

**MINOR CHANGE APPLICATION**  
**CORNERSTONE BROADCASTING CORPORATION**  
**NEW FM TRANSLATOR STATION**  
**CH 245D - 96.9 MHZ - 0.25 KW**  
**NEW SMYRNA BEACH, FLORIDA**  
**April 2018**

**EXHIBIT B**

**Interference Study for Channel 245D**  
**Using Proposed Site as Reference**

The proposed Channel 245, operating with an effective radiated power of 0.25 kilowatt, will not cause interference to any existing, applied for, or proposed facility. As noted on Exhibit B1, the proposed Channel 245 is within the predicted 60 dBu contour of the second adjacent station WDBO-FM, Channel 243C, Orlando, Florida. Due to the relationship between the proposed Channel 245 and WDBO-FM, 40 db ratio of the protected and interfering contours applies.

**Proposed Channel 245 vs WDBO-FM**

The WDBO-FM contour at the Channel 245 antenna site is in excess of 74.5 dBu (50/50). The corresponding interfering contour for Channel 245 is 114.5 dBu (50/10). As shown in the tabulation of desired to undesired contours (Exhibit B2), the Channel 245 interfering contour (114.5 dBu, FCC 50/10) will not reach ground level. Since the Channel 245 antenna will be mounted 80.0 meters (262.4 feet) above ground and there are no structures of comparable height in the vicinity of the proposed Channel 245 antenna, this contour never reaches any potentially occupied space. As such, WDBO-FM will not receive interference from the proposed translator.

Based on the foregoing, it is believed that the proposed Channel 245 is in compliance with §74.1204(d) of the Commission's rules. If a waiver of the rule is needed to address WDBO-FM, one is respectfully requested.

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**EXHIBIT B1**

Clearance Study for New Translator  
Using Proposed Site as Reference

REFERENCE		CH# 245D - 96.9 MHz, Pwr= 0.25 kW, HAAT= 82.7 M, COR= 88 M								DISPLAY DATES	
29 00 31.0 N.		Average Protected F(50-50)= 11.8 km								DATA 04-15-18	
80 58 27.8 W.		Omni-directional								SEARCH 04-15-18	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
245D New Smyrna Beach	1777685!	APP C	FL	35.0 215.0	0.03 BNPFT20180130AHW	29 00 32.0 80 58 27.0	0.250	0.03 98	0.03 Cornerstone Broadcasting C	-64.5R	64.5M
243C Orlando	WDBO-FM	LIC NCY	FL	189.1 9.0	49.53 BLH20011219AAC	28 34 07.0 81 03 16.0	100.00012.2 454	12.2 463	84.1 Cox Radio, Inc.	25.8	-35.7*
245C0 Jacksonville	WJGL	LIC C	FL	338.1 157.8	152.02 BMLH20130124AAR	30 16 34.0 81 33 53.0	100.000172.5 309	172.5 315	72.8 Cox Radio, Inc.	-32.3*	38.8
245D Deltona	W245CL	LIC DC	FL	226.5 46.3	64.90 BLFT20150916ADC	28 36 21.6 81 27 24.6	0.250	52.1 173	16.0 Clear Channel Broadcasting	1.4	9.7
299C Mount Dora	WMGF	LIC C	FL	253.6 73.4	34.98 BLH20081201AGU	28 55 10.1 81 19 07.4	100.00016.4 484	16.4 494	5.0 Clear Channel Broadcasting	28.5R	6.5M
246L1 Debarry	WJVE-LP	LIC	FL	246.8 66.7	32.98 BLL20170425AAA	28 53 29.0 81 17 09.0	0.094 31			13.7	10.9
247D Daytona Beach	W247AL	LIC C	FL	348.5 168.4	24.55 BLFT19990222TM	29 13 30.0 81 01 30.0	0.120 42	0.8 45	7.2 Cornerstone Broadcasting C	11.8	16.3
247D Deland	W247AK	LIC CN	FL	273.5 93.3	31.46 BLFT19980918TD	29 01 31.0 81 17 51.0	0.100 41	0.7 52	6.5 Cornerstone Broadcasting C	19.3	23.9
246L1 Titusville	WTYX-LP	LIC	FL	159.9 339.9	46.30 BLL20150724ABQ	28 37 03.0 80 48 40.0	0.100 29			26.6	24.0
246L1 Titusville	WTYX-LP	CP	FL	165.7 345.8	49.14 BPL20170713AIL	28 34 49.0 80 51 00.0	0.034 51			30.0	27.0
245L1 Cocoa	WRRQ-LP	LIC	FL	162.9 343.0	75.90 BLL20160128BEX	28 21 21.0 80 44 46.8	0.063 38			48.0	31.2
248C0 Winter Haven	WPCV	LIC CN	FL	210.0 29.7	113.08 BLH19890908KA	28 07 35.0 81 33 03.0	100.00010.4 310	10.4 340	73.9 Hall Communications, Inc.	91.2	38.1
245D Leesburg	W245AZ	CP DC	FL	257.8 77.3	92.47 BPFT20180117ACM	28 49 45.0 81 54 08.0	0.250	28.7 110	8.5 Central Florida Educationa	52.5	43.4
246L1 Mount Dora	WVGT-LP	LIC	FL	250.2 69.9	68.20 BLL20171205ACH	28 47 57.9 81 37 59.5	0.100 29			48.2	45.6

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM

In & Out distances between contours are shown at closest points. Reference Zone= East Zone, Co to 3rd adjacent.

All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtlt(Y,N,X)  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.  
« = Station meets FCC minimum distance spacing for its class.

CH 245 - New Smyrna Beach, FL - BNPFT20180130AHW  
Latitude: 29-00-31 N - Longitude: 080-58-27.80 W  
Channel: 245 - Frequency: 96.9 MHz  
ERP: 0.25 kW - AMSL Height: 88.0 m

WDBO-FM - Orlando, FL - BLH20011219AAC  
Latitude: 28-34-07 N - Longitude: 081-03-16 W  
Channel: 243 - Frequency: 96.5 MHz  
ERP: 100.00 kW - AMSL Height: 463.0 m

GRAHAM BROCK, INC.  
BROADCAST TECHNICAL CONSULTANTS

Glencoe

081-0

29-01-00 N

080-59-00 W

080-58-00 W

080-57-00 W

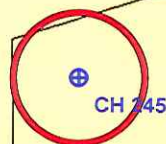
+

29-00-00 N

+

+

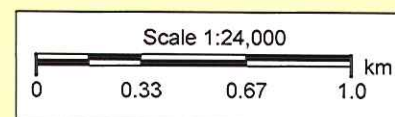
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CH 245

95

**EXHIBIT B2**  
**MINOR CHANGE APPLICATION**  
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**EXHIBIT B3**

**Proposed Channel 245 vs WDBO-FM Interference Contour Tabulation**

1777685 New Smyrna Beach, FL, Showing Protection to WDBO-FM  
 74.1204(d) Study - Using FCC 30 SEC Terrain Database  
 Translator or LPFM Maximum Licensed ERP = 0.25  
 Translator or LPFM Antenna Height AG = 80 Meters  
 1777685 Antenna Model = 2 BAY HW

Protected Station's Contour = 74.5 dBu  
 Translator's or LPFM's full Interference contour 114.5

Review Azimuth = 0 Degrees True  
 Relative Field on the horizon at Review Azimuth = 1.000  
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW  
 Distance between stations = 49.5 km  
 Protected Station= WDBO-FM, 100 kW, 463 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	208.9152	208.9152	080.000
05.00	0.984	1.0	0.2421	205.5725	204.7903	062.083
10.00	0.938	1.0	0.2200	195.9624	192.9853	045.971
15.00	0.865	1.0	0.1871	180.7116	174.5540	033.228
20.00	0.772	1.0	0.1490	161.2825	151.5560	024.838
25.00	0.665	1.0	0.1106	138.9286	125.9121	021.286
30.00	0.553	1.0	0.0765	115.5301	100.0520	022.235
35.00	0.442	1.0	0.0488	092.3405	075.6409	027.036
40.00	0.339	1.0	0.0287	070.8222	054.2530	034.476
45.00	0.248	1.0	0.0154	051.8110	036.6359	043.364
50.00	0.172	1.0	0.0074	035.9334	023.0976	052.473
55.00	0.112	1.0	0.0031	023.3985	013.4208	060.833
60.00	0.068	1.0	0.0012	014.2062	007.1031	067.697
65.00	0.037	1.0	0.0003	007.7299	003.2668	072.994
70.00	0.018	1.0	0.0001	003.7605	001.2862	076.466
75.00	0.007	1.0	0.0000	001.4624	000.3785	078.587
80.00	0.002	1.0	0.0000	000.4178	000.0726	079.589
85.00	0.001	1.0	0.0000	000.2089	000.0182	079.792
90.00	0.0	1.0	0.0000	000.0209	000.0000	079.979

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**EXHIBIT B4**

N. Lat. = 29° 00' 31.0" - Protected and Interfering Contour Data  
W. Lng. = 80° 58' 27.8 - New FM Translator, New Smyrna Beach, Florida

HAAT and Distance to Contour - FCC 30 second terrain database										
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5	40-F1	54-F1	100-F1	114.6-F1
000	0.1	87.9	0.2500	-6.02	1.000	12.09	41.57	17.76	1.11	0.21
010	0.0	88.0	0.2500	-6.02	1.000	12.10	41.59	17.78	1.11	0.21
020	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
030	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
040	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
050	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
060	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
070	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
080	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
090	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
100	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
110	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
120	0.0	88.0	0.2500	-6.02	1.000	12.10	41.60	17.78	1.11	0.21
130	0.2	87.8	0.2500	-6.02	1.000	12.08	41.55	17.75	1.11	0.21
140	1.7	86.3	0.2500	-6.02	1.000	11.99	41.20	17.57	1.11	0.21
150	5.7	82.3	0.2500	-6.02	1.000	11.72	40.22	17.07	1.11	0.21
160	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
170	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
180	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
190	9.4	78.6	0.2500	-6.02	1.000	11.48	39.29	16.60	1.11	0.21
200	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
210	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
220	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
230	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
240	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
250	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
260	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
270	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
280	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
290	10.0	78.0	0.2500	-6.02	1.000	11.44	39.14	16.53	1.11	0.21
300	8.8	79.2	0.2500	-6.02	1.000	11.52	39.44	16.68	1.11	0.21
310	8.3	79.7	0.2500	-6.02	1.000	11.55	39.58	16.75	1.11	0.21
320	9.1	78.9	0.2500	-6.02	1.000	11.50	39.37	16.64	1.11	0.21
330	8.8	79.2	0.2500	-6.02	1.000	11.52	39.45	16.68	1.11	0.21
340	4.8	83.2	0.2500	-6.02	1.000	11.79	40.45	17.19	1.11	0.21
350	1.6	86.4	0.2500	-6.02	1.000	11.99	41.21	17.58	1.11	0.21

AMSL= 88.0 M