

# WVNK(CP) CH 216 v. WRGB - Wide View

## WVNK - Proposed

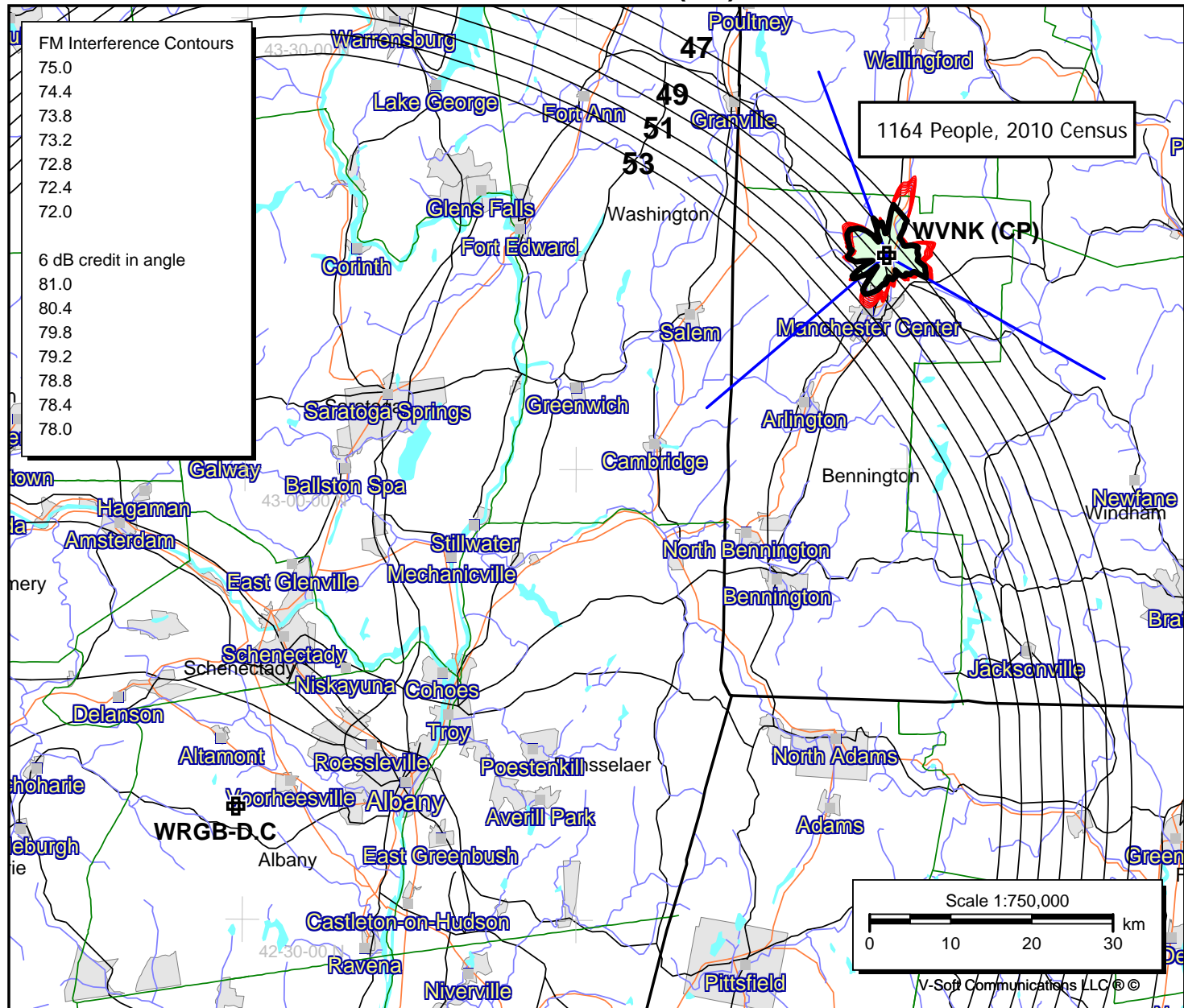
Manchester, VT  
 Latitude: 43-14-12.10 N  
 Longitude: 073-01-43.70 W  
 Study ERP: 0.12 kW  
 0.117 kW H + 0.117 kW V/40  
 Channel: 216  
 Frequency: 91.1 MHz  
 AMSL Height: 655.0 m  
 HAAT: 138.4 m  
 Horiz. Pattern: Omni

## WRGB-D.C

BPCDT20090622ABV  
 Latitude: 42-37-31 N  
 Longitude: 074-00-38 W  
 ERP: 30.20 kW  
 Channel: 6  
 Frequency: 85.0 MHz  
 AMSL Height: 649.0 m  
 HAAT: 392.0 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: Yes  
 Elec Tilt: 0.0

6/14/2011

**Doug Vernier**  
 401 Main Street, Suite 213  
 Cedar Falls, Iowa 50613  
 Telecommunication Consultants  
 dvernier@vsoft.com (319)266-4402



# WVNK (CP) CH 216 v. WRGB (Close View)

## WVNK (CP)

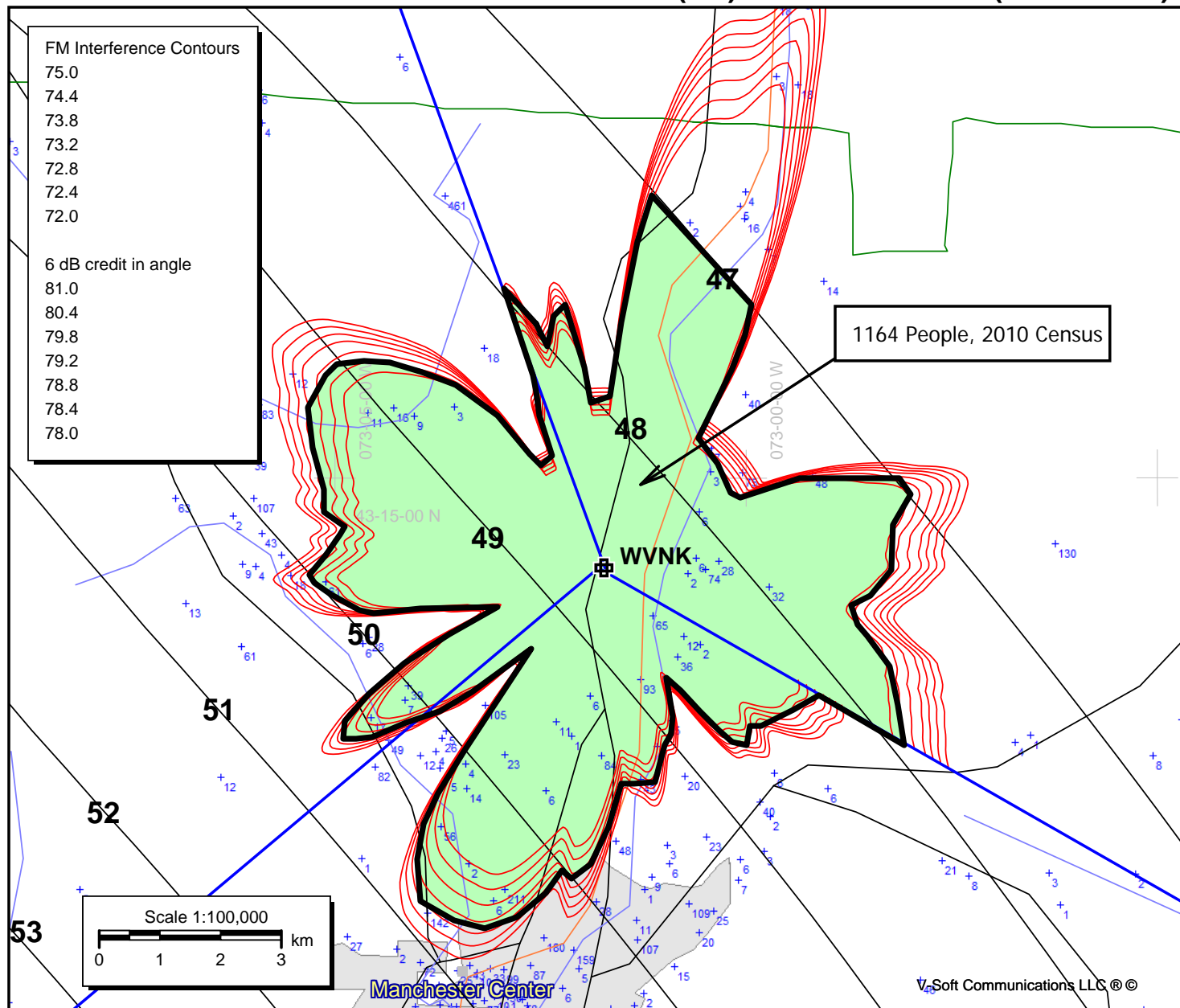
Manchester, VT  
 Latitude: 43-14-12.10 N  
 Longitude: 073-01-43.70 W  
 Study ERP: 0.12 kW  
 0.117 kW H + 0.117 kW V/40  
 Channel: 216  
 Frequency: 91.1 MHz  
 AMSL Height: 655.0 m  
 HAAT: 138.4 m  
 Horiz. Pattern: Omni

## WRGB-D.C

BPCDT20090622ABV  
 Latitude: 42-37-31 N  
 Longitude: 074-00-38 W  
 ERP: 30.20 kW  
 Channel: 6  
 Frequency: 85.0 MHz  
 AMSL Height: 649.0 m  
 HAAT: 392.0 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: Yes  
 Elec Tilt: 0.0

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# Channel-Six TV Protection Study

WRGB CP 06 1C Dom 30.200 kW 392 M HAAT THN Non-DA  
Schenectady NY 649.0 M COR AMSL  
Lat= 42 37 31.0, Lng= 74 00 38.0  
Freedom Broadcasting Of New  
Fac ID# 73942 BPCDT20090622ABV  
Dist.=105.06 km, Azi=230.0°, Rev Azi=49.3°

Direct line HAAT Grade B, 47 dBu= 109.74 km & Grade A= 57.8 km

Distance from reference to Grade B = -4.68 km

Cutoff Dist from Full Service or Class CA= 177

Maximum Co-located power= 67.6 kW

WRGB Signal Contour at Reference location = 48.7 dBu

73.525 CH. 216, U/D ratio = 31.3 dB, Maximum FM signal = 80.0 dBu

6 dB credit to TV Contour added

## TV/FM D to U values

47.0	81.0	55.0	77.7	63.0	78.6	71.0	83.4	79.0	90.0	87.0	96.9
48.0	80.4	56.0	77.6	64.0	79.0	72.0	84.2	80.0	90.8	88.0	97.7
49.0	79.8	57.0	77.6	65.0	79.4	73.0	85.0	81.0	91.7	89.0	98.6
50.0	79.2	58.0	77.5	66.0	80.0	74.0	85.8	82.0	92.6	90.0	99.5
51.0	78.8	59.0	77.5	67.0	80.6	75.0	86.6	83.0	93.5	91.0	99.5
52.0	78.4	60.0	77.8	68.0	81.2	76.0	87.5	84.0	94.3	92.0	99.5
53.0	78.0	61.0	78.0	69.0	81.9	77.0	88.3	85.0	95.2	93.0	99.5
54.0	77.9	62.0	78.3	70.0	82.7	78.0	89.1	86.0	96.0	94.0	99.5

# Channel-Six TV Protection Study

WRGB CP 06 1C Dom 30.200 kW 392 M HAAT THN Non-DA  
Schenectady NY 649.0 M COR AMSL  
Lat= 42 37 31.0, Lng= 74 00 38.0  
Freedom Broadcasting Of New  
Fac ID# 73942 BPCDT20090622ABV  
Dist.=105.06 km, Azi=230.0°, Rev Azi=49.3°

Direct line HAAT Grade B, 47 dBu= 109.74 km & Grade A= 57.8 km

Distance from reference to Grade B = -4.68 km

Cutoff Dist from Full Service or Class CA= 177

Maximum Co-located power= 67.6 kW

WRGB Signal Contour at Reference location = 48.7 dBu

73.525 CH. 216, U/D ratio = 25.3 dB, Maximum FM signal = 74.0 dBu

Add 6 dB to TV Contour if within angle.

## TV/FM D to U values

47.0	75.0	55.0	71.7	63.0	72.6	71.0	77.4	79.0	84.0	87.0	90.9
48.0	74.4	56.0	71.6	64.0	73.0	72.0	78.2	80.0	84.8	88.0	91.7
49.0	73.8	57.0	71.6	65.0	73.4	73.0	79.0	81.0	85.7	89.0	92.6
50.0	73.2	58.0	71.5	66.0	74.0	74.0	79.8	82.0	86.6	90.0	93.5
51.0	72.8	59.0	71.5	67.0	74.6	75.0	80.6	83.0	87.5	91.0	93.5
52.0	72.4	60.0	71.8	68.0	75.2	76.0	81.5	84.0	88.3	92.0	93.5
53.0	72.0	61.0	72.0	69.0	75.9	77.0	82.3	85.0	89.2	93.0	93.5
54.0	71.9	62.0	72.3	70.0	76.7	78.0	83.1	86.0	90.0	94.0	93.5

N. Lat. = 431412.1 W. Lng. = 730143.7  
 HAAT and Distance to Contour,  
 FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

WV NK CH-6 F(50-10) Interference Contour Distances with 6 dB Antenna Directivity Credit

Azi .	AV EL	HAAT	ERP kW	dBk	Field	81-F1	80.4-F1	79.8-F1	79.2-F1	78.8-F1	78.4-F1	78-F1
000	613.6	41.4	0.1200	-9.21	1.000	2.13	2.20	2.27	2.34	2.39	2.44	2.49
010	416.0	239.0	0.1200	-9.21	1.000	4.51	4.72	4.94	5.17	5.32	5.48	5.64
020	310.2	344.8	0.1200	-9.21	1.000	5.10	5.37	5.64	5.91	6.11	6.31	6.50
030	545.0	110.0	0.1200	-9.21	1.000	3.26	3.39	3.52	3.66	3.76	3.86	3.95
040	679.6	-24.6	0.1200	-9.21	1.000	1.80	1.86	1.93	1.99	2.04	2.09	2.14
050	723.6	-68.6	0.1200	-9.21	1.000	1.80	1.86	1.93	1.99	2.04	2.09	2.14
060	635.5	19.5	0.1200	-9.21	1.000	1.80	1.86	1.93	1.99	2.04	2.09	2.14
070	571.7	83.3	0.1200	-9.21	1.000	2.87	2.97	3.08	3.20	3.28	3.36	3.44
080	536.9	118.1	0.1200	-9.21	1.000	3.36	3.49	3.64	3.78	3.88	3.98	4.08
090	554.7	100.3	0.1200	-9.21	1.000	3.12	3.25	3.37	3.50	3.59	3.69	3.78
100	568.4	86.6	0.1200	-9.21	1.000	2.91	3.02	3.14	3.26	3.34	3.42	3.51
110	531.7	123.3	0.1200	-9.21	1.000	3.42	3.56	3.70	3.85	3.95	4.05	4.16
120	505.8	149.2	0.1200	-9.21	1.000	3.72	3.88	4.04	4.21	4.32	4.44	4.56
130	522.7	132.3	0.1200	-9.21	1.000	3.52	3.67	3.82	3.97	4.07	4.18	4.29
140	542.5	112.5	0.1200	-9.21	1.000	3.29	3.42	3.56	3.70	3.80	3.89	3.99
150	613.4	41.6	0.1200	-9.21	1.000	2.13	2.21	2.28	2.35	2.40	2.45	2.49
160	580.8	74.2	0.1200	-9.21	1.000	2.74	2.83	2.92	3.02	3.10	3.18	3.26
170	549.8	105.2	0.1200	-9.21	1.000	3.19	3.32	3.45	3.59	3.68	3.78	3.87
180	498.1	156.9	0.1200	-9.21	1.000	3.81	3.97	4.14	4.32	4.43	4.55	4.68
190	419.9	235.1	0.1200	-9.21	1.000	4.48	4.70	4.91	5.14	5.29	5.44	5.60
200	249.2	405.8	0.1200	-9.21	1.000	5.36	5.62	5.89	6.18	6.38	6.60	6.83
210	308.1	346.9	0.1200	-9.21	1.000	5.11	5.38	5.65	5.92	6.12	6.32	6.52
220	611.8	43.2	0.1200	-9.21	1.000	2.18	2.25	2.32	2.39	2.44	2.49	2.54
230	538.5	116.5	0.1200	-9.21	1.000	3.34	3.47	3.62	3.76	3.86	3.95	4.06
240	474.2	180.8	0.1200	-9.21	1.000	4.06	4.24	4.42	4.61	4.74	4.87	5.01
250	614.8	40.2	0.1200	-9.21	1.000	2.09	2.16	2.24	2.31	2.36	2.41	2.45
260	523.5	131.5	0.1200	-9.21	1.000	3.51	3.66	3.81	3.96	4.06	4.17	4.28
270	448.3	206.7	0.1200	-9.21	1.000	4.28	4.46	4.66	4.87	5.00	5.15	5.29
280	472.7	182.3	0.1200	-9.21	1.000	4.08	4.26	4.44	4.63	4.76	4.89	5.02
290	426.1	228.9	0.1200	-9.21	1.000	4.44	4.65	4.86	5.08	5.23	5.38	5.53
300	356.8	298.2	0.1200	-9.21	1.000	4.88	5.13	5.39	5.65	5.83	6.01	6.20
310	340.9	314.1	0.1200	-9.21	1.000	4.96	5.22	5.48	5.75	5.93	6.12	6.31
320	481.8	173.2	0.1200	-9.21	1.000	3.99	4.17	4.34	4.52	4.65	4.78	4.92
330	652.0	3.0	0.1200	-9.21	1.000	1.80	1.86	1.93	1.99	2.04	2.09	2.14
340	587.9	67.1	0.1200	-9.21	1.000	2.63	2.72	2.81	2.91	2.97	3.03	3.11
350	578.4	76.6	0.1200	-9.21	1.000	2.77	2.87	2.96	3.07	3.15	3.23	3.31

Ave EI = 516.25 M HAAT= 138.75 M AMSL= 655 M

N. Lat. = 431412.1 W. Lng. = 730143.7  
 HAAT and Distance to Contour,  
 FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

WVWK CH-6 F(50-10) Interference Distances to Contours

Azi.	AV EL	HAAT	ERP kW	dBk	Field	75-F1	74.4-F1	73.8-F1	73.2-F1	72.8-F1	72.4-F1	72-F1
000	613.6	41.4	0.1200	-9.21	1.000	2.92	3.01	3.12	3.23	3.31	3.38	3.46
010	416.0	239.0	0.1200	-9.21	1.000	6.91	7.18	7.46	7.76	7.96	8.17	8.38
020	310.2	344.8	0.1200	-9.21	1.000	8.20	8.57	8.94	9.31	9.56	9.81	10.06
030	545.0	110.0	0.1200	-9.21	1.000	4.78	4.96	5.15	5.34	5.47	5.60	5.73
040	679.6	-24.6	0.1200	-9.21	1.000	2.51	2.59	2.68	2.77	2.83	2.88	2.94
050	723.6	-68.6	0.1200	-9.21	1.000	2.51	2.59	2.68	2.77	2.83	2.88	2.94
060	635.5	19.5	0.1200	-9.21	1.000	2.51	2.59	2.68	2.77	2.83	2.88	2.94
070	571.7	83.3	0.1200	-9.21	1.000	4.13	4.29	4.44	4.61	4.72	4.84	4.95
080	536.9	118.1	0.1200	-9.21	1.000	4.95	5.14	5.33	5.52	5.66	5.79	5.93
090	554.7	100.3	0.1200	-9.21	1.000	4.55	4.73	4.91	5.09	5.21	5.34	5.47
100	568.4	86.6	0.1200	-9.21	1.000	4.22	4.37	4.53	4.70	4.82	4.93	5.05
110	531.7	123.3	0.1200	-9.21	1.000	5.04	5.24	5.43	5.63	5.77	5.90	6.04
120	505.8	149.2	0.1200	-9.21	1.000	5.53	5.74	5.95	6.16	6.31	6.46	6.61
130	522.7	132.3	0.1200	-9.21	1.000	5.21	5.41	5.61	5.82	5.95	6.09	6.24
140	542.5	112.5	0.1200	-9.21	1.000	4.83	5.01	5.21	5.40	5.53	5.66	5.79
150	613.4	41.6	0.1200	-9.21	1.000	2.93	3.02	3.13	3.24	3.32	3.39	3.46
160	580.8	74.2	0.1200	-9.21	1.000	3.90	4.04	4.19	4.34	4.44	4.55	4.66
170	549.8	105.2	0.1200	-9.21	1.000	4.67	4.85	5.03	5.22	5.35	5.47	5.60
180	498.1	156.9	0.1200	-9.21	1.000	5.68	5.88	6.10	6.32	6.47	6.62	6.77
190	419.9	235.1	0.1200	-9.21	1.000	6.85	7.12	7.40	7.70	7.90	8.10	8.31
200	249.2	405.8	0.1200	-9.21	1.000	8.77	9.17	9.58	9.98	10.25	10.52	10.79
210	308.1	346.9	0.1200	-9.21	1.000	8.23	8.59	8.96	9.33	9.58	9.83	10.09
220	611.8	43.2	0.1200	-9.21	1.000	2.98	3.08	3.19	3.31	3.38	3.46	3.53
230	538.5	116.5	0.1200	-9.21	1.000	4.91	5.10	5.30	5.49	5.62	5.76	5.89
240	474.2	180.8	0.1200	-9.21	1.000	6.06	6.29	6.52	6.76	6.92	7.09	7.26
250	614.8	40.2	0.1200	-9.21	1.000	2.88	2.96	3.07	3.18	3.25	3.33	3.40
260	523.5	131.5	0.1200	-9.21	1.000	5.20	5.40	5.60	5.80	5.94	6.08	6.22
270	448.3	206.7	0.1200	-9.21	1.000	6.43	6.68	6.93	7.20	7.38	7.56	7.76
280	472.7	182.3	0.1200	-9.21	1.000	6.09	6.31	6.54	6.79	6.95	7.12	7.29
290	426.1	228.9	0.1200	-9.21	1.000	6.76	7.03	7.31	7.59	7.79	7.98	8.19
300	356.8	298.2	0.1200	-9.21	1.000	7.69	8.02	8.35	8.69	8.92	9.15	9.38
310	340.9	314.1	0.1200	-9.21	1.000	7.87	8.21	8.55	8.90	9.14	9.37	9.61
320	481.8	173.2	0.1200	-9.21	1.000	5.95	6.17	6.40	6.63	6.79	6.95	7.11
330	652.0	3.0	0.1200	-9.21	1.000	2.51	2.59	2.68	2.77	2.83	2.88	2.94
340	587.9	67.1	0.1200	-9.21	1.000	3.72	3.86	3.99	4.14	4.24	4.34	4.44
350	578.4	76.6	0.1200	-9.21	1.000	3.96	4.11	4.26	4.41	4.51	4.63	4.74

Ave EI = 516.25 M HAAT= 138.75 M AMSL= 655 M

N. Lat. = 423731.0 W. Lng. = 740038.0  
 HAAT and Distance to Contour,  
 FCC OET,TV 3.2 - 16.1, 130 pts - FCC 30 SEC

WRGB-D, Freedom Broadcasting Of New, BPCDT20090622ABV - Protected Contours

Azi.	AV EL	HAAT	ERP kW	dBk	Field	47-F5	49-F5	51-F5	53-F5
000	132.5	516.5	30.2000	14.80	1.000	107.02	101.67	96.60	91.84
010	106.0	543.0	30.2000	14.80	1.000	109.23	103.72	98.47	93.53
020	103.4	545.6	30.2000	14.80	1.000	109.42	103.90	98.63	93.68
030	104.8	544.2	30.2000	14.80	1.000	109.32	103.81	98.54	93.60
040	98.7	550.3	30.2000	14.80	1.000	109.76	104.22	98.92	93.94
050	98.6	550.4	30.2000	14.80	1.000	109.77	104.23	98.92	93.95
060	91.2	557.8	22.6487	13.55	0.866	106.76	101.32	96.17	91.34
070	85.1	563.9	14.2950	11.55	0.688	101.66	96.49	91.63	86.93
080	84.5	564.5	11.2374	10.51	0.610	98.95	93.95	89.20	84.51
090	89.4	559.6	15.3958	11.87	0.714	102.29	97.08	92.20	87.48

AMSL= 649 M