

KZAR McQueeney, Texas
Channel 249C1 – 97.7 MHz – 100 kW ERP @ 299 m HAAT
Proposed
Channel 292C3 – 106.3 MHz – 14.5 kW ERP DA @ 131 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 KZAR, Channel 249C1, Facility ID No. 25588, McQueeney, Texas. EMF herein is filing a minor modification application to modify KZAR to specify operation on non-adjacent Channel 292C3 (106.3 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 KMLR, Channel 292C3, Facility ID No. 15907, Gonzales, Texas. to specify operation on Channel 249C1 (97.7 MHz). For details of the KMLR application please refer to the KMLR 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

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

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

The proposed KZAR facility would operate on Channel 292C3 (106.3 MHz) with 14.5 kW directional with the transmit antenna located at 114.58 meters height above ground level and 131 meters HAAT.

The KZAR Reference Site coordinates are located at 29° 42' 44.3" North Latitude, 97° 52' 46.4" West Longitude (NAD 83), This site is fully spaced to all full power FM station facilities with two exceptions. It is short spaced to co-owned KMLR, Channel 292C3, Gonzales, Texas. EMF is filing a contingent minor modification application for KMLR specifying operation on Channel 249C1. The other short spacing is to KTKX, Channel 294C0, Terrell Hills, TX. The attached KZAR Channel 292C3 Reference Site Channel Study shows that in order to facilitate the modification a change must be made to the FCC FM database. Herein, EMF is proposing new reference site coordinates for KTKX, Channel 294C0, Facility ID No. 70357, Terrell Hills, Texas. The proposed reference site coordinates for KTKX are 29° 06' 17" N. Latitude and 98° 26' 25" W. Longitude (NAD 83). These coordinates are fully spaced to all full power FM stations and allotments. The KZAR Channel 292C3 reference site is fully spaced to all full power FM stations and allotments including the KTKX Channel 294C0 reference site. Channel studies are provided for the KTKX reference site as well as the KZAR reference and application sites. Hypothetical site city grade exhibits are provided for both KTKX and KZAR. Both maps

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

demonstrate that the proposed reference site hypothetical 70 dBu contours for KTKX and KZAR reach 100 percent of their respective communities of license.

The KZAR Reference Site City Grade Exhibit demonstrates the hypothetical FCC 70 dBu contour (23.2 km.) extends over 100 percent of the corporate limits of McQueeney.

The KZAR Application Site Channel Study coordinates for Channel 292C3 are located at 29° 50' 08.8" North Latitude, 98° 01' 14.3" West Longitude (NAD 83). The site is an existing tower registered with Antenna Structure Registration ("ASR") 1049038. The site is fully spaced to all full power FM stations with two exceptions. The Application Site Channel Study shows the site is short spaced to KMLR, Channel 292C3, Gonzales, Texas. EMF is filing a contingent minor modification application for KMLR requesting operation on Channel 249C1. The Application Site Channel Study also shows one other short spacing to KOOC, Channel 292C3, licensed to Belton, Texas. EMF will utilize a directional antenna and requests Section 73.215 contour protection for KZAR with respect to KOOC.

The proposed KZAR FCC F(50,50) 70 dBu contour does not reach 80 percent of the McQueeney corporate boundaries. Therefore, a Section 73.315 Supplemental Showing using the Longley-Rice propagation methodology is used to show the required city grade coverage under Section 73.315.

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.

KZAR Ref. Site Channel Study

REFERENCE				CLASS = C3 Int = B1		DISPLAY DATES	
29 42 44.3 N.				Current Spacings to 3rd Adj.		DATA 04-24-23	
97 52 46.4 W.				Channel 292 - 106.3 MHz		SEARCH 04-24-23	
Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
KMLR	LIC 292C3	Gonzales		TX 97.8	19.7	152.5	-132.8
29 41 17.8	97 40 40.0	CN	15.000 kW		129 M		
		Educational Media Foundati	BMLED20060111AAT				
NOTE: KMLR is filing a contingent application for Channel 249C1.							
KMLR	ALO 292C3	Gonzales		TX 123.2	49.7	152.5	-102.8
29 28 00.9	97 27 01.0		0.000 kW		100 M		
		Educational Media Foundati					
K292FF	LIC-D 292D	Terrell Wells		TX 241.3	58.3	92.5	-34.2
29 27 34.8	98 24 25.1	DVN	0.150 kW		97 M		
		CSN International	BLFT20070329ADQ				
KTKX	LIC 294C0	Terrell Hills		TX 226.5	84.9	86.5	-1.6
29 11 03.9	98 30 50.1	CN	100.000 kW		310 M		
		Cmg Ny/texas Radio, LLC	BLH19850508KY				
NOTE: See the KTKX reference site below.							
KTKX	REF 294C0	Terrell Hills		TX 218.9	86.6	86.5	0.08
29 06 17.0	98 26 25.0		0.000 kW		450 M		
		Cmg Ny/texas Radio, LLC					
KOOC	LIC 292C3	Belton		TX 12.4	153.4	152.5	0.9
31 03 46.6	97 31 55.0	CN	11.500 kW		149 M		
		Townsquare Media Killeen-T	BLH19920811KB				
KFMK	LIC-N 290C2	Round Rock		TX 6.4	68.2	55.5	12.7
30 19 23.7	97 47 59.0	NCN	4.500 kW		397 M		
		Educational Media Foundati	0000164374				
AL10570	ALO 292A	George West		TX 193.3	155.9	141.5	14.4
28 20 34.0	98 14 46.0		0.000 kW		100 M		
AU7056770	VAC 292A	George West		TX 193.3	155.9	141.5	14.4
28 20 34.0	98 14 46.0		0.000 kW		100 M		
		From CDBS	RM10162				
K293BF	LIC-D 293D	Comanche Trail		TX 6.4	68.2	48.5	19.7
30 19 23.7	97 47 59.0	DCN	0.099 kW		334 M		
		Keilah Radio, LLC	BLFT20101012ABY				
K289BN	LIC 289D	San Antonio		TX 241.0	67.0	40.5	26.5
29 25 07.3	98 29 02.1	CN	0.145 kW		177 M		
		Carlos Lopez	BLFT20120509AEN				
KAJZ	LIC 293C3	Granite Shoals		TX 328.6	125.7	98.5	27.2
30 40 36.7	98 34 00.1	CN	7.000 kW		175 M		
			BLH20190722AAT				

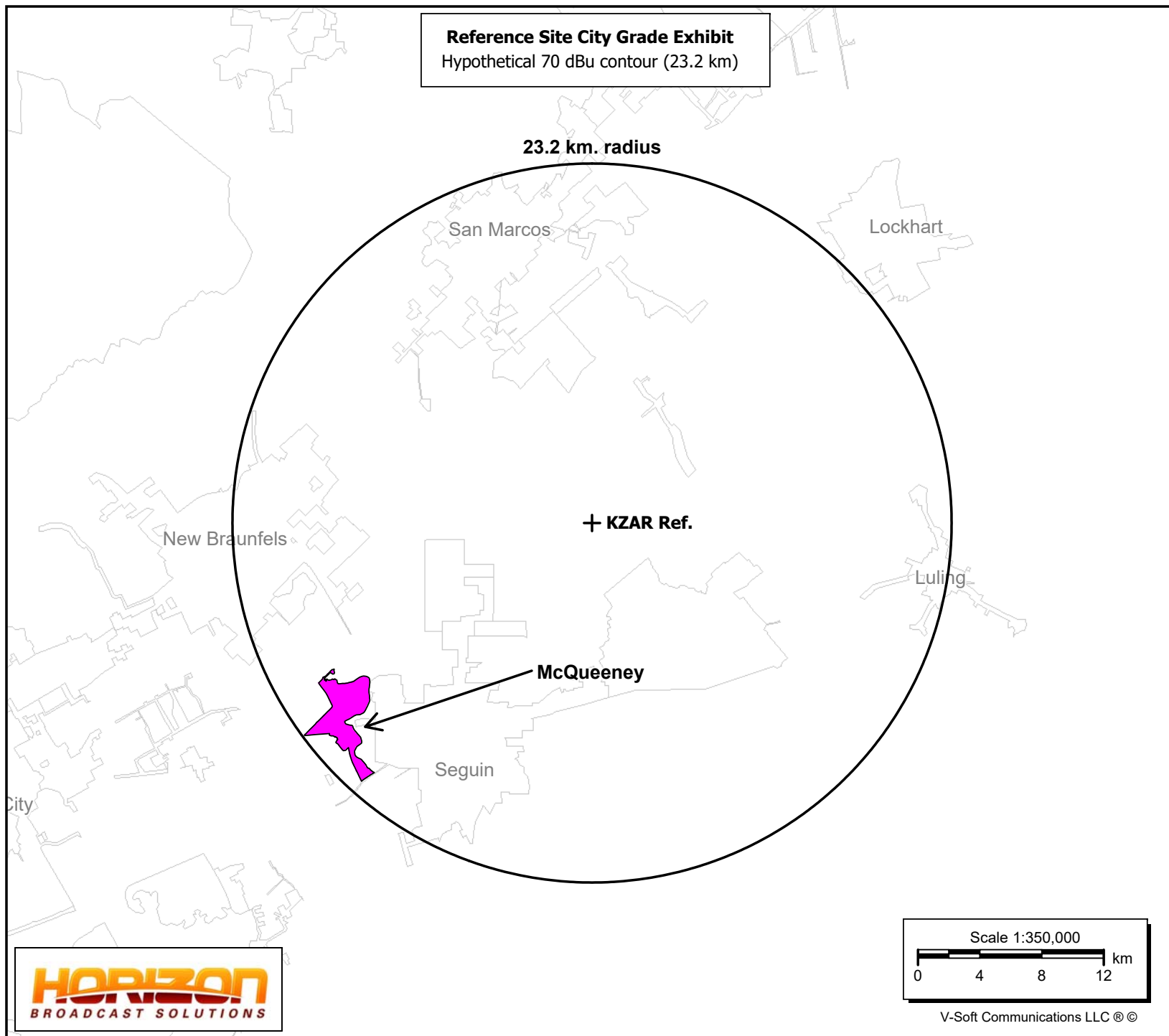
Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
KTTX	LIC-Z 291C2	Brenham		TX 59.7	145.0	116.5	28.5
30 21 48.7	96 34 33.8	ZCN	50.000 kW		150 M		
Tom S. Whitehead, Inc. BLH19920221KB							
K290BO	LIC-D 290D	The Dominion		TX 263.3	73.4	40.5	32.9
29 38 01.8	98 37 55.1	DCN	0.074 kW	0 M			
San Antonio Radioworks, LL BLFT20140702ACS							
K238BZ	CP -D 238D	Seguin		TX 247.9	48.4	11.5	36.9
29 32 53.3	98 20 35.3	DCN	0.250 kW	0 M			
Wendolynn Tellez 0000208398							
KKVR	LIC-N 291A	Kerrville		TX 286.7	130.1	88.5	41.6
30 02 27.8	99 10 20.1	NCN	6.000 kW		100 M		
Radio Ranch, LLC BLH20070911ADB							
KKMJ-FM	LIC 238C1	Austin		TX 6.4	68.2	23.5	44.7
30 19 23.7	97 47 59.0	CN	50.000 kW		398 M		
Audacy License, LLC BLH19980717KH							
K291DA	LIC 291D	San Antonio		TX 250.0	93.7	48.5	45.2
29 25 15.1	98 47 12.6	CN	0.200 kW	0 M			
Af Group, LLC 0000205642							
K295CK	LIC-D 295D	Luckenbach		TX 301.7	89.7	40.5	49.2
30 08 02.7	98 40 21.1	DVN	0.062 kW	0 M			
Sun Radio Foundation BLFT20160405ABL							
KGTN-LP	LIC 294L1	Georgetown		TX 11.1	99.4	39.5	59.9
30 35 30.7	97 40 45.0	CN	0.012 kW		86 M		
Power Radio Corporation BMLL20180601AAB							

KZAR Ref.

McQueeney, TX
Latitude: 29-42-44.30 N
Longitude: 097-52-46.40 W
ERP: 25.00 kW
HAAT: 100.0
Channel: 292
Frequency: 106.3 MHz
Prop Model: None

Reference Site City Grade Exhibit

Hypothetical 70 dBu contour (23.2 km)



KZAR Ref.

McQueeney, TX
Latitude: 29-42-44.30 N
Longitude: 097-52-46.40 W
ERP: 25.00 kW
HAAT: 100.0
Channel: 292
Frequency: 106.3 MHz
Prop Model: None

Reference Site City Grade Exhibit

Hypothetical 70 dBu contour (23.2 km)
(Close-up view)

23.2 km. radius

McQueeney

HORIZON
BROADCAST SOLUTIONS

Scale 1:60,000
0 0.83 1.67 2.5 km

V-Soft Communications LLC ©

KTKX CH294C0 Ref. Site Channel Study

REFERENCE								DISPLAY DATES
29 06 17.0 N.				CLASS = C0 Int = C				DATA 04-22-23
98 26 25.0 W.				Current Spacings to 3rd Adj.				SEARCH 04-24-23
----- Channel 294 - 106.7 MHz -----								
Call	Channel	Location	Azi	Dist	FCC	Margin		
Lat.	Lng.	Ant	Power	HAAT				

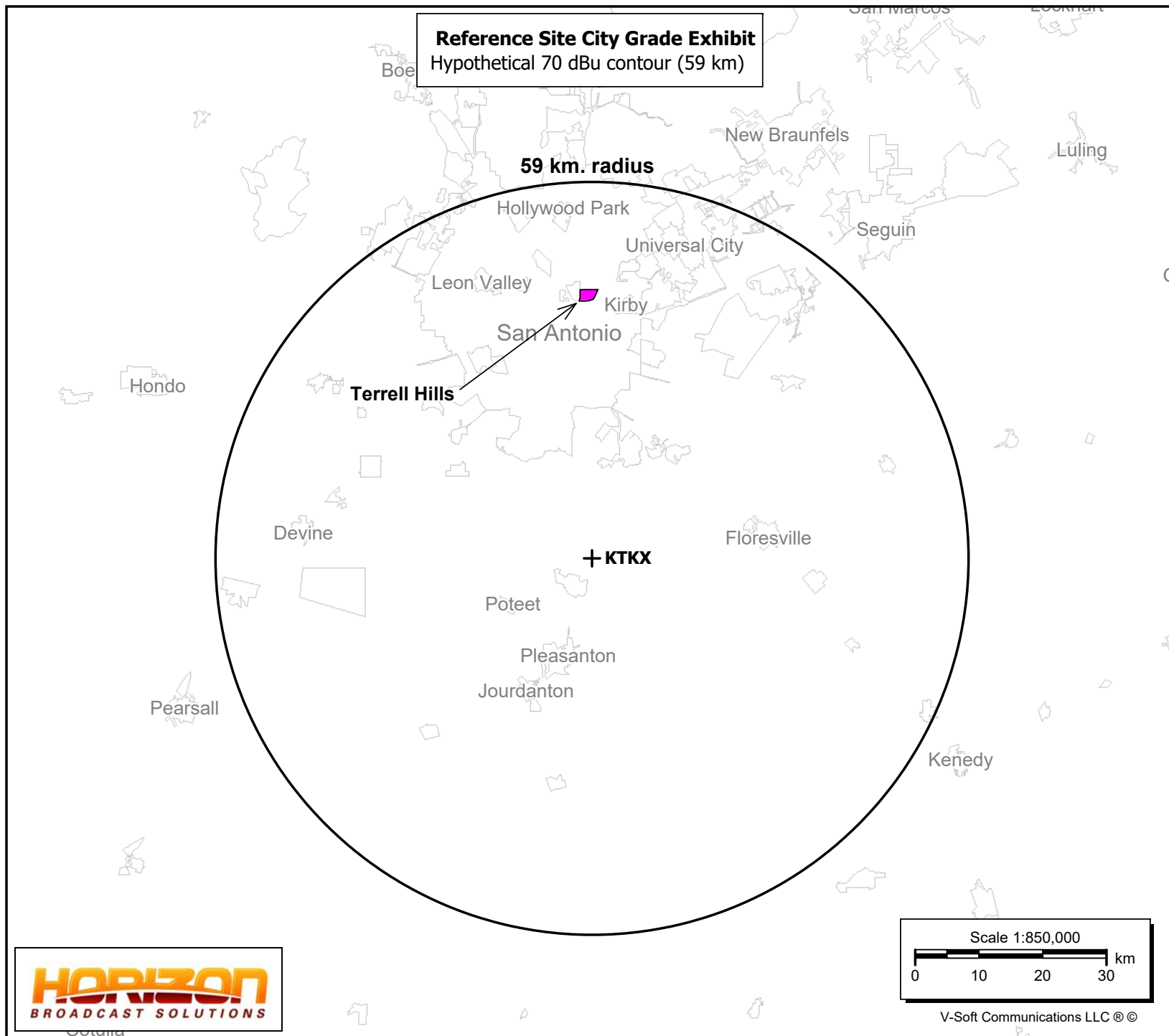
KTKX	LIC	294C0	Terrell Hills	TX	321.1	11.4	269.5	-258.1
29 11 03.9	98 30 50.1	CN	100.000 kW		310 M			
Cmg Ny/texas Radio, LLC				BLH19850508KY				
K296GK	LIC	296D	San Antonio	TX	353.1	35.0	83.5	-48.5
29 25 06.8	98 29 02.1	CN	0.250 kW	0 M				
Alpha Media Licensee LLC				BLFT20150217ABP				
K292FF	LIC-D	292D	Terrell Wells	TX	4.7	39.5	83.5	-44.0
29 27 34.8	98 24 25.1	DVN	0.150 kW		97 M			
CSN International				BLFT20070329ADQ				
K291DA	LIC	291D	San Antonio	TX	316.4	48.6	83.5	-34.9
29 25 15.1	98 47 12.6	CN	0.200 kW	0 M				
Af Group, LLC				0000205642				
R17613	VAC	294A	Piedras Negras	CI	258.0	208.1	209.5	-1.4
28 42 00.9	100 31 24.3		0.000 kW		100 M			
From CDBS								
KZAR	REF	292C3	Gonzales	TX	38.7	86.6	86.5	0.08
29 42 44.3	97 52 46.4		0.000 kW		100 M			
Educational Media Foundati								
AU9111727	VAC	291A	Dilley	TX	229.4	85.6	85.5	0.10
28 36 06.9	99 06 22.1		0.000 kW		100 M			
From CDBS				RM11394				
AL13593	ALO	291A	Dilley	TX	229.4	85.6	85.5	0.10
28 36 06.9	99 06 22.1		0.000 kW		100 M			
KLUB	LIC	295C3	Bloomington	TX	105.4	162.6	162.5	0.13
28 42 25.0	96 50 06.9	CN	18.500 kW		116 M			
Townsquare License, LLC				BLH20080424AAF				
AL10570	ALO	292A	George West	TX	167.4	86.5	85.5	1.1
28 20 34.0	98 14 46.0		0.000 kW		100 M			
AU7056770	VAC	292A	George West	TX	167.4	86.5	85.5	1.1
28 20 34.0	98 14 46.0		0.000 kW		100 M			
From CDBS				RM10162				
NEW	APP-N	295A	Carrizo Springs	TX	245.4	153.2	151.5	1.7
28 31 25.0	99 51 50.4	NCN	6.000 kW		50 M			
Mekaddesh Group Corporatio				0000159006				
AL12706	ALO	295A	Carrizo Springs	TX	242.3	154.9	151.5	3.4
28 27 01.0	99 50 31.2		0.000 kW		100 M			
AU9810682	VAC	295A	Carrizo Springs	TX	242.3	154.9	151.5	3.4
28 27 01.0	99 50 31.2		0.000 kW		100 M			
From CDBS				RM11316				

Call	Channel	Location			Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power			HAAT		
AL3835	295C2	Burnet	TX	4.4	181.5	175.5	6.0	
30 44 12.7	98 17 37.1		0.000 kW		150 M			
From CDBS								
KYRK	LIC-D	293C2	Taft	TX	138.8	181.9	175.5	6.4
27 52 03.1	97 13 08.0	DCN	50.000 kW		148 M			
Withers Family Texas Holdi BLH20110714ACK								
KYRK	ALO	293C2	Taft	TX	138.8	182.0	175.5	6.5
27 52 01.1	97 13 09.0		0.000 kW		150 M			
Withers Family Texas Holdi								
KRXB	LIC-N	296A	Beeville	TX	137.8	96.0	85.5	10.5
28 27 46.0	97 46 51.0	NCN	1.500 kW		103 M			
Scarlet Begonia Production BLH20100615ACW								
KMLR	STA	292C3	Gonzales	TX	48.5	98.3	86.5	11.8
29 41 17.8	97 40 40.0	CN	15.000 kW		129 M			
Educational Media Foundati 0000213040								
KMLR	LIC	292C3	Gonzales	TX	48.5	98.3	86.5	11.8
29 41 17.8	97 40 40.0	CN	15.000 kW		129 M			
Educational Media Foundati BMLED20060111AAT								
KAJZ	LIC	293C3	Granite Shoals	TX	356.0	174.7	162.5	12.2
30 40 36.7	98 34 00.1	CN	7.000 kW		175 M			
BLH20190722AAT								
KHAV	LIC	296A	Sabinal	TX	283.9	102.1	85.5	16.6
29 19 14.8	99 27 40.1	CN	0.100 kW	8 M				
35 Communications LLC BLH20140227ADE								
AL0168	VAC	294A	El Lobo	TA	207.2	227.7	209.5	18.2
27 16 30.1	99 29 42.1		0.000 kW		100 M			
From CDBS								
KMZZ	LIC	295A	Bishop	TX	156.5	173.1	151.5	21.6
27 40 17.0	97 44 17.7	CN	6.000 kW		75 M			
Claro Communications, Ltd. 0000125160								
K295CK	LIC-D	295D	Luckenbach	TX	349.0	116.3	93.5	22.8
30 08 02.7	98 40 21.1	DVN	0.062 kW	0 M				
Sun Radio Foundation BLFT20160405ABL								
KXXM	LIC	241C1	San Antonio	TX	342.5	61.5	36.5	25.0
29 38 01.8	98 37 55.1	CN	100.000 kW		182 M			
Ihm Licenses, LLC BLH20100510AVZ								
K293CY	LIC	293D	Kerrville	TX	330.7	122.0	93.5	28.5
30 03 42.3	99 03 44.2	CN	0.250 kW	0 M				
Radio Ranch, LLC 0000124579								
KSEJ-LP	LIC	293L1	Victoria	TX	104.4	142.3	110.5	31.8
28 46 45.9	97 01 43.9	CN	0.094 kW		31 M			
Ralph Salazar Victory Mini BLL20170210AHX								
AL10697	ALO	293A	Bruni	TX	192.7	183.7	151.5	32.2
27 29 13.1	98 51 01.1		0.000 kW		100 M			

Call	Channel	Location	Power	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant			HAAT		
AU7057826	VAC 293A	Bruni	TX 192.7	183.7	151.5	32.2	
27 29 13.1	98 51 01.1		0.000 kW		100 M		
From CDBS RM10245							
AL0285	VAC 294A	San Ignacio	TA 203.6	249.3	209.5	39.8	
27 02 26.1	99 26 59.2		0.000 kW		100 M		
From CDBS							
KKVR	LIC-N 291A	Kerrville	TX 326.0	125.7	85.5	40.2	
30 02 27.8	99 10 20.1	NCN	6.000 kW		100 M		
Radio Ranch, LLC BLH20070911ADB							
AL13240	ALO 291A	Refugio	TX 130.6	131.9	85.5	46.4	
28 19 45.0	97 25 00.0		0.000 kW		100 M		
KIXT	LIC-N 294C3	Hewitt	TX 24.6	275.3	225.5	49.8	
31 21 20.6	97 13 57.0	NCN	10.000 kW		150 M		
Prophecy Media Group, LLC BLH20100616AHJ							
KXHM	LIC-Z 291A	Refugio	TX 125.4	136.0	85.5	50.5	
28 23 30.0	97 18 27.0	ZCN	6.000 kW		45 M		
Hispanic Target Media Inc. BLH20140321AEV							
KLZT	LIC 296C2	Bastrop	TX 36.1	140.2	88.5	51.7	
30 07 17.8	97 34 47.5	CN	49.000 kW		152 M		
Waterloo Media Group, L.P. BMLH20140326AEI							
K293BF	LIC-D 293D	Comanche Trail	TX 24.4	148.6	93.5	55.1	
30 19 23.7	97 47 59.0	DCN	0.099 kW		334 M		
Keilah Radio, LLC BLFT20101012ABY							
AL10774	ALO 294A	Eden	TX 328.0	271.0	214.5	56.5	
31 10 00.6	99 57 02.3		0.000 kW		100 M		
AU9858299	VAC 294A	Eden	TX 328.0	271.0	214.5	56.5	
31 10 00.6	99 57 02.3		0.000 kW		100 M		
From CDBS RM10676							
KGTN-LP	LIC 294L1	Georgetown	TX 23.7	180.5	121.5	59.0	
30 35 30.7	97 40 45.0	CN	0.012 kW		86 M		
Power Radio Corporation BMLL20180601AAB							

KTKX

Terrell Hills, TX
Latitude: 29-06-17 N
Longitude: 098-26-25 W
ERP: 100.00 kW
HAAT: 450 m
Channel: 294
Frequency: 106.7 MHz
Prop Model: None

Reference Site City Grade Exhibit
Hypothetical 70 dBu contour (59 km)

KZAR Proposed Channel 292C3 McQueeney, Texas
FCC Section 73.315 Supplemental Showing
City Grade Coverage of McQueeney

This Supplemental Showing is based upon the standards established in the FCC DA-10-1760 Skytower Communications decision. A supplemental showing using the Longley-Rice mean occurrence 70 dBu contour and Longley-Rice signal shading is used to show city coverage of McQueeney, TX. The Longley-Rice contour was calculated using the standard settings established in OET Bulletin No. 69. The contour was created using V-Soft Probe Version 4.120a Professional. The specific Longley-Rice software settings are listed on the coverage map in the upper left hand corner of the map.

A table is included showing the distances to the FCC 70 dBu contour and Longley-Rice mean occurrence 70 dBu contour for ten radials between 181 and 190 degrees azimuth that cross over McQueeney, TX. The radials are clearly shown on a separate map included with this exhibit. The supplemental showing clearly establishes that the Longley-Rice 70 dBu median occurrence contours along the radials that cross the corporate boundaries of McQueeney are more than 10% greater than the FCC F(50,50) 70 dBu contours.

The attached map shows the FCC F(50,50) 60 dBu contour as well as the Longley Rice 70 dBu mean occurrence contour. 100 percent of McQueeney is contained in the FCC F(50,50) 60 dBu contour. The Longley-Rice 70 dBu mean occurrence contour easily reaches 100 percent of the area and population of McQueeney. The Longley-Rice 74 dBu or greater signal area is shaded in orange. A Longley-Rice signal strength of 74 dBu or greater reaches 100 percent of the population and 97.9 percent of the area of McQueeney.

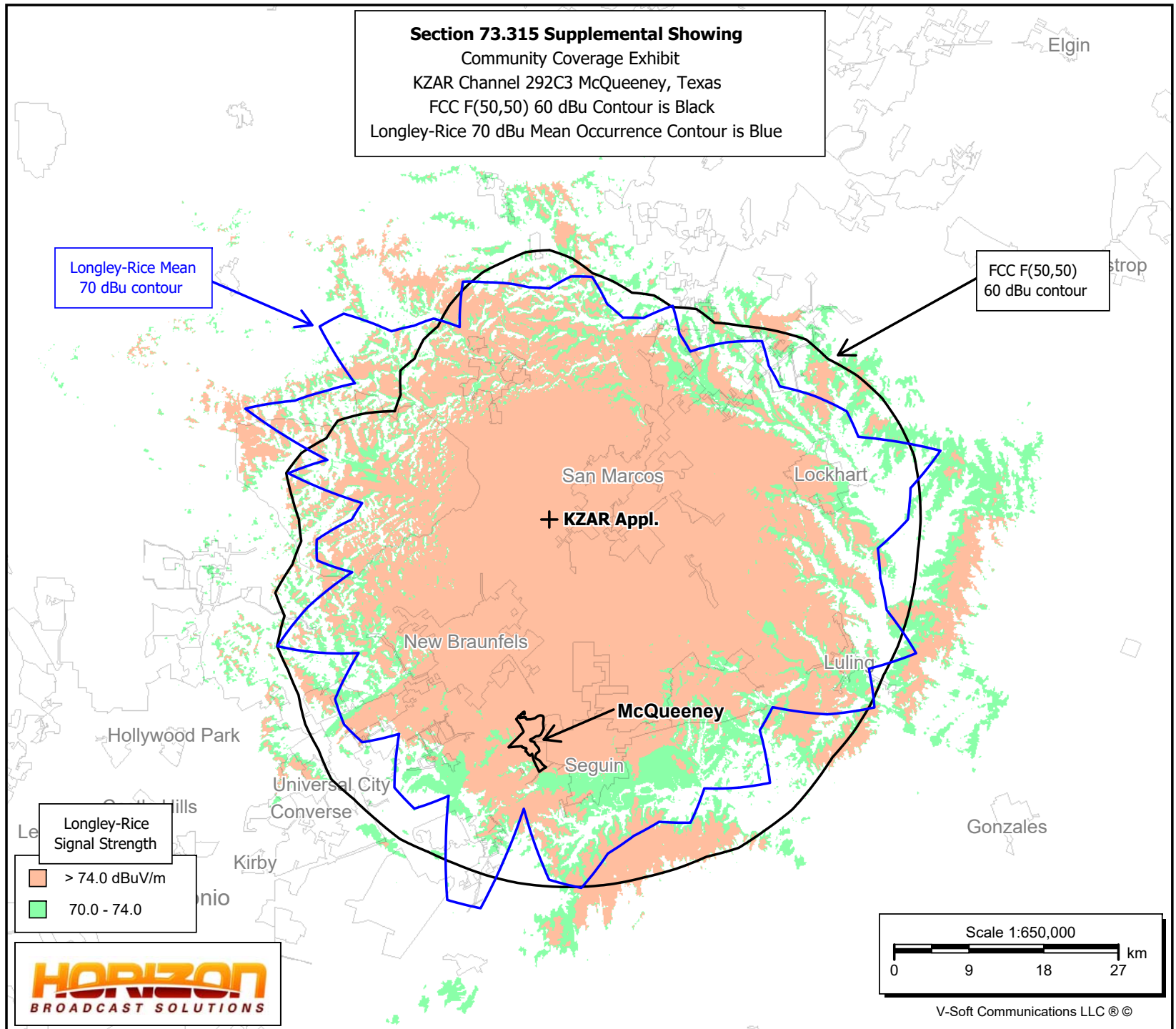
Therefore, it is believed that the proposed KZAR Channel 292C3 modification is in compliance with the Section 73.315 community coverage rules.

KZAR Appl.

McQueeney, TX
Latitude: 29-50-08.80 N
Longitude: 098-01-14.30 W
ERP: 14.50 kW
HAAT: 131.0
Channel: 292
Frequency: 106.3 MHz
AMSL Height: 365.78 m
Elevation: 251.2 m
Horiz. Pattern: Directional
Cell Size: 0.1 km
Profile Increment: 0.1 km
Vert. Pattern: No
Prop Model: Longley-Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast

Section 73.315 Supplemental Showing

Community Coverage Exhibit
KZAR Channel 292C3 McQueeney, Texas
FCC F(50,50) 60 dBu Contour is Black
Longley-Rice 70 dBu Mean Occurrence Contour is Blue

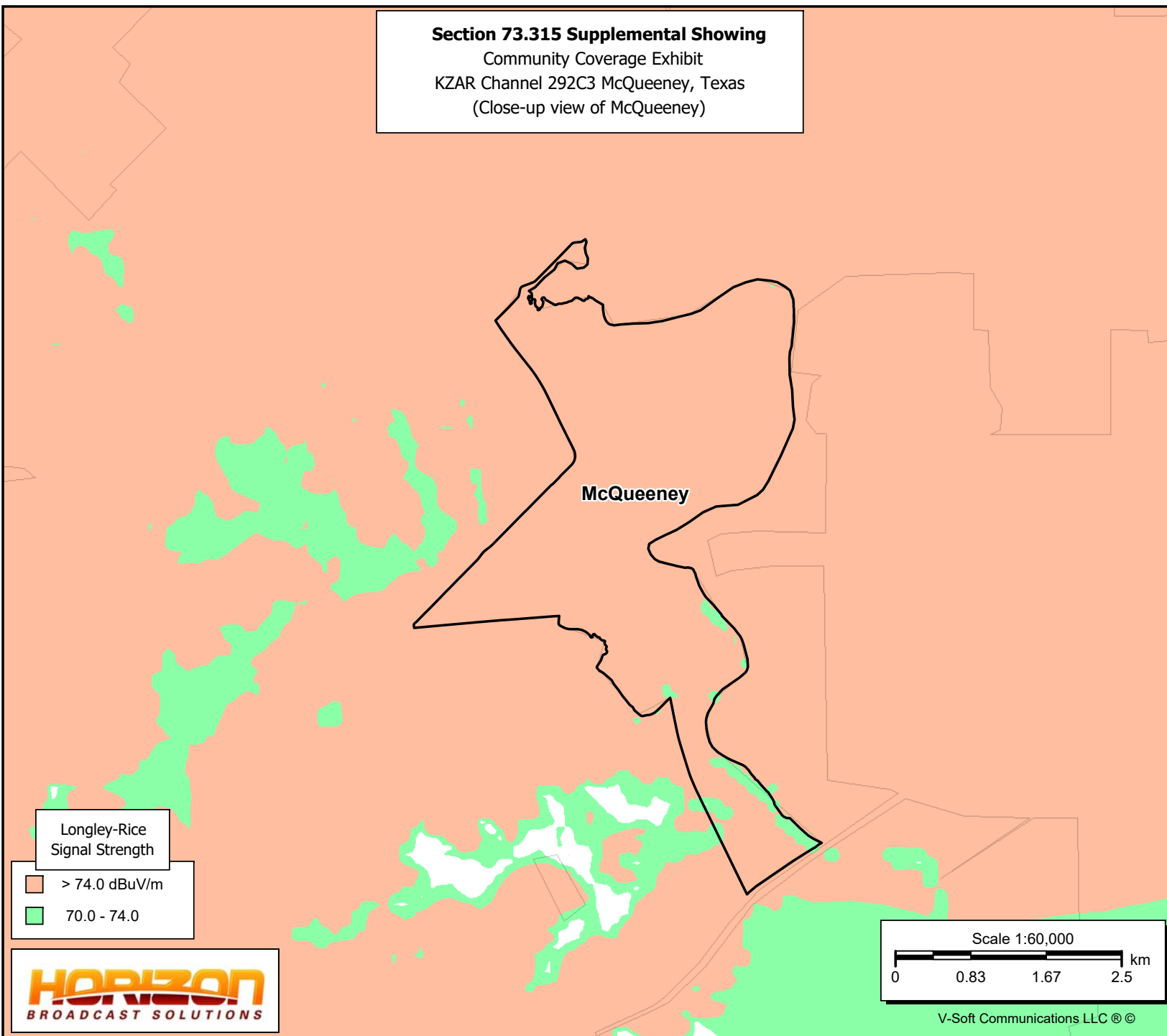


KZAR Appl.

McQueeney, TX
Latitude: 29-50-08.80 N
Longitude: 098-01-14.30 W
ERP: 14.50 kW
HAAT: 131.0
Channel: 292
Frequency: 106.3 MHz
AMSL Height: 365.78 m
Elevation: 251.2 m
Horiz. Pattern: Directional
Cell Size: 0.1 km
Profile Increment: 0.1 km
Vert. Pattern: No
Prop Model: Longley-Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast

Section 73.315 Supplemental Showing

Community Coverage Exhibit
KZAR Channel 292C3 McQueeney, Texas
(Close-up view of McQueeney)

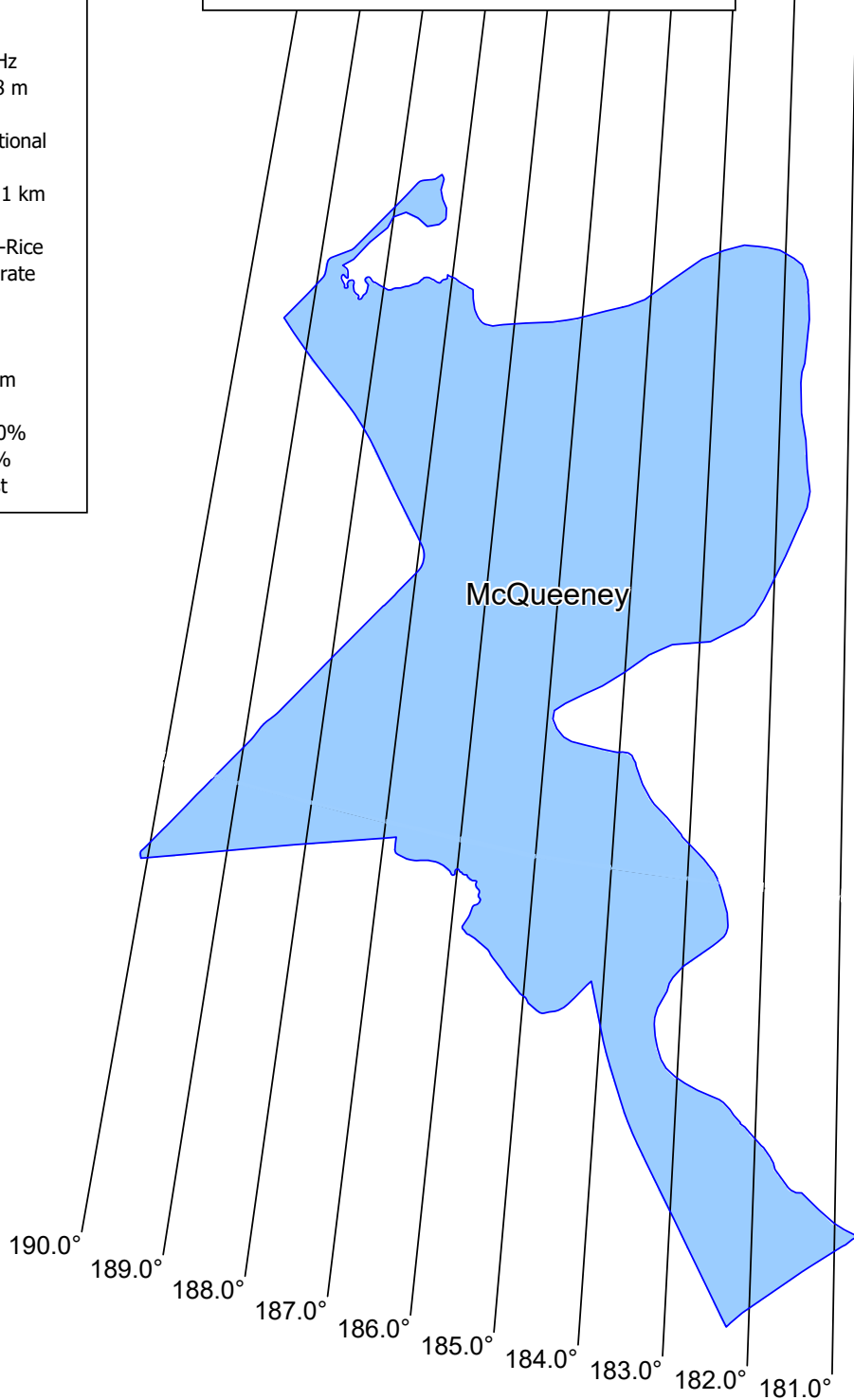


KZAR Appl.

McQueeney, TX
Latitude: 29-50-08.80 N
Longitude: 098-01-14.30 W
ERP: 14.50 kW
HAAT: 131.0
Channel: 292
Frequency: 106.3 MHz
AMSL Height: 365.78 m
Elevation: 251.2 m
Horiz. Pattern: Directional
Cell Size: 0.1 km
Profile Increment: 0.1 km
Vert. Pattern: No
Prop Model: Longley-Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast

Section 73.315 Supplemental Showing

Community Coverage Exhibit
Ten radials that cross over McQueeney
181 degrees to 190 degrees



Section 73.315 Supplemental Coverage Showing
KZAR Channel 292C3 McQueeney, Texas
Comparison of FCC F(50,50) 70 dBu contour distance
vs.
Longley-Rice Mean Occurrence 70 dBu Contour
(10 radials which cross McQueeney are shown)

Site:	KZAR Channel 292C3 McQueeney, Texas				
Coordinates:	29-50-08.8 N ~ 098-01-14.3 W (NAD 83)				
Freq:(MHz)	106.3				
ERP:(kW)	14.5				
HAAT:(m)	131				
Bearing (degrees)	ERP kW	HAAT (m)	FCC F(50,50) 70 dBu Distance (km)	Longley-Rice 70 dBu Mean Occurrence Contour Distance (km)	Percentage Increase
181	14.5	173	26.2	43.55	66.2%
182	14.5	173	26.2	41.90	59.9%
183	14.5	173	26.2	35.00	33.6%
184	14.5	172	26.1	42.00	60.9%
185	14.5	172	26.1	34.90	33.7%
186	14.5	172	26.1	34.20	31.0%
187	14.5	172	26.1	35.05	34.3%
188	14.5	170	26.0	35.95	38.3%
189	14.5	169	25.9	44.50	71.8%
190	14.5	167	25.8	47.45	83.9%
Avg.	14.5	171.3	26.07	39.45	51.4%

KZAR Appl.

McQueeney, TX
Latitude: 29-50-08.80 N
Longitude: 098-01-14.30 W
ERP: 14.50 kW
HAAT: 131.0
Channel: 292
Frequency: 106.3 MHz
AMSL Height: 365.78 m
Elevation: 251.2 m
Horiz. Pattern: Directional
Cell Size: 0.1 km
Profile Increment: 0.1 km
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KOOC

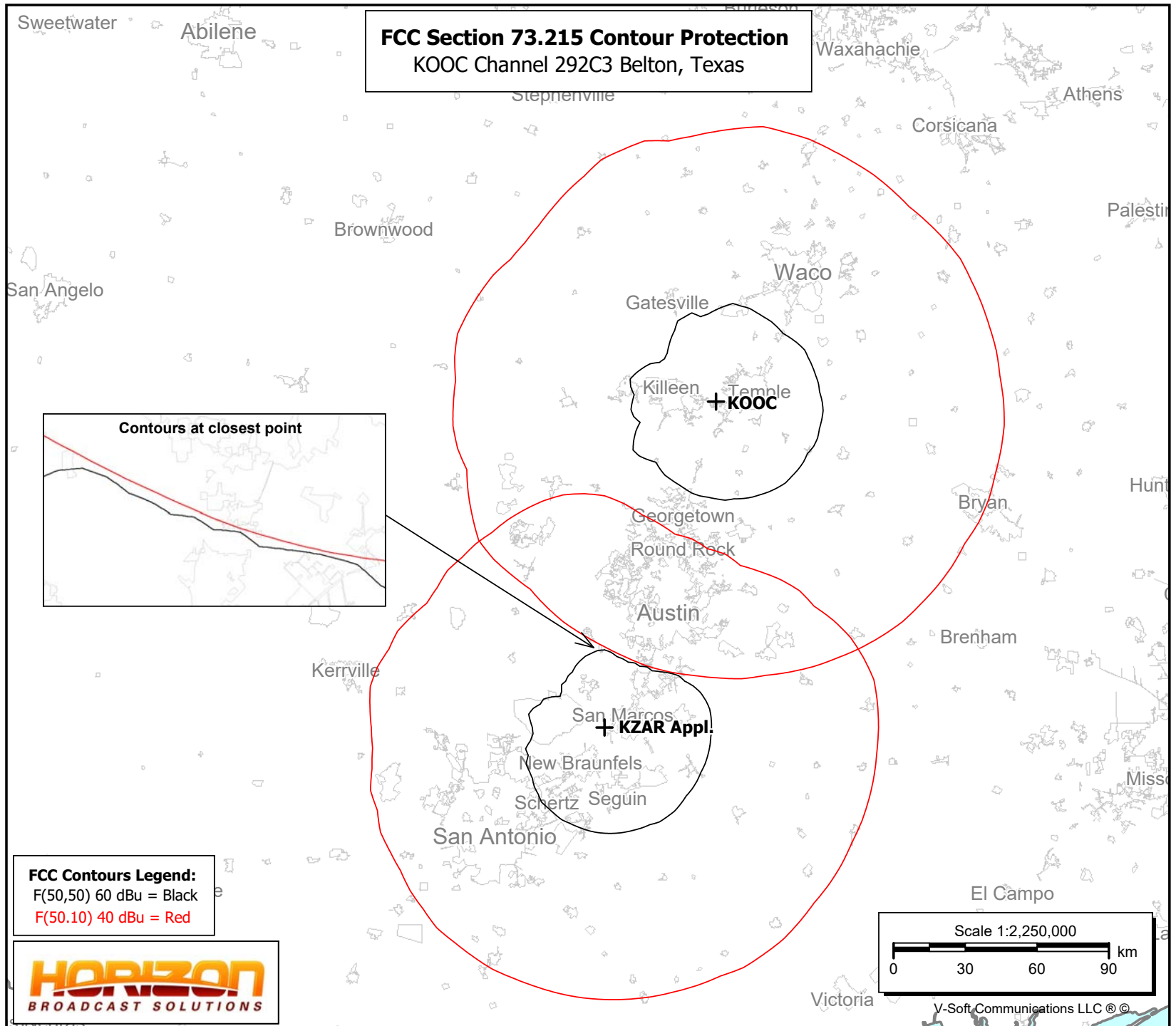
Belton, TX
Latitude: 31-03-46.60 N
Longitude: 097-31-55 W
ERP: 25.00 kW
HAAT: 100 m
Channel: 292
Frequency: 106.3 MHz
AMSL Height: 307.0 m
Elevation: 238.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

FCC Contours Legend:

F(50,50) 60 dBu = Black

F(50,10) 40 dBu = Red

HORIZON
BROADCAST SOLUTIONS

FCC Section 73.215 Contour Protection
KOOC Channel 292C3 Belton, Texas

**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 KZAR, Facility ID No. 25588, McQueeney, Texas. EMF proposes to operate KZAR on Channel 292C3 from a different transmit location. The existing tower, 121.0 meters in overall height, is located at 29° 50' 08.8" N ~ 98° 01' 14.3" W (NAD 83). The tower is registered with the Antenna Registration Structure "ASR" number 1049038. The proposed transmit antenna is an ERI Model LPX-3E three bay full wave circular polarized directional antenna with a center of radiation of 114.58 meters AGL. KZAR will operate on Channel 292C3, 106.3 MHz, with 14.5 kW ERP directional at 131 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 KZAR 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 8.015 $\mu\text{W}/\text{cm}$ at 56.4 meters, which is 4.008 percent of the general population/uncontrolled maximum permitted exposure limit. This is 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.

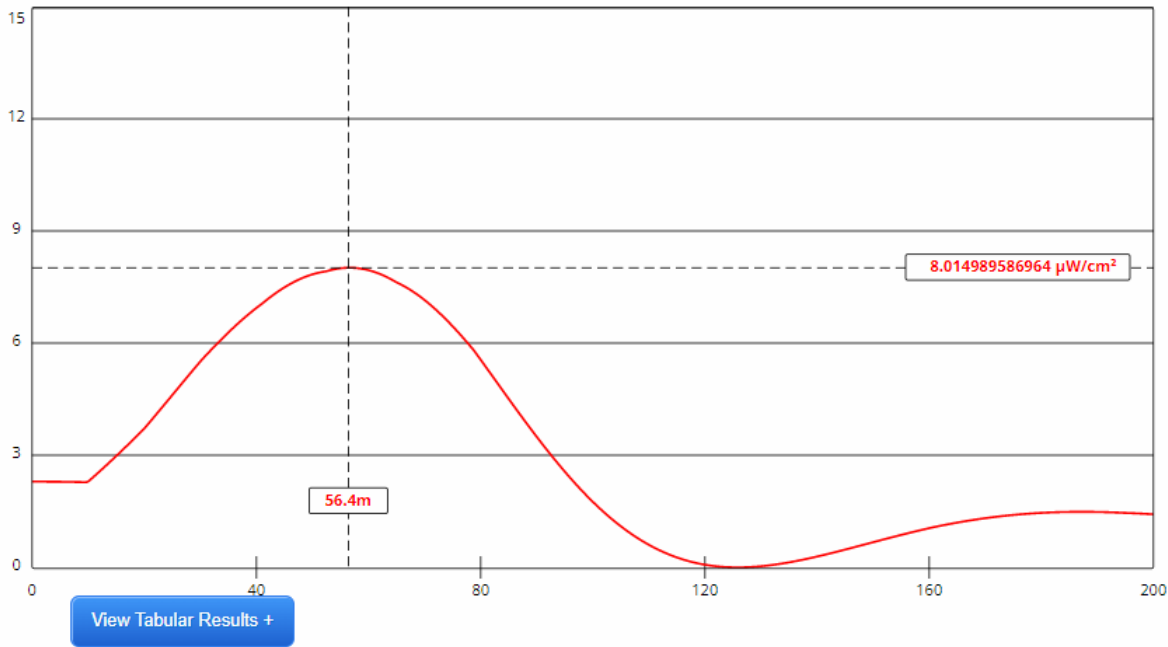
The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less 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 292 (106.3 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	114.58	Distance (m)	200
ERP-H (W)	14500	ERP-V (W)	14500
Num of Elements	3	λ	1
Num of Points	500	Apply	