

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of KING BROADCASTING COMPANY, licensee of television translator K21CC, Channel 21 in Lewiston, Idaho, in support of this Application for Construction Permit to operate a digital facility on Channel 21, as a flashcut proposal. No change in site location or antenna height is proposed herein.

It is proposed to utilize the licensed Scala directional antenna, which is mounted at the 10-meter level of the existing 11-meter communications tower. Exhibit B is a map upon which the predicted service contour is plotted. It is important to note that the proposed 51 dBu contour encompasses a significant portion of the Grade A contour that obtains from the licensed K21CC facility. Operating parameters for the proposed facility are tabulated in Exhibit C. An interference study, which utilized a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer, is 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. Due to the diminutive height of the tower and its proximity to the nearest airport runway, FAA registration is not required. This is supported by the commissions TOWAIR program.

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.

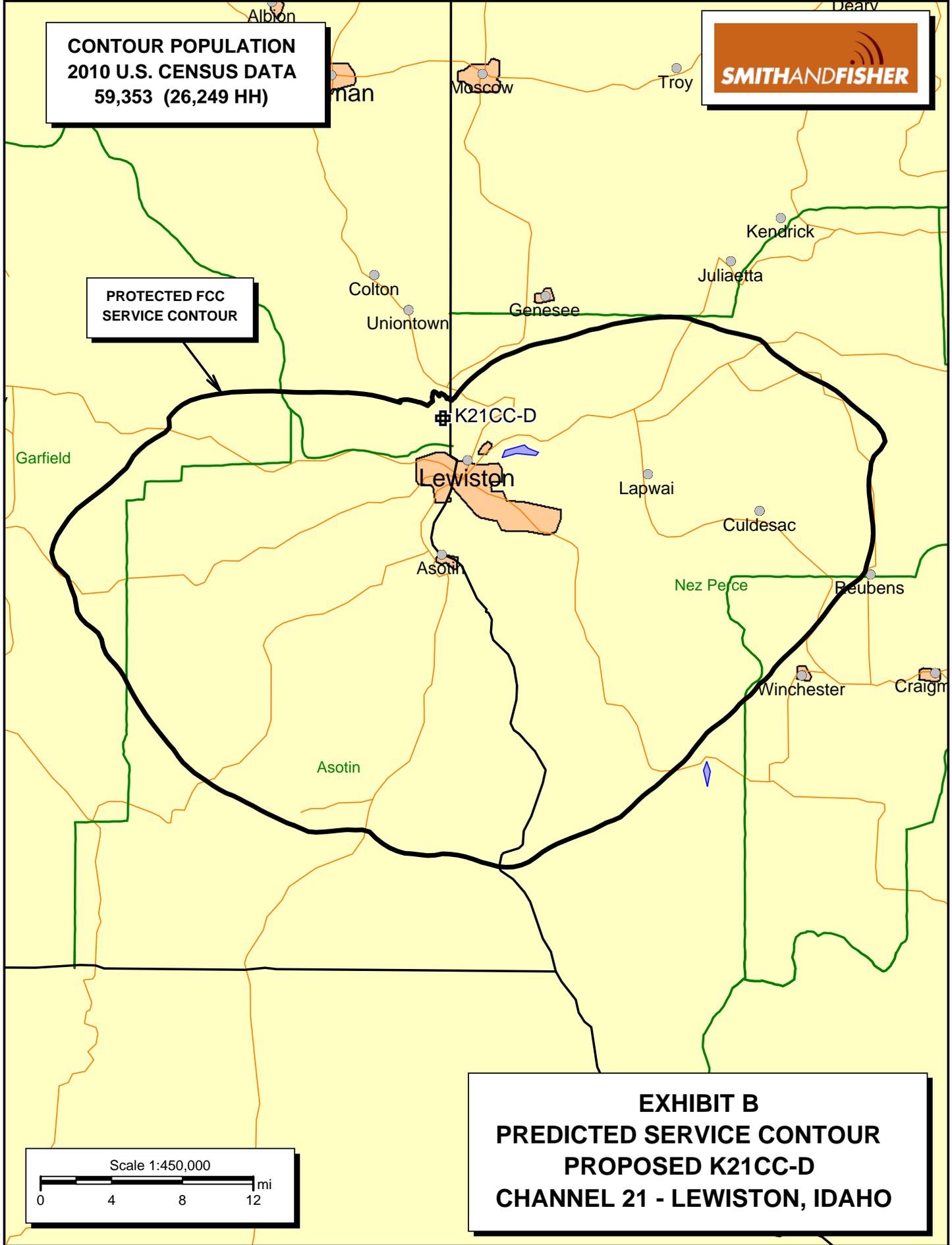
KYLE T. FISHER

May 2, 2014

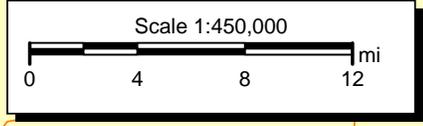
**CONTOUR POPULATION
2010 U.S. CENSUS DATA
59,353 (26,249 HH)**



**PROTECTED FCC
SERVICE CONTOUR**



**EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED K21CC-D
CHANNEL 21 - LEWISTON, IDAHO**



PROPOSED OPERATING PARAMETERS

PROPOSED K21CC-D
CHANNEL 21 – LEWISTON, IDAHO

Transmitter Power Output:	0.03 kW
Transmission Line Efficiency:	93.6%
Antenna Power Gain – Main Lobe:	7.08
Effective Radiated Power – Main Lobe:	0.2 kw
Transmitter Make and Model:	Type-accepted
Rated Output	0.03 kW
Transmission Line Make and Model:	Andrew LDF5-50
Size and Type:	7/8" foam heliax
Length:	33 feet
Antenna Make and Model:	Scala 4DR-8-2HW
Orientation	160° T
Beam Tilt	none
Radiation Center Above Ground:	10 meters
Radiation Center Above Mean Sea Level:	879 meters

LONGLEY-RICE INTERFERENCE STUDIES
PROPOSED K21CC-D
CHANNEL 21 – LEWISTON, IDAHO

We conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The software utilizes a 1-square kilometer cell size, calculates signal strength at 0.1 kilometer increments along each radial studied, and employs the 2000 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 proposed K21CC-D) already is predicted to exist (also known as "masking"). The results of these studies are provided in Exhibit D-2. They conclude that the facility proposed herein causes no significant new interference to any of the potentially affected stations.

As a result, it is believed that the proposed K21CC-D facility complies with the requirements of Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030 of the Commission's Rules.

K21CC_D_summary.txt

Summary Study

Percent allowed new interference: 0.500
Percent allowed new interference to non Class A LPTV: 2.000
Census data selected 2000
Data Base Selected
./data_files/pt_tvdb.sff
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-02-2014 Time: 10:55:54

Record Selected for Analysis

K21CC-D USERRECORD-01 LEWISTON ID US
Channel 21 ERP 0.2 kW HAAT 304. m RCAMSL 00879 m SIMPLE MASK
Latitude 046-27-04 Longitude 0117-02-46
Status APP Zone 1 Border Site number: 01
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 160.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.10 km

Not full service station
Service Class = LD
Maximum height/power limits not checked

Site number 1

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	0.000	43.2	2.1
45.0	0.014	49.7	7.4
90.0	0.167	484.0	36.5
135.0	0.130	492.6	35.2
180.0	0.138	557.5	37.2
225.0	0.180	450.3	35.9
270.0	0.034	322.1	23.3
315.0	0.000	33.0	1.8

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

K21CC_D_summary.txt

NO LANDMOBILE SPACING VIOLATIONS FOUND

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance
Distance to border = 283.3km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Proposed Station			
Channel	Call	City/State	ARN
21	K21CC-D	LEWISTON ID	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	K14HT	WALLA WALLA, ETC. WA	117.2	LIC	BLTT	-19910213IG
20	K20KG-D	PASCO WA	176.2	LIC	BLDTL	-20140224ABY
20	KREM	SPOKANE WA	128.5	LIC	BLCDDT	-20050623ABG
21	KAID	BOISE ID	325.2	LIC	BLEDT	-20120719ABH +
21	K26LE-D	CASCADE ID	227.9	APP	BDISDTT	-20100928ABA
21	DK21AN	DARBY MT	223.4	LIC	BLTTL	-19880812IE
21	K21MG-D	DILLON MT	361.9	CP	BNPDTL	-20100609AIH
21	K21KA-D	FERNDAL E MT	289.4	LIC	BLDTT	-20091210ADQ
21	KHBB-LD	HELENA MT	385.1	LIC	BLDTL	-20081126ADG
21	K21CA-D	PLAINS MT	198.0	LIC	BLDTL	-20091030AIB
21	KXLY-TV	COLVILLE WA	244.9	CP	BDRTCT	-20090406ALC
21	K21LD-D	MAZAMA WA	337.6	LIC	BLDTT	-20120614ABW
21	DK21AJ	QUINCY WA	230.4	APP	BDFCDTT	-20120216AEC
21	K21JQ-D	WALLA WALLA WA	100.9	LIC	BLDTA	-20090721ABT
21	KYVE	YAKIMA WA	265.1	LIC	BLEDT	-20030910ACL
22	KXLY-TV	COEUR D'ALENE ID	134.5	CP	BDRTCDT	-20090819ADR
22	KLEW-TV	MOSCOW ID	41.2	LIC	BLCDDT	-20130726ABH
22	K22JJ-D	MILTON-FREEWATER OR	116.1	LIC	BLDTT	-20111206BCQ
22	K22JK-D	MOSES LAKE WA	182.6	LIC	BLDTL	-20131206AUD
23	K23DB	LA GRANDE OR	137.6	LIC	BLTTL	-19920123JH

+ Indicates station is part of a DTS

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K21CC_D_summary.txt

Study of this proposal found the following interference problem(s):

NONE.

POWER DENSITY CALCULATION

PROPOSED K21CC-D
CHANNEL 21 – LEWISTON, IDAHO

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Lewiston facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 0.2 kW, an antenna radiation center 10 meters above ground, and the vertical pattern of the licensed Scala antenna, maximum power density two meters above ground of 0.0016 mW/cm^2 is calculated to occur 18 meters south-southeast of the base of the tower. Since this is only 0.5 percent of the 0.34 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 21 (512-518 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.