

[Exhibit 12]

## **Non-Interference Compliance**

Regarding FCC File Number: BNPFT-20030317HMW

Channel: 291

### **Description of Exhibit 12 Contents**

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all the applicable rule sections and that this application for a construction permit is in full compliance with 47 CFR 74.1204.

Page 2 of this exhibit is an explanation of the tabulated data, which is included as evidence on page 4 of this exhibit.

Page 3 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference protection provisions based on 47 CFR 74.1204(d), which states:

*"an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable."*

In addition, page 3 includes a tabulation of the second and third adjacent stations which this application is required to protect and the field strengths of those stations in the vicinity of the proposed translator. The field strengths given were based on contours predicted using FCC contour algorithms and 3 arc second terrain data.

**Let it be noted that should any actual real world interference occur, the applicant certifies that it will promptly suspend operation of this translator in accordance with 47 CFR 74.1203.**

Page 4 of this exhibit is the tabulated data from the interference analysis, which shows all stations that this application had to consider for contour protection. These tabulated values were generated using high resolution 3 arc second terrain data for the best possible accuracy.

Page 5 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 min quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using a free-space calculation (see FCC 98-117, Appendix A, pg. 41 for reference to the equation used).

## **Explanation of Frequency Finder Results**

The interference analysis for this application was performed using the "Frequency Finder" module in RadioSoft's Comstudy, version 2.2.

Frequency Finder analyzes data taken directly from the FCC's FM database and looks for prohibited overlap with contours of adjacent stations and prohibited proximity to stations 53 or 54 channels from the proposed station (IF) using 3 arc second terrain data and the FCC's contour algorithms. The results tabulated are the stations returned from that analysis. (Note: Because Comstudy was looking at the FCC's FM database, it took into account the proposed translator when doing the analysis and returned it in the tabulated results. For the sake of simplicity, that record has been deleted from all tabulated results.)

The first several columns of the table are self-explanatory. They give various data on the stations in question. The column labeled "Clr" gives the proposed translator's "clearance" with respect to the tabulated station, either in dB or km. The values listed with no units are given in km and are for stations located on an IF to the proposed site's channel.

**A negative value in the "Clr" column does NOT necessarily represent prohibited contour overlap, as explained below.**

A negative value listed in the "Clr" column would indicate either overlap of interference and protected contours or prohibited proximity to an IF station except in the following situations:

-Since the proposed station's Effective Radiated Power (ERP) is 75 watts, a negative value in km (no units listed in the table) does not represent a violation of the CFR, according to 47 CFR 1204(g), which states that "FM translator stations and booster stations operating with less than 100 watts ERP will be treated as class D stations and will not be subject to intermediate frequency separation requirements."

- A second or third adjacent LP100 station cannot represent a violation of the CFR, as 47 CFR 74.1204(a)(4) requires protection of only co-channel and first adjacent LP100 stations.

- 47 CFR 74.1204(a) requires only the protection of "AUTHORIZED commercial or noncommercial educational FM broadcast stations, FM translators, ..." Any entry with a status listed as "RSV," "USE" or "APP" does not represent an authorized station and therefore is not protected under 47 CFR 74.1204. The one exception is the case of LP100 applications. The note to 47 CFR 74.1204(a)(4) states that "LPFM applications and permits that have not yet been licensed must be considered as operating with the maximum permitted facilities." Therefore, any first adjacent or co-channel LP100 station, no matter the status, is protected.

-Entries highlighted in red are those stations where there is overlap of predicted contours and lack of population has been demonstrated within the area of interference.

## Compliance with 47 CFR 74.1204(d)

The proposed translator's Maximum Effective Radiated Power (ERP) is 0.075kW at 147 meters above ground level. According to 47 CFR, 74.1204(a), the desired to undesired ratio between 2nd/3rd adjacent stations is 40dB, making the proposed translator's interfering contour 116.6dBu F(50,10).

Using a free-space calculation (equation referenced in FCC 98-117, Appendix A, pg. 41), this proposed translator's F(50,10) interference contour was calculated and plotted on the pertinent portion of a USGS quadrangle (page 5 of this exhibit). As demonstrated on the quadrangle, there are no populated structures or highways within the calculated area of interference (Note: FCC 02-244, II, A, 6 states that USGS quadrangles are sufficient for demonstrating lack of population). Hence, in accordance with 47 CFR 74.1204(d) and the clarification provided by the FCC in the decision Re: Living Way Ministries (FCC 02-244), a lack of population has been demonstrated within the area of interference and therefore this application is in full compliance with 47 CFR 74.1204.

CORAGL: 147m

Antenna Manufacturer: SWR

Maximum ERP: 0.075kW

Antenna Model: FM1

F(50,10) Interfering Contour: 116.6dBu

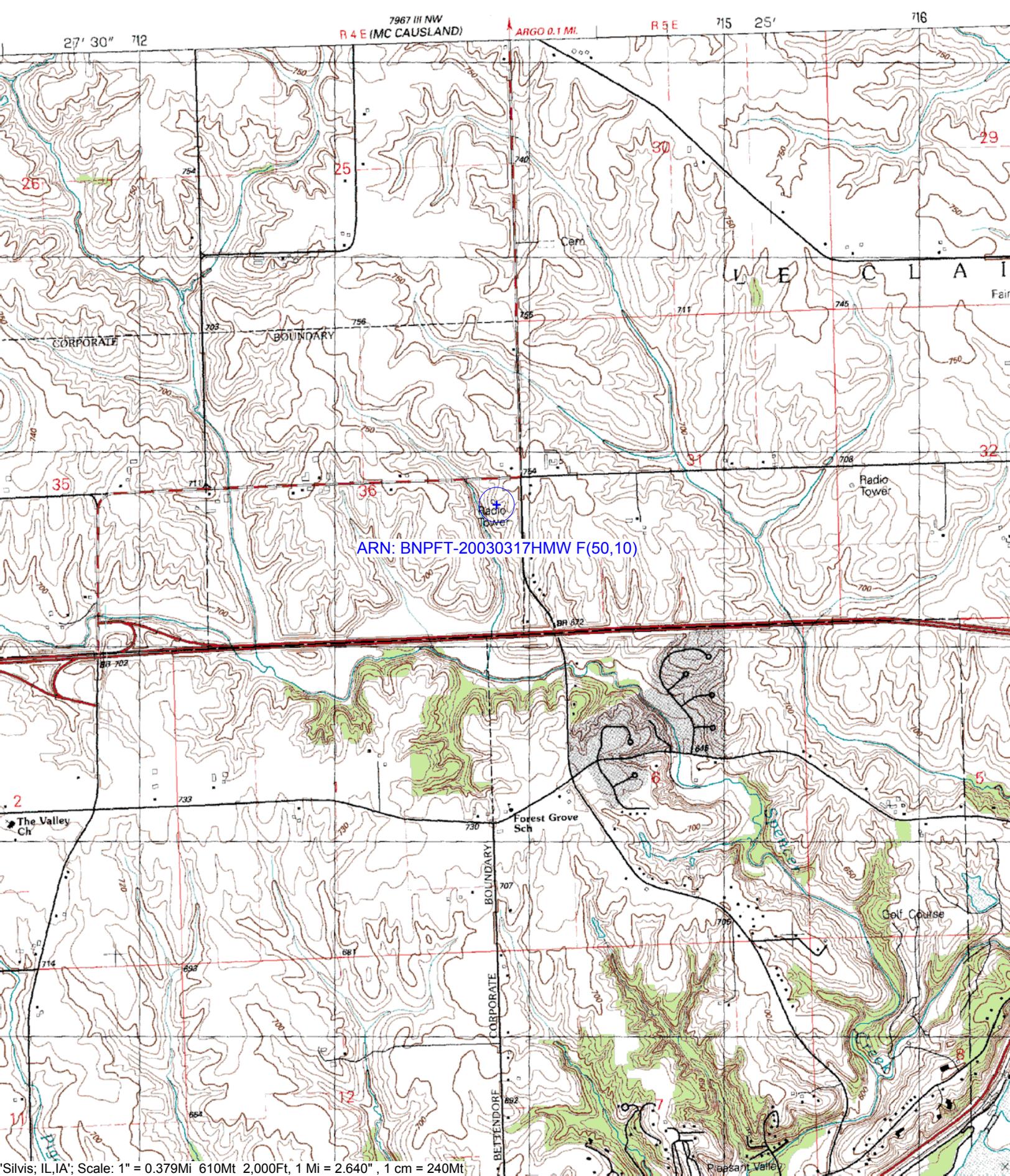
F(50,10) Max Distance: 89.9m

The F(50,50) signal strength of all relevant second and third adjacent stations have been examined, and are tabulated below. Column three shows the station's signal level at the proposed translator's tower site, and column four gives the minimum value within the entire proposed translator's standard F(50,10) contour (100 dBu for most classes, 94 dBu for class B's, 97 dBu for class B1's). For signal levels too great to determine, 999 was entered. The minimum F(50,50) contour within the proposed translator's standard F(50,10) contour was used to calculate the proposed translator's interference contour, thereby assuring a minimum undesired-to-desired ratio of 40dB for all relevant adjacent stations, as required in 47 CFR, 74.1204(a).

FCC File Number	Call Sign	F(50,50) Contour at Tower	Min. F(50,50) Contour
BLH19980413KD	KCQQ	113dBu	110.5dBu
BMLH19980826KA	KCQQ	77.9dBu	76.6dBu
Minimum F(50,50) Protected Contour of Adjacent Station Within Proposed Translator's standard F(50,10) Contour:			<b>76.6dBu</b>

Frequency Finder

Callsign	State	City	Channel	ERP_w	Licensee	ARN	Class	Status	Distance_km	Clr	Facility_id
KCQQ	IA	DAVENPORT	293	100000	CITICASTERS LICENSES, L.P.	BLH19980413KD	C1	LIC	3.79	-55.68 dB	32987
KCQQ	IA	DAVENPORT	293	60000	CITICASTERS LICENSES, L.P.	BMLH19980826KA	C1	LIC	13.87	-19.40 dB	32987
K288CY	IA	BETTENDORF	288	43	ST. AMBROSE COLLEGE	BLFT19920609TA	D	LIC	14.77	2.26 dB	62091
NEW	IL	GALVA	291	13	RADIO ASSIST MINISTRY INC.	BNPFT20030317HYC	D	APP	62.32	5.58 dB	153733
NEW	IA	DAVENPORT	238	15	RADIO ASSIST MINISTRY INC.	BNPFT20030317DSP	D	APP	7.21	7.2	152199
NEW	IL	STERLING	291	10	RADIO ASSIST MINISTRY INC.	BNPFT20030317HZQ	D	APP	68.34	8.66 dB	153903
NEW	IL	GALESBURG	291	10	RADIO ASSIST MINISTRY INC.	BNPFT20030317HYJ	D	APP	73.78	9.57 dB	153743
NEW	IL	GALESBURG	291	250	EDUCATIONAL MEDIA FOUNDATION	BNPFT20030314BDX	D	APP	79.81	10.20 dB	143574
NEW	IA	MOUNT VERNON	291	140	RADIO ASSIST MINISTRY INC.	BNPFT20030317HOL	D	APP	76.95	10.10 dB	153604
	IL	KNOXVILLE	291	0		RM10670	A	APP	78.43	13.29 dB	0
KCQQ	IA	DAVENPORT	293	0	CITICASTERS LICENSES, L.P.		C1	USE	13.87	14.47 dB	32987
NEW	IA	DAVENPORT	237	170	COVENANT NETWORK	BNPFT20030317APV	D	APP	14.19	14.2	151882
NEW	IA	DAVENPORT	237	110	COVENANT NETWORK INC.	BNPFT20030314AUD	D	APP	14.19	14.2	144571
KCII-FM	IA	WASHINGTON	291	3000	HOME BROADCASTING, INC.	BMLH19990525KH	A	LIC	111.64	17.24 dB	71015
NEW	MN	PORT CARGAILL	292	250	AMFM RADIO LICENSES, LLC	BNPFT20030314BWW	D	APP	58.11	17.87 dB	138367
KIYX	IA	SAGEVILLE	291	4200	QUEENB RADIO WISCONSIN, INC	BMLH20020426AAX	A	LIC	121.78	18.14 dB	77326
NEW	IL	SAVANNA	290	10	RADIO ASSIST MINISTRY INC.	BNPFT20030317HZK	D	APP	63.34	20.47 dB	153880
WWCT	IL	PEORIA	289	33000	AAA ENTERTAINMENT LICENSING LLC	BLH19950327KG	B	LIC	125.21	21.26 dB	9894
NEW	IL	BUSHNELL	291	13	RADIO ASSIST MINISTRY INC.	BNPFT20030317HXU	D	APP	117.56	22.37 dB	153706
NEW	IL	SEWARD	291	80	CATHOLIC DIOCESE OF ROCKFORD	BNPFT20030317BHY	D	APP	114.63	22.06 dB	153213
NEW	IL	CANTON	291	10	RADIO ASSIST MINISTRY INC.	BNPFT20030317HXV	D	APP	117.59	22.45 dB	153709
WYYS	IL	STREATOR	291	3000	MENDOTA BROADCASTING, INC.	BLH19950315KD	A	LIC	139.15	23.33 dB	35058
KCII-FM	IA	WASHINGTON	291	0	HOME BROADCASTING, INC.		A	USE	111.64	23.13 dB	71015
KIYX	IA	SAGEVILLE	291	0	QUEENB RADIO WISCONSIN, INC		A	USE	112.66	23.46 dB	77326
NEW	IA	FORT MADISON	291	92	RADIO ASSIST MINISTRY INC.	BNPFT20030317HNX	D	APP	136.71	24.49 dB	153582
NEW	IL	PEKIN	291	10	RADIO ASSIST MINISTRY INC.	BNPFT20030317HZC	D	APP	137.08	25.86 dB	153857
KOKZ	IA	WATERLOO	289	100000	KXEL BROADCASTING COMPANY, INC.	BLH19850613KC	C	LIC	163.54	26.87 dB	35949
	IL	ERIE	288	0		RM9840	A	APP	30.65	28.74 dB	0
NEW	IA	WILTON	288	100	IOWA DEPARTMENT OF TRANSPORTA	BNPL20010615AHQ	LP100	APP	50.63	28.81 dB	133746
900516MJ	IL	STREATOR	291	0	DAUGHERITY-REAGAN PARTNERSHIP		A	USE	144.37	29.01 dB	15533
NEW	IL	GENESE0	237	80	EDGEWATER BROADCASTING INC.	BNPFT20030317ETH	D	APP	29.9	29.9	147536



7967 III NW  
R 4 E (MC CAUSLAND)

ARGO 0.1 MI.

R 5 E 715 25'

716

27' 30" 712

ARN: BNPFT-20030317HMW F(50,10)