

# **ENGINEERING REPORT**

## **FM Translator Minor Construction Permit Application**

for

**W244BJ – Lakeland, FL**

License No. BLFT-20150213ACM

Facility ID No. 138530

NEW DA Pattern

March, 2015

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(Exhibit numbering is in response to FCC Online Form 349, Section III-A)

## Discussion

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This firm has been retained to prepare the required engineering report in support of a Minor Construction Permit Application for FM Translator W244BJ - Lakeland, FL License No. BLFT-20150213ACM (Facility ID: 138530). W244BJ presently operates on Channel 244D (96.7 MHz) with 250 watts of circularly polarized directional power with an antenna COR of 167 meters AMSL. Operation from the same site location is requested at the same antenna height, but with a new directional antenna. Operation on CH244D, 96.7 MHz, with 250 watts ERP (H&V) at 167 meters AMSL is proposed utilizing a new Nicom BKG77/1-DA directional antenna. The translator will rebroadcast new primary station WWRZ(FM)-HD4 - Fort Meade, FL, CH252C2 (Facility ID: 72687) as an HD4 FM Fill-In Translator. The Translator will continue to serve the community of Lakeland, FL.

The translator will be mounted on the existing tower bearing Antenna Structure Registration Number 1040895. A copy of ASR #1040895 has been included in **Exhibit 13.1**. As this Form 349 filing will not increase the overall tower height, notification to the FAA is not believed necessary.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or facility. General allocation details are found in **Exhibit 13.5**. There are two (2) facilities existing or proposed, close enough to merit further study. Therefore supplemental contour protection studies have been provided toward co-channel protection WZPH-LP(FM) - Dade City, FL and first adjacent channel protection WDBO-FM - Orlando, FL as included in **Exhibit(s) 13.6** and **13.7**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The applicant would like to note use of the NED 03 second terrain database for all allocation, contour and HAAT showings contained here-in.

The proposed 60 dBμ contour of the Fill-In translator lies wholly inside of the WWRZ(FM)-HD4 primary 60 dBμ service contour. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 13.4**.

The proposed operating parameters have been changed from the licensed values, however the proposed service contour serves a portion of the present service area as seen in **Exhibit 13.3**.

**RADIATION PROTECTION:** The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. This report section is in response to that provision of the Rules. The current Federal Communications Commission guidelines for RF radiation protection are set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01).

## Discussion (continued)

The FM Broadcast facility proposed in this application will not produce human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b)(3) of the Commission's rules concerning RF contributors of less than 5%. **Exhibit 17.1** provides the details of the study that was made to demonstrate compliance. The facility is or will be properly marked with signs, and entry is restricted by means of fencing with locked doors and/or gates if required. Any other means as may be required to protect employees and the general public will be employed.

***In the event work would be required in proximity to the antenna such that the person or persons working in the area would be potentially exposed to fields in excess of the guidelines set forth in OET Bulletin No. 65 (Edition 97-01), the transmitter power will be reduced or the station will cease operation during the critical period.***

**DISTANCES TO CONTOURS:** The following tabulation of the distances to the proposed service contours results from calculations performed in accordance with §73.313(d) and §73.333 Figure 1.

N. Lat. = 275636.0 W. Lng. = 815444.0						
HAAT and Distance to Contour,						
FCC, FM 2-10 Mi, 51 pts Method - NED 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	40.6	126.4	0.2500	-6.02	1.000	14.43
030	34.4	132.6	0.2500	-6.02	1.000	14.80
060	35.3	131.7	0.2500	-6.02	1.000	14.74
090	33.8	133.2	0.2500	-6.02	1.000	14.84
120	36.9	130.1	0.2500	-6.02	1.000	14.65
150	40.0	127.0	0.2500	-6.02	1.000	14.46
180	56.4	110.6	0.2500	-6.02	1.000	13.51
210	44.1	122.9	0.2500	-6.02	1.000	14.23
240	38.4	128.6	0.2500	-6.02	1.000	14.56
270	37.0	130.0	0.2500	-6.02	1.000	14.65
300	46.0	121.0	0.1806	-7.43	0.850	13.01
330	51.9	115.1	0.2500	-6.02	1.000	13.79
Ave El= 41.23 M HAAT= 125.77 M AMSL= 167						