

Non-Interference Compliance
K268BR, Oklahoma City, OK FAC# 139288
December 14, 2022

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern using V-Soft X-Field.

Pages 4 through 6 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 7 of this exhibit is the Adjacent Channel Study performed by ComStudy.

Page 8 of this exhibit is a Google Earth aerial photo of the vicinity surrounding the proposed translator's tower site with the zone of predicted interference plotted.

Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1419335	BLFT20110301ABF	K266BG	72.1	72.1
430395	BLH20000105ABI	KTST	88	87.4
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				71.9

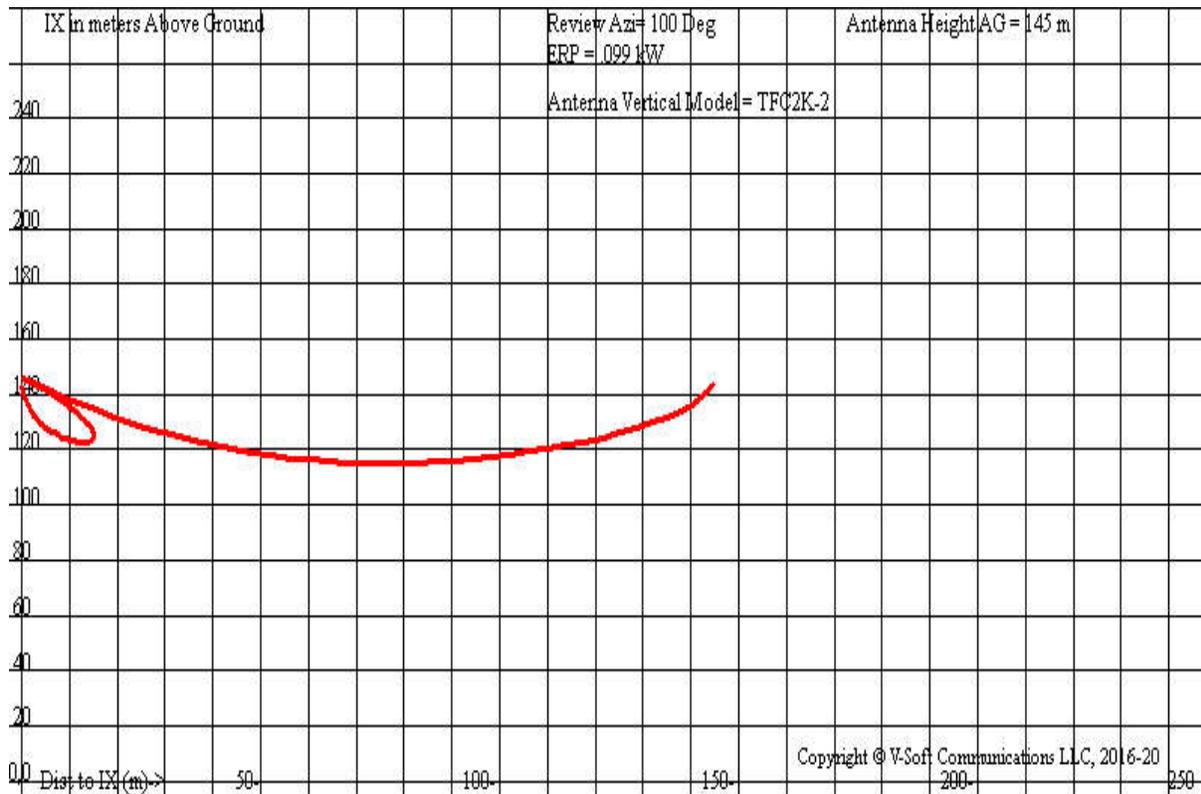
FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **71.9 dBμ**, this makes the proposed translator's worst-case interfering contour **111.9 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **148.1 m** from the transmit antenna.

The calculations for the necessary ground clearance to qualify for a 1204(d) population waiver were prepared by V-Soft, X-Field.

Note: The tallest buildings within the zone of predicted interference are less than 15ft (4.6m) in height. This proposal provides a minimum 114.1m ground clearance so, in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer: BEX
Antenna Model: TFC2K-2 (.75)
CORAGL: 145 m
Maximum ERP: 0.099 kW
Interfering Contour: 111.9 dBμ
Max Int. Contour Distance: 148.1 m
Min Ground Clearance: 114.1 m

**1204(d) Exhibit
K268BR, Oklahoma City, OK FAC# 139288
December 14, 2022**



K268BR Oklahoma City , OK, Showing Protection to K266BG , Channel: 266
 Geographic Coordinates: N. 35 24 02.00 W. 97 29 35.00
 74.1204(d) Study - Using FCC 30 SEC Terrain Database
 Translator or LPFM Maximum Antenna ERP = 0.099 kW, Channel: 268
 Translator or LPFM Antenna Height AG = 145 meters
 K268BR Antenna Azimuth Model = TFC2K Vertical Model = TFC2K-2(.75)

Protected Station's Contour = 71.92388 dBu
 Translator's or LPFM's full Interference contour 111.92388

Review Azimuth = 100 Degrees True
 Relative Field on the horizontal at Review Azimuth = 0.702
 Translator/LPFM ERP on the horizontal at Review Azimuth = 0.049 kW
 Distance between stations = 4.8 km
 Protected Station= K266BG, .14 kW, 458 M meters COR AMSL

Depression Angle From Horiz. (Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
00.0	1.0	0.7	0.0695	148.1809	148.1809	145.000
05.0	0.954	0.7	0.0633	141.3646	140.8266	132.679
10.0	0.850	0.7	0.0502	125.9537	124.0402	123.128
15.0	0.728	0.7	0.0368	107.8757	104.1999	117.080
20.0	0.609	0.7	0.0258	090.2422	084.7999	114.135
25.0	0.489	0.7	0.0166	072.4604	065.6715	114.377
30.0	0.351	0.7	0.0086	052.0115	045.0433	118.994
35.0	0.197	0.7	0.0027	029.1916	023.9124	128.256
40.0	0.048	0.7	0.0002	007.1127	005.4486	140.428
45.0	0.071	0.7	0.0004	010.5208	007.4394	137.561
50.0	0.147	0.7	0.0015	021.7826	014.0016	128.314
55.0	0.181	0.7	0.0023	026.8207	015.3837	123.030
60.0	0.185	0.7	0.0024	027.4135	013.7067	121.259
65.0	0.172	0.7	0.0021	025.4871	010.7713	121.901
70.0	0.150	0.7	0.0016	022.2271	007.6021	124.113
75.0	0.122	0.7	0.0010	018.0781	004.6789	127.538
80.0	0.089	0.7	0.0006	013.1881	002.2901	132.012
85.0	0.050	0.7	0.0002	007.4090	000.6457	137.619
90.0	0.050	0.7	0.0002	007.4090	000.0000	137.591

2 Bay TFC2K Full Wave 99.1MHz

TX station:

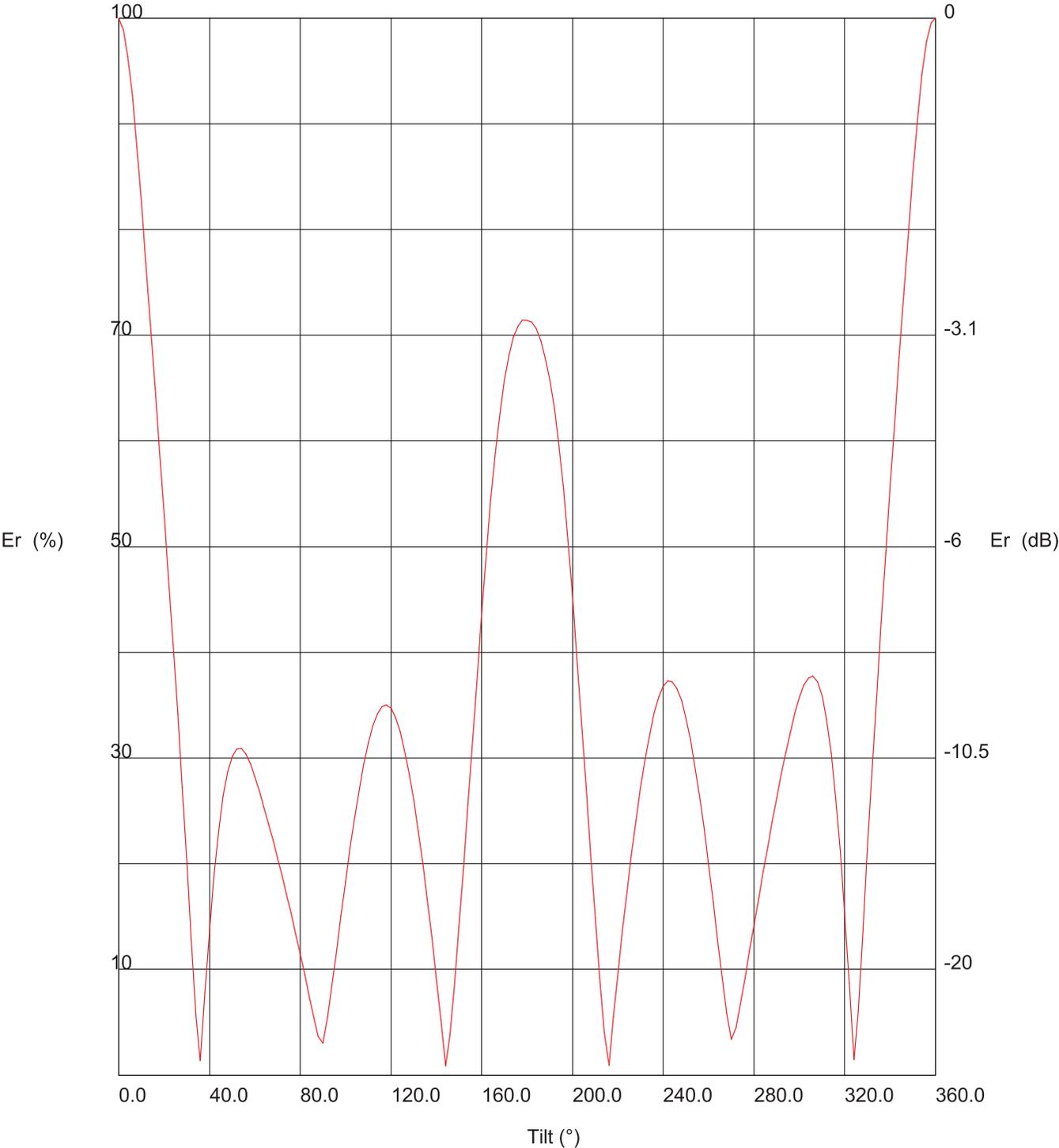
Site name:

Frequency: 99.10 MHz

Date: 10/01/2009

Frequency: 99.10 MHz

Vertical diagram



— 0.0° Az. (Total antenna)

Frequency: 99.10 MHz

Vertical diagram at an azimuth of 0°

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	0.5	120.0	34.7	0.1	240.0	36.8	0.1
2.0	98.9	0.5	122.0	33.8	0.1	242.0	37.3	0.1
4.0	96.3	0.5	124.0	32.5	0.1	244.0	37.2	0.1
6.0	92.7	0.4	126.0	30.7	0.0	246.0	36.6	0.1
8.0	87.9	0.4	128.0	28.5	0.0	248.0	35.5	0.1
10.0	82.6	0.4	130.0	26.0	0.0	250.0	33.8	0.1
12.0	76.9	0.3	132.0	23.1	0.0	252.0	31.7	0.1
14.0	71.0	0.3	134.0	20.0	0.0	254.0	29.2	0.0
16.0	65.0	0.2	136.0	16.7	0.0	256.0	26.4	0.0
18.0	59.1	0.2	138.0	13.1	0.0	258.0	23.2	0.0
20.0	53.1	0.1	140.0	9.3	0.0	260.0	19.9	0.0
22.0	47.0	0.1	142.0	5.2	0.0	262.0	16.3	0.0
24.0	40.7	0.1	144.0	0.9	0.0	264.0	12.7	0.0
26.0	34.1	0.1	146.0	3.7	0.0	266.0	9.1	0.0
28.0	27.2	0.0	148.0	8.7	0.0	268.0	5.9	0.0
30.0	20.1	0.0	150.0	14.1	0.0	270.0	3.4	0.0
32.0	12.9	0.0	152.0	19.7	0.0	272.0	4.5	0.0
34.0	5.6	0.0	154.0	25.6	0.0	274.0	6.7	0.0
36.0	1.4	0.0	156.0	31.7	0.1	276.0	9.2	0.0
38.0	7.9	0.0	158.0	37.8	0.1	278.0	11.7	0.0
40.0	13.8	0.0	160.0	43.7	0.1	280.0	14.3	0.0
42.0	18.9	0.0	162.0	49.3	0.1	282.0	16.8	0.0
44.0	23.1	0.0	164.0	54.4	0.2	284.0	19.2	0.0
46.0	26.4	0.0	166.0	58.9	0.2	286.0	21.6	0.0
48.0	28.7	0.0	168.0	62.7	0.2	288.0	23.9	0.0
50.0	30.2	0.0	170.0	65.8	0.2	290.0	26.2	0.0
52.0	30.9	0.0	172.0	68.1	0.2	292.0	28.4	0.0
54.0	30.9	0.0	174.0	69.8	0.3	294.0	30.5	0.0
56.0	30.4	0.0	176.0	70.9	0.3	296.0	32.5	0.1
58.0	29.5	0.0	178.0	71.4	0.3	298.0	34.2	0.1
60.0	28.3	0.0	180.0	71.4	0.3	300.0	35.8	0.1
62.0	26.9	0.0	182.0	71.2	0.3	302.0	36.9	0.1
64.0	25.4	0.0	184.0	70.6	0.3	304.0	37.6	0.1
66.0	23.8	0.0	186.0	69.5	0.3	306.0	37.7	0.1
68.0	22.2	0.0	188.0	67.9	0.2	308.0	37.2	0.1
70.0	20.5	0.0	190.0	65.8	0.2	310.0	35.9	0.1
72.0	18.8	0.0	192.0	63.0	0.2	312.0	33.6	0.1
74.0	17.1	0.0	194.0	59.6	0.2	314.0	30.5	0.0
76.0	15.3	0.0	196.0	55.4	0.2	316.0	26.3	0.0
78.0	13.5	0.0	198.0	50.6	0.1	318.0	21.3	0.0
80.0	11.5	0.0	200.0	45.2	0.1	320.0	15.3	0.0
82.0	9.5	0.0	202.0	39.4	0.1	322.0	8.7	0.0
84.0	7.5	0.0	204.0	33.3	0.1	324.0	1.5	0.0
86.0	5.4	0.0	206.0	27.0	0.0	326.0	6.1	0.0
88.0	3.7	0.0	208.0	20.9	0.0	328.0	13.8	0.0
90.0	3.0	0.0	210.0	14.9	0.0	330.0	21.4	0.0
92.0	5.6	0.0	212.0	9.2	0.0	332.0	28.8	0.0
94.0	8.5	0.0	214.0	4.0	0.0	334.0	36.0	0.1
96.0	11.8	0.0	216.0	0.9	0.0	336.0	42.8	0.1
98.0	15.1	0.0	218.0	5.5	0.0	338.0	49.3	0.1
100.0	18.3	0.0	220.0	9.7	0.0	340.0	55.6	0.2
102.0	21.5	0.0	222.0	13.7	0.0	342.0	61.8	0.2
104.0	24.4	0.0	224.0	17.4	0.0	344.0	67.9	0.2
106.0	27.0	0.0	226.0	20.9	0.0	346.0	73.9	0.3
108.0	29.4	0.0	228.0	24.1	0.0	348.0	79.8	0.3
110.0	31.4	0.1	230.0	27.1	0.0	350.0	85.3	0.4
112.0	33.0	0.1	232.0	29.9	0.0	352.0	90.4	0.4
114.0	34.2	0.1	234.0	32.3	0.1	354.0	94.6	0.5
116.0	34.9	0.1	236.0	34.3	0.1	356.0	97.8	0.5
118.0	35.0	0.1	238.0	35.8	0.1	358.0	99.6	0.5

Adjacent Channel Study
K268BR, Oklahoma City, OK FAC# 139288
12/14/2022

Callsign	State	City	Channel	ERP (W)	Class	Status	Distance (km)	Sep (km)	Clr
KTST	OK	OKLAHOMA CITY	270	27000	C0	LIC	2.26	0	-57.98 dB
KTST	OK	OKLAHOMA CITY	270	100000	C0	LIC	21.89	0	-28.91 dB
K266BG	OK	EDMOND	266	140	D	LIC	4.79	0	-20.79 dB
KTST	OK	OKLAHOMA CITY	270	25000	C0	LIC	21.89	0	-18.93 dB
KOKF	OK	EDMOND	215	7800	C1	LIC	17.74	22	-4.3
KOKF	OK	EDMOND	215	13500	C1	CP MOD	19.19	22	-2.8
KPCG-LP	OK	EDMOND	267	40	LP100	LIC	37.71	13	7.81 dB
KOCD	OK	OKEENE	268	14000	C3	LIC	105.89	0	9.92 dB
K268DK	OK	CUSHING	268	250	D	LIC	96.17	0	15.96 dB
KLAW	OK	LAWTON	267	100000	C1	LIC	134.31	0	20.94 dB
K265FE	OK	SHAWNEE	265	150	D	LIC	43.4	0	23.47 dB
KSMJ-LP	OK	EDMOND	265	22	LP100	LIC	27.43	6	28.10 dB
KMCO	OK	WILBURTON	267	100000	C1	LIC	169.36	0	29.55 dB
KIZS	OK	COLLINSVILLE	268	6200	C3	LIC	185.75	0	30.08 dB
KVRO	OK	STILLWATER	266	6000	A	LIC	95.54	0	30.30 dB
KYDA	TX	AZLE	269	92000	C	LIC	217.81	0	31.56 dB
KYDA	TX	AZLE	269	100000	C	LIC	217.81	0	32.22 dB
K265DT	OK	CHICKASHA	265	92	D	LIC	66.81	0	32.47 dB
KKZU	OK	SAYRE	269	50000	C2	LIC	180.68	0	34.74 dB
KWOX	OK	WOODWARD	266	82000	C0	LIC	201.28	0	35.08 dB
K269GL	OK	LAWTON	269	62	D	LIC	125.53	0	35.83 dB
KTSO	OK	SAPULPA	265	19000	C3	LIC	145.98	0	37.43 dB
K268DG	OK	MUSKOGEE	268	10	D	LIC	196.09	0	39.24 dB
KMCO	OK	MCALESTER	267	27000	C1	LIC	168.37	0	39.26 dB

Aerial Photo Zone of Predicted Interference
K268BR, Oklahoma City, OK FAC# 139288
December 14, 2022

