

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of digital television station KNAT-DT, Channel 24 in Albuquerque, New Mexico, in support of its Application for Construction Permit to correct the station's site coordinates, ground elevation, and effective antenna height, based on a survey that was conducted recently at the transmitter site. No change in effective radiated power or antenna pattern is proposed herein. These corrections result in essentially no change in the KNAT-DT service contour.

For completeness, the elevation pattern for the licensed omnidirectional antenna is provided in Exhibit B. Exhibit C is a map upon which the corrected service contours are plotted. It is important to note that the corrected 48 dBu contour encompasses the entirety of Albuquerque, the city of license. The licensed and corrected 41 dBu service contours are plotted in Exhibit D. As shown, there is no significant difference between the two. Since there are a few azimuths where the corrected contour slightly exceeds that of the licensed contour, a waiver of the Commission's current freeze on the filing of a modification application that results in an extension of a digital television station's service contour is requested and believed to be justified, since this application merely seeks to correct the operating parameters of an existing and licensed station. It would not be in the public interest to require KNAT-DT to reduce power and therefore reduce service to existing viewers by attempting to keep the corrected contour inside the incorrect one.

EXHIBIT A

An interference study is provided in Exhibit E, and it is important to note that a cell size of 2.0 kilometers and increment spacing of 1.0 kilometer were both used for the analysis. A power density calculation follows as Exhibit F.

Due to the diminutive height of the tower and its proximity to the nearest airport runway, the Federal Aviation Administration has not been notified of this application. For similar reasons, no FCC antenna structure registration is required. This conclusion is supported by the Commission's TOWAIR software.

I declare under penalty of perjury that the foregoing statements and the attached exhibits are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher", is centered on the page.

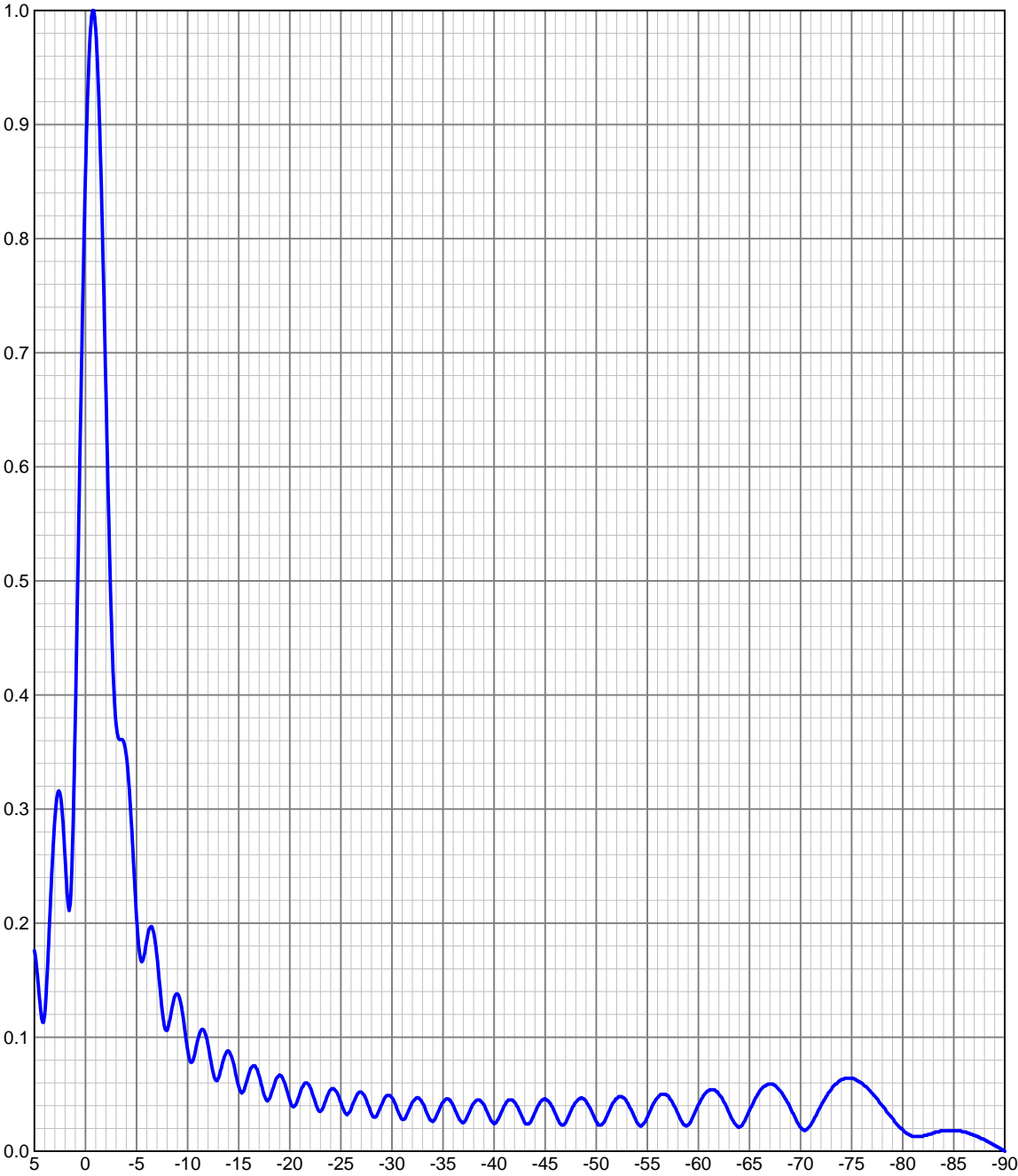
KEVIN T. FISHER

June 20, 2013

ELEVATION PATTERN

Type:	ATW22H3H		Channel:	24
Directivity:	Numeric	dBd	Location:	
Main Lobe:	22.00	13.42	Beam Tilt:	-0.75
Horizontal:	16.16	12.08	Polarization:	Horizontal

Relative Field



Preliminary, subject to final design and review.



**CONTOUR POPULATION
2010 U.S. CENSUS DATA**
48 DBU : 1,099,988
41 DBU : 1,158,351

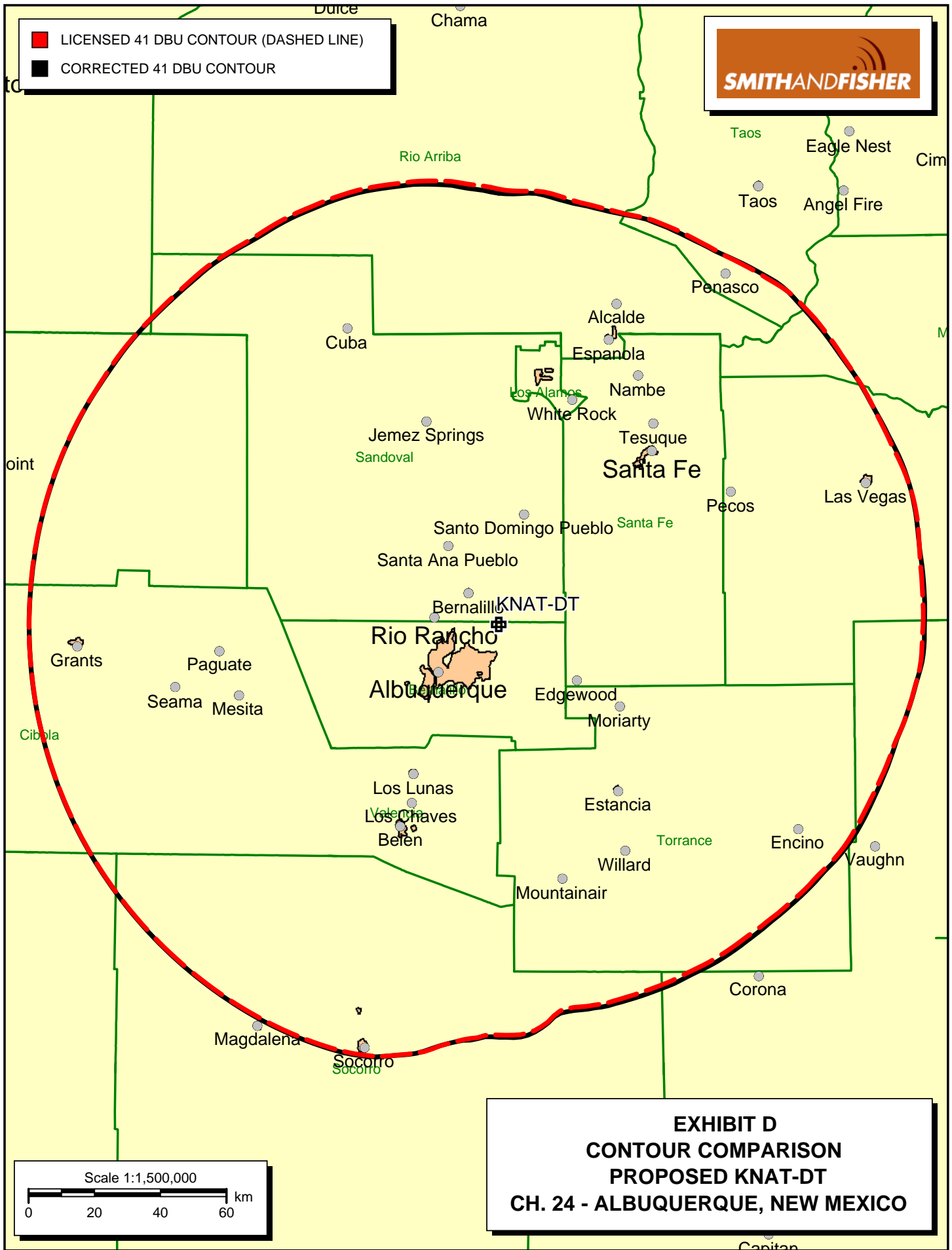
**41 DBU FCC
CONTOUR**

**48 DBU FCC
CONTOUR**

**EXHIBIT C
PREDICTED SERVICE CONTOURS
PROPOSED KNAT-DT
CH. 24 - ALBUQUERQUE, NEW MEXICO**

Scale 1:1,500,000

0 20 40 60 km



- LICENSED 41 DBU CONTOUR (DASHED LINE)
- CORRECTED 41 DBU CONTOUR

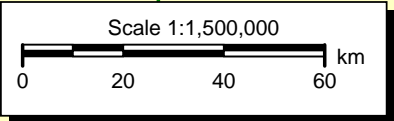


EXHIBIT D
CONTOUR COMPARISON
PROPOSED KNAT-DT
CH. 24 - ALBUQUERQUE, NEW MEXICO

LONGLEY-RICE INTERFERENCE STUDY
PROPOSED KNAT-DT
CHANNEL 24 – ALBUQUERQUE, NEW MEXICO

We conducted a detailed interference study using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The software utilizes a 2-square kilometer cell size, calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 2000 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than the proposed KNAT-DT facility) already is predicted to exist (also known as "masking"). The results of this study are provided in Exhibit E-2. It concludes that the facility proposed herein causes no significant interference to any of the potentially affected stations.

EXHIBIT E-2

INTERFERENCE SUMMARY

PROPOSED KNAT-DT
CHANNEL 24 – ALBUQUERQUE, NEW MEXICO

<u>Call Sign</u>	<u>Status</u>	<u>City, State</u>	<u>Ch.</u>	<u>Longley-Rice Service Population</u>	<u>Unmasked Interference From Proposed Facility</u>	<u>%</u>
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[NO STATIONS AFFECTED]

POWER DENSITY CALCULATION

PROPOSED KNAT-DT
CHANNEL 24 – ALBUQUERQUE, NEW MEXICO

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Albuquerque facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 320 kW, an antenna radiation center 18 meters above ground, and the specific elevation pattern the Andrew (ERI) ATW22H3-HSO-24S antenna, maximum power density two meters above ground of 0.16 mW/cm^2 is calculated to occur 4 meters from the base of the tower. Since this is only 8.9 percent of the 1.8 mW/cm^2 reference for controlled environments (areas with public access) surrounding a facility operating on Channel 24 (530-536 MHz), and since the Sandia Crest antenna farm (within which the KNAT-DT transmitting facility is located) is secure from unauthorized access, a grant of this proposal may be considered a minor environmental action with respect to public and occupational exposure to non-ionizing electromagnetic radiation. In addition, a power density survey was recently conducted by Hammett and Edison. They concluded that KNAT-DT was not a significant contributor to the composite RF in any location where the values were found to exceed the Commission's human exposure guidelines.

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.