

CITY OF LICENSE
CALL LETTERS
PREPARED FOR
VERSION
JOB

Palmer, AK
K209FY
Radio Free Palmer, Inc.
1.0
118044

CONSOLIDATED

ENGINEERING EXHIBIT

FCC Form 349 - Section II-a - Engineering

BROWN BROADCAST SERVICES
INCORPORATED

Michael D. Brown

3740 S.W. Comus St.

Portland, Oregon 97219-7418

503-245-6065

ENGINEERING STATEMENT
MINOR CHANGE OF LICENSED FM TRANSLATOR
K209FY, PALMER, AK

SUMMARY

Radio Free Palmer (RFP) hereby submits this proposal for a minor-change to K209FY. RFP proposes to move to a site approximately 40m southeast of the current licensed location. The frequency, ERP, antenna pattern, and antenna height would remain unchanged.

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EXHIBIT 13

FM OVERLAP REQUIREMENTS

INTERFERENCE PROTECTION

This application meets all requirements of 47 CFR §74.1204 regarding interference protection to other stations and authorizations.

| <div style="text-align: center;"> K209FY move 150ft_Sept 2018 Radio Free Palmer, Inc. CH# 209D - 89.7 MHz, Pwr= 0.065 kW DA, HAAT= -127.2 M, COR= 268.7 M Average Protected F(50-50)= 5.0 km Standard Directional </div> | | | | | | | | | | |
|---|----------|--|--------------|----------------|----------------------------|---------------------------|--------------------|-------------------|--|--------------------------|
| REFERENCE | | <div style="text-align: right;"> DI SPLAY DATES DATA 09-03-18 SEARCH 09-26-18 </div> | | | | | | | | |
| 61 37 04.0 N. 149 00 36.0 W. | | | | | | | | | | |
| CH CITY | CALL | TYPE | ANT STATE | AZI. <-- | DIST FILE # | LAT. LNG. | Pwr(kW) HAAT(M) | INT(km) COR(M) | PRO(km) LICENSEE | *OUT* (Overlap in km) |
| 212C1 Anchorage | KNBA | LIC | CN AK | 245.0 64.2 | 50.59 BLED19961025KF | 61 25 22.0 149 52 20.0 | 100.000 195 | 8.8 229 | 66.2 Koahnic Broadcast Corporat | -16.1* |
| 208A Sutton | KVRF | LIC | CX AK | 21.9 202.0 | 14.46 BLED20110907AAJ | 61 44 18.2 148 54 26.6 | 0.360 -435 | 25.6 297 | 11.2 Radio Free Palmer, Inc. | -8.7 |
| 209D Palmer | K209FY! | LIC | DH AK | 316.1 136.1 | 0.04 BLFT20160722AAA | 61 37 05.0 149 00 38.0 | 0.065 | 302 | ---Reference--- Radio Free Palmer, Inc. | |
| 210D Anchorage | KAUG | LIC | HX AK | 223.4 43.0 | 31.82 BLED20070827ABI | 61 24 33.0 149 25 15.0 | 0.004 30 | 8.1 178 | 5.2 Anchorage School District | 11.3 |
| 206D Eagle River | K206A0 | LIC | C AK | 220.6 40.1 | 41.09 BLFT20011003AAD | 61 20 10.0 149 30 41.0 | 0.043 | 0.5 609 | 8.6 Christian Broadcasting, In | 23.8 |
| 207C2 Anchorage | KATB | CP | CN AK | 212.9 32.2 | 72.63 BPED20151022AAN | 61 04 02.0 149 44 36.0 | 14.500 202 | 2.0 534 | 19.9 Christian Broadcasting, In | 29.9 |
| 06--- Anchorage | KNIK-LP« | LI | DHN AK | 214.8 34.1 | 66.28 BLTVL-19990914AAI | 61 07 34.0 149 42 49.9 | 0.920 -999 | 2.3 449 | 2.2 | 4.5R 61.8M |
| Terrain database is AK USGS 03 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3 rd adjacent. Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X) Incoming contour overlap is ignored. "***"affixed to 'IN' or 'OUT' values = site inside restricted contour. | | | | | | | | | | |

As shown by **Exhibit 13a**, the licensed and proposed contours are essentially identical, given that all parameters remain unchanged, except for a 40m move of the tower site to the southeast.

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There are no co-channel stations within range. **Exhibit 13b** shows the first-adjacent contour protections. The proposed translator overlaps a portion of the 60dBu protected contour of KVRP, the co-owned primary station. However, the overlap is entirely outside the Community of License, Sutton, AK (now known as Sutton-Alpine CDP). The overlap is therefore allowable under §74.1204(e).

CONTOUR PROTECTION TO 2nd AND 3rd- ADJACENT STATIONS

Exhibit 13c shows contour protection to all 2nd and 3rd-Adjacent stations, except for KNBA, Anchorage. Protection to KNBA is shown using the ratio method. The F(50/50) contour of KNBA is 67.26dBu at the proposed translator site. Using the appropriate U/D ratio of 40dB, the corresponding interfering contour of the proposed translator is therefore 107.26dBu. **Exhibit 13d** shows that there are no populated areas within the 107.26dBu contour. The building inside part of the contour is uninhabited.

This proposal is exempt from I.F. spacing requirements in that the proposed ERP is less than 100 watts.

MAXIMUM ERP COMPLIANCE

This is a non-fill-in translator proposal. The site is west of the Mississippi River and not in Zone 1-A. Compliance with 74.1235(b)(2), regarding the Maximum Allowable ERP (MAERP) for each of the cardinal radials, is demonstrated here.

HAAT calculations were done with Globe 30 second terrain data, with 51 radial data points per km.

| Radial (Degrees) | Radial HAAT (m) | ERP (Watts) | MAERP at HAAT (W) |
|---------------------|--------------------|----------------|----------------------|
| 0 | -23.6 | 0.0 | 250 |
| 30 | 49.9 | 1.0 | 250 |
| 60 | -504.1 | 2.3 | 250 |
| 90 | -827.5 | 3.1 | 250 |
| 120 | -967.4 | 0.9 | 250 |
| 150 | 190.1 | 0.0 | 62 |
| 180 | 42.7 | 0.0 | 250 |
| 210 | 276.6 | 0.9 | 34 |
| 240 | 250.7 | 40.8 | 41 |
| 260 | | 65.0 | 75 |
| 270 | 185.4 | 57.2 | 75 |
| 300 | 121.9 | 6.2 | 170 |
| 330 | 2.5 | 0.0 | 250 |

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PROTECTED ZONES REPORT

Protected zones report for K209FY on channel 209D 09-26-2018

Lat. 61 37 04.0 Lng. 149 00 36.0, ERP= 0.065 kw, HAAT= -127.2 m

Facility is okay with respect to AM station towers.

Closest AM Facility is KVHZ, WASILLA, AK, L, ND2 at 270.4° at a distance of 14.6 km

Facility is okay with respect to FCC monitoring stations.

Closest FCC Monitoring Station is 73.3 km= Anchorage, AK

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Exhibit 13a

Prop. vs. Licensed 60dBu Contours

Brown Broadcast Services, Inc.
Job: K209FY Move_Sept 2018.fmj
Master Database: 2018_Sep_23.fmd
Lat: N61:37:04 Lon: W149:00:36 NAD-27
Scale: 1:150000
Channel: 209 Class: DX

rfInvestigator Version 3.8.16
by rfSoftware, Inc.
Date: 9/26/2018 6:43:19 PM

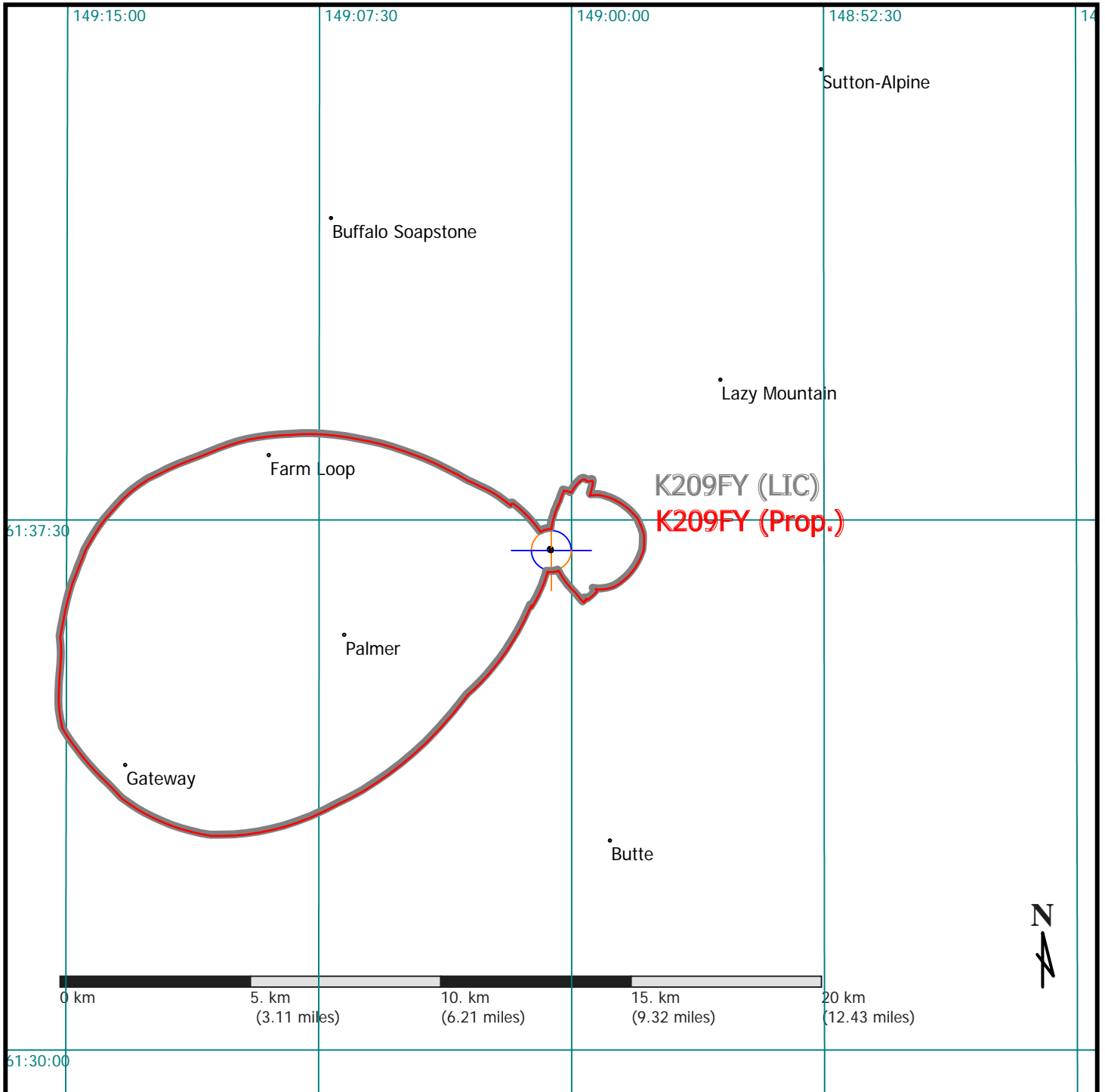


Exhibit 13b - First-Adjacent-Channel Contour Protection

Brown Broadcast Services, Inc.
Job: K209FY Move_Sept 2018.fmj
Master Database: 2018_Sep_23.fmd
Lat: N61:37:04 Lon: W149:00:36 NAD-27
Scale: 1:500000
Channel: 209 Class: DX

rfInvestigator Version 3.8.16
by rfSoftware, Inc.
Date: 9/26/2018 7:23:19 PM
Key:

City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

Overlap with co-owned primary station KVRF
does not occur within the Community of License,
in compliance with 74.1204(e).

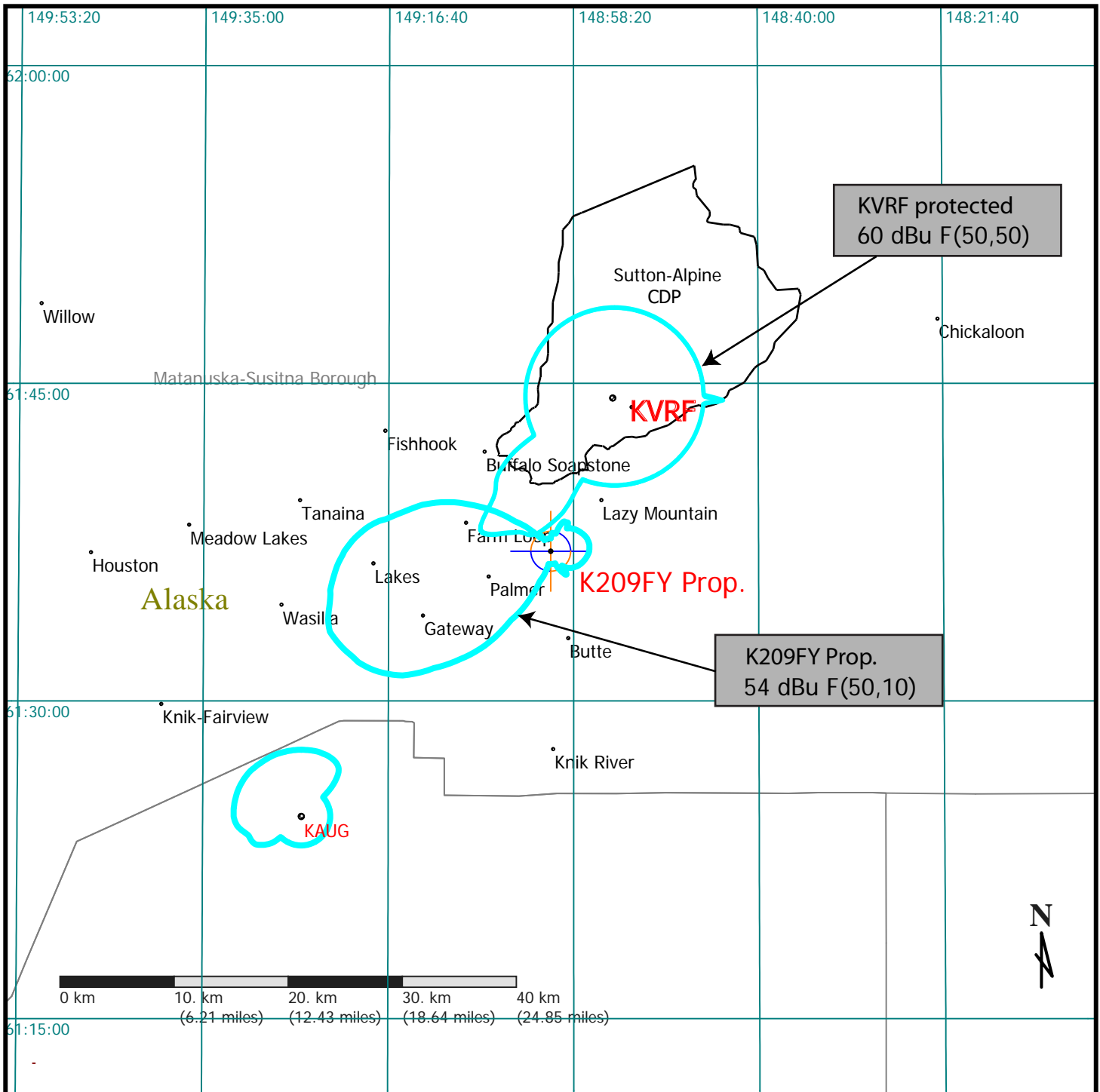


Exhibit 13c

2nd and 3rd-Adjacent Contour Protection

Brown Broadcast Services, Inc.
Job: K209FY Move_Sept 2018.fmj
Master Database: 2018_Sep_23.fmd
Lat: N61:37:04 Lon: W149:00:36 NAD-27
Scale: 1:750000
Channel: 209 Class: DX

rfInvestigator Version 3.8.16
by rfSoftware, Inc.
Date: 9/26/2018 11:02:03 PM
Key:
City Grade
Protected
Co-Channel
1st Adj
2nd/3rd Adj

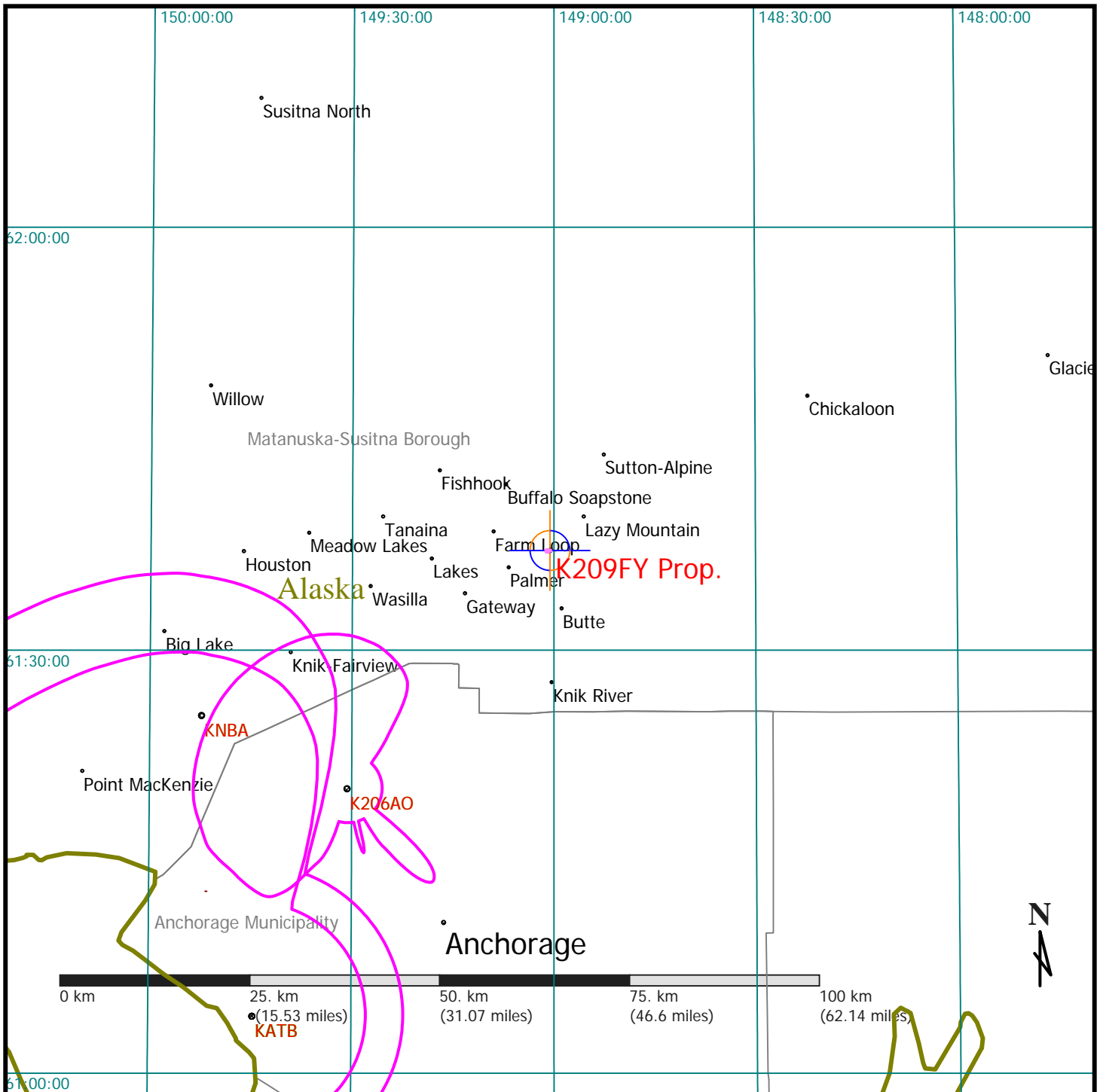


Exhibit 13d

3rd-Adjacent Protection to KNBA

KNBA protection is provided by ratio method.
There are no populated areas within the
proposed translator interfering contour.



EXHIBIT 14

TV CHANNEL 6 PROTECTION

LPTV Channel 6 station KNIK-LP, Anchorage, is located 66.28km from this proposal, which is within the critical distance. A written agreement between the applicant and Fireweed Communications LLC, the owner of KNIK-LP is included in **Exhibit 14a**. Fireweed has consented to this proposal.

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EXHIBIT 14a

Fireweed Communications LLC
7112 Rosencrans ST
Las Vegas, NV 89116

September 14, 2018

Mike Chmielewski – COO
Radio Free Palmer
550 S. Alaska Street
Suite 201
Palmer, AK 99645

Dear Mr. Chmielewski:

We understand that you are applying to move your FM translator, K209FY, Palmer AK, a short distance, without changing the antenna or significantly changing the coverage contour. Your proposal is within the critical distance to KNIK-LP, our Channel 6 LPTV station in Anchorage. Based on the specifications presented to me today by your consultant Michael Brown, Fireweed Communications hereby consents to the grant of your application, subject to the following conditions:

1. Radio Free Palmer (RFP) will notify Fireweed Communications, LLC at least 7 days prior to commencing operation at the new location.
2. RFP will furnish Fireweed copies of any reception complaints, and any corrective action.
3. RFP agrees to furnish suitable notch filters to Channel 6 users, as needed, to remove any interference.
4. RFP will provide the email and phone number(s) of the person(s) to contact, should any complaints to Channel 6 reception arise.

Sincerely,



Jeremy Lansman
Managing Member
Fireweed Communications LLC.

EXHIBIT 17

ENVIRONMENTAL PROTECTION ACT / NEIR ANALYSIS

§1.1307(b)(1) Table 1, states that any “Part 74 – Subpart L” facility with an ERP greater than 100 watts, is subject to routine environmental evaluation. This facility will operate with less than 100 watts ERP, and qualifies under this Subpart. It is therefore “categorically excluded from making such studies or preparing an EA” .

The applicant will ensure that public access is restricted by fencing, anti-climb devices, or other appropriate measures. The site will be posted with appropriate RF exposure warning signs. If climbing by authorized personnel becomes necessary, transmitter power will be reduced operation will cease, as necessary, so as to not exceed the RF exposure limits.

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