

**DELAWDER COMMUNICATIONS, INC.**

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**ENGINEERING REPORT**

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**K224FF, Kansas City, MO, Channel 224D Minor Change**

**ENGINEERING STATEMENT**

All contour non-overlap protection requirements are met with the exception of stations KCCV-FM (Olathe, KS, 222C3) and KMXV(FM) (Kansas City, MO, 227C0), discussed below.

**PROTECTION TO KCCV-FM and KMXV(FM)**

KCCV-FM (27 kilometers at 260 degrees True from proposed translator site) and KMXV (5 kilometers at 29 degrees True from proposed translator site) are second/third adjacent-channel to the proposed channel 224D facility. The 60 dBu F50,50 service contours of KCCV-FM and KMXV extend beyond the proposed 224D transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to KCCV-FM or KMXV.

Note that a rule waiver of Section 74.1204 for this second/third adjacent-channel protection using the well-established *Living Way Ministries* Methodology is respectfully requested if such a rule waiver is deemed necessary for protection to any station.

The F50,50 signal strength from KCCV-FM at the proposed 224D transmitter site is greater than 66 dBu (the “desired” KCCV-FM signal). The F50,50 signal strength from KMXV(FM) at the proposed 224D transmitter site is greater than 90 dBu (the “desired” KMXV signal). The second/third adjacent-channel protection of Section 74.1204 is an undesired-to-desired (“U/D”) dB signal strength ratio of 40:1. Therefore, predicted interference to the worst case protection requirement to KCCV-FM and KMXV from the proposed 224D facility is a signal of greater than or equal to 106 dBu.

The 106 dBu signal based on a free space field determination is predicted to extend out to 295 meters from the proposed 224D transmit antenna. However, at depression angles of 30 degrees or more below horizontal, the downward signal is more than 3 dB down – an amount of less than 35 watts ERP. At 35 watts, the distance to the 106 meters FSL signal extends only 208 meters and will not reach ground level. (The clearance is at least 30 meters). Therefore, pursuant to Section 74.1204(d) of the FCC Rules, KCCV-FM and KMXV are adequately protected by the proposed facility.