

MULLANEY ENGINEERING, INC.

4937 G - GREEN VALLEY ROAD
MONROVIA, MARYLAND 21770

APPLICATION FOR DIGITAL TELEVISION STATION
CONSTRUCTION PERMIT

LIVING FAITH MINISTRIES, INC.
WLFB (TV) BLUEFIELD, WEST VIRGINIA
Facility ID: 37806

INCENTIVE AUCTION CHANNEL REASSIGNMENT
“CHECKBOX” APPLICATION

DTV ASSIGNMENT CHANNEL 25 (536-542 MHZ)
MAXIMUM ERP: 734 KW DIRECTIONAL
ANTENNA HEIGHTS; 1224 AMSL 399 HAAT 54 METERS AGL

JUNE 2017

Engineering Statement Narrative

Living Faith Ministries, Inc. (LFM) is the licensee of digital television station WLFB, Channel 40, Facility ID 37806, Bluefield, West Virginia, and has been reassigned to Channel 25 as a result of the incentive auction television channel repack assignments.

LFM proposes construction of the WLFB post-auction facility as assigned and specified in the Incentive Auction Closing and Channel Reassignment Public Notice (DA 17-317) released April 13, 2017.

Technical Facility:

The proposed Channel 25 operation will employ a new antenna to be side-mounted on the WLFB tower in lieu of the existing Channel 40 antenna, and will operate with an effective radiated power (ERP) of 734 kW at 399 meters antenna height above average terrain (HAAT) as specified in the reassignment public notice. The RF facilities proposed correspond exactly to the post-auction assignment. No change in the antenna location (geographical coordinates or antenna heights) will occur.

The proposed antenna is a horizontally polarized directional DIE model TFU-26DSC-TFU 26-Bay antenna employing 0.75 degrees of electrical beam tilt. The horizontal radiation pattern matches the previous radiation pattern of the SHI 2100-32 (antenna ID: 106698) on Channel 40. SHI (Shivley) no longer provides television antennas in their product line, thus a custom DIE (Dielectric) TFU-26DSC-TFU will be utilized for pattern match.

This is the existing tower site and supporting structure for WLFB. The tower's FCC tower registration number (ASR) is: 1219321. Notice to the FAA is not required as no changes to the overall height of the structure will occur.

Predicted Service Contours:

Figure 1 is a map which depicts the standard predicted coverage contours from the proposal. The map includes the location and corporate boundary of Bluefield, West Virginia, the station's principal community.

As shown in Figure 1, the proposed facility complies with §73.625(a)(1) concerning service to the community of license.

Interference Analysis:

The proposed noise limited service contour does not extend beyond that of the post-auction assignment. Therefore, an interference analysis to other television facilities is not required.

Effective Radiated Power:

The proposed 734 kW ERP does not exceeds the maximum allowed for the proposed antenna height above average terrain (HAAT) of 399 meters permitted by §73.622(f)(8)(I).

AM Facilities/International Coordination:

There are no authorized AM stations within 3 kilometers of the site, additionally the site location is beyond any area that require international coordination.

Environmental Considerations:

No new construction will occur at the site other than the replacement of one side-mounted antenna type with another on an existing structure (the physical size of the antennas are as close to identical as practical). The proposed construction does not trigger any event with regards to Section 106 of the National Historical Preservation Act (NHPA).

The proposal does not meet any of the criteria specified in Section 1.1307 of the FCC Rules. More specifically, the proposed facilities are not known to fall within any of the categories enumerated in Sections 1.1307(a)(1)-(7) and will not involve the use of high intensity white lights.

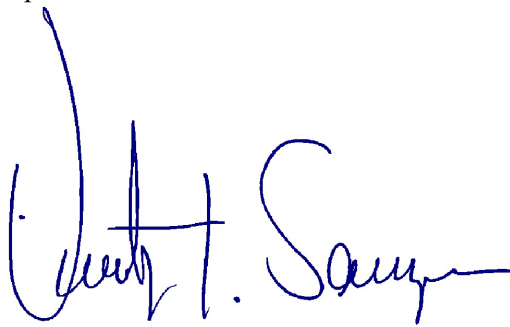
Furthermore, operation of the proposed facility will not involve the exposure of workers or the general public to levels of radio frequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. (The current FCC guidelines are based upon criteria contained in the National Council of Radiation Protection and Measurements (NCRP) Report No.86 (1986) and ANSI/IEEE C95.1-1992.)

Based upon the antenna manufacturers data, and a downward relative field value from the antenna of 0.1 for all angles 10 degrees and greater below the horizon, the calculated power density level 2-meters above ground near the base of the tower is predicted to be 0.090 mW/cm² or less. The computed power density is 5.05% of the Commission's guidelines for a worker/controlled area and 25.23% for a public/uncontrolled area.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs are posted at the site. The applicant will coordinate exposure procedures with any co-located facilities and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

The proposed operation is fully in compliance with all areas of the Commission's rules and applicable international agreements.

June 24, 2017

A handwritten signature in blue ink, reading "Timothy Z. Sawyer". The signature is fluid and cursive, with the first name "Timothy" and last name "Sawyer" clearly legible, and "Z." as a middle initial.

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WLFB - DIGITAL REPACK

BASELINE CHECKBOX APPLICATION
FCC Facility ID:37806
ERP: 734.00 kW
Channel: 25 Frequency: 539.0 MHz
AMSL Height: 1224.0 m
Horiz. Pattern: Directional
Antenna Beam Tilt: 0.75 Deg.

PROPOSED DIGITAL SERVICE CONTOURS

WLFB (TV) BLUEFIELD, WV
CHANNEL 25 734.0 KW 399 HAAT

LIVING FAITH MINISTRIES, INC.

FIGURE 1

BLUEFIELD, WV

WLFB - DIGITAL REPACK

FCC 39.9 DBU F(50,90)

NOISE LIMITED SERVICE CONTOUR

FCC 48 DBU F(50,90)

PRINCIPLE COMMUNITY CONTOUR



Proposal service area is within baseline plus 1.0%

