

Non-Interference Compliance for Hollywood Brothers Helping Others, Inc. Regarding Facility ID 194181 Channel 224

Description of Exhibit 11 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. § 73.807. The applicant acknowledges that it will comply with 47 C.F.R. § 73.827(a) in regards to resolving any interference that may occur. The applicant acknowledges further acknowledges that it will operate 47 C.F.R. § 73.811 and all other applicable FCC rules and regulations.

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), applicable sections of Part 73 that apply to LPFMs and the instructions for this form 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 dB μ 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) and Demonstration of no LPFM Interference to Second Adjacent Channels - Waiver

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.

File Number	Callsign	Contour at Tower	Min. Contour
1047799	WFEZ	85.45	84.94
1363934	WCMQ-FM	63.66	63.12

Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour:
84.94 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 **84.94 dBμ**, this makes the proposed translator's worst-case interfering contour **124.94 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **18.62 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 **64.19 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 applicable sections of § 73.800 concerning LPFM rules and regulations, 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 47, C.F.R. § 73.807, applicable sections of § 73.800 concerning LPFM rules and regulations, and the LPFM rules concerning second adjacent channel waiver request.

Antenna Manufacturer:	ERI
Antenna Model:	ERI100-2MHW
CORAGL:	70 m
Maximum ERP:	0.022² kW
Interfering Contour:	124.94 dBμ
Max Int. Contour Distance:	18.62 m
Ground Clearance:	64.19 m

¹ This LPFM analysis was based on an ERP of 22 watts. Application BNPL-20131113BFJ is believed not to be grantable and has been excluded from analysis. WCMQ-FM was excluded because it is third adjacent to the proposed LPFM.

² Id 1

ERI100-2MHW 2 bay Depression Propagation below horizontal - two bay half wave

desired erp (w) 22
 RCAGL 70 229.6
 Interfering co db 124.94

Depress Ang	Rel field	Rel field Pwr	db	ERP (watts)	Dist to interfering contour (m)	Horz. Dist to contour from tower (m)	Vert Clearance of Interfering Contour (m)
0	1	1	0	22	18.62367279	18.62367279	70
5	0.987	0.974169	0.113656947	21.431718	18.38156505	18.31161764	68.3979410
10	0.95	0.9025	0.445527894	19.855	17.69248915	17.42370049	66.9277315
15	0.891	0.793881	1.002445919	17.465382	16.59369246	16.0282761	65.7052363
20	0.814	0.662596	1.787511902	14.577112	15.15966965	14.24542971	64.8150876
25	0.723	0.522729	2.817234054	11.500038	13.46491543	12.2033577	64.3094808
30	0.624	0.389376	4.096308206	8.566272	11.62117182	10.06423002	64.1894140
35	0.523	0.273529	5.629966223	6.017638	9.74018087	7.978689072	64.4132617
40	0.423	0.178929	7.473192652	3.936438	7.877813591	6.034755325	64.9362390
45	0.33	0.1089	9.629721202	2.3958	6.145812021	4.345745356	65.6542546
50	0.247	0.061009	12.14606093	1.342198	4.60004718	2.956853331	66.4761594
55	0.169	0.028561	15.44226591	0.628342	3.147400702	1.805274878	67.4218002
60	0.118	0.013924	18.56235985	0.306328	2.197593389	1.098796695	68.0968283
65	0.073	0.005329	-22.7335428	0.117238	1.359528114	0.574561408	68.7678490
70	0.04	0.0016	27.95880017	0.0352	0.744946912	0.25478685	69.2999788
75	0.019	0.000361	34.42492798	0.007942	0.353849783	0.091583063	69.6582073
80	0.007	0.000049	-43.0980392	0.001078	0.13036571	0.022637768	69.8716148
85	0.001	0.000001	-60	0.000022	0.018623673	0.00162316	69.9814472
90	0.00001	1E-10	-100	2.2E-09	0.000186237	1.14084E-20	69.9998137



ELEVATION TABULATED DATA

Type: 100-2MHW

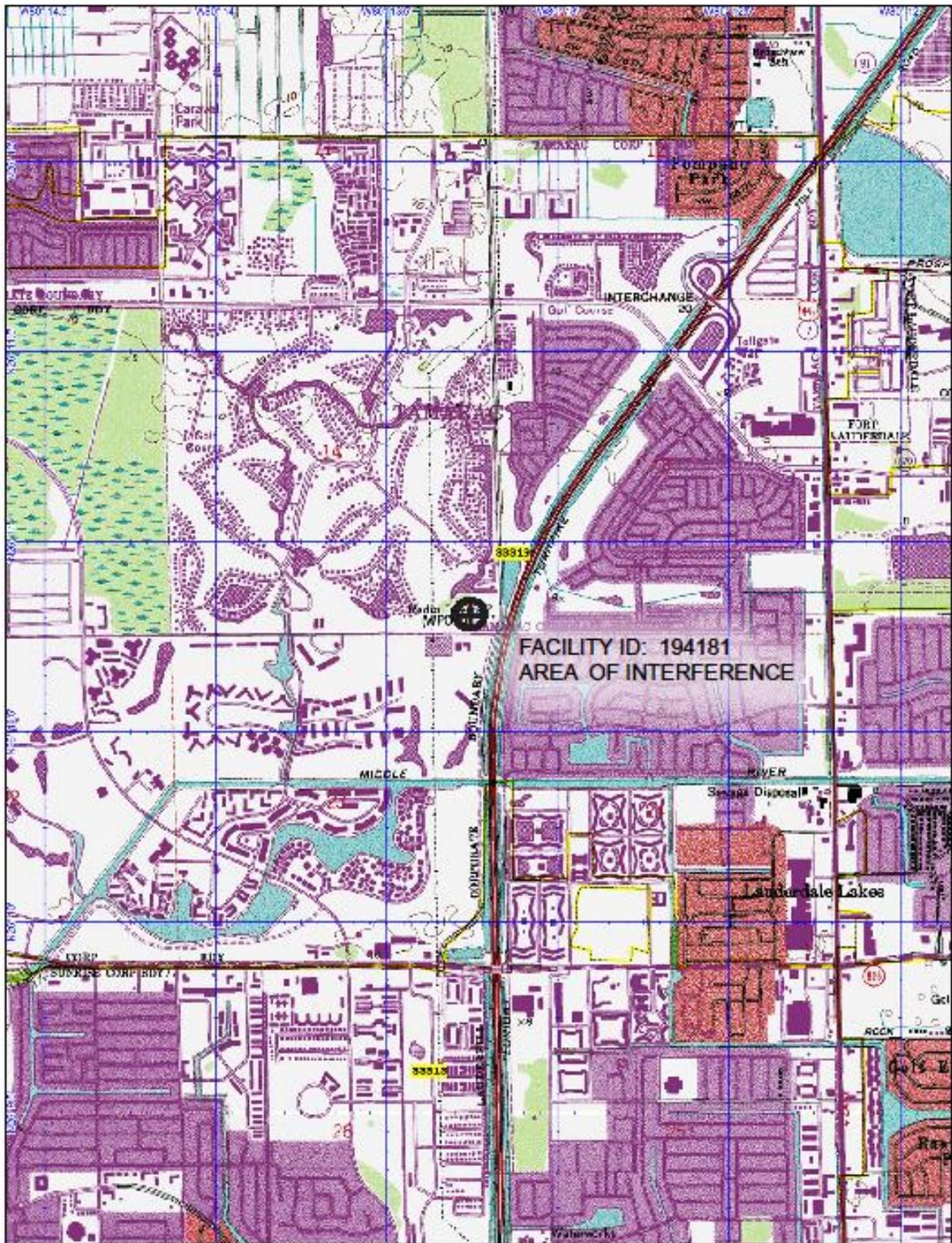
Polarization: _____

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
5.00	0.987	-0.11	-6.50	0.979	-0.19	-42.00	0.388	-8.22	-88.00	0.001	-58.92
4.75	0.989	-0.10	-6.75	0.977	-0.20	-43.00	0.369	-8.65	-89.00	0.001	-60.00
4.50	0.990	-0.09	-7.00	0.975	-0.22	-44.00	0.351	-9.09	-90.00	0.001	-60.00
4.25	0.991	-0.08	-7.25	0.974	-0.23	-45.00	0.333	-9.54			
4.00	0.992	-0.07	-7.50	0.972	-0.25	-46.00	0.316	-10.01			
3.75	0.993	-0.06	-7.75	0.970	-0.26	-47.00	0.299	-10.49			
3.50	0.994	-0.05	-8.00	0.968	-0.28	-48.00	0.282	-10.99			
3.25	0.995	-0.05	-8.25	0.966	-0.30	-49.00	0.266	-11.50			
3.00	0.995	-0.04	-8.50	0.964	-0.32	-50.00	0.250	-12.03			
2.75	0.996	-0.03	-8.75	0.962	-0.34	-51.00	0.235	-12.58			
2.50	0.997	-0.03	-9.00	0.960	-0.36	-52.00	0.220	-13.14			
2.25	0.997	-0.02	-9.25	0.958	-0.38	-53.00	0.206	-13.73			
2.00	0.998	-0.02	-9.50	0.955	-0.40	-54.00	0.192	-14.33			
1.75	0.998	-0.01	-9.75	0.953	-0.42	-55.00	0.179	-14.95			
1.50	0.999	-0.01	-10.00	0.951	-0.44	-56.00	0.166	-15.59			
1.25	0.999	-0.01	-11.00	0.940	-0.53	-57.00	0.154	-16.25			
1.00	0.999	0.00	-12.00	0.929	-0.64	-58.00	0.142	-16.93			
0.75	1.000	0.00	-13.00	0.918	-0.75	-59.00	0.131	-17.64			
0.50	1.000	0.00	-14.00	0.905	-0.87	-60.00	0.121	-18.37			
0.25	1.000	0.00	-15.00	0.892	-1.00	-61.00	0.111	-19.13			
0.00	1.000	0.00	-16.00	0.878	-1.13	-62.00	0.101	-19.92			
-0.25	1.000	0.00	-17.00	0.863	-1.28	-63.00	0.092	-20.73			
-0.50	1.000	0.00	-18.00	0.848	-1.44	-64.00	0.083	-21.57			
-0.75	1.000	0.00	-19.00	0.831	-1.60	-65.00	0.075	-22.45			
-1.00	0.999	0.00	-20.00	0.815	-1.78	-66.00	0.068	-23.36			
-1.25	0.999	-0.01	-21.00	0.798	-1.96	-67.00	0.061	-24.31			
-1.50	0.999	-0.01	-22.00	0.780	-2.16	-68.00	0.054	-25.29			
-1.75	0.998	-0.01	-23.00	0.762	-2.36	-69.00	0.048	-26.32			
-2.00	0.998	-0.02	-24.00	0.744	-2.57	-70.00	0.043	-27.39			
-2.25	0.997	-0.02	-25.00	0.725	-2.80	-71.00	0.038	-28.51			
-2.50	0.997	-0.03	-26.00	0.705	-3.03	-72.00	0.033	-29.69			
-2.75	0.996	-0.03	-27.00	0.686	-3.27	-73.00	0.028	-30.92			
-3.00	0.995	-0.04	-28.00	0.666	-3.53	-74.00	0.025	-32.21			
-3.25	0.995	-0.05	-29.00	0.646	-3.79	-75.00	0.021	-33.57			
-3.50	0.994	-0.05	-30.00	0.626	-4.06	-76.00	0.018	-34.99			
-3.75	0.993	-0.06	-31.00	0.606	-4.35	-77.00	0.015	-36.50			
-4.00	0.992	-0.07	-32.00	0.586	-4.64	-78.00	0.012	-38.10			
-4.25	0.991	-0.08	-33.00	0.566	-4.95	-79.00	0.010	-39.78			
-4.50	0.990	-0.09	-34.00	0.545	-5.27	-80.00	0.008	-41.57			
-4.75	0.989	-0.10	-35.00	0.525	-5.60	-81.00	0.007	-43.46			
-5.00	0.987	-0.11	-36.00	0.505	-5.93	-82.00	0.005	-45.47			
-5.25	0.986	-0.12	-37.00	0.485	-6.29	-83.00	0.004	-47.59			
-5.50	0.985	-0.13	-38.00	0.465	-6.65	-84.00	0.003	-49.82			
-5.75	0.983	-0.15	-39.00	0.445	-7.02	-85.00	0.002	-52.13			
-6.00	0.982	-0.16	-40.00	0.426	-7.41	-86.00	0.002	-54.48			
-6.25	0.980	-0.17	-41.00	0.407	-7.81	-87.00	0.001	-56.79			



Electronics Research, Inc.
7777 Gardner Road
Chandler, In. 47610

Facility ID	File Number	Callsign	Licensee	Sts	City	St	Cls	ERP	AMSL	Ch	Adj	Dist
40408	BLH-20050224ABN	WFEZ	COX RADIO, INC.	LIC	MIAMI	FL	C0	98000	308	226	2	23.54
40408	BXLH-20041229AAX	WFEZ	COX RADIO, INC.	LIC	MIAMI	FL	C	67430	215	226	2	23.54
40408	BXPB-20150917ADB	WFEZ	COX RADIO, INC.	CP	MIAMI	FL	C0	19000	311	226	2	24.51
67193	BXLH-20121220AAG	WMIB	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	FORT LAUDERDALE	FL	C	42000	283	278	54	21.62
67193	BXLH-20041227ABA	WMIB	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	FORT LAUDERDALE	FL	C	57980	215	278	54	23.54
67193	BLH-20050225AAP	WMIB	CLEAR CHANNEL BROADCASTING LICENSES, INC.	LIC	FORT LAUDERDALE	FL	C	98000	308	278	54	23.54
61640	WCMQ-FM	WCMQ-LP	WCMQ LICENSING, INC.	LIC	HIALEAH	FL	C2	31000	191	222	-2	45.11
196997	BNPL-20131113BUT	WKHE-LP	ACTIONS FOR BETTER FUTURE	CP	NORTH MIAMI	FL	LP100	30	54	224	0	31.92
193449	BMPFT-20150416AAY	WYTG-LP	TABERNACLE OF GLORY COMMUNITY CENTER INC	CP	MIAMI	FL	LP100	100	30	224	0	33.17
158103	BMPFT-20140317AAT	W223CJ	CIRCUITWERKES, INC.	MOD	WEST PALM BEACH	FL	D	245	340	223	-1	43.84
195408	BNPL-20131113BIO	NEW	1MIAMI, INC.	CP	MIAMI	FL	LP100	100	29	224	0	41.11
20442	BLH-19931104KB	WRLX	CAPSTAR TX, LLC	LIC	WEST PALM BEACH	FL	C3	7200	154	221	-3	70.2
61640	BXLH-20061011AAC	WCMQ-FM	WCMQ LICENSING, INC.	LIC	HIALEAH	FL	C2	1400	90.2	222	-2	49.56
20442	BLH-19970723KA	WRLX	CAPSTAR TX, LLC	LIC	WEST PALM BEACH	FL	C3	4100	112	221	-3	64.68
14376	BMLH-20100113ABB	WAVW	CAPSTAR TX, LLC	LIC	STUART	FL	C2	50000	148	224	0	121.53
139076	BLFT-20140630AAG	W223AJ	GLADES MEDIA COMPANY, LLC	LIC	BELLE GLADE	FL	D	250	137	223	-1	68.37
50321	BLH-20070622AAV	WFSX-FM	SUN BROADCASTING INC	LIC	ESTERO	FL	C2	25000	191	223	-1	157.2
143464	BLFT-20151203ABO	W227CX	CAPSTAR TX, LLC	LIC	NORTH PALM BEACH	FL	D	132	153	227	3	70.21
47387	BLH-20070622AAU	WAFZ-FM	GLADES MEDIA COMPANY LLC	LIC	IMMOKALEE	FL	A	5600	105	221	-3	109.05
11194	BMLH-20120612AAT	WEOU	FLORIDA KEYS MEDIA, LLC	LIC	KEY WEST	FL	C1	100000	167	224	0	211.08
28899	BLH-20000626AET	WIKX	CITICASTERS LICENSES, INC.	LIC	CHARLOTTE HARBOR	FL	C1	100000	246	225	1	216.42
28899	BLH-20000626AET	WIKX	CITICASTERS LICENSES, INC.	LIC	CHARLOTTE HARBOR	FL	C1	100000	246	225	1	216.42



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