

ENGINEERING REPORT

FM Translator Minor Construction Permit Modification Application

for

W296AW.C – Mangonia Park, FL

Permit File No. BPFT-20130301AGD

Facility ID No. 82621

(License No. BLFT-19970507TJ)

March, 2014

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

Discussion

This firm has been retained to prepare the required engineering report in support of a minor Construction Permit Modification Application for FM Translator W296AW.C – Mangonia Park, FL Construction Permit BPFT-20130301AGD. Presently W296AW.L (Facility ID No. 82621) is licensed under BLFT-19970507TJ to operate on 107.1 MHz with 0.010 kW of non-directional power with an antenna COR of 161 meters AMSL. The W296AW.C Construction Permit authorizes operation on CH296D, 107.1 MHz with 250 watts ERP at a COR height of 159 meters AMSL. The Construction Permit authorizes use of a circularly polarized (H&V) directional antenna. Due to changes in the allocation, a relaxed circularly polarized (H&V) directional antenna may be employed from the presently authorized Construction Permit parameters. Therefore continued operation on CH296D, 107.1 MHz with 250 watts ERP at a COR height of 159 meters AMSL is required with a new directional antenna pattern. The translator will rebroadcast primary station WLLY-FM – Palm Beach Gardens, FL, CH258A (Facility ID No. 24230) as an HD-2 FM Fill-In Translator.

The facility will remain located on the existing tower bearing Antenna Structure Registration Number 1031315. A copy of the existing ASR has been included in **Exhibit 13.1**. The vertical antenna system has been plotted in **Exhibit 13.2**. As this proposal will not increase the overall tower height, it is believed the FAA need not be notified.

It has been determined the translator may be used in the area without given 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 protection studies. Therefore, supplemental FMContour™ maps and tabulations of contours toward W295BJ – Jupiter, FL and APP296L1 – Pompano Beach, FL (BNPL-20131113BIG) have been 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 the use of the NED 03 second terrain database for all allocation, contour and HAAT calculations contained here-in.

The proposed 60 dBμ contour of the Fill-In Translator lies wholly inside of the WLLY-FM primary daytime 60 dBμ contour. A map of the proposed service contour in relation to the primary station service contour has been included in **Exhibit 13.4**. The applicant would like to note WLLY-FM has not yet commenced HD/IBOC operation at this time. Commencement of WLLY-FM HD/IBOC operation and the filing of the WLLY-FM Form 335-FM Digital Notification will take place concurrent with or immediately prior to the commencement of the FM Fill-In Translator Operation proposed here-in.

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**.

Discussion (continued)

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).

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 properly marked with signs, and entry is restricted by means of fencing with locked doors and/or gates. 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 utilizing the NED 03 second terrain database.

N. Lat. = 264542.0 W. Lng. = 800442.0						
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	2.7	156.3	0.0625	-12.04	0.500	11.48
030	0.3	158.7	0.2500	-6.02	1.000	16.45
060	0.1	158.9	0.2500	-6.02	1.000	16.46
090	0.1	158.9	0.2500	-6.02	1.000	16.47
120	0.2	158.8	0.2500	-6.02	1.000	16.46
150	1.1	157.9	0.2500	-6.02	1.000	16.40
180	3.6	155.4	0.1892	-7.23	0.870	15.04
210	4.7	154.3	0.2500	-6.02	1.000	16.17
240	4.9	154.1	0.2500	-6.02	1.000	16.16
270	5.0	154.0	0.2500	-6.02	1.000	16.15
300	5.0	154.0	0.2500	-6.02	1.000	16.15
330	4.3	154.7	0.0506	-12.96	0.450	10.85
Ave El= 2.68 M HAAT= 156.32 M AMSL= 159						