

Sylva, North Carolina  
Minor Modification Application for  
FM Translator W218AB  
File Number BLFT-19970919TE  
On Channel 218  
by  
Western North Carolina Public Radio, Inc.

Exhibit 13  
Interference Analysis

November 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 Western North Carolina Public Radio, Inc., 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 W218AB, for FM translator, license file number BLFT-19970919TE, on Channel 218 in Sylva, North Carolina. Allocation details are provided in this exhibit. The changes are a correction of coordinates and site elevation, an increase in power, and a change in delivery of the primary signal to relay through another translator. 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) coverage area. The authorized W218AB 60 dBu F(50,50) contour is shown as well.

### Allocations

This application proposes service to Sylva, North Carolina, on channel 218. 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  
Western North Carolina Public Radio, Inc.

CH# 218D - 91.5 MHz, Pwr= 0.01 kw, HAAT= 6.5 M, COR= 916 M  
Average Protected F(50-50)= 3.2 km  
Omni-directional

DISPLAY DATES  
DATA 11-29-16  
SEARCH 11-29-16

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*
218C2 Greenville	WTBI-FM	LIC	CX SC	130.1 310.5	92.22 BLED20071214ADL	34 49 51.0 82 26 55.0	22.500 128	113.3 414	40.2 Tabernacle Baptist Bible C	-30.0*	22.9
218D Sylva	W218AB!	LIC	CN NC	164.9 344.9	0.09 BLFT19970919TE	35 21 58.0 83 13 17.0	0.005 -6	8.5 913	2.7 Western North Carolina Pub	-15.5	-26.4
TRANSLATOR FOR WCQSFM, ASHEVILLE, NC. Facility being modified.											
217C3 Franklin	WFQS	LIC	DEN NC	236.7 56.5	39.12 BLED19890119KF	35 10 24.0 83 34 52.0	0.265 702	41.4 1681	23.4 western North Carolina Pub	-7.2*	8.2
220C Knoxville	WUOT	CP	CY TN	317.8 137.4	96.12 BPED20140521AHX	36 00 19.0 83 56 23.0	81.000 482	11.9 793	85.4 University Of Tennessee	74.6	10.6
220C Knoxville	WUOT	LIC	CY TN	316.7 136.3	96.37 BLED20050519AGZ	35 59 44.0 83 57 23.0	65.000 534	11.5 839	85.4 University Of Tennessee	75.2	10.7
06 D Franklin, Etc.	W06AJ-D	LI	D N NC	236.6 56.4	39.18 BLDTV20120625AAZ	35 10 22.0 83 34 53.0	0.193 921	1.2 1643	26.9	28.1R	11.1M
06NT Maggie Valley, Etc.	W06AP	LI	DHN NC	29.8 209.8	19.30 BLTTV19791109IC	35 31 04.0 83 06 56.0	0.015 402	1.2 1266	1.6	2.9R	16.5M
217A Asheville	WLFA	LIC	CN NC	63.1 243.4	57.83 BLED1386	35 36 02.0 82 39 07.0	0.440 262	35.8 1019	21.4 Radio Training Network, In	19.3	29.6
06NT Sapphire Valley, etc	W06AN	LI	DHN NC	141.4 321.6	33.41 BLTTV19820218ID	35 07 54.0 82 59 33.0	0.163 937	1.2 1465	9.5	10.7R	22.7M
218C1 Bristol	WHCB	LIC	CN TN	39.2 219.9	153.82 BLED19930210KD	36 26 03.0 82 08 03.0	1.500 715	126.6 1337	52.7 Appalachian Educational Co	23.2	90.6
215C1 Toccoa Falls	WRAF	LIC	DCX GA	188.8 8.7	86.17 BLED20090529AEI	34 35 57.0 83 21 55.0	100.000 172	7.8 513	59.6 Radio Training Network, In	71.9	24.4
218C2 Cumming	WWEV-FM	LIC	DCN GA	214.6 34.0	151.94 BLED19860203KB	34 14 13.0 84 09 36.0	8.900 293	115.6 644	47.3 war Hill Christian Fellows	29.3	81.3
219A Tallulah Falls	WHTD	CP	DCN GA	203.6 23.5	63.15 BMPED20150622AAC	34 50 43.8 83 29 58.8	0.072 386	12.6 1069	9.1 Toccoa Foundation, Inc.	43.5	45.7
220D Enka	W220CD	LIC	C NC	63.1 243.4	57.86 BLFT20150713ACF	35 36 04.0 82 39 07.0	0.010	0.2 1051	8.8 Calvary Chapel Of Twin Fal	53.4	47.7
216C3 Tusculum	WZTH	LIC	DVX TN	17.1 197.2	84.92 BLED20101001AAR	36 05 53.0 82 56 37.0	17.000 87	2.9 502	21.0 Solid Foundation Broadcast	78.2	51.1
219A Tallulah Falls	WHTD	LIC	C GA	194.5 14.4	69.43 BLED20110414ABI	34 45 39.5 83 24 44.5	0.025 169	8.6 693	5.7 Toccoa Foundation, Inc.	54.1	56.6

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 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)  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

### 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.

**W218ABm**

Proposed  
Latitude: 35-22-01 N  
Longitude: 083-13-18 W  
ERP: 0.01 kW  
Channel: 218 91.5 MHz  
AMSL Height: 916.0 m  
Elevation: 888.0 m  
Horiz. Pattern: Omni

**W218AB**

BLFT19970919TE  
Latitude: 35-21-58 N  
Longitude: 083-13-17 W  
ERP: 0.005 kW  
Channel: 218 91.5 MHz  
AMSL Height: 913.0 m  
Elevation: 885.0 m  
Horiz. Pattern: Omni

**W2128AB**

Licensed and Proposed Contours  
November 2016  
Figure 1

Timothy L. Warner, Inc.

Waynesville

Hazelwood

Proposed F(50-50) 60.00 dBu

Licensed F(50-50) 60.00 dBu

Sylva

W218ABm  
W218AB

Cullowhee

Jackson

Scale 1:250,000



V-Soft Communications LLC ©

Franklin