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**ENGINEERING REPORT**

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**San Francisco, CA, Channel 257D FM Translator Application**

**ENGINEERING STATEMENT**

All required protections are met by contour non-overlap pursuant to Section 74.1204, with the exception of protection to KSOL, San Francisco, CA 255B and KMQV-FM, San Francisco, CA 259B. KSOL and KMQV-FM are protected, as discussed below.

**PROTECTION TO KSOL AND KMQV-FM**

KSOL 255B and KMQV-FM 259B (both within 8 kilometers of the translator site) are second adjacent-channel stations to the proposed channel 257 translator facility. The 54 dBu F50,50 service contour of both KSOL and KMQV-FM extends well beyond the 257D transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to KSOL or KMQV-FM.

Note that a rule waiver of Section 74.1204 for this second and 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 KSOL at the proposed 257D transmitter site is greater than 110 dBu (the "desired" signal of KSOL). The F50,50 signal strength from KMQV-FM at the proposed 257D transmitter site is greater than 100 dBu (the "desired" signal of KMQV-FM). The second/third adjacent-channel protection is an undesired-to-desired ("U/D") dB signal strength ratio of 40:1. Therefore, predicted interference to KSOL or KMQV-FM is a 257D signal of greater than or equal to 140 dBu.

The 140 dBu signal based on a free space field determination is predicted to extend out to 7 meters from the proposed 257D transmit antenna. The interfering signal level will not reach any point at ground level or at 2 meters above ground level. (The clearance is at least 9 meters.) Therefore, pursuant to Section 74.1204(d) of the FCC Rules, KSOL and KMQV-FM are adequately protected by the proposed facility.