

TECHNICAL EXHIBIT  
SUPPORTING THE REQUEST FOR  
SPECIAL TEMPORARY AUTHORIZATION (STA) FROM  
CORRIDOR TELEVISION, L.L.P.  
STATION KCWX-DT  
FREDERICKSBURG, TEXAS  
CH 5 45 kW-ND 412 M

This Technical Exhibit was prepared on behalf of Corridor Television, L.L.P. and supports its request for special temporary authorization (STA) for station KCWX-DT on channel 5 at Fredericksburg, Texas to increase effective radiated power (ERP).

According to the FCC database, station KCWX-DT had its analog (NTSC) operation on low VHF channel 2 (BLCT-20000811ACG). The station used a non-directional (ND) antenna system. The visual ERP was 100 kilowatts (kW). The antenna center of radiation was 913 meters above mean sea level (AMSL). The antenna height above average terrain (HAAT) was 413 meters. The site coordinates were 30-08-13, 98-36-35 (NAD-27).

Station KCWX-DT has its post transition digital operation on low VHF channel 5 using a nondirectional antenna system. It has a license (BLCDDT-20090709AEQ) for operation from its former analog site with an ERP of 23.7 kW-ND and antenna HAAT of 412 meters. The site coordinates are 30-08-13, 98-36-35 (NAD-27).<sup>1</sup>

Station KCWX-DT is a CW affiliate station. After its conversion to digital on low VHF channel 5, station KCWX-DT received numerous reception complaints from viewers. As the FCC is aware, stations converting their pre-transition analog operation to post transition digital operation on low VHF channels have experienced complaints from off-the-air viewers who were able to receive the pre-transition analog signal, but are unable to receive the post transition digital signal. This is particularly a concern for viewers using indoor receiving antennas. The longer wavelength of low VHF signals is a handicap for penetration of buildings and reception with typical indoor antennas geared for smaller wavelength signals (such as UHF). The reception of analog signals is more forgiving in that a picture and audio may be available, even though it may be somewhat degraded. Digital reception exhibits the “cliff” effect where the reception is either perfect or non-existent.

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<sup>1</sup> It is noted that KCWX-DT has a pending application (BPCDDT-20090713ACO) which proposes to increase the ERP from 23.7 kW to 82.9 kW. That application will be amended to specify an ERP of 45 kW upon FCC approval of the instant STA request.

Through this STA request, station KCWX-DT proposes to increase its ERP from 23.7 kW-ND to 45 kW-ND. Although this ERP increase is not expected to resolve all of the viewer reception complaints, the higher power is expected to help alleviate some.

It is recognized that the proposed KCWX-DT STA facilities (Ch. 5, 45 kW-ND, 412 m) are in excess of that normally permitted by Section 73.622(f)(6) of the FCC rules for a DTV station on a low VHF channel in Zone 2. However, the proposed ERP level (45 kW) does not exceed the absolute low VHF ERP limit (45 kW) regardless of antenna height. The power increase is not intended to expand coverage, but rather to provide a stronger signal for viewers using indoor antennas for reception. The proposed KCWX-DT STA operation meets the FCC's interference standards using the FCC's OET-69 processing software (i.e., no excessive interference is caused to other full service and Class A stations).

Figure 1 is a map showing the predicted 28 dBu noise limited contour for the current KCWX-DT licensed operation on channel 5 (23.7 kW-ND, 412 m). The map shows the predicted 35 dBu city grade contour and noise limited 28 dBu contour for the proposed KCWX-DT STA operation on channel 5 (45 kW-ND, 412 m). The extent of the contours is based on the normal FCC prediction method using a digitized terrain database at 1 degree azimuth increments.

The proposed transmitter site is located 229.1 kilometers from the US-Mexican border. Therefore, if necessary it is requested that the proposal be coordinated with Mexico. As demonstrated in the attached Mexican allocation study (Figure 2), the proposed facilities comply with the minimum distance separation requirements applicable to VHF stations (Chs 2-13) with respect to all pertinent Mexican NTSC and DTV allotments which are contained in the Memorandum of Understanding (MOU) between the US and Mexico related to use of DTV channels along the common border.

The proposed KCWX-DT STA operation will not cause prohibited interference to FCC monitoring stations, radio astronomy installations and specified radio quiet zones.

The proposed KCWX-DT STA facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The KCWX-DT antenna radiation center is located 336 meters above ground level. The proposed STA ERP is 45 kW. Assuming a conservative (worst case) vertical plane relative field value of 1.0, the calculated power density at a point 2 meters above ground level is 0.0135 mW/cm<sup>2</sup>. This is 6.8% of the FCC's recommended limit of 0.2 mW/cm<sup>2</sup> for channel 5 and an uncontrolled environment.

Public access to the transmitting site is restricted and appropriately marked with RFR warning signs. Furthermore, a protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure.

If there are questions concerning this statement, please communicate with the office of the undersigned.

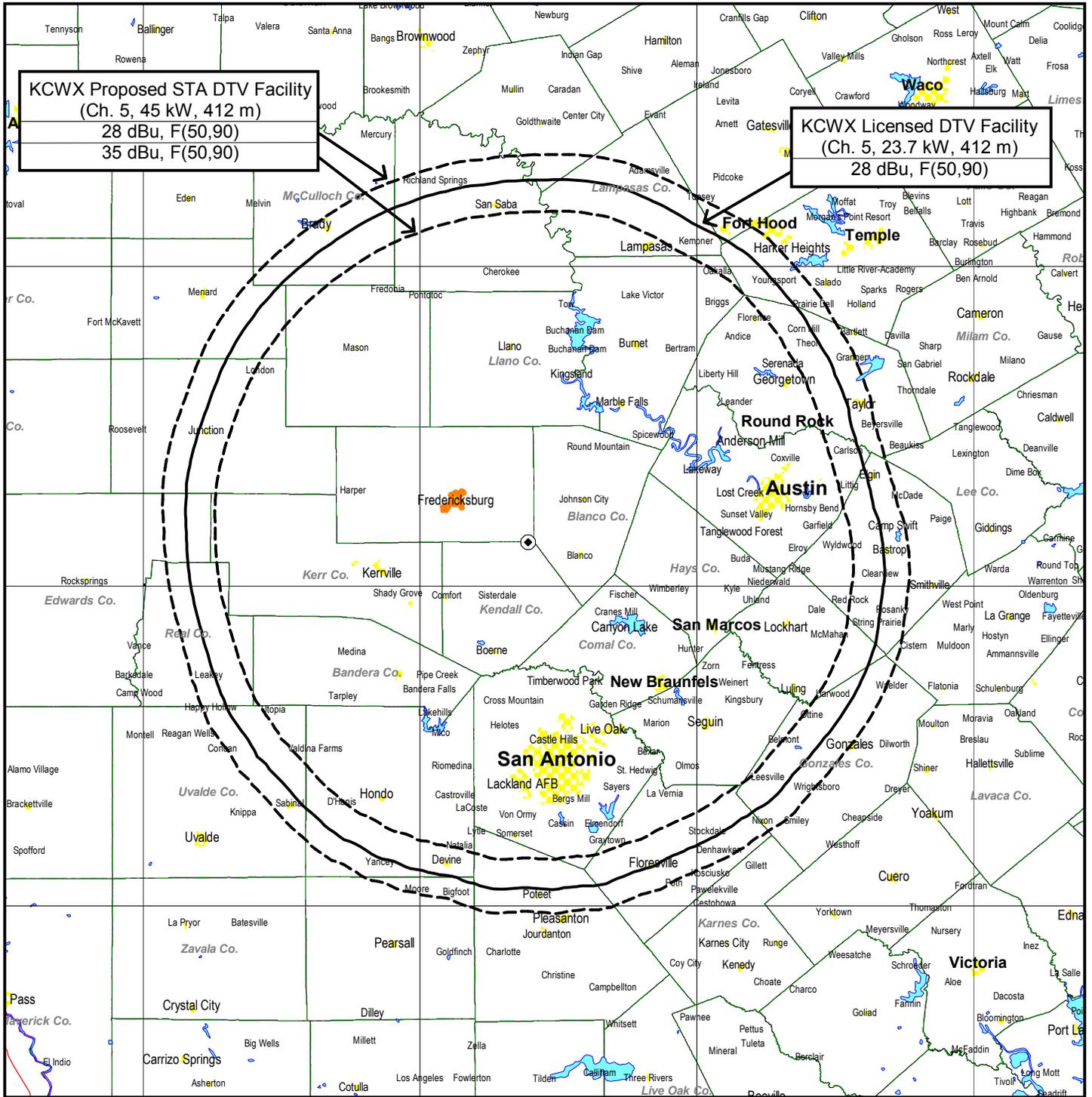


W. Jeffrey Reynolds

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Ave.  
Sarasota, Florida 34237  
941.329.6000

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Figure 1



**KCWX Proposed STA DTV Facility**  
(Ch. 5, 45 kW, 412 m)  
28 dBu, F(50,90)  
35 dBu, F(50,90)

**KCWX Licensed DTV Facility**  
(Ch. 5, 23.7 kW, 412 m)  
28 dBu, F(50,90)

**FCC PREDICTED COVERAGE CONTOURS**

STA REQUEST - DTV STATION KCWX  
FREDERICKSBURG, TEXAS  
CH 5 45 KW 412 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

# TV Study

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



**Station Type:** DT      **Station Coordinates:** 030-08-13 098-36-35 (NAD 27)  
**Station Channel:** 5      **Station Zone:** II      **Equivalent Canadian Class:** EX  
**Buffer Distance:** 150 km      **Comment:** Proposed KCWX STA

Callsign	Status	Channel	Service	Zone	City	State	Latitude	Dist. (km)	Min. (km)	Spacing (km)			
Facility ID	ARN			Class	DA	Ant ID	ERP (kW)	HAAT (m)	Rec Type	Longitude	Bear. (deg)	Max. (km)	Comment
<b>KCWX</b>	APP	5	DT	2	FREDERICKSBURG	TX	030-08-13	0	273.6	-273.6			
24316	BPCDT	20090713ACO		N	94052	82.9	412	C	098-36-35	179.99	273.6		<b>SHORT</b>
<b>KCWX</b>	CP	5	DT	2	FREDERICKSBURG	TX	030-08-13	0	273.6	-273.6			
24316	BPCDT	20080324AIO		N	87932	23.7	412	C	098-36-35	179.99	273.6		<b>SHORT</b>
<b>DKTFH</b>	DTVALT	5	DT	3	CONROE	TX	30-15-45	324.09	273.6	50.49			
0					20692	1	359	C	095-14-50	86.68	273.6		<b>CLEAR</b>
<b>XHSDD-TV</b>	GRANT	5	Z	TV	SABINAS	CI	027-52-50	351.11	273	78.11			
185220	BPFS	20100304AAL		N		3.8		C	101-08-21	225.05	273		<b>CLEAR</b>
		5	-	TA	2	EL JABALI		CI	027-11-44	393.21	273		120.21
97258				N				C	100-51-33	214.41	273		<b>CLEAR</b>
<b>KFLZ-CA</b>	CP	6	-	CA	SAN ANTONIO	TX	029-26-29	77.75	11	-47.25			
40782	BDISTVA	20070622ACS		N	79605	0.5		C	098-30-22	172.61	125		<b>SHORT</b>
		6	-	TA	2	PIEDRAS NEGRAS		CI	028-40-28	249.48	18		149.48
98662				N				C	100-33-49	229.81	100		<b>CLEAR</b>
	MEXTAB	6	TV		PIEDRAS NEGRAS			CO	028-40-27	249.5	18		149.5
0					0	0	0	C	100-33-49	229.81	100		<b>CLEAR</b>