

## **Non-Interference Compliance**

Regarding Facility id 14455

Channel 261

### **Description of Exhibit 12 Contents**

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.

Pages 4 through 5 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 6 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 7 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 8 of this exhibit is a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by the U.S. Geological Survey's National Aerial Photography Program. It has been included to provide clarification of the nature of the buildings in the vicinity.

**Note: The tallest building within the zone of predicted interference is less than 25ft (7.6m). This application provides 31.5m (103.3ft) ground clearance so 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.**

### 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
1124833	BLH20060412ACR	KVWF	73.4	73.4
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>73.4</b>

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 **73.4 dBμ**, this makes the proposed translator's worst-case interfering contour **113.4 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **237.1 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 7 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **31.5 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference. Hence, 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.

**Note: The tallest building within the zone of predicted interference is less than 25ft (7.6m). This application provides 31.5m (103.3ft) ground clearance so 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:	NIC
Antenna Model:	BKG77-2(.5)
CORAGL:	98 m
Maximum ERP:	0.25 kW
Interfering Contour:	113.4 dBμ
Max Int. Contour Distance:	237.1 m
Min Ground Clearance:	31.5 m

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.973	236.7	230.7	229.8	77.9
10	.933	217.6	221.2	217.9	59.6
15	.855	182.8	202.7	195.8	45.5
20	.777	150.9	184.2	173.1	35.0
25	.664	110.2	157.4	142.7	31.5
30	.560	78.4	132.8	115.0	31.6
35	.456	52.0	108.1	88.6	36.0
40	.365	33.3	86.5	66.3	42.4
45	.292	21.3	69.2	49.0	49.0
50	.227	12.9	53.8	34.6	56.8
55	.172	7.4	40.8	23.4	64.6
60	.126	4.0	29.9	14.9	72.1
65	.096	2.3	22.8	9.6	77.4
70	.072	1.3	17.1	5.8	82.0
75	.056	0.8	13.3	3.4	85.2
80	.046	0.5	10.9	1.9	87.3
85	.039	0.4	9.2	0.8	88.8
90	.035	0.3	8.3	0.0	89.7
Minimum Clearance above TGL:					<b>31.5 m</b>

TX station: TV Mondiale

Site name: Monte Alto

Frequency: 100.00 MHz

## Vertical diagram at an azimuth of 0° degrees

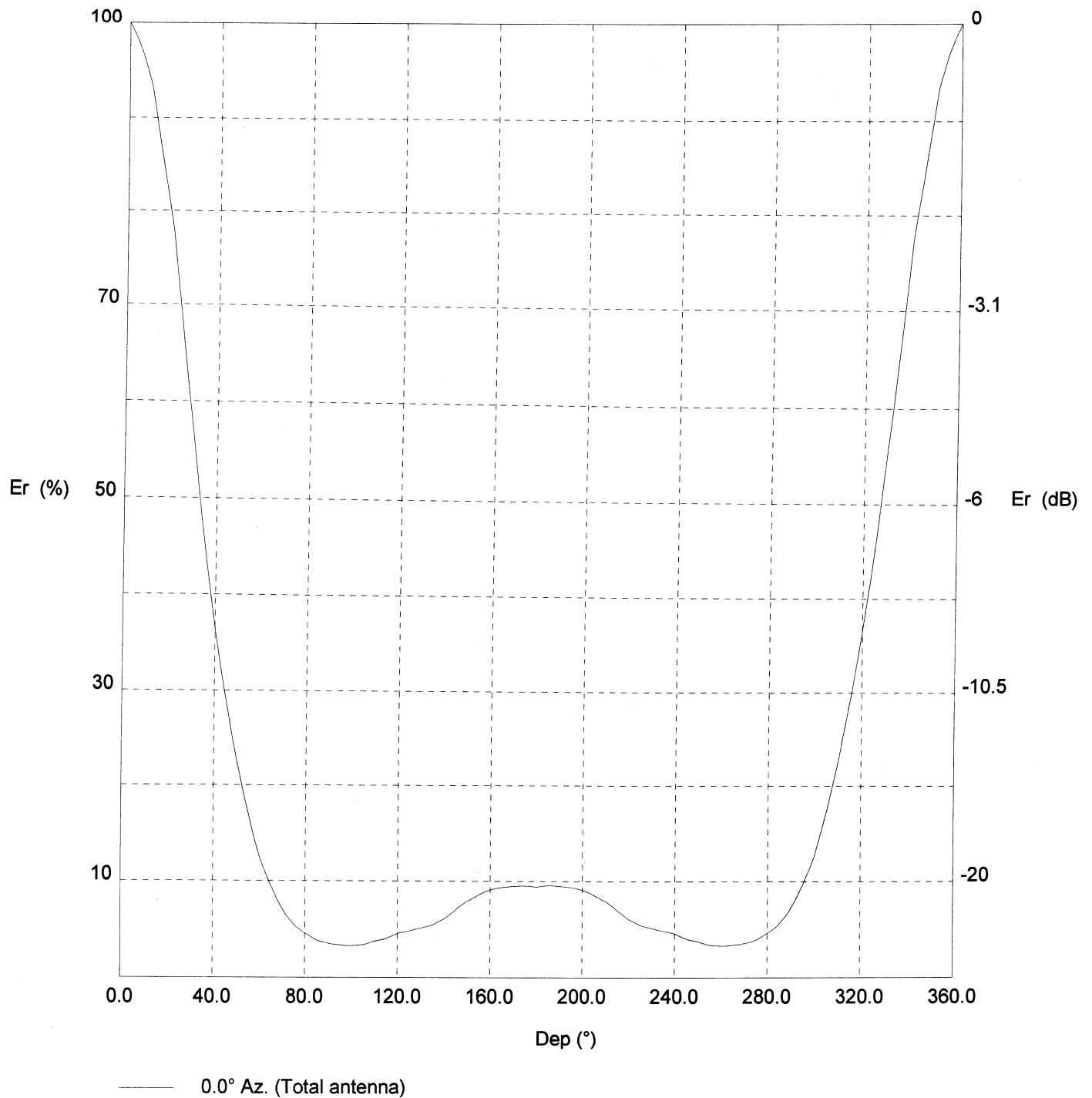
Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)
0.0	100.0	8.73	120.0	4.5	0.02	240.0	4.5	0.02
2.0	99.1	8.57	122.0	4.6	0.02	242.0	4.3	0.02
4.0	98.0	8.38	124.0	4.7	0.02	244.0	4.1	0.01
6.0	96.6	8.15	126.0	4.9	0.02	246.0	3.9	0.01
8.0	95.1	7.89	128.0	5.0	0.02	248.0	3.8	0.01
10.0	93.3	7.60	130.0	5.1	0.02	250.0	3.7	0.01
12.0	90.3	7.11	132.0	5.3	0.02	252.0	3.6	0.01
14.0	87.1	6.62	134.0	5.4	0.03	254.0	3.4	0.01
16.0	83.9	6.15	136.0	5.6	0.03	256.0	3.3	0.01
18.0	80.9	5.71	138.0	5.8	0.03	258.0	3.3	0.01
20.0	77.7	5.28	140.0	6.1	0.03	260.0	3.3	0.01
22.0	73.1	4.67	142.0	6.5	0.04	262.0	3.3	0.01
24.0	68.6	4.10	144.0	6.8	0.04	264.0	3.3	0.01
26.0	64.2	3.60	146.0	7.2	0.05	266.0	3.4	0.01
28.0	60.0	3.15	148.0	7.6	0.05	268.0	3.4	0.01
30.0	56.0	2.73	150.0	7.9	0.05	270.0	3.5	0.01
32.0	51.7	2.33	152.0	8.2	0.06	272.0	3.6	0.01
34.0	47.5	1.97	154.0	8.4	0.06	274.0	3.8	0.01
36.0	43.6	1.66	156.0	8.7	0.07	276.0	4.0	0.01
38.0	40.0	1.40	158.0	8.9	0.07	278.0	4.2	0.02
40.0	36.5	1.17	160.0	9.1	0.07	280.0	4.6	0.02
42.0	33.5	0.98	162.0	9.2	0.07	282.0	4.9	0.02
44.0	30.5	0.81	164.0	9.3	0.08	284.0	5.3	0.02
46.0	27.8	0.67	166.0	9.4	0.08	286.0	5.9	0.03
48.0	25.1	0.55	168.0	9.5	0.08	288.0	6.5	0.04
50.0	22.7	0.45	170.0	9.5	0.08	290.0	7.2	0.05
52.0	20.3	0.36	172.0	9.5	0.08	292.0	8.1	0.06
54.0	18.2	0.29	174.0	9.5	0.08	294.0	9.1	0.07
56.0	16.2	0.23	176.0	9.5	0.08	296.0	10.1	0.09
58.0	14.3	0.18	178.0	9.5	0.08	298.0	11.3	0.11
60.0	12.6	0.14	180.0	9.4	0.08	300.0	12.6	0.14
62.0	11.3	0.11	182.0	9.5	0.08	302.0	14.3	0.18
64.0	10.1	0.09	184.0	9.5	0.08	304.0	16.2	0.23
66.0	9.1	0.07	186.0	9.6	0.08	306.0	18.2	0.29
68.0	8.1	0.06	188.0	9.5	0.08	308.0	20.3	0.36
70.0	7.2	0.05	190.0	9.5	0.08	310.0	22.7	0.45
72.0	6.5	0.04	192.0	9.5	0.08	312.0	25.1	0.55
74.0	5.9	0.03	194.0	9.4	0.08	314.0	27.8	0.67
76.0	5.3	0.02	196.0	9.3	0.08	316.0	30.5	0.81
78.0	4.9	0.02	198.0	9.2	0.07	318.0	33.5	0.98
80.0	4.6	0.02	200.0	9.1	0.07	320.0	36.5	1.17
82.0	4.2	0.02	202.0	8.9	0.07	322.0	40.0	1.40
84.0	4.0	0.01	204.0	8.7	0.07	324.0	43.6	1.66
86.0	3.8	0.01	206.0	8.4	0.06	326.0	47.5	1.97
88.0	3.6	0.01	208.0	8.2	0.06	328.0	51.7	2.33
90.0	3.5	0.01	210.0	7.9	0.05	330.0	56.0	2.73
92.0	3.4	0.01	212.0	7.6	0.05	332.0	60.0	3.15
94.0	3.4	0.01	214.0	7.2	0.05	334.0	64.2	3.60
96.0	3.3	0.01	216.0	6.8	0.04	336.0	68.6	4.10
98.0	3.3	0.01	218.0	6.5	0.04	338.0	73.1	4.67
100.0	3.3	0.01	220.0	6.1	0.03	340.0	77.7	5.28
102.0	3.3	0.01	222.0	5.8	0.03	342.0	80.9	5.71
104.0	3.3	0.01	224.0	5.6	0.03	344.0	83.9	6.15
106.0	3.4	0.01	226.0	5.4	0.03	346.0	87.1	6.62
108.0	3.6	0.01	228.0	5.3	0.02	348.0	90.3	7.11
110.0	3.7	0.01	230.0	5.1	0.02	350.0	93.3	7.60
112.0	3.8	0.01	232.0	5.0	0.02	352.0	95.1	7.89
114.0	3.9	0.01	234.0	4.9	0.02	354.0	96.6	8.15
116.0	4.1	0.01	236.0	4.7	0.02	356.0	98.0	8.38
118.0	4.3	0.02	238.0	4.6	0.02	358.0	99.1	8.57

TX station: TV Mondiale

Site name: Monte Alto

Frequency: 100.00 MHz

### Vertical diagram



# **Adjacent Channel Study** **For Station K261DR, Facility\_id: 14455**

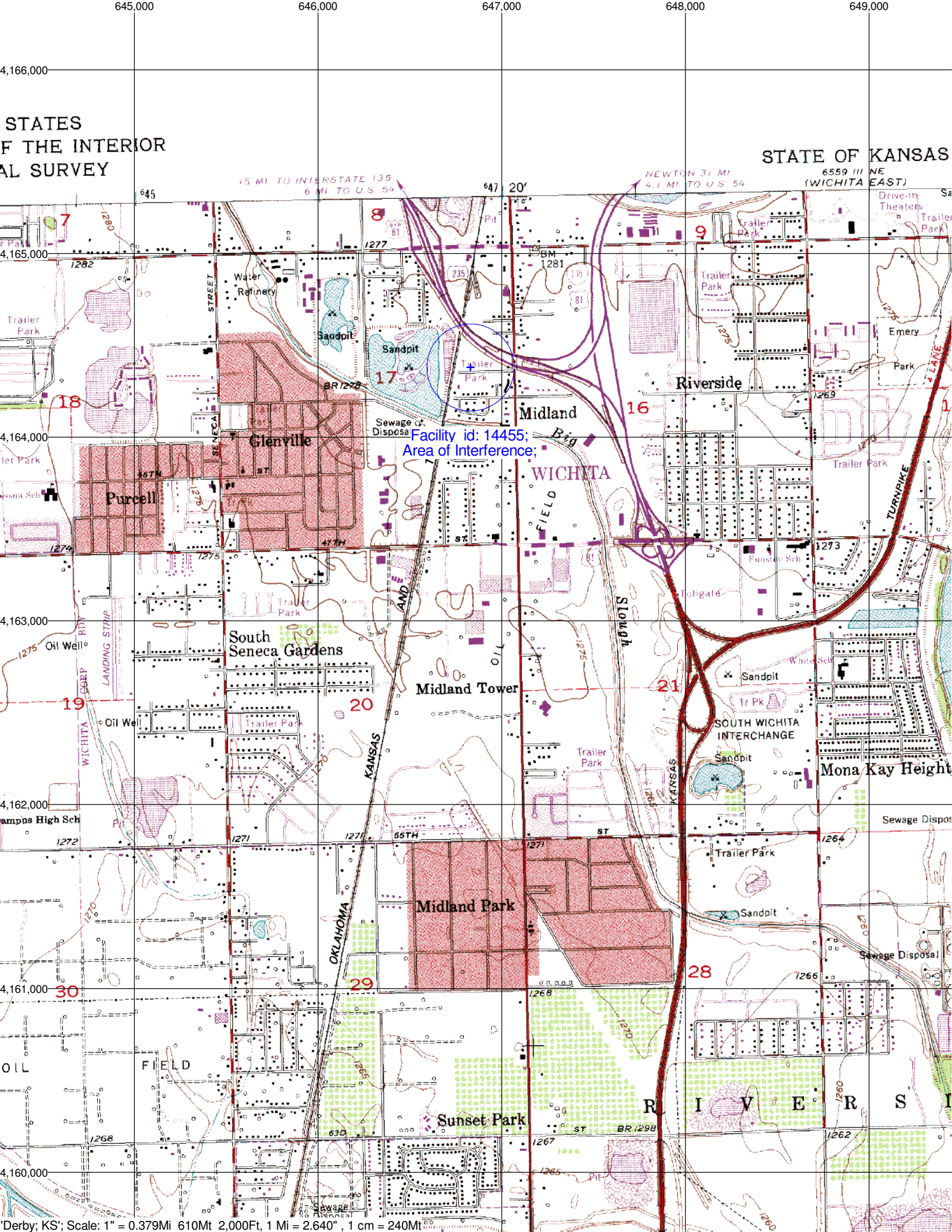
## **Co-channel through third adjacent:**

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
1124833	164106	BLH	20060412ACR	KVWF	CONNOISSEUR MEDIA, LLC	C3	AUGUSTA	KS	LIC	25	493	263	2	20.7	1.2233
646206	152995	BNPFT	20030317FEO	NEW	EDGEWATER BROADCASTING, INC.	D	WICHITA	KS	APP	0.092	554.8	258	3	13.3	0.3027
650427	157113	BNPFT	20030317LOK	NEW	EDUCATIONAL MEDIA FOUNDATION	D	BENTON	KS	APP	0.12	500	258	3	20.7	0
634738	142748	BNPFT	20030312ADU	NEW	COMMUNITY BROADCASTING, INC.	D	WELLINGTON	KS	APP	0.25	469	258	3	32.1	0
646164	152953	BNPFT	20030317FAD	NEW	EDGEWATER BROADCASTING, INC.	D	EL DORADO	KS	APP	0.115	543.3	258	3	44.9	0
27682	66382	BLD	19810209AT	KSWC	THE SOUTHWESTERN COLLEGE	D	WINFIELD	KS	LIC	0.009	381	262	1	52.3	0
221718	5196	BLFT	19960319TH	K258AE	BIBLE BROADCASTING NETWORK, INC.	D	HUTCHINSON	KS	LIC	0.25	527	258	3	71.4	0
646174	152963	BNPFT	20030317FDE	NEW	EDGEWATER BROADCASTING, INC.	D	MCPHERSON	KS	APP	0.14	582.6	258	3	87.5	0
1250355	1137	BLH	20080813AAZ	KNZS	AD ASTRA PER ASPERA BROADCASTING, INC.	C3	ARLINGTON	KS	LIC	14.5	648.2	262	1	91.5	0
1241618	35485	BLH	20080326AHG	KPNC	TEAM RADIO LLC	C3	PONCA CITY	OK	LIC	25	396	264	3	95.6	0
1312813	58645	BMLH	20090520AGH	KSKG	EAGLE COMMUNICATIONS, INC.	C1	SALINA	KS	LIC	100	557	260	1	131.9	0
586036	36005	BLH	20010807AAB	KYFM	KCD ENTERPRISES, INC	C2	BARTLESVILLE	OK	LIC	25	477	261	0	149.7	0
42848	18087	BLH	19820521AX	KHOK	EAGLE RADIO, INC.	C1	HOISINGTON	KS	LIC	100	707	264	3	162.4	0

## **Intermediate Frequencies (53 and 54 channels difference):**

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
494463	123025	BNPFT	20000322ABC	NEW	EDUCATIONAL MEDIA FOUNDATION	D	WICHITA	KS	APP	0.205	513	208	53	15.2	5.2





STATES  
OF THE INTERIOR  
AL SURVEY

STATE OF KANSAS  
6559 III NE  
(WICHITA EAST)

Facility id: 14455;  
Area of Interference;



