

## **Non-Interference Compliance**

Regarding Facility id 146879

Channel 236

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

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

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

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

*[A]n 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.*

Page 3 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 4 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute 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 the free space equation and 120 radials.

Page 5 of this exhibit is a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by the U.S. Geological Survey's National Aerial Photography Program. It has been included to provide clarification of the nature of the buildings in the vicinity.

Since the proposed translator is within 320 km of the Canadian border, 47 C.F.R. § 74.1235(d) has been taken into account and this applicant certifies that in no direction does the 34 dBμ F(50,10) extend beyond 60 km, and this application is therefore in full compliance with 47 C.F.R. § 74.1235(d)(3), which states that "the distance to the 34 dBμ interfering contour may not exceed 60 km in any direction," and hence complies with 47 C.F.R. § 74.1204(h).

**Note: The quadrangle and aerial photo indicate the presence of county roads in the area of interference. It is apparent that these are not major roads, e.g. interstate highways, as described in the Living Way decision. The zone of predicted interference extends 427.7m from the proposed transmit site. The nearest occupied buildings are the apartments 442m to the west on Sterling Lane. The building to the northeast is an uninhabited communications building, so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

### Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
105526	BLH19870928KA	WZID	63.9	63.6
707100	BLH20031201AWA	WJMN	61.7	61.7
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>61.7</b>

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **61.7 dBμ**, this makes the proposed translator's worst-case interfering contour **101.7 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **427.7 m** from the transmit antenna.

The interfering contour of the proposed translator was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 4 of this exhibit). As demonstrated on the quadrangle, there are no populated structures or highways within the area of interference (Note: FCC 02-244 at Section II.A.6 states that USGS quadrangles "have been recognized as acceptable to demonstrate lack of population").

**Note: The quadrangle and aerial photo indicate the presence of county roads in the area of interference. It is apparent that these are not major roads, e.g. interstate highways, as described in the Living Way decision. The zone of predicted interference extends 427.7m from the proposed transmit site. The nearest occupied buildings are the apartments 442m to the west on Sterling Lane. The building to the northeast is an uninhabited communications building, so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

**Antenna Manufacturer:** CEN  
**Antenna Model:** FM-DX(1/4)  
**CORAGL:** 6 m  
**Maximum ERP:** 0.055 kW  
**Interfering Contour:** 101.7 dBμ  
**Max Int. Contour Distance:** 427.7 m

# **Adjacent Channel Study** **For Station W236BX, Facility\_id: 146879**

## **Co-channel through third adjacent:**

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Channel	Adj	Dist	Overlap
105526	58550	BLH	19870928KA	WZID	SAGA COMMUNS. OF NEW ENGLAND, INC.	B	MANCHESTER	NH	LIC	14.5	431	239	3	48.4	1.3066
1134744	58550	BXLH	20060630AAH	WZID	SAGA COMMUNICATIONS OF NEW ENGLAND, I	B	MANCHESTER	NH	LIC	4.1	419	239	3	48.4	1.3066
707100	53972	BLH	20031201AWA	WJMN	AMFM RADIO LICENSES, L.L.C.	B	BOSTON	MA	LIC	9.2	394	233	3	49	1.3066
647966	154746	BNPFT	20030317JPW	NEW	NORTHEAST BROADCASTING COMPANY, INC.	D	LEXINGTON	MA	APP	0.013	146	235	1	37.2	0
610897	26341	BXMLH	20020930ABD	WHRB	HARVARD RADIO BROADCASTING CO., INC.	A	CAMBRIDGE	MA	LIC	3	60	237	1	40.7	0
213301	26341	BLH	19950830KE	WHRB	HARVARD RADIO BROADCASTING CO., INC.	A	CAMBRIDGE	MA	LIC	1.7	202	237	1	43.1	0
630837	139776	BNPFT	20030312ABN	NEW	LIVING PROOF, INC.	D	BOSTON	MA	APP	0.01	248	235	1	43.3	0
1168520	58550	BSTA	20070118ACM	WZID	SAGA COMMUNICATIONS OF NEW ENGLAND, I	B	MANCHESTER	NH	APP	0.145	419	239	3	48.4	0
1133107	58550	BDSTA	20060630ACW	WZID	SAGA COMMUNICATIONS OF NEW ENGLAND, I	B	MANCHESTER	NH	APP	0.145	419	239	3	48.4	0
186075	35218	BLH	19930507KA	WSKX	CAPSTAR ROYALTY I CORPORATION	A	YORK CENTER	ME	LIC	1.4	245	237	1	63.2	0
565829	35218	BXMLH	20010525AAQ	WSKX	CAPSTAR TX LIMITED PARTNERSHIP	A	YORK CENTER	ME	LIC	0.9	174	237	1	67.9	0
1195933	138657	BLFT	20070725AAR	W235AV	AMFM RADIO LICENSES, LLC	D	TATNUCK	MA	LIC	0.23	474	235	1	81.4	0
287360	7313	BLH	19990723KD	WBRU	BROWN BROADCASTING SERVICE, INC.	B	PROVIDENCE	RI	LIC	18.5	170	238	2	103.7	0
1152885	49687	BMLH	20061018ABT	WHOM	CITADEL BROADCASTING COMPANY	C	MOUNT WASHINGTON	NH	LIC	48	1924	235	1	171.1	0
1187791	49687	BXLH	20070615ACH	WHOM	CITADEL BROADCASTING COMPANY	C	MOUNT WASHINGTON	NH	LIC	20.5	1932	235	1	171.1	0
1010758	49687	BXLH	20051107AFN	WHOM	CITADEL BROADCASTING COMPANY	C	MOUNT WASHINGTON	NH	LIC	20.5	1930	235	1	171.1	0







