

# **ENGINEERING REPORT**

## **FM Translator Minor Change Modification**

for

**W290BJ – West Tampa, FL  
Site Change, I.F. Channel Change  
and Power Increase Application**

Lic No. BLFT-20080204AAM

August, 2008

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**MUNN-REESE, INC.**  
Broadcast Engineering Consultants  
Coldwater, MI 49036

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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 change modification for FM translator W290BJ, West Tampa, FL, License No. BLFT-20080204AAM. W290BJ is presently licensed to operate on 105.9 MHz with 2 watts of non-directional power with an antenna COR of 15 meters AMSL. A change in site location, I.F. channel change and power increase to 115 watts ERP at a COR of 45 meters AMSL is requested. Circular polarization will be employed along with a directional antenna. The translator will rebroadcast new parent station WLPJ(FM), New Port Richey, FL.

The proposed site is the existing tower bearing Antenna Structure Registration No. 1031072. A copy of ASR 1031072 has been included in **Exhibit 12.1**. This proposal will not increase the overall tower height, therefore the FAA need not be notified. A copy of the vertical antenna system has been included in **Exhibit 12.2**.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or translator with the exceptions of WWRM(FM), Tampa, FL and WBTP(FM), Clearwater, FL (Lic and CP). Allocation details are found in **Exhibit 12.5**. Waiver requests for second adjacent channel given interference to WWRM(FM) and WBTP(FM) have been included in **Exhibit 12.8**. No housing, population or major roads have been noted in the interference area as shown on the supplied USGS topographic map. There is one facility close enough to merit additional contour protection showings. Contour protection studies toward W237CW – Pinellas Park, FL has been included in **Exhibit 12.6**. It is believed sufficient clearance exists precluding the need for additional contour protection showings.

The translator site lies outside of the primary contour of WLPJ(FM), and the 1 mV/m (60 dBu) contour of the proposed translator extends beyond the WLPJ(FM) station 1 mV/m contour. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 12.4**.

Regarding protection of international concerns, the proposed facility will remain more than 320 km of the common border between the United States and Canada and/or Mexico. As a result, no further international showings are required.

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 12.3**.

The translator will employ a two bay circularly polarized Nicom BKG-77/2-DA directional antenna. As stated before, the antenna will be mounted on an existing tower.

The proposed facility meets the requirements of the Rules for operation without a licensed operator in attendance. The transmitter site may be reached promptly at all hours and in all seasons. The transmitter will be equipped with proper control and interface circuits which will place the translator in a non-radiating condition in the event the proper incoming signal is absent. The transmitter and controls will be placed in a locked area to prevent unauthorized tampering with the equipment. A person or persons will be assigned to observe the signals of the station each day, and to take corrective action if required. The equipment proposed for operation is listed in the type-approved list of the Commission.

## 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 is within the limits as set forth in the FCC Form 349 Worksheet #2 (RF Exposure Compliance), issued March, 2001. As this facility complies with Worksheet #2, no RF study need be supplied. The facility will be properly marked with signs, and entry will be 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.

N. Lat. = 275906.0 W. Lng. = 823032.0						
HAAT and Distance to Contour - FCC Method - USGS 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	13.2	31.8	0.1129	-9.47	0.991	5.96
030	10.4	34.6	0.1109	-9.55	0.982	6.17
060	10.8	34.2	0.1109	-9.55	0.982	6.13
090	11.1	33.9	0.1123	-9.50	0.988	6.13
120	2.8	42.2	0.1134	-9.45	0.993	6.84
150	1.7	43.3	0.0876	-10.57	0.873	6.49
180	2.7	42.3	0.0668	-11.75	0.762	6.01
210	0.5	44.5	0.0568	-12.45	0.703	5.93
240	0.3	44.7	0.0568	-12.45	0.703	5.94
270	0.9	44.1	0.0616	-12.10	0.732	6.02
300	3.2	41.8	0.0837	-10.77	0.853	6.32
330	9.6	35.4	0.1087	-9.64	0.972	6.20
Ave El= 5.60 M HAAT= 39.40 M AMSL= 45 M						