

Lumberton, North Carolina
Minor Modification Application for
FM Translator W280EP Construction Permit
File Number BNPFT-20131024ADA
On Channel 280
by
Shaw University

Exhibit 13
Interference Analysis

December 2016

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Declaration

I declare, under penalty of perjury, that I am a technical consultant to broadcasting and other communications systems, that I have over twenty-five years of experience in the engineering of broadcast and other communications systems, that I am familiar with the Federal Communications Commission's Rules found in the Code of Federal Regulations Title 47, that I am a Professional Engineer registered in North Carolina, that I have prepared or supervised the preparation of the attached Exhibit 13, Interference Analysis, for Shaw University, and that all of the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.



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Narrative

This Exhibit supports a modification application for W280EP, for FM translator Construction Permit file number BNPFT-20131024ADA, on Channel 280 in Lumberton, North Carolina. Allocation details are provided in this exhibit. The changes are the location, change of primary station, change of antenna model, a decrease in elevation, and an increase in effective radiated power. This proposal creates no new mutual exclusivities with any Auction 83 Tech Box filings or any other facility.

Figure 1 shows the proposed 60 dBu F(50,50) contour and the authorized contour. As Figure 1 shows, this is a minor modification of the authorized facilities.

Allocations

This application proposes service to Lumberton, North Carolina, on channel 280. An updated Table 1: Allocations is included in this exhibit with a list of the stations, construction permits, allocations, and applications studied. All are protected by this application

Table 1: Allocations

Allocation Study Shaw University											
REFERENCE		CH# 280D - 103.9 MHz, Pwr= 0.1 kW, HAAT= 11.2 M, COR= 52 M							DISPLAY DATES		
34 39 58.0 N.		Average Protected F(50-50)= 5.6 km							DATA 12-14-16		
79 00 43.0 W.		Omni-directional							SEARCH 12-14-16		
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*
280D Lumberton	W280EP!	CP	C NC	51.1 231.1	0.09 BNPFT20131024ADA	34 40 00.0 79 00 40.0	0.080 49	23.0 90	6.9 Shaw University	-28.5	-25.3
Facility being modified.											
280C3 Fuquay-varina	WNNL	LIC	ZCN NC	12.7 192.8	105.82 BLH19921001KA	35 35 47.0 78 45 18.0	7.900 176	101.2 272	38.9 Radio One Licenses, Llc	-1.0	48.3
278C2 Dunn	WRCQ	LIC	CN NC	37.6 217.8	54.24 BLH19900207KB	35 03 09.0 78 38 54.0	48.000 153	5.9 187	52.1 Cumulus Licensing Llc	42.7	1.4
283A Hope Mills	WCCG	LIC	CN NC	24.0 204.1	33.64 BLH19970421KB	34 56 34.0 78 51 41.0	6.000 84	2.5 122	25.2 Dr. James E. Carson	25.5	7.8
281C1 Myrtle Beach	WYAV	LIC	CN SC	181.6 1.6	119.31 BLH19980731KA	33 35 27.0 79 02 55.0	100.000 299	105.1 301	72.4 Alpha Media Licensee Llc	8.6	39.1
277C2 Cheraw	WJMX-FM	LIC	CN SC	257.9 77.4	83.86 BLH19921118KA	34 30 18.0 79 54 18.0	50.000 150	6.4 197	55.1 Amfm Radio Licenses, L.L.C	71.8	28.0
282C3 Hamlet	WJSG	LIC	NCX NC	284.0 103.6	67.44 BLH20061109ADN	34 48 39.0 79 43 38.0	6.000 149	3.2 223	33.7 Jackson Broadcasting Compa	58.6	32.8
279C0 Charlotte	WSOC-FM	LIC	CN NC	293.6 112.6	166.18 BMLH20140821ABX	35 15 06.0 80 41 12.0	100.000 411	121.2 613	81.6 Wxtu License Limited Partn	39.4	76.5
279C2 wrightsville Beach	WILT	LIC	NCX NC	123.2 303.8	114.58 BLH20140121MLI	34 05 51.6 77 58 18.2	22.000 151	66.9 156	44.9 Sunrise Broadcasting, Llc	42.0	61.7
279C2 wrightsville Beach	AL9816	RSV-A	NC	125.9 306.6	125.56 RM11295	33 59 56.0 77 54 35.0	50.000 150	77.4 153	51.6	42.5	65.9
counterproposal in MB Doc. No. 05-16.											

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 adj.
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), Beamtilt(Y,N,X)

Source of Data

Transmitter location, effective radiated power, directional antenna pattern, and elevation data are extracted from the Commission's CDBS. All contours for existing and proposed facilities are calculated using height above average terrain calculated at one degree horizontal increments.

The contours were evaluated using terrain extracted from the National Geophysical Data Center's (NGDC) 30 arcsecond terrain database, formatted by V-Soft Communications and edited to match the database in use at the Federal Communications Commission.

All population data is from 2010 U.S. Census PL data files. Population is counted by considering the location of the centroid of each census block. The data for each block is counted if it falls within the area being counted.

W280EPm

Proposed

Latitude: 34-39-58 N

Longitude: 079-00-43 W

ERP: 0.10 kW

Channel: 280 103.9 MHz

AMSL Height: 52.0 m

Elevation: 37.0 m

Horiz. Pattern: Omni

W280EP.C

BNPFT20131024ADA

Latitude: 34-40-00 N

Longitude: 079-00-40 W

ERP: 0.08 kW

Channel: 280 103.9 MHz

AMSL Height: 90.0 m

Elevation: 39.0 m

Horiz. Pattern: Omni

W280EP

Authorized and Proposed Contours

December 2016

Figure 1

Timothy L. Warner, Inc.

Saint Pauls

Authorized F(50-50) 60.00 dBu

Proposed F(50-50) 60.00 dBu

W280EP.C
W280EPm

Lumberton

Robeson

Airmont

Scale 1:250,000

0 3 6 9 km

V-Soft Communications LLC ©