

August 16, 2021

W277DZ (W224DK) Durham, NC - Facility ID: 146901
Fill-In Translator for WPTF(AM) Raleigh, NC - Facility ID: 21630
Minor Modification of BLANK-0000100657

This minor modification application is to modify the antenna and effective radiated power of the CP for W277DZ (W224DK) Durham, NC. The authorized site is an existing multiple use communications tower.

47 C.F.R. Sections 74.1204, 74.1205, 74.1232, 74.1234, 74.1235

The channel study on the next sheet shows the contour overlap values for the proposed translator. The only potential contour overlap is to second adjacent WKIX-FM 275A Raleigh, NC. WKIX-FM places a signal strength of 65.5 dBu at the proposed translator tower site. A translator interfering signal level 40 dBu greater will be 105.5 dBu. The proposed translator with the proposed antenna using the power and height proposed will generate an interfering signal that will at no point be less than 30 feet from the ground, as shown on the attached table. There are no tall structures close to the supporting structure to be used. Therefore no actual interference will occur to WKIX-FM in accordance with Section 74.1204 of the rules. There are no other contour overlaps shown on the table. Contour to contour maps are included for five other facilities with less than 16 kilometers separation from the proposed translator interfering contour.

W277DZ will rebroadcast AM station WPTF Raleigh, NC. A map is included showing the FM fill-in translators used by WPTF, including the proposed W277DZ.

A map is included to show compliance with 74.1232.

47 C.F.R. Section 1.1306

A Commission grant of Authorization for this location would not be an action which will have a significant environmental effect. The FCC FM Model software predicts the proposed facility will create a maximum power density near the ground of 0.265 $\mu\text{W}/\text{cm}^2$ 21 meters out from the tower. This is 1.33% of the maximum power density for uncontrolled public access areas in accordance with OET

W277DZ Durham, NC – Minor Modification of CP Application – Sheet 2

Bulletin 65. The permittee/licensee in coordination with other users of the site will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

Carl E. Gluck

Carl E. Gluck, CPBE



Channel Study of W277DZ Proposed Translator

REFERENCE CH# 277D - 103.3 MHz, Pwr= 0.12 kW DA, HAAT= 124.7 M, COR= 226.8 M
 35 58 39.6 N. Average Protected F(50-50)= 11.9 km DATA 08-16-21
 78 48 57.1 W. Standard Directional SEARCH 08-16-21

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
275A Raleigh	WKIX-FM	LIC	NCN NC	166.4 346.4	20.96 BLH19980702KF	35 47 38.50 78 45 40.00	1.700 189	2.3 298	27.9 Fm 102.9 LLC	-7.0*
278L1 Chapel Hill	WCOM-LP	LIC	CN NC	244.0 63.8	25.40 BLL20040629ACS	35 52 38.50 79 04 08.00	0.100 28	149	Public Gallery Of Carrboro	0.0
277L1 Cary	WSHP-LP	LIC	CN NC	174.3 354.3	21.38 BLL20171128ABD	35 47 09.30 78 47 32.60	0.037 49	165	Diocese Of Raleigh	0.5
278L1 Wake Forest	WFNE-LP	LIC	CN NC	90.8 271.0	27.43 BLL20151016ABG	35 58 26.20 78 30 42.10	0.061 39	146	Epic Radio, Inc.	2.8
277C1 Danville	WAKG	LIC	CN VA	329.2 148.9	98.90 BLH19900904KB	36 44 28.40 79 23 04.00	100.000 199	163.1 410	64.7 Piedmont Broadcasting Corp	4.6
280C3 Fuquay-Varina	WNNL	LIC	ZCN NC	172.6 352.6	42.64 BLH19921001KA	35 35 47.50 78 45 17.00	7.900 176	3.5 272	35.9 Radio One Licenses, LLC	6.7
279D Roxboro	W279BW	CP	VN NC	349.4 169.4	36.34 BPFT20181105AAW	36 17 58.50 78 53 25.00	0.250 177	1.1 177	7.1 Eastern Airwaves, LLC	29.1
276A Sharpsburg	WLQC	LIC	CN NC	89.7 270.2	78.12 BLH20101022ACF	35 58 40.60 77 56 58.90	4.400 117	40.9 172	26.7 Pinestone Media Corporatio	33.4

Terrain database is 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-3rd adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 Incoming contour overlap is ignored.
 "***affixed to 'IN' or 'OUT' values = site inside restricted contour.
 « = Station meets FCC minimum distance spacing for its class.