

EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TRINITY BROADCASTING NETWORK, licensee of television translator W49CB, Channel 49 in Green Bay, Wisconsin, in support of this Application for Construction Permit to specify operation on Channel 47 from the licensed W49CB site. This proposal is being submitted in response to the Commission's recent allotment of NTSC Channel 50 to Green Bay (BPRM-20000717ACL), thereby placing this translator in a displacement situation.

It is proposed to mount a standard Andrew omnidirectional antenna at the authorized height on the side of an existing 353-meter communications tower. Exhibit B is a map upon which the predicted service contours are plotted. It is important to note that the newly proposed 74 dBu contour encompasses a significant portion of that which obtains from the licensed W49CB facility. Operating parameters for the proposed facility are tabulated in Exhibit C. A contour overlap analysis and interference study are provided in Exhibit D, and a power density calculation follows as Exhibit E.

Because no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1064113 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.

  
KYLE T. FISHER

May 18, 2005



**POPULATION CONTOUR**  
**GRADE A (74 DBU): 268,137**  
**GRADE B (64DBU): 464,338**

**SMITH AND FISHER**

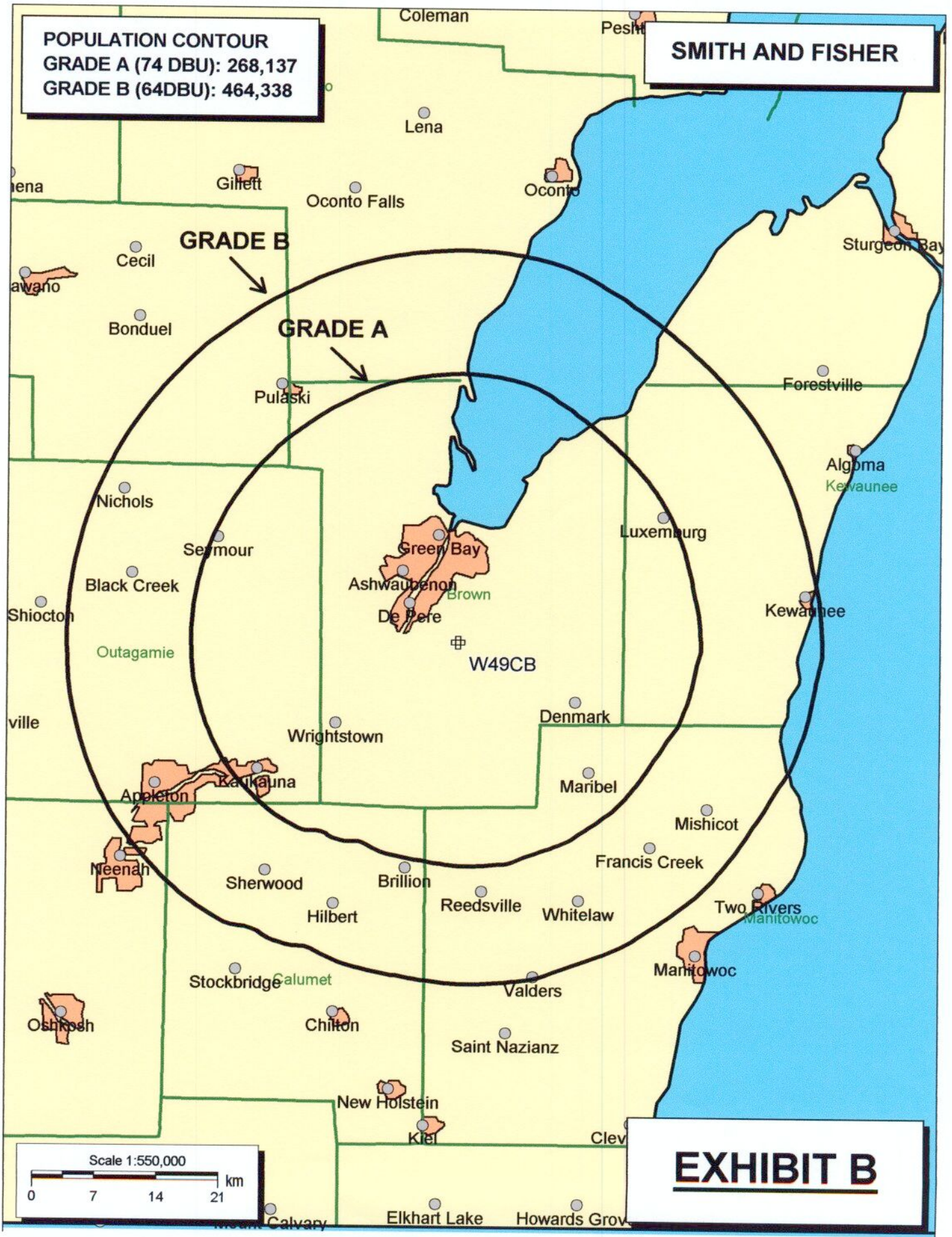


EXHIBIT C

## PROPOSED OPERATING PARAMETERS

LOW POWER TELEVISION STATION W49CB  
CHANNEL 47 - GREEN BAY, WISCONSIN

Transmitter Power Output:	3.0 kw
Transmission Line Efficiency:	35.2%
Antenna Power Gain – Toward Horizon:	28.2
Antenna Power Gain – Main Lobe:	28.2
Effective Radiated Power – Toward Horizon:	29.8 kw
Effective Radiated Power – Main Lobe:	29.8 kw
Transmitter Make and Model:	Type Accepted
Rated Output	3.0 kw
Transmission Line Make and Model:	Andrew LDF7-50A
Size and Type:	1-5/8" foam heliax
Length:	700 feet
Antenna Make and Model:	Andrew ALP16L2-HSOC
Orientation	Omnidirectional
Beam Tilt	0.5 degrees
Effective Height Above Ground:	179 meters
Effective Height Above Mean Sea Level:	449 meters



CONTOUR OVERLAP AND  
LONGLEY-RICE INTERFERENCE STUDIES  
PROPOSED W49CB  
CHANNEL 47 – GREEN BAY, WISCONSIN

We conducted a computer analysis of the interference situation for the proposed facility, the results of which are shown in Exhibit D-2. The study is based on contour protection requirements of Sections 74.705, 74.706, and 74.707 of the FCC's Rules with respect to analog full-power, digital full-power, and low power television stations, respectively. It concludes that the facility proposed herein meets these requirements except to five stations: WFQX-DT, Channel 47 in Cadillac, Michigan; WACY(TV), Channel 32 in Appleton, Wisconsin; WLEF-DT, Channel 47 in Park Falls, Wisconsin; WTTW-DT, Channel 47 in Chicago, Illinois; and, WMSN-TV, Channel 47 in Madison, Wisconsin.

We then conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to these facilities of concern. The software utilizes a 2-square kilometer cell size (except where noted), calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 1990 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 Trinity's proposed W49CB) already is predicted to exist (also known as "masking"). The results of these studies are provided in Exhibit D-3. They conclude that

EXHIBIT D-1

the facility proposed herein causes no significant new interference to any of the potentially affected stations.

As a result, waivers of Section 74.705 of the Commission's Rules with respect to interference to WACY(TV) and WMSN-TV, and Section 74.706 with regard to WFQX-DT, WLEF-DT, and WTTW-DT, are requested and believed to be justified based on the aforementioned Longley-Rice studies.

SMITH AND FISHER

EXHIBIT D-2

PROPOSED W49CB  
CH. 47 - GREEN BAY WI

REFERENCE  
44 24 32 N  
87 59 31 W

LPTV Pwr = 29.8 kW, HAMS L COR= 449 M

DISPLAY DATES  
DATA 05-14-05  
SEARCH 05-17-05

..... Channel 47Z, 668 MHz .....

Call	Channel	Location	Dist	Azi	FCC	Margin
WFQX-D CP	47	Cadillac	MI	213.22	96.9	> 337.02 -123.80
WFQX-D AP	47	Cadillac	MI	235.20	79.7	> 339.73 -104.53
WACY LI	32+	Appleton	WI	5.70	170.4	> 109.44 -103.74
WLEF-D LI	47	Park Falls	WI	247.60	314.5	> 317.55 -69.95
WTTW-D LI	47	Chicago	IL	282.56	174.0	> 340.66 -58.10
WMSNTV LI	47+	Madison	WI	195.08	220.0	> 228.98 -33.90
W23BL AP	48Z	Oshkosh	WI	57.49	228.3	> 034.39 23.10
WSYMTV LI	47Z	Lansing	MI	345.91	127.5	> 318.57 27.34
WTAS-L CP	47-	Waukesha	WI	160.88	185.7	> 132.85 28.03
WDJT-D CPM	46	Milwaukee	WI	144.21	178.0	> 112.19 32.02
WTTW LI	47	Chicago	IL	282.56	174.0	> 235.30 47.26
WTPX-D LI	46	Antigo	WI	137.07	302.3	> 085.85 51.22
WDJT-D ST	46	Milwaukee	WI	144.21	178.0	> 080.58 63.63
NEW AD	48-	Wausaukee	WI	107.41	1.7	> 033.96 73.45

INTERFERENCE SUMMARY  
 PROPOSED W49CB  
 CHANNEL 47 – GREEN BAY, WISCONSIN

<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>
WFQX-DT BPCDT-19991101AIV	CP	Cadillac, MI	47	415,746	202	<0.1
WFQX-DT BMPCDT-20040507ABB	AP	Cadillac, MI	47	304,761	1,355	0.4
WACY(TV) BMLCT-19990831LF	Lic.	Appleton, WI	32	772,242	0	0
WLEF-DT BLEDT-20040503AFO	Lic.	Park Falls, WI	47	91,335	0	0
WTTW-DT BLEDT-20020408ABK	Lic.	Chicago, IL	47	8,438,096	0	0
WMSN-TV BMLCT-20010817AAS	Lic.	Madison, WI	47	827,572	0	0



EXHIBIT E

POWER DENSITY CALCULATION

PROPOSED W49CB  
CHANNEL 47 - GREEN BAY, WISCONSIN

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Green Bay facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 29.8 kw, an effective antenna height of 179 meters above ground, and the vertical pattern of the Andrew antenna, maximum power density two meters above ground of  $0.00083 \text{ mw/cm}^2$  is calculated to occur 58 meters from the base of the tower. Since this is only 0.2 percent of the  $0.45 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 47 (668-674 MHz), this proposal may be excluded from consideration with respect to public 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.