

**Non-Interference Compliance for  
Calvary Chapel Church, Inc.**  
Regarding Facility ID 138845 Channel 263

**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
1191974	BLH20070713AAF	WAVV	75.08	74.84
1164979	BLH20061222ABC	WZJZ	66.31	65.98

Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour:  
**65.98 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 **65.98 dBμ**, this makes the proposed translator's worst-case interfering contour **105.98 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **161.42 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 **27.40 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.

<b>Antenna Manufacturer:</b>	<b>Nicomm</b>
<b>Antenna Model:</b>	<b>BKG77 1/2</b>
<b>CORAGL:</b>	<b>73 m</b>
<b>Maximum ERP:</b>	<b>0.021 kW</b>
<b>Interfering Contour:</b>	<b>105.98 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>161.42 m</b>
<b>Ground Clearance:</b>	<b>27.40 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	21.00	161.42	161.42	73.00
5	0.988	20.50	159.49	158.88	59.10
10	0.947	18.83	152.87	150.54	46.45
15	0.871	15.93	140.60	135.81	36.61
20	0.792	13.17	127.85	120.14	29.27
25	0.682	9.77	110.09	99.78	26.47
30	0.565	6.70	91.20	78.98	27.40
35	0.469	4.62	75.71	62.02	29.58
40	0.376	2.97	60.69	46.49	33.99
45	0.273	1.57	44.07	31.16	41.84
50	0.188	0.74	30.35	19.51	49.75
55	0.131	0.36	21.15	12.13	55.68
60	0.079	0.13	12.75	6.38	61.96
65	0.047	0.05	7.59	3.21	66.12
70	0.022	0.01	3.55	1.21	69.66
75	0.01	0.00	1.61	0.42	71.44
80	0.003	0.00	0.48	0.08	72.52
85	0.001	0.00	0.16	0.01	72.84
90	0	0.00	0.00	0.00	73.00

TX station:  
Frequency: 100.00 MHz

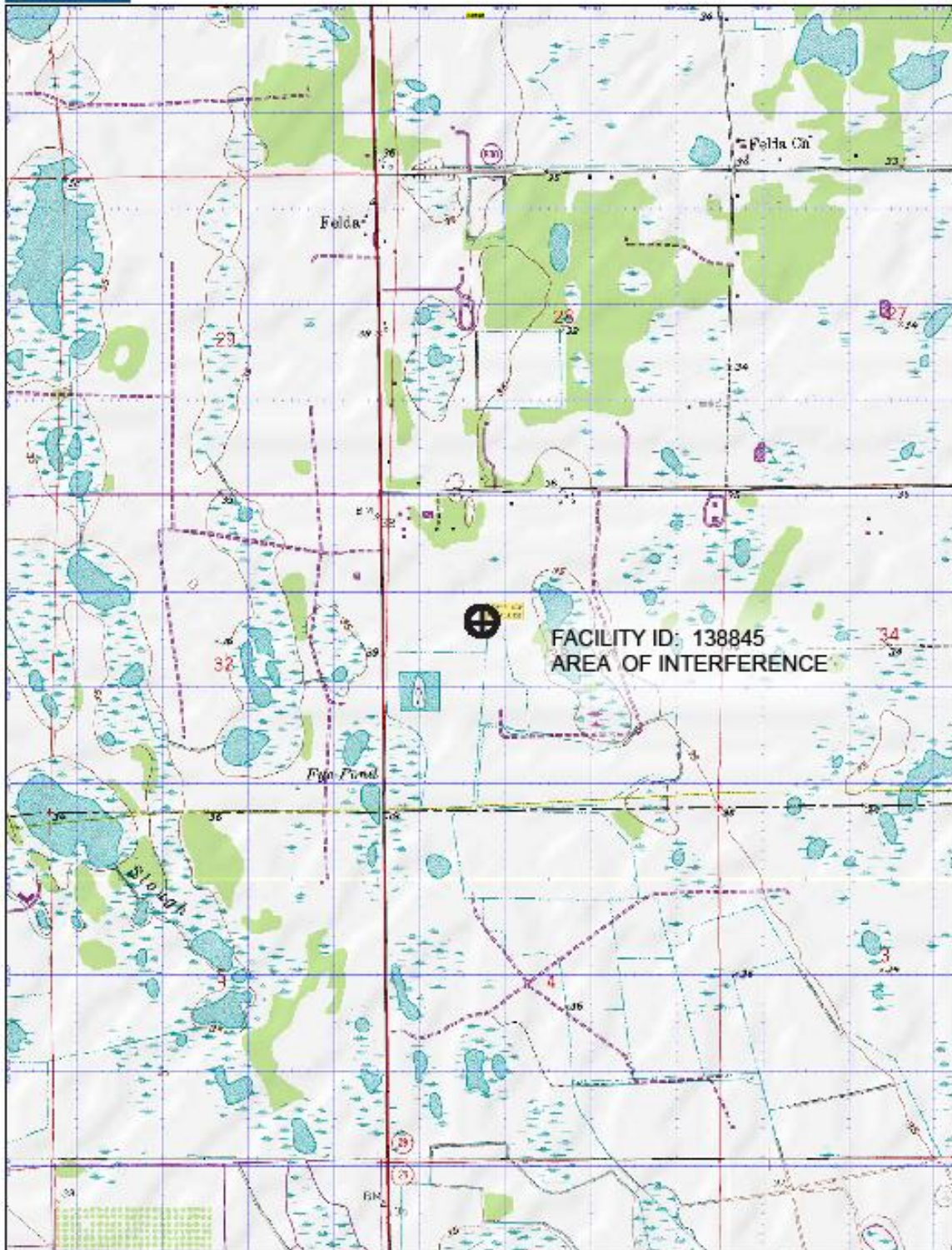
Site name: 2 BAY 1/2

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
1154	BLH20070713AAF	WAVV	ALPINE BROADCASTING CORP., INC. CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	NAPLES PARK	FL	C1	100000	299	266	3	36.38
35213	BLH20061222ABC	WZJZ	LICENSES, INC.	LIC	PORT CHARLOTTE	FL	C1	84000	332	261	-2	35.86
143063	BLFT20120404ABI	W263BI	WAY MEDIA , INC.	LIC	FORT MYERS	FL	D	250	329	263	0	35.86
61505	BLFT20090126AAQ	W263BT	GLADES MEDIA COMPANY LLC CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	CLEWISTON	FL	D	250	150	263	0	100.55
35213	BXMLH20070215ABS	WZJZ	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	PORT CHARLOTTE	FL	C1	100000	146	261	-2	39.19
35213	BXMLH20090424ABF	WZJZ	LICENSES, INC.	LIC	PORT CHARLOTTE	FL	C1	100000	145	261	-2	39.13
139928	BLFT20101122AFN	W263BY	OSCAR AGUERO MINISTRY CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	NAPLES FORT	FL	D	250	31	263	0	45.85
41381	BLH20050225AAQ	WHYI-FM	LICENSES, INC.	LIC	LAUDERDALE	FL	C	98000	308	264	1	164.89
23078	BLH20111005AAC	WMTX	CITICASTERS LICENSES, INC. CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	TAMPA FORT	FL	C	96000	491	264	1	158.13
41381	BXLH20041227AAY	WHYI-FM	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	LAUDERDALE FORT	FL	C	62570	215	264	1	164.89
41381	BXPH20110928AJJ	WHYI-FM	LICENSES, INC.	CP	LAUDERDALE	FL	C	42000	283	264	1	165.7
23078	BXPH20110216AAR	WMTX	CITICASTERS LICENSES, INC.	CP	TAMPA	FL	C	100000	307	264	1	158.13
64001	BLH19871216KH	WKIS	WKIS LICENSE LIMITED PARTNERSHIP	LIC	BOCA RATON	FL	C0	100000	302	260	-3	167.3
157480	BNPFT20030317LPH	NEW	VERO BEACH BROADCASTERS, LLC	APP	VERO BEACH	FL	D	250	55	263	0	185.31
138594	BLFT20110329ADV	W262AN	REACH COMMUNICATIONS, INC.	LIC	TAMARAC	FL	D	198	278	262	-1	165.71
23078	BXLH20111019AHE	WMTX	CITICASTERS LICENSES, INC.	LIC	TAMPA	FL	C	10000	472	264	1	158.13
43706	BLFT20040521AAT	W263AH	THE MOODY BIBLE INSTITUTE OF CHICAGO CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	FT. PIERCE	FL	D	15	66	263	0	175.6
59976	BMLH20031010ADF	WRUM	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	ORLANDO	FL	C	95000	497	262	-1	244.39
60910	BLH20070126AFO	WCTH	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	PLANTATION KEY WEST PALM BEACH	FL	C1	100000	141	262	-1	204.95
21103	BLFT19961108TD	W262AE	FAMILY STATIONS, INC. CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	BEACH	FL	D	250	32	262	-1	158.04
51983	BMLH20031010ADE	WJRR	LICENSES, INC.	LIC	COCOA BEACH	FL	C	95000	500	266	3	244.39



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