TECHNICAL NARRATIVE

This request for a minor modification to station KENJ-LP Channel 283 Fac. ID # 195291 proposes a change of antenna models and an increase in ERP to expand the F(50,50) 60dBu service contour to its maximum 5.6 km allowed under §73.811

Currently KENJ-LP is broadcasting 40 watts ERP at 34 meters HAAT resulting in an F(50,50) 60dBu service contour of 4.7 kilometers. KENJ-LP is short spaced to 2nd adjacent station KXNA channel 285 and was licensed under waiver rule §73.807 (e)

Distance between:

36 15 30.22 N Latitude, 94 8 9.57 W Longitude (Point 1)
As decimals: 36.2583944 Latitude, -94.1359917 Longitude

and

36 10 48. N Latitude, 94 5 7. W Longitude (Point 2)
As decimals: 36.1800000 Latitude, -94.0852778 Longitude

Distance = 9.821 km (6.103 miles)
via the method in Sections 73.208 and 73.611(d)
This method is only suitable for distances up to 475 km (295 miles).

Azimuth, Point 1 to Point 2: 152.42° True
Azimuth, Point 2 to Point 1: 332.45° True

Station KXNA Facility ID # 71703 radiates 2.75kW at 148 meters HAAT in general. Using FCC bearing and HAAT data, KXNA places a 77.452 dBu F(50, 50) service contour at KENJ-LPs tower/antenna location. Utilizing the U/D method, KENJ-LP is predicted to produce an undesired overlap of the KXNA contour with a signal of 117.45 dBu. The applicants propose mounting a Nicom BKG/88-2 antenna with ¾ wave inter-bay spacing at a radiation center of 19 meters AGL on the tower.

At depression angles between 80 and 90 degrees around the tower base the 117.45 dBu contour is 7 meters above ground level and does not reach any potential listeners. The antenna data is shown in the manufacturers table below.

TX station: BKG88/2 GENERIC Site name: 3/4 WAVE SEPARATION

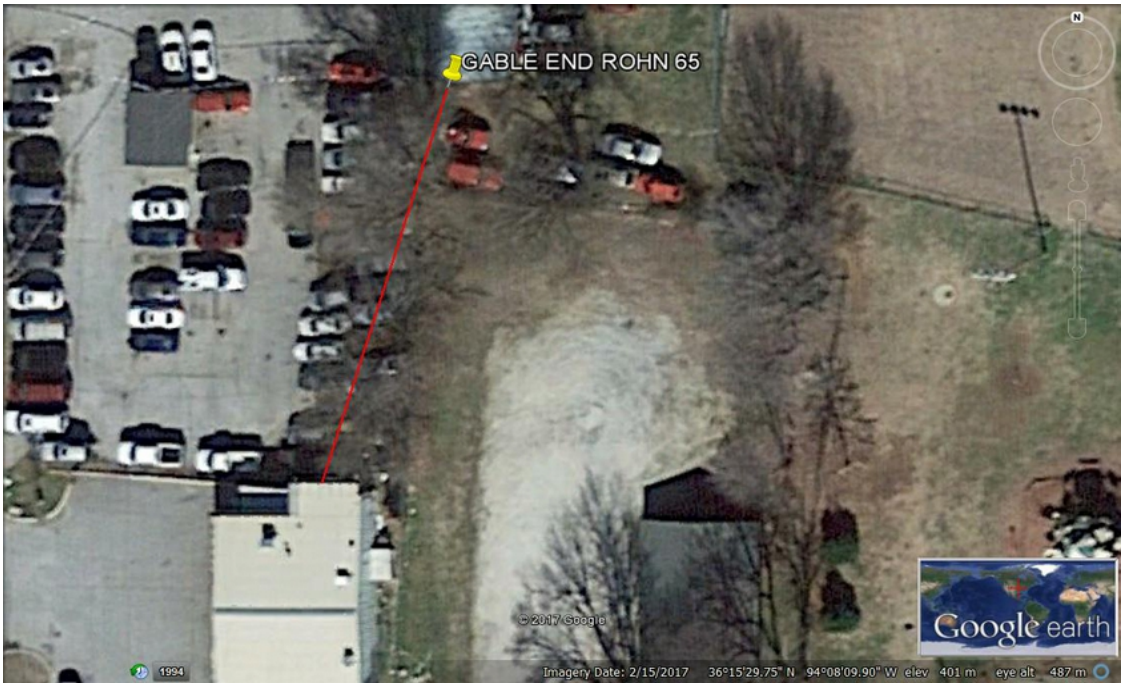
Frequency: 98.10 MHz

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	873.0	30.0	11.2	10.9	60.0	33.1	95.6
0.5	100.0	872.2	30.5	9.3	7.6	60.5	32.8	94.0
1.0	99.8	870.3	31.0	7.5	4.8	61.0	32.5	92.3
1.5	99.7	867.3	31.5	5.6	2.8	61.5	32.2	90.5
2.0	99.4	863.2	32.0	3.8	1.3	62.0	31.9	88.7
2.5	99.1	858.0	32.5	2.1	0.4	62.5	31.5	86.7
3.0	98.8	851.8	33.0	0.3	0.0	63.0	31.1	84.7
3.5	98.4	844.5	33.5	1.4	0.2	63.5	30.8	82.6
4.0	97.9	836.2	34.0	3.0	0.8	64.0	30.4	80.4
4.5	97.3	827.0	34.5	4.6	1.9	64.5	29.9	78.2
5.0	96.7	816.7	35.0	6.2	3.4	65.0	29.5	75.9
5.5	96.0	804.8	35.5	7.8	5.3	65.5	29.1	73.7
6.0	95.2	791.9	36.0	9.3	7.5	66.0	28.6	71.5
6.5	94.4	778.2	36.5	10.7	10.0	66.5	28.2	69.2
7.0	93.5	763.7	37.0	12.1	12.9	67.0	27.7	66.9
7.5	92.6	748.4	37.5	13.5	16.0	67.5	27.2	64.6
8.0	91.6	732.4	38.0	14.9	19.3	68.0	26.7	62.2
8.5	90.5	715.7	38.5	16.1	22.8	68.5	26.2	59.9
9.0	89.4	698.3	39.0	17.4	26.4	69.0	25.7	57.5
9.5	88.3	680.4	39.5	18.6	30.2	69.5	25.1	55.2
10.0	87.1	661.9	40.0	19.8	34.1	70.0	24.6	52.8
10.5	85.7	640.6	40.5	20.9	38.0	70.5	24.1	50.9
11.0	84.2	619.0	41.0	21.9	42.0	71.0	23.7	48.9
11.5	82.7	597.2	41.5	22.9	45.9	71.5	23.2	47.0
12.0	81.2	575.1	42.0	23.9	49.9	72.0	22.7	45.1
12.5	79.6	553.0	42.5	24.8	53.8	72.5	22.2	43.2
13.0	78.0	530.7	43.0	25.7	57.7	73.0	21.7	41.3
13.5	76.3	508.4	43.5	26.5	61.5	73.5	21.2	39.4
14.0	74.6	486.2	44.0	27.3	65.3	74.0	20.7	37.6
14.5	72.9	464.0	44.5	28.1	68.9	74.5	20.2	35.7
15.0	71.1	441.9	45.0	28.8	72.4	75.0	19.7	33.9
15.5	69.3	419.4	45.5	29.5	75.8	75.5	19.3	32.4
16.0	67.4	397.1	46.0	30.1	79.0	76.0	18.8	30.9
16.5	65.6	375.2	46.5	30.7	82.0	76.5	18.4	29.4
17.0	63.6	353.6	47.0	31.2	84.9	77.0	17.9	28.0
17.5	61.7	332.5	47.5	31.7	87.6	77.5	17.4	26.6
18.0	59.8	311.8	48.0	32.1	90.2	78.0	17.0	25.2
18.5	57.8	291.6	48.5	32.6	92.5	78.5	16.5	23.8
19.0	55.8	271.9	49.0	32.9	94.7	79.0	16.0	22.5
19.5	53.8	252.8	49.5	33.3	96.7	79.5	15.6	21.1
20.0	51.8	234.3	50.0	33.6	98.4	80.0	15.1	19.9
20.5	49.7	215.9	50.5	33.9	100.1	80.5	14.8	19.1
21.0	47.6	198.2	51.0	34.1	101.5	81.0	14.5	18.4
21.5	45.6	181.2	51.5	34.3	102.8	81.5	14.3	17.7
22.0	43.5	165.0	52.0	34.5	103.8	82.0	14.0	17.0
22.5	41.4	149.6	52.5	34.6	104.7	82.5	13.7	16.3
23.0	39.3	134.9	53.0	34.7	105.3	83.0	13.4	15.7
23.5	37.2	121.0	53.5	34.8	105.8	83.5	13.1	15.0
24.0	35.2	107.9	54.0	34.9	106.1	84.0	12.8	14.4
24.5	33.1	95.6	54.5	34.9	106.2	84.5	12.5	13.7
25.0	31.0	84.1	55.0	34.9	106.1	85.0	12.2	13.1
25.5	29.0	73.3	55.5	34.8	105.7	85.5	12.2	13.0
26.0	26.9	63.4	56.0	34.7	105.2	86.0	12.1	12.8
26.5	24.9	54.2	56.5	34.6	104.5	86.5	12.1	12.7
27.0	22.9	45.8	57.0	34.5	103.7	87.0	12.0	12.6
27.5	20.9	38.1	57.5	34.3	102.7	87.5	11.9	12.4
28.0	18.9	31.2	58.0	34.1	101.5	88.0	11.9	12.3
28.5	17.0	25.1	58.5	33.9	100.2	88.5	11.8	12.2
29.0	15.0	19.7	59.0	33.6	98.8	89.0	11.7	12.0
29.5	13.1	15.0	59.5	33.4	97.2	89.5	11.7	11.9

NicomUsa, Inc

The nearest inhabitable building is south of the used car lot, 36 meters from the tower base and 28 degrees angle of depression from the center of radiation. Based on manufacturer's data, a 109.65 dBu signal is predicted at the outside wall of this metal building.



A small office is used as a storage building by the KENJ-LP station sponser and is not habitable. It is 23 meters away at an angle of depression of 39 degrees.

Any potential listener in the used car lot outside and next to the small office / storage building would receive an interfering contour of 112.8dBu or less from KENJ-LP

The other nearby building is currently occupied by an alarm company. The awning in their driveway is 33 meters from the tower at a depression angle of 30 degrees from the center of radiation. It's predicted to receive a 105.9dBu signal from station KENJ-LP

The applicant is requesting an ERP increase to 78 watts from a radiation center of 34 meters HAAT which will allow the maximum 5.6 km service area as depicted in the predicted 60dBu service contour as shown below.