

**Non-Interference Compliance for  
Reach Communications, Incorporated  
Regarding Facility ID 151917 Channel 205**

**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
703733	BLED20031216ADO	WFCF	122.2	107.9

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

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 **107.9 dBμ**, this makes the proposed translator's worst-case interfering contour **147.9 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **2.53 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 tower ground level (TGL) by **46.27 m** at the lowest point.. 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.

<b>Antenna Manufacturer:</b>	<b>NICOM</b>
<b>Antenna Model:</b>	<b>BKG77 Two Bay Half Wave Spaced</b>
<b>CORAGL:</b>	<b>47 m</b>
<b>Maximum ERP:</b>	<b>0.080 kW</b>
<b>Interfering Contour:</b>	<b>107.9 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>147.9 m</b>
<b>Min Ground Clearance:</b>	<b>46.27 m</b>

# **NICOM BKG77/2 Depression Propagation Elevations - Two Bay Half Wave Spaced**

Depress Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour (m)	Horizontal Distance to Contour from Antenna (m)	Vertical Clearance of Interfering Contour (m)
0	1	80.00	2.53	2.53	47.00
5	0.988	78.09	2.50	2.49	46.78
10	0.947	71.74	2.39	2.36	46.58
15	0.871	60.69	2.20	2.13	46.43
20	0.792	50.18	2.00	1.88	46.32
25	0.682	37.21	1.72	1.56	46.27
30	0.565	25.54	1.43	1.24	46.29
35	0.469	17.60	1.18	0.97	46.32
40	0.376	11.31	0.95	0.73	46.39
45	0.273	5.96	0.69	0.49	46.51
50	0.188	2.83	0.47	0.31	46.64
55	0.131	1.37	0.33	0.19	46.73
60	0.079	0.50	0.20	0.10	46.83
65	0.047	0.18	0.12	0.05	46.89
70	0.022	0.04	0.06	0.02	46.95
75	0.01	0.01	0.03	0.01	46.98
80	0.003	0.00	0.01	0.00	46.99
85	0.001	0.00	0.00	0.00	47.00
90	0	0.00	0.00	0.00	47.00

TX station:  
Frequency: 100.00 MHz

Site name: 2 BAY 1/2

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	747.3	54.0	14.2	15.0	108.0	1.8	0.2
0.9	100.0	746.6	54.9	13.1	12.9	108.9	2.1	0.3
1.8	99.8	745.0	55.8	12.2	11.0	109.8	2.3	0.4
2.7	99.7	742.5	56.7	11.2	9.4	110.7	2.6	0.5
3.6	99.4	739.1	57.6	10.3	8.0	111.6	2.9	0.6
4.5	99.2	734.7	58.5	9.5	6.7	112.5	3.2	0.8
5.4	98.8	729.5	59.4	8.7	5.6	113.4	3.5	0.9
6.3	98.3	721.9	60.3	7.9	4.7	114.3	3.9	1.1
7.2	97.5	710.3	61.2	7.2	3.9	115.2	4.3	1.4
8.1	96.6	698.0	62.1	6.5	3.2	116.1	4.7	1.6
9.0	95.7	685.1	63.0	5.9	2.6	117.0	5.1	1.9
9.9	94.7	670.3	63.9	5.3	2.1	117.9	5.5	2.3
10.8	93.6	655.0	64.8	4.7	1.7	118.8	5.9	2.6
11.7	92.5	639.2	65.7	4.2	1.3	119.7	6.4	3.1
12.6	91.2	622.1	66.6	3.7	1.0	120.6	6.9	3.6
13.5	89.9	604.2	67.5	3.3	0.8	121.5	7.4	4.1
14.4	88.6	586.1	68.4	2.9	0.6	122.4	7.9	4.7
15.3	87.1	567.5	69.3	2.5	0.5	123.3	8.5	5.4
16.2	85.7	548.5	70.2	2.2	0.4	124.2	9.0	6.1
17.1	84.2	529.4	71.1	1.9	0.3	125.1	9.6	6.9
18.0	82.6	510.3	72.0	1.6	0.2	126.0	10.2	7.8
18.9	80.9	489.6	72.9	1.4	0.1	126.9	10.9	8.8
19.8	79.2	469.1	73.8	1.2	0.1	127.8	11.5	9.9
20.7	77.5	448.8	74.7	1.0	0.1	128.7	12.2	11.1
21.6	75.7	428.2	75.6	0.8	0.1	129.6	12.9	12.4
22.5	73.8	407.5	76.5	0.7	0.0	130.5	13.6	13.7
23.4	72.0	387.3	77.4	0.6	0.0	131.4	14.3	15.2
24.3	70.1	367.4	78.3	0.5	0.0	132.3	15.0	16.8
25.2	68.2	347.8	79.2	0.4	0.0	133.2	15.8	18.6
26.1	66.3	328.7	80.1	0.3	0.0	134.1	16.5	20.5
27.0	64.4	310.1	81.0	0.2	0.0	135.0	17.3	22.5
27.9	62.4	291.2	81.9	0.2	0.0	135.9	18.1	24.6
28.8	60.4	273.0	82.8	0.1	0.0	136.8	19.0	26.9
29.7	58.5	255.5	83.7	0.1	0.0	137.7	19.8	29.3
30.6	56.5	238.7	84.6	0.1	0.0	138.6	20.6	31.9
31.5	54.6	222.6	85.5	0.0	0.0	139.5	21.5	34.6
32.4	52.7	207.2	86.4	0.0	0.0	140.4	22.4	37.5
33.3	50.7	192.3	87.3	0.0	0.0	141.3	23.3	40.5
34.2	48.8	177.8	88.2	0.0	0.0	142.2	24.2	43.6
35.1	46.9	164.0	89.1	0.0	0.0	143.1	25.0	46.8
36.0	45.0	151.0	90.0	0.0	0.0	144.0	25.9	50.2
36.9	43.1	138.7	90.9	0.0	0.0	144.9	26.8	53.8
37.8	41.2	127.1	91.8	0.0	0.0	145.8	27.7	57.5
38.7	39.4	116.2	92.7	0.0	0.0	146.7	28.6	61.3
39.6	37.6	105.6	93.6	0.0	0.0	147.6	29.6	65.6
40.5	35.8	95.7	94.5	0.1	0.0	148.5	30.7	70.3
41.4	34.0	86.4	95.4	0.1	0.0	149.4	31.7	75.1
42.3	32.3	77.8	96.3	0.1	0.0	150.3	32.7	80.1
43.2	30.6	69.9	97.2	0.2	0.0	151.2	33.8	85.4
44.1	28.9	62.5	98.1	0.3	0.0	152.1	34.9	90.8
45.0	27.3	55.8	99.0	0.3	0.0	153.0	35.9	96.4
45.9	25.8	49.6	99.9	0.4	0.0	153.9	37.0	102.2
46.8	24.3	44.0	100.8	0.5	0.0	154.8	38.0	108.1
47.7	22.8	38.8	101.7	0.6	0.0	155.7	39.1	114.2
48.6	21.4	34.2	102.6	0.7	0.0	156.6	40.0	119.8
49.5	20.1	30.1	103.5	0.9	0.1	157.5	41.0	125.3
50.4	18.8	26.3	104.4	1.0	0.1	158.4	41.9	130.9
51.3	17.5	23.0	105.3	1.2	0.1	159.3	42.7	136.5
52.2	16.4	20.0	106.2	1.4	0.1	160.2	43.6	142.1
53.1	15.2	17.3	107.1	1.6	0.2	161.1	44.5	147.8

NicomUsa, Inc

Facility ID	File Number	Callsign	Licensee	Sts	City	St	Cls	ERP	AMSL	Ch	Adj	Dist
21688	BLED20031216ADO	WFCF	FLAGLER COLLEGE	LIC	ST. AUGUSTINE	FL	C3	10000	65	203	-2	0.32
86933	BLFT20050114AAB	W207AZ	PENSACOLA CHRISTIAN CC	LIC	ST. AUGUSTINE	FL	D	50	57	207	2	6.75
66604	BLED19811007AJ	WUFT-FM	BOARD OF TRUSTEES, UNI'	LIC	GAINESVILLE	FL	C1	100000	275	206	1	103.59
20864	BLED19870928KC	WJFR	FAMILY STATIONS, INC.	LIC	JACKSONVILLE	FL	C3	8000	113	204	-1	62.61
42684	BMPED20061102ACB	WKTO	MIMS COMMUNITY RADIO, I	CP MOI	EDGEWATER	FL	C2	25000	131	205	0	94.08
42684	BLED20070213ABH	WKTO	MIMS COMMUNITY RADIO, I	LIC	EDGEWATER	FL	C2	29000	80	205	0	95.33
175730	BNPED20071018ASP	WLIZ	HAMMOCK EDUCATIONAL /	CP	PALM COAST	FL	A	1750	55	207	2	44.58
9714	BLED20070227AFG	WKSG	DAYSTAR PUBLIC RADIO, I	LIC	CEDAR CREEK	FL	C2	26000	126	208	3	90.98
62344	BLED19890302KA	WTLG	STARKE CHRISTIAN EDUCA	LIC	STARKE	FL	C3	7000	132	202	-3	74.02
9876	BMPED20070907AEU	WPOZ	CENTRAL FLORIDA EDUCA	APP	UNION PARK	FL	C0	100000	409	202	-3	145.47
42684	BXLED20070329AFE	WKTO	MIMS COMMUNITY RADIO, I	LIC	EDGEWATER	FL	C2	120	29	205	0	101.97
9876	BMPED20070828ACD	WPOZ	CENTRAL FLORIDA EDUCA	CP MOI	UNION PARK	FL	C1	20000	416	202	-3	141.15
81294	BLED20051202AJY	WECC-FM	LIGHTHOUSE CHRISTIAN B	LIC	FOLKSTON	GA	C2	30000	150	207	2	124.32
23944	BPED20070705ADQ	WWIO-FM	GEORGIA PUBLIC TELECOM	CP	BRUNSWICK	GA	C3	11700	48	205	0	148.28
23944	BLED20020314AAH	WWIO-FM	GEORGIA PUBLIC TELECOM	LIC	BRUNSWICK	GA	C3	7000	48	205	0	148.28
151895	BNPFT20030317DNN	NEW	EDGEWATER BROADCASTI	APP	PALM COAST	FL	D	38	79	258	53	33.56
92752	BLFT20021004AAX	W204BL	EDUCATIONAL MEDIA FOU	LIC	GAINESVILLE	FL	D	120	66	204	-1	98.63
91917	BLFT20050429AEN	W208AV	EDUCATIONAL MEDIA FOU	LIC	SAN JOSE	FL	D	10	192	208	3	51.33
9714	BXMLED20030618AA	WKSG	DAYSTAR PUBLIC RADIO, I	LIC	CEDAR CREEK	FL	A	2000	116	208	3	90.98
81294	BXMLED20051214AA	WECC-FM	LIGHTHOUSE CHRISTIAN B	LIC	FOLKSTON	GA	C3	15300	90	207	2	124.32
151888	BNPFT20030317DNK	NEW	EDGEWATER BROADCASTI	APP	PALATKA	FL	D	38	69	258	53	35.13
9876	BLED20021126ABN	WPOZ	CENTRAL FLORIDA EDUCA	LIC	UNION PARK	FL	C2	2300	416	202	-3	141.15
9876	BXMLED20030407AB	WPOZ	CENTRAL FLORIDA EDUCA	LIC	UNION PARK	FL	C2	1800	458	202	-3	141.15
42684	BSTA20060413ADX	WKTO	MIMS COMMUNITY RADIO, I	APP	EDGEWATER	FL	A	500	81	204	-1	97.55
121772	BPED20051121ATX	WWLC	SPIRIT RADIO OF NORTH F	CP	CROSS CITY	FL	C1	100000	106	203	-2	187.65
121772	BMPED20080130ANS	WWLC	SPIRIT RADIO OF NORTH F	APP	CROSS CITY	FL	C1	100000	114	203	-2	141.4
151773	BNPFT20030317DKZ	NEW	EDGEWATER BROADCASTI	APP	FRUIT COVE	FL	D	10	155	258	53	38.06
92752	BPFT20070815ABE	W204BL	EDUCATIONAL MEDIA FOU	CP	GAINESVILLE	FL	D	27	104	204	-1	98.85
5173	BLED19970403KD	WYFE	BIBLE BROADCASTING NET	LIC	TARPON SPRINGS	FL	C1	60000	143	205	0	209.38



