

[Exhibit 12]

## **Non-Interference Compliance**

Regarding FCC File Number: BNPFT-20030317DQH

### **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).

Since the proposed translator is 182.9 km from the Canadian border, 47 CFR 74.1235(d) has been taken into account and this applicant certifies that in no direction does the 34 dBu F(50,10) extend beyond 60 km, and this application is therefore in full compliance with 47 CFR 74.1235(d)(3), which states that "the distance to the 34 dBu interfering contour may not exceed 60 km in any direction," and hence in compliance with 47 CFR 74.1204(h).

## **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 10 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 0.01kW at 116 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 105.4dBu 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: 116m  
Maximum ERP: 0.01kW

Antenna Manufacturer: SWR  
Antenna Model: FM1

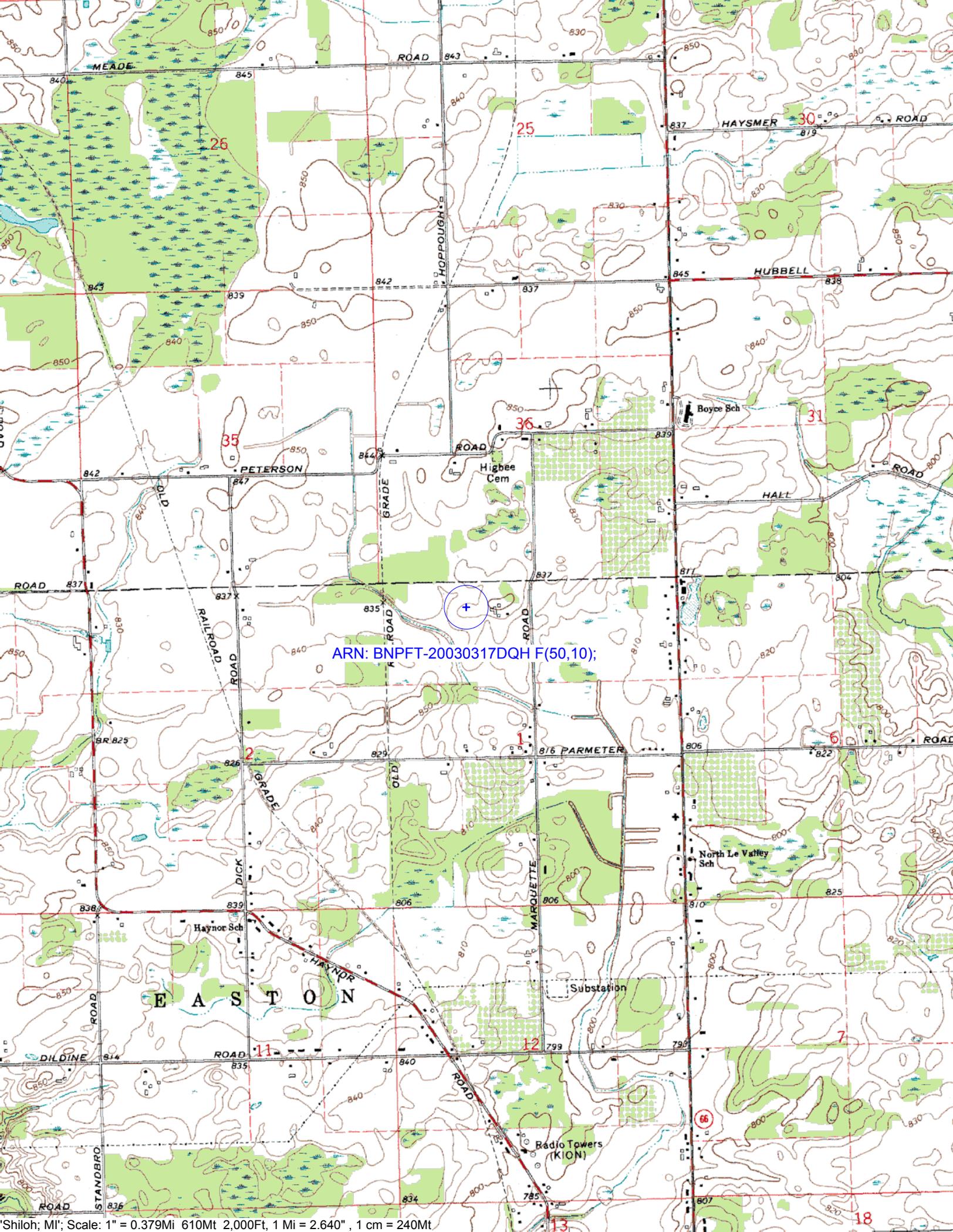
F(50,10) Interfering Contour: 105.4dBu  
F(50,10) Max Distance: 119.1m

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
BLH19800402AB	WVGR	65.8dBu	65.4dBu
Minimum F(50,50) Protected Contour of Adjacent Station Within Proposed Application's 100dBu F(50,10) Contour:			<b>65.4dBu</b>

Frequency Finder

Callsign	State	City	Channel	ERP_w	Licensee	ARN	Class	Status	Distance_km	Clr	Facility_id
	MI	HUBBARDSTON	279	0		RM9493	A	APP	19.72	-18.35 dB	0
<b>WVGR</b>	<b>MI</b>	<b>GRAND RAPIDS</b>	<b>281</b>	<b>108000</b>	<b>REGENTS OF THE UNIVERSITY OF MIC</b>	<b>BLH19800402AB</b>	<b>B</b>	<b>LIC</b>	<b>51.41</b>	<b>-12.24 dB</b>	<b>66309</b>
WVGR	MI	GRAND RAPIDS	281	108000	REGENTS OF THE UNIVERSITY OF MIC	BPED20030714AFD	B	APP	55.03	-11.58 dB	66309
WKFR-FM	MI	BATTLE CREEK	277	50000	CUMULUS LICENSING CORP.	BLH19980730KC	B	LIC	77.83	6.07 dB	14658
WDLP-LP	MI	FENWICK	225	100	MONTCALM PUBLIC RADIO, INC.	BNPL20000831AAU	LP100	CP	14.62	7.6	126066
NEW	MI	GRAND RAPIDS E	279	10	CALVARY CHAPEL OF TWIN FALLS, INC	BNPFT20030310BBT	D	APP	43.86	9.29 dB	138651
NEW	MI	HASTINGS	279	13	EDGEWATER BROADCASTING INC.	BNPFT20030317DQE	D	APP	47.57	10.04 dB	152364
NEW	MI	GRAND RAPIDS	279	10	EDGEWATER BROADCASTING INC.	BNPFT20030317DQA	D	APP	50.44	11.08 dB	152358
NEW	MI	BATTLE CREEK	279	19	EDGEWATER BROADCASTING INC.	BNPFT20030317DPO	D	APP	82.79	22.58 dB	152312
NEW	MI	GRAND HAVEN	279	27	EDGEWATER BROADCASTING INC.	BNPFT20030317DPX	D	APP	85.9	22.43 dB	152350
WCZY-FM	MI	MOUNT PLEASAN	282	3000	CENTRAL MICHIGAN COMMUNICATION	BLH19910828KB	A	LIC	66.16	22.88 dB	9920
WRSR	MI	OWOSSO	280	2850	CUMULUS LICENSING CORP.	BLH19960111KR	A	LIC	89.49	24.46 dB	41681
WOMC	MI	DETROIT	282	190000	INFINITY BROADCASTING CORPORATI	BLH19970512KI	B	LIC	173.25	26.31 dB	28623
NEW	MI	HILLSDALE	279	100	GREAT LAKES COMMUNITY BROADCA	BNPFT20030317KOL	D	APP	128.62	27.00 dB	157237
WMUZ	MI	DETROIT	278	50000	WMUZ RADIO, INC.	BLH19851223KG	B	LIC	167.83	27.86 dB	73298
NEW	IN	HUNTINGTON	279	80	PUBLIC BROADCASTING OF NORTHEA	BNPFT20030310AJV	D	APP	133.35	28.92 dB	139843
WUVS-LP	MI	MUSKEGON	279	100	THE WEST MICHIGAN COMMUNITY HEI	BMLL20030425ABG	LP100	LIC	97.17	28.35 dB	125796
WMUZ	MI	DETROIT	278	50000	WMUZ RADIO, INC.	BLH19950505KD	B	LIC	167.83	28.18 dB	73298
NEW	MI	JACKSON	279	10	ELMER HESS, JR.	BNPFT20030313BJP	D	APP	99.95	28.77 dB	143033
WTCM-FM	MI	TRAVERSE CITY	278	100000	WTCM RADIO, INC.	BLH19870203KB	C	LIC	166.08	29.17 dB	70525
NEW	MI	GRAND RAPIDS	225	100	GRAND RAPIDS LOCAL EDUCATIONAL	BNPL20000901AHV	LP100	APP	36.68	29.7	127120
WZBL	MI	HARTFORD	279	3000	WSJM INC	BLH19960314KC	A	LIC	125.12	29.99 dB	57954
WGDN-FM	MI	GLADWIN	276	11500	APPLE BROADCASTING COMPANY, INC	BLH20021213AAB	C3	LIC	111.45	30.49 dB	2484
NEW	MI	BIG RAPIDS	280	50	GREAT LAKES COMMUNITY BROADCA	BNPFT20030313AAK	D	APP	74.68	31.52 dB	144178
NEW	MI	COLDWATER	279	10	EDGEWATER BROADCASTING INC.	BNPFT20030317DPU	D	APP	121.94	32.96 dB	152344
WVGR	MI	GRAND RAPIDS	281	0	REGENTS OF THE UNIVERSITY OF MICHIGAN		B	USE	51.41	33.76 dB	66309
870820MB	MI	HARTFORD	279	0	AMERICAN INDIAN BROADCAST GROUP, INC		A	USE	122.13	34.20 dB	1739
WCZE	MI	HARBOR BEACH	279	50000	JENNIFER & EDWARD CZELADA	BPH19950223MC	C2	CP	188.93	35.96 dB	30944
WXSS	WI	WAUWATOSA	279	19500	ENTERCOM MILWAUKEE LICENSE, LLC	BMLH20010731ABY	B	LIC	229.49	35.89 dB	27031
NEW	IN	ANGOLA	279	27	TAYLOR UNIVERSITY BROADCASTING,	BNPFT20030314AXH	D	APP	150.16	35.49 dB	140161
	MI	HARTFORD	279	0		RMspm112	A	APP	125.12	35.01 dB	0
	MI	SOUTH HAVEN	279	0		RMspm112	A	APP	125.12	35.01 dB	0
WRSR	MI	OWOSSO	280	0	CUMULUS LICENSING CORP.		A	USE	74.3	36.46 dB	41681
WSAG	MI	PINCONNING	281	4700	BLUE MOOSE, LLC	BPH20030520AZH	A	APP	120.45	38.74 dB	87624
NEW	MI	HASTINGS	226	100	AUTOMATED MICRO, INC.	BNPL20000901AFS	LP100	APP	46.88	39.9	126913
WCKY-FM	OH	TIFFIN	279	50000	CITICASTERS LICENSES, L.P.	BLH19850715KW	B	LIC	259.68	39.45 dB	70526



ARN: BNPFT-20030317DQH F(50,10);