

ENGINEERING STATEMENT

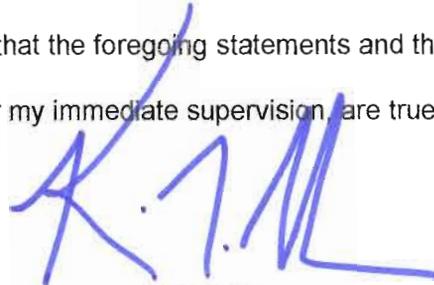
The engineering data contained herein have been prepared on behalf of SAN ANTONIO COMMUNITY EDUCATIONAL TV, INC., licensee of KHCE-DT, Channel 16 in San Antonio, Texas, in support of its Application for Construction Permit to operate with a maximized post-transition DTV facility.

It is proposed to mount the existing Andrew directional antenna at the 325-meter level of the existing 336-meter tower on which the antenna is presently mounted. Exhibit B provides azimuth and elevation pattern data for the licensed antenna. Exhibit C is a map upon which the predicted service contours are plotted. As shown, the city of license is completely contained within the proposed 48 dBu service contour. An interference study is included as Exhibit D. It is important to note that the study employed a 1.0 kilometer cell size and 0.1 kilometer increment spacing. A power density calculation is provided in Exhibit E.

It is not expected that the proposed facility would cause objectionable interference to any other broadcast or non-broadcast station authorized to operate at or near the KHCE-DT site. However, if such should occur, the owner of this station recognizes its obligation to take whatever corrective actions are necessary.

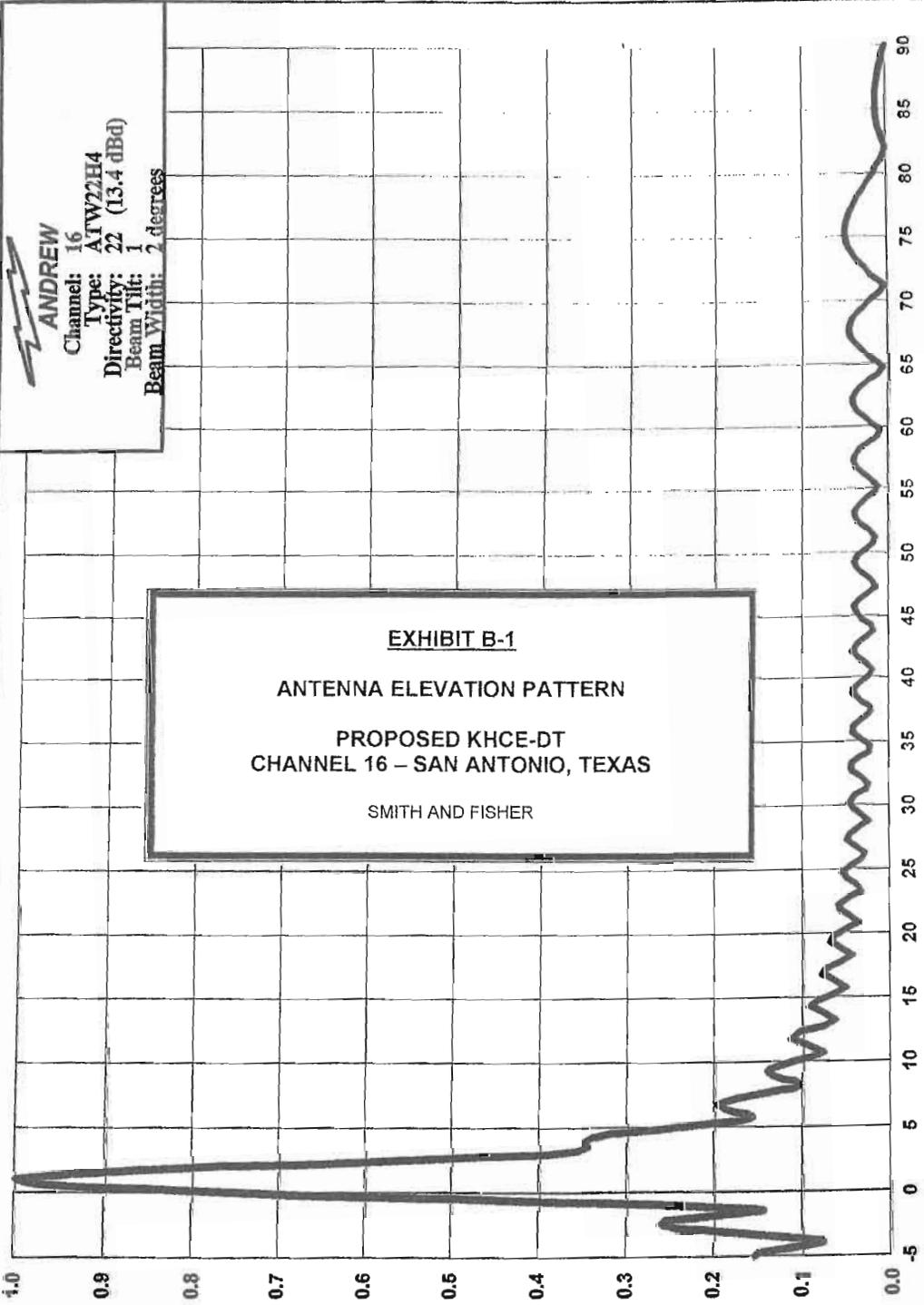
Since no change in overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1228187 to this tower.

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.



KEVIN T. FISHER

June 5, 2008



**ANDREW**

Channel: 16  
 Type: ATW22H4  
 Directivity: 22 (13.4 dBd)  
 Beam Tilt: 1  
 Beam Width: 2 degrees

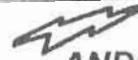
**EXHIBIT B-1**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED KHCE-DT**  
**CHANNEL 16 – SAN ANTONIO, TEXAS**  
 SMITH AND FISHER

Date: 5/16/2002

Author:

Company:  
 Site:  
 Proposal Number:

ANDREW CORPORATION  
 10500 W. 153rd Street  
 Orland Park, Illinois U.S.A. 60462



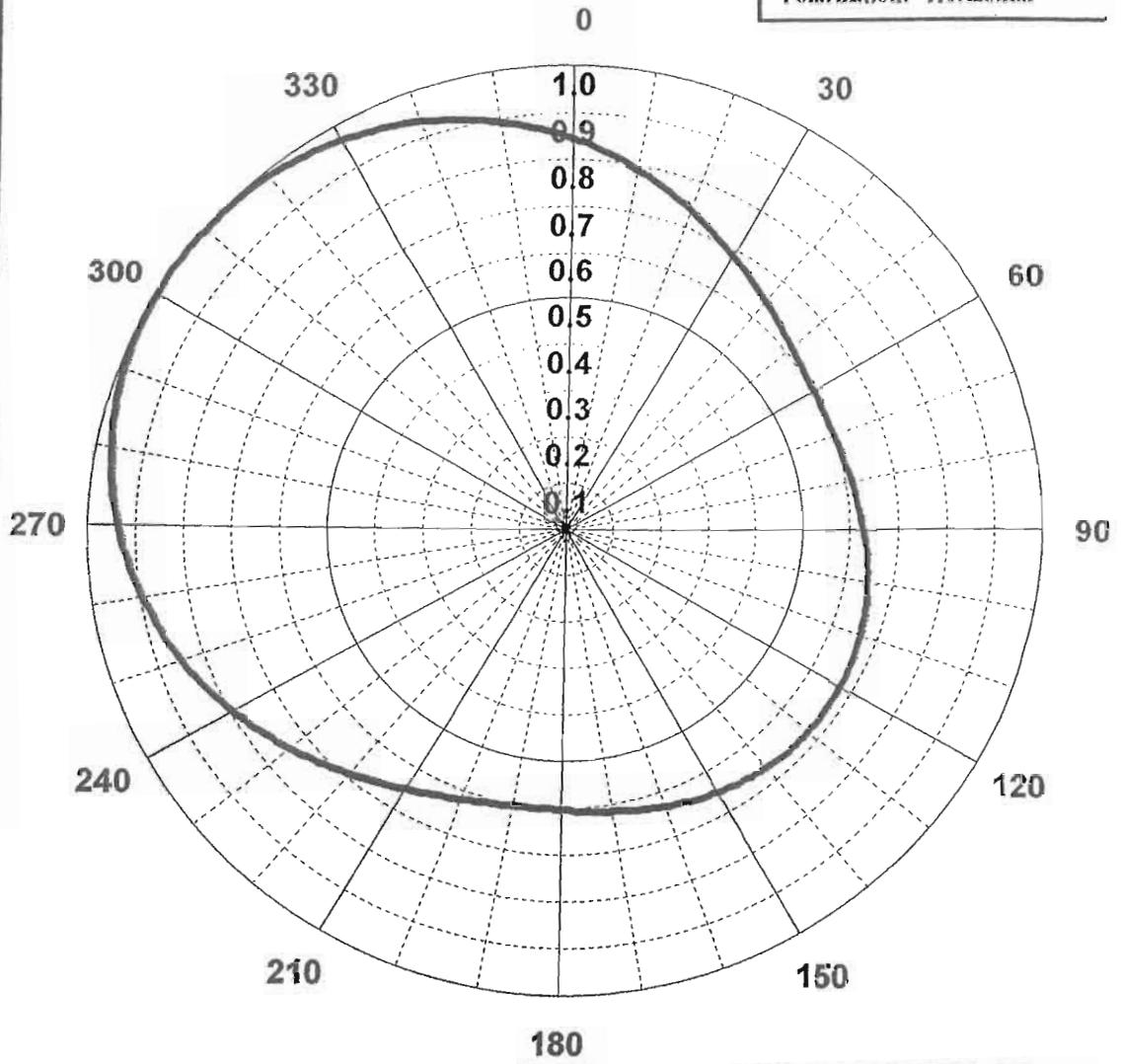
**ANDREW**

Channel: 16

Type: ATW-OC

Gain: 2 (3.01 dB)

Polarization: Horizontal



**EXHIBIT B-2**

**ANTENNA AZIMUTH PATTERN**

**PROPOSED KHCE-DT  
CHANNEL 16 - SAN ANTONIO, TEXAS**

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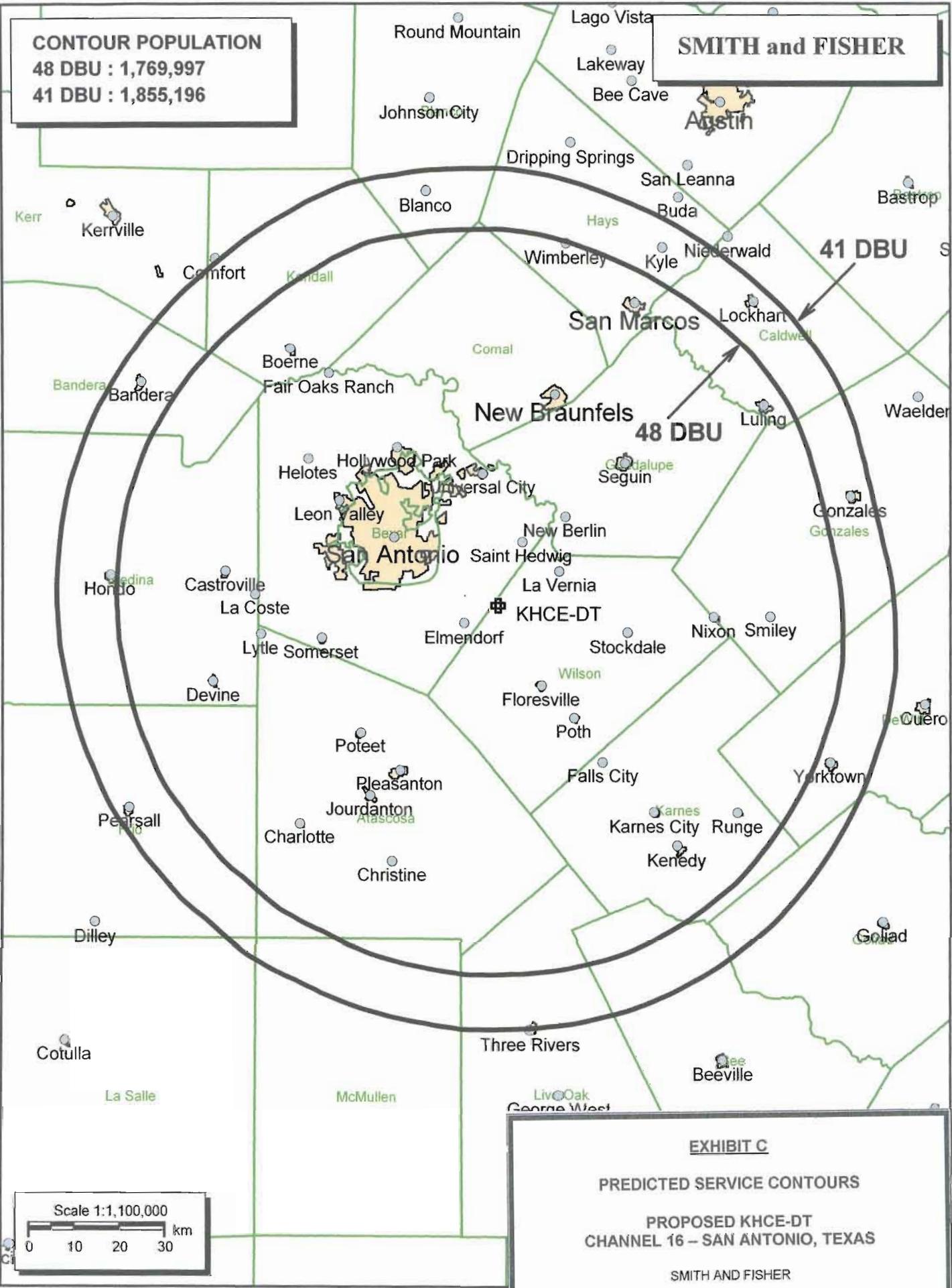
## HORIZONTAL RELATIVE FIELD PATTERN

PROPOSED KHCE-DT  
CHANNEL 16 - SAN ANTONIO, TEXAS

<u>Azimuth</u> (° T)	<u>Relative</u> <u>Field</u>	<u>ERP</u> (dbk)	<u>Azimuth</u> (° T)	<u>Relative</u> <u>Field</u>	<u>ERP</u> (dbk)
0	0.85	27.9	180	0.60	24.9
10	0.79	27.3	190	0.60	24.9
20	0.74	26.7	200	0.62	25.1
30	0.69	26.1	210	0.65	25.6
40	0.65	25.6	220	0.69	26.1
50	0.62	25.1	230	0.74	26.7
60	0.60	24.9	240	0.79	27.3
70	0.60	24.9	250	0.85	27.9
80	0.62	25.1	260	0.89	28.3
90	0.63	25.3	270	0.94	28.8
100	0.65	25.6	280	0.97	29.0
110	0.67	25.8	290	0.99	29.2
120	0.67	25.8	300	1.00	29.3
130	0.67	25.8	310	1.00	29.3
140	0.67	25.8	320	0.99	29.2
150	0.65	25.6	330	0.97	29.0
160	0.63	25.3	340	0.94	28.8
170	0.62	25.1	350	0.89	28.3

SMITH and FISHER

CONTOUR POPULATION  
48 DBU : 1,769,997  
41 DBU : 1,855,196



**EXHIBIT C**

PREDICTED SERVICE CONTOURS

PROPOSED KHCE-DT  
CHANNEL 16 – SAN ANTONIO, TEXAS

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## INTERFERENCE STUDY

PROPOSED KHCE-DT  
CHANNEL 16 – SAN ANTONIO, TEXAS

The instant application specifies an ERP of 850 kw (omnidirectional) at 328 meters above average terrain, which we have determined to be allowable under the FCC's recently approved interference standards with respect to various post-transition digital television facilities as they will exist on or before February 17, 2009, the date by which all stations must operate with the parameters recently adopted in the Commission's DTV Table of Allotments.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "Probe III" computer program, which has been found generally to mimic the FCC's program. In conducting our studies, we employed a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. Changes in interference caused by proposed KHCE-DT to other pertinent stations are tabulated in Exhibit D-2.

As shown, the proposed KHCE-DT facility would not contribute more than 0.5% interference (beyond that which is caused by the allotted KHCE-DT facility) to the service population of any potentially affected post-transition DTV station.

A Longley-Rice interference study also reveals that the proposed KHCE-DT facility does not cause significant (0.5%) interference within the protected service contour of any potentially affected Class A low power television station.

Therefore, this proposal meets the FCC's *de minimis* interference standards for DTV operations.

EXHIBIT D-2

## INTERFERENCE STUDY SUMMARY

PROPOSED KHCE-DT  
CHANNEL 16 – SAN ANTONIO, TEXAS

<u>Call Sign</u>	<u>City, State</u>	<u>CH.</u>	<u>Coverage Population</u>	<u>Interference Population From KHCE-DT*</u>	<u>%</u>
KAVU-DT	Victoria, TX	15	316,565	565	0.18
KNIC-CA	San Antonio, TX	17	809,374	3,469	0.43

\*Above that caused by the allotment facility.

Note: This study utilized a cell size of 1.0 km and an increment spacing of 0.1 km.

POWER DENSITY CALCULATION  
PROPOSED KHCE-DT  
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 850 kw, an antenna radiation center 325 meters above ground, and the elevation pattern of the Andrew antenna, maximum power density two meters above ground of  $0.00064 \text{ mw/cm}^2$  is calculated to occur 87 meters northwest of the base of the tower. Since this is only 0.2 percent of the  $0.32 \text{ mw/cm}^2$  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 and occupational ground-level exposure to nonionizing 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 nonionizing radiation.