

KMLR Gonzales, Texas
Channel 292C3 – 106.3 MHz – 15 kW ERP @ 129 m HAAT
Proposed
Channel 249C1 – 97.7 MHz – 100 kW ERP @ 299 m HAAT

May 1, 2023

Technical Narrative

This Technical Narrative and attached exhibits were prepared on behalf of Educational Media Foundation, (“EMF”), licensee of non-commercial educational station KMLR, Channel 292C3, Facility ID No. 15907, Gonzales, Texas. EMF herein is filing a minor modification application to modify KMLR to specify operation on non-adjacent Channel 249C1 (97.7 MHz).

This minor modification application is being filed as a group of two contingently related and mutually exclusive applications. EMF proposes to modify co-owned KZAR, Channel 249C1, McQueeney, Texas to specify operation on Channel 292C3 (106.3 MHz). For details of the KZAR application please refer to the KZAR minor modification application. These contingent applications are believed to be similar to the previous FCC policy under Section 1.420(g)(3), known as an “incompatible channel swap”. However, an incompatible channel swap is limited to upgrades in the class of the station and not the substitution of one channel for another. The Commission has previously granted applications that proposed exchange of channels when it creates a mutually exclusive relationship¹. Under these circumstances, the Commission concluded that there is no reason to entertain competing expressions of interest for the upgraded

¹ See Blair, NE, 8 FCC Rcd 4086 (Allocations Br. 1993); Dyersburg, TN, 4 FCC Rcd 4814, 4816 (1989).

channel because the mutually exclusive relationship of the channels involved is similar to an adjacent channel upgrade².

The proposed KMLR facility would operate on Channel 249C1 (97.7 MHz) with 100.0 kW non-directional with the transmit antenna located at 297 meters height above ground level and 299 meters HAAT.

The Channel 249C1 Reference Site Channel Study coordinates are located at 29° 28' 37" North Latitude, 97° 39' 58" West Longitude (NAD 83). This site is fully spaced to all full power FM station facilities with one exception. It is short spaced to co-owned KZAR, Channel 249C1, McQueeney, Texas. EMF is filing a contingent minor modification application for KZAR specifying operation on Channel 292C3. The KMLR Reference Site City Grade Exhibit demonstrates that the hypothetical FCC 70 dBu contour (50 km.) extends over 100 percent of the corporate limits of Gonzales.

The KZAR application site coordinates are located at 29° 22' 11.8" North Latitude, 97° 39' 44.9" West Longitude (NAD 83) is an existing tower registered with Antenna Structure Registration ("ASR") number 1252281. The Application Site Channel Study shows Channel 249C1 is fully spaced to all full power FM stations with two exceptions. The site is short spaced to KZAR, Channel 249C1, McQueeney, Texas. EMF is filing a minor modification for KZAR that is contingent with this KMLR minor modification to specify operation on Channel 292C3. The Application Site Channel Study also shows one other short spacing to KXAF, Channel 250A,

² MB Docket No. 03-192 RM-10763 Brazil and Spencer, Indiana

licensed to George West, Texas. EMF requests Section 73.215 processing for KMLR with respect to KXAF.

The KMLR application site FCC F(50,50) 70 dBu contour easily reaches 100 percent of Gonzales.

A study has been undertaken and exhibits are provided to show the proposed facility is in compliance with the Commission's radio frequency emission limits and Section 106 compliance.

KMLR CH249C1 Ref. Site Channel Study

REFERENCE							DISPLAY DATES
29 28 37.0 N.				CLASS = C1 Int = C1			DATA 04-22-23
97 39 58.0 W.				Current Spacings to 3rd Adj.			SEARCH 04-24-23

----- Channel 249 - 97.7 MHz -----

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		

KZAR	LIC	249C1	Mcqueeney		TX 178.3	11.9	244.5	-232.6
29 22 11.9		97 39 45.0	CN		100.000 kW		299 M	
		Educational Media Foundati			BMLED20110826AAG			

Note: KZAR is filing a contingent app to operate on Channel 292C3.

KCJV-LP	LIC	250L1	Leon Springs		TX 282.4	96.6	99.5	-2.9
29 39 33.0		98 38 29.3	CN		0.015 kW		76 M	
		Hispanic Heritage Radio Ne			BLL20160318ACH			

KWTX-FM	LIC	248C	Waco		TX 9.3	209.1	208.5	0.6
31 20 16.6		97 18 37.0	CN		100.000 kW		430 M	
		Ihm Licenses, LLC			BMLH20190214AAY			

KBXX	LIC	250C	Houston		TX 86.4	209.3	208.5	0.8
29 34 34.8		95 30 36.7	CN		100.000 kW		585 M	
		Radio One Of Texas II, LLC			BLH19831026AD			

KCTC-LP	LIC	251L1	San Antonio		TX 265.5	80.4	72.5	7.9
29 25 06.0		98 29 32.0	CN		0.037 kW		49 M	
		Omega Christian Communicat			0000124389			

KAJA	LIC	247C0	San Antonio		TX 273.2	102.7	93.5	9.2
29 31 25.8		98 43 26.1	CN		100.000 kW		300 M	
		Ihm Licenses, LLC			BMLH20010412AAK			

KXAF	LIC-N	250A	George West		TX 202.2	142.7	132.5	10.2
28 17 04.3		98 13 02.3	NCN		6.000 kW		62 M	
		Hispanic Target Media Inc.			BLH20170214ABH			

K248CU	LIC-D	248D	Austin		TX 352.2	94.7	83.5	11.2
30 19 23.8		97 47 59.5	DCN		0.250 kW 0 M			
		Auslator LLC			BLFT20151215ACK			

K248CS	LIC	248D	Victoria		TX 138.3	96.2	83.5	12.7
28 49 43.9		97 00 31.9	CN		0.250 kW 0 M			
		Victoria Radioworks, LLC			BLFT20140807AAB			

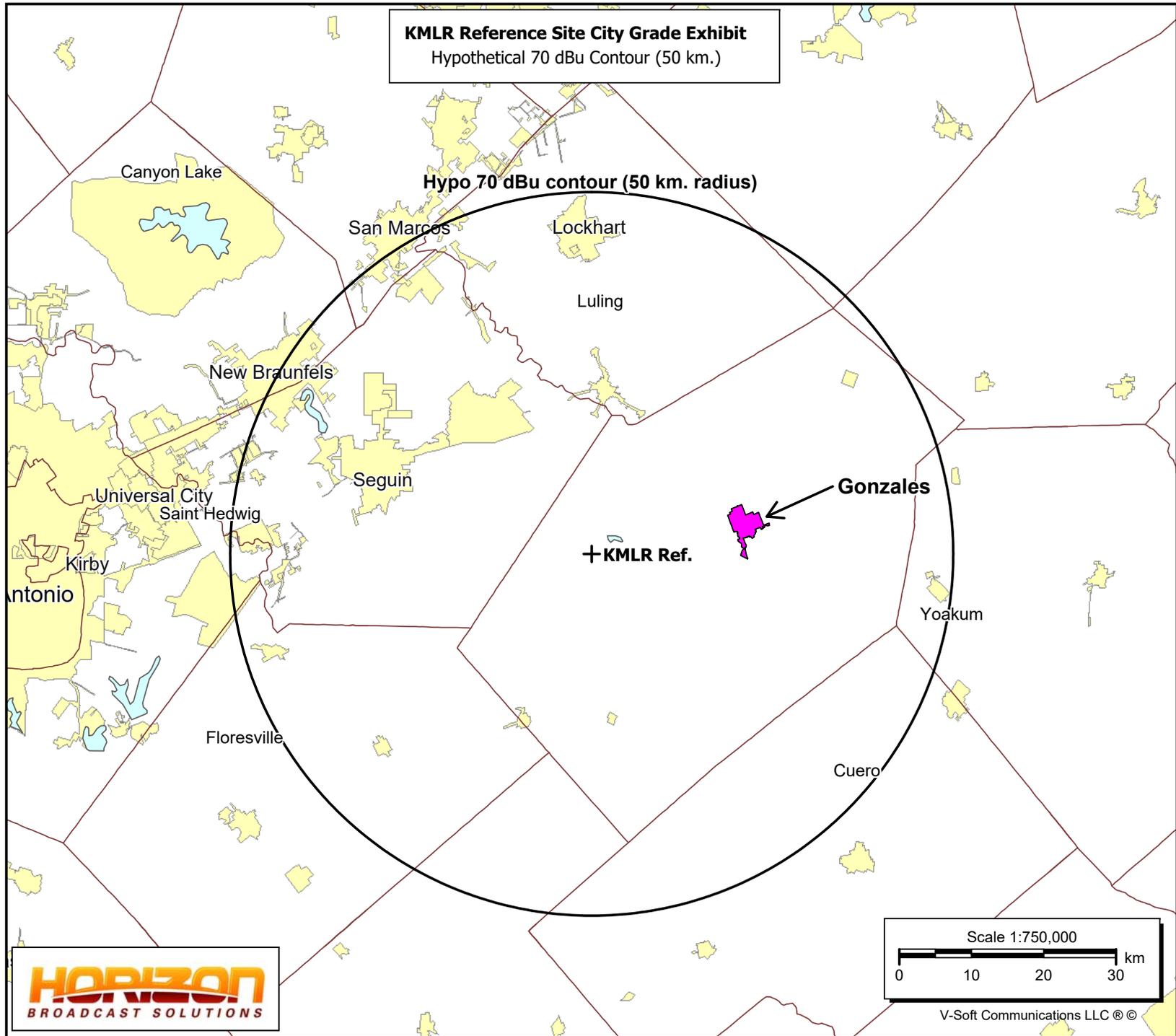
KVET-FM	LIC-N	251C1	Austin		TX 352.2	94.7	81.5	13.2
30 19 23.7		97 47 59.0	NCN		49.800 kW		397 M	
		Ihm Licenses, LLC			BLH20020730ABK			

KFTX	LIC-D	248C1	Kingsville		TX 178.1	192.4	176.5	15.9
27 44 29.1		97 36 09.0	DCN		100.000 kW		291 M	
		Quality Broadcasting Corpo			BLH19890130KC			

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
K246BD	LIC 246D	Austin		TX 352.2	94.7	73.5	21.2
30 19 23.7	97 47 59.0	CN	0.250 kW	0 M			
	Sinclair Telecable, Inc.		0000145896				
K251CB	LIC 251D	Victoria		TX 138.3	96.2	73.5	22.7
28 49 43.9	97 00 31.9	CN	0.250 kW	0 M			
	Victoria Radioworks, LLC		BLFT20170612AAJ				
KULM-FM	LIC 252A	Columbus		TX 76.5	108.7	74.5	34.2
29 42 03.8	96 34 24.9	CN	6.000 kW		77 M		
	S Content Marketing, LLC		BLH19930111KF				
KYRT	LIC-N 250A	Hunt		TX 296.8	167.7	132.5	35.2
30 08 51.7	99 13 15.2	NCN	4.500 kW		115 M		
	La Promesa Foundation		BMLE20130812ADH				
KPUY	LIC 247A	Garwood		TX 86.0	113.8	74.5	39.3
29 32 31.9	96 29 41.9	CN	6.000 kW		46 M		
	Centro Cristiano De Vida E		BLH20190625AAD				
KQSA	CP -Z 250C3	Batesville		TX 254.2	188.9	143.5	45.4
29 00 08.9	99 31 57.2	ZCN	13.000 kW		110 M		
			BPH20190125AAA				
K249ET	LIC 249D	College Station		TX 41.2	179.8	132.5	47.3
30 41 16.2	96 25 32.4	CN	0.250 kW	0 M			
	Bryan Broadcasting License		BMLFT20190531AAX				
K246CP	LIC-D 246D	Beeville		TX 182.9	121.1	73.5	47.6
28 23 09.0	97 43 43.0	DCN	0.250 kW	0 M			
	Rufus Resources, LLC		BLFT20170131AER				
KQSA	LIC 250A	Batesville		TX 254.2	188.9	132.5	56.4
29 00 08.9	99 31 57.2	CN	5.200 kW		107 M		
			BLH20181126AAK				

KMLR Reference Site City Grade Exhibit
Hypothetical 70 dBu Contour (50 km.)

KMLR Ref.
Gonzales, TX
Latitude: 29-28-37 N
Longitude: 097-39-58 W
ERP: 100.00 kW
HAAT:299 m
Channel: 249
Frequency: 97.7 MHz



KMLR CH249C1 Appl. Site Channel Study

REFERENCE							DISPLAY DATES
29 22 11.8 N.			CLASS = C1 Int = C1				DATA 04-24-23
97 39 44.9 W.			Current Spacings to 3rd Adj.				SEARCH 04-24-23

----- Channel 249 - 97.7 MHz -----

Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		

KZAR	LIC	249C1	Mcqueeney		TX	325.1	0.0	244.5	-244.5
29 22 11.9	97 39 45.0	CN				100.000 kW		299 M	
			Educational Media Foundati			BMLED20110826AAG			

Note: KZAR is filing a contingent app to operate on Channel 292C3.

KXAF	LIC-N	250A	George West		TX	204.3	131.9	132.5	-0.58
28 17 04.3	98 13 02.3	NCN				6.000 kW		62 M	
			Hispanic Target Media Inc.			BLH20170214ABH			

Note: Adopt Section 73.215 contour protection with respect to KXAF

KCJV-LP	LIC	250L1	Leon Springs		TX	289.0	100.2	99.5	0.7
29 39 33.0	98 38 29.3	CN				0.015 kW		76 M	
			Hispanic Heritage Radio Ne			BLL20160318ACH			

KBXX	LIC	250C	Houston		TX	83.2	210.0	208.5	1.5
29 34 34.8	95 30 36.7	CN				100.000 kW		585 M	
			Radio One Of Texas II, LLC			BLH19831026AD			

K248CS	LIC	248D	Victoria		TX	133.3	87.4	83.5	3.9
28 49 43.9	97 00 31.9	CN				0.250 kW	0 M		
			Victoria Radioworks, LLC			BLFT20140807AAB			

KFTX	LIC-D	248C1	Kingsville		TX	178.1	180.6	176.5	4.1
27 44 29.1	97 36 09.0	DCN				100.000 kW		291 M	
			Quality Broadcasting Corpo			BLH19890130KC			

KCTC-LP	LIC	251L1	San Antonio		TX	274.0	80.7	72.5	8.2
29 25 06.0	98 29 32.0	CN				0.037 kW		49 M	
			Omega Christian Communicat			0000124389			

KAJA	LIC	247C0	San Antonio		TX	279.7	104.4	93.5	10.9
29 31 25.8	98 43 26.1	CN				100.000 kW		300 M	
			Ihm Licenses, LLC			BMLH20010412AAK			

KWTX-FM	LIC	248C	Waco		TX	8.7	220.8	208.5	12.3
31 20 16.6	97 18 37.0	CN				100.000 kW		430 M	
			Ihm Licenses, LLC			BMLH20190214AAY			

K251CB	LIC	251D	Victoria		TX	133.3	87.4	73.5	13.9
28 49 43.9	97 00 31.9	CN				0.250 kW	0 M		
			Victoria Radioworks, LLC			BLFT20170612AAJ			

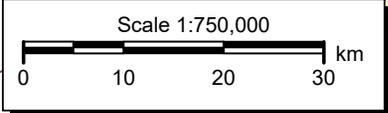
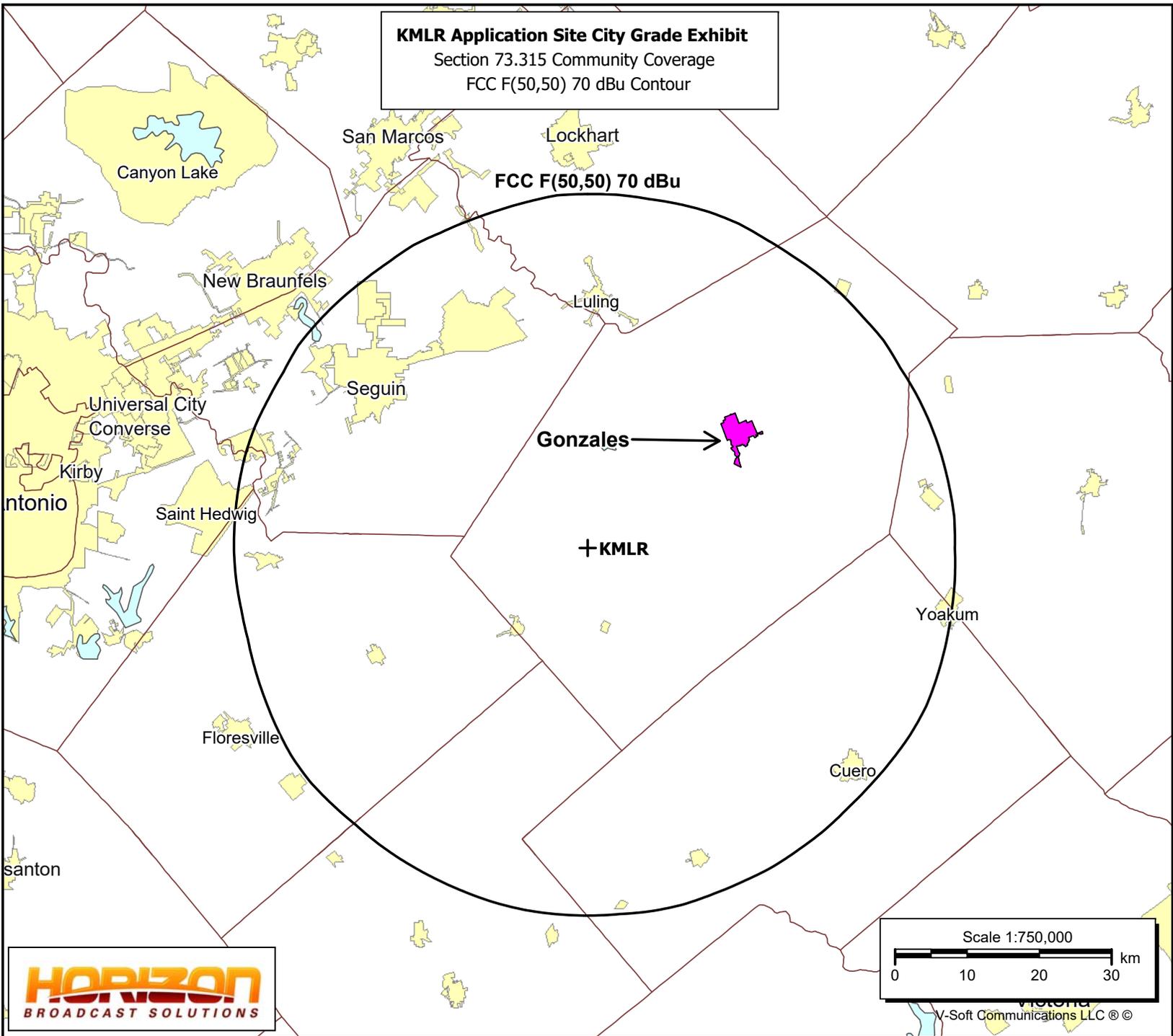
K248CU	LIC-D	248D	Austin		TX	352.9	106.5	83.5	23.0
30 19 23.8	97 47 59.5	DCN				0.250 kW	0 M		
			Auslator LLC			BLFT20151215ACK			

KVET-FM	LIC-N	251C1	Austin		TX	352.9	106.5	81.5	25.0
30 19 23.7	97 47 59.0	NCN				49.800 kW		397 M	
			Ihm Licenses, LLC			BLH20020730ABK			

Call	Channel	Location	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power	HAAT		
K246BD	LIC 246D	Austin				
30 19 23.7	97 47 59.0	CN	TX 352.9	106.5	73.5	33.0
	Sinclair Telecable, Inc.		0.250 kW 0 M			
			0000145896			
K246CP	LIC-D 246D	Beeville				
28 23 09.0	97 43 43.0	DCN	TX 183.4	109.3	73.5	35.8
	Rufus Resources, LLC		0.250 kW 0 M			
			BLFT20170131AER			
KULM-FM	LIC 252A	Columbus				
29 42 03.8	96 34 24.9	CN	TX 70.5	111.7	74.5	37.3
	S Content Marketing, LLC		6.000 kW	77 M		
			BLH19930111KF			
KPUY	LIC 247A	Garwood				
29 32 31.9	96 29 41.9	CN	TX 80.1	114.9	74.5	40.4
	Centro Cristiano De Vida E		6.000 kW	46 M		
			BLH20190625AAD			
KYRT	LIC-N 250A	Hunt				
30 08 51.7	99 13 15.2	NCN	TX 300.3	173.6	132.5	41.1
	La Promesa Foundation		4.500 kW	115 M		
			BMLED20130812ADH			
KQSA	CP -Z 250C3	Batesville				
29 00 08.9	99 31 57.2	ZCN	TX 257.8	186.4	143.5	42.9
			13.000 kW	110 M		
			BPH20190125AAA			
KQSA	LIC 250A	Batesville				
29 00 08.9	99 31 57.2	CN	TX 257.8	186.4	132.5	53.9
			5.200 kW	107 M		
			BLH20181126AAK			
K249ET	LIC 249D	College Station				
30 41 16.2	96 25 32.4	CN	TX 38.8	188.6	132.5	56.1
	Bryan Broadcasting License		0.250 kW 0 M			
			BMLFT20190531AAX			

KMLR Application Site City Grade Exhibit
Section 73.315 Community Coverage
FCC F(50,50) 70 dBu Contour

KMLR
Gonzales, TX
Latitude: 29-22-11.90 N
Longitude: 097-39-45 W
ERP: 100.00 kW
HAAT: 299.0 m
Channel: 249
Frequency: 97.7 MHz
AMSL Height: 403.0 m
Elevation: 106.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC



V-Soft Communications LLC ©

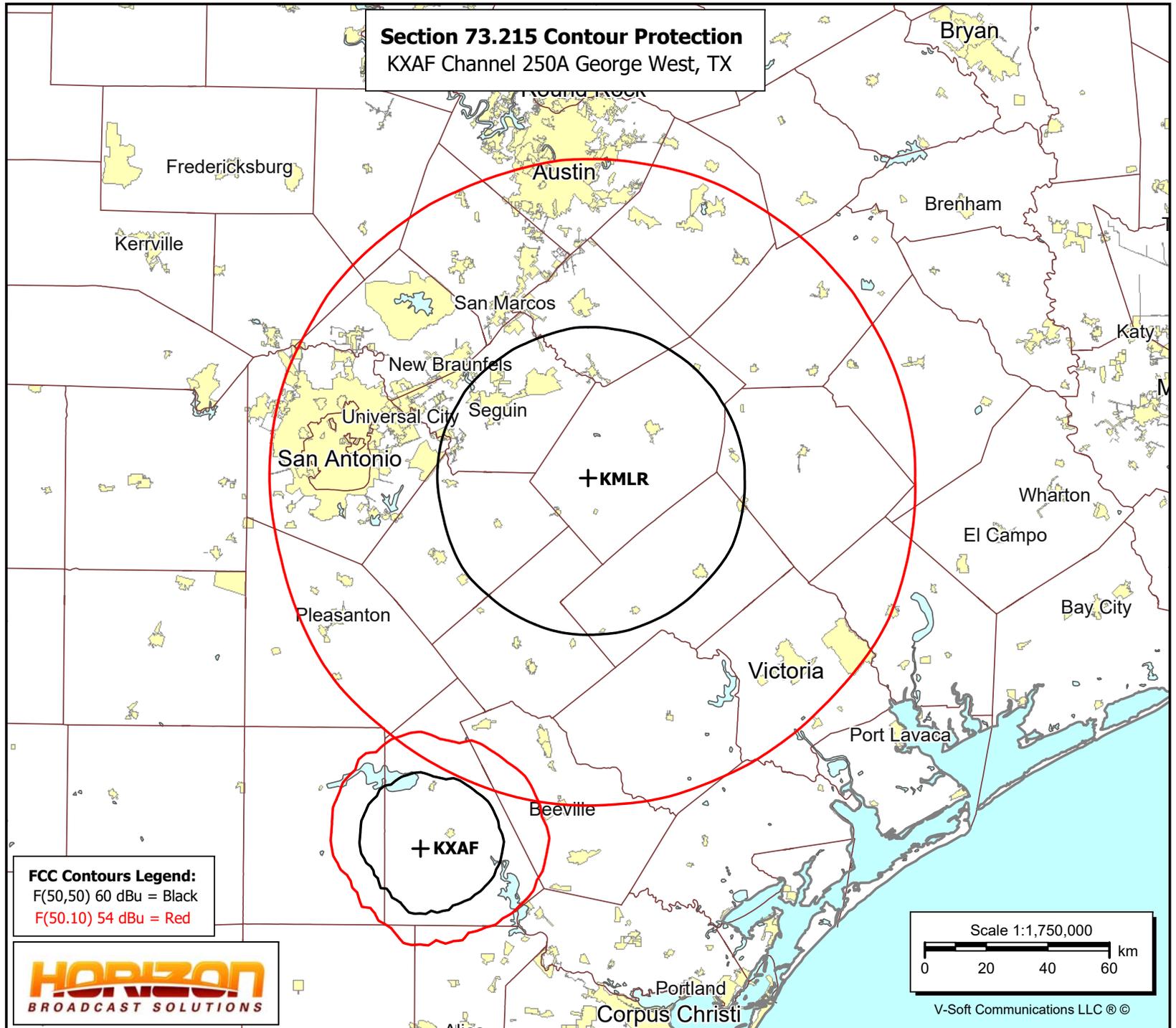
KMLR

Gonzales, TX
BMLED20110826AAG
Latitude: 29-22-11.90 N
Longitude: 097-39-45 W
ERP: 100.00 kW
HAAT: 299.0
Channel: 249
Frequency: 97.7 MHz
AMSL Height: 403.0 m
Elevation: 106.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KXAF

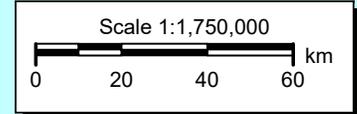
George West, TX
BLH20170214ABH
Latitude: 28-17-04.30 N
Longitude: 098-13-02.30 W
ERP: 6.00 kW
HAAT: 62.0
Channel: 250
Frequency: 97.9 MHz
AMSL Height: 149.0 m
Elevation: 100.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Section 73.215 Contour Protection
KXAF Channel 250A George West, TX



FCC Contours Legend:

F(50,50) 60 dBu = Black
F(50,10) 54 dBu = Red



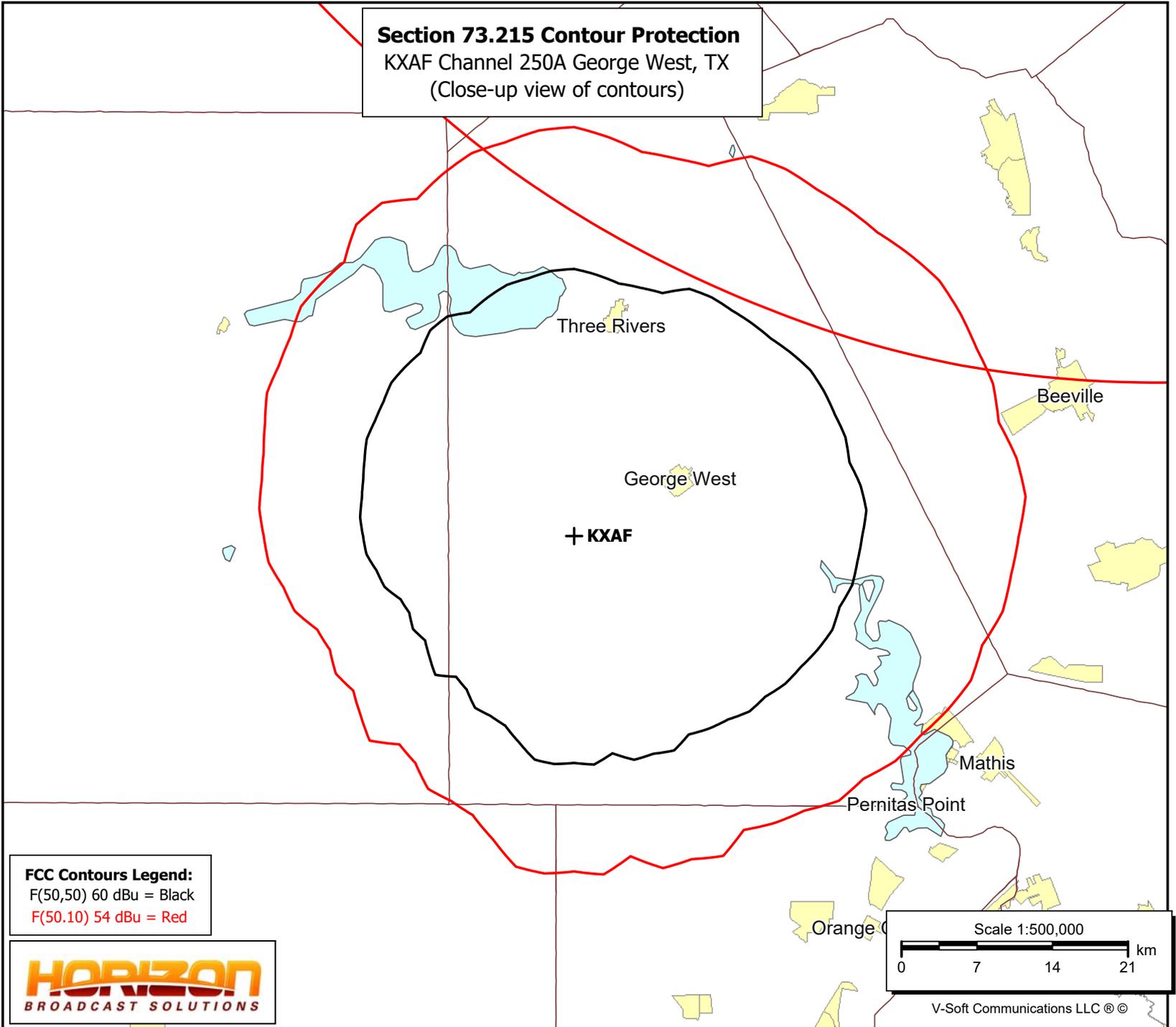
KMLR

Gonzales, TX
BMLED20110826AAG
Latitude: 29-22-11.90 N
Longitude: 097-39-45 W
ERP: 100.00 kW
HAAT: 299.0
Channel: 249
Frequency: 97.7 MHz
AMSL Height: 403.0 m
Elevation: 106.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KXAF

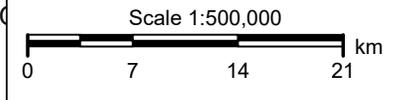
George West, TX
BLH20170214ABH
Latitude: 28-17-04.30 N
Longitude: 098-13-02.30 W
ERP: 6.00 kW
HAAT: 62.0
Channel: 250
Frequency: 97.9 MHz
AMSL Height: 149.0 m
Elevation: 100.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

Section 73.215 Contour Protection
KXAF Channel 250A George West, TX
(Close-up view of contours)



FCC Contours Legend:

F(50,50) 60 dBu = Black
F(50,10) 54 dBu = Red



**Human Exposure to Radiofrequency Electromagnetic Field
&
Section 106 Compliance
(Environmental)**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. Educational Media Foundation ("EMF") is the licensee of KMLR, Facility ID No. 15907, Gonzales, Texas. EMF proposes to operate KMLR on Channel 249C1 from a new transmit location. The existing tower, 313.9 meters in overall height, is located at 29° 22' 11.8" N ~ 97° 39' 44.9" W (NAD 83). The tower is registered with the Antenna Registration Structure "ASR" number 1252281. The proposed transmit antenna is an ERI Model SHPX-10AC ten bay full wave circular polarized non-directional antenna with a center of radiation of 297 meters AGL. KMLR will operate on Channel 249C1, 97.7 MHz, with 100.0 kW ERP non-directional at 299 meters HAAT. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of § 1.1306 of the FCC Rules. The proposed KMLR facility would operate from an existing tower and no modifications are being made to the tower. Therefore, it is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The ERI antenna is included in the revised OET FM Model Program under Type 3, Opposed "U" dipole. Using the Type 3 antenna selection, the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 3.952 $\mu\text{W}/\text{cm}$ at 71.6 meters, which is 1.976 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in 1.1307(b) regarding sites with multiple emitters, which excludes applicant from responsibility for taking any corrective action in areas where the proposal's contribution is less than five percent.

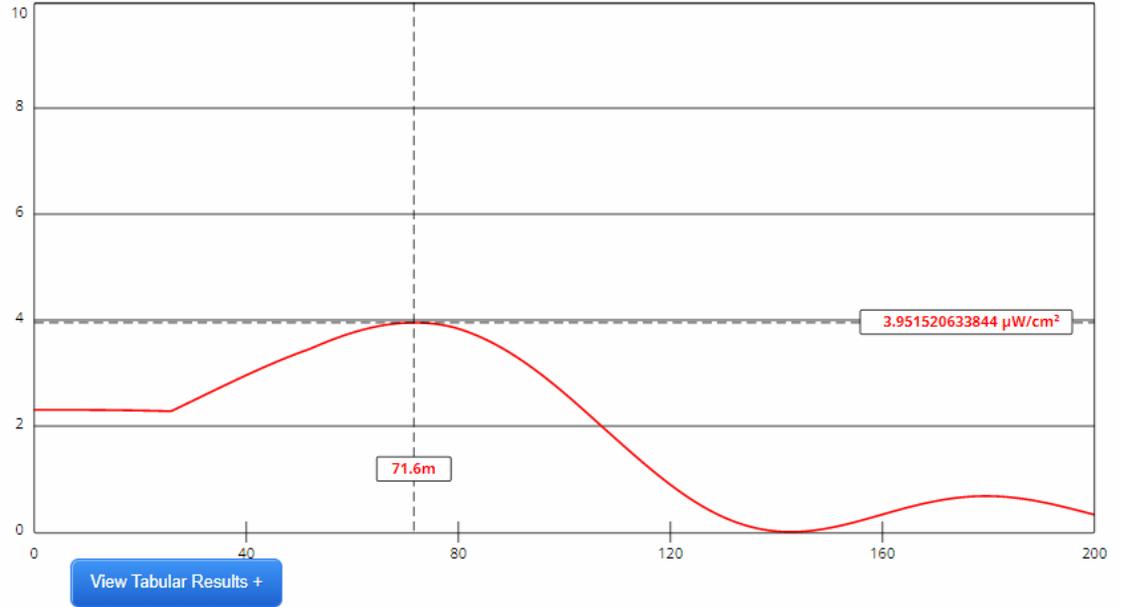
The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

FM Model

Electromagnetic Compatibility Division

- FM Model
- FCC Policy on Human Exposure
- RF Safety FAQ
- Body Tissue Dielectric Parameters
- RF Safety Highlighted Releases

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA. [Show More....](#)



Channel Selection	Channel 249 (97.7 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	<input type="text" value="297"/>	Distance (m)	<input type="text" value="200"/>
ERP-H (W)	<input type="text" value="100000"/>	ERP-V (W)	<input type="text" value="100000"/>
Num of Elements	<input type="text" value="10"/>	λ	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	Apply	