

# Manchester 216 v. WRGB (Large Scale)

## Man216

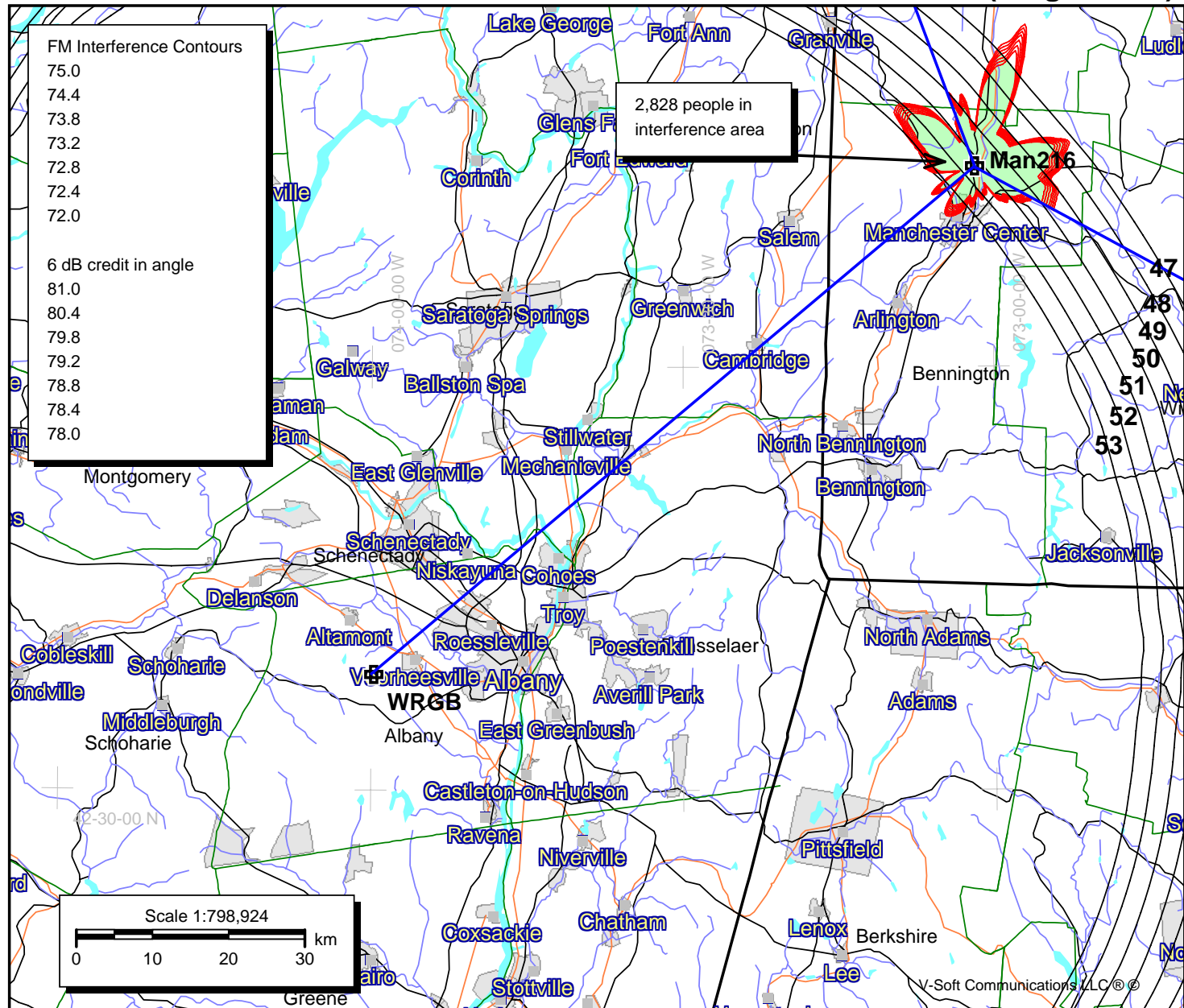
Manchester, VT  
 Latitude: 43-14-12.10 N  
 Longitude: 073-01-43.70 W  
 Study ERP: 2.4088 kW  
 2.35 kW H + 2.35 kW V/40  
 Channel: 216  
 Frequency: 91.1 MHz  
 AMSL Height: 655.0 m  
 HAAT: 138.4 m  
 Horiz. Pattern: Directional

## WRGB

BLCT2492  
 Latitude: 42-38-12 N  
 Longitude: 073-59-45 W  
 ERP: 93.30 kW  
 Channel: 06Z  
 Frequency: 85.0 MHz  
 AMSL Height: 555.0 m  
 HAAT: 311.0 m  
 Horiz. Pattern: Omni  
 Vert. Pattern: Yes  
 Elec Tilt: 0.0

10/16/2007

**V** Doug Vernier  
 721 West 1st Street, Suite A  
 Cedar Falls, Iowa 50613  
 (319) 366-8402  
 Telecommunications Consultants



## Manchester 216 v. WRGB (Small Scale)

### Man216

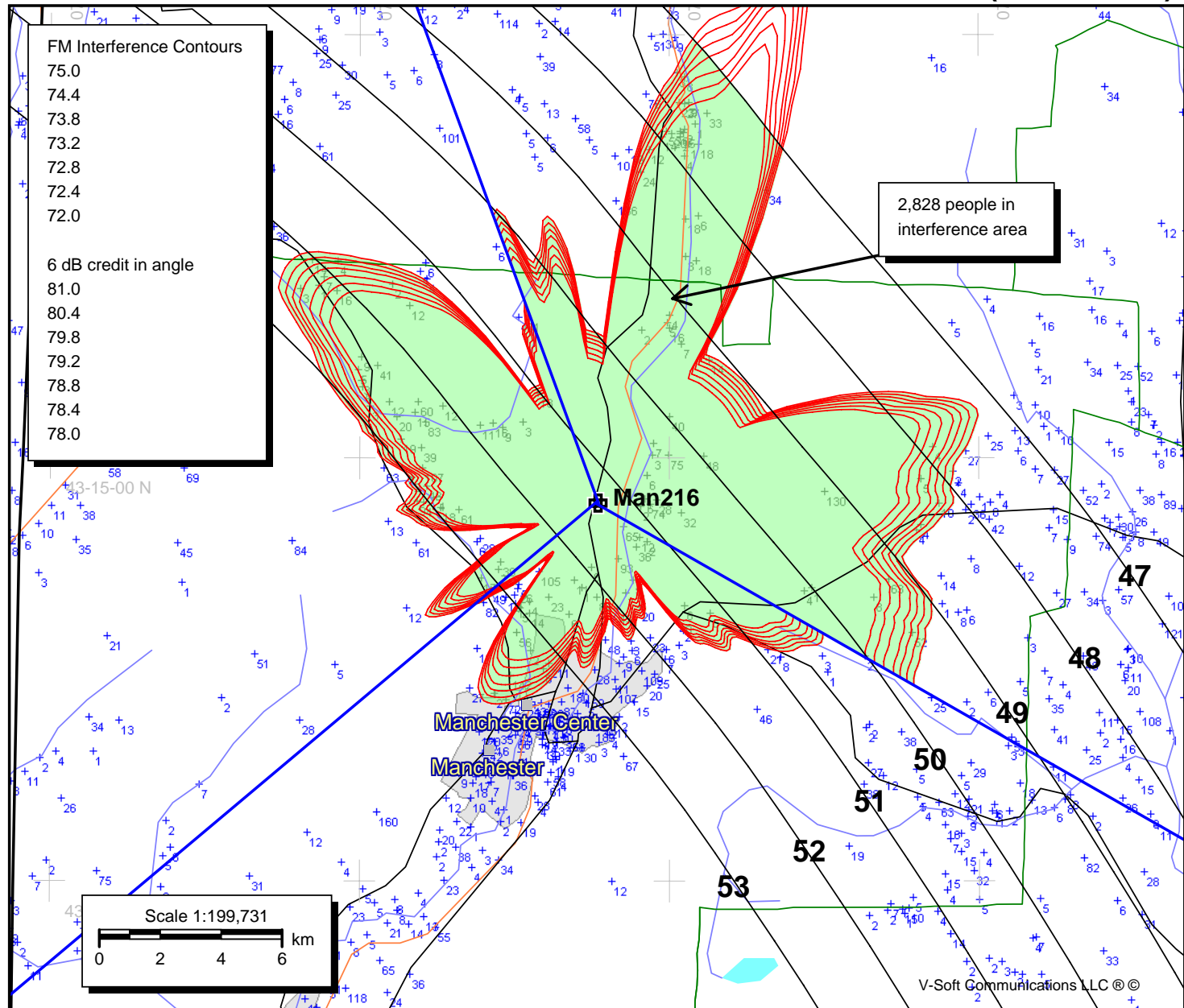
Manchester, VT  
Latitude: 43-14-12.10 N  
Longitude: 073-01-43.70 W  
Study ERP: 2.4088 kW  
2.35 kW H + 2.35 kW V/40  
Channel: 216  
Frequency: 91.1 MHz  
AMSL Height: 655.0 m  
HAAT: 138.4 m  
Horiz. Pattern: Directional

### WRGB

BLCT2492  
Latitude: 42-38-12 N  
Longitude: 073-59-45 W  
ERP: 93.30 kW  
Channel: 06Z  
Frequency: 85.0 MHz  
AMSL Height: 555.0 m  
HAAT: 311.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: Yes  
Elec Tilt: 0.0

10/16/2007

**V** Doug Vernier  
721 West 1st Street, Suite A  
Cedar Falls, Iowa 50613  
(319) 366-8402  
Telecommunications Consultants



N. Lat. = 431412.1 W. Lng. = 730143.7  
 HAAT and Distance to Contour - FCC Method - USGS 03 SEC

Manchester 216 - Distance to Interference Contours for TV 6 Protection

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
340	574.2	80.8	2.1469	3.32	0.950	8.40	8.71	9.03	9.36	9.58	9.80	10.03
350	577.0	78.0	1.8970	2.78	0.893	7.96	8.27	8.58	8.90	9.12	9.34	9.56
000	646.3	8.7	1.5035	1.77	0.795	4.64	4.82	5.00	5.18	5.31	5.43	5.56
010	410.2	244.8	0.9989	0.00	0.648	12.13	12.53	12.95	13.38	13.68	13.99	14.31
020	283.0	372.0	1.2469	0.96	0.724	16.02	16.75	17.48	18.22	18.71	19.21	19.72
030	553.2	101.8	1.8380	2.64	0.879	9.11	9.43	9.75	10.09	10.32	10.55	10.79
040	678.1	-23.1	2.2060	3.44	0.963	5.14	5.33	5.52	5.71	5.85	5.98	6.12
050	723.1	-68.1	2.3645	3.74	0.997	5.23	5.42	5.62	5.81	5.95	6.09	6.23
060	637.5	17.5	2.4088	3.76	1.000	5.24	5.43	5.62	5.82	5.95	6.09	6.24
070	568.0	87.0	2.4088	3.76	1.000	8.97	9.29	9.62	9.96	10.18	10.41	10.65
080	534.7	120.3	2.4088	3.76	1.000	10.50	10.86	11.22	11.60	11.86	12.13	12.40
090	549.9	105.1	2.4088	3.76	1.000	9.86	10.20	10.54	10.90	11.14	11.39	11.65
100	575.4	79.6	2.3033	3.62	0.984	8.48	8.80	9.13	9.45	9.68	9.90	10.13
110	537.3	117.7	1.8380	2.64	0.879	9.77	10.10	10.44	10.80	11.04	11.29	11.54
120	508.7	146.3	1.3668	1.36	0.758	10.13	10.47	10.83	11.19	11.44	11.70	11.96

Ave EI = 557.11 M HAAT= 97.89 M AMSL= 655 M

N. Lat. = 431412.1 W. Lng. = 730143.7  
 HAAT and Distance to Contour - FCC Method - USGS 03 SEC

Manchester 216 - Distance to Interference Contours for TV 6 Protection

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
120	508.7	146.3	1.3668	1.36	0.758	7.15	7.39	7.65	7.93	8.12	8.32	8.52
130	518.0	137.0	0.9501	-0.22	0.632	6.33	6.55	6.78	7.01	7.17	7.33	7.49
140	538.1	116.9	0.6163	-2.10	0.509	5.27	5.47	5.67	5.87	6.00	6.14	6.29
150	615.7	39.3	0.3999	-3.98	0.410	2.74	2.82	2.91	3.00	3.07	3.15	3.22
160	581.0	74.0	0.2654	-5.76	0.334	3.34	3.46	3.59	3.73	3.82	3.91	4.00
170	550.8	104.2	0.1747	-7.58	0.271	3.53	3.67	3.81	3.96	4.06	4.16	4.27
180	489.4	165.6	0.1131	-9.47	0.218	3.84	4.00	4.18	4.36	4.47	4.60	4.73
190	432.7	222.3	0.0859	-10.66	0.190	3.95	4.13	4.32	4.51	4.65	4.79	4.93
200	248.4	406.6	0.1151	-9.39	0.220	5.28	5.54	5.81	6.09	6.30	6.50	6.73
210	300.9	354.1	0.1760	-7.55	0.272	5.90	6.19	6.49	6.81	7.03	7.26	7.49
220	605.0	50.0	0.2513	-6.00	0.325	2.78	2.86	2.95	3.05	3.12	3.20	3.27
230	534.7	120.3	0.2591	-5.87	0.330	4.21	4.37	4.54	4.72	4.85	4.97	5.10
240	469.0	186.0	0.2242	-6.49	0.307	4.97	5.17	5.38	5.59	5.74	5.88	6.03
250	625.2	29.8	0.2098	-6.78	0.297	2.07	2.14	2.22	2.29	2.34	2.39	2.44
260	509.8	145.2	0.1892	-7.23	0.282	4.20	4.37	4.55	4.74	4.86	4.99	5.12
270	456.6	198.4	0.2436	-6.13	0.320	5.23	5.44	5.66	5.88	6.03	6.19	6.34
280	482.4	172.6	0.3749	-4.26	0.397	5.57	5.78	5.99	6.22	6.37	6.52	6.68
290	432.2	222.8	0.5900	-2.29	0.498	7.08	7.35	7.63	7.93	8.14	8.34	8.55
300	352.9	302.1	0.9174	-0.37	0.621	9.34	9.70	10.06	10.42	10.67	10.92	11.17
310	337.6	317.4	1.4214	1.53	0.773	10.73	11.11	11.49	11.89	12.16	12.44	12.72
320	487.9	167.1	1.9440	2.89	0.904	8.40	8.72	9.03	9.35	9.57	9.80	10.02
330	672.8	-17.8	2.3127	3.64	0.986	3.66	3.79	3.92	4.05	4.15	4.25	4.35
340	574.2	80.8	2.1469	3.32	0.950	5.96	6.16	6.37	6.58	6.73	6.88	7.03

Ave EI = 492.35 M HAAT= 162.65 M AMSL= 655 M

N. Lat. = 423812.0 W. Lng. = 735945.0  
 HAAT and Distance to Contour - FCC Method - USGS 03 SEC

WRGB , Freedom Broadcasting Of New , BLCT2492												
Azi .	AV EL	HAAT	ERP kW	dBk	Fi el d	47-F5	48-F5	49-F5	50-F5	51-F5	52-F5	53-F5
000	98.0	457.0	93.3000	19.70	1.000	115.59	112.64	109.77	107.01	104.34	101.75	99.23
010	99.0	456.0	93.3000	19.70	1.000	115.49	112.54	109.68	106.92	104.25	101.66	99.15
020	102.1	452.9	93.3000	19.70	1.000	115.22	112.27	109.41	106.66	104.00	101.42	98.91
030	99.5	455.5	93.3000	19.70	1.000	115.45	112.50	109.64	106.88	104.21	101.63	99.11
040	95.1	459.9	93.3000	19.70	1.000	115.85	112.89	110.02	107.25	104.57	101.98	99.46
050	99.5	455.5	93.3000	19.70	1.000	115.45	112.50	109.64	106.88	104.21	101.62	99.11
060	90.8	464.2	93.3000	19.70	1.000	116.24	113.28	110.40	107.62	104.93	102.32	99.79
070	76.8	478.2	93.3000	19.70	1.000	117.53	114.56	111.66	108.85	106.12	103.47	100.90
080	75.4	479.6	93.3000	19.70	1.000	117.66	114.69	111.79	108.97	106.24	103.59	101.01
090	78.8	476.2	93.3000	19.70	1.000	117.35	114.37	111.47	108.66	105.94	103.30	100.73

Ave EI = 91.50 M HAAT= 463.50 M AMSL= 555 M

# Channel-Six TV Protection Study

WRGB LI 06Z 1C Dom Int 93.300 kW 311 M HAAT VHN  
Schenectady NY 555.0 M COR AMSL  
Lat= 42 38 12.0, Lng= 73 59 45.0  
Freedom Broadcasting Of New BLCT2492  
Fac ID# 73942  
Dist.=103.32 km, Azi=230.0°, Rev Azi=49.4°

Direct line HAAT Grade B, 47 dBu= 115.42 km & Grade A= 63.29 km

Distance from reference to Grade B = -12.1 km  
Cutoff Dist from Full Service or Class CA= 177  
Maximum Co-located power= 67.6 kW

WRGB Signal Contour at Reference location = 51.3 dBu  
CH. 216, U/D ratio = 27.3 dB, Maximum FM signal = 78.7 dBu , 6 dB credit 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            LI   06Z 1C Dom   Int 93.300 kW   311 M HAAT VHN  
Schenectady            NY            555.0 M COR AMSL  
Lat= 42 38 12.0,        Lng= 73 59 45.0  
Freedom Broadcasting Of New        BLCT2492  
Fac ID# 73942  
Dist.=103.32 km,    Azi=230.0°,    Rev Azi=49.4°

Direct line HAAT Grade B, 47 dBu= 115.42 km & Grade A= 63.29 km

Distance from reference to Grade B = -12.1 km

Cutoff Dist from Full Service or Class CA= 177

Maximum Co-located power= 67.6 kW

WRGB            Signal Contour at Reference location = 51.3 dBu

CH. 216, U/D ratio = 21.3 dB, Maximum FM signal = 72.7 dBu , add 6 dB 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