



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
A DISPLACEMENT CONSTRUCTION PERMIT FOR
KTXE-LD - SAN ANGELO, TEXAS
LICENSE # BLDTL-20140627AAC22
DTV - CH. 22 - 15.0 kW - 696 m AMSL**

Prepared for: BLUESTONE LICENSE HOLDINGS LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, License No. 7418, and in the State of New York, License No. 63418.

GENERAL

This office has been authorized by BLUESTONE LICENSE HOLDINGS LLC, licensee of KTXE-LD, channel 38, facility ID number 309, licensed to San Angelo, Texas, to prepare this statement, FCC Form 2100, Schedule C, its technical sections, and the associated exhibits in support of an application for displacement its licensed channel 38 facility in accordance with a notification letter from T-Mobile USA, Inc., stating that T-Mobile is preparing to commence operations on its 600 MHz spectrum in the Partial Economic Area ("PEA") # 320 by 10/31/2017 and your station is likely to cause harmful interference to T-Mobile's operations. KTXE-LD's licensee has determined that the station can continue its operations on channel 22 while complying with the FCC's restrictions on new

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interference to other television facilities. The instant application proposes a change to channel 22 and an increase in ERP to 15 kW using its non-directional antenna. No other changes are proposed.

NON-DIRECTIONAL ANTENNA

The applicant proposes to continue using a non-directional transmitting antenna with its center of radiation located at a height above ground of 119 meters, and a height above mean sea level of 696 meters.

PREDICTED COVERAGE CONTOURS

The predicted coverage contours were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 1 shows the predicted LPTV protected (51 dBu) contour, and the principal community of license, San Angelo, Texas.

ALLOCATION CONSIDERATIONS

Post-Transition DTV Considerations

A study was performed, using the FCC's software, tv_study, v. 2.2.3, to determine if the instant application for construction permit is predicted to cause new prohibited

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interference to post reassignment DTV stations, construction permits, DTV allotments, Class A DTV stations or eligible authorized or proposed LPTV facilities. The study results, shown in Appendix B, indicate that the instant application for construction permit is predicted to cause no new interference exceeding 0.5% to the populations served by any post reassignment DTV station, construction permit, allotment, Class A DTV station or authorized and/or proposed LPTV facilities. (See Appendix B)

International DTV Considerations

The KTXE-LD site is located more than 1000 kilometers from the nearest point on the US-Canadian border, but is located 210.8 kilometers from the Mexican border, which is within the Mexican coordination zone. The above study included all stations within the coordination zone, however no Mexican facility was potentially affected, therefore no additional international coordination is required.

BLANKETING AND INTERMODULATION INTERFERENCE

Other broadcast facilities and/or non-broadcast facilities might be located within 10 km of the existing KTXE-LD site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

RADIO FREQUENCY IMPACT

The FCC's guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86

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(1986) and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines define a maximum permissible exposure (MPE) level for occupational or “controlled” situations, and for “uncontrolled” environments that apply in all other cases that might affect the general public. The FCC Office of Engineering and Technology’s technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance to determine whether FCC-regulated transmitting facilities, operations or devices comply with guidelines for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. OET Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC’s policies and guidelines.

The Maximum Permitted Exposure (MPE) level for broadcast facilities that operate on a frequency between 30 MHz and 300 MHz is 200 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) for an “uncontrolled” environment, and is 1000 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) for a “controlled” environment. The MPE level for broadcast facilities that operate on a frequency between 300 MHz and 1500 MHz, primarily UHF TV stations, is determined, in $\mu\text{W}/\text{cm}^2$ for an “uncontrolled” environment by dividing the operating frequency in MHz by 1.500, and is similarly determined for a “controlled” environment by dividing the operating frequency in MHz by 0.300.

The predicted emissions of KTXE-LD must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For KTXE-LD, which

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will operate on television Channel 22 (518-524 MHz), the MPE is 347.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an "uncontrolled" environment and 1,736.7 $\mu\text{W}/\text{cm}^2$ in a "controlled" environment. The proposed KTXE-LD facility will operate with a maximum ERP of 15.0 kW from a horizontally polarized omni-directional transmitting antenna with a centerline height of 119 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the KTXE-LD facility is predicted to produce a power density at two meters above ground level of 3.410 $\mu\text{W}/\text{cm}^2$, which is 0.98% of the FCC guideline value for an "uncontrolled" environment, and 0.196% of the FCC's guideline value for "controlled" environments. There is one other LPTV DTV facility that is located at the KTXE-LD site. The total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all facilities within the relevant proximity, is 1.11% of the limit applicable to "uncontrolled" environments, and 0.222% of the limit for "controlled" environments. (See Appendix A)

OCCUPATIONAL SAFETY

The licensee of KTXE-LD is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KTXE-LD antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

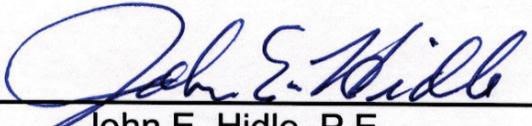
SUMMARY

It is submitted that the instant application for a displacement construction permit to change KTXE-LD from channel 38 to channel 22, as described herein, complies with the

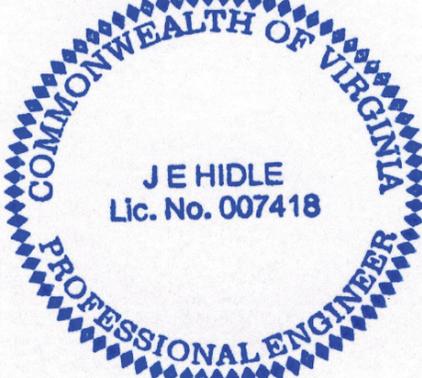
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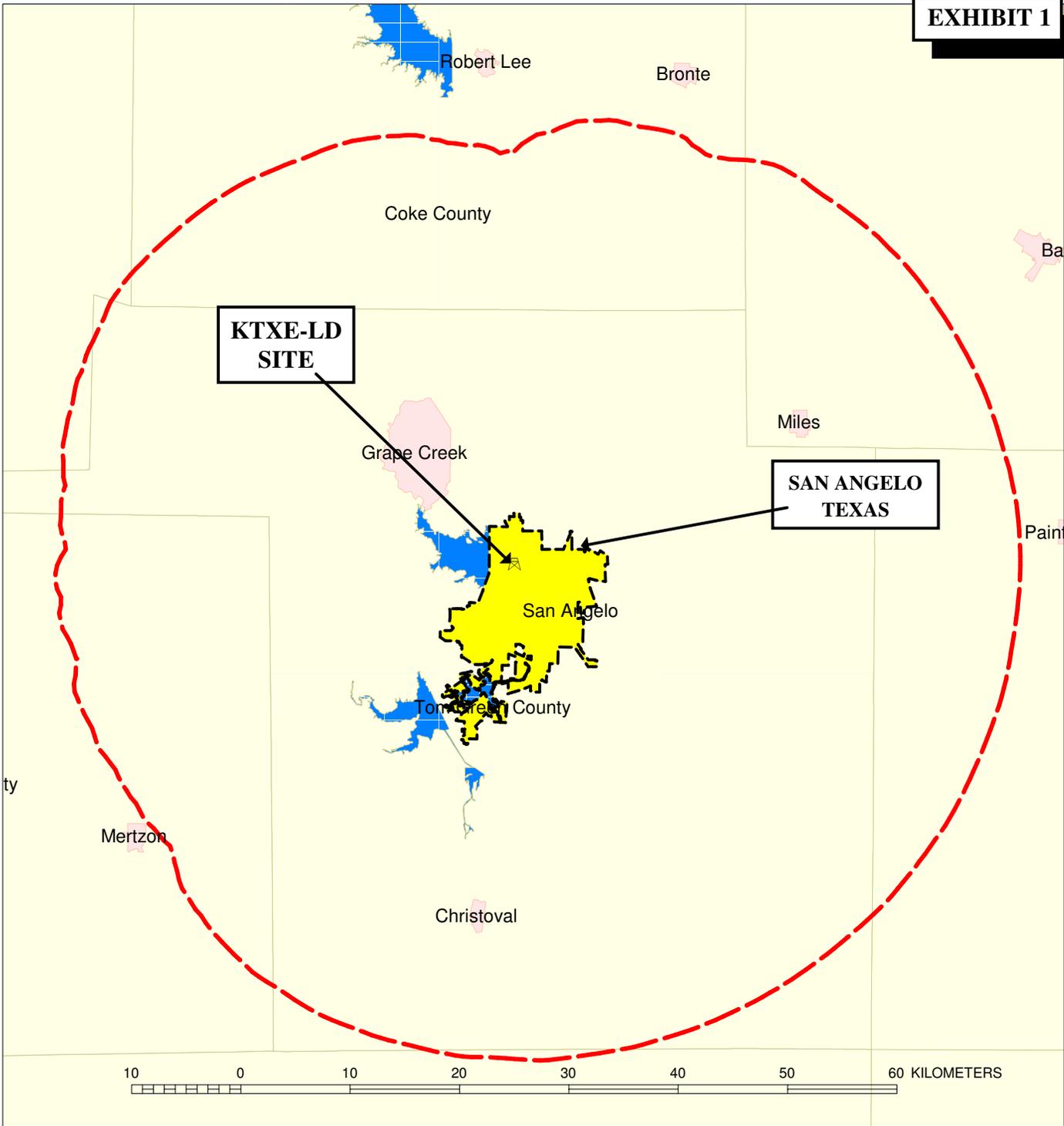
Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: September 22, 2017



John E. Hidle, P.E.





PREDICTED COVERAGE CONTOUR

KTXE-LD - SAN ANGELO, TEXAS
DTV Channel 22 - 15 kW - 696 m AMSL

Predicted Protected LPTV 51 dBu
F(50,90) Coverage Contour

SEPTEMBER 2017

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**

KTXE-LD, San Angelo, Texas
Channel 22, 15.0 kW, 696 m AMSL
September, 2017

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLAR- IZATION</u>	<u>ANTENNA HEIGHT</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR*</u>	<u>WORST-CASE PREDICTED POWER DENSITY ($\mu\text{W}/\text{cm}^2$)</u>	<u>FCC UNCONTROLLED LIMIT ($\mu\text{W}/\text{cm}^2$)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
KTXE-LD	DT	22	521	H	117	15.000	0.300	3.410	347.33	0.98%
KTXE-LD**	DT	38	617	H	117	2.400	0.300	0.546	411.33	0.13%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =										1.11%

* For television stations a very conservative vertical relative field factor of 0.3 was assumed pursuant to OET Bulletin 65.

** Existing channel 38 facility will be replaced by new channel 22 facility



KTXE-LD - SAN ANGELO, TEXAS Longley-Rice Interference Analysis

tvstudy v2.2.3 (DAezu1)
 Database: localhost, Study: KTXE-LD-CH22-15kW, Model: Longley-Rice
 Start: 2017.09.15 12:20:42

Study created: 2017.09.15 12:20:04

Study build station data: LMS TV 2017-09-13 (13)

Proposal: KTXE-LD D22 LD LIC SAN ANGELO, TX
 File number: KTXE-LD-CH22-15kW
 Facility ID: 309
 Station data: User record
 Record ID: 635
 Country: U.S.

Build options:
 Protect records not on baseline channel

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
KLRU	D22	DT	LIC	AUSTIN, TX	BLEDT20040305ACK	284.2 km

Non-directional AM stations within 0.8 km:
 KKSA 1260 L ND2 D SAN ANGELO, TX BL19860306AB
 KKSA 1260 L ND2 N SAN ANGELO, TX BL19860306AB

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D22
 Mask: Stringent
 Latitude: 31 29 6.00 N (NAD83)
 Longitude: 100 27 27.00 W
 Height AMSL: 696.0 m
 HAAT: 0.0 m
 Peak ERP: 15.0 kW
 Antenna: Omnidirectional
 Elev Pattn: None

49.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	15.0 kW	61.6 m	38.8 km
45.0	15.0	111.9	45.6
90.0	15.0	141.0	47.8
135.0	15.0	133.2	47.2
180.0	15.0	121.5	46.4
225.0	15.0	94.6	43.7
270.0	15.0	88.9	43.0
315.0	15.0	101.8	44.6

Database HAAT does not agree with computed HAAT
 Database HAAT: 0 m Computed HAAT: 107 m

Distance to Canadian border: 1926.0 km

**Proposal is within coordination distance of Mexican border
 Distance to Mexican border: 210.8 km

Conditions at FCC monitoring station: Kingsville TX

Appendix B - Interference Analysis
KTXE-LD - San Angelo, Texas
Channel 22 - 15 kW - Page 2

Bearing: 150.4 degrees Distance: 513.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
 Bearing: 337.2 degrees Distance: 1051.0 km

Study cell size: 1.00 km
 Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
 Maximum new IX to LPTV: 2.00%

 Interference to BLEDT20040305ACK LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KLRU	D22	DT	LIC	AUSTIN, TX	BLEDT20040305ACK	
Undesireds:	KTXE-LD	D22	LD	LIC	SAN ANGELO, TX	KTXE-LD-CH22-15kW	284.2 km
	KXAN-TV	D21	DT	LIC	AUSTIN, TX	BLCDT20050630AAG	0.6
	K22JA-D	D22	DC	LIC	CORPUS CHRISTI, TX	BLDTL20120103ABS	287.5
	KUVN-CD	D22	DC	CP	FORT WORTH, TX	BLANK0000025148	273.5
	KTMD	D22	DT	CP	GALVESTON, TX	BLANK0000026839	236.1
	KETK-TV	D22	DT	LIC	JACKSONVILLE, TX	BMLCDT20120516ABW	305.6
	KNVA	D23	DT	CP	AUSTIN, TX	BLANK0000028096	0.6
	Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX
	33715.5	2,616,817	32939.7	2,584,581	32083.8	2,565,295	32078.7 2,565,273 0.02 0.00
Undesired			Total IX		Unique IX, before	Unique IX, after	
KTXE-LD	D22	LD	LIC	5.0	22	5.0	22
KXAN-TV	D21	DT	LIC	62.3	2,330	15.1	50
K22JA-D	D22	DC	LIC	2.0	0	0.0	0
KTMD	D22	DT	CP	788.6	17,287	729.2	16,354
KETK-TV	D22	DT	LIC	66.5	1,140	15.1	207
KNVA	D23	DT	CP	42.2	2,280	0.0	0

 Interference to BLEDT20040305ACK LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KLRU	D22	DT	LIC	AUSTIN, TX	BLEDT20040305ACK	
Undesireds:	KTXE-LD	D22	LD	LIC	SAN ANGELO, TX	KTXE-LD-CH22-15kW	284.2 km
	KXAN-TV	D21	DT	LIC	AUSTIN, TX	BLCDT20050630AAG	0.6
	K22JA-D	D22	DC	LIC	CORPUS CHRISTI, TX	BLDTL20120103ABS	287.5
	KUVN-CD	D22	DC	CP	FORT WORTH, TX	BLANK0000025148	273.5
	KTMD	D22	DT	CP	GALVESTON, TX	BLANK0000026839	236.1
	KETK-TV	D22	DT	LIC	JACKSONVILLE, TX	BMLCDT20120516ABW	305.6
	KNVA	D23	DT	BL	AUSTIN, TX	DTVBL144	0.6
	Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX
	33715.5	2,616,817	32939.7	2,584,581	32082.7	2,565,295	32077.7 2,565,273 0.02 0.00
Undesired			Total IX		Unique IX, before	Unique IX, after	
KTXE-LD	D22	LD	LIC	5.0	22	5.0	22
KXAN-TV	D21	DT	LIC	62.3	2,330	20.1	214
K22JA-D	D22	DC	LIC	2.0	0	0.0	0
KTMD	D22	DT	CP	788.6	17,287	729.2	16,354
KETK-TV	D22	DT	LIC	66.5	1,140	15.1	207
KNVA	D23	DT	BL	38.2	2,116	1.0	0

 Interference to BLEDT20040305ACK LIC, scenario 3

Call	Chan	Svc	Status	City, State	File Number	Distance
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Appendix B - Interference Analysis
KTXE-LD - San Angelo, Texas
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Desired:	KLRU	D22	DT	LIC	AUSTIN, TX	BLEDT20040305ACK	
Undesireds:	KTXE-LD	D22	LD	LIC	SAN ANGELO, TX	KTXE-LD-CH22-15kW	284.2 km
	KXAN-TV	D21	DT	LIC	AUSTIN, TX	BLCDT20050630AAG	0.6
	K22JA-D	D22	DC	LIC	CORPUS CHRISTI, TX	BLDTL20120103ABS	287.5
	KUVN-CD	D22	DC	CP	FORT WORTH, TX	BLANK0000025148	273.5
	KTMD	D22	DT	BL	GALVESTON, TX	DTVBL64984	236.1
	KETK-TV	D22	DT	LIC	JACKSONVILLE, TX	BMLCDT20120516ABW	305.6
	KNVA	D23	DT	CP	AUSTIN, TX	BLANK0000028096	0.6

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	33715.5	2,616,817	32939.7	2,584,581	32090.8	2,565,375	32085.8	2,565,353	0.02 0.00

Undesired				Total IX		Unique IX, before		Unique IX, after
KTXE-LD	D22	LD	LIC	5.0		22		5.0
KXAN-TV	D21	DT	LIC	62.3		2,330	15.1	50
K22JA-D	D22	DC	LIC	2.0		0	0.0	0
KTMD	D22	DT	BL	781.5		16,718	722.2	16,274
KETK-TV	D22	DT	LIC	66.5		1,140	14.1	158
KNVA	D23	DT	CP	42.2		2,280	0.0	0

Interference to BLEDT20040305ACK LIC, scenario 4

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KLRU	D22	DT	LIC	AUSTIN, TX	BLEDT20040305ACK	
Undesireds:	KTXE-LD	D22	LD	LIC	SAN ANGELO, TX	KTXE-LD-CH22-15kW	284.2 km
	KXAN-TV	D21	DT	LIC	AUSTIN, TX	BLCDT20050630AAG	0.6
	K22JA-D	D22	DC	LIC	CORPUS CHRISTI, TX	BLDTL20120103ABS	287.5
	KUVN-CD	D22	DC	CP	FORT WORTH, TX	BLANK0000025148	273.5
	KTMD	D22	DT	BL	GALVESTON, TX	DTVBL64984	236.1
	KETK-TV	D22	DT	LIC	JACKSONVILLE, TX	BMLCDT20120516ABW	305.6
	KNVA	D23	DT	BL	AUSTIN, TX	DTVBL144	0.6

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	33715.5	2,616,817	32939.7	2,584,581	32089.8	2,565,375	32084.8	2,565,353	0.02 0.00

Undesired				Total IX		Unique IX, before		Unique IX, after
KTXE-LD	D22	LD	LIC	5.0		22		5.0
KXAN-TV	D21	DT	LIC	62.3		2,330	20.1	214
K22JA-D	D22	DC	LIC	2.0		0	0.0	0
KTMD	D22	DT	BL	781.5		16,718	722.2	16,274
KETK-TV	D22	DT	LIC	66.5		1,140	14.1	158
KNVA	D23	DT	BL	38.2		2,116	1.0	0

Interference to proposal, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KTXE-LD	D22	LD	LIC	SAN ANGELO, TX	KTXE-LD-CH22-15kW	
Undesireds:	KLRU	D22	DT	LIC	AUSTIN, TX	BLEDT20040305ACK	284.2 km
	KMDF-LD	D22	LD	LIC	MIDLAND, TX	BLANK000004506	184.7
	K22KL-D	D22	LD	CP	WESTBROOK, TX	BNPDTL20100323AIX	110.3

	Service area		Terrain-limited		IX-free		Percent IX
	6339.0	113,289	6046.5	113,238	6039.4	113,238	0.12 0.00

Undesired				Total IX		Unique IX	Prcnt Unique IX
KLRU	D22	DT	LIC	3.0		3.0	0.05 0.00
K22KL-D	D22	LD	CP	4.0		4.0	0.07 0.00



VIA CERTIFIED MAIL & EMAIL

June 29, 2017

BLUESTONE LICENSE HOLDINGS INC.

675 THIRD AVENUE SUITE 2521

NEW YORK, NY 10017

RE: Notification of Intent to Begin 600MHz Operations

Dear KTXE-LD Licensee:

T-Mobile USA, Inc. ("T-Mobile") is notifying you that T-Mobile is preparing to commence operations on its 600MHz spectrum in the Partial Economic Area ("PEA") # 320 by 10/31/2017 and your station is likely to cause harmful interference to T-Mobile's operations.

To determine if your station(s) is likely to cause interference, an interference analysis has been performed, as specified by the Federal Communications Commissions' ("FCC") Inter-service Interference procedures¹, using publicly available information in the FCC's Licensing and Management System ("LMS") for your facility. This analysis predicts field strength at T-Mobile's base station and user equipment locations in the PEA # 320 market from your facility. The FCC has set the thresholds at which the predicted field strength from low power TV and translator stations creates a sufficient interference risk to wireless facilities. T-Mobile has determined that your facility exceeds those thresholds and is an interference risk to its wireless operations.

T-Mobile will commence its operations in the PEA # 320 market on 10/31/2017. This letter provides the 120 days' advance notification required by FCC regulations, 47 CFR §73.3700(g)(4).

¹ See 30 FCC Rcd 12049, 12071, para. 49 (2015)

The FCC regulations also require you to cease operations or eliminate the potential for harmful interference to T-Mobile's wireless facilities in the PEA # 320 market.

The FCC will work with you to attempt find a new television channel outside of the new 600 MHz mobile band that will not interfere with T-Mobile's network. You should review the FCC's Tools Available to LPTV/Translator Station Public Notice (enclosed) released on June 14, 2017 and contact Hossein Hashemzadeh, Melvin Collins, or Barbara Kreisman at the FCC for more information about the options available in your area.²

Please email 600MhzFC@T-Mobile.com once you have determined when you will eliminate the interference. If you would like additional information regarding our findings or if it might be possible to coordinate our operations, please submit a request to Dan Wilson, Sr. Manager, Spectrum Engineering, at 600MhzFC@T-Mobile.com.

Sincerely,

/s/ Dan Wilson

Sr. Manager, Spectrum Engineering, T-Mobile USA, Inc.

² See <https://www.fcc.gov/document/iatf-mb-set-forth-tools-available-lptvtranslator-stations>