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ENGINEERING REPORT

K254BZ, Houston, TX, Channel 254D FM Translator Minor Mod

ENGINEERING STATEMENT

PROTECTION TO KODA AND K252FR

All contour non-overlap protection requirements are met with the exception of Houston, TX stations K252FR (252D) and KODA (256C), discussed below.

K252FR (7.9 kilometers at 149 degrees True) and KODA (6.6 kilometers at 142 degrees True) are second adjacent-channel stations to the proposed channel 254D facility. For both of these existing FM stations, the 60 dBu F50,50 service contour extends beyond the proposed 254D transmitter site. Using the well-established *Living Way Ministries* Methodology, no actual interference to any population is predicted to exist to K252FR or KODA.

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 K252FR at the proposed 254D transmitter site is greater than 63 dBu (the “desired” signal of K252FR). The F50,50 signal strength from KODA at the proposed 254D transmitter site is at least 90 dBu (the “desired” signal of KODA). 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 K252FR and KODA from the proposed 254D facility is a signal of greater than or equal to 103 dBu.

Attached is the vertical plane relative field pattern for the proposed Nicom BKG-77 four-bay 0.85 wavelength-spaced antenna. By adjusting for the vertical plane downward relative field values of the proposed antenna, it is herein demonstrated that the 103 dBu interfering signal (using a free space field determination) does not exist at any point on ground level. (The clearance is at least 76 meters.) This is demonstrated by the attached table (requested for use by the FCC for these studies). Therefore, K252FR and KODA is adequately protected by the proposed facility.