

**ENGINEERING EXHIBIT FOR AN
APPLICATION FOR A MODIFICATION TO A
CONSTRUCTION PERMIT (BNPFT-20130328AOC)
FOR TRANSLATOR K243BS
FACILITY ID# 149104
RADIO MILLENNIUM, LLC
FORT BRAGG, CALIFORNIA**

CHANNEL 243 0.25 KW (H&V) 103 METERS HAAT

SEPTEMBER 15, 2013



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ENGINEERING STATEMENT

This engineering exhibit, of which this Statement is a part, was prepared in accordance with the Rules and Regulations of the Federal Communications Commission and pursuant to the provisions of Section III-B of FCC Form 349 on behalf of Radio Millennium, LLC (hereafter ("Millennium") in support of an application for authority to modify an existing FM Construction Permit (BNPFT-20130328AOC), K243BS, for operation on channel 243 (96.5 MHz) at Fort Bragg, CA. The purpose of this application is to change the Transmitter site location, output power and HAAT (height of 103 meters). This power/height combination is an allowable Class D facility permitted under the current rules and regulations.

Millennium proposes to operate from a site uniquely described by the geographic coordinates:

(NAD 27)

39° 26' 35" North Latitude
123° 43' 58" West Longitude

(NAD 83)

39° 26' 34.6" North Latitude
123° 44' 02" West Longitude

Notification to the FAA is not required since the tower is already existing and no increase in height is proposed

Engineering Figure 1 is a portion of the Noyo Hills, CA 7.5 minute USGS map that shows the exact location of the tower. A search was performed for the presence of any other AM or FM communications facilities located nearby and only the co-located KCJU on channel 210A was found.

Figure 2 is an aerial view of the site. The applicant is aware of the provisions of §74.1203 of the FCC's Rules and the requirement for satisfying all complaints of interference that are received.

The proposed translator will be co-located on KCJU tower and will comply with the provisions contained in §74.1237.



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ALLOCATION CONSIDERATIONS

A review of allotments and assignments on channel 243, on the three immediately upper adjacent, the three immediately lower adjacent channels and the two channels removed by 53 and 54 channels (296 & 297) shows that the site proposed satisfies the requirements of §74.1204. The results of the allocation study are as follow:

Call	Channel	Location	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power	HAAT		
Radio Millennium Llc						
REFERENCE						
39 26 35.0 N.			CLASS = D		DISPLAY DATES	
123 43 58.0 W.			Current Spacings to 3rd Adj.		DATA 09-13-13	
----- Channel 243 - 96.5 MHz -----						
K243BS	CP -D 243D	Fort Bragg	CA 323.1	2.97	65.0	-62.0
39 27 52.0	123 45 13.0	DC	0.005 kW	0 M		
Radio Millennium Llc BNPFT20130328AOC						
K240AQ	LIC-D 240D	Mendocino	CA 169.3	19.33	7.0	12.3
39 16 19.0	123 41 28.0	DC	0.250 kW	195 M		
California Radio Partners, BLFT20040610AAN						
K241AH	LIC 241D	Laytonville	CA 25.3	30.83	7.0	23.8
39 41 38.0	123 34 43.0	VN	0.010 kW	709 M		
Family Stations, Inc. BLFT19980107TC						
K244AH	LIC 244D	Ukiah, Etc.	CA 107.9	41.91	14.0	27.9
39 19 36.0	123 16 12.0	HN	0.039 kW	508 M		
Tom Van Hese BLFT19841012TB						
K242AH	CP 243D	Clearlake	CA 117.5	94.14	65.0	29.1
39 02 56.0	122 46 02.0	C	0.060 kW	0 M		
Bicoastal Media Licenses, BPFT20130326BBY						
KYBU	LIC 245A	Covelo	CA 46.6	56.97	26.0	31.0
39 47 39.0	123 14 56.0	CX	0.100 kW	-225 M		
Friends Of The Round Valle BLH20111025ABK						
K240AU	LIC-D 240D	Ukiah	CA 108.1	41.71	7.0	34.7
39 19 33.0	123 16 22.0	DCN	0.090 kW	512 M		
Joy Lovinger BLFT19970303TC						
KFMI	LIC 242C	Eureka	CA 352.0	143.97	104.0	40.0
40 43 36.0	123 58 18.0	CN	30.000 kW	482 M		
Bicoastal Media Licenses I BLH5918						
KULV	LIC 246A	Ukiah	CA 121.4	66.47	26.0	40.5
39 07 50.0	123 04 32.0	CX	0.130 kW	603 M		
Educational Media Foundati BLED20030917AEI						
K242AD	CP -D 242D	Ukiah	CA 129.9	56.43	14.0	42.4
39 07 00.0	123 13 53.0	DV	0.250 kW	0 M		
Bicoastal Media Licenses, BPFT20130326BBS						
K242AD	APP-D 242D	Ukiah	CA 129.9	56.43	14.0	42.4
39 07 00.0	123 13 53.0	DV	0.250 kW	0 M		
Bicoastal Media Licenses, BMPFT20130822AFW						



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COVERAGE CONTOURS

The three-to-sixteen-kilometer average terrain elevations were derived from the NGDC 30-second terrain database.

DISTANCES TO CONTOURS (Kilometers):

Antenna COR elevation (AMSL): 221 meters Average HAAT: 102 meters
Frequency: 96.5000 MHz
Coordinates: N 39° 26' 35" W 123° 43' 58"
F(50,50) Curves Number of Contours: 1

AZ (degs)	HAAT (m)	ERPd (kW)	CONTOUR LEVELS (dBuV): 60.0
0.0	92	0.2500	12.5
30.0	19	0.2500	7.1
60.0	30	0.2500	7.1
90.0	7	0.2500	7.1
120.0	-15	0.2500	7.1
150.0	64	0.2500	10.4
180.0	72	0.2500	11.1
210.0	147	0.2500	15.8
240.0	201	0.2500	18.6
270.0	212	0.2500	19.1
300.0	209	0.2500	19.0
330.0	185	0.2500	17.9

The effective antenna radiation center height for each of the twelve standard 30-degree spaced radials was used in conjunction with the F (50, 50) metric curves of Figure 1 of §73.333 of the Rules to determine the distances to the 60 dBuV coverage contour. The contours drawn from the data are depicted on the map included as Engineering Figure 3.

Figure 4 shows the 54 dBuV F(50,50) contours of KMKX and the 60 dBuV of the proposal. This shows that the proposed signal overlaps the KMKX contour. However, all of the overlap is over water and complies with §74.1204 (d).

ANSI Power Density Calculations

The proposed antenna will be energized such that it produces an effective radiated power of 0.25 kW from a center of radiation 14 meters above ground level. The co-located KJCU operates with an output power of .13 kW at an antenna height of 21 meters above ground level. The combined RF level produces a total level of 10% of the



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uncontrolled Public Area. Using the OET-65 model program the maximum RF Radiation level assuming an uncontrolled area would be 10% of the maximum limit value.

Based on the calculations it was determined that the RF radiation would be only 43.25% of the uncontrolled limit. Measurements will be performed after construction to demonstrate compliance with the radiation standard. Hence, the conditions of §1.1306(b)(3) would not be involved.

The proposal is in complete conformance with all technical rules of the Federal Communications Commission.

A handwritten signature in black ink that reads "Garrett G. Lysiak". The signature is written in a cursive style.

Garrett G. Lysiak, P.E.
September 15, 2013

(INGLENOOK)

(DUTCHMANS KNOLL)

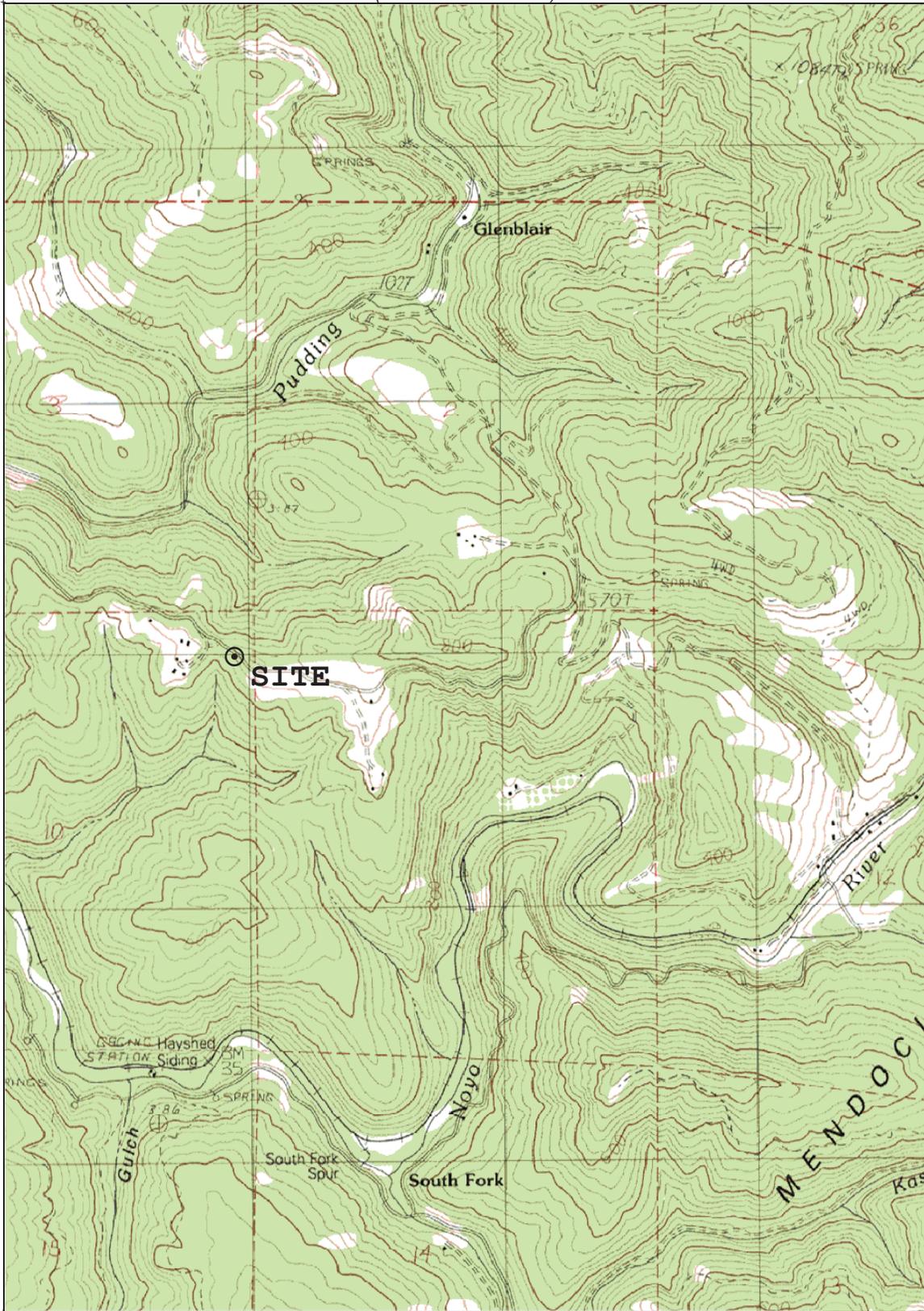
124° 00' 53.08" W
039° 45' 40.88" N

(DUTCHMANS KNOLL)

123° 25' 56.01" W
039° 45' 40.88" N

(FORT BRAGG)

(NOYO HILL)



039° 07' 26.56" N
124° 00' 53.08" W

039° 07' 26.56" N
123° 25' 56.01" W

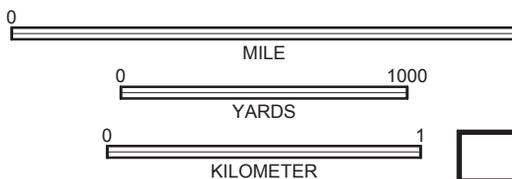
(MENDOCINO)

(MATHISON PEAK)

Declination



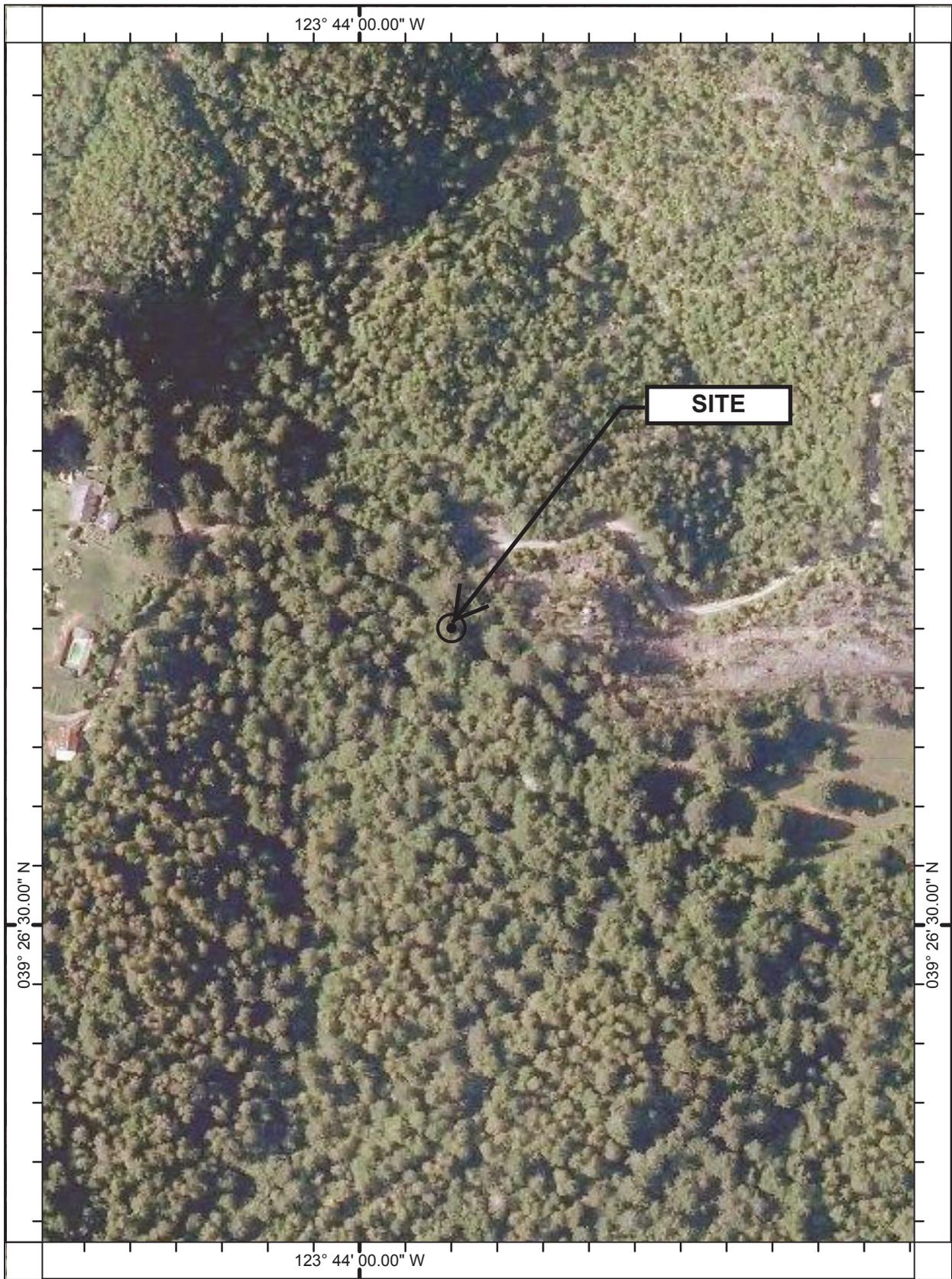
(MATHISON PEAK)
SCALE 1:24000



NOYO HILL, CA
1991

FIGURE 1 - SITE MAP

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM 1929



SCALE 1:3000

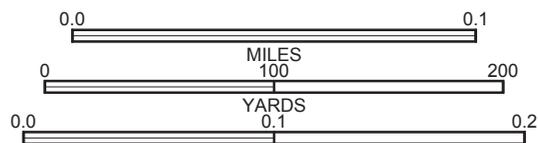
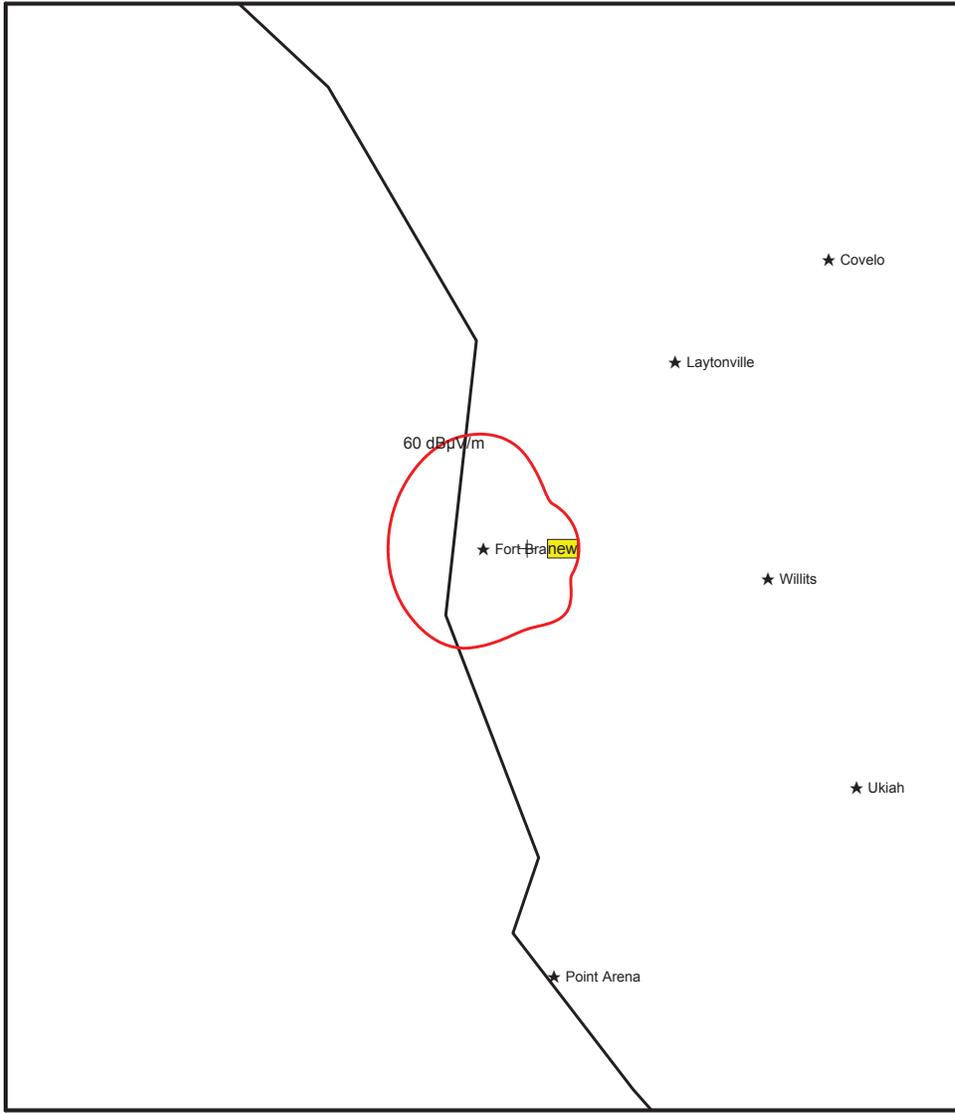


FIGURE 2 - AERIAL VIEW



Prop. model: FCC-EDX
 Time: 50.0% Loc.: 50.0%
 Prediction Confidence Margin: 0.0dB
 Climate: Continental Temperate
 Land use (clutter): none
 Atmospheric Abs.: none
 K Factor: 1.333
 RX Antenna - Type: OMNI
 Height: 2.0 m AGL Gain: -2.15 dBd

Field strength at remote
 ■ = 60.0 dBµV/m
 Display threshold level: -120.0 dBmW

Sites
 Site: new
 N39°26'35.00" W123°43'58.00" 207.0 m
 new Tx.Ht.AGL: 14.0 m Total ERPd: 0.25kW
 Grp: 1 omni-horizontal/0.0° 96.5000 MHz



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 SIGNAL COVERAGE

FIGURE 3 SEPTEMBER 15, 2013

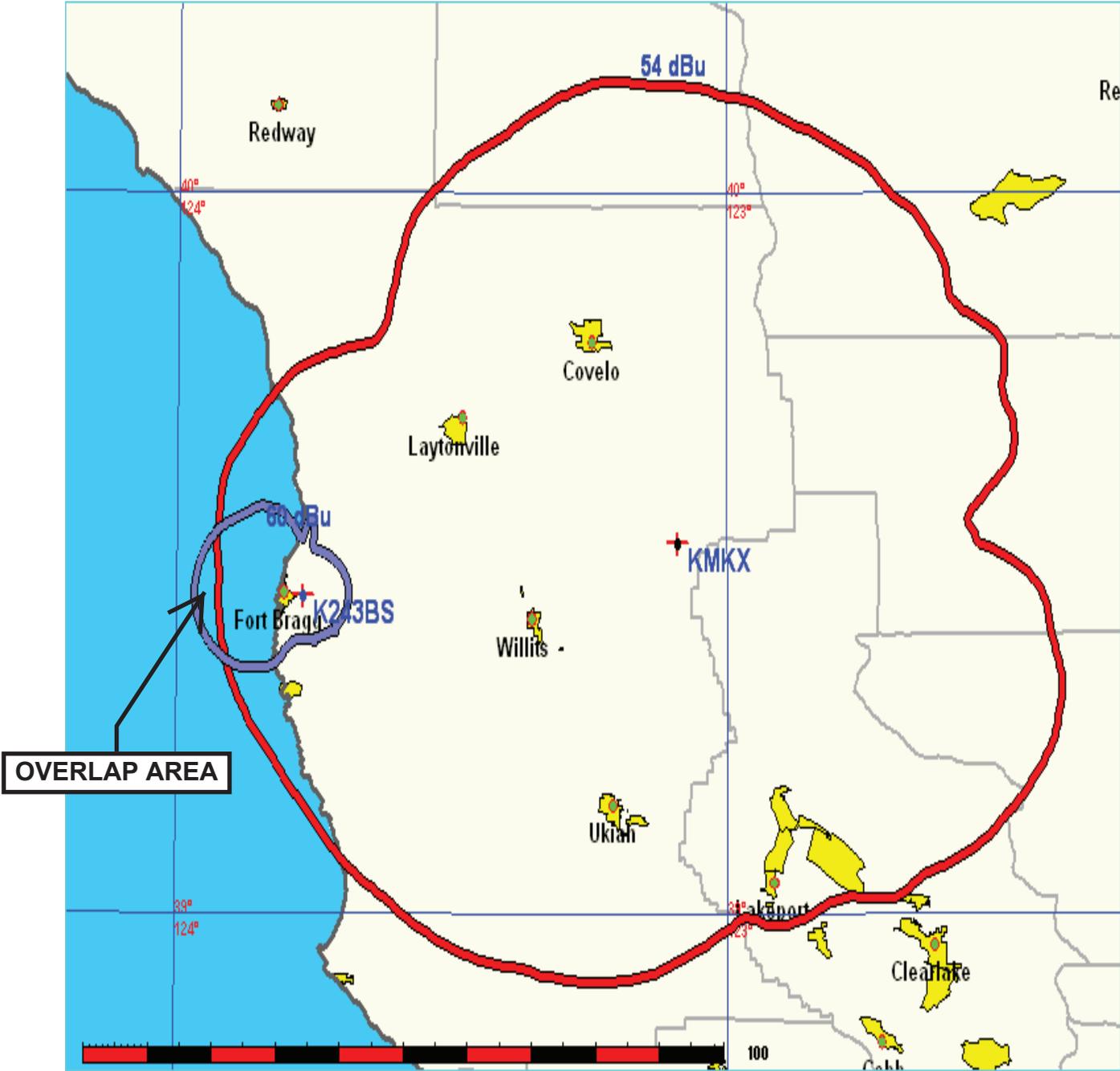


FIGURE 4 - OVERLAP AREA