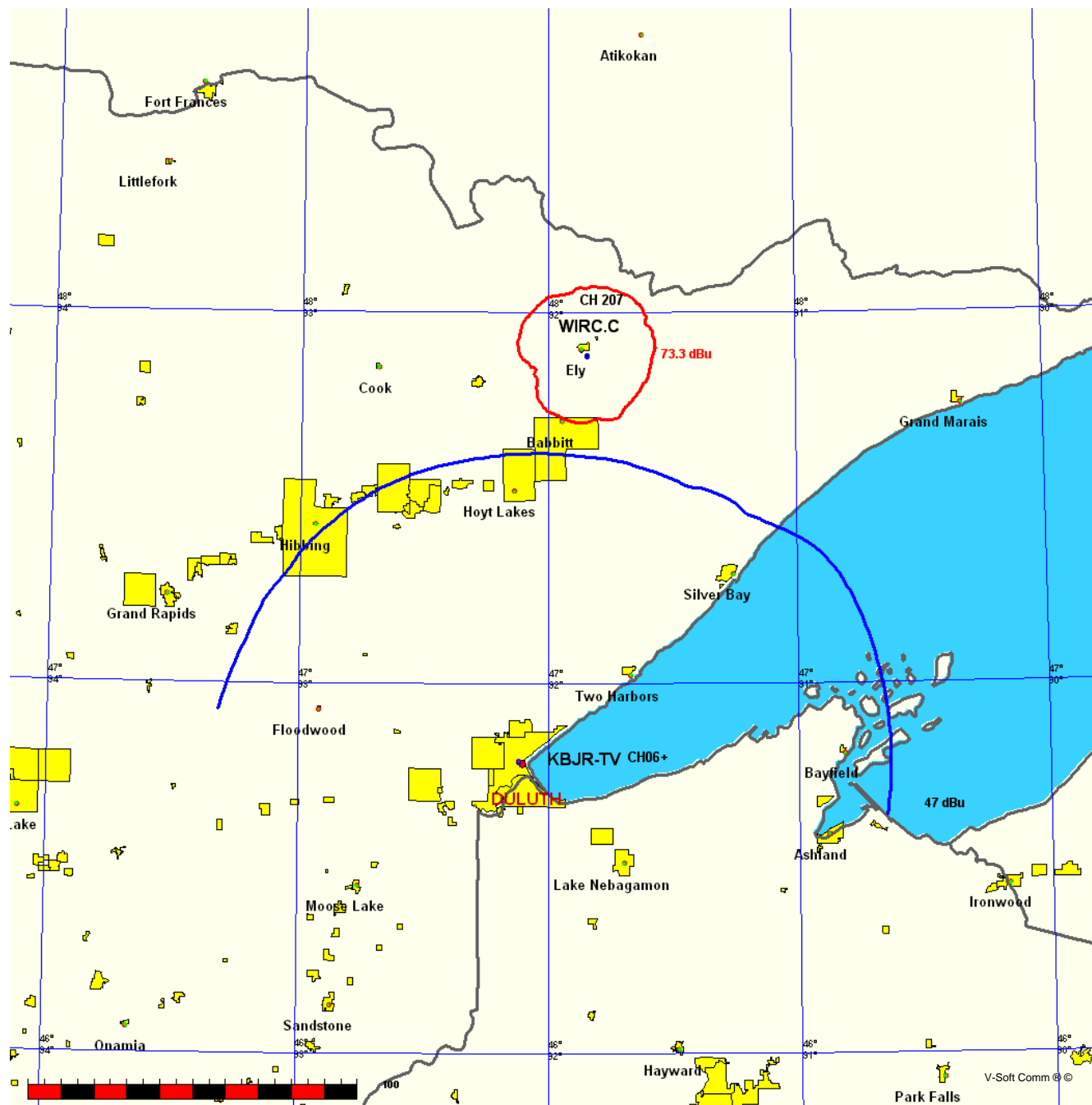
47.0	73.3	55.0	72.3	63.0	73.9	71.0	78.7	79.0	85.0	87.0	91.6
48.0	73.0	56.0	72.4	64.0	74.4	72.0	79.5	80.0	85.8	88.0	92.4
49.0	72.6	57.0	72.5	65.0	74.8	73.0	80.2	81.0	86.6	89.0	93.3
50.0	72.3	58.0	72.6	66.0	75.4	74.0	81.0	82.0	87.4	90.0	94.2
51.0	72.2	59.0	72.8	67.0	76.0	75.0	81.8	83.0	88.2	91.0	94.2
52.0	72.2	60.0	73.0	68.0	76.6	76.0	82.6	84.0	89.0	92.0	94.2
53.0	72.1	61.0	73.3	69.0	77.3	77.0	83.4	85.0	89.9	93.0	94.2
54.0	72.2	62.0	73.5	70.0	78.0	78.0	84.2	86.0	90.7	94.0	94.2

Minnesota Public Radio - WIRC Ely, MN  
WIRC (New) v. KBJR-TV

FMCommander Single Allocation Study - 08-04-2009 - USGS 03 SEC  
WIRC.C's Overlaps (In= 2.61 km, Out= 0.31 km)

WIRC.C CH 207 C3  
Lat= 47 53 01.0, Lng= 91 50 32.0  
18.963 kW 116.2 M HAAT, 553.2 M COR  
Intef. = 73.3 dBu Prot. = 47 dBu

KBJR-TV CH 06+ 2C BLCT20000517AEX  
Lat= 46 47 21.0, Lng= 92 06 51.0  
100.0 kW 301.8 M HAAT, 603.8 M COR



08-04-2009 USGS 03 SEC Terrain Data

KBJR-TV BLCT20000517AEX

Channel = 06+2C

Max ERP = 100 kW

RCAMSL = 603.8 M

N. Lat. 46 47 21.0

W. Lng. 92 06 51.0

Protected

47 dBu

WIRC.C

Channel = 207C3

Study ERP = 18.9625 kW

RCAMSL = 553.2 M

N. Lat. 47 53 01.0

W. Lng. 91 50 32.0

Interfering

73.3 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
309.0	100.0000	0167.2	090.7	234.9	018.9625	0099.9	111.3	39.23	
310.0	100.0000	0167.5	090.7	235.2	018.9625	0099.2	110.0	39.45	
311.0	100.0000	0169.0	090.9	235.5	018.9625	0098.7	108.5	39.72	
312.0	100.0000	0170.6	091.0	235.8	018.9625	0098.3	107.0	40.01	
313.0	100.0000	0173.4	091.4	236.1	018.9625	0097.9	105.5	40.30	
314.0	100.0000	0174.3	091.4	236.3	018.9625	0097.8	104.0	40.61	
315.0	100.0000	0174.6	091.5	236.5	018.9625	0097.6	102.4	40.94	
316.0	100.0000	0174.9	091.5	236.7	018.9625	0097.6	100.9	41.29	
317.0	100.0000	0175.1	091.5	236.9	018.9625	0097.5	099.3	41.64	
318.0	100.0000	0175.3	091.6	237.0	018.9625	0097.4	097.7	42.01	
319.0	100.0000	0175.4	091.6	237.2	018.9625	0097.4	096.1	42.39	
320.0	100.0000	0175.5	091.6	237.3	018.9625	0097.3	094.6	42.78	
321.0	100.0000	0175.7	091.6	237.4	018.9625	0097.2	093.0	43.18	
322.0	100.0000	0175.9	091.6	237.5	018.9625	0097.1	091.4	43.59	
323.0	100.0000	0176.1	091.6	237.6	018.9625	0097.0	089.8	44.01	
324.0	100.0000	0176.6	091.7	237.7	018.9625	0096.8	088.2	44.43	
325.0	100.0000	0177.3	091.8	237.8	018.9625	0096.7	086.6	44.86	
326.0	100.0000	0178.3	091.9	237.9	018.9625	0096.6	085.0	45.29	
327.0	100.0000	0178.5	091.9	237.9	018.9625	0096.5	083.4	45.74	
328.0	100.0000	0178.7	091.9	237.9	018.9625	0096.5	081.8	46.18	
329.0	100.0000	0179.2	092.0	238.0	018.9625	0096.5	080.2	46.63	
330.0	100.0000	0179.8	092.0	237.9	018.9625	0096.5	078.6	47.07	
331.0	100.0000	0180.1	092.1	237.9	018.9625	0096.6	077.0	47.53	
332.0	100.0000	0180.5	092.1	237.9	018.9625	0096.6	075.4	47.98	
333.0	100.0000	0180.9	092.1	237.8	018.9625	0096.7	073.8	48.45	
334.0	100.0000	0181.0	092.2	237.6	018.9625	0096.9	072.2	48.92	
335.0	100.0000	0181.0	092.2	237.5	018.9625	0097.1	070.6	49.39	
336.0	100.0000	0180.8	092.1	237.3	018.9625	0097.3	069.0	49.87	
337.0	100.0000	0180.4	092.1	237.0	018.9625	0097.5	067.4	50.35	
338.0	100.0000	0179.9	092.0	236.7	018.9625	0097.6	065.8	50.82	
339.0	100.0000	0179.8	092.0	236.4	018.9625	0097.7	064.3	51.31	
340.0	100.0000	0179.7	092.0	236.0	018.9625	0098.0	062.7	51.82	
341.0	100.0000	0179.6	092.0	235.6	018.9625	0098.5	061.1	52.36	
342.0	100.0000	0179.4	092.0	235.1	018.9625	0099.2	059.6	52.95	
343.0	100.0000	0179.1	092.0	234.6	018.9625	0100.4	058.1	53.57	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
344.0	100.0000	0178.7	091.9	234.1	018.9625	0101.4	056.6	54.20
345.0	100.0000	0178.0	091.8	233.4	018.9625	0102.7	055.1	54.84
346.0	100.0000	0177.9	091.8	232.7	018.9625	0104.3	053.6	55.51
347.0	100.0000	0177.9	091.8	232.0	018.9625	0105.9	052.2	56.18
348.0	100.0000	0177.4	091.8	231.2	018.9625	0107.5	050.8	56.83
349.0	100.0000	0176.5	091.7	230.2	018.9625	0108.9	049.4	57.46
350.0	100.0000	0176.2	091.6	229.2	018.9625	0109.9	048.0	58.05
351.0	100.0000	0176.6	091.7	228.2	018.9625	0110.2	046.6	58.61
352.0	100.0000	0177.1	091.7	227.2	018.9625	0110.3	045.3	59.15
353.0	100.0000	0177.4	091.8	226.0	018.9625	0110.2	044.0	59.68
354.0	100.0000	0177.6	091.8	224.7	018.9625	0111.0	042.7	60.25
355.0	100.0000	0177.9	091.8	223.3	018.9625	0112.9	041.5	60.91
356.0	100.0000	0179.2	092.0	221.9	018.9625	0113.6	040.2	61.50
357.0	100.0000	0180.9	092.1	220.4	018.9625	0115.5	038.9	62.18
358.0	100.0000	0182.0	092.3	218.7	018.9625	0115.2	037.8	62.68
359.0	100.0000	0182.4	092.3	216.8	018.9625	0116.2	036.7	63.23
000.0	100.0000	0182.4	092.3	214.8	018.9625	0115.7	035.8	63.64
001.0	100.0000	0182.6	092.3	212.6	018.9625	0114.4	034.9	63.97
002.0	100.0000	0183.5	092.4	210.3	018.9625	0113.5	034.0	64.32
003.0	100.0000	0184.7	092.5	208.0	018.9625	0111.5	033.1	64.58
004.0	100.0000	0186.2	092.7	205.5	018.9625	0111.0	032.4	64.92
005.0	100.0000	0187.3	092.8	202.8	018.9625	0113.4	031.7	65.42
006.0	100.0000	0188.0	092.9	200.0	018.9625	0113.4	031.2	65.68
007.0	100.0000	0188.7	093.0	197.1	018.9625	0114.2	030.8	65.97
008.0	100.0000	0189.5	093.0	194.1	018.9625	0114.1	030.5	66.13
009.0	100.0000	0190.3	093.1	191.1	018.9625	0115.0	030.3	66.30
010.0	100.0000	0191.1	093.2	188.0	018.9625	0115.0	030.2	66.35
011.0	100.0000	0192.5	093.3	184.9	018.9625	0114.7	030.2	66.34
012.0	100.0000	0194.8	093.6	181.8	018.9625	0112.7	030.2	66.20
013.0	100.0000	0197.1	093.8	178.7	018.9625	0111.2	030.3	66.00
014.0	100.0000	0199.2	094.0	175.6	018.9625	0107.8	030.6	65.59
015.0	100.0000	0201.6	094.3	172.6	018.9625	0105.1	030.9	65.17
016.0	100.0000	0204.2	094.5	169.6	018.9625	0104.7	031.4	64.91
017.0	100.0000	0206.5	094.7	166.8	018.9625	0107.8	031.9	64.88
018.0	100.0000	0208.5	094.9	164.1	018.9625	0111.6	032.6	64.83
019.0	100.0000	0211.5	095.2	161.5	018.9625	0114.0	033.4	64.65
020.0	100.0000	0213.0	095.4	159.1	018.9625	0116.4	034.3	64.37
021.0	100.0000	0214.1	095.5	157.0	018.9625	0119.1	035.4	64.06
022.0	100.0000	0214.6	095.5	155.1	018.9625	0121.3	036.5	63.66
023.0	100.0000	0215.6	095.6	153.2	018.9625	0121.9	037.7	63.15
024.0	100.0000	0217.6	095.8	151.4	018.9625	0120.9	038.9	62.56
025.0	100.0000	0221.4	096.2	149.6	018.9625	0118.1	040.0	61.87
026.0	100.0000	0224.2	096.5	147.9	018.9625	0114.3	041.3	61.08
027.0	100.0000	0225.2	096.6	146.6	018.9625	0112.3	042.7	60.35
028.0	100.0000	0226.3	096.7	145.5	018.9625	0110.4	044.1	59.64
029.0	100.0000	0227.9	096.8	144.3	018.9625	0108.3	045.5	58.91
030.0	100.0000	0228.6	096.9	143.4	018.9625	0106.9	047.0	58.22
031.0	100.0000	0229.4	097.0	142.5	018.9625	0106.4	048.6	57.60
032.0	100.0000	0233.5	097.4	141.4	018.9625	0106.9	050.0	57.08
033.0	100.0000	0241.7	098.2	139.9	018.9625	0107.7	051.4	56.61
034.0	100.0000	0250.6	099.0	138.5	018.9625	0106.9	052.8	56.00

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
035.0	100.0000	0257.2	099.7	137.4	018.9625	0106.4	054.4	55.37
036.0	100.0000	0262.5	100.2	136.5	018.9625	0105.9	056.0	54.73
037.0	100.0000	0266.8	100.6	135.8	018.9625	0105.8	057.6	54.10
038.0	100.0000	0271.5	101.0	135.1	018.9625	0105.8	059.3	53.48
039.0	100.0000	0275.3	101.4	134.6	018.9625	0105.8	061.0	52.88
040.0	100.0000	0278.6	101.7	134.1	018.9625	0105.8	062.8	52.28
041.0	100.0000	0279.8	101.8	133.9	018.9625	0105.8	064.5	51.72
042.0	100.0000	0280.0	101.8	133.8	018.9625	0105.8	066.3	51.17
043.0	100.0000	0280.0	101.8	133.8	018.9625	0105.8	068.1	50.63
044.0	100.0000	0285.8	102.3	133.3	018.9625	0105.9	069.8	50.09
045.0	100.0000	0294.9	103.1	132.7	018.9625	0105.6	071.7	49.54
046.0	100.0000	0304.1	103.9	132.2	018.9625	0105.4	073.5	48.99
047.0	100.0000	0313.3	104.6	131.7	018.9625	0105.2	075.4	48.44
048.0	100.0000	0324.6	105.5	131.2	018.9625	0105.0	077.3	47.88
049.0	100.0000	0337.7	106.4	130.7	018.9625	0104.9	079.2	47.32
050.0	100.0000	0350.9	107.4	130.2	018.9625	0104.9	081.2	46.75
051.0	100.0000	0363.1	108.3	129.8	018.9625	0104.9	083.2	46.19
052.0	100.0000	0373.7	109.1	129.5	018.9625	0104.9	085.3	45.62
053.0	100.0000	0382.2	109.8	129.3	018.9625	0104.9	087.3	45.05
054.0	100.0000	0389.2	110.4	129.2	018.9625	0104.9	089.3	44.50
055.0	100.0000	0396.7	111.1	129.1	018.9625	0104.9	091.3	43.95
056.0	100.0000	0402.3	111.6	129.2	018.9625	0104.9	093.3	43.42
057.0	100.0000	0405.7	111.9	129.3	018.9625	0104.9	095.3	42.92
058.0	100.0000	0409.0	112.2	129.5	018.9625	0104.9	097.2	42.43
059.0	100.0000	0412.3	112.5	129.7	018.9625	0104.9	099.2	41.96
060.0	100.0000	0414.6	112.7	130.0	018.9625	0104.9	101.1	41.51
061.0	100.0000	0416.1	112.8	130.3	018.9625	0104.9	103.0	41.09
062.0	100.0000	0417.4	112.9	130.6	018.9625	0104.9	104.9	40.68
063.0	100.0000	0418.3	113.0	131.0	018.9625	0105.0	106.7	40.29
064.0	100.0000	0419.0	113.1	131.3	018.9625	0105.1	108.6	39.92
065.0	100.0000	0419.4	113.1	131.7	018.9625	0105.2	110.4	39.57
066.0	100.0000	0419.8	113.1	132.1	018.9625	0105.4	112.2	39.23
067.0	100.0000	0420.0	113.2	132.5	018.9625	0105.5	114.0	38.90
068.0	100.0000	0420.2	113.2	132.9	018.9625	0105.7	115.8	38.59
069.0	100.0000	0177.4	091.8	143.5	018.9625	0106.9	110.2	39.67