

**Non-Interference Compliance for
Reach Communications, Incorporated
Regarding Facility ID 149386 Channel 283**

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. The applicant acknowledges that it will comply with 47 C.F.R. § 74.1203 in regards to resolving any interference that may occur.

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 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Page 4 includes tabulations of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 5 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.

Page 6 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. The area of interference was calculated using the free space equation and 120 radials.

Page 7 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 vicinity.

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
	BMLH20031010ADD	WTKS-FM	81.46	80.9
	BMLH20030924ABI	WOMX-FM	81.46	80.92

Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour:
80.9 dBμ.¹

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 **80.9 dBμ**, this makes the proposed translator's worst-case interfering contour **120.9 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **93.98 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 8 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the ground level by **101.26 m** from the tower. The applicant has taken into account USGS quadrangles and relevant aerial photography instating that no structures, except possibly tower support structures, puncture the area of interference. Hence, in accordance with 47 C.F.R. § 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 this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer:	NICOM
Antenna Model:	BKG77
CORAGL:	143 m
Maximum ERP:	0.221 kW
Interfering Contour:	120.9 dBμ
Max Int. Contour Distance:	93.98 m
Ground Clearance:	101.26 m

¹ This translator shall become a "fill-in" translator to WRUM. 74.1204 (e) exempts protection to WRUM.



BKO 77

Vertical Values				
-180 0.487	-66 0.297	54 0.479	174 0.488	
-177 0.478	-63 0.345	57 0.436	177 0.479	
-174 0.467	-60 0.391	60 0.391		
-171 0.460	-57 0.436	63 0.345		
-168 0.454	-54 0.479	66 0.297		
-165 0.447	-51 0.523	69 0.253		
-162 0.439	-48 0.568	72 0.211		
-159 0.429	-45 0.616	75 0.176		
-156 0.419	-42 0.661	78 0.145		
-153 0.402	-39 0.706	81 0.120		
-150 0.385	-36 0.745	84 0.105		
-147 0.369	-33 0.783	87 0.100		
-144 0.359	-30 0.818	90 0.105		
-141 0.350	-27 0.852	93 0.118		
-138 0.338	-24 0.881	96 0.134		
-135 0.326	-21 0.910	99 0.151		
-132 0.314	-18 0.934	102 0.168		
-129 0.303	-15 0.954	105 0.185		
-126 0.290	-12 0.972	108 0.202		
-123 0.278	-9 0.987	111 0.219		
-120 0.265	-6 0.999	114 0.236		
-117 0.251	-3 0.999	117 0.252		
-114 0.236	0 1.000	120 0.265		
-111 0.218	3 0.999	123 0.278		
-108 0.202	6 0.999	126 0.290		
-105 0.185	9 0.987	129 0.304		
-102 0.168	12 0.972	132 0.314		
-99 0.151	15 0.954	135 0.327		
-96 0.134	18 0.934	138 0.338		
-93 0.118	21 0.910	141 0.350		
-90 0.105	24 0.881	144 0.360		
-87 0.100	27 0.852	147 0.370		
-84 0.105	30 0.818	150 0.386		
-81 0.120	33 0.783	153 0.403		
-78 0.145	36 0.745	156 0.420		
-75 0.176	39 0.706	159 0.430		
-72 0.211	42 0.661	162 0.440		
-69 0.253	45 0.616	165 0.448		
	48 0.568	168 0.455		
	51 0.523	171 0.461		

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Facility ID	File Number	Callsign	Licensee	Sts	City	St	Cls	ERP	AMSL	Ch	Adj	Dist
53457	BMLH20031010ADD	WTKS-FM	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	COCOA BEACH	FL	C	94000	500	281	-2	37.41
47746	BMLH20030924ABI	WOMX-FM	CBS RADIO STATIONS INC.	LIC	ORLANDO	FL	C	94000	500	286	3	37.41
151352	BLFT20110428AAV	W284AV	REACH COMMUNICATIONS, INC.	LIC	DELTONA	FL	D	10	419	284	1	37.26
149396	BNPFT20030317HHM	NEW	RADIO ASSIST MINISTRY, INC.	APP	TITUSVILLE	FL	D	10	152	283	0	59.52
135770	BLL20060201AQW	WIFL-LP	MARCONI BROADCASTING FOUNDATION	LIC	WEIRSDALE	FL	LP100	100	49	283	0	61.77
151352	BSTA20090305AAB	W284AV	REACH COMMUNICATIONS, INC.	APP	DELTONA	FL	D	10	323	284	1	37.45
157706	BNPFT20030317MWJ	NEW	CIRCUITWERKES, INC.	APP	ORLANDO	FL	D	200	61	229	-54	7.44
151352	BPFT20110503ACZ	W284AV WRBQ-FM	REACH COMMUNICATIONS, INC.	CP	DELTONA	FL	D	250	160	284	1	69.34
11943	BLH20100122AAR	FM	CBS RADIO STATIONS INC.	LIC	TAMPA	FL	C1	99000	181	284	1	119.05
135661	BNPL20010615AYT	NEW	ESPERANZA ADVENTIST EDUCATIONAL RADIO	APP	SEBRING	FL	LP100	100	74	283	0	118.11
72081	BLH19940816KD	WFYV-FM	COX RADIO, INC.	LIC	ATLANTIC BEACH	FL	C	99000	315	283	0	185.4
151402	BNPFT20030317DBC	NEW	EDGEWATER BROADCASTING, INC.	APP	MERRITT ISLAND	FL	D	13	121	284	1	73.83
138804	BLFT20070228AAK	W283AM	REACH COMMUNICATIONS, INC. GREAT GOD GOSPEL & EDUCATIONAL STATION, INC.	LIC	ARCADIA	FL	D	27	106	283	0	156.38
131370	BMLL20101025ABK	WITG-LP WITG-LP-1	GREAT GOD GOSPEL & EDUCATIONAL STATION, INC.	LIC	OCALA	FL	LP100	100	60	284	1	92.51
180726	BNPFTB20090330ADZ	1	CITRUS COUNTY ASSOCIATION FOR RETARDED	APP	OCALA	FL	D	10	41	284	1	90.55
71585	BPH20110812ACP	WYKE	CITIZENS, INC	APP	INGLIS	FL	C3	16900	119	282	-1	128.77
71585	BLH20020822ABN	WYKE	CITRUS COUNTY ASSOCIATION FOR RETARDED CITIZENS, INC	LIC	INGLIS	FL	A	4400	119	282	-1	128.77
146661	BNPFT20030317BBK	NEW	RADIO TRAINING NETWORK, INC.	APP	TAMPA	FL	D	55	68	282	-1	115.79
138521	BLFT20061117AAT	W282BG	REACH COMMUNICATIONS, INC.	LIC	GRANT	FL	D	40	57	282	-1	120.51



