

Technical Report K293BX Minor Modification

This technical report is submitted in support of an application for a modification to K293BX, FCC file no. BLFT-20150401AEK. Changes in antenna and ERP are submitted. The translator will continue to serve as a fill-in facility to rebroadcast KLTI(AM) 1560 kHz at Macon, MO, FCC facility I.D. 43535.

K293BX Modification Analysis:

An overlap study (exhibit E-1) shows the K293BX modification does not produce any interference overlap to other facilities. The 60 dBu overlaps the licensed 60 dBu contour and is contained within a 25 mile/40 km radius from the primary KLTI(AM) tower site (exhibit E-2).

Antenna System:

The K293BX modification is located on an existing tower, ASR #1251042, at coordinates:

39 27 10N 92 21 58W NAD 27.

A PSI FML-1 nondirectional antenna will be mounted at a COR AGL of 61 meters, 314 meters AMSL and operate at 0.200 kW ERP.

RF Exposure Calculation:

The RF contribution was calculated using FMModel (exhibit E-3). The RF is calculated to be $1.06 \mu\text{W}/\text{cm}^2$ at a distance of 60.4 meters, which is well below 5% of the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for uncontrolled controlled exposure.

Conclusion:

It is concluded that the K293BX modification complies with all Commission rules and policies.

A handwritten signature in black ink, appearing to read "Christopher Anderson", is written over a horizontal line.

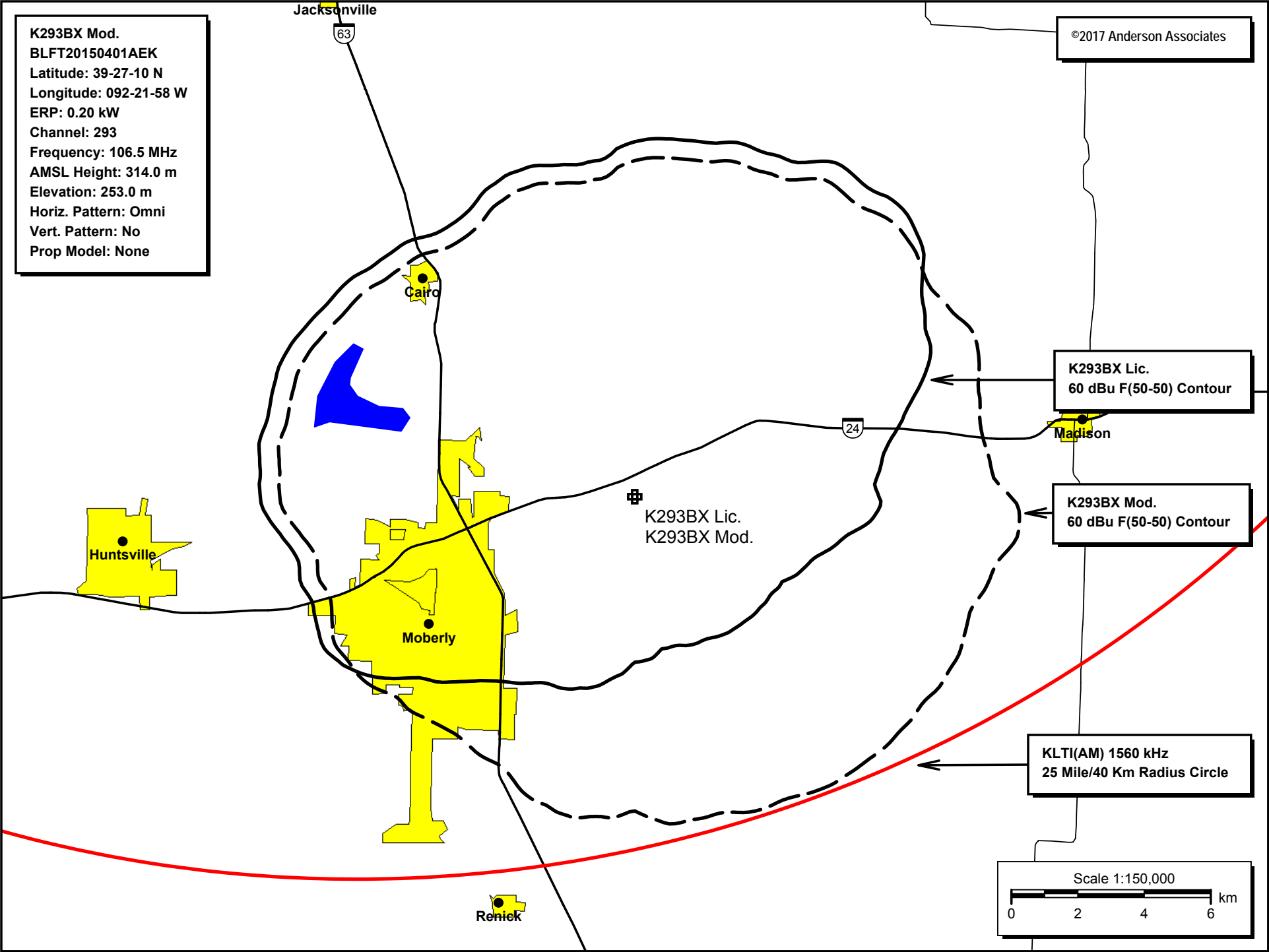
Christopher Anderson April 04, 2017
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E-1 K293BX Mod. Overlap Study

REFERENCE		CH#	293D - 106.5 MHz, Pwr= 0.2 kW, HAAT= 70.0 M, COR= 314 M						DISPLAY DATES	
39 27 10.0 N.			Average Protected F(50-50)= 10.32 km						DATA 04-04-17	
92 21 58.0 W.			Omni-directional						SEARCH 04-04-17	
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)
293D	K293BX	LIC DC_	0.0	0.00	39 27 10.0	0.250	36.2	10.7	-46.3*	-44.6*
Moberly		MO	0.0	BLFT20150401AEK	92 21 58.0	70	314	Fm 105, Inc.		
239C	KWWR	LIC NCY	136.6	28.94	39 15 49.0	100.000	128.8	52.5	28.5R	0.44M
Mexico		MO	316.7	BLH20000530ACL	92 08 06.0	360	608	Kxeo Radio, Inc.		
293C1	WDAF-FM	LIC _CX	257.6	187.20	39 04 24.0	100.000	171.2	71.8	5.6	82.4
Liberty		MO	76.3	BMLH20040802BEU	94 29 06.0	299	565	Entercom License, Lic		
293D	K293CI	LIC _C_	171.7	55.90	38 57 19.0	0.140	38.1	10.9	8.6	11.6
Columbia		MO	351.7	BLFT20161103ACL	92 16 20.0		332	Educational Media Foundati		
291C1	KOQL	LIC NCN	192.1	79.85	38 45 01.0	69.000	8.9	67.3	61.1	11.5
Ashland		MO	11.9	BLH19981125KG	92 33 31.0	292	519	Cumulus Li censi ng Li c		
295C	KTXV	LIC _CY	186.9	91.26	38 38 16.0	100.000	11.4	78.8	70.1	11.5
Jefferson City		MO	6.8	BLH19900727KA	92 29 34.0	381	609	Zimmer Radio Of Mi d-mi ssou		
293C1	WARH	LIC _C_	118.3	201.52	38 34 27.7	90.000	167.8	70.0	22.9	94.6
Granite City		IL	299.6	BLH20111026AGG	90 19 31.5	309	462	St. Loui s Fcc Li cense Sub,		
292D	K292GI	CP _C_	105.5	68.39	39 17 07.4	0.250	13.4	9.6	43.6	43.3
Vandalia		MO	286.0	BNPFT20130325AIS	91 36 01.5	54	282	Covenant Network		

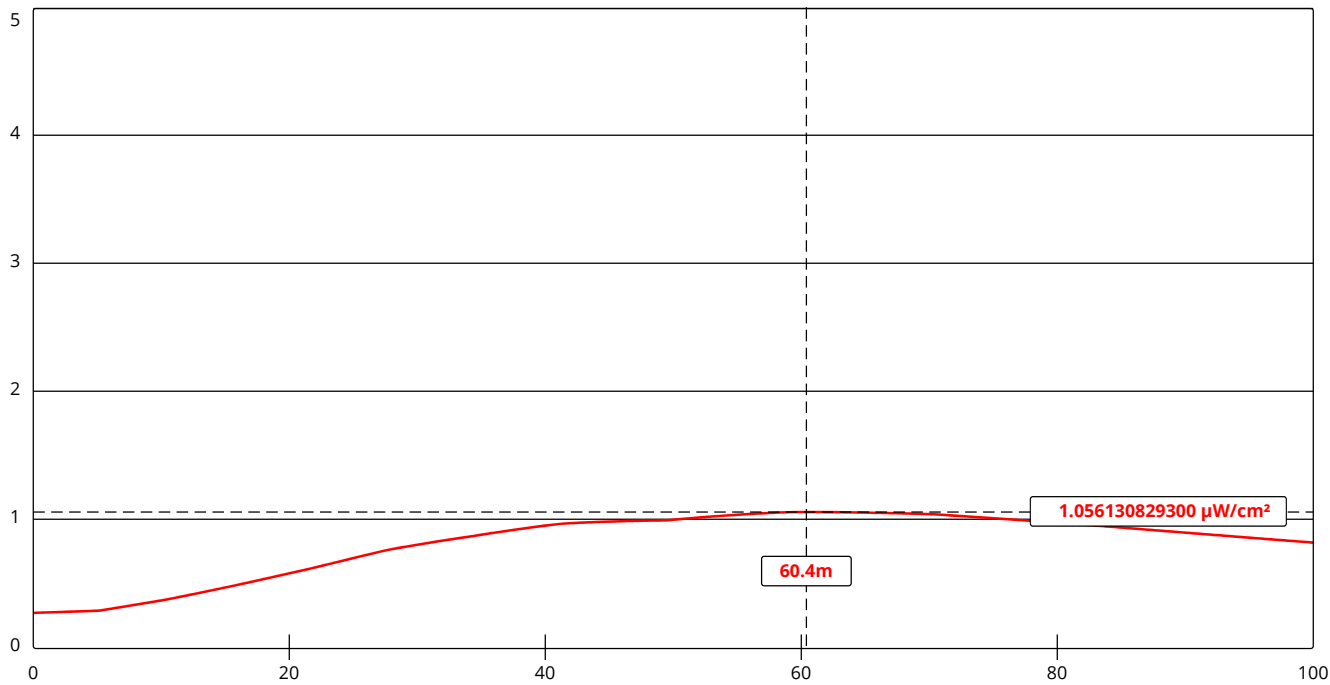
Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

E-2 K293BX Mod. 60 dBu Contour Plot



E-3 K293BX Mod. RF Calculation

FM Model



Channel Selection	Channel 250 (97.9 MHz)		
Antenna Type +	EPA Type 2: Opposed V Dipole		
Height (m)	61	Distance (m)	100
ERP-H (W)	200	ERP-V (W)	200
Num of Elements	1	Element Spacing (λ)	1
Num of Points	500		

E-4 K293BX Tower ASR

ASR Registration 1251042

Registration Detail

Reg Number	1251042	Status	Constructed
File Number	A0616324	Constructed	03/14/2008
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	39-27-10.1 N 092-21-58.7 W	Address	1 km south southwest from the intersection of County Road 2320 and US Highway 24
City, State	Moberly , MO		
Zip	65270	County	RANDOLPH
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
253.0	91.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
344.4	91.4

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1K

FAA Notification

FAA Study	2007-ACE-4028-OE	FAA Issue Date	10/19/2007
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Owner & Contact Information

FRN	0003772548	Owner Entity Type	
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Owner

105-FM, Inc.
408 West Reed Street
P.O. Box 219
Moberly , MO 65270

P: (660)263-7368
F:
E: best@mcmsys.com

Contact

P:
F:
E:

Last Action Status

Status	Constructed	Received	12/10/2008
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