

Site Selection and RF Energy Exposure

prepared 10/23/2018 for

UniMas Dallas LLC

KSTR-DT Garland, TX

Channel 34 1000 kW-DA 517 m

This application proposes continued use of a multiple-use communications tower owned by American Tower, located in the “antenna farm” near Cedar Hill, TX. Use of currently utilized, shared sites in areas with similar structures is environmentally preferred. The proposed antenna will be mounted on the same candelabra arm as the station’s pre-repack antenna, but at a lower elevation in order to reduce support structure loading.

Operation on channel 34, with its center frequency of 593 MHz, implies a radiofrequency radiation exposure guideline value of $395 \mu\text{W}/\text{cm}^2$ for the general population. The proposed RFS SAA26-KSTR-E300-ET65-3433 antenna will have its radiation center 472.1 meters above ground level, with vertical ERP at 30% of horizontal ERP. The maximum downward radiation value, at depression angles greater than 55° , does not exceed 0.03. Consequently, the worst-case predicted exposure level at 2 meters above ground level will not exceed $0.18 \mu\text{W}/\text{cm}^2$. This exposure level is 0.04% of the guideline value, far below the “responsibility threshold” of 5%. Access to the site and tower base is restricted by fencing and marked by appropriate warning signs. A formal RFE exposure control protocol is in effect for on-tower work. The applicant recognizes its responsibility to reduce power or interrupt operation during tower work, to ensure safe working conditions for rigging personnel.



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