

ENGINEERING STATEMENT

In support of a request for

Displacement for LPTV Translator Application

K45JZ-D Channel 32

Elk City, OK

Facility ID: 168301

PURPOSE

MARSAND, INC. has been retained by Oklahoma Community Television, LLC (“OKCT”), licensee of digital TV translator K45JZ-D, the “station”, in Elk City, OK, to prepare this engineering statement in support of a displacement application and accompanying Special Temporary Authority (STA).

DISCUSSION

The station currently operates on channel 45 which is beyond the broadcast television band plan implemented in the *Incentive Auction Closing and Channel Reassignment Public Notice*, DA 17-314, released April 13, 2017. The station has received a letter from T-Mobile providing 120 day notice to vacate its channel before T-Mobile commences operations or testing as the station will likely cause interference operating on its current channel. Following the procedure set forth in the Public Notice on June 14, 2017 (DA 17-584 “Incentive Auction Task Force and Media Bureau Set Forth Tools Available to LPTV/Translator Stations Displaced Prior to the Special Displacement Window”) OKCT respectfully requests a waiver of the Displacement Freeze for this application. The grant of this waiver allows this station to continue servicing its viewers with minimal interruption.

INTERFERENCE STUDY

An interference study was performed on the proposed facility using the FCC TVStudy v2.2.3 software, and the results of which show no predicted new interference in excess of the allowable 0.50% to full-service and Class A stations or 2.00% to other LPTV’s. A summary is included as **Exhibit 1**.

ENVIRONMENTAL STATEMENT

The proposed facility has been evaluated according to FCC OET Bulletin No. 65 "Evaluating Compliance With FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, and has been found to comply with the limits set forth in Section 1.1310 of the Rules. The total exposure as defined by the ANSI standard computations for occupational/controlled area is $0.08 \mu\text{W}/\text{cm}^2$, or $<0.00\%$ of the $1.94 \text{ mW}/\text{cm}^2$ maximum. The total exposure as defined by the ANSI standard computations for general population/uncontrolled area is 0.02% of the $387 \mu\text{W}/\text{cm}^2$ maximum. The proposed facility contributes power densities less than 5% of the exposure limit at this site and is therefore categorically excluded from further RF exposure evaluation. The Applicant agrees to maintain full compliance with the safety precautions to workers on the tower (controlled) and the general public (uncontrolled) by reducing or removing radiated power during the time of construction or maintenance on or near the antenna. The Applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from Radiofrequency Electromagnetic exposure in excess of FCC guidelines

CONCLUSION

It is respectfully requested that the Commission grant this displacement application and accompanying request for STA for the facilities as specified herein.

DECLARATION

David Sanderford, EIT, declares and states that he is a graduate Electrical Engineer with a Bachelor of Science Degree in Electrical Engineering from the Georgia Institute of Technology, and his qualifications are known to the Federal Communications Commission, and that he is Vice-President of MARSAND, INC., a Registered Professional Engineering firm in the State of Texas, and that firm has been retained by Oklahoma Community Television, LLC, to perform the engineering support as contained in this report.

All facts contained herein are true of his own knowledge except where stated to be on information or belief provided by others, and as to those facts, he believes them to be true.

I declare under penalty of perjury that the foregoing is true and correct.



David Sanderford, EIT
Vice-President - MARSAND, INC.

Executed this 10th day of September, 2017
State of Texas

MARSAND, INC.

Matthew A. Sanderford, Jr., P.E.

EXHIBIT 1

Study created: 2017.08.24 18:36:14

Study build station data: LMS TV 2017-08-08 (11)

Proposal: K45JZ-D D32 LD LIC ELK CITY, OK
File number: okct_k45jz-d_prop01
Facility ID: 168301
Station data: User record
Record ID: 211
Country: U.S.

Build options:
Protect records not on baseline channel

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
K32KA-D	D32	LD	CP	CLINTON, OK	BNPDTL20100406ACI	40.0 km

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D32
Mask: Stringent
Latitude: 35 21 25.00 N (NAD83)
Longitude: 99 16 9.00 W
Height AMSL: 691.0 m
HAAT: 0.0 m
Peak ERP: 0.450 kW
Antenna: Omnidirectional
Elev Pattn: Generic

50.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.450 kW	131.9 m	28.1 km
45.0	0.450	154.7	29.6
90.0	0.450	128.3	27.9
135.0	0.450	118.9	27.2
180.0	0.450	145.3	29.0
225.0	0.450	136.4	28.4
270.0	0.450	111.2	26.6
315.0	0.450	83.5	23.5

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 126 m

Distance to Canadian border: 1516.4 km

Distance to Mexican border: 651.8 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 6.5 degrees Distance: 623.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 317.1 degrees Distance: 744.1 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%

**IX check failure, 3.25% interference to BNPDTL20100406ACI CP, scenario 1
Proposal receives 15.76% interference from scenario 1