

# *APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT*

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K279CJ - TYLER, TEXAS  
FACILITY ID: 156351  
104.9 MHz / 250 W ERP ND

E-STRING WIRELESS, LTD

JULY, 2016

## **APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT**

The following engineering statement and attached exhibits have been prepared for **E-String Wireless, Ltd** ("E-String"), permittee of FM translator station K279CJ at Fort Smith, Arkansas, and are in support of their application for modification of construction permit.<sup>1</sup> This application is a 250-mile window application, and seeks to relocate the translator from Fort Smith, Arkansas to Tyler, Texas.

K279CJ is currently authorized on FM channel 279 with a maximum effective radiated power of 99 Watts horizontally polarized at a center of radiation of 250 meters above mean sea level utilizing a directional antenna. E-String proposes that the translator operate on FM channel 285 with a maximum effective radiated power of 250 Watts, circularly polarized, at a center of radiation of 246.0 meters above mean sea level utilizing a non-directional antenna. E-String proposes the use of a single-bay Bext TFC2K.

This application, as was previously stated, also proposes relocation of the facility in addition to the channel change. E-String proposes that the translator be relocated from the authorized location specified on the current construction permit, which is the tower assigned antenna structure registration number 1040841, to the location assigned 1065551 as its ASRN. The distance of the relocation as calculated through the use of the Commission's online utility is 342.7 kilometers, or 212.9 miles.

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<sup>1</sup> The Facility ID for K279CJ is 156351.

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The proposed relocation of the translator is depicted in Exhibit E-1. This map illustrates the proposed and authorized sites. Additionally, circles with radii of 342.7 kilometers (212.9 miles) and 402.3 kilometers (250 miles) are illustrated on the map. As this map confirms, the proposed relocation of the facility is less than the maximum of 250 miles permitted under the AM revitalization translator relocation window.

This application also proposes a change in the primary station associated with the facility. The proposed primary station is class D AM Station KGLD at Tyler, Texas.<sup>2</sup> KGLD is licensed to Salt of the Earth Broadcasting, Inc. ("Salt"). A written retransmission agreement is in place between Salt and E-String in order to rebroadcast KGLD on K279CJ.

Exhibit E-2 demonstrates that the proposed translator would qualify as a fill-in translator for AM station KGLD. On this map are indicated the proposed K279CJ 60 dBu service contour, the KGLD 2 mV/m daytime service contour, and a circle representing a twenty-five (25) mile radius centered on the KGLD transmitter site. As this map demonstrates, the proposed K279CJ 60 dBu service contour would be wholly contained within the latter two constructs.

The proposed facility complies with the provisions of Section 74.1204 of the Commission's Rules. Due to the proposed channel of operation, Section 74.1205 is not applicable. Exhibit E-3 is a tabular interference study for the proposed facility. This study demonstrates that the contour overlap provisions of Section 74.1204 would be met by the proposed facility to all relevant

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<sup>2</sup> The Facility ID for KGLD at Tyler, Texas is 24246.

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authorizations in the region. This tabular interference study is graphically depicted in the contour map that comprises Exhibit E-4.

The antenna structure proposed for use is a multi-tenant office building in downtown Tyler, Texas. Numerous antennas are located on the rooftop of this building, including those for other FM translators. The antenna system proposed by E-String will be utilized solely for K279CJ. No combined antenna system with any other translator is contemplated or proposed.

The proposed facility would not constitute a significant environmental impact, and is exempt from environmental processing. The translator antenna would utilize an existing structure that is registered with the Commission. The addition of the translator antenna to this tower would not increase the existing environmental impact already present from the structure.

In addition, the proposed facility would not constitute a radiofrequency radiation hazard to persons at the site. The Commission's on-line *FM Model* utility calculated a maximum power density of  $0.746 \mu\text{W}/\text{cm}^2$  at a distance of 80 meters from the base of the building. This value complies with the uncontrolled environment condition of the Commission's safety standard, and is sufficiently low to categorically exclude the facility for the general public. The rooftop of the building is a controlled environment as a community communications site.

E-String 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.

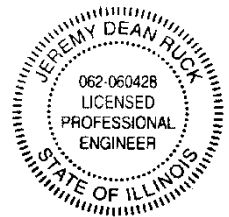
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**7.28.2016**

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  
July 28, 2016

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7.28.2016

**K279CJ.C**

BNPFT20130830ASO  
Latitude: 35-21-15 N  
Longitude: 094-25-53 W  
ERP: 0.099 kW  
Channel: 279  
Frequency: 103.7 MHz  
AMSL Height: 250.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

**K279CJ.X**

BNPFT20130830ASO  
Latitude: 32-21-04.70 N  
Longitude: 095-18-06.40 W  
ERP: 0.25 kW  
Channel: 285  
Frequency: 104.9 MHz  
AMSL Height: 246.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

Exhibit E-1  
Translator Relocation Illustration  
K279CJ - Tyler, Texas  
E-String Wireless, Ltd  
July, 2016

Jeremy Ruck & Associates, Inc.

Authorized K279CJ  
Transmitter Site

Circle R = 342.7 km

Circle R = 402.3 km

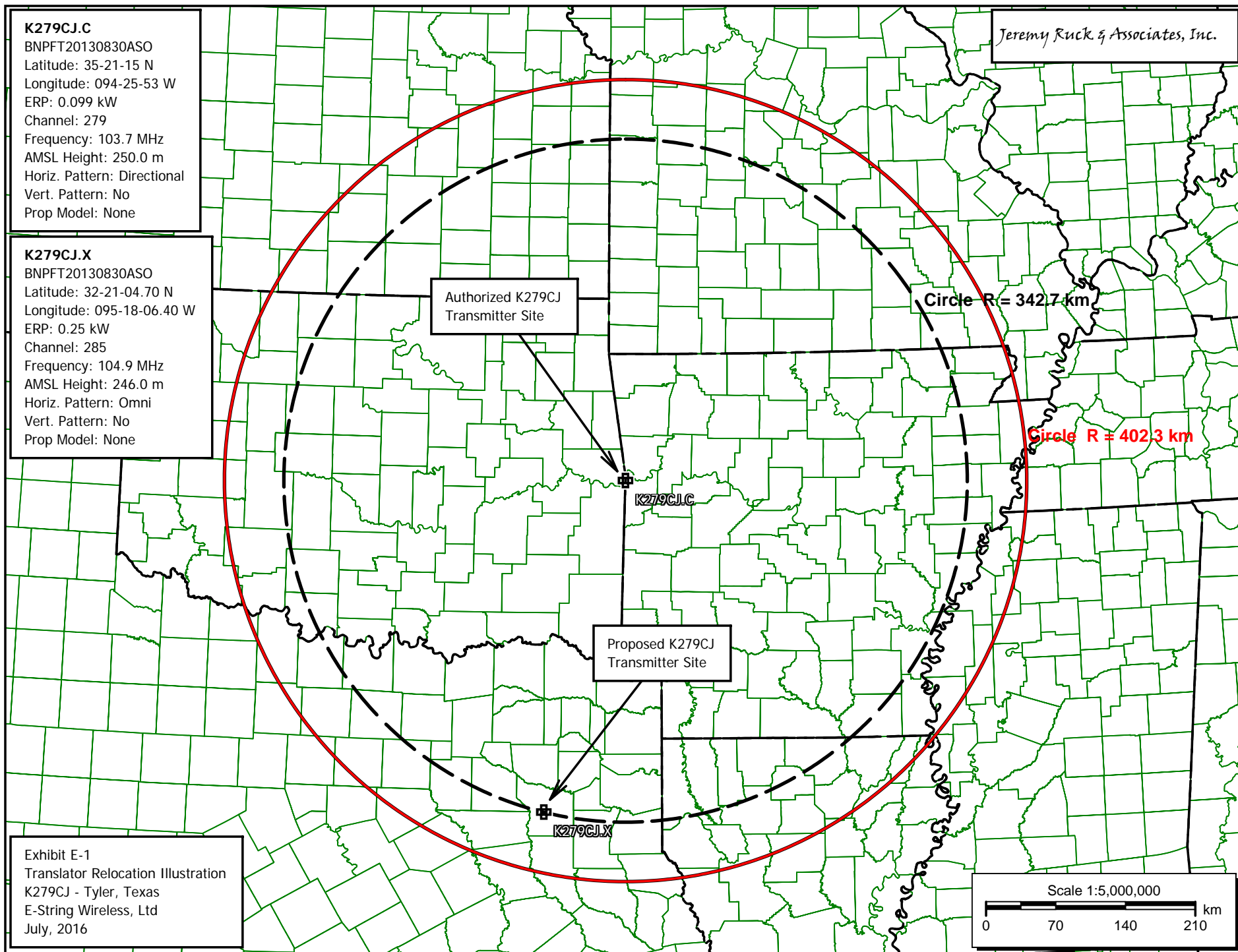
Proposed K279CJ  
Transmitter Site

K279CJ.C

K279CJ.X

Scale 1:5,000,000

0 70 140 210 km



**K279CJ.X**

BNPFT20130830ASO  
Latitude: 32-21-04.70 N  
Longitude: 095-18-06.40 W  
ERP: 0.25 kW  
Channel: 285  
Frequency: 104.9 MHz  
AMSL Height: 246.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

Jeremy Ruck & Associates, Inc.

KGLD 2 mV/m  
Daytime Contour

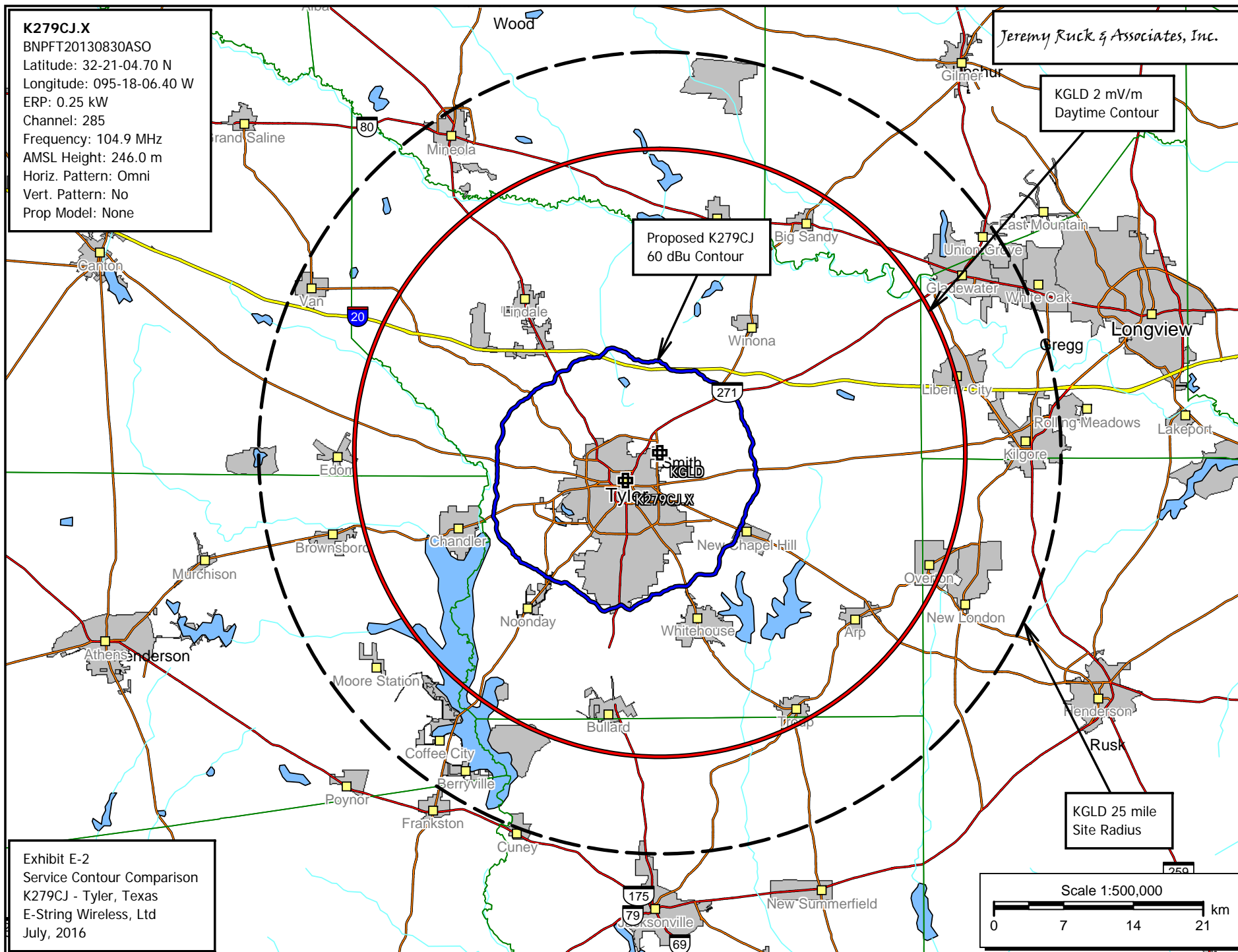
Proposed K279CJ  
60 dBu Contour

KGLD 25 mile  
Site Radius

Exhibit E-2  
Service Contour Comparison  
K279CJ - Tyler, Texas  
E-String Wireless, Ltd  
July, 2016

Scale 1:500,000

0 7 14 21 km



Jeremy Ruck & Associates, Inc.  
Consulting Engineers - Canton, Illinois

Exhibit E-3 - Tabular Interference Study  
K279CJ - Tyler, Texas  
CH# 285D - 104.9 MHz, Pwr= 0.25 kW, HAAT= 99.7 M, COR= 246 M  
Average Protected F(50-50)= 12.84 km  
Omni-directional

DISPLAY DATES  
DATA 07-28-16  
SEARCH 07-28-16

REFERENCE  
32 21 04.7 N.  
95 18 06.4 W.

CH CITY	CALL	TYPE STATE	ANT TX	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
285CO	KZMP-FM Pilot Point	RSV-A	TX	313.3 132.5	198.69	33 34 03.0 96 51 45.0	100.000 450	187.1 669	83.5 Liberian Broadcasting Of D	-1.6	70.9
286CO	KYKS Lufkin	LIC _CN	TX	150.3 330.6	125.56 BLH19900827KA	31 22 08.0 94 38 45.0	100.000 325	109.9 403	75.4 Townsquare Media Lufkin Li	3.1	32.1
285CO	KZMP-FM Pilot Point	CP NCX	TX	313.1 132.3	194.31 BPH20141028AAK	33 32 14.0 96 49 54.0	42.000 606	177.9 822	82.9 Liberian Broadcasting Of D	3.2	67.1
232A	KZXM Bullard	LIC ZEX	TX	187.3 7.3	23.18 BLH20120316ACQ	32 08 38.0 95 19 59.0	2.050 172	23.5 305	15.8 Waller Media, Lic	9.5R	13.7M
285L1	KOAT-LP Hallsville	LIC	TX	77.4 257.8	70.29 BLL20050418ADU	32 29 13.0 94 34 13.0	0.100 26	128	Hallsville Independent Sch	38.2	19.8
284A	KWNS Winnsboro	LIC NCN	TX	0.8 180.8	80.06 BLH19990603KC	33 04 17.0 95 17 22.0	2.750 150	42.8 293	28.2 Lottie L. Foster	24.0	32.3
287D	K287AJ Kilgore	LIC _C_	TX	85.4 265.6	40.54 BLFT20050809AFP	32 22 48.0 94 52 17.0	0.250 59	1.1 168	9.0 Chalk Hill Communications,	26.2	30.4
285C1	KZMP-FM Pilot Point	LIC _C_	TX	311.4 130.5	204.88 BMLH20070514AFY	33 33 37.0 96 57 34.0	20.500 535	162.2 757	73.2 Liberian Broadcasting Of D	29.4	87.4
284L1	KXAL-LP Chalk Hill Communi t	LIC	TX	91.4 271.7	60.87 BMLL20050121AEH	32 20 12.0 94 39 14.0	0.074 35	138	The Church At Lake Cherokee	40.2	35.1
285A	WETO Oil City	CP ZCX	LA	74.4 255.1	132.99 BNPH20130723AAI	32 39 58.0 93 56 00.0	0.100 490	72.4 554	22.7 Eternity Records Company,	47.3	64.6

Terrain database is FCC 30 meter , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.  
All separation margins (if shown) include rounding.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
\*\*\*affixed to 'IN' or 'OUT' values = site inside restricted contour.



BNPFT20130830ASO  
Latitude: 32-21-04.70 N  
Longitude: 095-18-06.40 W  
ERP: 0.25 kW  
Channel: 285  
Frequency: 104.9 MHz  
AMSL Height: 246.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

- 60 dBU F(50,50) Service Contour
- 40 dBU F(50,10) Interference Contour
- 54 dBU F(50,10) Interference Contour
- 100 dBU F(50,10) Interference Contour

Exhibit E-4  
Contour Interference Study  
K279CJ - Tyler, Texas  
E-String Wireless, Ltd  
July, 2016