

ENGINEERING REPORT

**FM Translator
Minor Construction
Permit Application**

for

**W286BE.L - Dawson, GA
(Facility ID: 150280)**

**"250 Mile Window Application"
Pursuant to FCC Public Notice
DA 1491 (issued 12/23/2015)**

for

**CH273D.P - Columbus, GA
as an AM Fill-In Translator for
WBOJ(AM) - Columbus, GA**

January 2016

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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 Application for FM Translator W286BE.L - Dawson, GA (Facility ID: 150280). *This Form 349 Filing is being filed as a "250 Mile Window Application" in response to the Revitalization of the AM Radio Service, First Report and Order (MB Docket No. 13-249 (FCC 15-142), released October 23, 2015; subsequent Public Notice DA 15-1215, released October 26, 2015; and final Public Notice DA 1491, released December 23, 2015. This Form 349 is being filed under the "First Modification Window" open for AM Class C and D Fill-In Translators.* This Translator proposal requests a new (less than 250 mile) site location and new (non-adjacent channel) operational frequency. Operation on CH273D (102.5 MHz) with 0.250 kW ERP (H&V) at 332 meters AMSL is proposed. The Fill-In Translator will rebroadcast new Class D AM Primary Station WBOJ(AM) - Columbus, GA (1270 kHz); Facility ID No. 36685. The Translator will serve the new community of Columbus, GA.

The Translator will be mounted on the existing tower bearing Antenna Structure Registration Number 1032658. A copy of the existing ASR has been included in **Exhibit 13.1**. The vertical antenna system has been included in **Exhibit 13.2**. As this proposal will not increase the overall tower height, notification to the FAA is not believed required.

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 WVRK(FM). General allocation details are found in **Exhibit 13.5**. A §74.1204(d) Second and/or Third Adjacent Channel Given Interference Waiver Request toward WVRK(FM).L - Columbus, GA (CH275C) has been made here-in. Full protection will be afforded the facility based on a calculated 134.7 dB μ F(50:10) Interference Area. The Interference Area is void of housing, buildings or major roads as noted the **Exhibit 13.8** showing. The applicant would like to note the existence of a dedicated transmitter building located at the site. There are two facilities, existing or proposed, close enough to merit further study. Therefore supplemental contour protection studies have been provided toward W271CF - Phenix City, AL and WELR-FM - Roanoke, AL (CH272C3) as included in **Exhibit(s) 13.6** and **13.7**. It is believed sufficient clearance exists precluding the need for additional contour protection showings. A copy of the antenna manufacturer's directional antenna pattern documentation has been included in **Exhibit 13.9**.

The applicant would like to note use of the NED 03 second terrain database for all allocation, contour and HAAT showings contained here-in.

The proposed 60 dB μ contour of the Fill-In Translator lies wholly inside of the AM primary daytime 2.0 mV/m contour and a 25 mile radius around the AM site. A map of the proposed service area in relation to the primary station service contour has been included in **Exhibit 13.4**. In addition, this exhibit also demonstrates the physical relocation of the Translator is less than 250 miles (402.3 km) in accordance with the Commission's Policy concerning this "250 Mile Window Application".

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

Discussion (continued)

The proposed operating parameters have been changed from the present values. A map of the proposed service contour has been included in **Exhibit 13.3**.

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.

N. Lat. = 322728.0 W. Lng. = 845308.0 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	135.7	196.3	0.2500	-6.02	1.000	18.37
030	136.8	195.2	0.2500	-6.02	1.000	18.32
060	127.1	204.9	0.2025	-6.94	0.900	17.76
090	119.6	212.4	0.1600	-7.96	0.800	16.99
120	118.4	213.6	0.2500	-6.02	1.000	19.14
150	103.1	228.9	0.2500	-6.02	1.000	19.80
180	107.2	224.8	0.2500	-6.02	1.000	19.63
210	103.7	228.3	0.2500	-6.02	1.000	19.78
240	88.7	243.3	0.2500	-6.02	1.000	20.40
270	105.5	226.5	0.2500	-6.02	1.000	19.70
300	111.8	220.2	0.2500	-6.02	1.000	19.42
330	133.0	199.0	0.2500	-6.02	1.000	18.49

Ave El= 115.88 M HAAT= 216.12 M AMSL= 332