

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of WELF-DT, Channel 16 in Dalton, Georgia, 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 142-meter level of the existing 152-meter tower on which the antenna is presently mounted. Exhibit B provides azimuth and elevation pattern data for the existing 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 in our interference study, we utilized a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer. A power density calculation is provided in Exhibit E.

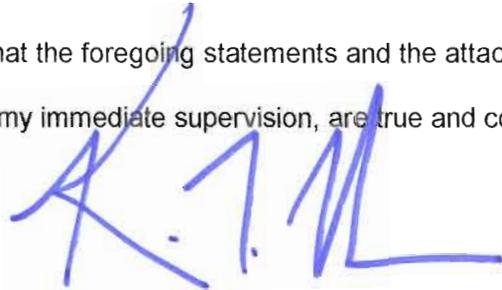
The proposed ERP of 699 kw was derived from FCC Rule 73.622(f)(8)(i), using linear interpolation of the values given in the associated table.

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 WELF-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 1028358 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 a light gray rectangular background.

KEVIN T. FISHER

June 2, 2008



ANDREW

Channel: 16

Type: ATW22H3

Directivity: 22 (13.4 dBd)

Beam Tilt: 0.75

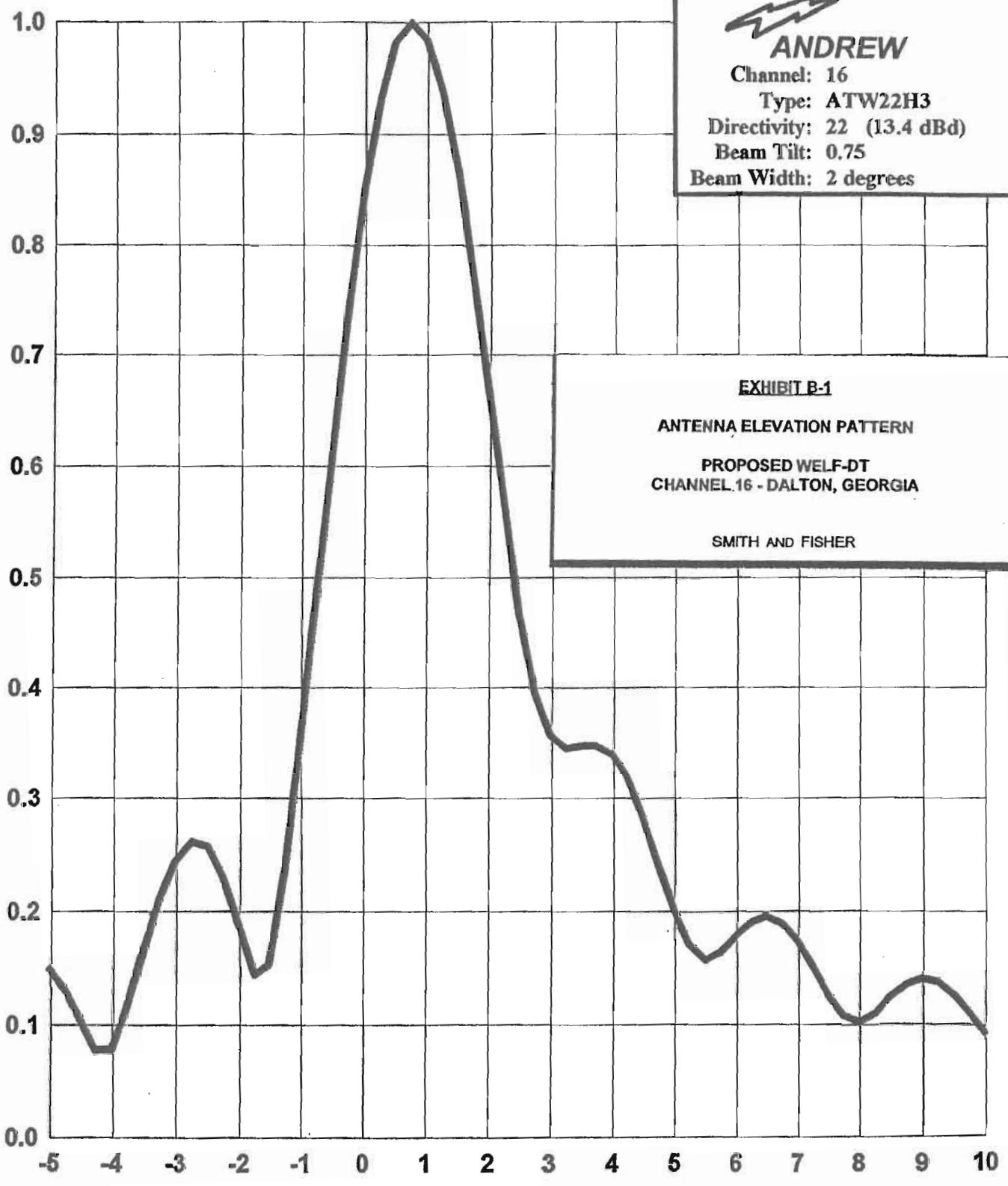
Beam Width: 2 degrees

EXHIBIT B-1

ANTENNA ELEVATION PATTERN

**PROPOSED WELF-DT
CHANNEL 16 - DALTON, GEORGIA**

SMITH AND FISHER



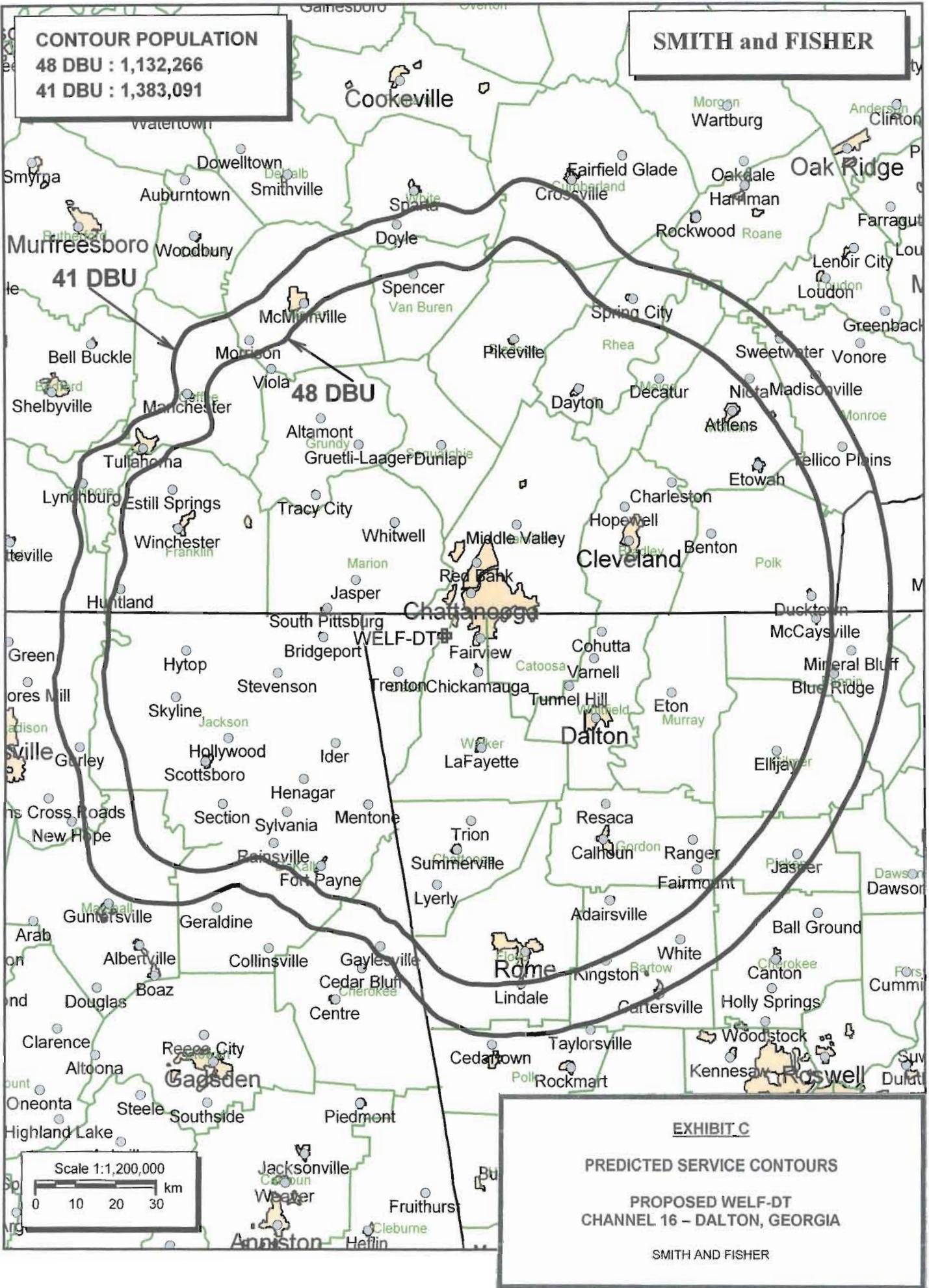
ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

Company:
Site:
Proposal Number:

Author: Date: 12/1/04

ANTENNA RADIATION VALUES
PROPOSED WELF-DT
CHANNEL 16 - DALTON, GEORGIA

<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>	<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>
0	0.89	27.4	180	0.61	24.1
10	0.94	27.9	190	0.63	24.4
20	0.97	28.1	200	0.65	24.6
30	0.99	28.3	210	0.67	24.9
40	1.00	28.4	220	0.67	24.9
50	1.00	28.4	230	0.67	24.9
60	0.99	28.3	240	0.67	24.9
70	0.97	28.1	250	0.65	24.6
80	0.94	27.9	260	0.63	24.4
90	0.89	27.4	270	0.61	24.1
100	0.85	27.0	280	0.60	24.0
110	0.79	26.3	290	0.60	24.0
120	0.74	25.8	300	0.62	24.2
130	0.69	25.2	310	0.65	24.6
140	0.65	24.6	320	0.69	25.2
150	0.62	24.2	330	0.74	25.8
160	0.60	24.0	340	0.79	26.3
170	0.60	24.0	350	0.85	27.0



INTERFERENCE STUDY
PROPOSED WELF-DT
CHANNEL 16 - DALTON, GEORGIA

The instant application specifies an ERP of 699 kw (directional) at 445 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 WELF-DT to other pertinent stations are tabulated in Exhibit D-2.

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

A Longley-Rice interference study also reveals that the proposed WELF-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.

INTERFERENCE STUDY SUMMARY

PROPOSED WELF-DT
CHANNEL 16 – DALTON, GEORGIA

<u>Call Sign</u>	<u>City, State</u>	<u>Ch.</u>	<u>Coverage Population</u>	<u>Interference Population From WELF-DT*</u>	<u>%</u>
WCOV-DT	Montgomery, AL	16	839,744	433	<0.1
WGGS-DT	Greenville, SC	16	1,602,132	5	<0.1
WGXA-DT	Macon, GA	16	681,471	501	<0.1
WKHA-DT	Hazard, KY	16	399,493	960	0.2
WKOP-DT	Knoxville, TN	17	1,237,266	1,883	0.2
WLOV-DT	West Point, MS	16	597,092	33	<0.1
WNKY-DT	Bowling Green, KY	16	337,310	1,242	0.4

*Above that caused by allotment facility.

Note:

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

EXHIBIT E

POWER DENSITY CALCULATION
PROPOSED WELF-DT
CHANNEL 16 – DALTON, GEORGIA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Dalton facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 699 kw, an antenna radiation center 142 meters above ground, and the elevation pattern of the Andrew antenna, maximum power density two meters above ground of 0.0027 mw/cm^2 is calculated to occur 43 meters northeast of the base of the tower. Since this is only 0.8 percent of the 0.32 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.