

# **ENGINEERING REPORT**

**MINOR CONSTRUCTION  
PERMIT APPLICATION**

**FOR**

**WJSZ(FM) – CH223A  
Ashley, MI**

**BLH-19940323KB**

**February, 2008**

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(Exhibit Numbering is in response to FCC Online Form 301, Section III-B)

# **DISCUSSION OF REPORT**

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This firm was retained to prepare the required engineering report in support of a minor construction permit application for WJSZ(FM), Ashley, MI, License No. BLH-19940323KB. WJSZ(FM) is currently authorized to operate as a §73.213(c) former Class A 3.0 kW station with 2.0 kW ERP (H)&(V) at 122 meters HAAT on CH223A. This minor construction permit modification requests a power increase to full Class A equivalent operating parameters of 4.0 kW at the present HAAT value of 122 meters. The facility will continue to serve Ashley, MI.

The proposed site for the Class A operation meets all domestic spacing requirements of 47 C.F.R. §73.207 toward other stations in the allocation with the exception of two facilities. A tabulation of the existing and required spacing toward each of the other relevant stations is found in **Exhibit 26.1**. Continued processing under the provisions of §73.213(c) is requested towards WDZZ-FM.L and WDZZ-FM.C, Flint, MI. Protection toward both have been included in **Exhibit(s) 29.1** to **29.2**. It was noted WDZZ-FM.L operates with less than former 3.0 kW Class A parameters, therefore WDZZ-FM.L has been protected assuming 3.0 kW at 100 meters HAAT.

The proposed service contours have been calculated in accordance with the Rules, and the data obtained has been tabulated and plotted in this report. The plotted contours are found as **Exhibit 23.4** of this report. This exhibit shows the 3.16 mV/m contour which serves the community of license, and the overall service provided by the 1.0 mV/m contour of the facility. The tabulation of the distances to the respective contours shown in this discussion is based on the use of the standard eight cardinal bearings, which were also used for the computation of the HAAT. However, the plotted contours shown in **Exhibit 23.4**, are based on the use of a full 360 terrain radials. The NGDC 30 second terrain database has been used in calculation of both HAAT and contour distance computations.

The proposed two bay, ERI, LP-2E-DA fully spaced antenna will be mounted on an existing tower bearing Antenna Structure Registration Number 1007196. As this proposal will not increase the overall tower height, the FAA need not be notified. A copy of the existing ASR has been included in **Exhibit 23.1**. A copy of the vertical antenna plan has been included as **Exhibit 23.2**.

The remainder of the information in this report and exhibit numbering is responsive to the Rules of the Commission, and provides the data for FCC Online Form 301, Section III-B.

## DISCUSSION OF REPORT (continued)

The FM Broadcast facility proposed in this application is within the controlled and uncontrolled limits as set forth in the RF Exposure Compliance Worksheets, Worksheet #3, issued May 1999. A copy of Worksheet #3 will be supplied upon request. The RF radiation will not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1310 of the Commission's rules. 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 table below shows the distances to the 3.16 mV/m and 1.0 mV/m contours from the proposed facility using an ERP of 4.0 kW at an HAAT of 122 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 431056.0    W. Lng. = 842703.0 HAAT and Distance to Contour - FCC Method - NGDC 30 SEC							
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5	70-F5
000	208.0	122.0	4.0000	6.02	1.000	28.20	16.12
045	198.6	131.4	4.0000	6.02	1.000	29.07	16.79
090	198.9	131.1	2.2500	3.52	0.750	25.55	14.31
135	211.8	118.2	4.0000	6.02	1.000	27.85	15.85
180	208.6	121.4	4.0000	6.02	1.000	28.15	16.08
225	205.8	124.2	4.0000	6.02	1.000	28.40	16.28
270	213.7	116.3	4.0000	6.02	1.000	27.65	15.71
315	216.9	113.1	4.0000	6.02	1.000	27.33	15.47
Ave El= 207.78 M    HAAT= 122.22 M    AMSL= 330.0							