

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of WMCF-DT, Channel 46 in Montgomery, Alabama, in support of its Application for Construction Permit to operate with a maximized post-transition DTV facility.

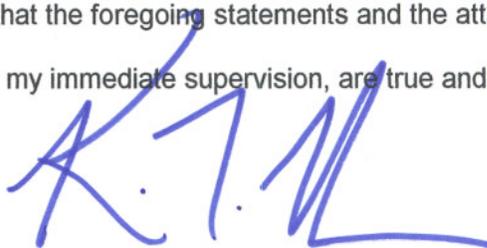
It is proposed to mount a standard ERI omnidirectional antenna in the analog antenna's aperture at the 316-meter level of the existing 356-meter tower, once the analog antenna is removed. Exhibit B provides elevation pattern data for the proposed antenna. Exhibit C is a map upon which the predicted service contours are plotted. As shown, the city of license is completely contained within the proposed 48 dBu service contour. An interference study is provided in Exhibit D. It is important to note that the study employed a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer. 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 WMCF-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 1042484 to this tower.

EXHIBIT A

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.

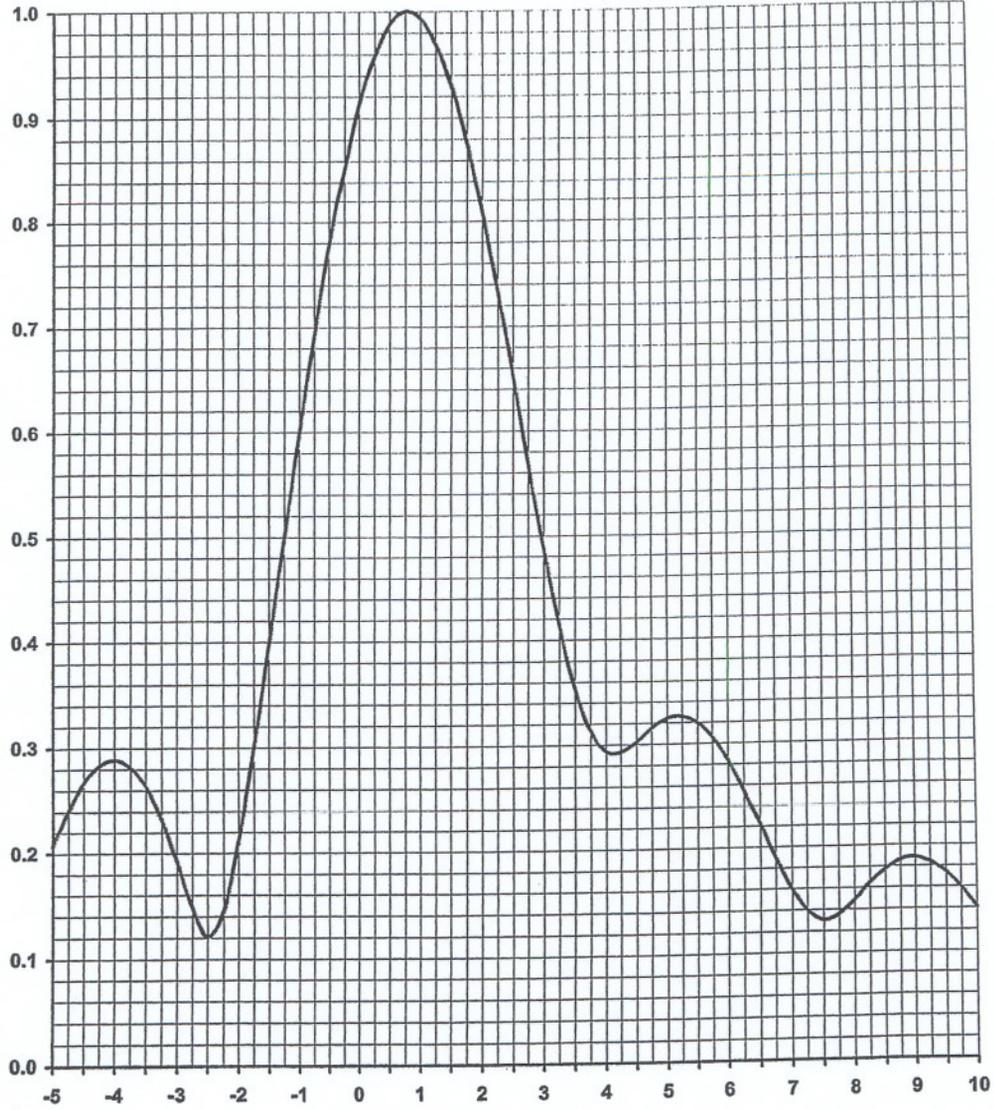
A handwritten signature in blue ink, appearing to read 'K. T. Fisher', is written over the text of the declaration.

KEVIN T. FISHER

June 4, 2008

**ELEVATION PATTERN**

<b>TYPE:</b>	<b>ATW16H3H</b>		<b>Frequency:</b>	<u>46 (DTV)</u>
<b>Directivity:</b>	<b>Numeric</b>	<b>dBd</b>	<b>Location:</b>	<u>Montgomery, AL</u>
<b>Main Lobe:</b>	<u>16.00</u>	<u>12.04</u>	<b>Beam Tilt:</b>	<u>0.75</u>
<b>Horizontal:</b>	<u>13.34</u>	<u>11.25</u>	<b>Polarization:</b>	<u>Horizontal</u>

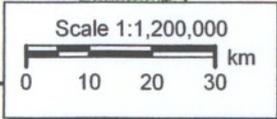
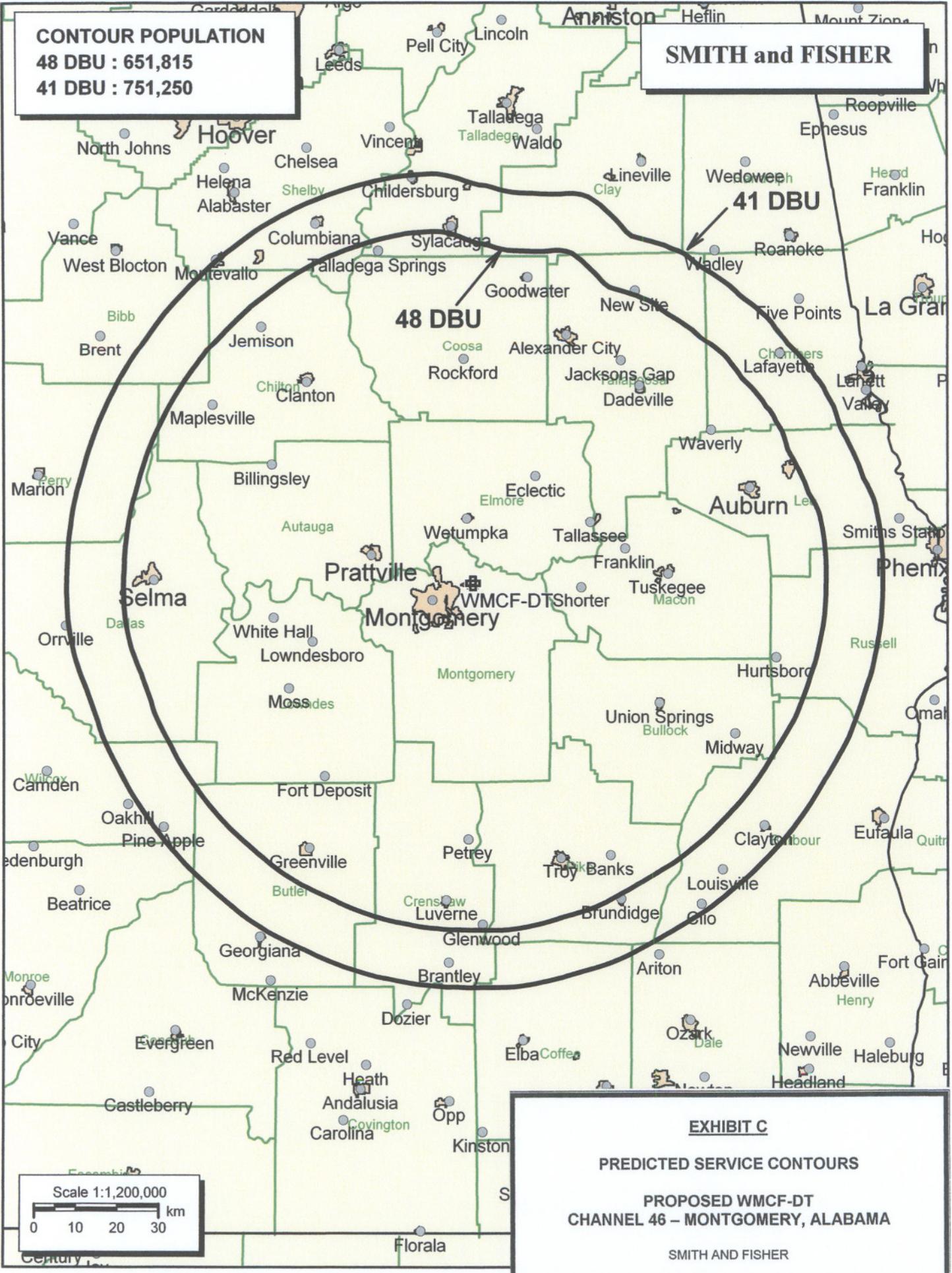


ELECTRONICS RESEARCH, INC. **ERI**

**EXHIBIT B**  
**ANTENNA ELEVATION PATTERN**  
**PROPOSED WMCF-DT**  
**CHANNEL 46 – MONTGOMERY, ALABAMA**  
 SMITH AND FISHER

**CONTOUR POPULATION**  
**48 DBU : 651,815**  
**41 DBU : 751,250**

**SMITH and FISHER**



**EXHIBIT C**  
**PREDICTED SERVICE CONTOURS**  
**PROPOSED WMCF-DT**  
**CHANNEL 46 - MONTGOMERY, ALABAMA**  
**SMITH AND FISHER**

INTERFERENCE STUDY  
PROPOSED WMCF-DT  
CHANNEL 46 – MONTGOMERY, ALABAMA

The instant application specifies an ERP of 1000 kw (omnidirectional) at 305 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 kilometers 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 WMCF-DT to other pertinent stations are tabulated in Exhibit D-2.

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

A Longley-Rice interference study also reveals that the proposed WMCF-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 WMCF-DT  
CHANNEL 46 – MONTGOMERY, ALABAMA

<u>Call Sign</u>	<u>City, State</u>	<u>CH.</u>	<u>Coverage Population</u>	<u>Interference Population From WMCF-DT*</u>	<u>%</u>
WLGA-DT	Opelika, AL	47	668,678	2,723	0.41
WCTV-DT	Thomasville, GA	46	974,680	343	<0.1

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

\*Above that caused by the allotment facility.

EXHIBIT E

POWER DENSITY CALCULATION  
PROPOSED WMCF-DT  
CHANNEL 46 – MONTGOMERY, ALABAMA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Montgomery facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1000 kw, an antenna radiation center 316 meters above ground, and the elevation pattern of the ERI antenna, maximum power density two meters above ground of  $0.0018 \text{ mw/cm}^2$  is calculated to occur 111 meters from the base of the tower. Since this is only 0.4 percent of the  $0.44 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 46 (662-668 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.