

Hope Christian Church of Marlton, Inc.

Exhibit 12-1 - Compliance with CFR 47 §74.1204
NEW-T, Channel 243, 96.5 MHz, L12, York, PA

Interference Analysis Overlap Requirements

According to CFR 47 §74.1204(a), translators are required to protect all existing FM stations from interference due to overlap of the protected contours of the existing stations with the interfering contours of the new translators.

Three stations have been identified with outgoing 2nd or 3rd adjacent contour overlaps from the proposed translator and are listed below. According to CFR 47 §74.1204(d),

“The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to ... lack of population”

The F(50,50) signals from these stations at the proposed site have been computed based upon the ERP and HAAT in the direction towards the proposed translator, as well as the distance, and have been found to be as follows:

Station	Power	ERP	HAAT	Distance	Protected F(50,50)	Allowable Interfering F(50,10)
WLAN-FM	50 kW	50 kW	126 m	13.9 km	83.6 dBu	123.6 dBu
WSOX	13.5 kW	13.5 kW	303 m	14.7 km	84.8 dBu	124.8 dBu
WSOX	50 kW	50 kW	163 m	14.7 km	85.1 dBu	125.1 dBu

A 40 dB ratio of undesired to desired signal strength gives an allowable interfering F(50,10) field strength of up to 123.6 dBu, based upon the worst case (lowest) of these signal strengths. With the proposed translator output power of 10 Watts ERP, the free-space equations give the distance to this contour of 14.7 meters. Since the antenna is located 208 meters from the ground, the interfering contour never touches the ground, and never comes any closer to the ground than 193.3 meters.

An analysis of a USGS 7.5' topographical map shows that there are no habitable buildings in the area of sufficient height to reach up and intersect these interfering contours. Hence CFR 47 §74.1204(d) applies, and the predicted area of interference is acceptable to the Commission.