COMPREHENSIVE TECHNICAL EXHIBIT
AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT

FM STATION KXBJ(FM)
FM CHANNEL 245C0
EL CAMPO, TEXAS

KSBJ EDUCATIONAL FOUNDATION

FEBRUARY, 2017

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AMENDMENT TO APPLICATION FOR CONSTRUCTION PERMIT

The following engineering statement and attached exhibits have been prepared for **KSBJ Educational Foundation** ("KSBJ"), licensee of Non-Commercial Educational FM station KXBJ at El Campo, Texas, and are in support of their amendment to application for construction permit.[1] This amendment to the original application continues the proposed updates to elevation and coordinate data, but eliminates the proposed directional characteristics associated with the antenna. This later change maintains the licensed status of the facility as a non-directional station.

The current license for KXBJ, under FCC File No. BMLED-20130717AIL, specifies operation on FM channel 245C0 with a maximum effective radiated power of 100 kW at a center of radiation of 457 meters above mean sea level, which corresponds to a center of radiation elevation of 450 meters above average terrain. These parameters were apparently based on a sample of 30-second terrain, as was stated in the technical exhibit attached to the original application. As was also stated in that original text, the center of radiation elevation is apparently inconsistent with the site elevation listed in the antenna structure registration data.

As the ASRN data indicates, the site elevation is 6.7 meters above mean sea level. The known antenna center of radiation is 449.2 meters above ground level. The resulting center of radiation above mean sea level is 455.9 meters. The average terrain for the site location is 7.7 meters AMSL, as was determined through an eight radials sample of the Commission's 30-meter linearly interpolated terrain database, which yields a COR elevation of 448.2 meters above

[1] The Facility ID for KXBJ(FM) at El Campo, Texas is 36507.

average terrain. This change is an administrative change, as no actual change in the antenna elevation has occurred.

In addition, the coordinates listed on the license vary from the antenna structure registration data. The variance is one second each of latitude and longitude, when integral values are considered. The NADCON converted values are 28-48-00.0 North Latitude, and 96-07-32.0 West Longitude, which are based on the conversion of the ASRN values.

KXBJ operates on channel 245C0, which is allocated to El Campo, Texas. KXBJ is operated by the licensee as a non-commercial educational facility. No changes to the allocation for KXBJ at El Campo, Texas are proposed under this application, or its amendments.

KXBJ would continue to comply with the community coverage requirements of Section 73.315 of the Commission's Rules. Exhibit E-1 illustrates the predicted 70 dBu and 60 dBu service contours for KXBJ as determined through the Commission's standard method.[2] This map demonstrates that the predicted 70 dBu service contour would fully encompass El Campo, Texas. Additionally, there are no major terrain obstructions between the transmitter site and the community of license.

The main studio for KXBJ is not in compliance with the provisions of Section 73.1125 of the Commission's Rules. KXBJ was authorized under BMLED-20130717AIL to operate as a satellite facility of KSBJ(FM) at Humble, Texas.[3] That application authorized a waiver of that section of the

[2] Contours determined through a sample of the FCC 30-meter terrain database.
[3] The Facility ID for KSBJ(FM) at Humble, Texas is 35590.

Commission's Rules. KSBJ will continue to operate KXBJ as a satellite, and will continue to abide by the representations proffered in the waiver request.

The proposed facility would continue to comply with the applicable sections of the Commission's Rules with regard to interference protection. Section 73.207 is applicable to KXBJ, while Sections 73.215 and 73.213 are not. Exhibit E-2 is a single channel spacing study for KXBJ. This study demonstrates that the spacing requirements would be met to all facilities with the exception of the current construction permit for KWYU at Christine, Texas.[4]

The current construction permit for KWYU is under FCC File No. BNPH-20151009AIB. That application requested processing under Section 73.215 due to their short spacing to KXBJ. That application proposed the use of a directional antenna to provide contour protection to KXBJ. As was previously indicated, no actual change in the actual physical location of KXBJ is proposed, but a shift in the coordinates of one-second results from a necessary correction to bring the KXBJ technical parameters into compliance with the ASR data. As a result, it is respectfully submitted that KXBJ continue to be authorized under Section 73.207.

The proposed facility would not constitute a significant environmental impact, and is exempt from environmental processing. All that is necessary to implement this construction permit is a reduction in the transmitter power output of KXBJ. There will be no change in the calculated power density at ground level, which complies with the uncontrolled environment condition of the Commission's safety standard.

[4] The Facility ID for KWYU(FM) at Christine, Texas is 198739.

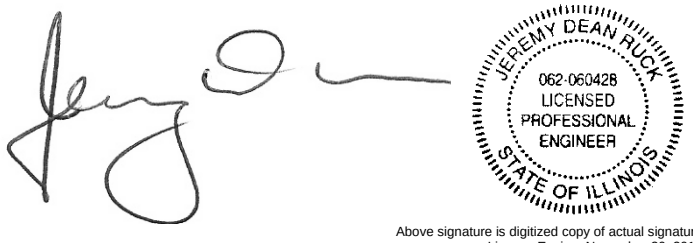
The following table summarizes the power density contribution from each of the facilities on the tower based on a worst-case analysis. This worst-case analysis assumes that each facility operates as a point source. Calculated power density values are determined through the equations in Appendix A of *OET Bulletin 65*. The power density values are in $\mu W/cm^2$.

Callsign	City of License	Facility ID	ERP (kW)	COR AGL (m)	Power Density
KQUE	Bay City	91338	3.6	433.7	1.29
KABA	Louise	123270	3.6	423	1.36
KXBJ	El Campo	36507	100	449.2	33.4
KNTE	Bay City	2131	35	449.2	11.7

The calculated values were based on a height of 2 meters above ground level. The sum of the values is 47.8 $\mu W/cm^2$. This value is less than the upper limit permissible under the uncontrolled environment condition of the Commission's safety standard, and is assumed to exist at all locations within the vicinity of the tower.

KSBJ certifies that it will coordinate with all other users of the site to ensure that workers and other personnel are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Coordination activities will include, but are not necessarily limited to, a reduction in transmitter power, or cessation of operation.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2017

Jeremy D. Ruck, PE
February 20, 2017

JEREMY RUCK & ASSOCIATES, INC.

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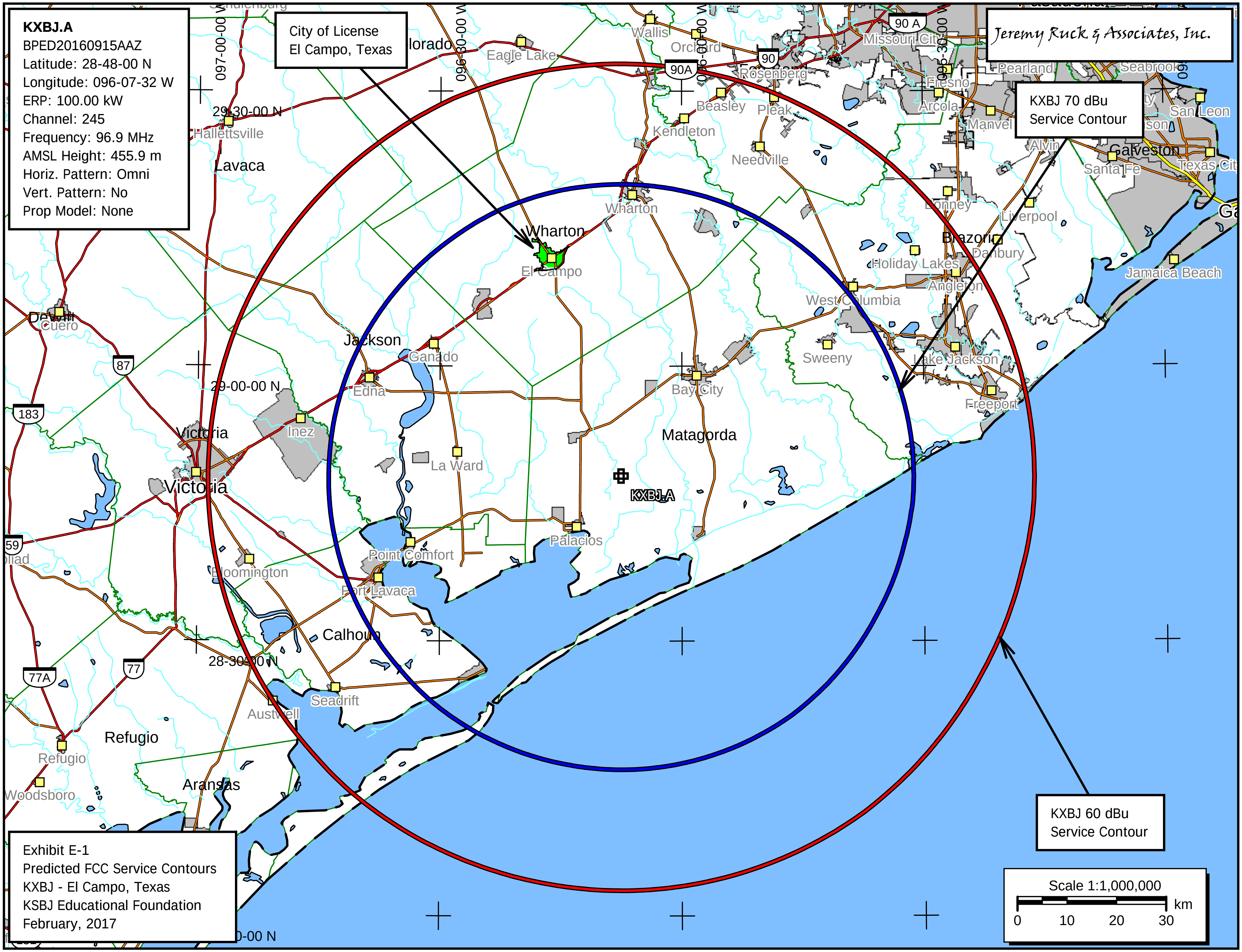
KXBJ.A
BPED20160915AAZ
Latitude: 28-48-00 N
Longitude: 096-07-32 W
ERP: 100.00 kW
Channel: 245
Frequency: 96.9 MHz
AMSL Height: 455.9 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None
City of License
El Campo, Texas
Jeremy Ruck & Associates, Inc.
KXBJ 70 dBu
Service Contour
KXBJ 60 dBu
Service Contour
Scale 1:1,000,000
0 10 20 30
km
Exhibit E-1
Predicted FCC Service Contours
KXBJ - El Campo, Texas
KSBJ Educational Foundation
February, 2017
29-30-00 N
29-00-00 N
28-30-00 N
097-00-00 W
096-30-00 W
096-00-00 W
095-30-00 W
KXBJ.A
Wharton
El Campo
Jackson
Ganado
Edna
Victoria
Inez
La Ward
Matagorda
Bay City
Palacios
Point Comfort
Port Lavaca
Calhoun
Seadrift
Bloomington
Austwell
Refugio
Woodsboro
Aransas
Lavaca
Hallettsville
Cuero
Eagle Lake
Wallis
Orchard
Rosenberg
Beasley
Pleak
Kendleton
Needville
Missouri City
Fresno
Arcola
Pearland
Manvel
Alvin
Seabrook
San Leon
Galveston
Santa Fe
Texas City
Liverpool
Danbury
Brazoria
Holiday Lakes
Angleton
West Columbia
Sweeny
Lake Jackson
Freeport
Jamaica Beach
90A
90
90 A
87
183
59
77
77A

Jeremy Ruck & Associates, Inc.
Consulting Engineers - Canton, Illinois
Exhibit E-2 - Single Channel Spacing Study
KXBJ - El Campo, Texas

REFERENCE
28 48 00.0 N.
96 07 32.0 W.

CLASS = C0 Int = C
Current Spacings to 3rd Adj.

DISPLAY DATES
DATA 02-20-17
SEARCH 02-20-17

Channel 245 - 96.9 MHz

Call	Channel	Location		Azi	Dist	FCC	Margin
KXBJ	APP-D 245C0	El Campo	TX	0.0	0.00	269.5	-269.5
KXBJ	LIC 245C0	El Campo	TX	277.4	0.02	269.5	-269.5
KWYU	CP -Z 245C3	Christine	TX	270.5	215.86	225.5	-9.6
KHMX	LIC 243C	Houston	TX	34.5	104.80	104.5	0.30
KTHT	LIC 246C	Cleveland	TX	28.7	220.19	219.5	0.7
NEW	CP -Z 247A	Garwood	TX	331.0	93.31	85.5	7.8
KHFI-FM	LIC 244C1	Georgetown	TX	316.7	234.14	195.5	38.6
KGGB	LIC-N 242A	Yorktown	TX	282.7	127.82	85.5	42.3

All separation margins include rounding