

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of J.F. BROADCASTING, LLC, licensee of analog Low Power Television Station KCWS-LP, Channel 27 in Sioux Falls, South Dakota, in support of a flashcut Application for Construction Permit to operate digitally on Channel 27. No change in site location, antenna azimuth pattern, or antenna height is proposed herein.

It is proposed to utilize the licensed KCWS-LP omnidirectional slotted cylinder antenna, which is mounted at the 34-meter level of the existing 35.4-meter building. The proposed effective radiated power for the facility is 0.72 kW in the horizontal plane. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted.

Attached, as Exhibit C, is a summary report from a TVStudy interference analysis for the proposed facility. Our study employed both a cell size and increment spacing of 1.0 kilometer. The results indicate that the proposed digital KCWS-LD facility meets the Commission's interference requirements to all full-power and low-power co-channel and adjacent-channel facilities.

A detailed power density calculation is provided in Exhibit D.

Since no change in the overall height or location of the existing KCWS-LP structure is proposed herein, the FAA has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1059387 to this tower.

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 written over a horizontal line.

March 5, 2021

KEVIN T. FISHER

CONTOUR POPULATION
2018 U.S. CENSUS DATA
220,268 (92,262 HH)

Smith and Fisher, LLC

PROPOSED KCWS-LD
51 DBU CONTOUR

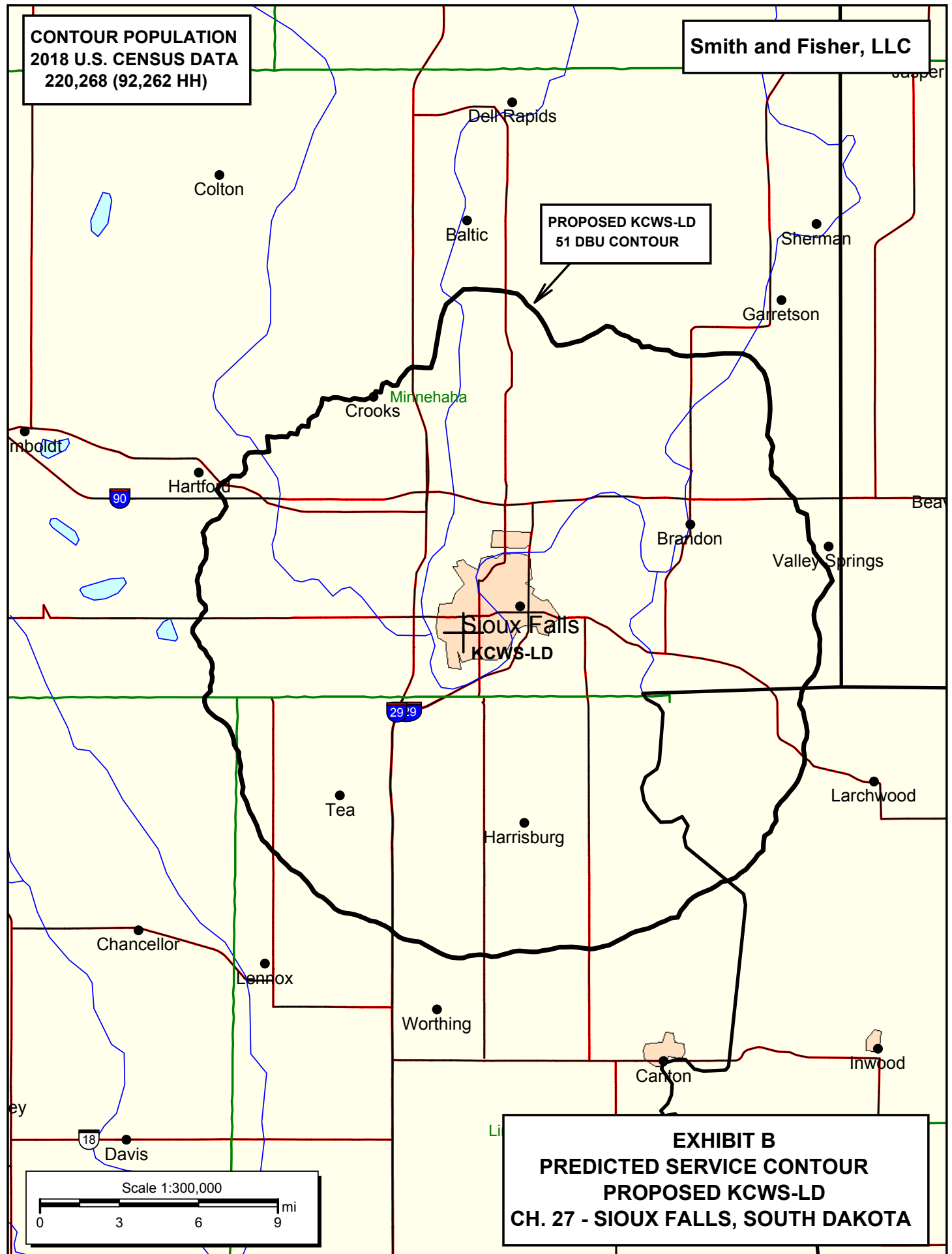


EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED KCWS-LD
CH. 27 - SIOUX FALLS, SOUTH DAKOTA

TVSTUDY INTERFERENCE ANALYSIS RESULTS
 PROPOSED KCWS-LD
 CHANNEL 27 – SIOUX FALLS, SOUTH DAKOTA

Study created: 2021.03.05 11:33:36

Study build station data: LMS TV 2021-01-18

Proposal: KCWS-LD D27 LD APP SIOUX FALLS, SD

File number: BLANK0000116223

Facility ID: 38116

Station data: User record

Record ID: 975

Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KAUN-LP	N25	TX	LIC	SIOUX FALLS, SD	BLANK0000116224	0.0 km
No	K26JI-D	D26	LD	LIC	SIBLEY, IA	BLDTT20101213AAZ	87.9
No	K26NT-D	D26	LD	LIC	GRANITE FALLS, MN	BLANK0000063066	168.8
No	KPTM	D26	DT	LIC	OMAHA, NE	BLANK0000079038	277.2
No	KSXC-LD	D26z	LD	LIC	SOUTH SIOUX CITY, NE	BLANK0000058765	122.1
No	KDLV-TV	D26	DT	LIC	MITCHELL, SD	BLCDT20081016ADD	136.5
Yes	KCPO-LP	D26+	LD	CP	SIOUX FALLS, SD	BLANK0000110806	0.5
Yes	KCPO-LP	N26+	TX	LIC	SIOUX FALLS, SD	BLTTL20011029AAL	1.1
No	KFXA	D27	DT	LIC	CEDAR RAPIDS, IA	BLCDT20050713ABD	412.1
No	K27MI-D	D27	LD	CP	MASON CITY, IA	BNPDTL20100723AQS	278.1
No	K27LD-D	D27	LD	CP	SALIX, IA	BNPDTL20100505AFA	137.9
No	K27LY-D	D27	LD	CP	ALBANY, MN	BNPDTL20100505AKH	288.9
No	K27KN-D	D27	LD	LIC	ALEXANDRIA, MN	BLDTT20111123OCO	285.4
No	K27FI-D	D27	LD	LIC	FROST, MN	BLDTT20090730ACP	226.7
No	K27MB-D	D27	LD	CP	HEWITT, MN	BNPDTL20100505AKW	313.6
No	K27NF-D	D27	LD	LIC	JACKSON, MN	BLANK0000064446	141.2
No	KRWF	D27	DT	LIC	REDWOOD FALLS, MN	BLCDT20080502ABG	145.4
No	K40JT	D27+	LD	CP	Rochester, MN	BLANK0000097931	315.3

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No	K40JT	D27+	LD LIC	Rochester, MN	BLANK0000121243	315.3
No	K27ML-D	D27	LD CP	RUSHMORE, MN	BNPDTL20100510AHZ	79.7
No	K27LN-D	D27	LD CP	FARGO, ND	BNPDTL20100518AEF	358.5
No	KFDY-LD	D27	LD LIC	LINCOLN, NE	BLANK0000113709	312.3
No	K27NI-D	D27	LD LIC	NELIGH, NE	BLANK0000120031	196.4
No	K27MP-D	D27	LD CP	NORFOLK, NE	BDCCDTL20121001BAH	203.9
No	KHGI-CD	D27	DC LIC	NORTH PLATTE, NE	BLANK0000114628	413.5
No	KHGI-LD	D27	LD LIC	O'NEIL, NE	BLDTL20110512ACC	194.4
No	KOHA-LD	D27	LD CP	OMAHA, NE	BLANK0000027874	254.4
No	K27LB-D	D27	LD CP	ARLINGTON, SD	BNPDTL20100505AEF	96.6
No	K27HJ-D	D27-	LD LIC	PIERRE, SD	BLANK0000021590	301.6
No	K27HJ-D	N27-	TX LIC	PIERRE, SD	BLTT20031008ACB	301.6
No	WHWC-TV	D27	DT CP	MENOMONIE, WI	BLANK0000035676	422.9
No	WHWC-TV	D27	DT LIC	MENOMONIE, WI	BLEDT20040824AAF	422.9
No	KSIN-TV	D28	DT LIC	SIOUX CITY, IA	BLEDT20050726AMC	118.9
No	K28OI-D	D28	LD LIC	Jackson, MN	BLANK0000064442	141.2
No	K28NJ-D	D28	LD CP	MITCHELL, SD	BNPDTL20100510AID	111.3
No	K42FI-D	D28+	LD CP	WATERTOWN, SD	BLANK0000067619	151.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D27

Mask: Stringent

Latitude: 43 32 8.00 N (NAD83)

Longitude: 96 44 35.00 W

Height AMSL: 490.0 m

HAAT: 0.0 m

Peak ERP: 0.720 kW

Antenna: Omnidirectional

Elev Pattn: Generic

Elec Tilt: 0.50

50.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.720 kW	53.7 m	22.1 km
45.0	0.720	74.8	25.3
90.0	0.720	57.9	22.9
135.0	0.720	58.8	23.0

180.0	0.720	48.5	21.0
225.0	0.720	39.0	18.6
270.0	0.720	35.2	17.6
315.0	0.720	36.7	18.0

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 51 m

Distance to Canadian border: 598.5 km

Distance to Mexican border: 1559.7 km

Conditions at FCC monitoring station: Grand Island NE

Bearing: 206.1 degrees Distance: 321.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 244.7 degrees Distance: 796.1 km

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.

POWER DENSITY CALCULATION

PROPOSED KCWS-LD
CHANNEL 27 – SIOUX FALLS, SOUTH DAKOTA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Sioux Falls facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 0.72 kW, an antenna radiation center 34 meters above ground, and assuming a maximum relative field value of 40 percent at the steeper elevation angles for the licensed SWR SWLP8OI antenna, a maximum power density value two meters above ground of 0.0038 mW/cm^2 is calculated to occur near the base of the building. Since this is only 1 percent of the 0.37 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 27 (548-554 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing 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 non-ionizing radiation.