

ENGINEERING STATEMENT

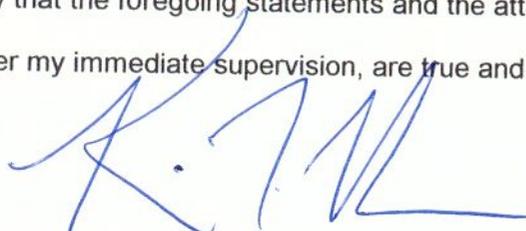
The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of WWTO-DT, Channel 10 in LaSalle, Illinois, in support of its Application for Construction Permit to operate with its post-transition DTV facility. It is proposed herein to move the authorized DTV antenna into the analog antenna's aperture upon its removal at the end of the transition. A corresponding reduction in effective radiated power is also specified.

It is proposed to mount the existing Andrew directional antenna at the 408-meter level of the existing 417-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 43 dBu service contour. The combination of the proposed height increase and power decrease results in a predicted 36 dBu service contour which matches that licensed to WWTO-DT. Accordingly, no interference study is included herein. A power density calculation is provided in Exhibit D.

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 WWTO-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 1028357 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.



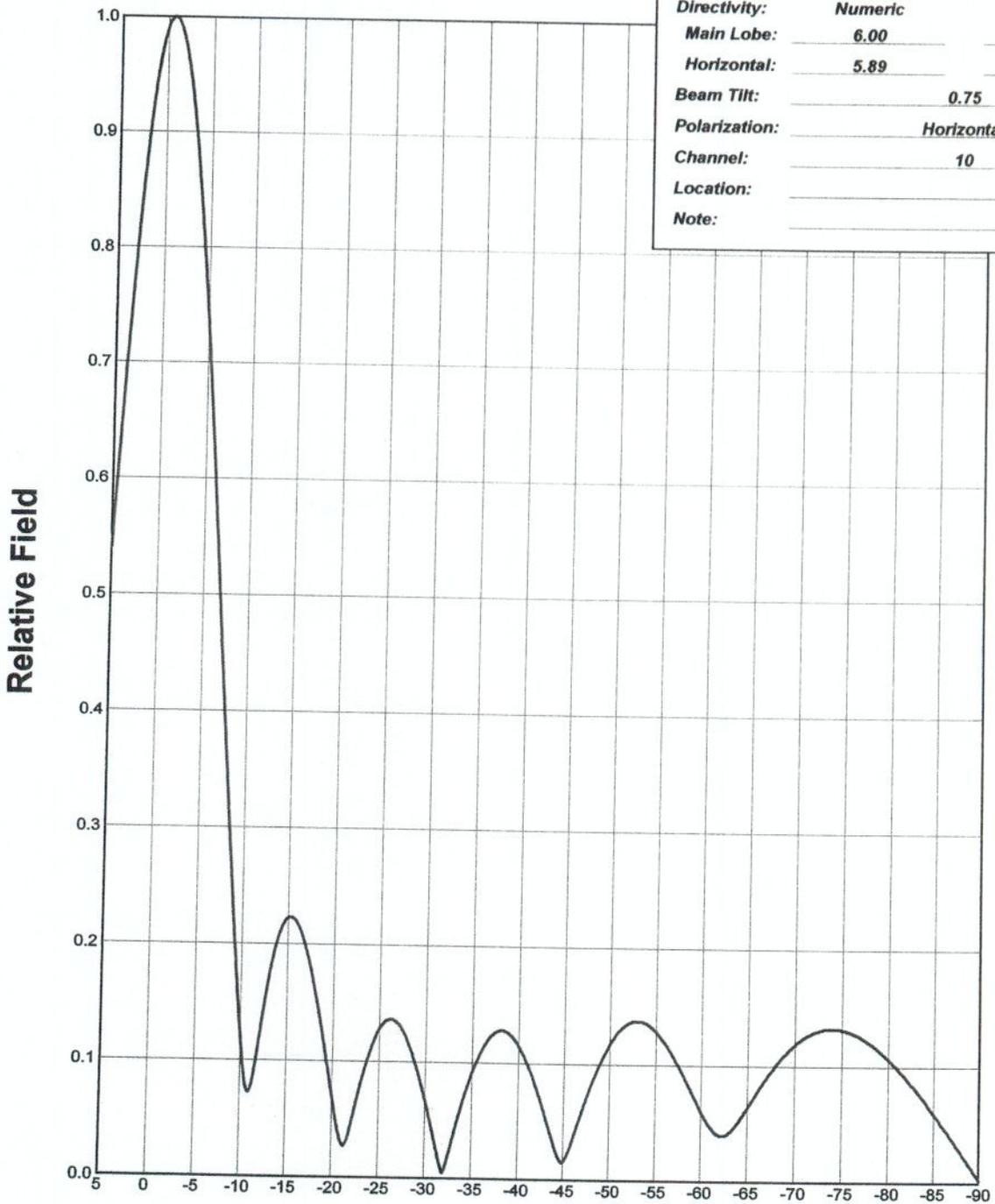
KEVIN T. FISHER

February 28, 2008



### ELEVATION PATTERN

Type:	ATW6V3H	
Directivity:	Numeric	dBd
Main Lobe:	6.00	7.78
Horizontal:	5.89	7.70
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	10	
Location:		
Note:		



Electronics Research, Inc.  
7777 Gardner Road  
Chandler, Indiana U.S.A 47610

#### EXHIBIT B-1

ANTENNA ELEVATION PATTERN

PROPOSED WWTO-DT  
CHANNEL 10 - LA SALLE, ILLINOIS

SMITH AND FISHER



### AZIMUTH PATTERN

Type: ATW-VHF-S

	Numeric	dBd
Directivity:	<u>1.90</u>	<u>2.79</u>
Peak(s) at:		
Polarization:	<u>Horizontal</u>	
Channel:	<u>10</u>	
Location:		
Note:		



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**EXHIBIT B-2**  
**ANTENNA AZIMUTH PATTERN**  
**PROPOSED WWTO-DT**  
**CHANNEL 10 - LA SALLE, ILLINOIS**  
SMITH AND FISHER

ANTENNA RADIATION VALUES  
PROPOSED WWTO-DT  
CHANNEL 10 – LA SALLE, ILLINOIS

<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	0.95	11.2	180	0.42	4.10
10	0.97	11.4	190	0.45	4.70
20	0.99	11.5	200	0.48	5.3
30	1.00	11.6	210	0.51	5.8
40	1.00	11.6	220	0.52	6.1
50	1.00	11.6	230	0.51	5.8
60	0.99	11.5	240	0.48	5.3
70	0.97	11.4	250	0.45	4.7
80	0.95	11.2	260	0.42	4.1
90	0.92	10.9	270	0.40	3.7
100	0.87	10.4	280	0.43	4.3
110	0.81	9.8	290	0.49	5.4
120	0.74	9.0	300	0.57	6.8
130	0.66	8.0	310	0.66	8.0
140	0.57	6.8	320	0.74	9.0
150	0.49	5.4	330	0.81	9.8
160	0.43	4.3	340	0.87	10.4
170	0.40	3.7	350	0.92	10.9

**CONTOUR POPULATION**

**43 DBU : 1,493,855**

**36 DBU : 2,945,523**

**SMITH and FISHER**

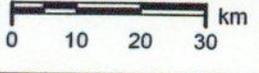
**36 DBU**

**43 DBU**

**WWTO-DT**  
Grand Ridge

**Chicago**

Scale 1:1,200,000

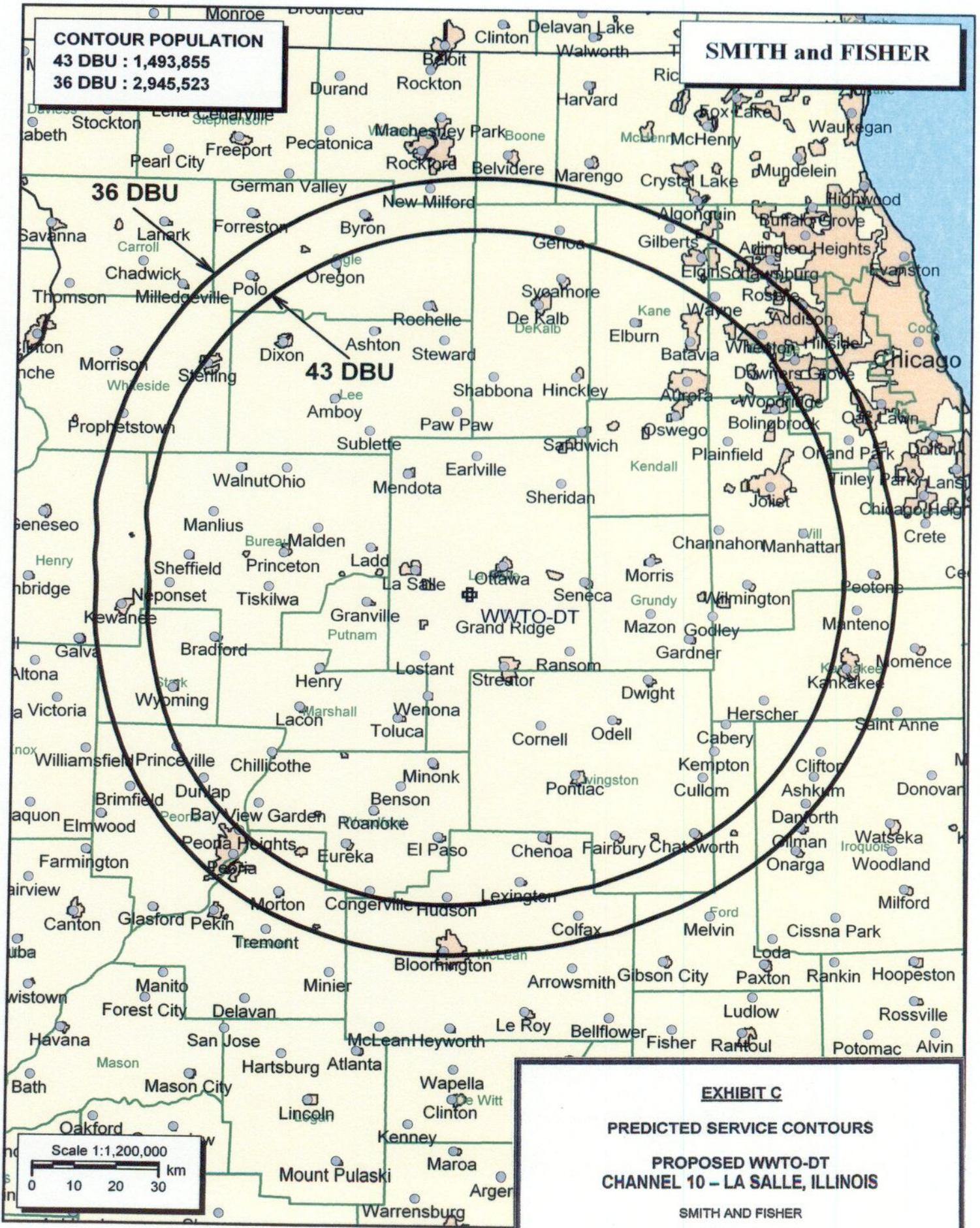


**EXHIBIT C**

**PREDICTED SERVICE CONTOURS**

**PROPOSED WWTO-DT  
CHANNEL 10 - LA SALLE, ILLINOIS**

SMITH AND FISHER



POWER DENSITY CALCULATION  
PROPOSED WWTO-DT  
CHANNEL 10 – LA SALLE, ILLINOIS

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this La Salle facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 14.5 kw (H, V), an antenna radiation center 408 meters above ground, and the elevation pattern of the Andrew antenna, maximum power density two meters above ground of  $0.000095 \text{ mw/cm}^2$  is calculated to occur 116 meters northeast of the base of the tower. Since this is less than 0.1 percent of the  $0.2 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 10 (192-198 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.