

ENGINEERING REPORT

FM Translator Minor Change Modification

for

**W280EA – Ruskin, FL
Site Change and Power
Increase Application**

Lic No. BLFT-20080206AFV

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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

This firm has been retained to prepare the required engineering report in support of a minor change modification for FM translator W280EA, Ruskin, FL, License No. BLFT-20080206AFV. W280EA is presently licensed to operate on 103.9 MHz with 8 watts of non-directional power with an antenna COR of 20 meters AMSL. A change in site location and power increase to 99 watts ERP at a COR of 45 meters AMSL is requested. Circular polarization will be employed. The translator will continue to rebroadcast parent station WJIS(FM), Bradenton, FL.

The proposed site is the existing tower bearing Antenna Structure Registration No. 1003604. A copy of ASR 1003604 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 exception of WFUS(FM), Gulfport, FL. Allocation details are found in **Exhibit 12.5**. A waiver request for second adjacent channel given interference to WFUS(FM) has been included in **Exhibit 12.7**. 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 W280DW– Brandon, FL have been included in **Exhibit 12.6**. It is believed sufficient clearance exists precluding the need for additional contour protection showings. The applicant would like to note the use of the USGS 03 second terrain database for all HAAT, allocation and contour showings.

The translator site lies outside of the primary contour of WJIS(FM), and the 1 mV/m (60 dBu) contour of the proposed translator extends beyond the WJIS(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 from the common border of 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 non-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 facility proposed in this application is in compliance with the provisions of the FCC Rules and Guidelines concerning human exposure to radiofrequency radiation to observers located on the ground. Since the facility will operate with an ERP of less than 100 watts, §1.1307(b)(1) categorically exempts the facility from the requirement for special showings.

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. = 274137.0 W. Lng. = 822451.0 | | | | | | |
|---|------------|-------------|---------------|---------------|--------------|-------------|
| HAAT and Distance to Contour - FCC Method - USGS 03 SEC | | | | | | |
| Azi. | AV EL | HAAT | ERP kW | dBk | Field | 60-F5 |
| 000 | 0.8 | 44.2 | 0.0990 | -10.04 | 1.000 | 6.77 |
| 030 | 11.2 | 33.8 | 0.0990 | -10.04 | 1.000 | 5.93 |
| 060 | 19.2 | 25.8 | 0.0990 | -10.04 | 1.000 | 5.62 |
| 090 | 18.5 | 26.5 | 0.0990 | -10.04 | 1.000 | 5.62 |
| 120 | 11.1 | 33.9 | 0.0990 | -10.04 | 1.000 | 5.94 |
| 150 | 8.4 | 36.6 | 0.0990 | -10.04 | 1.000 | 6.16 |
| 180 | 7.9 | 37.1 | 0.0990 | -10.04 | 1.000 | 6.20 |
| 210 | 5.2 | 39.8 | 0.0990 | -10.04 | 1.000 | 6.41 |
| 240 | 4.4 | 40.6 | 0.0990 | -10.04 | 1.000 | 6.48 |
| 270 | 1.0 | 44.0 | 0.0990 | -10.04 | 1.000 | 6.76 |
| 300 | 0.3 | 44.7 | 0.0990 | -10.04 | 1.000 | 6.81 |
| 330 | 0.5 | 44.5 | 0.0990 | -10.04 | 1.000 | 6.79 |
| Ave El= 7.39 M HAAT= 37.61 M AMSL= 45 | | | | | | |