

K211GC LAS VEGAS, NV (Licensed) 211D (90.1 MHz)
ONDAS DE VIDA, INC. - INTERFERENCE SHOWING

K211GC (LIC) currently receives interference from K211DC which has greater than 40 dBu signal completely overlapping K211GC which makes the K211GC not receivable in most areas of the predicted K211GC coverage area. Applicant requests a non-adjacent channel change pursuant to the FM translator interference Report And Order (MB Docket 18-119).

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Table 1 - 74.1204(a) Channel Study**K211GC LAS VEGAS, NV - ONDAS DE VIDA, INC.****MINOR MODIFICATION January 2021 (Ch.203D proposed)**

Chan	Class	Call Letters	Type	Status	City	State	Country	Owner	Bearing TO (deg)	Distance (km)	Req. Dist. (km)	Clearance (km)	Field Strength (dBu)
201	C1	KCEP	FM	L-L2C	LAS VEGAS	NV	US	ECONOMIC OPPORTUI	126.5	20.1	59.3	-39.2	81.4
203	C2	KEKL	FM	L-L2C	MESQUITE	NV	US	EDUCATIONAL MEDIA	43.5	87.1	85.9	1.2	40.7
205	C	KNPR	FM	L-L2C	LAS VEGAS	NV	US	NEVADA PUBLIC RADIC	239.4	32.8	96.5	-63.7	86.9
205	C	KNPR	FS	L-AMD	LAS VEGAS	NV	US	NEVADA PUBLIC RADIC	239.4	32.8	70.5	-37.7	76.4

Terrain data DEM: FCC-30

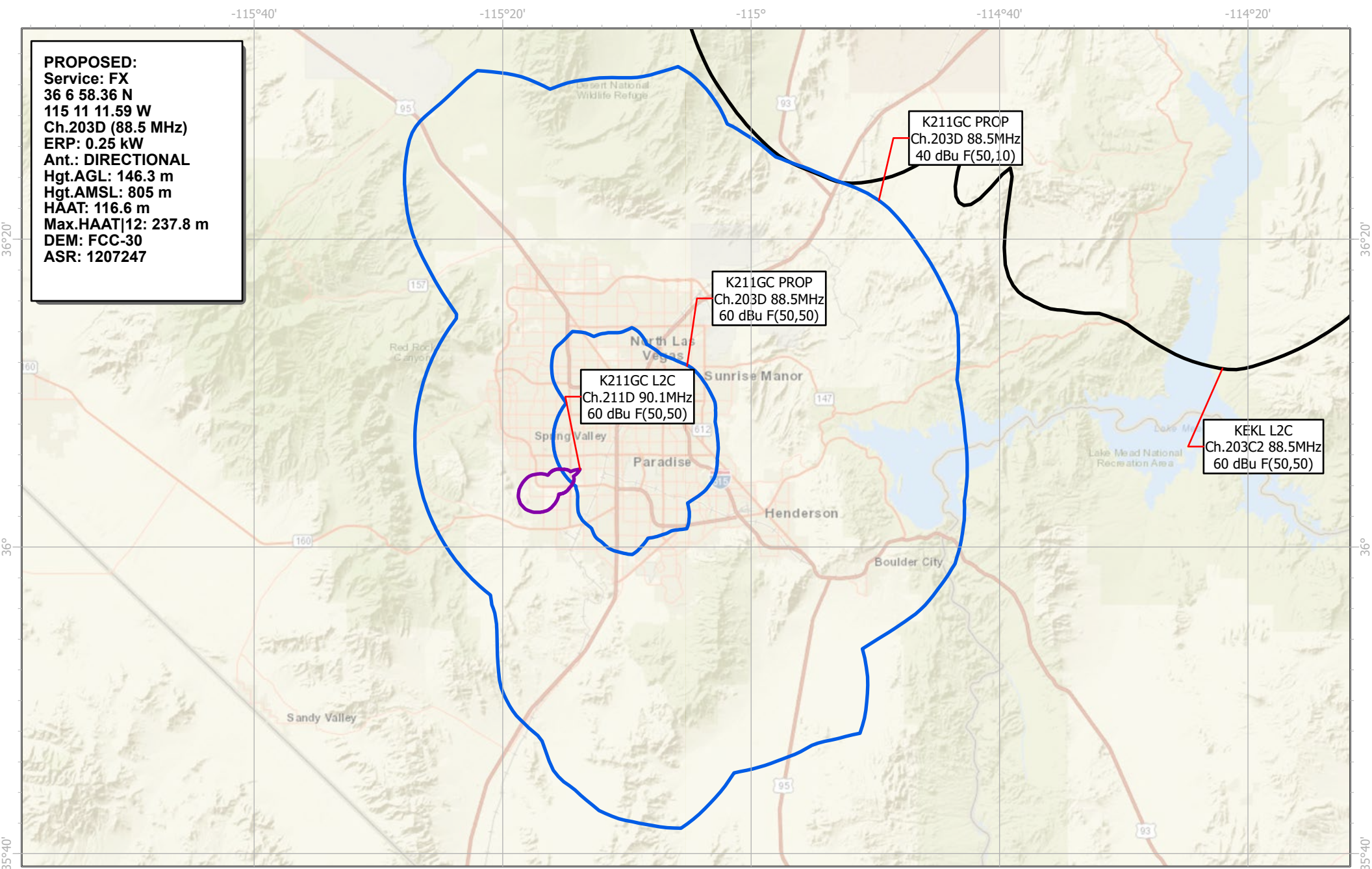
NOTE: Second adjacent-channel waiver showing with respect to KCEP.

Second adjacent KCEP has a field strength of 81.4 dBu at the proposed K211GC site. Therefore the proposed translator's interfering contour is the 121 dBu F(50,10) contour. At 250.0 watts ERP and with the antenna mounted at 146.3 meters AGL the proposed translator's 121 dBu F(50,10) extends 95 meters horizontally from the tower. However, due to mounting height and the vertical elevation pattern of the proposed antenna, the 121 dBu interfering contour will remain far above ground level and will not contain any structures or population. The translator's 121 dBu contour will remain at least 118.8 meters above ground level. Therefore this proposal is compliant with the allowance of Rule 74.1204(d).

Table 2 - 74.1204(g) Channel Study**K211GC LAS VEGAS, NV - ONDAS DE VIDA, INC.****MINOR MODIFICATION January 2021 (Ch.203D proposed)**

Chan	Class	Call Letters	Type	Status	City	State	Country	Owner	Bearing TO (deg)	FCC Dist.(km)	Req. Dist. (km)	Clearance (km)
257	C2	KRGT	FM	C-AMD	SUNRISE MANOR	NV	US	UNIVISION RADIO STA	126.1	20.1	15	5.1
257	C0	KRGT	FM	L-L2C	INDIAN SPRINGS	NV	US	UNIVISION RADIO STA	303.5	41.4	25	16.4

Distance separations determined per §73.208(c)



K211GC LAS VEGAS, NV Proposed Channel 203D (88.5 MHz)
ONDAS DE VIDA, INC. - MINOR MODIFICATION

Co-channel and minor change showing.

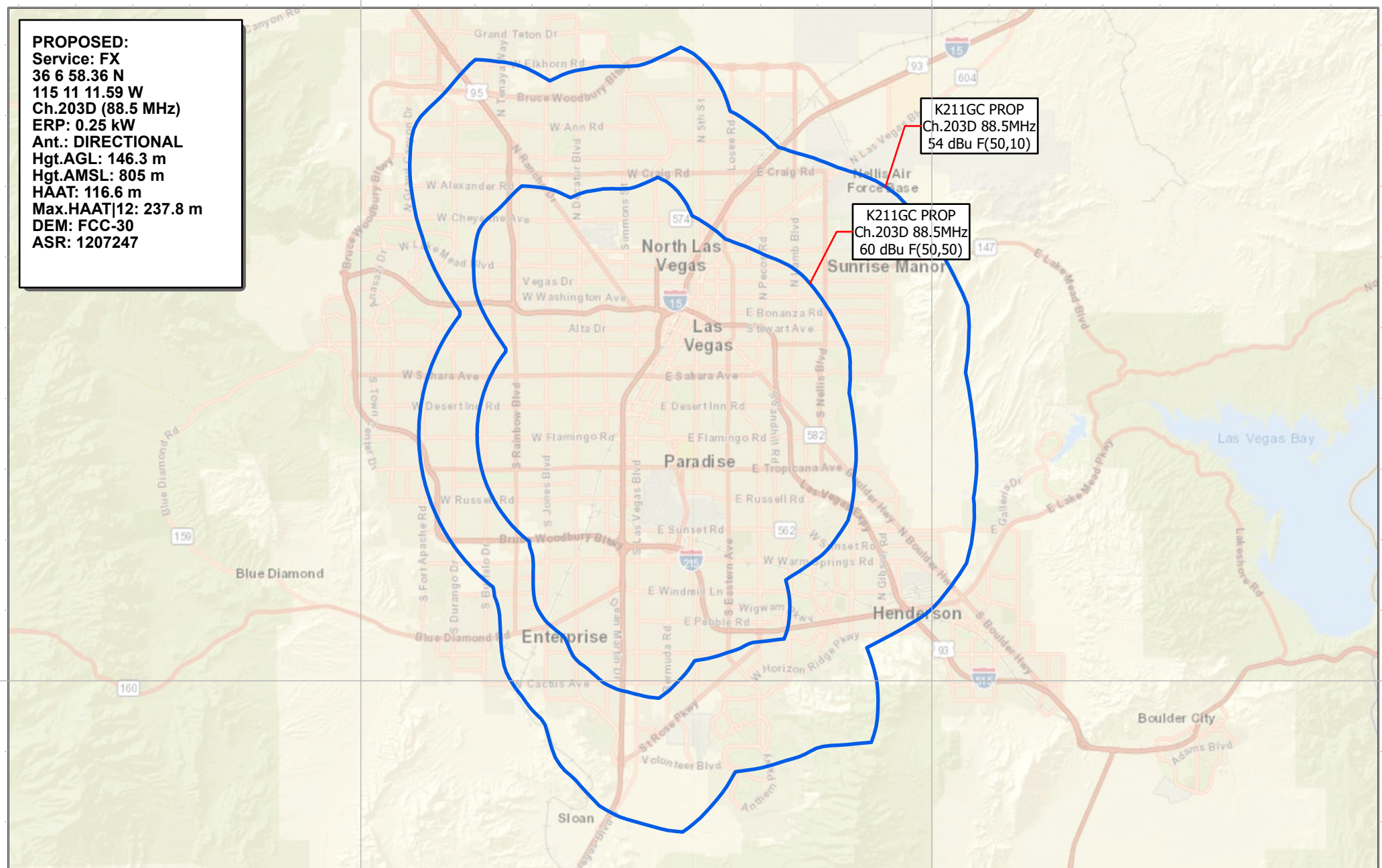
Figure 1

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PROPOSED:
Service: FX
36 6 58.36 N
115 11 11.59 W
Ch.203D (88.5 MHz)
ERP: 0.25 kW
Ant.: DIRECTIONAL
Hgt.AGL: 146.3 m
Hgt.AMSL: 805 m
HAAT: 116.6 m
Max.HAAT|12: 237.8 m
DEM: FCC-30
ASR: 1207247

K211GC PROP
Ch.203D 88.5MHz
54 dBu F(50,10)

K211GC PROP
Ch.203D 88.5MHz
60 dBu F(50,50)



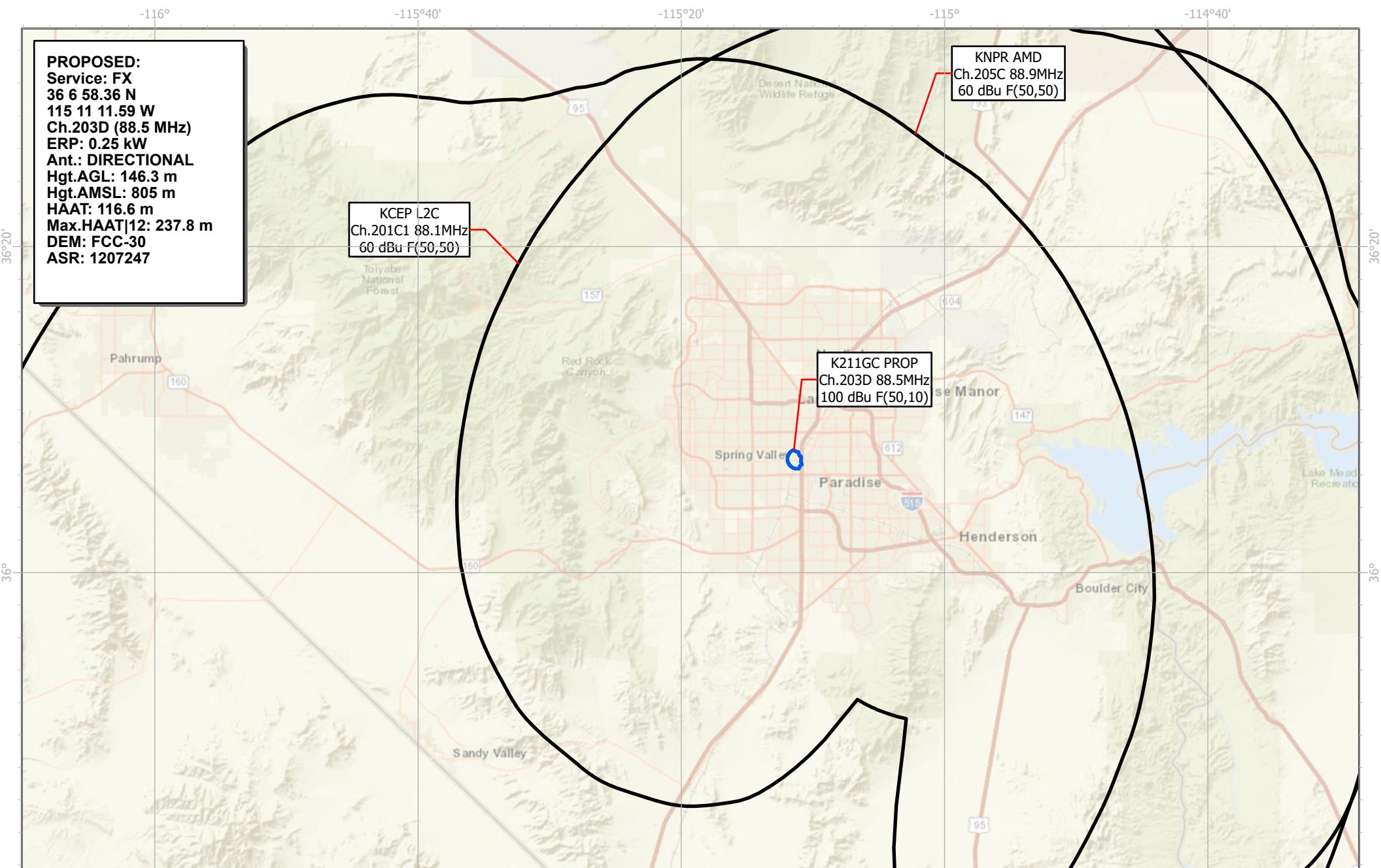
K211GC LAS VEGAS, NV Proposed Channel 203D (88.5 MHz)
ONDAS DE VIDA, INC. - MINOR MODIFICATION

0 3.25 6.5 13 Kilometers

Figure 2

1st adjacent-channel showing.

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2nd and 3rd adjacent-channel showing.

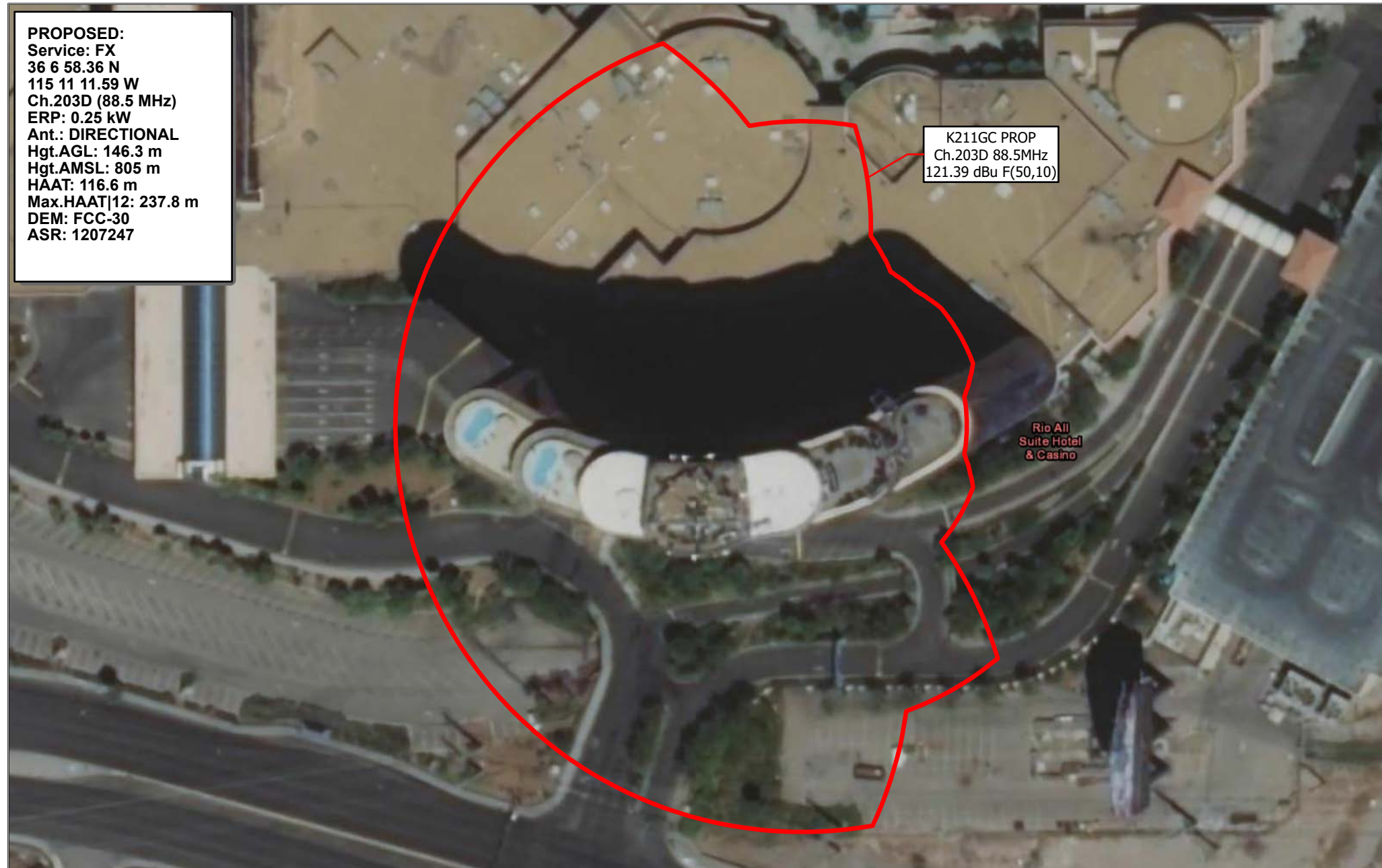
Figure 3

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PROPOSED:
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115 11 11.59 W
Ch.203D (88.5 MHz)
ERP: 0.25 kW
Ant.: DIRECTIONAL
Hgt.AGL: 146.3 m
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HAAT: 116.6 m
Max.HAAT|12: 237.8 m
DEM: FCC-30
ASR: 1207247

K211GC PROP
Ch.203D 88.5MHz
121.39 dBu F(50,10)

Rio All
Suite Hotel
& Casino



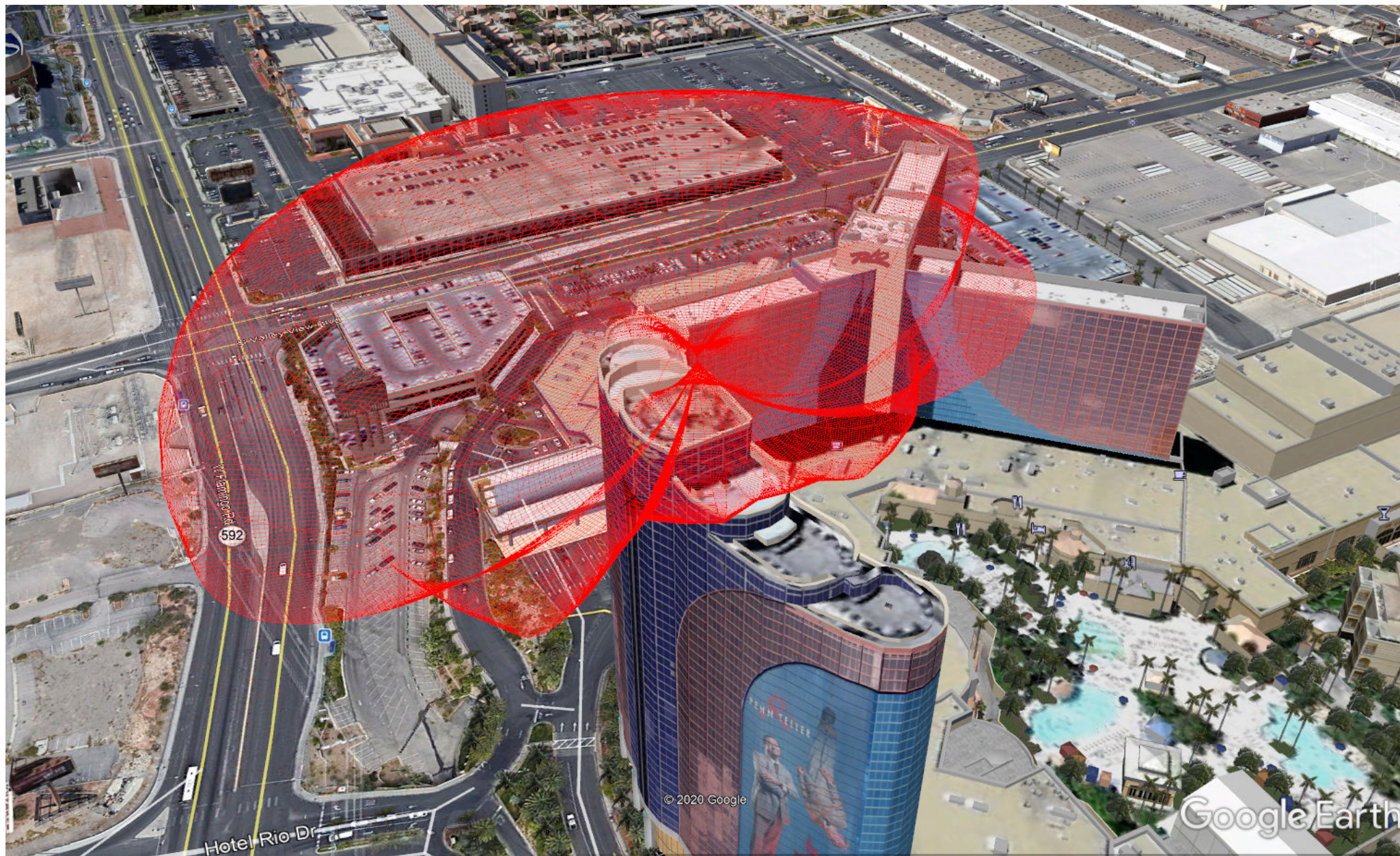
K211GC LAS VEGAS, NV Proposed Channel 203D (88.5 MHz)
ONDAS DE VIDA, INC. - MINOR MODIFICATION

0 15 30 60 Meters

Figure 4

Second adjacent-channel waiver showing with respect to KCEP. KCEP has a field strength of 81.4 dBu F(50,50) at the proposed site.

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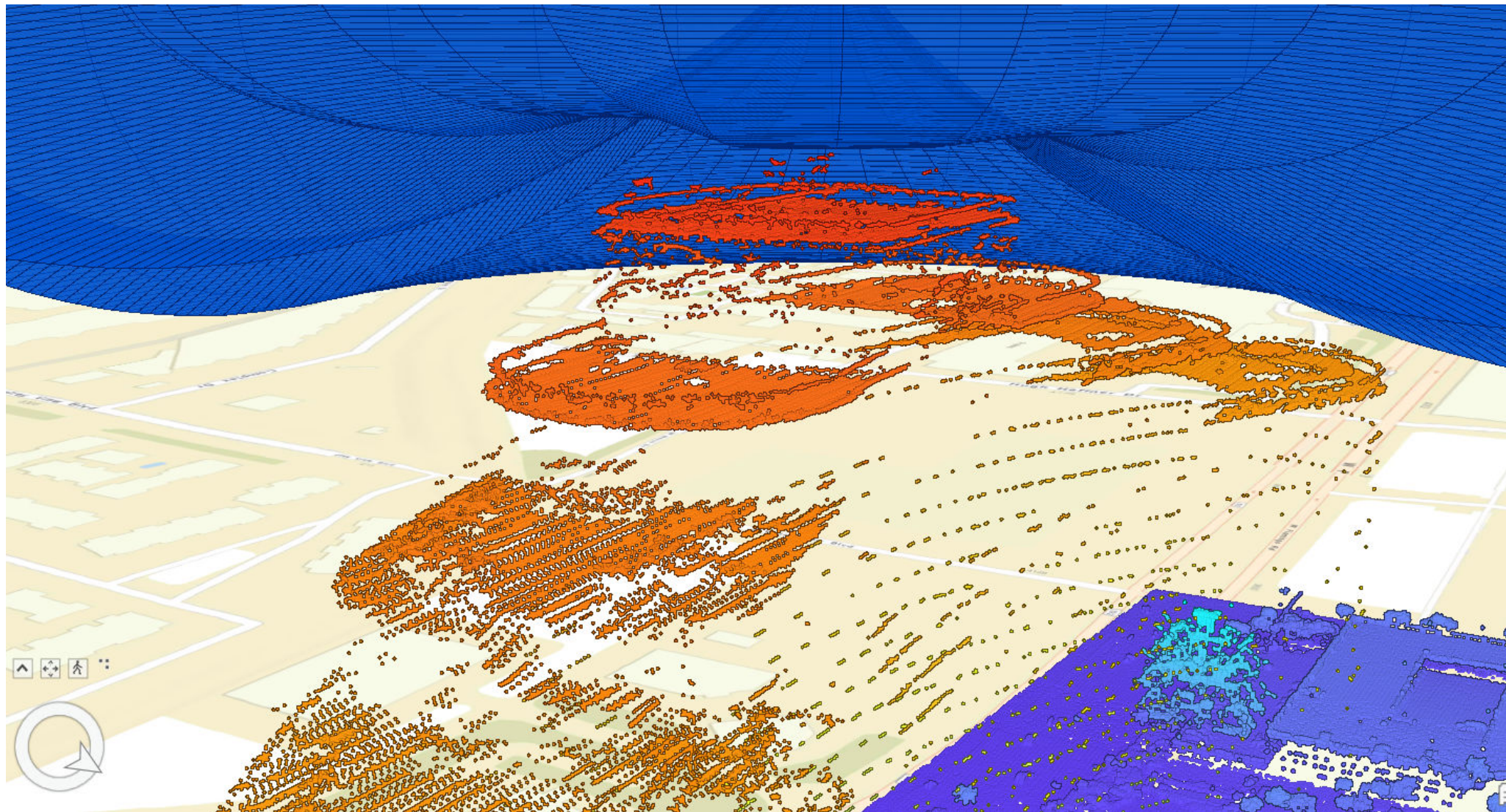


K211GC LAS VEGAS, NV Proposed Channel 203D (88.5 MHz)
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Figure 4 - 3D Google Earth

Second adjacent-channel waiver showing with respect to KCEP. KCEP has a field strength of 81.4 dBu F(50,50) at the proposed site. 121.4 dBu interfering contour based on NICOM BKG-77 2-bay half-wave antenna with proposed directional pattern demonstrates clearance of all buildings.

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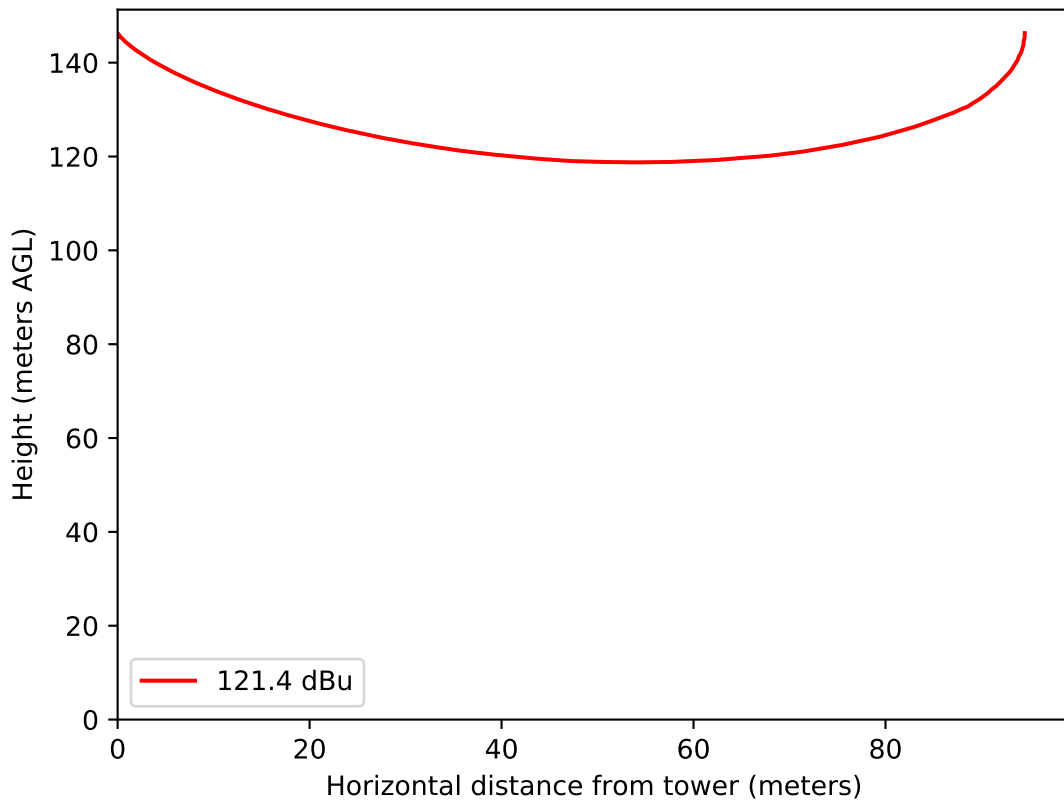
K211GC LAS VEGAS, NV Proposed Channel 203D (88.5 MHz)
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Figure 4 - 3D view

Second adjacent-channel waiver showing with respect to KCEP. KCEP has a field strength of 81.4 dBu F(50,50) at the proposed site. LIDAR elevation points shown from USGS (USGS_LPC_NV_LasVegas_QL1_2016_16217_LAS_2018). 121.4 dBu interfering contour based on NICOM BKG-77 2-bay half-wave antenna with proposed directional pattern demonstrates clearance of all buildings.

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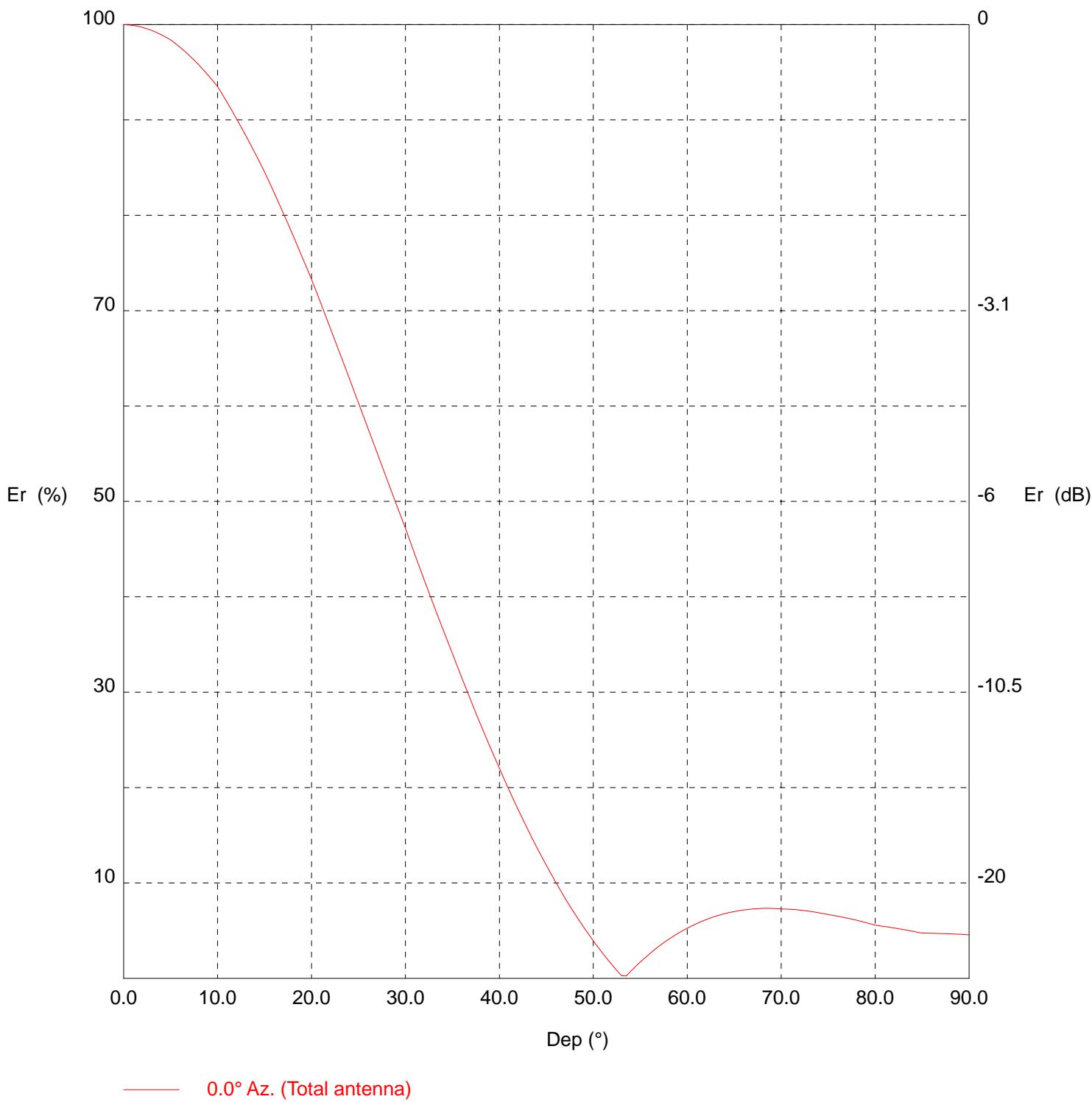
Interference bubble



TX station: BKG77 2BAY 5/8WAVE
Frequency: 98.00 MHz

Site name:

Vertical diagram



TX station: BKG77 2BAY 5/8WAVE

Site name:

Frequency: 98.00 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	192.0	30.0	47.2	42.7	60.0	5.3	0.5
0.5	100.0	191.8	30.5	45.8	40.3	60.5	5.5	0.6
1.0	99.9	191.6	31.0	44.5	37.9	61.0	5.7	0.6
1.5	99.8	191.3	31.5	43.1	35.7	61.5	6.0	0.7
2.0	99.7	190.8	32.0	41.8	33.5	62.0	6.2	0.7
2.5	99.6	190.3	32.5	40.5	31.4	62.5	6.3	0.8
3.0	99.4	189.6	33.0	39.2	29.4	63.0	6.5	0.8
3.5	99.2	188.8	33.5	37.9	27.5	63.5	6.7	0.8
4.0	98.9	187.9	34.0	36.6	25.7	64.0	6.8	0.9
4.5	98.7	186.9	34.5	35.3	23.9	64.5	6.9	0.9
5.0	98.4	185.8	35.0	34.0	22.2	65.0	7.0	0.9
5.5	98.0	184.4	35.5	32.8	20.6	65.5	7.1	1.0
6.0	97.6	183.0	36.0	31.5	19.0	66.0	7.2	1.0
6.5	97.2	181.4	36.5	30.2	17.6	66.5	7.2	1.0
7.0	96.8	179.7	37.0	29.0	16.2	67.0	7.3	1.0
7.5	96.3	177.9	37.5	27.8	14.8	67.5	7.3	1.0
8.0	95.8	176.1	38.0	26.6	13.6	68.0	7.3	1.0
8.5	95.2	174.1	38.5	25.4	12.4	68.5	7.3	1.0
9.0	94.7	172.1	39.0	24.3	11.3	69.0	7.3	1.0
9.5	94.1	170.0	39.5	23.1	10.3	69.5	7.3	1.0
10.0	93.5	167.8	40.0	22.0	9.3	70.0	7.3	1.0
10.5	92.7	165.0	40.5	20.9	8.4	70.5	7.3	1.0
11.0	91.9	162.0	41.0	19.8	7.5	71.0	7.2	1.0
11.5	91.0	159.1	41.5	18.7	6.7	71.5	7.2	1.0
12.0	90.2	156.1	42.0	17.7	6.0	72.0	7.2	1.0
12.5	89.3	153.0	42.5	16.7	5.3	72.5	7.1	1.0
13.0	88.4	149.9	43.0	15.6	4.7	73.0	7.0	0.9
13.5	87.4	146.8	43.5	14.7	4.1	73.5	7.0	0.9
14.0	86.5	143.6	44.0	13.7	3.6	74.0	6.9	0.9
14.5	85.5	140.5	44.5	12.8	3.1	74.5	6.8	0.9
15.0	84.6	137.2	45.0	11.8	2.7	75.0	6.7	0.9
15.5	83.5	133.8	45.5	10.9	2.3	75.5	6.6	0.8
16.0	82.4	130.4	46.0	10.1	1.9	76.0	6.5	0.8
16.5	81.3	126.9	46.5	9.2	1.6	76.5	6.4	0.8
17.0	80.2	123.5	47.0	8.4	1.4	77.0	6.3	0.8
17.5	79.1	120.1	47.5	7.6	1.1	77.5	6.2	0.7
18.0	77.9	116.6	48.0	6.8	0.9	78.0	6.1	0.7
18.5	76.8	113.2	48.5	6.1	0.7	78.5	6.0	0.7
19.0	75.6	109.8	49.0	5.3	0.5	79.0	5.8	0.7
19.5	74.5	106.5	49.5	4.6	0.4	79.5	5.7	0.6
20.0	73.3	103.1	50.0	3.9	0.3	80.0	5.6	0.6
20.5	72.0	99.6	50.5	3.3	0.2	80.5	5.5	0.6
21.0	70.7	96.1	51.0	2.6	0.1	81.0	5.4	0.6
21.5	69.5	92.6	51.5	2.0	0.1	81.5	5.4	0.6
22.0	68.2	89.2	52.0	1.4	0.0	82.0	5.3	0.5
22.5	66.9	85.8	52.5	0.8	0.0	82.5	5.2	0.5
23.0	65.6	82.5	53.0	0.3	0.0	83.0	5.1	0.5
23.5	64.3	79.3	53.5	0.3	0.0	83.5	5.0	0.5
24.0	63.0	76.1	54.0	0.8	0.0	84.0	4.9	0.5
24.5	61.7	73.0	54.5	1.3	0.0	84.5	4.8	0.4
25.0	60.3	69.9	55.0	1.7	0.1	85.0	4.7	0.4
25.5	59.0	66.9	55.5	2.2	0.1	85.5	4.7	0.4
26.0	57.7	63.9	56.0	2.6	0.1	86.0	4.7	0.4
26.5	56.4	61.0	56.5	3.0	0.2	86.5	4.7	0.4
27.0	55.0	58.2	57.0	3.4	0.2	87.0	4.7	0.4
27.5	53.7	55.4	57.5	3.7	0.3	87.5	4.7	0.4
28.0	52.4	52.7	58.0	4.1	0.3	88.0	4.7	0.4
28.5	51.1	50.1	58.5	4.4	0.4	88.5	4.6	0.4
29.0	49.8	47.6	59.0	4.7	0.4	89.0	4.6	0.4
29.5	48.5	45.1	59.5	5.0	0.5	89.5	4.6	0.4

MERP values by azimuth and HAAT per 74.1235(2)

Azimuth (deg.)	HAAT(m)	74.1235(2) ERP limit (kW)	Proposed ERP (kW)
0	135	0.140	0.140
30	190	0.075	0.047
60	230	0.050	0.050
90	238	0.041	0.041
120	213	0.050	0.050
150	138	0.140	0.140
180	106	0.250	0.250
210	41	0.250	0.250
240	-10	0.250	0.250
270	-11	0.250	0.250
300	-3	0.250	0.250
330	103	0.250	0.250

Radiofrequency Electromagnetic Exposure Analysis

Source	Height AGL(m)	Antenna type	Bays	Horizontal ERP (kw)	Vertical ERP (kw)	Power Density $\mu\text{W}/\text{cm}^2$ at 2 meters AGL				
						within 10 meters distance	% controlled environment limit (1000 $\mu\text{W}/\text{cm}^2$)	Max. PD beyond 10 m	% uncontrolled environment limit (200 $\mu\text{W}/\text{cm}^2$)	Distance to maximum PD (m)
K211GC (PROPOSED)	4	NICOM BKG-77-2-HW	2	0.250	0.250	50.70	5.07%	43.70	21.9%	10.1
	(height above roof level)					50.70	5.07%	43.70	21.9%	10.1

The proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., The facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

Calculations made using antenna data from manufacturer per OET Bulletin 65