

ENGINEERING REPORT

FM Translator Construction Permit Modification Application

W284CK.C – Fort Myers, FL
File No. BNPFT-20130826AEA
Facility ID No. 139201

Minor Frequency, Site &
Directional Antenna Change

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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 Construction Permit Modification Application for FM Translator W284CK.C – Fort Myers, FL Permit BNPFT-20130826AEA (Facility ID No. 139201). The authorized Construction Permit specifies operation on CH284D (104.7 MHz) – Fort Myers, FL with 0.250 kW of directional power at an antenna COR of 51 meters AMSL. An alternate site and alternate minor frequency change is requested. Operation on Channel CH283D (104.5 MHz) with a power of 0.250 kW ERP is requested from a new site location. A new circularly polarized antenna with a new directional antenna pattern is requested at a new antenna COR height of 109 meters AMSL. The translator will continue to rebroadcast primary station WOLZ(FM) – Fort Myers, FL, CH237C1 (Facility ID No. 13898) as an FM Fill-In Translator.

The facility will be located on an existing tower which bears Antenna Structure Registration Number 1029963. A copy of ASR #1029963 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 interference to any existing FM broadcast station or facility with the exception of WXKB(FM) – Cape Coral, FL (CH280C). General allocation details are found in **Exhibit 13.5**. A §74.1204(d) Third Adjacent Channel Given Interference Waiver is requested toward WXKB(FM) as included in **Exhibit 13.8**. Full protection will be afforded WXKB(FM) as the calculated interference area will not reach the ground nor a seven (7) meter artificial plane representing a standard two story building when taking into account the downward radiation characteristics of the antenna as supplied by the antenna manufacturer. A copy of the manufacturer's vertical radiation pattern has been included in **Exhibit 13.9**. There are two (2) facilities, existing or proposed, close enough to merit further study. Therefore supplemental contour protection studies have been provided toward WSGL(FM) – Naples, FL and WCVU(FM) – Solana, 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 the use of the USGS 03 second terrain database for all allocation, contour and HAAT calculations contained here-in.

The proposed 60 dBμ contour of the Translator lies wholly inside of the WOLZ(FM) Class C1 primary 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 Translator will rebroadcast WOLZ(FM) as an FM Fill-In Translator.

The proposed operating parameters have been changed from the original Construction Permit 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 USGS 03 second terrain database.

N. Lat. = 264129.0 W. Lng. = 815251.0						
HAAT and Distance to Contour,						
FCC, FM 2-10 Mi, 51 pts Method - USGS 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	7.7	101.3	0.2256	-6.47	0.950	12.62
030	7.5	101.5	0.2500	-6.02	1.000	12.95
060	6.4	102.6	0.2500	-6.02	1.000	13.02
090	1.4	107.6	0.2500	-6.02	1.000	13.33
120	3.2	105.8	0.2500	-6.02	1.000	13.23
150	3.0	106.0	0.2500	-6.02	1.000	13.24
180	1.5	107.5	0.2500	-6.02	1.000	13.33
210	2.5	106.5	0.2500	-6.02	1.000	13.27
240	4.6	104.4	0.2500	-6.02	1.000	13.14
270	4.5	104.5	0.2500	-6.02	1.000	13.15
300	6.9	102.1	0.1600	-7.96	0.800	11.67
330	7.0	102.0	0.1406	-8.52	0.750	11.31
Ave El= 4.69 M HAAT= 104.31 M AMSL= 109						