

ENGINEERING REPORT

Minor Modification to
Construction Permit Application

File No. BNPFT-20030825ANC

W249BT.C – Adrian, MI
Taylor University Broadcasting

March, 2005

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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 for a minor modification to Construction Permit BNPFT-20030825ANC for W249BT.C Adrian, MI. The facility will serve as a translator for non-commercial FM station WBCY, Archbold, OH. WBCY operates on Channel 208B1, 89.5 MHz. The proposed translator will operate on Channel 249D with 80 watts at a max HAAT of 55 meters.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or translator. Allocation details are found in **Exhibit 12.1**. **Exhibit 11.4** of this report is a map showing the relationship of the primary station protected contour to the protected contour of the translator station. The translator site is outside the primary contour, and the 1 mV/m (60 dBu) contour of the translator extends beyond the primary station 1 mV/m contour. A map of the proposed service area has been included in **Exhibit 11.3**. The proposed site has been relocated slightly from the original Construction Permit site, however the move qualifies as a minor change as the service contour serves substantially the same area.

The proposed translator is located within 320 kilometers of the border between the United States of America and Canada. This proposal meets the requirements of 47 C.F.R. §74.1235(d)(3).

The translator will employ a one bay circularly polarized antenna. The antenna will be mounted on an existing tower bearing Antenna Structure Registration No. 1247719. Placement of the antenna will not increase the overall tower height, therefore the FAA need not be notified.

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.

Prompt suspension of the translator operation will be made, in the event of equipment failure that could cause operation outside the specifications of the Rules. The data contained in this report is responsive to the Rules of the Commission, and provides information for FCC Form 349.

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. = 41 54 17 W. Lng. = 84 04 41						
HAAT and Distance to Contour - FCC Method - 30 Arc Sec.						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	268.3	10.7	0.0800	-10.97	1.000	5.33
030	253.0	26.0	0.0800	-10.97	1.000	5.33
060	238.3	40.7	0.0800	-10.97	1.000	6.16
090	224.5	54.5	0.0800	-10.97	1.000	7.17
120	226.1	52.9	0.0800	-10.97	1.000	7.05
150	230.2	48.8	0.0800	-10.97	1.000	6.76
180	235.4	43.6	0.0800	-10.97	1.000	6.38
210	243.6	35.4	0.0800	-10.97	1.000	5.75
240	257.7	21.3	0.0800	-10.97	1.000	5.33
270	275.4	3.6	0.0800	-10.97	1.000	5.33
300	287.7	-8.7	0.0800	-10.97	1.000	5.33
330	276.5	2.5	0.0800	-10.97	1.000	5.33
Ave El= 251.40 M HAAT= 27.60 M AMSL= 279						