

MB COMMUNICATIONS
New FM Translator
Penn Yan, NY
CH230FT, 93.9 MHz, 0.25 kW-DA (Vertical), 83m AAT

ENGINEERING STATEMENT

This engineering statement, with attached exhibits, was prepared on behalf of MB Communications, licensee of WYLF (850 kHz), Penn Yan, NY (FCC ID #39466; File #BL-19981026AC), in support of an application for an FM translator on channel 230 with power of 0.25 kW from a vertically polarized directional antenna. The proposed translator, to rebroadcast WYLF, has been assigned file number BNPFT-20170726AHK (ID #200771).

The proposed supporting mast shall be 19m (62') above ground level and shall be anti-resonated at the WYLF frequency so as to avoid interaction with the nearby WYLF tower.

This translator is a fill-in facility and the 60 dBu contour is well within the WYLF 2 mV/m service contour

ENVIRONMENTAL CONSIDERATIONS

This was addressed in FCC Docket # 93-62, released August 1, 1996. Table 1(B) on Page 67 of the document depicts the ANSI/IEEE C95.1-1992 (IEEE C95.1-1991) protection requirements. The maximum permissible exposure for uncontrolled environments in the 30 to 300 MHz spectrum is a power density of 0.2 milliwatts per centimeter squared (mw/cm^2).

Since the applicant will employ a Kathrein FMVMP-2 two-bay directional vertically polarized antenna, the vertical elevation pattern of that antenna has been used in determining the effective radiated power below the horizon toward all areas 2 meters above ground level. For the uncontrolled environment in the commercial FM spectrum 2 meters above ground level, the power density will be $0.0054 \text{ mw}/\text{cm}^2$, or 2.7 % of the allowed $0.2 \text{ mw}/\text{cm}^2$.

Should any maintenance worker require access to the structure, the applicant will either reduce power or cease operation until workers are outside the mast fence. Appropriate RF warning signs will be placed on all sides of the fence and it may be assumed that there will be no significant effect on the human environment with regard to exposure of the general public.

ATTACHED EXHIBITS

Figure 1 is an allocation map showing protection to pertinent FM facilities and also shows the proposed 60dBy contour is well within the WYLF 2 mV/m.

Figure 2 is a tabulation of allocation data for the translator and all studied FM facilities.

Figure 3 is a tabulation and polar plot of the Kathrein FMVMP-2 antenna, oriented 150 degrees from true north.

November 18, 2017

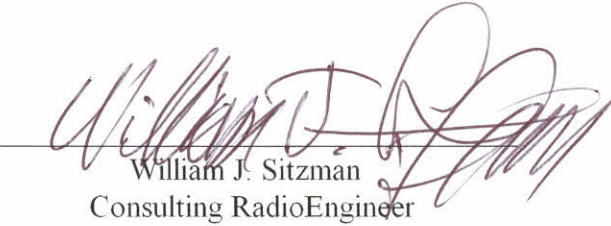
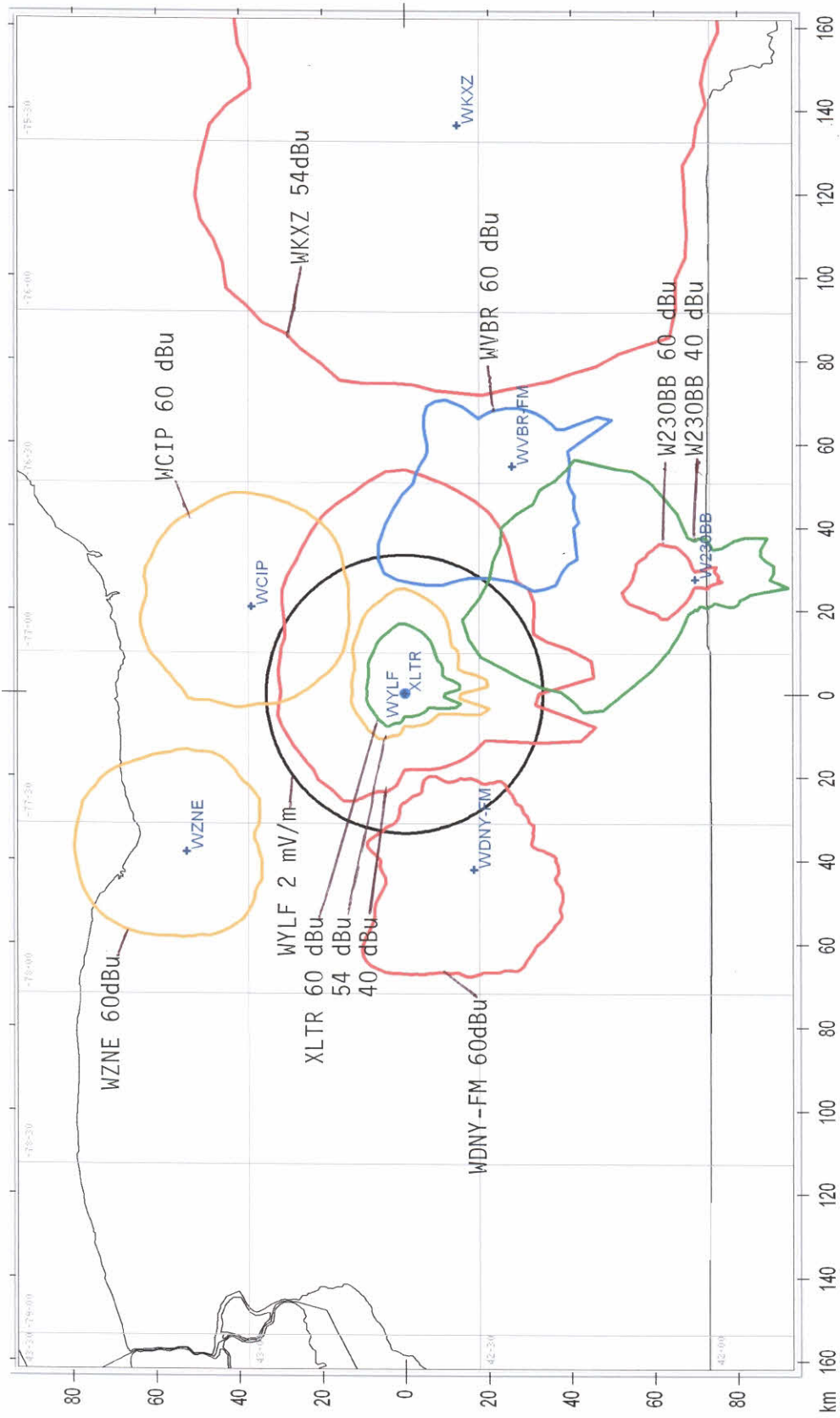

William J. Sitzman
Consulting Radio Engineer

FIGURE 1



WYLF Ch230FT Alloc Data

Callsign : XLTR
 Coordinates : 42-39-43.0 N, 77-07-11.0 W
 Frequency (MHz): 93.90000
 HAAT (m): 82.87 AMSL (m): 404.00
 Elevation (m): 385.00 Tower AGL (m): 19.00
 ERP (w): 250
 TX power (w): 0 Gain (dB): 0.00
 City/State : PENN YAN, NY
 ARN :
 Distance (km): 0
 Licensee :

|
 Callsign : WVBR-FM
 Coordinates : 42-25-45.0 N, 76-27-04.2 W
 Comments : Date Imported: 2017-07-12
 Frequency (MHz): 93.50000
 HAAT (m): 32.73 AMSL (m): 429.00
 Elevation (m): 389.00 Tower AGL (m): 40.00
 ERP (w): 3800
 TX power (w): 4 Gain (dB): 0.00
 City/State : ITHACA, NY
 ARN :
 Distance (km): 60
 Licensee : CORNELL MEDIA GUILD, INC.

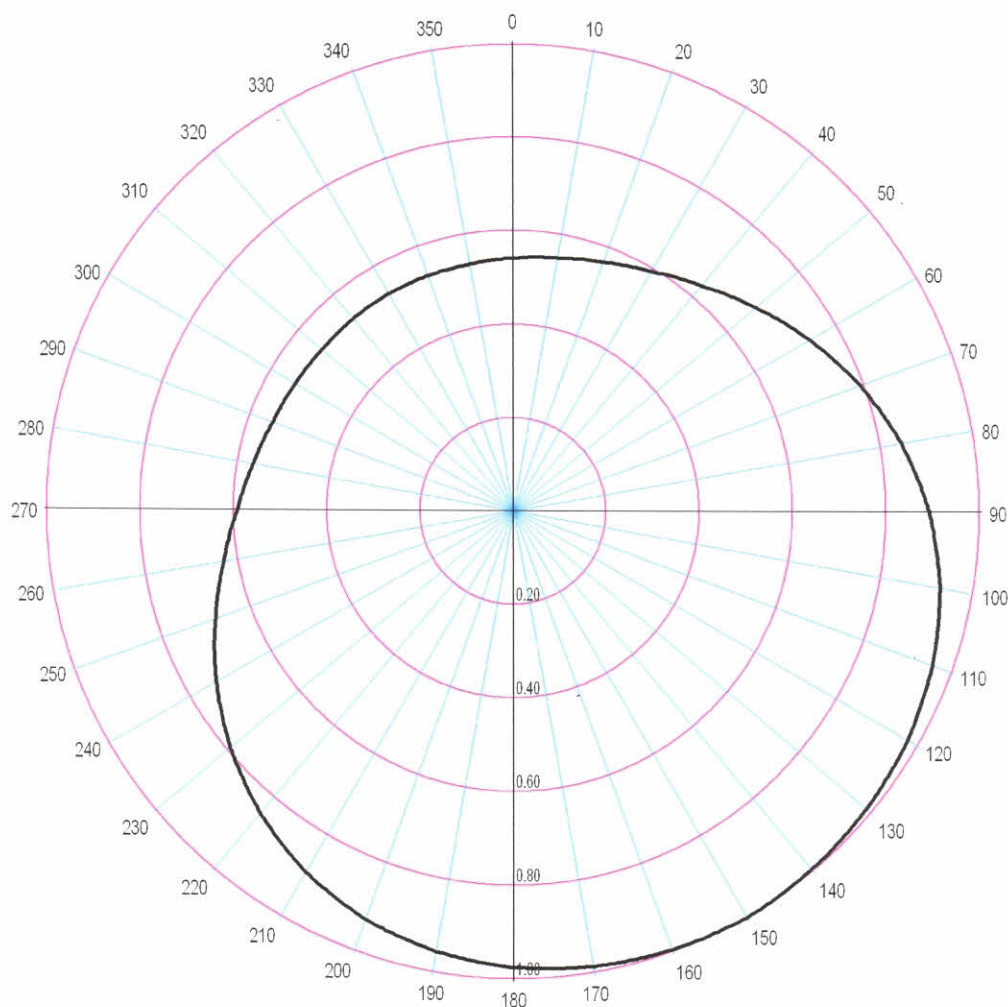
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 Callsign : WCIP
 Coordinates : 42-59-38.0 N, 76-51-59.0 W
 Comments : Date Imported: 2017-07-12
 Frequency (MHz): 93.70000
 HAAT (m): 42.81 AMSL (m): 241.00
 Elevation (m): 162.00 Tower AGL (m): 79.00
 ERP (w): 3800
 TX power (w): 4 Gain (dB): 0.00
 City/State : CLYDE, NY
 ARN :
 Distance (km): 42
 Licensee : FAMILY LIFE MINISTRIES, INC.

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 Callsign : W230BB
 Coordinates : 42-01-54.7 N, 76-47-02.2 W
 Comments : Primary call sign: WEHH; Date Imported: 2017-07-12
 Frequency (MHz): 93.90000
 HAAT (m): 125.65 AMSL (m): 580.00
 Elevation (m): 539.00 Tower AGL (m): 41.00
 ERP (w): 99
 TX power (w): 0 Gain (dB): 0.00
 City/State : ELMIRA, NY
 ARN :
 Distance (km): 75
 Licensee : TOWER BROADCASTING LLC

|
 Callsign : WDNV-FM
 Coordinates : 42-30-45.0 N, 77-38-07.0 W
 Comments : Date Imported: 2017-07-12
 Frequency (MHz): 93.90000
 HAAT (m): 167.70 AMSL (m): 684.00
 Elevation (m): 634.00 Tower AGL (m): 50.00
 ERP (w): 570
 TX power (w): 1 Gain (dB): 0.00
 City/State : DANSVILLE, NY
 ARN :
 Distance (km): 45
 Licensee : GENESEE MEDIA CORPORATION

|
 Callsign : WKXZ
 Coordinates : 42-32-51.0 N, 75-27-09.0 W
 Comments : Date Imported: 2017-07-12
 Frequency (MHz): 93.90000
 HAAT (m): 135.86 AMSL (m): 639.00
 Elevation (m): 598.00 Tower AGL (m): 41.00
 ERP (w): 26000
 TX power (w): 26 Gain (dB): 0.00
 City/State : NORWICH, NY
 ARN :
 Distance (km): 137
 Licensee : TOWNSQUARE MEDIA ONEONTA LICENSE, LLC

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 Callsign : WZNE
 Coordinates : 43-08-07.0 N, 77-35-07.0 W
 Comments : Auxiliary ; Date Imported: 2017-07-12
 Frequency (MHz): 94.10000
 HAAT (m): 79.93 AMSL (m): 247.00
 Elevation (m): 218.00 Tower AGL (m): 29.00
 ERP (w): 2500
 TX power (w): 3 Gain (dB): 0.00
 City/State : BRIGHTON, NY
 ARN :
 Distance (km): 64
 Licensee : STEPHENS MEDIA GROUP - ROCHESTER, LLC



KATHREIN 2-Bay FMVMP2Vertically polarised antenna

Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk
0.0	0.540	72.900	-11.373	90.0	0.892	198.916	-7.013	180.0	0.975	237.656	-6.241	270.0	0.592	87.616	-10.574
5.0	0.544	73.984	-11.309	95.0	0.910	207.025	-6.840	185.0	0.965	232.806	-6.330	275.0	0.579	83.810	-10.767
10.0	0.549	75.350	-11.229	100.0	0.929	215.760	-6.660	190.0	0.956	228.484	-6.411	280.0	0.566	80.089	-10.964
15.0	0.557	77.562	-11.103	105.0	0.942	221.841	-6.540	195.0	0.942	221.841	-6.540	285.0	0.557	77.562	-11.103
20.0	0.566	80.089	-10.964	110.0	0.956	228.484	-6.411	200.0	0.929	215.760	-6.660	290.0	0.549	75.350	-11.229
25.0	0.579	83.810	-10.767	115.0	0.965	232.806	-6.330	205.0	0.910	207.025	-6.840	295.0	0.544	73.984	-11.309
30.0	0.592	87.616	-10.574	120.0	0.975	237.656	-6.241	210.0	0.892	198.916	-7.013	300.0	0.540	72.900	-11.373
35.0	0.611	93.330	-10.300	125.0	0.981	240.590	-6.187	215.0	0.868	188.356	-7.250	305.0	0.537	72.092	-11.421
40.0	0.630	99.225	-10.034	130.0	0.987	243.542	-6.134	220.0	0.845	178.506	-7.483	310.0	0.535	71.556	-11.454
45.0	0.654	106.929	-9.709	135.0	0.991	245.520	-6.099	225.0	0.818	167.281	-7.766	315.0	0.534	71.289	-11.470
50.0	0.679	115.260	-9.383	140.0	0.995	247.506	-6.064	230.0	0.792	156.816	-8.046	320.0	0.534	71.289	-11.470
55.0	0.707	124.962	-9.032	145.0	0.997	248.502	-6.047	235.0	0.763	145.542	-8.370	325.0	0.534	71.289	-11.470
60.0	0.735	135.056	-8.695	150.0	1.000	250.000	-6.021	240.0	0.735	135.056	-8.695	330.0	0.535	71.556	-11.454
65.0	0.763	145.542	-8.370	155.0	0.997	248.502	-6.047	245.0	0.707	124.962	-9.032	335.0	0.534	71.289	-11.470
70.0	0.792	156.816	-8.046	160.0	0.995	247.506	-6.064	250.0	0.679	115.260	-9.383	340.0	0.534	71.289	-11.470
75.0	0.818	167.281	-7.766	165.0	0.991	245.520	-6.099	255.0	0.654	106.929	-9.709	345.0	0.534	71.289	-11.470
80.0	0.845	178.506	-7.483	170.0	0.987	243.542	-6.134	260.0	0.630	99.225	-10.034	350.0	0.535	71.556	-11.454
85.0	0.868	188.356	-7.250	175.0	0.981	240.590	-6.187	265.0	0.611	93.330	-10.300	355.0	0.537	72.092	-11.421

Orientation: 150°T