



**Kessler and Gehman Associates**  
Consultants • Broadcast • Wireless

**DIGITAL TELEVISION  
TRANSLATOR POST  
TRANSITION CHANNEL  
DISPLACEMENT  
RELIEF APPLICATION  
FOR KIDZ-LD FACILITY  
ID 58561**

Abilene, TX

**Prepared For:**

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**Prepared On:**

May 23, 2018

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## **1.0 MINOR MODIFICATION CHANNEL DISPLACEMENT RELIEF ELIGIBILITY**

LSB Broadcasting, Inc. (“LSB”) is the licensee of a digital Low Power Television Station (“LPTV”) having call sign KIDZ-LD, Facility ID 58561 which is licensed<sup>1</sup> to operate on channel 42 with an ERP of 12.0KW through an omni-directional antenna using a stringent emission mask.

LPTV/translator stations which currently broadcast on channels (38-51) are automatically displaced because they are in the new 600 MHz band for mobile broadband service and thus KIDZ-LD is clearly eligible to file for channel displacement relief in the April 10, 2018 through June 1, 2018 post-incentive auction special displacement window and is the purpose of the instant application.

Pursuant to 47 CFR Section 74.787(b) the instant application is considered a “minor” change because:

- The change in frequency is related to displacement relief as outlined above.
- There is no change in transmitting antenna location such that the protected contour resulting from the change does not overlap some portion of the protected contour of the authorized facilities of the existing station as illustrated in Appendix C.
- There is no change in transmitting antenna location greater than 30 miles (48km) from the reference coordinates of the existing station’s antenna location.

## **2.0 STATION TRANSMITTER LOCATION AND ELEVATION**

It is proposed to keep KIDZ-LD at its licensed location on an existing tower having FCC Antenna Structure Registration (“ASR”) number 1211887. The

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<sup>1</sup> FCC File No.: BLDTT-20110428AAI

instant application does not propose to increase or modify the existing ASR or support structure.

### **3.0 ALLOCATION ANALYSIS**

Appendix B are the summarized results from TVStudy V2.2.5. As indicated the proposed facility is not predicted to cause prohibited interference to other stations. Aggregate inbound interference is predicted to be 2.48% of the KIDZ-ID service area which is acceptable to LSB.

### **4.0 AM STATION PROXIMITY**

No AM stations are located within 3.2 km of the proposed facility. Pursuant to 47 C.F.R. Section 1.30002(e), the construction or extension of an antenna-supporting structure shall be considered subject to the moment method analysis and prior notification requirement; however, the instant application does not propose to extend the existing structure or build a new structure. Thus, the proposed facility is exempt from further AM analysis consideration.

### **5.0 INTERNATIONAL COORDINATION**

The KIDZ-LD transmitter site is 336.8 km and 1804.7 km from the Mexican and Canadian border respectively. The proposed facility will not require international coordination.

### **6.0 RADIO FREQUENCY RADIATION COMPLIANCE**

A theoretical analysis has been conducted of the human exposure to radio frequency radiation ("RFR") using the calculation methodology described in OET Bulletin 65, Edition 97-01. The RFR analysis is conducted pursuant to the following methodology:

Terrain<sup>2</sup> extraction is compiled from the proposed tower site to radial lengths of 0.25 miles in 0.001 mile increments for 360 radials. In this instance the terrain is flat since a rooftop location is being studied. The power density is calculated for each terrain point at 6 feet above ground level using the elevation and azimuth pattern of the proposed broadcast antenna. The power density calculations are conducted using the lower edge of the proposed channel frequency. To account for ground reflections, a coefficient of 1.6 was included in the calculation.

The resulting cylindrical polar analysis is then summarized into a coordinate plane graph using the following methodology:

Starting from the origin the maximum calculated RFR value is determined among the 360 degree radials for each 0.001 mile increment, the value is then converted into a percentage of the maximum allowable general population or uncontrolled exposure and plotted as a function of perpendicular distance from the tower.

The resulting RFR study in Appendix D demonstrates that the peak exposure is 4.92% of the most restrictive permissible exposure threshold standing at any location on the rooftop. Pursuant to OET Bulletin 65 concerning multiple-user transmitter sites only those licensees whose transmitters produce power density levels greater than 5.0% of the exposure limit are considered significant contributors to RFR. Since the proposed operation is within 5% of the most permissible exposure at any location 2 meters above the ground, it is not considered a significant contributor to RFR exposure. Thus, contributions to exposure from other RF sources in the vicinity of the proposed facility were not taken into account. The instant application is compliant with the FCC limits for human exposure to RF radiation and is excluded from further environmental

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<sup>2</sup> Terrain extraction is based upon a 3 arc second point spacing terrain database.

processing since no changes are proposed to the tower structure in order to accommodate the proposed antenna.

A chain link fence encloses the support structure and the applicant will cooperate with any other users of the tower by reducing the power to the antenna or if necessary completely cutting it off to protect maintenance workers on the tower.

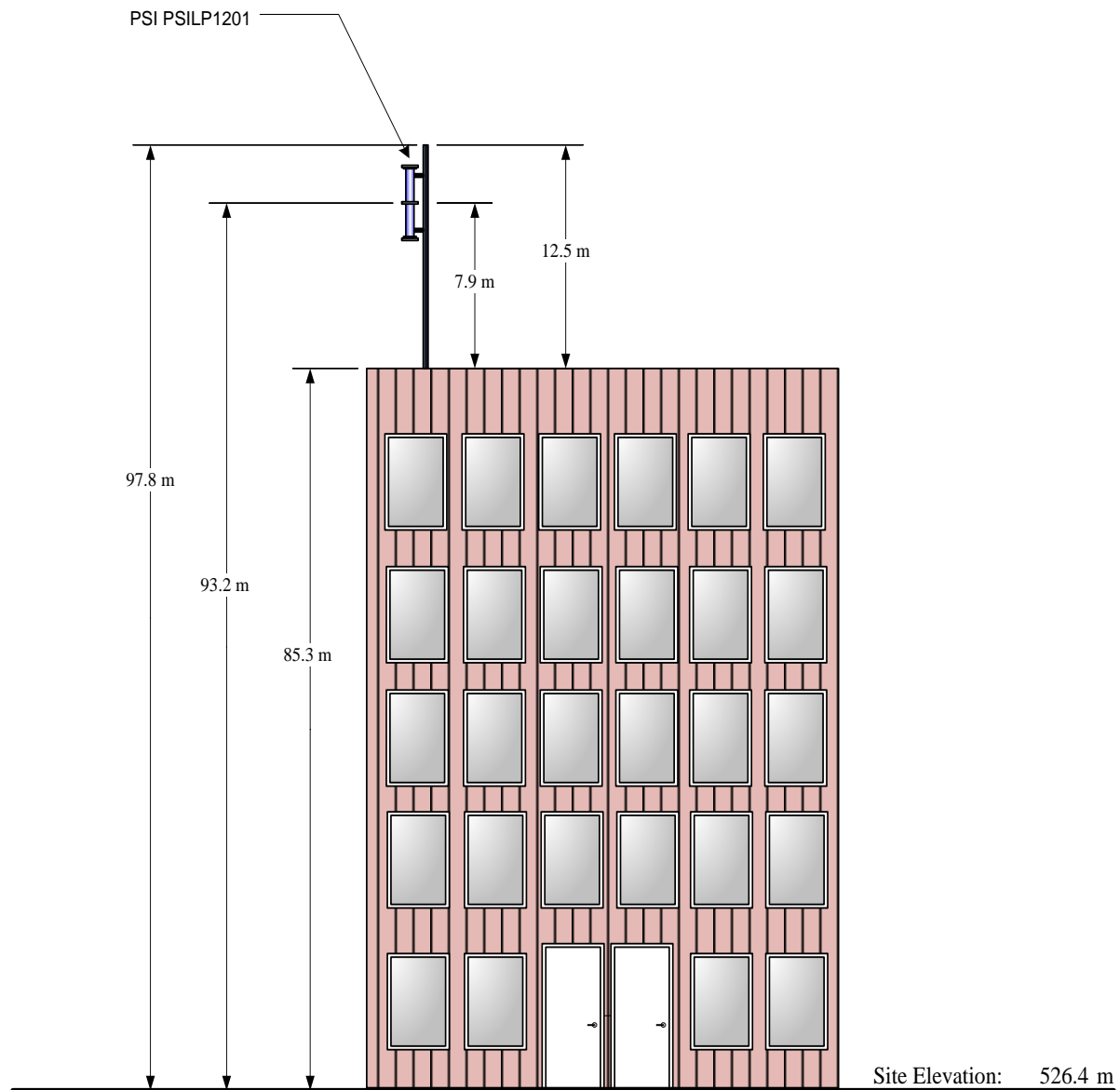
## **7.0 CERTIFICATION**

The foregoing statement and the report regarding the engineering work are true and correct to the best of my knowledge. Executed May 23, 2018.

Kessler and Gehman Associates, Inc.



Ryan Wilhour  
Consulting Engineer

**APPENDIX A – Tower Elevation Diagram**

Radiation Center AGL: 93.2 m

Radiation Center AMSL: 619.6 m

Radiation Center HAAT: 82.5 m

NOTE: NOT TO SCALE

NAD 27 Coordinates:

N. Latitude: 32° 26' 38.5"

W. Longitude: 99° 44' 05.3"

ASR No.: 1211887

FAA Study No.: 99-ASW-4271-OE

## KIDZ-LD – Post Transition Channel Displacement Relief

Abilene, TX

### APPENDIX B – TVStudy V2.2.5 Allocation Analysis

Study created: 2018.05.23 07:37:54

Study build station data: LMS TV 2018-05-23

Proposal: KIDZ-LD D28 LD LIC ABILENE, TX  
File number: KIDZ-LD Channel 28  
Facility ID: 58561  
Station data: User record  
Record ID: 3167  
Country: U.S.

Build options:  
Protect pre-transition records not on baseline channel

Search options:  
Non-U.S. records included  
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KDFI	D27	DT	APP	DALLAS, TX	BLANK0000034507	258.8 km
No	KDFI	D27	DT	CP	DALLAS, TX	BLANK0000027211	260.4
No	KBVO	D27	DT	LIC	LLANO, TX	BLCDT20090622ABA	225.4
No	KAMC	D27	DT	APP	LUBBOCK, TX	BLANK0000052586	232.5
No	KAMC	D27	DT	LIC	LUBBOCK, TX	BLCDT20080227ABN	232.5
No	K27LU-D	D27	LD	LIC	STEPHENVILLE, TX	BLDTL20140610AAO	134.8
No	K27LG-D	D27	LD	CP	WESTBROOK, TX	BNPDTL20100310ACG	118.1
No	K19II-D	D28	LD	APP	ARDMORE, OK	BLANK0000053156	325.0
No	K28LR-D	D28	LD	CP	ERICK, OK	BNPDTL20100406ACK	309.4
No	K23IY-D	D28	LD	APP	WEATHERFORD, OK	BLANK0000053430	351.1
No	K28LS-D	D28	LD	CP	ACKERLY, TX	BNPDTL20100323AIL	193.0
No	KEAM-LD	D28	LD	LIC	AMARILLO, TX	BLDTL20121231ALQ	363.4
No	KYLE-TV	D28	DT	LIC	BRYAN, TX	BLCDT20090612ABZ	369.2
No	KLEG-CD	D28	DC	CP	DALLAS, TX	BLANK0000028671	276.9
No	KYVV-TV	D28	DT	APP	DEL RIO, TX	BMPCDT20080618ACC	331.2
No	KYVV-TV	D28	LD	APP	DEL RIO, TX	BDRTCDT20101008AAW	320.6
No	KYVV-TV	D28	DT	LIC	DEL RIO, TX	BLCDT20110527AKP	360.9
No	K28NG-D	D28	LD	CP	FORT STOCKTON, TX	BNPDTL20100406ABZ	378.0
No	KHPX-CD	D28	DC	LIC	GEORGETOWN, TX	BLANK0000001529	283.9
No	KFMP-LP	D28+	LD	CP	LUBBOCK, TX	BLANK0000011027	232.5
No	K40AL-D	D28	LD	APP	MEMPHIS, TX	BLANK0000052122	274.5
No	KPBT-TV	D28	DT	CP	ODESSA, TX	BLANK0000028621	243.1
No	WOAI-TV	D28	DT	CP	SAN ANTONIO, TX	BLANK0000025130	379.6
No	WOAI-TV	D28	DT	APP	SAN ANTONIO, TX	BLANK0000033833	379.6
No	KSAA-LP	N28+	TX	LIC	SAN ANTONIO, TX	BLTTL20020122AAM	353.7
No	K31LQ-D	D28	LD	APP	SHERMAN, TX	BLANK0000054047	325.0
No	K28ML-D	D28	LD	CP	SONORA, TX	BNPDTL201003229ACM	227.1
No	K28LT-D	D28	LD	CP	TULIA, TX	BNPDTL20100324ADO	298.3
No	K28KV-D	D28	LD	LIC	TURKEY, TX	BLDTT20101115FOE	252.6
No	KWKT-TV	D28	DT	CP	WACO, TX	BLANK0000028462	259.6
No	KWKT-TV	D28	DT	APP	WACO, TX	BLANK0000034740	259.6
Yes	KFDX-TV	D28	DT	LIC	WICHITA FALLS, TX	BLCDT20090205ABU	194.4
No	KRBC-TV	D29	DT	LIC	ABILENE, TX	BLCDT20070831AAK	22.6
No	K29JV-D	D29	LD	CP	COAHOMA, TX	BNPDTL20100312ACU	152.1
No	KDTN	D29	DT	CP	DENTON, TX	BLANK0000034864	259.6
No	KTXA	D29	DT	LIC	FORT WORTH, TX	BLCDT20110127AAG	260.4
No	NEW	D29	LD	APP	SAN ANGELO, TX	BNPDTL20100510ALF	121.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D28  
Mask: Full Service



## KIDZ-LD – Post Transition Channel Displacement Relief

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Latitude: 32 26 38.50 N (NAD83)  
Longitude: 99 44 5.30 W  
Height AMSL: 619.6 m  
HAAT: 82.5 m  
Peak ERP: 12.0 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic

50.1 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	12.0 kW	111.2 m	43.8 km
45.0	12.0	96.8	42.2
90.0	12.0	70.8	38.6
135.0	12.0	68.4	38.2
180.0	12.0	67.0	38.0
225.0	12.0	67.4	38.1
270.0	12.0	80.3	40.0
315.0	12.0	97.9	42.4

Distance to Canadian border: 1804.7 km

Distance to Mexican border: 336.8 km

Conditions at FCC monitoring station: Kingsville TX  
Bearing: 161.8 degrees Distance: 583.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 331.6 degrees Distance: 984.2 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%

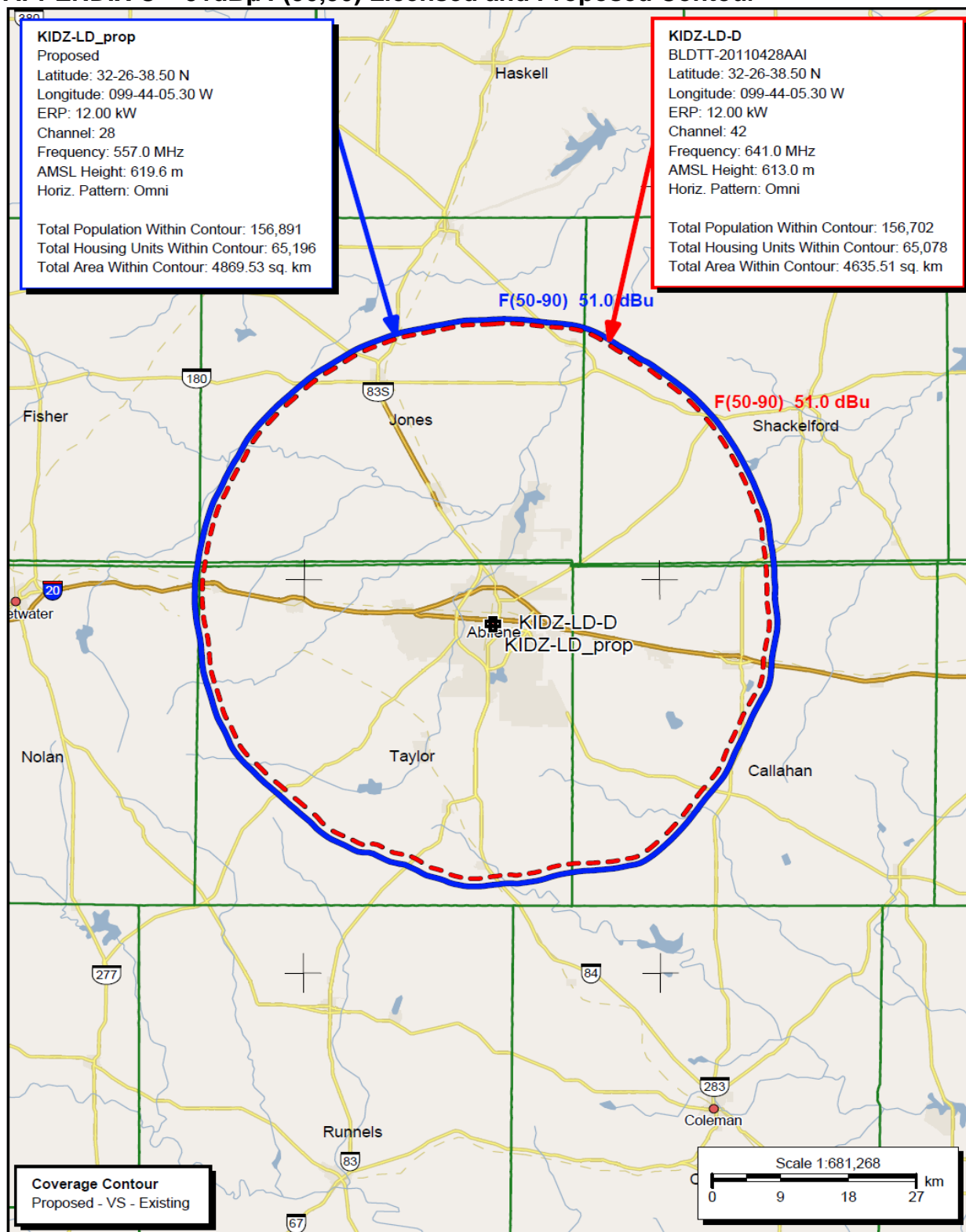
---- Below is IX received by proposal KIDZ-LD Channel 28 ----

Proposal receives 2.48% interference from scenario 1  
No IX check failures found.

## KIDZ-LD – Post Transition Channel Displacement Relief

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### APPENDIX C – 51dBμ F(50,90) Licensed and Proposed Contour



APPENDIX D – Far Field Exposure to RF Emissions

