

New LPFM Application
Channel 207-LP100 Waco TX
Technical Exhibit

Site Information:

Tower Structure - Building with Mast on Top
Structure Coordinates 31 31 27.0 97 12 57.5
Ground Elevation: 160.0 m Overall Structure Height: 31.5 m
Antenna: Circular Antenna Height: 30.0 m.

The Proposed location meets all distance separation requirements with respect to co-channel and first adjacent facilities. This Chart is visualized on the attached map:

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
KWAA	MART	TX 205 C1	16.59	73.00	200.7	-56.4
Adjacent Channel waiver Requested Below:						
KNON	DALLAS	TX 207 C1	120.42	111.00	10.9	9.4
KEQX	STEPHENVILLE	TX 208 C2	98.17	80.00	312.9	18.2
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The proposed 100dBu contour is located inside the protected 60dBu contour of KWAA (FM) Channel 205-C1 which is located 16.59km away from the proposed facility. An interference analysis has been conducted based on the U/D ratio of +40 dB at the proposed site. The signal of KWAA(FM) is 86.6dBu (50,50) making the relevant interfering contour of the proposed facility 126.6 (50, 10). Utilizing the assigned 90 watts of power, the free space distance to the 126.6dBu in a worse-case scenario utilizing a single dipole antenna at 31.1 meters from the aperture of the antenna. The proposed height of the antenna above ground is 30 meters on a roof-mounted mast of the building owned by the applicant.

The applicant proposes the use of a circularly polarized single bay FM antenna, which the vertical radiation characteristics will be reduced to the point of irrelevance to any contact of the contour apart from the premises of the applicant.

A waiver to operate on a second adjacent channel to KWAA(FM) is respectfully requested on the basis of zero population in the area of real interference.

Allocation Distances and 2nd Adjacent Waiver Contour Map:

