

B. W. St. Clair

COMPREHENSIVE TECHNICAL EXHIBIT

**Application for Construction Permit
KJLA (NEW Replacement Translator)
FCC File Number BLCDDT-20041117AAB
KJLA, LLC**

Application for Replacement Translator, Licensed Facility. The within proposal seeks a NEW replacement translator to aid its licensed digital facility in covering a terrain-shielded population that was included in its analog service area and was better served by its analog predecessor at its previous site. The location of the digital facility for KJLA is such that a small but important viewer population is heavily terrain-shielded by Mt. Harvard. By placing this replacement translator on-channel at the Mt. Harvard site and limiting its coverage area, this population of nearly 10,000 persons can be served.

Facility Proposed. The proposed facility is to be located on Mt. Harvard. The antenna array is a phase-related pair of PR-TV antennas aimed at a bearing of 180° True and mechanically tilted 9° below the horizon. The effective radiated power into the tilt is 500W; using the standard FCC OET69 elevation antenna radiation pattern, the resultant power on the horizon is therefore not greater than 45W in the main beam. Accordingly, mutual interference with KJLA and all others is below the 0.5% allowable pursuant to §74.793.

Desired Coverage Areas. The vicinity of the two communities of Sierra Madre and Arcadia, CA are the desired coverage areas for the replacement translator. The attached annotated map depicts the service contour of the previous analog KJLA from its licensed location; on it, a Longley-Rice coverage diagram of the area of interest coverage from KJLA digital and of the proposed replacement translator are superimposed. The map shows the area that is within the old KJLA analog contour, not covered adequately by KJLA digital but which will be covered by the within proposal. Population analysis indicates that the replacement translator will deliver adequate signal to some 9,780 persons who are not covered by the existing digital license of KJLA.

Interference Analysis. The proposal has been subjected to the Longley-Rice interference study used by the Commission as run on the *Sun Blade* computer and, with respect to all potential interfees, found to be in compliance with all applicable portions of §74.793. This and the NIER statement are elsewhere on the application.

Attached map. Map shows coverage areas of interest, is annotated and should be self-explanatory.

J. R. McDonald
November 7, 2011

Diagram of KJLA-D fill in coverage area and estimated 2010 census population served by replacement translator application

500w FILL COVERAGE
SEE SIGLEV COLORS

Coverage area, replacement translator
Estimated population gain = 9,780

65.5 dBu F 50,50 analog contour
KJLA analog facility

estimated 51 dBu F50,90 D Contour from beamtilted
antenna array with 0.5 kW tilted 9 deg below horizon

- > 57.0 dBu
- 51.0 - 57.0
- 48.0 - 51.0
- 41.0 - 48.0

Coverage area, KJLA-D
From Mt. Wilson Site

