

TECHNICAL EXHIBIT
APPLICATION FOR AUXILIARY STATION
RADIO STATION KELZ-FM (FACILITY ID 70357)
TERRELL HILLS, TEXAS
CH 294C0 6.2 KW 276 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of radio station KELZ-FM at Terrell Hills, Texas. The KELZ-FM main facility is presently licensed on Channel 294C0 with an effective radiated power of 100 kilowatts and antenna height above average terrain of 310 meters.¹ By this instant application, KELZ-FM is proposing an auxiliary facility at its licensed transmitter site. The FCC tower number for the existing antenna mounting structure is 1047171. It is believed that this proposal conforms to all applicable rules and regulations of the FCC.

Transmitter Location

The herein proposed auxiliary facility will utilize an ERI LPX-4E, 4-bay antenna mounted on same tower as the main KELZ-FM antenna. The proposed antenna is located at the 249.9 meter (820 foot) level (see Figure 1).

Blanketing Contour

The 115 dBu predicted blanketing contour of the station would extend radially 1 kilometer from the transmitting site. The applicant recognizes its responsibility to resolve complaints of blanketing interference as required by Section 73.318.

¹ See FCC File No. BLH-19850508KY

Coverage Contours

The predicted 60 dBu coverage contours for the auxiliary operation and the existing main operation were calculated in accordance with the provisions of Section 73.313. In accordance with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from the National Geophysical Data Center's (NGDC) 30-second terrain database. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Figure 2 is a map showing the predicted 60 dBu coverage contours for the licensed and proposed operations. As the map illustrates, the predicted auxiliary's 60-dBu contour is entirely encompassed by the primary station's 60-dBu contour.

Radiofrequency Electromagnetic Field Exposure

The proposed KELZ-FM auxiliary facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed ERI "rototiller" type 4 bay antenna is located 249.9 meters above ground level. The effective radiated power is 12.4 kilowatts (combined horizontal and vertical polarizations). Using the FCC's FM Model program, the worst-case ground level power density is approximately 0.0006 mW/cm². This is less than five percent of the Commission's guideline in an uncontrolled environment for an FM radio station.²

² The FCC maximum guideline for a FM broadcast station in an uncontrolled environment is 0.2 mW/cm².

Access to the transmitting site is restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower or any nearby adjacent towers, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

It is noted that this technical exhibit only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be provided to the FCC by the tower owner as part of the tower registration process.

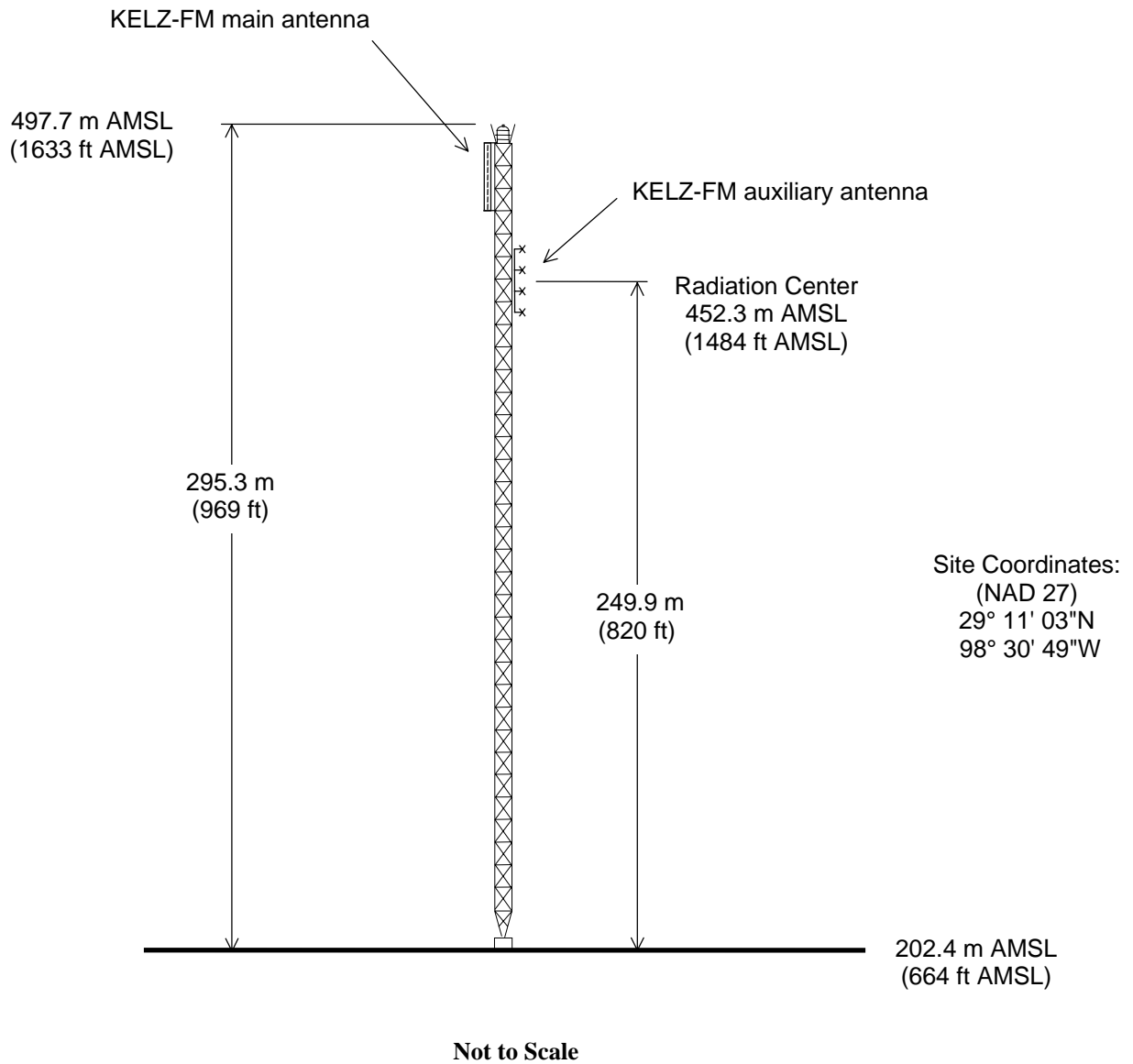


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ASRN: 1047171



ANTENNA AND SUPPORTING STRUCTURE

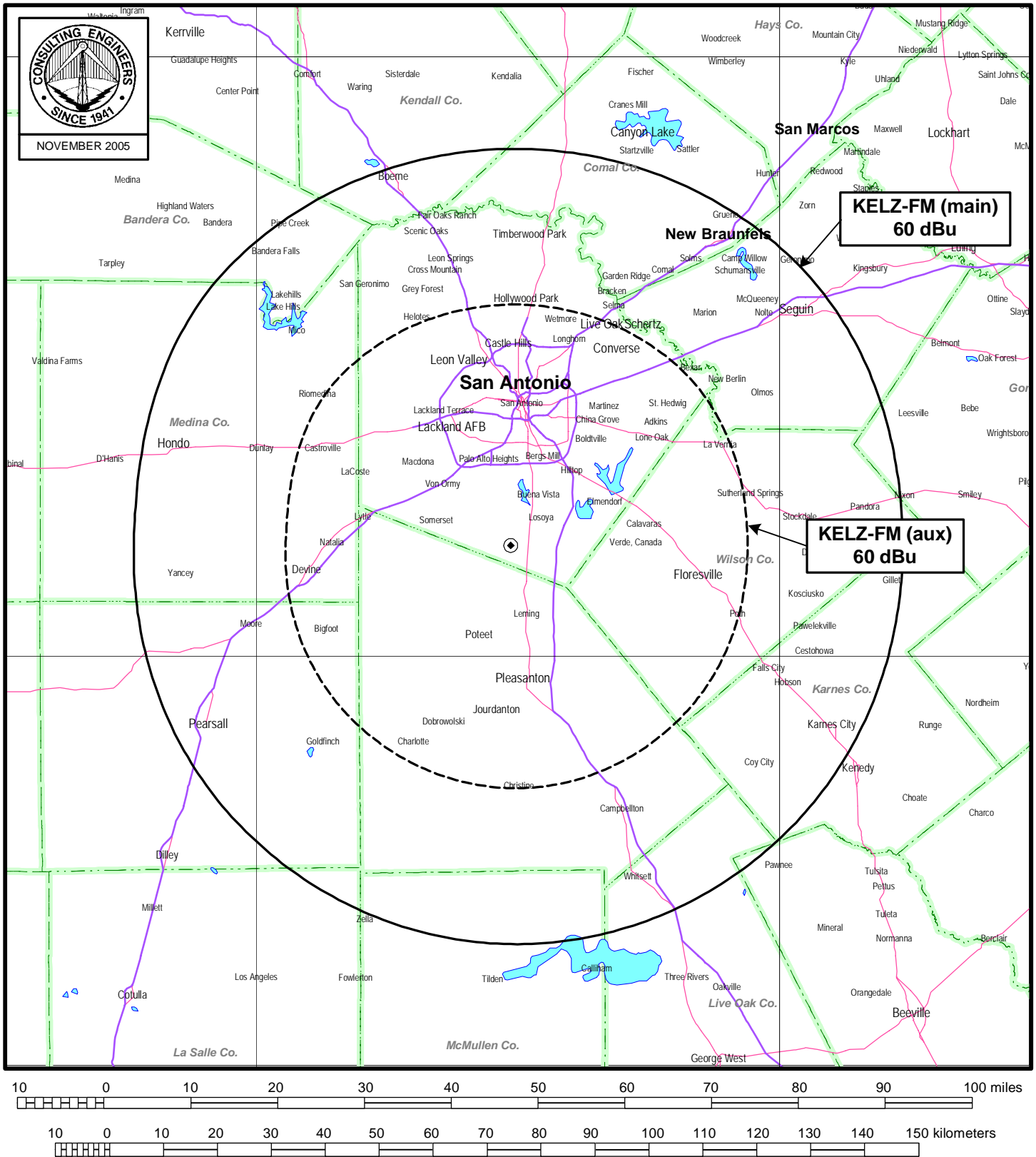
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Figure 2



PREDICTED COVERAGE CONTOURS

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