

Broadcast Engineering Services of Bonny Doon, Inc.

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Engineering Statement Minor Change To Translator K212AN Espanola, NM BLFT- 20160901AAS

The licensee proposes to modify this translator to avoid preclusion by the newly authorized KANM facility in Grants, New Mexico (BMLED-20161208ABM). The activation of KANM is now causing destructive interference to K212AN within the primary coverage area, and precluding coverage to the listening area.

This minor change seeks to modify the output frequency to Ch 216D and change the azimuth of the existing directional antenna to 220 degrees true. This translator would continue to operate as a fill-in translator for KANW, Albuquerque, New Mexico (Facility 4273), which is co-owned and operated.

The attached allocation studies for Ch. 216 reveals no overlaps to any existing or proposed stations, with the exception of 2nd adjacent KQLV Albuquerque (BLED- 20090624AEO) and 2nd adjacent KFLQ Albuquerque (BMLED-20121126AQQ). To the extent required, the applicant requests a waiver of the rules, as allowed by 74.1204(d), because there is no population inside the proposed 100 dbu 50/10 overlap contour.

According to 47 C.F.R. 1.1307(b)(1) Table 1, any "Part 74 – Subpart L" facility with an ERP greater than 100 watts, is subject to routine environmental evaluation. As the facility proposed in this application will operate with an ERP of 200 watts, an analysis of the predicted radiofrequency exposure has been conducted.

The existing and proposed antenna is located at the northern end of the Tesuque Peak Electronic site. There are no other broadcast stations at the site, only low power two way and microwave stations. This site is not restricted from public access by locked gates, but the site is posted with RF warning signs. Site access to the buildings and towers is behind locked gates and limited to service personnel who are trained in RF procedures specific for this site.

The existing and proposed transmitting antenna is a vertically polarized Scala type CL-FMV. This antenna employs a log-periodic design that reduces radiation above, below and behind the antenna to a very low level. The antenna is mounted with its center of radiation at 17 meters above ground level, and is

situated on a mountaintop site. Because this is a single-user facility, the actual RFR level is calculated as follows:

K212AN (proposed): .200kW @ 17 meters AG = 8.1 W/m² @ 8 Meters

Because the calculated RFR level is well below the Public and occupied standards of 200/1000 W/m², the proposal appears to be compliant with FCC and ANSI limits.

The applicant will, in coordination with other users of the site, reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from Radiofrequency Electromagnetic fields in excess of FCC guidelines.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Mussell Jr.', with a stylized, cursive flourish.

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
April 8, 2018



Graph: Min, Avg, Max Elevation: 5298, 6819, 12030 ft
Range Totals: Distance: 109 mi Elev Gain/Loss: 13317 ft, -11829 ft Max Slope: 34.5%, -37.6% Avg Slope: 4.5%, -3.5%

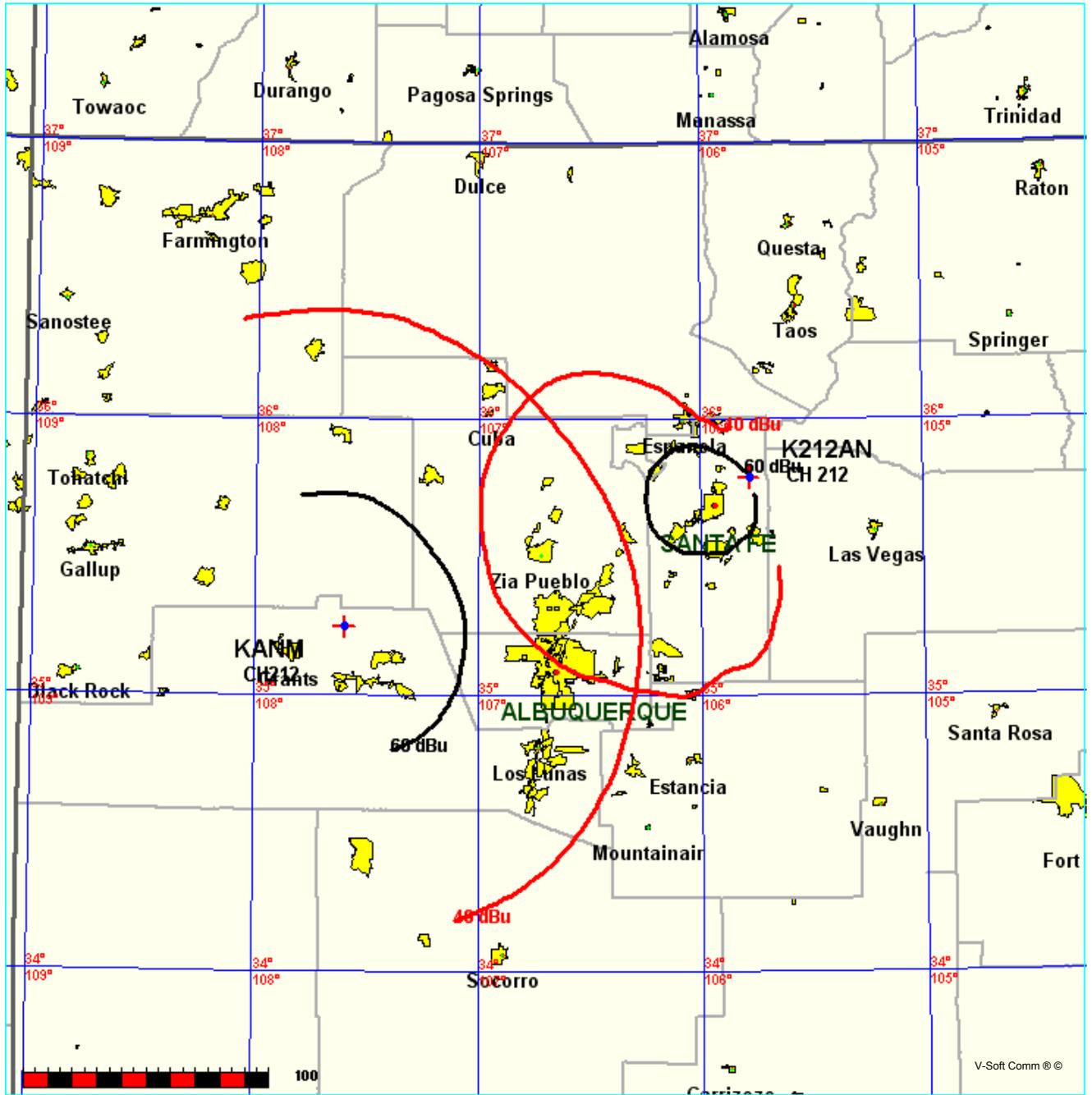


K212AN - KANM
Board Of Education Of The City Of Albuquerque, Nm

FMCommander Single Allocation Study - 04-03-2018 - FCC NGDC 30 Sec
K212AN's Overlaps (In= 12.67 km, Out= 14.87 km)

K212AN CH 212 D DA
Lat= 35 47 08.0, Lng= 105 46 55.0
0.2 kW 0 m HAAT, 3688 m COR
Prot.= 60 dBu, Intef.= 40 dBu

KANM CH 212 C2 BMLED20161208ABM
Lat= 35 15 08.0, Lng= 107 35 45.0
1.0 kW 827 m HAAT, 3360 m COR
Prot.= 60 dBu, Intef.= 40 dBu



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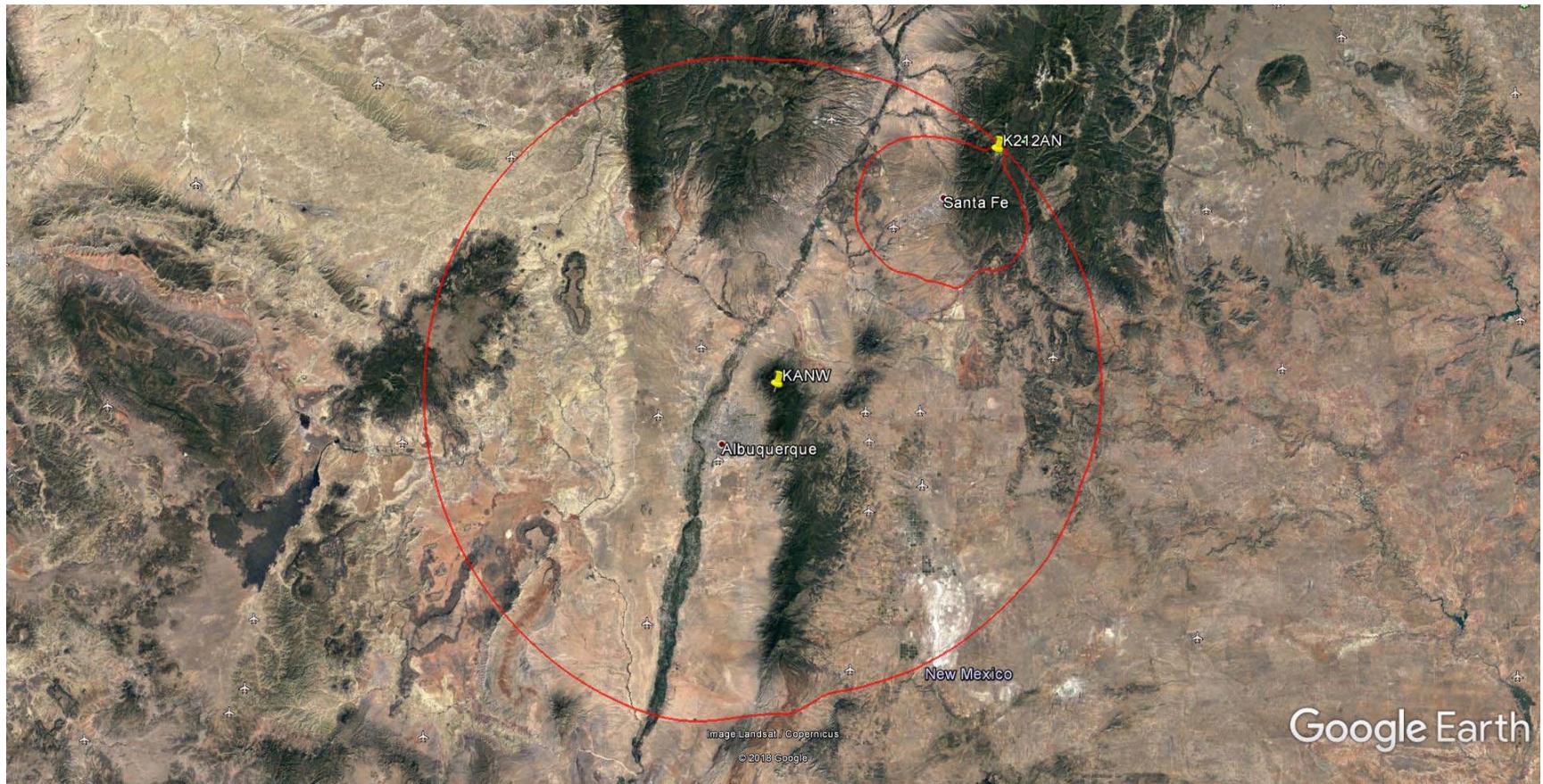
K212AN Minor Change
Board of Education Of The City Of Albuquerque, Nm
- 91.1 MHz, Pwr= 0.2 kw DA, HAAT= 0.0 M, COR= 3688 M
Average Protected F(50-50)= 6.71 km
Standard Directional

REFERENCE
35 47 08.0 N.
105 46 55.0 W.

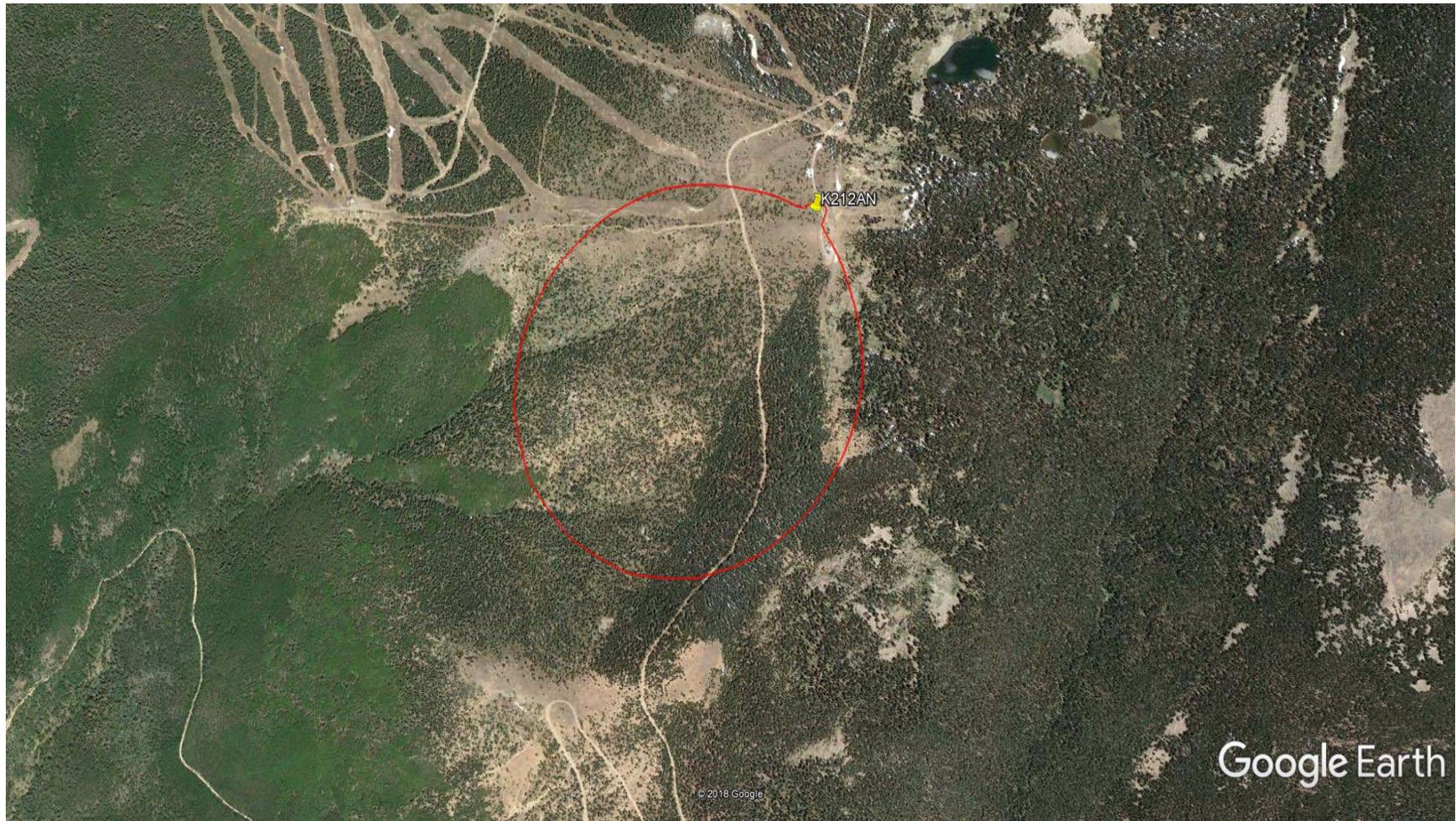
DISPLAY DATES
DATA 04-03-18
SEARCH 04-07-18

CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
214C	KQLV	LIC _CY		223.8	87.74	35 12 50.0	20.000	9.0	91.4	37.1	-4.6*
	Santa Fe	NM		43.4	BLED20090624AEO	106 27 01.0	1261	3281	Educational Media Foundati		
218C	KFLQ	LIC _CX		223.8	87.74	35 12 51.0	20.000	9.0	91.0	37.1	-4.2*
	Albuquerque	NM		43.4	BMLED20121126AQG	106 27 02.0	1232	3252	Family Life Broadcasting S		
216A	KEDP	LIC _HX		112.6	55.05	35 35 39.0	1.320	39.2	10.9	3.0	23.1
	Las Vegas	NM		292.9	BLED20070118AAF	105 13 15.0	-61	1983	Board Of Regents Of New Me		
216L1	KQUQ-LP	APP _		226.0	119.15	35 02 13.6	0.100			57.8	4.6
	Albuquerque	NM		45.4	BMPL20141204ABJ	106 43 21.8	-24	1550	Quote...unquote, Inc.		
216D	K216CU	LIC _CN		285.2	99.17	36 00 49.0	0.008	36.6	10.0	30.6	6.4
	Cuba	NM		104.5	BLFT19960613TA	106 50 39.0	366	2954	Regents Of The University		
	Translator for KUNM, Albuquerque, NM										
270C1	KTAO	LIC _CN		12.6	52.44	36 14 48.0	1.200	12.8	58.8	21.5R	30.9M
	Taos	NM		192.7	BLH19990308KD	105 39 15.0	852	3303	Taos Communication Corpora		
	Mod of one-step app from Channel 268C1--From Channel 269A per D90-120.										
06 --	K06PR-D	CP D_N		318.7	46.28	36 05 52.1	0.300	0.3	14.7	15.0R	31.3M
	Chamita	NM		138.5	BNPDVL-20090923ABL	106 07 19.6	-999	2040	□□□□□□□□□□□□□□□□□□□□		
215D	K215DT	LIC DV_		128.0	68.50	35 24 17.0	0.104	14.4	10.6	36.4	51.3
	San Augustin	NM		308.4	BLFT20010403ABM	105 11 13.0	207	2085	Eastern New Mexico Univers		
06 --	DK06HX	APP D_N		63.4	43.20	35 57 31.0	0.001	0.4	1.0	1.4R	41.8M
	Mora	NM		243.6	BDFCDTV-20090824AD	105 21 11.9	-999	2590	□□□□□□□□□□□□□□□□□□□□		
06N--	K06FT	LI DHN		5.2	48.09	36 13 01.9	0.001	0.4	1.5	1.9R	46.2M
	Penasco	NM		185.3	BLTT-3074	105 43 58.9	-999	2445	□□□□□□□□□□□□□□□□□□□□		
216C3	KQGC	LIC _HX		216.3	190.66	34 23 44.0	7.000	98.0	36.9	51.6	49.5
	Belen	NM		35.5	BMLED20090630AFW	107 00 42.0	49	1724	Carlos Arana Ministries, I		
215A	KRRT	LIC DHX		17.4	71.24	36 23 52.0	5.100	10.8	7.5	57.1	49.7
	Arroyo Seco	NM		197.6	BLED20120203ABW	105 32 36.0	-186	2283	Regents Of The University		

Terrain database is FCC NGDC 30 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 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), Beamtlt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.



KANW and Proposed fill-in contour from K212AN (migrating to Ch 216D)



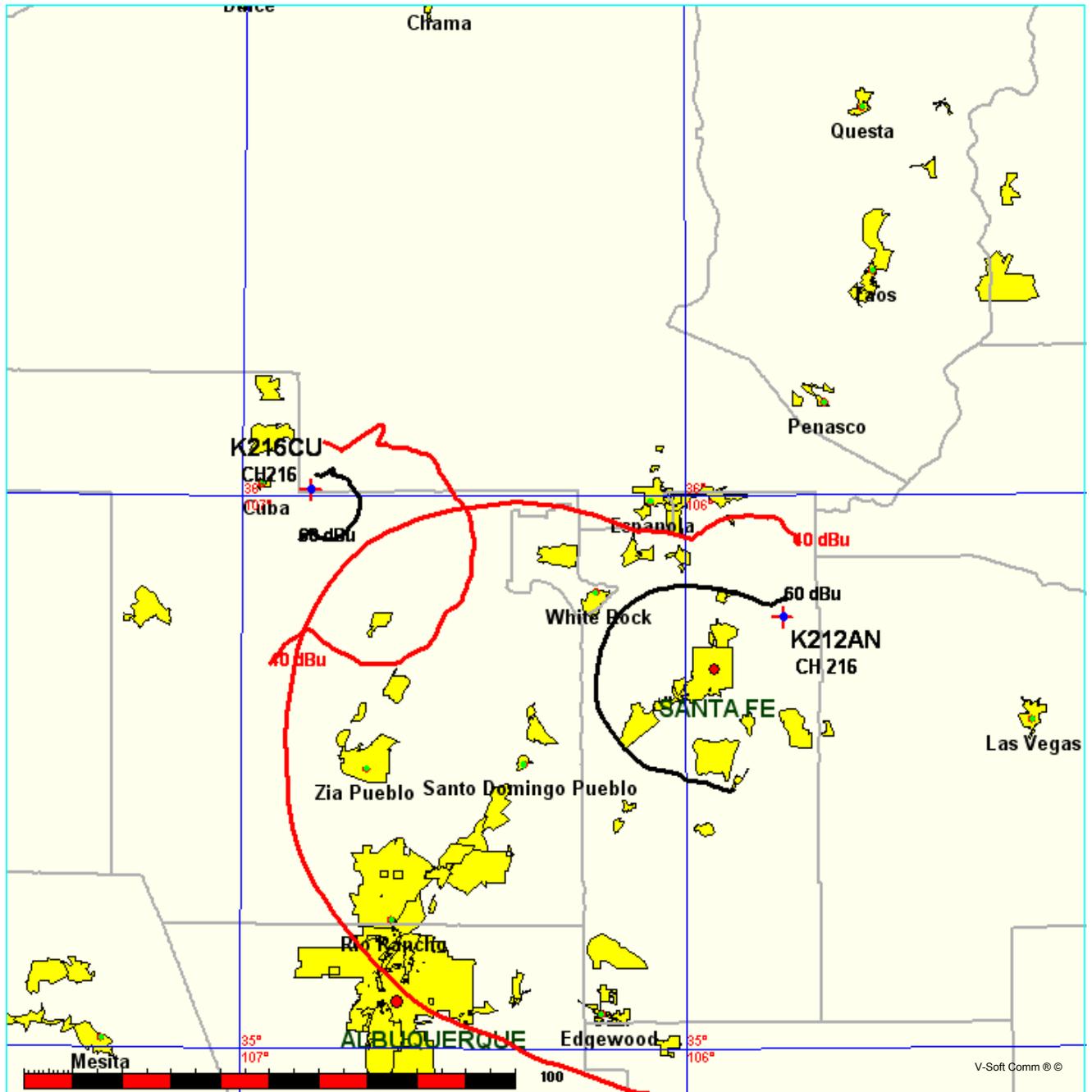
Proposed 100 dbu 50/10 Overlap Contour showing No Population

K212AN Minor Change
Board Of Education Of The City Of Albuquerque, Nm

FMCommander Single Allocation Study - 04-07-2018 - FCC NGDC 30 Sec
K212AN's Overlaps (In= 30.55 km, Out= 6.38 km)

K212AN CH 216 D DA
Lat= 35 47 08.0, Lng= 105 46 55.0
0.2 kW 0 m HAAT, 3688 m COR
Prot.= 60 dBu, Intef.= 40 dBu

K216CU CH 216 D BLFT19960613TA
Lat= 36 00 49.0, Lng= 106 50 39.0
0.008 kW 366 m HAAT, 2954 m COR
Prot.= 60 dBu, Intef.= 40 dBu

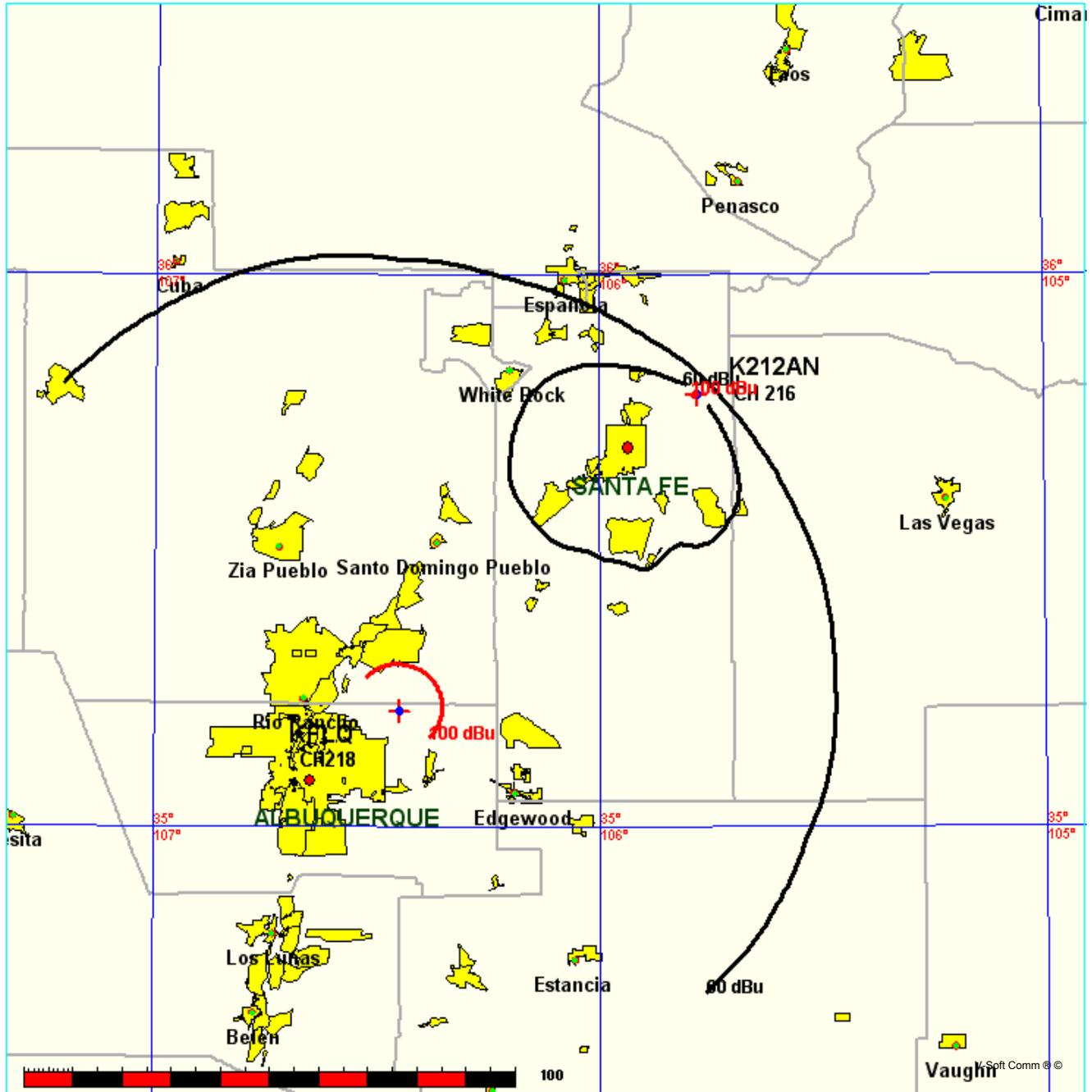


K212AN Minor Change
Board Of Education Of The City Of Albuquerque, Nm

FMCommander Single Allocation Study - 04-07-2018 - FCC NGDC 30 Sec
K212AN's Overlaps (In= 37.11 km, Out= -4.19 km)

K212AN CH 216 D DA
Lat= 35 47 08.0, Lng= 105 46 55.0
0.2 kW 0 m HAAT, 3688 m COR
Prot.= 60 dBu, Intef.= 100 dBu

KFLQ CH 218 C BMLED20121126AQQ
Lat= 35 12 51.0, Lng= 106 27 02.0
20.0 kW 1232 m HAAT, 3252 m COR
Prot.= 60 dBu, Intef.= 100 dBu

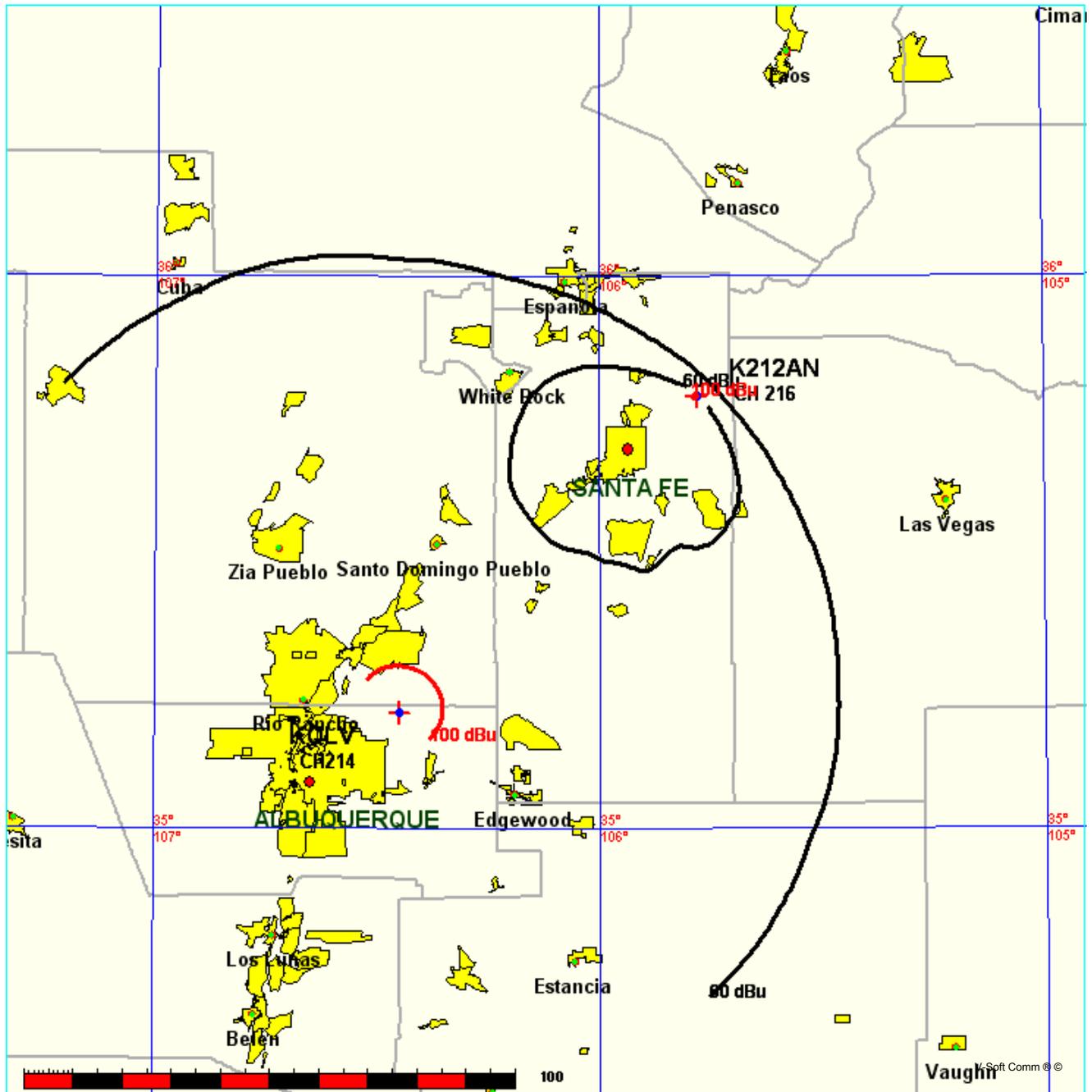


K212AN Minor Change
Board Of Education Of The City Of Albuquerque, Nm

FMCommander Single Allocation Study - 04-07-2018 - FCC NGDC 30 Sec
K212AN's Overlaps (In= 37.09 km, Out= -4.63 km)

K212AN CH 216 D DA
Lat= 35 47 08.0, Lng= 105 46 55.0
0.2 kW 0 m HAAT, 3688 m COR
Prot.= 60 dBu, Intef.= 100 dBu

KQLV CH 214 C BLED20090624AEO
Lat= 35 12 50.0, Lng= 106 27 01.0
20.0 kW 1261 m HAAT, 3281 m COR
Prot.= 60 dBu, Intef.= 100 dBu



K212AN Minor Change
Board Of Education Of The City Of Albuquerque, Nm

FMCommander Single Allocation Study - 04-07-2018 - FCC NGDC 30 Sec
K212AN's Overlaps (In= 57.79 km, Out= 4.55 km)

K212AN CH 216 D DA
Lat= 35 47 08.0, Lng= 105 46 55.0
0.2 kW 0 m HAAT, 3688 m COR
Prot.= 60 dBu, Intef.= 40 dBu

KQUQ-LP CH 216 L1 BMPL20141204ABJ
Lat= 35 02 13.6, Lng= 106 43 21.8
0.1 kW -24.22914 m HAAT, 1550 m COR
Prot.= 60 dBu, Intef.= 40 dBu

