FCC Form 302-FM
Radio Station KHSB-FM,
Channel 284A, Kingsland, Texas,
FCC Facility ID No. 181260
Application for a License to Cover
Construction Permit BPH-20190322ABH
June 2022

EXHIBIT 8

SHOWING RE CITY-GRADE COVERAGE

February 2022
KHSB-FM Channel 284A
Kingsland, Texas
Principal Community Coverage Study

Background

The KHSB-FM construction permit BPH-20190322ABH includes a condition requiring the submission of an exhibit demonstrating that the measured directional antenna pattern complies with the community coverage provisions of §73.315. The application for construction permit relied upon a Longley-Rice study to demonstrate coverage of Kingsland, and so that study has been updated to incorporate the measured pattern of the PSIFMR-3E-R-DA antenna which has been installed.

Longley-Rice

Study has been made of the predicted 70 dBu field strength over Kingsland, using the Longley-Rice v1.2.2 methodology. This study has been conducted using the software program SIGNAL™ from EDX Wireless.

A sample calculation has been made to a location within the community boundary of Kingsland to verify the presence of 70 dBu service, using the formula:

Field Strength = Free Space - Diffraction Loss - Clutter
Where Free Space = 106.9 + power in dBk - 20log(distance in km to point of interest)

For the path studied (0.11 dBk at this azimuth over a 19.2 km path), the result of this calculation is:

Radial	Free Space Field	Minus Diffraction Loss	Yields
274 deg	81.34 dBu	5.49 dB	75.85 dBu

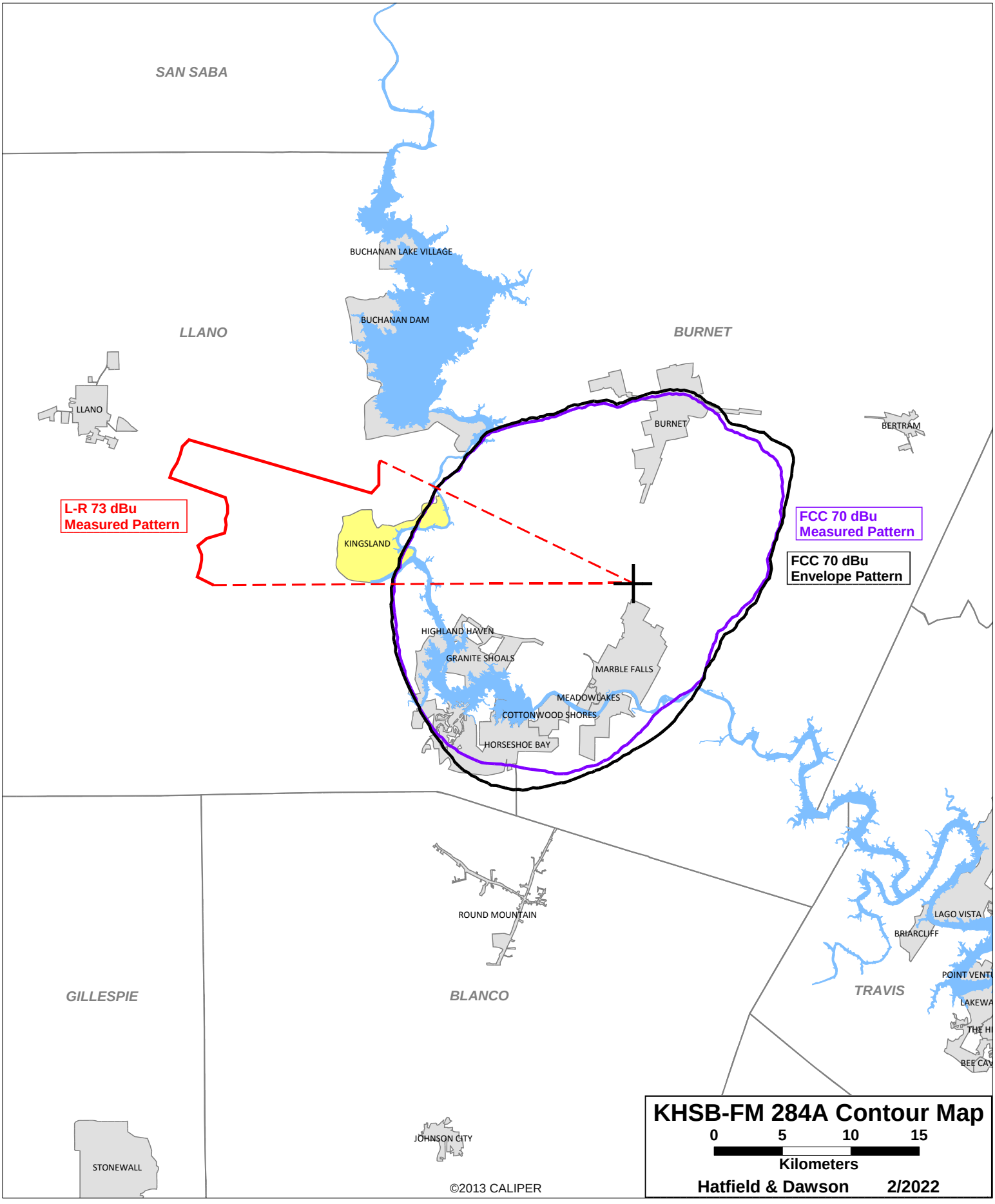
Attached is a plot of the terrain path from the transmitter site to the sample location in Kingsland. The attached terrain path plot includes a list of the Longley-Rice study parameters.

The location of the Longley-Rice contour in the direction of Kingsland has been determined for 1-degree increment radials passing through Kingsland (starting at 270 degrees and ending at 296

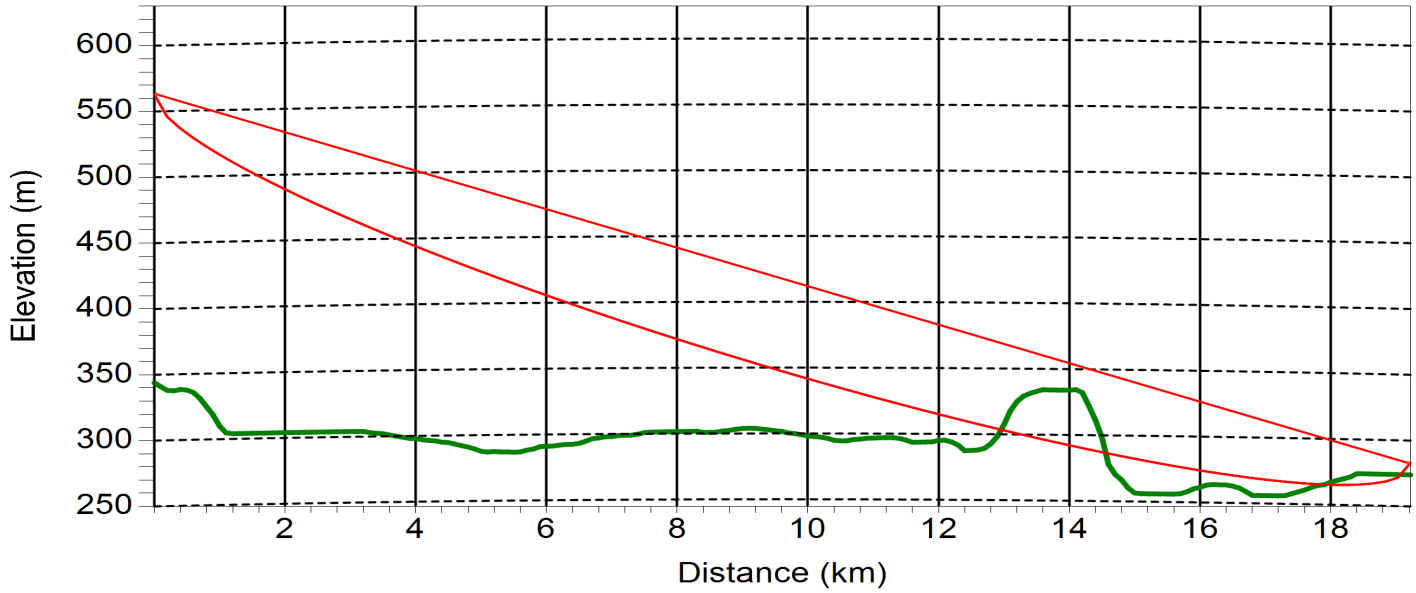
degrees). The attached map exhibit depicts the results of this analysis as a 73 dBu contour (chosen to allow for 3 dB of local clutter loss at the receive locations) over the span of 270 to 296 degrees.

Radial	F(50,50) 70 dBu (km)	L-R 73 dBu (km)	L-R exceeds F(50,50) by
270	17.6 km	30.6 km	74%
271	17.5 km	31.8 km	82%
272	17.4 km	31.6 km	82%
273	17.3 km	31.5 km	82%
274	17.2 km	31.6 km	84%
275	17.1 km	31.9 km	87%
276	17.1 km	31.3 km	83%
277	17.0 km	30.0 km	76%
278	16.9 km	30.0 km	78%
279	16.8 km	30.1 km	79%
280	16.8 km	30.0 km	79%
281	16.6 km	30.1 km	81%
282	16.5 km	30.4 km	84%
283	16.5 km	34.6 km	110%
284	16.4 km	34.6 km	111%
285	16.3 km	34.4 km	111%
286	16.3 km	34.4 km	111%
287	16.2 km	34.3 km	112%
288	16.2 km	34.0 km	110%
289	16.1 km	20.1 km	25%
290	16.0 km	20.0 km	25%
291	16.0 km	19.9 km	24%
292	15.9 km	20.0 km	26%

293	15.9 km	20.2 km	27%
294	15.9 km	20.3 km	28%
295	15.9 km	20.5 km	29%
296	15.9 km	20.5 km	29%


SAN SABA
BUCHANAN LAKE VILLAGE
BUCHANAN DAM
LLANO
BURNET
LLANO
BURNET
BERTRAM
L-R 73 dBu
Measured Pattern
FCC 70 dBu
Measured Pattern
FCC 70 dBu
Envelope Pattern
KINGSLAND
HIGHLAND HAVEN
GRANITE SHOALS
MARBLE FALLS
MEADOWLAKES
COTTONWOOD SHORES
HORSESHOE BAY
ROUND MOUNTAIN
LAGO VISTA
BRIARCLIFF
POINT VENTI
LAKEWA
THE HI
BEE CAV
TRAVIS
GILLESPIE
BLANCO
STONEWALL
JOHNSON CITY
©2013 CALIPER
KHSB-FM 284A Contour Map
0 5 10 15
Kilometers
Hatfield & Dawson 2/2022

Sample Path to Kingsland
Link: Tx001 -> Rx001



Transmitter	
Description	Data
Link end 1 ID	Tx001
Site name	Transmitter Site
Latitude	N30°38'19.70"
Longitude	W98°15'45.10"
Transmitter Frequency	104.7 MHz
Polarization	horizontal
Antenna Height (AGL)	222.00 m
Antenna elevation (AMSL)	563.00 m
Point az. to link end 2	274.00°
ERPd toward link end 2	0.11 dBkW

Receiver	
Description	Data
Link end 2 ID	Rx001
Site name	Kingsland
Latitude	N30°39'02.56"
Longitude	W98°27'46.79"
Received signal level	75.85 dBu
Antenna Height (AGL)	9.10 m
Antenna elevation (AMSL)	283.01 m
Point az. to link end 1	93.90°

Link Statistics	
Description	Data
Path	Tx001 -> Rx001
Length	19.2196 km
Number of obstacles	0
Excess pathloss	5.49 dB
Path Fresnel zone clearance	----
K factor	1.333