

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of CHRISTIAN BROADCASTING, INC., licensee of FM translator station K202CB, Channel 202D in Palmer, Alaska, in support of its Application for Construction Permit to specify a new transmitter site. In addition, the station is being displaced by an adjacent-channel full-service station authorization and, as a result, requests a new operating frequency.

Due to the recent grant of a power increase authorization to KRUA(FM), Channel 201A in Anchorage, Alaska (LMS-0000087737), significant interference to and from licensed K202CB is predicted to occur. In Exhibit B, we have plotted the predicted 60 dBu service contour of the KRUA construction permit and the licensed 54 dBu adjacent-channel interference contour from the presently licensed K202CB facility. As shown, significant overlap of the contours will exist. Therefore, K202CB is being displaced. A search of the FM spectrum in Palmer reveals that Channel 249D (97.7 MHz) is available for use for K202CB and operation on this new channel is requested herein.

It is proposed to mount a 1-bay circularly polarized antenna on the tower of KJLP(FM), the station for which K202CB is a fill-in translator. The antenna will be mounted in the aperture of KJLP and KJLP will be diplexed into the new antenna. The antenna radiation center will be located at the 11-meter level of the existing 29-meter tower. The proposed effective radiated power will be 250 watts. As a result, these operating parameters mirror those of KJLP, and the contours of KJLP and proposed K202CB will be identical. The K202CB service contour cannot (and does not) extend beyond that of its main station, KJLP, which means that this facility meets the requirements of a fill-in translator.

EXHIBIT A

Exhibit C-1 is a map upon which the new predicted 60 dBu service contour is plotted. In Exhibit C-2, we have plotted the licensed and proposed service contours of translator K202CB. As shown, there is significant overlap between the two contours, meaning that this change in transmitting location can be considered a minor change.

The proposed facility meets the FCC's contour protection requirements to all facilities, as shown in Exhibit D

A power density calculation appears as Exhibit E.

Since no change in the overall height or location of the existing KJLP tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, and for the same reasons, antenna structure registration of the tower with the Federal Communications Commission is not required.

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.

A handwritten signature in blue ink, appearing to read 'K. T. Fisher', with a horizontal line extending to the right.

KEVIN T. FISHER

May 28, 2020



AUTHORIZED KRUAFM
60 DBU F(50,50)
PROTECTED CONTOUR

LICENSED K202CB
54 DBU F(50,10)
INTERFERENCE CONTOUR

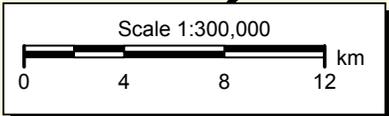
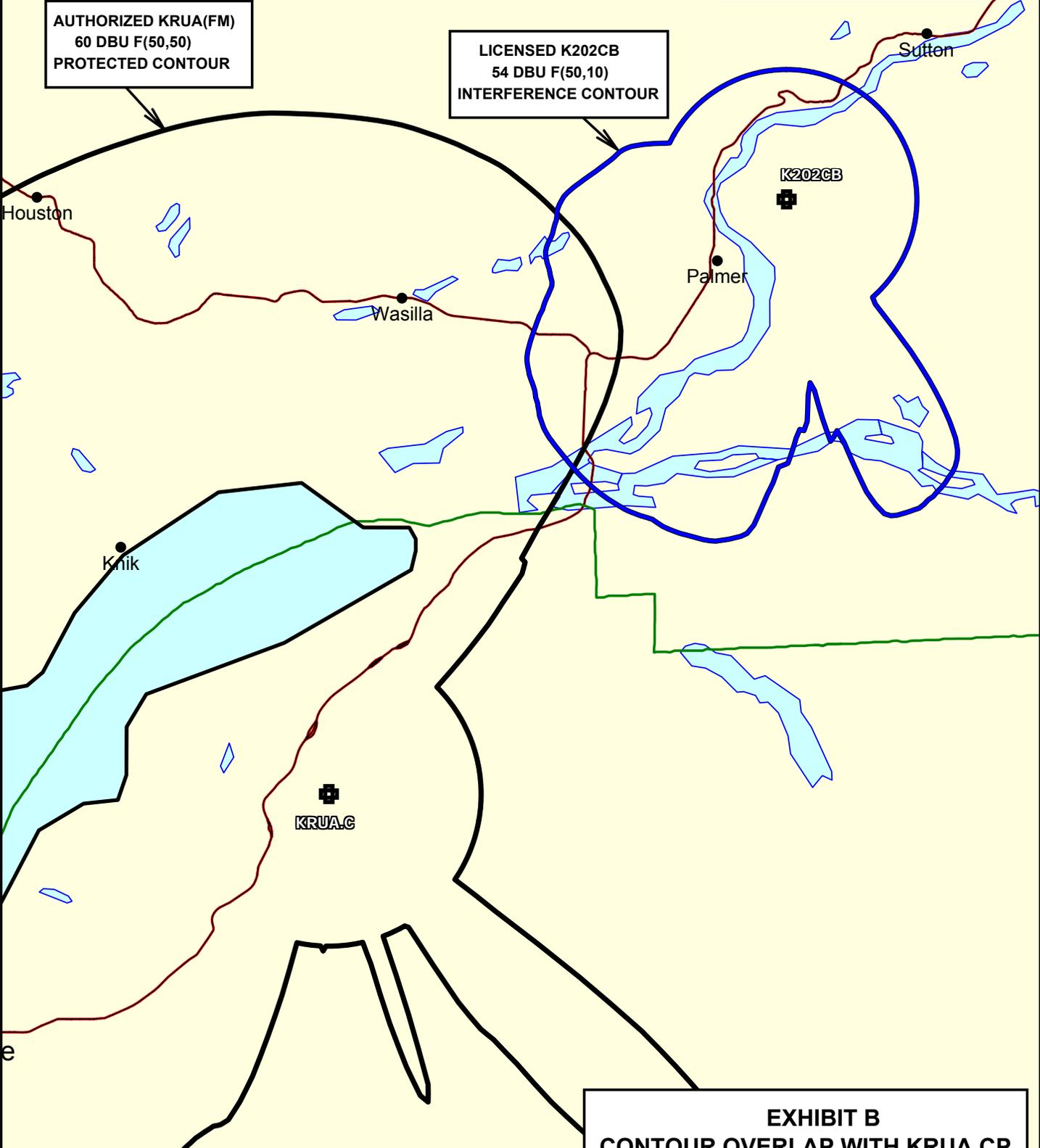


EXHIBIT B
CONTOUR OVERLAP WITH KRUAFM CP
LICENSED K202CB
CHANNEL 202D - PALMER, ALASKA

CONTOUR POPULATION
2018 U.S. CENSUS ESTIMATE
36,052 (11,409 HOUSEHOLDS)



PROPOSED K202CB
60 DBU F(50,50)
PROTECTED CONTOUR

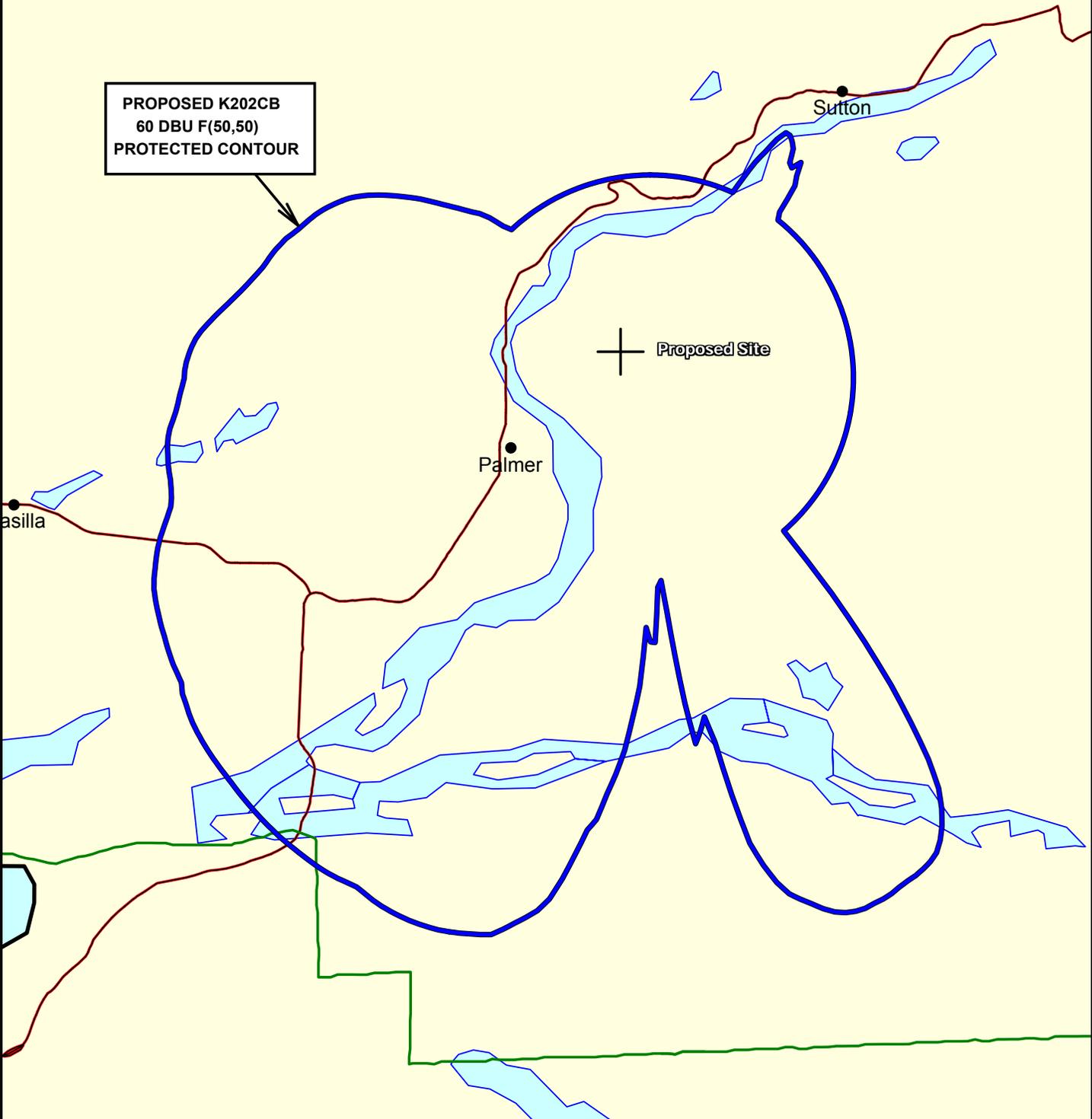


EXHIBIT C-1
PREDICTED SERVICE CONTOUR
PROPOSED TRANSLATOR K202CB
CHANNEL 249D - PALMER, ALASKA



**PROPOSED K202CB
60 DBU F(50,50)
PROTECTED CONTOUR**

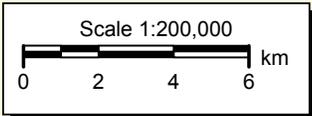
Proposed Site
+
K202CB

**LICENSED K202CB
60 DBU F(50,50)
PROTECTED CONTOUR**

asilla

Sutton

Palmer



**EXHIBIT C-2
CONTOUR OVERLAP SHOWING
PROPOSED TRANSLATOR K202CB
CHANNEL 249D - PALMER, ALASKA**

CONTOUR PROTECTION STUDY
PROPOSED FM TRANSLATOR K202CB
CHANNEL 249D – PALMER, ALASKA

A contour protection study was conducted for the proposed K202CB facility and the results are provided in Exhibit D-2. As shown, there are only two instances in which the contour protection requirements could possibly be in question: KEAG(FM), Channel 247C1 in Anchorage, Alaska; and, KLEF(FM), Channel 251C1 in Anchorage.

In Exhibit D-3, we have plotted the protected 60 dBu contours of KEAG and KLEF. To that map, we have added the proposed 100 dBu f(50,10) interference contour for proposed K202CB on Channel 249. As shown, the proposed interference contour does not overlap the protected KEAG and KLEF contours, and therefore meets the Commission's interference rules with respect to these two stations.

PROPOSED TRANSLATOR K202CB
 CHANNEL 249D - PALMER, ALASKA

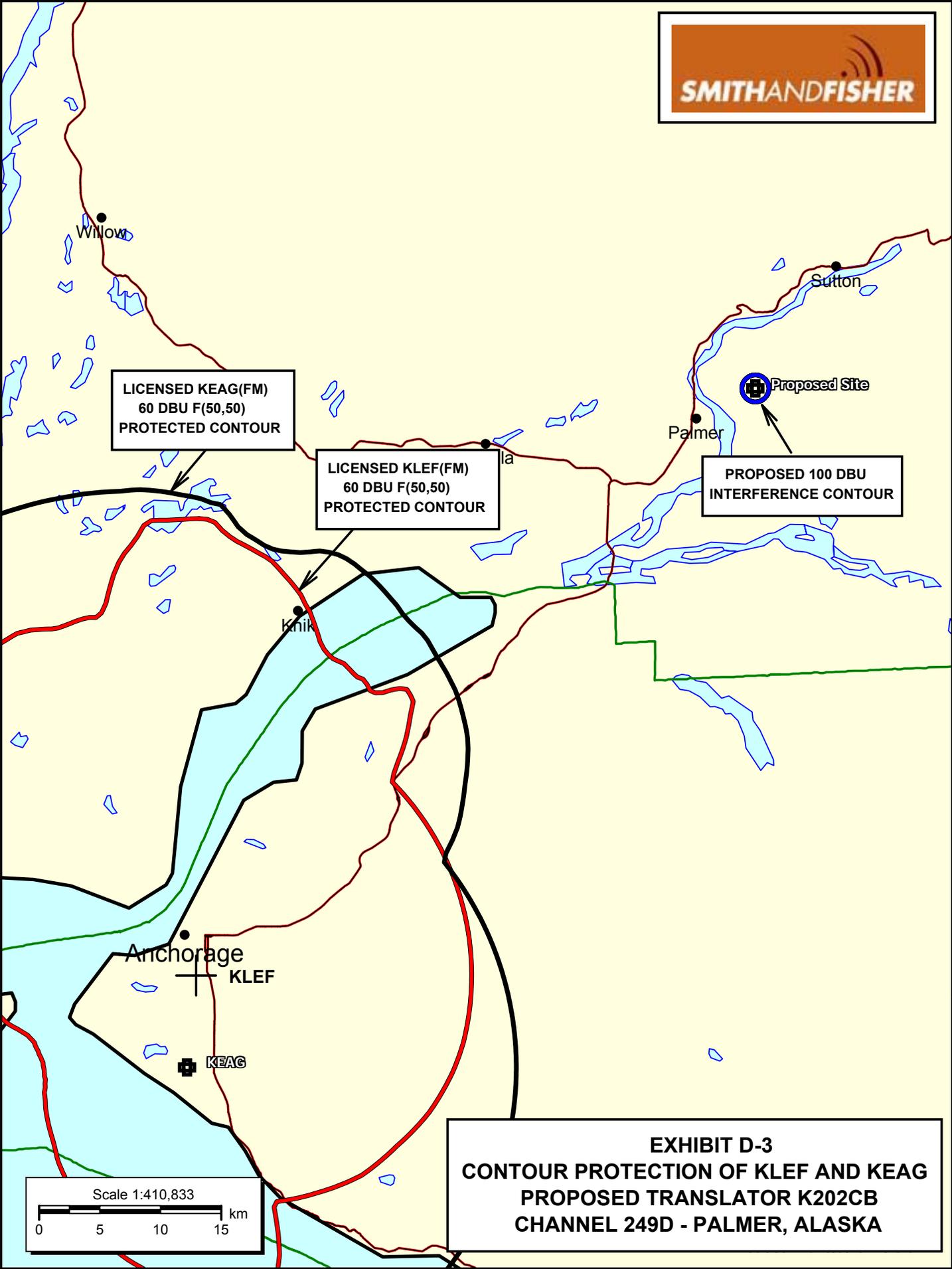
REFERENCE
 61 37 18.0 N.
 149 01 16.0 W.

CH# 249D - 97.7 MHz, Pwr= 0.25 kW, HAAT= 0.0 M, COR= 276 M
 Average Protected F(50-50)= 7.09 km
 Omni-directional

DISPLAY DATES
 DATA 05-27-20
 SEARCH 05-27-20

CH CITY	CALL	TYPE STATE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
247C1 Anchorage	KEAG	LIC ___ AK		220.3 39.5	72.99 BLH20061205ADT	61 07 10.0 149 53 50.9	55.000 19	5.6 126	49.7 Alpha Media Licensee LLC	45.7	22.2
251C1 Anchorage	KLEF	LIC D__ AK		224.0 43.2	66.85 BLH19880829LA	61 11 15.0 149 53 04.9	25.000 9	4.0 98	38.7 Chinook Concert Broadcaste	41.2	27.0

Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference zone= , Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)



LICENSED KEAG(FM)
60 DBU F(50,50)
PROTECTED CONTOUR

LICENSED KLEF(FM)
60 DBU F(50,50)
PROTECTED CONTOUR

PROPOSED 100 DBU
INTERFERENCE CONTOUR

Proposed Site

Anchorage
KLEF

KEAG

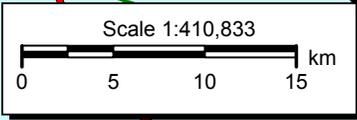


EXHIBIT D-3
CONTOUR PROTECTION OF KLEF AND KEAG
PROPOSED TRANSLATOR K202CB
CHANNEL 249D - PALMER, ALASKA

POWER DENSITY CALCULATION
PROPOSED FM TRANSLATOR K202CB
CHANNEL 249D – PALMER, ALASKA

Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 250 watts (H,V), an antenna radiation center 11 meters above ground level and assuming a vertical relative field value of 40 percent at the steeper elevation angles for the proposed antenna, a maximum power density value two meters above ground of 0.033 mW/cm^2 is calculated to occur near the base of the antenna supporting structure. Since this RF value is only 16.5 percent of the 0.20 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating in the FM band, 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 electromagnetic radiation.