

## Exhibit 12.1 – ENGINEERING REPORT

Family Life Broadcasting System Requesting Minor  
Modification to W231CV FM Translator – Facility ID: 148503  
Construction Permit BPFT-20160127ADA  
Channel 231 (94.1 MHz), 0.210 kW ERP  
Holly, Michigan

Family Life Broadcasting System (“FLBS”) as the licensee of translator station W231CV, and Permittee of BPFT-20160127ADA Channel 231D, Holly, Michigan proposes herein to make minor changes in the Construction Permit by modifying the effective radiated power and antenna pattern of the Construction Permit.

FLBS would like to note the existence of a §73.3517(e) contingency between W231CV, Holly, Michigan (Facility ID 148503) and W232CA, Detroit, Michigan (Facility ID 152374). Both facilities are requesting simultaneous processing as §73.3517 contingent applications. Both applications have been simultaneously filed to reference each other regarding the §73.3517 processing request. W232CA.P will only modify its directional antenna pattern. W231CV.P will modify the Construction Permit effective radiated power and directional antenna pattern. Because both W232CA and W231CV are licensed by FLBS, no contingent agreement is needed with another licensee.

The proposed operating conditions are shown in **Exhibit 10.1**. A study of the required common 60-dBu f[50:50] contour area of both the licensed as well as the proposed facility is shown in **Exhibit 10.2**. The modified W231CV.P 1.0 mV/m contour is well within the WUFL(AM) 2.0 mV/m contour are shown in **Exhibit 10.3**, showing compliance with C.F.R. § 74.1201(g), whereby the modified translator 1.0 mV/m Contour is entirely within the AM Main Station’s 2.0 mV/m Contour.

**Exhibit 13.1** is a channel study demonstrating that the modified W231CV.P facility will not cause interference to any full-service U.S. station, translator, or LPFM application or station with the possible exception of 3<sup>rd</sup> adjacent WCSX and Canadian station CKLW. **Exhibit 13.2** shows that the interference to CKLW is only over United States territory, and is thus compliant with the Working Arrangement for the Allotment and Assignment of FM Broadcast Channels under the Agreement between Canada and the United States.

**Exhibit 13.3** is waiver request of § 74.1204(d) and shows that 3<sup>rd</sup> adjacent WCSX is fully protected as the calculated interference area will not reach the ground nor a 7-meter artificial plane representing a two-story building when taking into account the downward radiation characteristics of the transmitting antenna.

**Exhibits 13.4** shows that the proposed modified W231CV will fully protect WWDK. An FM Over report is included. **Exhibit 13.5** shows how the proposed modified facility will fully protect the concurrent W232CA Proposal. **Exhibit 17** is a study that shows the modified W231CV.P facilities complies with the Commission’s environmental and RF exposure guidelines.

All other necessary documentation used to certify the technical portion of the FCC Form 349 is available to the Commission upon request. The USGS 03 Second terrain data was utilized in the preparation of the exhibits.