

## NARRATIVE

### ST. JUDE BROADCASTING GERALD BENAVIDIES

**STATION      K211DR**

**FACID        91997**

**FILE NUMBER      0000137479**

Applicant, St. Jude Broadcasting submits this minor change application for a construction permit to move the current licensed operation of K211DR to a new location. This move will also incorporate a change in frequency from ch 211 (90.1) to ch 212 (90.3).

New Location: Tower ASRN 1053856

NAD(83)  
28 – 49 – 59 N  
97 – 06 – 53 W

ERP – 0.14 KW (V) AND (H)  
RCAGL – 114 METERS

Proposed location is 274 km from the US/Mexico Border. This application protects licensed facilities, construction permits, applications, allotments, and is in compliance the US/Mexico Treaty.

## EXHIBITS

**Exhibit 1.0** – Channel 212 (90.3) spacing and clearance study

**Exhibit 1.1** – Channel 6 TV contour overlap showing

Per FCC 74.1205 (c)(1)  
TV Ch 6 Grade B contour is 47 dbu

Per FCC 74.1205(c)(3)  
K211DR proposed ch 212 (90.3) operation, F(50,10) interference contour is 74 dbu.

**Exhibit 1.2** – KVRT second adjacent channel wavier request

At the proposed site of K211DR, the KVRT F(50,50) contour is 75.75 db.  
Proposed K211DR F(50,10) contour is 115.75 db. This is calculated to be: 40 db D/U ratio, 75.57 db + 40 db = 115.75 db.  
The calculated distance of this contour using FCC graph program is 135 meters.

Table 1 below shows that this contour is a minimum 53.3 meters above a 2 meter AGL plane parallel to the ground, which is well above the highways and human occupied dwellings. Applicant believes that this will not create any interference to KVRT.

**TABLE 1**

<b>ANT MODEL</b>		<b>BKG 77 -2</b>	<b>K211DR</b>			
2 BAYS		Full Wave	CH 212 (90.3)			
<b>Angle of Depression</b>	<b>Antenna REL (mv)</b>	<b>ERP watts</b>	<b>Distance to interfering Contour from antenna (m)</b>	<b>Horizl Distance of F(50,10) from tower (m)</b>	<b>Vert Distance</b>	<b>AGL CLEARANCE</b>
0	1	140.0	135	135.0	0.0	112.0
5	0.959	128.8	129	129.0	11.3	100.7
10	0.843	99.5	115	113.1	19.9	92.1
15	0.666	62.1	91	87.8	23.5	88.5
20	0.45	28.4	62	58.0	21.1	90.9
25	0.22	6.8	30	26.9	12.6	99.4
30	0	0.0	0	0.0	0.0	112.0
35	0.192	5.2	26	21.2	14.9	97.1
40	0.342	16.4	46	35.4	29.7	82.3
45	0.446	27.8	60	42.6	42.6	69.4
50	0.503	35.4	69	44.3	52.8	59.2
55	0.519	37.7	70	40.2	57.4	54.6
<b>60</b>	<b>0.502</b>	<b>35.3</b>	<b>68</b>	<b>33.9</b>	<b>58.7</b>	<b>53.3</b>
65	0.46	29.6	63	26.7	57.2	54.8
70	0.401	22.5	54	18.5	50.9	61.1
75	0.331	15.3	45	11.6	43.2	68.8
80	0.256	9.2	35	6.0	34.0	78.0
85	0.178	4.4	23	2.0	22.9	89.1
90	0.1	1.4	14	0.0	13.5	98.5

**Exhibit 1.3** – FCC Graph calculation of the 115.75 db contour distance.

**Exhibit 1.4** – Map of of the K211DR licensed 60 db contour and the proposed 60 db contour.

**Exhibit 1.5** – FCC HAAT calculation using FCC USA Terrain indicating that the 120 degree radial HAAT is 140.2 meters. Per FCC 74.1235 (2), the maximum ERP is 0.140 kw (140 watts).

**Exhibit 1.6** – FMMODEL

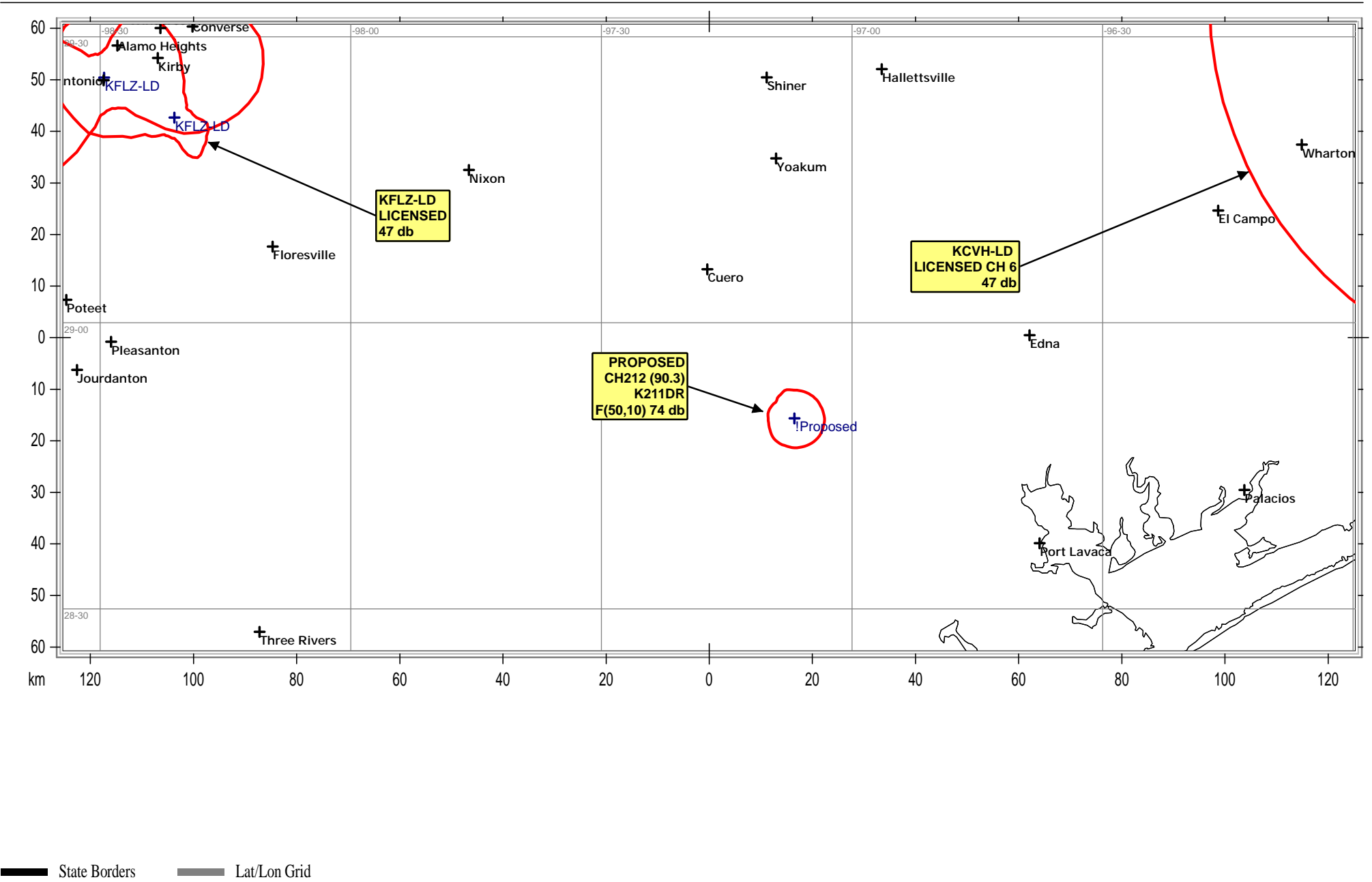


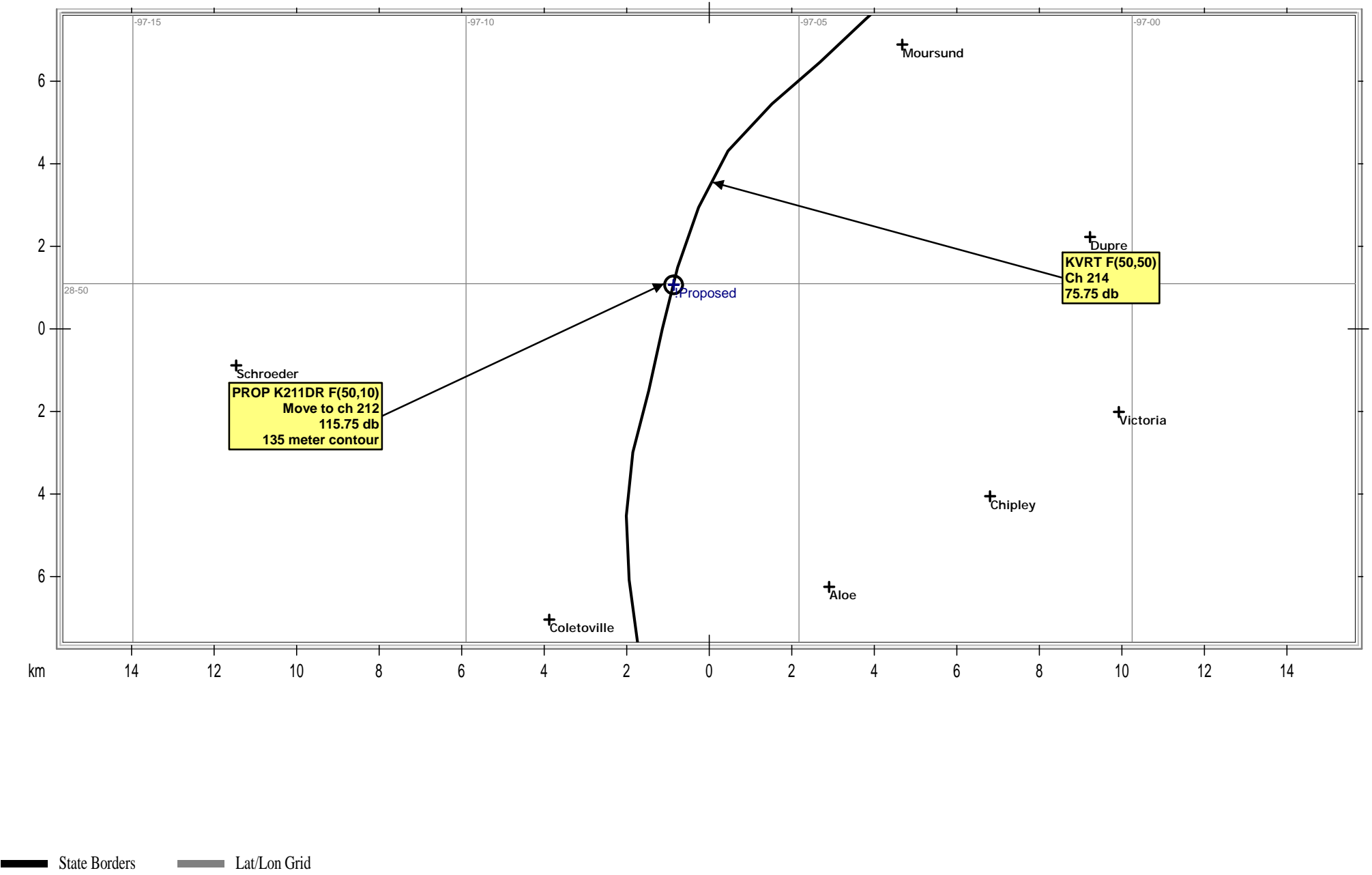
$S=0.14 \mu\text{W}/\text{cm}^2$ , which is 0.07% of the maximum allowable uncontrolled  $200 \mu\text{W}/\text{cm}^2$  public exposure. Since this is less than 5%, no further analysis was done.

Applicant will place appropriate signage at the site. Whenever there are personal working at the site or on the tower, applicant will reduce ERP or cease transmission.

**EXHIBIT 1.0  
PROPOSED K211DR  
CHANNEL 212 (90.3)  
SPACING**

Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_km	Clr
<b>KVRT</b>	<b>TX</b>	<b>VICTORIA</b>	<b>90.7</b>	<b>214</b>	<b>30000</b>	<b>C2</b>	<b>LIC</b>	<b>17.79</b>	<b>-16.64 dB</b>
KABA	TX	LOUISE	90.3	212	4900	A	LIC	70.81	0.31 dB
KTLZ	TX	CUERO	89.9	210	5000	A	LIC	30.67	4.72 dB
KSXT	TX	SMILEY	90.3	212	13000	C3	LIC	74.65	5.70 dB
KBAR-FM	TX	VICTORIA	100.9	265	15000	C3	LIC	17.81	5.8
KEDT-FM	TX	CORPUS CHRISTI	90.3	212	100000	C1	LIC	137.99	10.73 dB
K212FE	TX	BAY CITY	90.3	212	250	D	LIC	112.46	19.33 dB
KJMA	TX	FLORESVILLE	89.7	209	100000	C1	LIC	112.5	25.97 dB
KYFS	TX	SAN ANTONIO	90.9	215	100000	C1	APP	144.15	27.85 dB
KYFS	TX	SAN ANTONIO	90.9	215	100000	C1	LIC	144.15	27.99 dB
KYRQ	TX	NATALIA	90.3	212	3000	A	LIC	176.2	30.29 dB
KUT	TX	AUSTIN	90.5	213	24500	C1	LIC	178.02	31.12 dB
KCBG	TX	FULTON	89.9	210	100000	C1	CP	74.16	31.46 dB
KMPI	TX	MCCOY	90.5	213	10000	C3	LIC	115.88	33.02 dB
KPFT	TX	HOUSTON	90.1	211	100000	C1	LIC	193.79	33.30 dB
KUBJ	TX	BRENHAM	89.7	209	17500	C2	LIC	147.69	38.56 dB
K215FC	TX	BEEVILLE	90.9	215	92	D	LIC	76.98	38.32 dB
KSYM-FM	TX	SAN ANTONIO	90.1	211	5700	A	LIC	150.93	38.89 dB





## EXHIBIT 1.3 - CONTOUR DISTANCE

Select Contour Type:

F(50,50) Service Contour -- FM and NTSC (analog) TV  
F(50,10) Interfering Contour  
F(50,90) Digital TV Service Contour

Select Channel Range:  
(not TV Virtual Channel)

FM Radio or TV Transmit Channels 2-6  
TV Transmit Channels 7-13  
TV Transmit Channels 14-69

Find This:

Field Strength, given a Distance (in km)  
Distance, Given a Field Strength (in dBu)  
FM ERP, given Distance and Field Strength [F(50,50) Service Contour]

.140

ERP (kW)

Distance (km)

122

HAAT (meters)

115.75

Field (dBu)

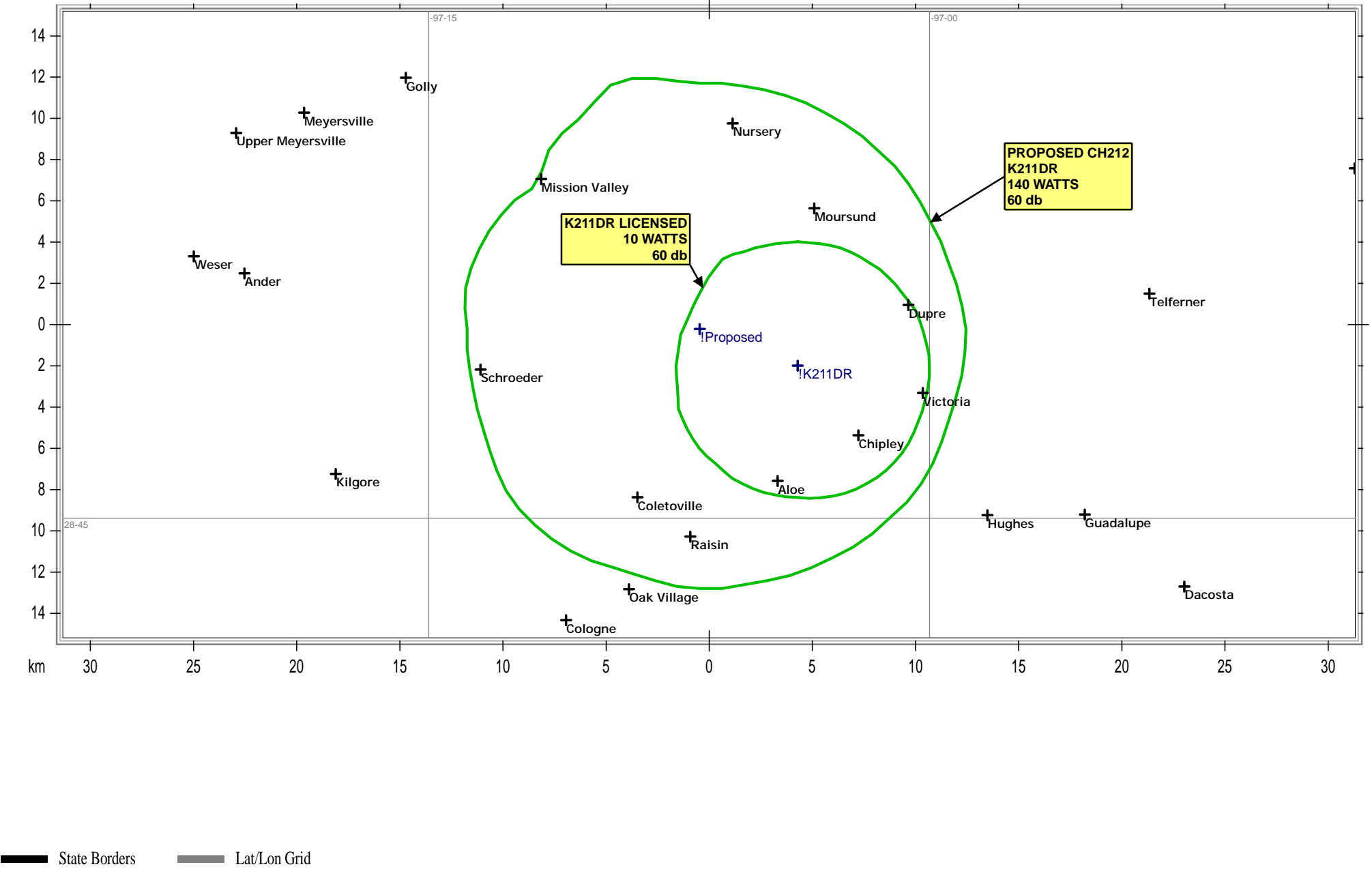
Find Result

Clear Form

Results:

Calculated Distance = **0.135 km**

Free Space equation used to compute distance.



## EXHIBIT 1.5

**Antenna Height Above Average Terrain Calculations -- Results****Input Data**

Latitude **28° 49' 59"** North  
Longitude **97° 6' 53"** West (NAD 83)

These coordinates convert to NAD 27 coordinates of  
28° 49' 58.04", North, 97° 06' 52.04" West (NAD 27).

Height of antenna radiation center above mean sea level: **155** meters AMSL

Number of Evenly Spaced Radials = **12**      0° is referenced to True North

**Results**

Calculated HAAT = **122 meters**

Antenna Height Above Average Terrain calculated  
using FCC 30 second terrain database (continental USA only)

**Individual "Radial HAAT" Values, in meters**

0°	116.8 m
30°	120.1 m
60°	123.8 m
90°	138.1 m
120°	140.2 m
150°	136.5 m
180°	131.7 m
210°	127.7 m
240°	112.0 m
270°	102.3 m
300°	100.4 m
330°	113.4 m

[Print Results?](#)[New Calculation?](#)