

# EXHIBIT E

## TECHNICAL CERTIFICATIONS & EXHIBITS

### BROADCAST FACILITY

Proposed New LPFM Station at Greenville, SC  
Ubuntu Institute for Community Development

#### OVERVIEW

The applicant proposes a new LPFM at an existing structure, outside of a Top-50 Market. Attached **Exhibit E-1** shows spacing protection to co- and first-adjacent stations, and second-adjacent protection using a second-adjacent waiver. **Exhibit E-2** shows environmental compliance.

#### METHODOLOGY

HAAT and contour calculations for 2<sup>nd</sup>-adjacent waivers were made using the methods and procedures described in 47 CFR §73.313, using linear interpolation in one-degree increments. Calculations were done using V-Soft FM Commander software, using “HAAT method 0 (zero)”, 51 data points per radial, and the **Globe 30** second terrain database.

#### PROPOSED ERP IS 58 WATTS

The LMS filing system internally computed a maximum ERP of 47 watts. Our calculations show a HAAT of 39.575m, which allows a maximum ERP of 58 watts.

AZ	HAAT (m)
0	16.9
45	25.7
90	44.7
135	56.5
180	73.6
225	43.7
270	34.3
315	21.2

8 Radial HAAT: 39.575m  
Resultant ERP **58W**

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# EXHIBIT E-1

## TECHNICAL CERTIFICATIONS

### INTERFERENCE PROTECTION

#### CHANNEL STUDY

This proposal is fully spaced to all co and first-adjacent stations.

#### NEW LPFM GREENVILLE

REFERENCE		DISPLAY DATES
34 46 10.30 N.	CLASS = L1	DATA 12-07-23
82 27 29.30 W.	Current Spacings to 3rd Adj.	SEARCH 12-10-23
----- Channel 231 - 94.1 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin
WKVG	LIC 233C	Greenville	SC 12.6	19.55	92.5	-73.0*
WKVG	APP 233C	Greenville	SC 12.6	19.55	92.5	-73.0*
WFBC-FM	LIC 229C	Greenville	SC 340.5	40.34	92.5	-52.2*
W231BA	LIC 231D	Spartanburg	SC 48.8	38.75	38.5	0.25
W231BX	LIC-D 231D	Seneca	SC 259.5	49.26	38.5	10.8
W231AR	LIC 231D	Black Mountain	NC 4.3	88.81	38.5	50.3

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All separation margins include rounding

\*2nd Adjacent stations - protection shown through ratio method

#### SECOND-ADJACENT CONTOUR PROTECTION

A waiver of second-adjacent spacing to WKVG and WFBC-FM, is hereby requested, under the provisions of §73.807(e)(1). Contour protection is provided using the ratio method. At the proposed LPFM tower site, the F(50,50) signal for WKVG is 92.01dBu, and for WFBC-FM it is 85.02dBu. The corresponding “worst-case” LPFM interfering contour is therefore 125.02dBu. At the proposed 58W ERP, the distance to the interfering contour is 30.0m, without including the effects of the antenna elevation pattern. The proposed antenna radiation center is 40m AGL, with no buildings in the area observed to be taller than two stories. Therefore, the predicted area of interference is well above all populated areas.

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## **PROTECTED ZONES**

Facility is okay with respect to AM station towers.

Closest AM Facility is WYRD, GREENVILLE, SC, L, DAN at 18.1° at a distance of 10.0 km

Facility is okay with respect to FCC monitoring stations.

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## **EXHIBIT E-2**

### **TECHNICAL CERTIFICATIONS**

#### **ENVIRONMENTAL EFFECTS**

This proposal will not have a significant environmental impact, under 47 CFR §1.1307. None of the provisions of this Part apply in this case. The applicant proposes a new omnidirectional antenna, mounted on an existing registered tower. The proposed antenna radiation center is 40m AGL, with an ERP of 58W. Using the “worst-case” Type-1 setting in FM Model with a 1-bay antenna, the predicted peak RF exposure is  $1.6\mu\text{W}/\text{cm}^2$  at 10.2m from the base, or 0.8% of the Maximum Permissible Exposure for uncontrolled/public access areas. The other RF emitters on this tower are not expected to be significant contributors to ground-level exposures. There are no tall buildings in the area.

The applicant will ensure that appropriate RF exposure warning signs are posted. When antenna work by authorized personnel becomes necessary, the station will reduce power or cease operations, as necessary, so as to not exceed the RF exposure limits.

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