

Non-Interference Compliance

Regarding Facility id 122160

Channel 219

Description of Exhibit 13 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

Page 3 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 4 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 5 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1578994	BLED20140224ABJ	KTEQ-FM	86.8	86.8
616339	BLH20021028ABX	KQRQ	107.8	106.7
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				86.8

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **86.8 dBμ**, this makes the proposed translator's worst-case interfering contour **126.8 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **18.7 m** from the transmit antenna.

The interfering contour of the proposed translator was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 4 of this exhibit). As demonstrated on the quadrangle, there are no populated structures or highways within the area of interference (Note: FCC 02-244 at Section II.A.6 states that USGS quadrangles "have been recognized as acceptable to demonstrate lack of population").

Note: The only structures within the zone of predicted interference are unoccupied communications buildings so in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer: BEX
Antenna Model: TFC2K
CORAGL: 32 m
Maximum ERP: 0.034 kW
Interfering Contour: 126.8 dBμ
Max Int. Contour Distance: 18.7 m

Adjacent Channel Study **For Station K219LD, Facility_id: 122160**

Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
1578994	172663	BLED-20140224ABJ	KTEQ-FM	SOUTH DAKOTA SCHOOL OF MIN	A	RAPID CITY	SD	LIC	0.5	1110	217	2	3	0.2029
616339	78167	BLH-20021028ABX	KQRQ	RIVERFRONT BROADCASTING, L	C1	RAPID CITY	SD	LIC	86	1286	222	3	5.1	0.2029
1411866	174496	BLED-20101221ACB	KYSD	SOUTH DAKOTA BOARD OF DIRE	A	SPEARFISH	SD	LIC	6	1265	220	1	66	0
517352	92621	BLED-20000830AFK	KUWD	UNIVERSITY OF WYOMING	C3	SUNDANCE	WY	LIC	0.43	2042	218	1	104	0

53°22'11" NE
(BLACKHAWK)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

103°15'
44°07'30"
4887000m N.

641000m E.

642

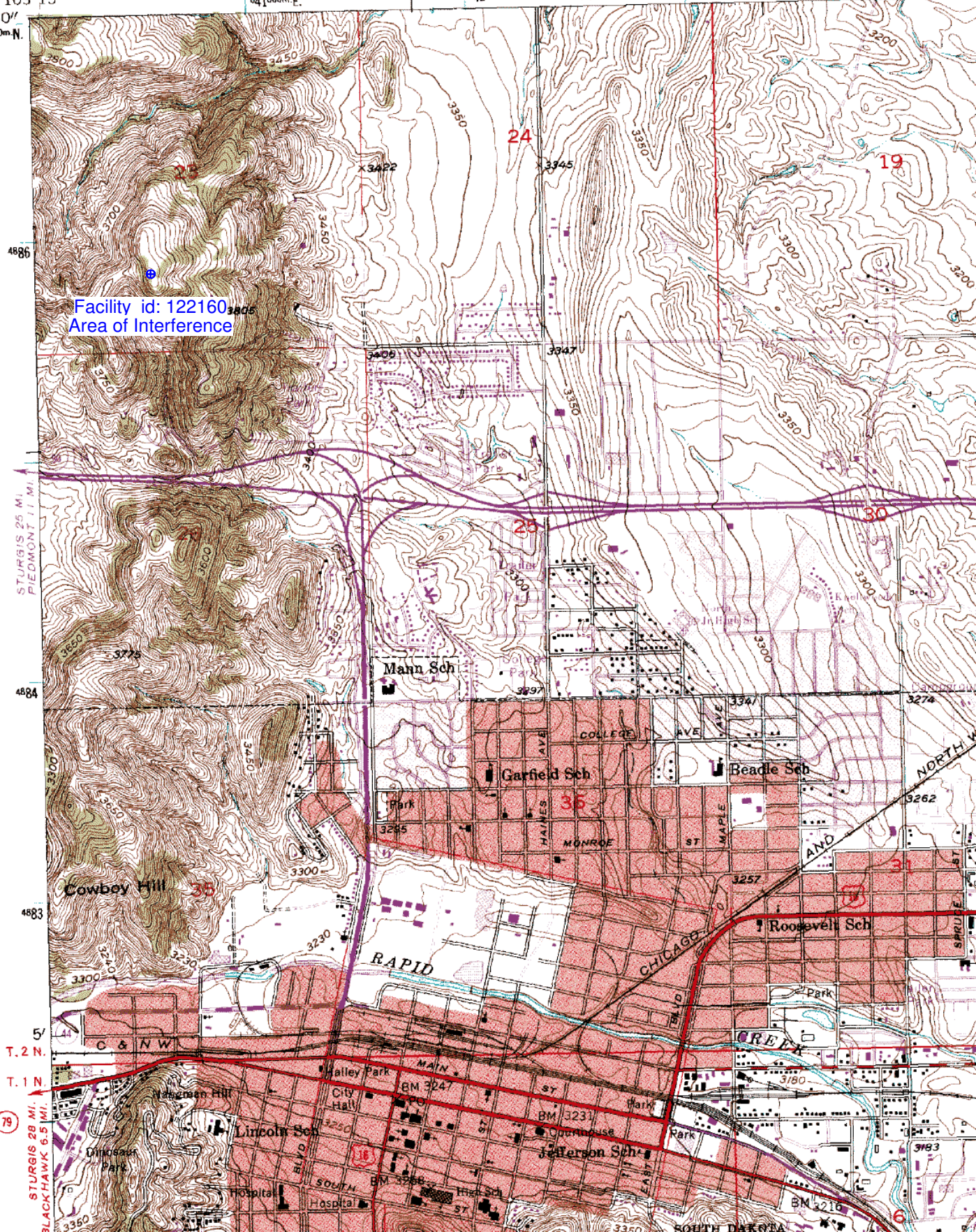
R. 7 E.

643

12°30' W.

R. 8 E.

644



T. 2 N.

T. 1 N.

79

STURGIS 28 MI.

BLACKHAWK 6.5 MI.

