

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of SAN ANTONIO COMMUNITY EDUCATIONAL TV, INC., licensee of full-power non-commercial digital television station KHCE-TV, Channel 16 in San Antonio, Texas, in support of its request for Special Temporary Authority (STA) to operate with reduced power while the main transmitter is being upgraded. While the licensed effective radiated power is 1000 kW, that for the temporary operation is 500 kW. No change in site location, antenna make or model, or antenna height above average terrain from that licensed is proposed herein.

It is proposed to utilize the licensed ERI directional, elliptically-polarized slotted cylinder antenna, which is mounted at the 325-meter level of an existing 336.2-meter tower. Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of San Antonio is completely encompassed by the proposed STA 48 dBu city-grade service contour.

Elevation and azimuth pattern data for the licensed ERI antenna are provided in Exhibit C. Since the proposed STA noise-limited service contour is completely contained within that licensed to KHCE-TV under LMS-0000216413, no interference study is provided.

A power density calculation appears as Exhibit D.

Since no change in the overall height or location of the existing KHCE-TV tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1228187 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F".

KEVIN T. FISHER

December 11, 2023

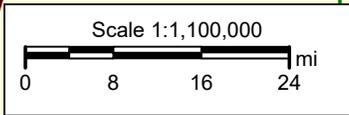
**CONTOUR POPULATION**  
**2020 U.S. CENSUS DATA**  
**CITY-GRADE : 2,624,847 (1,043,826 HH)**  
**NOISE-LIMITED : 2,785,034 (1,107,753 HH)**



**FCC NOISE-LIMITED SERVICE CONTOUR**

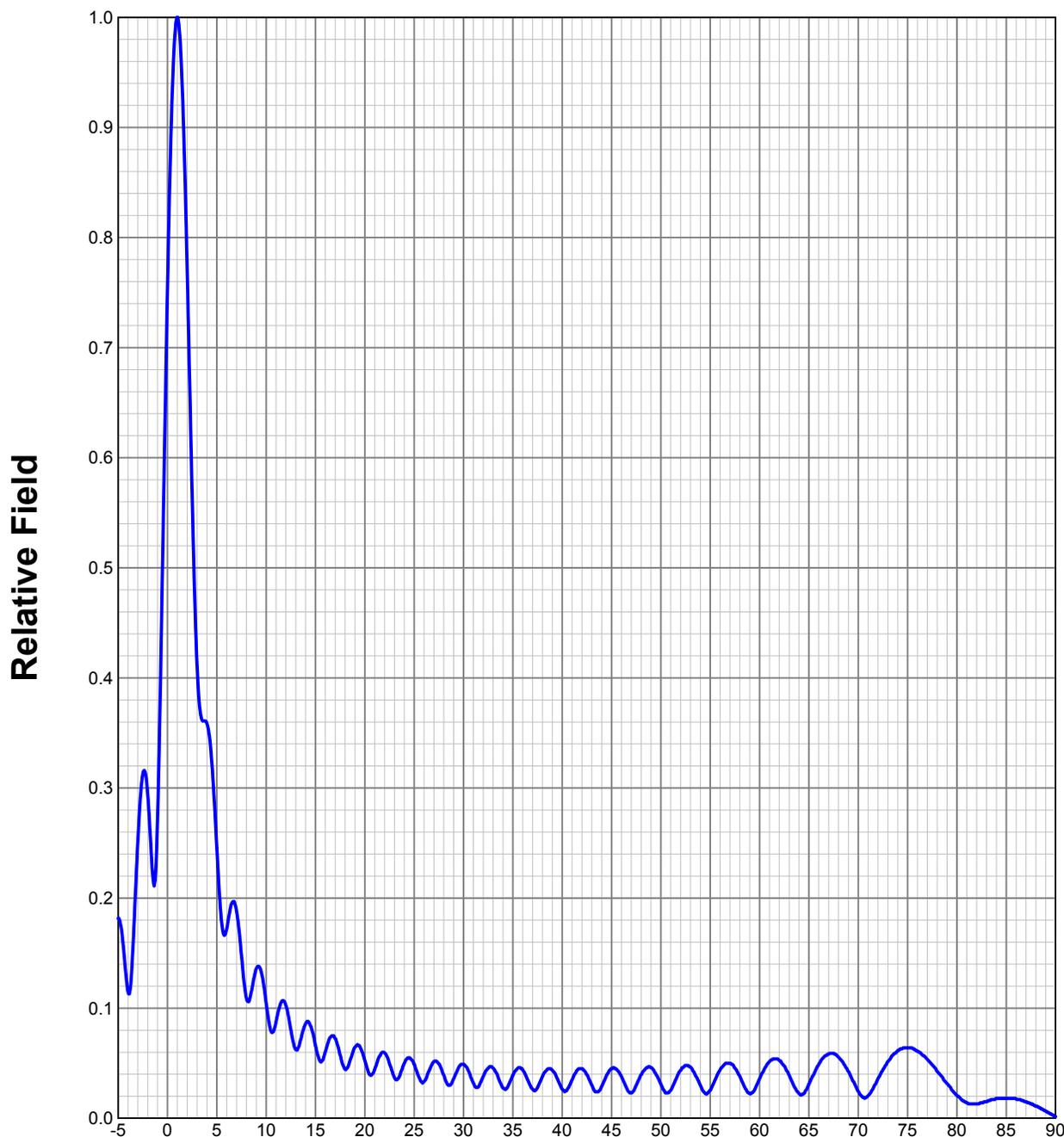
**FCC CITY-GRADE CONTOUR**

**EXHIBIT B**  
**PREDICTED SERVICE CONTOURS**  
**PROPOSED KHCE-TV STA REQUEST**  
**CH. 16 - SAN ANTONIO, TEXAS**



### ELEVATION PATTERN

Type:	<u>ATW22H4H</u>		Channel:	<u>16</u>
Directivity:	<u>Numeric</u>	<u>dBd</u>	Location:	<u>                    </u>
Main Lobe:	<u>22.00</u>	<u>13.42</u>	Beam Tilt:	<u>1.00</u>
Horizontal:	<u>12.47</u>	<u>10.96</u>	Polarization:	<u>Horizontal</u>

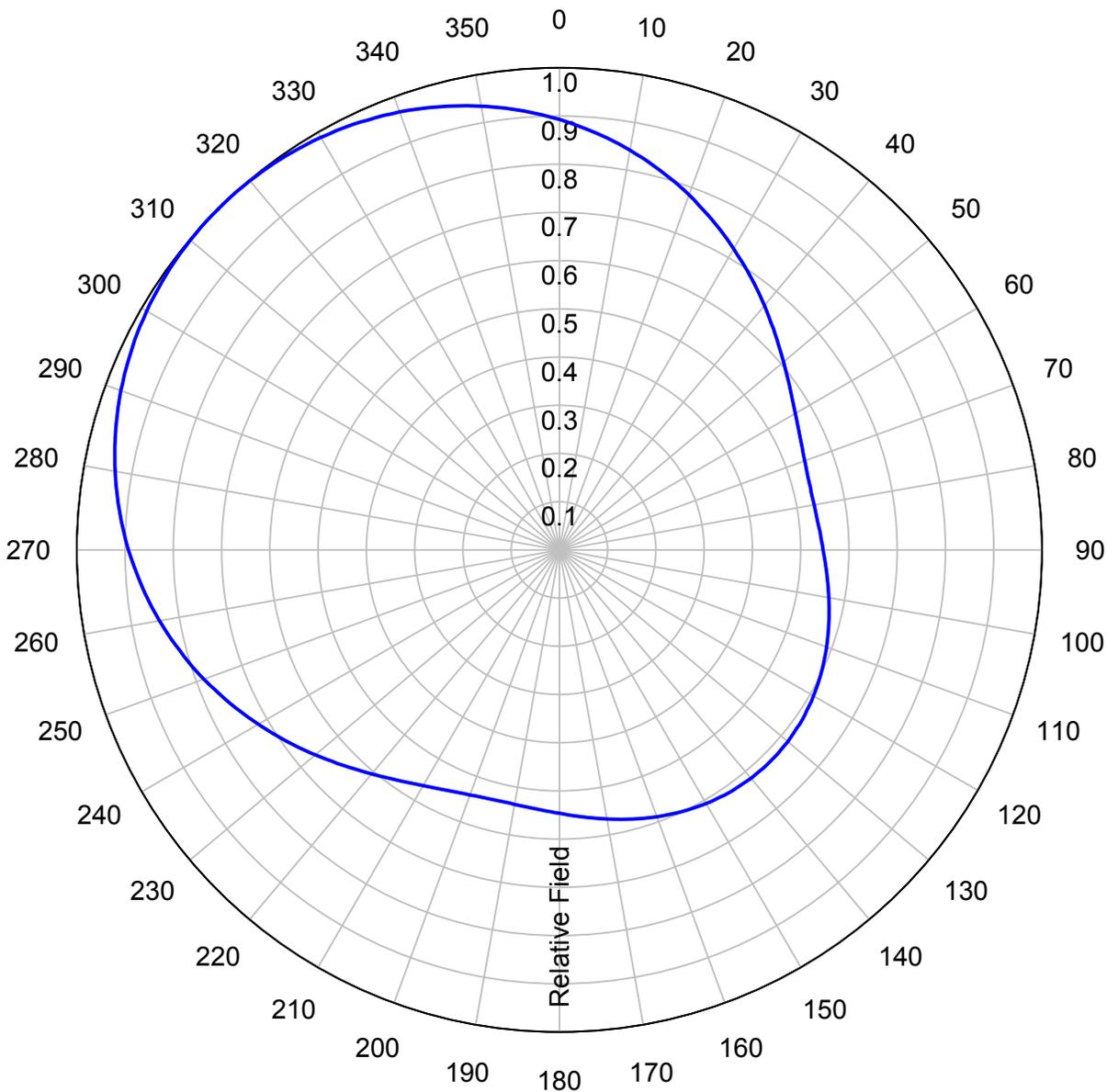


Preliminary, subject to final design and review.

### AZIMUTH PATTERN

Type: ATW-S  
Directivity: Numeric 1.83 dBd 2.62  
Peak(s) at: \_\_\_\_\_

Channel: 16  
Location: \_\_\_\_\_  
Polarization: Horizontal  
Note: Pattern shape and directivity may vary with channel and mouting configuration.



Preliminary, subject to final design and review.

POWER DENSITY CALCULATION  
PROPOSED KHCE-DT STA REQUEST  
CHANNEL 16 – SAN ANTONIO, TEXAS

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this San Antonio facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 500 kW, an antenna radiation center 325 meters above ground, and the specific elevation pattern of the licensed ERI antenna, maximum power density two meters above ground of 0.0006 mW/cm<sup>2</sup> is calculated to occur 84 meters northwest of the base of the tower. Since this is only 0.2 percent of the 0.32 mW/cm<sup>2</sup> reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 16 (482-488 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.