

Exhibit 13C
Section 74.1204
Contour Protection to KHFI-FM

This comprehensive exhibit has been prepared to demonstrate that the K300CM modification will not cause prohibited interference to third adjacent station KHFI-FM, Channel 244C1, Georgetown, Texas. The KHFI-FM F(50,50) protected contour at the K300CM application site is 71.1 dBu. Therefore the K300CM F(50,10) interfering contour with respect to KHFI-FM is the 111.1 dBu contour. Using the FCC's FM propagation curves program (see attached), the 111.1 dBu contour was calculated to extend 255 meters from the antenna.

A copy of the Kathrein-Scala single bay FMVP antenna vertical elevation pattern is attached. Using the data provided in the vertical elevation pattern, the ERP was calculated for every ten degrees of elevation. The respective contour distance for the K300CM interfering contour was then calculated using the FCC's FM propagation curves program. The attached spreadsheet then plotted the interfering curve from the antenna into free space. The interfering contour does not reach the ground. The nearest point to the ground of the K300CM interfering contour is approximately 145 meters (476 feet) from the tower base where the contour is 6.75 meters (22.1 ft.) above ground level. The tower site is located adjacent to a park and the nearest occupied building is approximately 235 meters (771 feet) from the tower. Please refer to the attached Google Earth screenshot where the tower and nearest building are clearly identified. The nearest building of any type is a small two story structure (see attached photo) in

the center of four baseball diamonds where concessions are sold during baseball games. That structure is located 135 meters from the tower base at its closest point. This building does not meet the criteria of an occupied structure. Regardless, the interfering contour does not reach any part of the building. It is believed that the proposed modification to K300CM will not cause prohibited interference to KHFI-FM as no interference reaches the ground. The closest the interfering contour comes to the ground is approximately 6.75 meters (22.1 ft.). There are no other multi story buildings located near the proposed K300CM tower site. Therefore it is believed the proposed K300CM is in compliance with Section 74.1204 contour protection rules with respect to KHFI-FM.

K300CM Appl.
Lockhart, TX
Latitude: 29-53-28 N
Longitude: 097-39-44 W
ERP: 0.17 kW
Channel: 247
Frequency: 97.3 MHz
AMSL Height: 273.9 m
Elevation: 160.9 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KHFI-FM
Georgetown, TX
Latitude: 30-19-20 N
Longitude: 097-48-03 W
ERP: 100.00 kW
Channel: 244
Frequency: 96.7 MHz
AMSL Height: 508.0 m
Elevation: 237.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

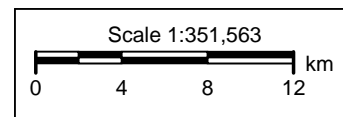
EXHIBIT 13-C
Section 74.1204
Contour Protection:
KHFI-FM

**KHFI-FM FCC F(50,50)
71.1 dBu contour**

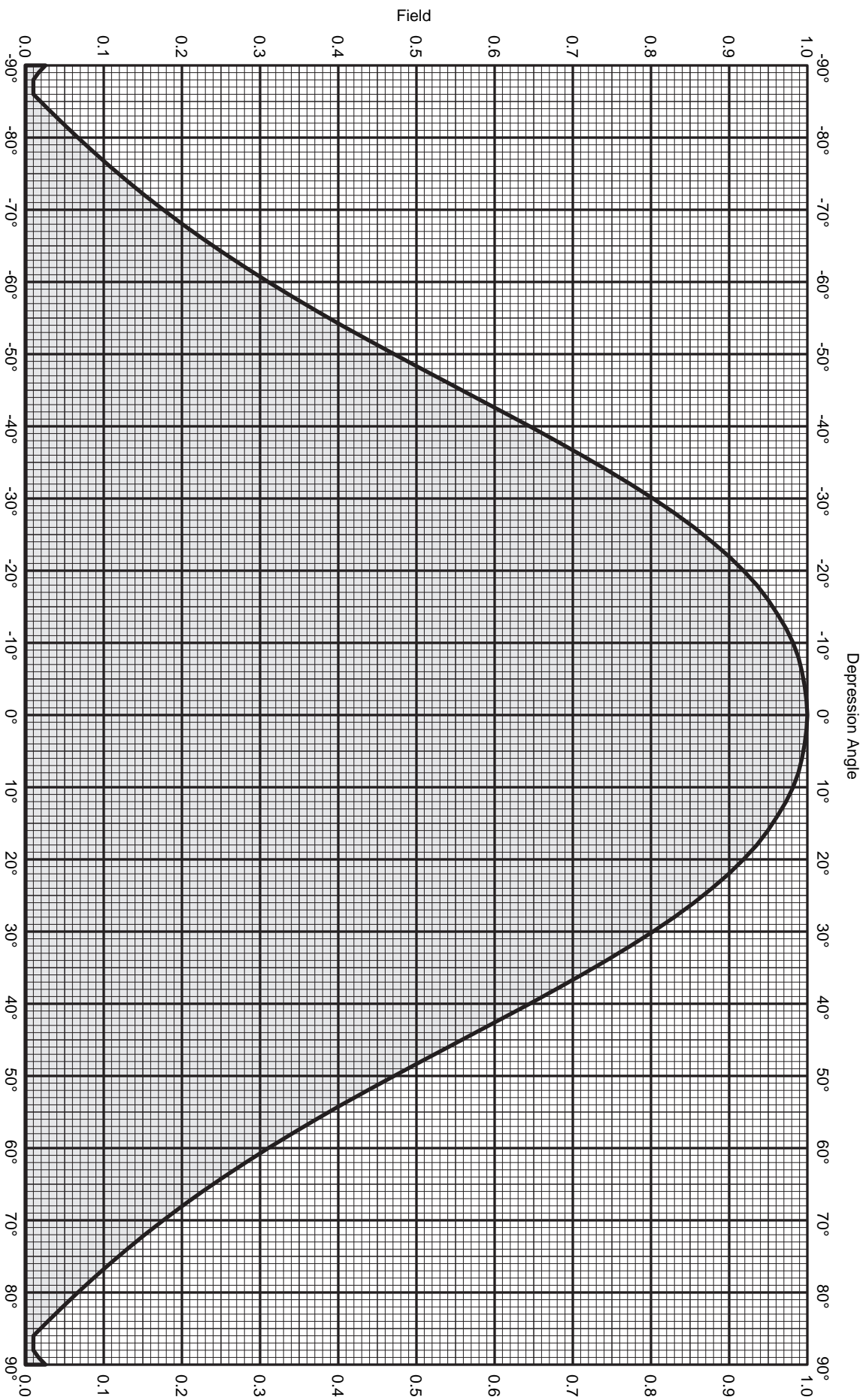
K300CM Appl.

The K300CM FCC F(50,50) interfering
contour with respect to KHFI-FM is
111.1 dBu.

HORIZON
BROADCAST SOLUTIONS



V-Soft Communications LLC ©



FMVMP

FM

Maximum gain: 1.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt



SCALA DIVISION

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FMVMP

FM

Maximum gain: 1.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.025	-31.89	-30.89	0.00	-45	0.558	-5.07	-4.07	0.39
-89	0.017	-35.56	-34.56	0.00	-44	0.575	-4.80	-3.80	0.42
-88	0.010	-40.00	-39.00	0.00	-43	0.593	-4.54	-3.54	0.44
-87	0.010	-40.00	-39.00	0.00	-42	0.610	-4.29	-3.29	0.47
-86	0.010	-39.94	-38.94	0.00	-41	0.628	-4.05	-3.05	0.50
-85	0.019	-34.30	-33.30	0.00	-40	0.645	-3.81	-2.81	0.52
-84	0.028	-30.91	-29.91	0.00	-39	0.662	-3.59	-2.59	0.55
-83	0.038	-28.42	-27.42	0.00	-38	0.678	-3.37	-2.37	0.58
-82	0.047	-26.48	-25.48	0.00	-37	0.695	-3.16	-2.16	0.61
-81	0.057	-24.86	-23.86	0.00	-36	0.711	-2.96	-1.96	0.64
-80	0.067	-23.49	-22.49	0.01	-35	0.727	-2.77	-1.77	0.67
-79	0.077	-22.27	-21.27	0.01	-34	0.743	-2.58	-1.58	0.70
-78	0.087	-21.20	-20.20	0.01	-33	0.758	-2.40	-1.40	0.72
-77	0.098	-20.21	-19.21	0.01	-32	0.774	-2.23	-1.23	0.75
-76	0.108	-19.33	-18.33	0.01	-31	0.788	-2.07	-1.07	0.78
-75	0.119	-18.49	-17.49	0.02	-30	0.803	-1.91	-0.91	0.81
-74	0.130	-17.73	-16.73	0.02	-29	0.816	-1.76	-0.76	0.84
-73	0.141	-17.01	-16.01	0.03	-28	0.830	-1.62	-0.62	0.87
-72	0.152	-16.34	-15.34	0.03	-27	0.842	-1.49	-0.49	0.89
-71	0.164	-15.69	-14.69	0.03	-26	0.855	-1.36	-0.36	0.92
-70	0.176	-15.08	-14.08	0.04	-25	0.867	-1.24	-0.24	0.95
-69	0.188	-14.50	-13.50	0.04	-24	0.878	-1.13	-0.13	0.97
-68	0.201	-13.95	-12.95	0.05	-23	0.889	-1.02	-0.02	0.99
-67	0.214	-13.41	-12.41	0.06	-22	0.899	-0.92	0.08	1.02
-66	0.226	-12.90	-11.90	0.06	-21	0.909	-0.83	0.17	1.04
-65	0.240	-12.40	-11.40	0.07	-20	0.918	-0.74	0.26	1.06
-64	0.254	-11.92	-10.92	0.08	-19	0.927	-0.66	0.34	1.08
-63	0.268	-11.45	-10.45	0.09	-18	0.935	-0.58	0.42	1.10
-62	0.282	-11.01	-10.01	0.10	-17	0.942	-0.51	0.49	1.12
-61	0.296	-10.57	-9.57	0.11	-16	0.950	-0.45	0.55	1.14
-60	0.310	-10.16	-9.16	0.12	-15	0.956	-0.39	0.61	1.15
-59	0.326	-9.75	-8.75	0.13	-14	0.962	-0.34	0.66	1.16
-58	0.341	-9.35	-8.35	0.15	-13	0.967	-0.29	0.71	1.18
-57	0.356	-8.96	-7.96	0.16	-12	0.973	-0.24	0.76	1.19
-56	0.372	-8.59	-7.59	0.17	-11	0.977	-0.20	0.80	1.20
-55	0.388	-8.22	-7.22	0.19	-10	0.982	-0.16	0.84	1.21
-54	0.404	-7.87	-6.87	0.21	-9	0.985	-0.13	0.87	1.22
-53	0.421	-7.52	-6.52	0.22	-8	0.989	-0.10	0.90	1.23
-52	0.438	-7.18	-6.18	0.24	-7	0.991	-0.08	0.92	1.24
-51	0.455	-6.85	-5.85	0.26	-6	0.993	-0.06	0.94	1.24
-50	0.472	-6.53	-5.53	0.28	-5	0.995	-0.04	0.96	1.25
-49	0.489	-6.22	-5.22	0.30	-4	0.997	-0.03	0.97	1.25
-48	0.506	-5.92	-4.92	0.32	-3	0.998	-0.02	0.98	1.25
-47	0.523	-5.63	-4.63	0.34	-2	0.999	-0.01	0.99	1.26
-46	0.541	-5.34	-4.34	0.37	-1	0.999	-0.00	1.00	1.26
					0	1.000	0.00	1.00	1.26



FMVMP

FM

Maximum gain: 1.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	1.00	1.26	45	0.558	-5.07	-4.07	0.39
1	0.999	-0.00	1.00	1.26	46	0.541	-5.34	-4.34	0.37
2	0.999	-0.01	0.99	1.26	47	0.523	-5.63	-4.63	0.34
3	0.998	-0.02	0.98	1.25	48	0.506	-5.92	-4.92	0.32
4	0.997	-0.03	0.97	1.25	49	0.489	-6.22	-5.22	0.30
5	0.995	-0.04	0.96	1.25	50	0.472	-6.53	-5.53	0.28
6	0.993	-0.06	0.94	1.24	51	0.455	-6.85	-5.85	0.26
7	0.991	-0.08	0.92	1.24	52	0.438	-7.18	-6.18	0.24
8	0.989	-0.10	0.90	1.23	53	0.421	-7.52	-6.52	0.22
9	0.985	-0.13	0.87	1.22	54	0.404	-7.87	-6.87	0.21
10	0.982	-0.16	0.84	1.21	55	0.388	-8.22	-7.22	0.19
11	0.977	-0.20	0.80	1.20	56	0.372	-8.59	-7.59	0.17
12	0.973	-0.24	0.76	1.19	57	0.356	-8.96	-7.96	0.16
13	0.967	-0.29	0.71	1.18	58	0.341	-9.35	-8.35	0.15
14	0.962	-0.34	0.66	1.16	59	0.326	-9.75	-8.75	0.13
15	0.956	-0.39	0.61	1.15	60	0.310	-10.16	-9.16	0.12
16	0.950	-0.45	0.55	1.14	61	0.296	-10.57	-9.57	0.11
17	0.942	-0.51	0.49	1.12	62	0.282	-11.01	-10.01	0.10
18	0.935	-0.58	0.42	1.10	63	0.268	-11.45	-10.45	0.09
19	0.927	-0.66	0.34	1.08	64	0.254	-11.92	-10.92	0.08
20	0.918	-0.74	0.26	1.06	65	0.240	-12.40	-11.40	0.07
21	0.909	-0.83	0.17	1.04	66	0.226	-12.90	-11.90	0.06
22	0.899	-0.92	0.08	1.02	67	0.214	-13.41	-12.41	0.06
23	0.889	-1.02	-0.02	0.99	68	0.201	-13.95	-12.95	0.05
24	0.878	-1.13	-0.13	0.97	69	0.188	-14.50	-13.50	0.04
25	0.867	-1.24	-0.24	0.95	70	0.176	-15.08	-14.08	0.04
26	0.855	-1.36	-0.36	0.92	71	0.164	-15.69	-14.69	0.03
27	0.842	-1.49	-0.49	0.89	72	0.152	-16.34	-15.34	0.03
28	0.830	-1.62	-0.62	0.87	73	0.141	-17.01	-16.01	0.03
29	0.816	-1.76	-0.76	0.84	74	0.130	-17.73	-16.73	0.02
30	0.803	-1.91	-0.91	0.81	75	0.119	-18.49	-17.49	0.02
31	0.788	-2.07	-1.07	0.78	76	0.108	-19.33	-18.33	0.01
32	0.774	-2.23	-1.23	0.75	77	0.098	-20.21	-19.21	0.01
33	0.758	-2.40	-1.40	0.72	78	0.087	-21.20	-20.20	0.01
34	0.743	-2.58	-1.58	0.70	79	0.077	-22.27	-21.27	0.01
35	0.727	-2.77	-1.77	0.67	80	0.067	-23.49	-22.49	0.01
36	0.711	-2.96	-1.96	0.64	81	0.057	-24.86	-23.86	0.00
37	0.695	-3.16	-2.16	0.61	82	0.047	-26.48	-25.48	0.00
38	0.678	-3.37	-2.37	0.58	83	0.038	-28.42	-27.42	0.00
39	0.662	-3.59	-2.59	0.55	84	0.028	-30.91	-29.91	0.00
40	0.645	-3.81	-2.81	0.52	85	0.019	-34.30	-33.30	0.00
41	0.628	-4.05	-3.05	0.50	86	0.010	-39.94	-38.94	0.00
42	0.610	-4.29	-3.29	0.47	87	0.010	-40.00	-39.00	0.00
43	0.593	-4.54	-3.54	0.44	88	0.010	-40.00	-39.00	0.00
44	0.575	-4.80	-3.80	0.42	89	0.017	-35.56	-34.56	0.00
					90	0.025	-31.89	-30.89	0.00

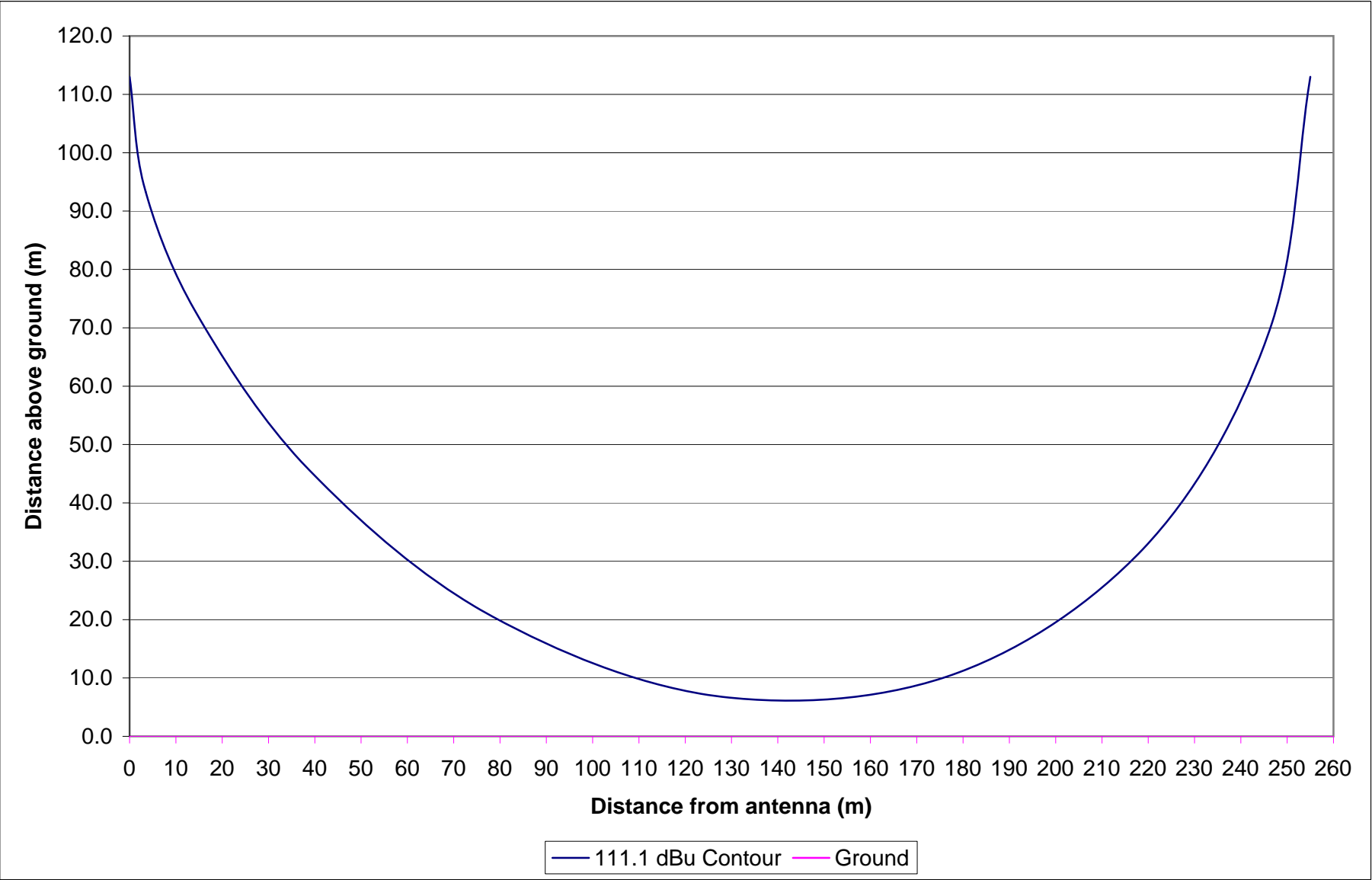
Angle of			111.1
Elevation	Relative	ERP	Contour*
(Degrees)	Field	(dBk)	(Meters)
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0	1	-7.696	255
-10	0.982	-7.853	250
-20	0.918	-8.439	234
-30	0.803	-9.601	205
-40	0.645	-11.504	165
-50	0.472	-14.217	120
-60	0.31	-17.868	79
-70	0.176	-22.785	44
-80	0.067	-31.174	20
-90	0.025	-39.737	0

Θ (°)	Θ (radians)	R (m)	x'	y'	$y = 113 - y'$	Gnd
0	0	255	255	0	113.0	0
10	0.175	250	246.2	43.4	69.6	0
20	0.349	234	219.9	80.0	33.0	0
30	0.524	205	177.5	102.5	10.5	0
40	0.698	165	126.4	106.1	6.9	0
50	0.873	120	77.1	91.9	21.1	0
60	1.047	78	39.0	67.5	45.5	0
70	1.222	44	15.0	41.3	71.7	0
80	1.396	20	3.5	19.7	93.3	0
90	1.571	0	0.0	0	113	0

Angle of Elevation (Degrees)	Relative Field	ERP (dBk)	ERP (watts)	111.1 dBu Contour* (Meters)
0	1	-7.696	170	255
10	0.982	-7.853	164	250
20	0.918	-8.439	143	234
30	0.818	-9.601	110	205
40	0.691	-11.504	71	165
50	0.538	-14.217	38	120
60	0.391	-17.868	16	78
70	0.239	-22.785	5	44
80	0.129	-31.174	1	20
90	0.105	-39.737	0	0

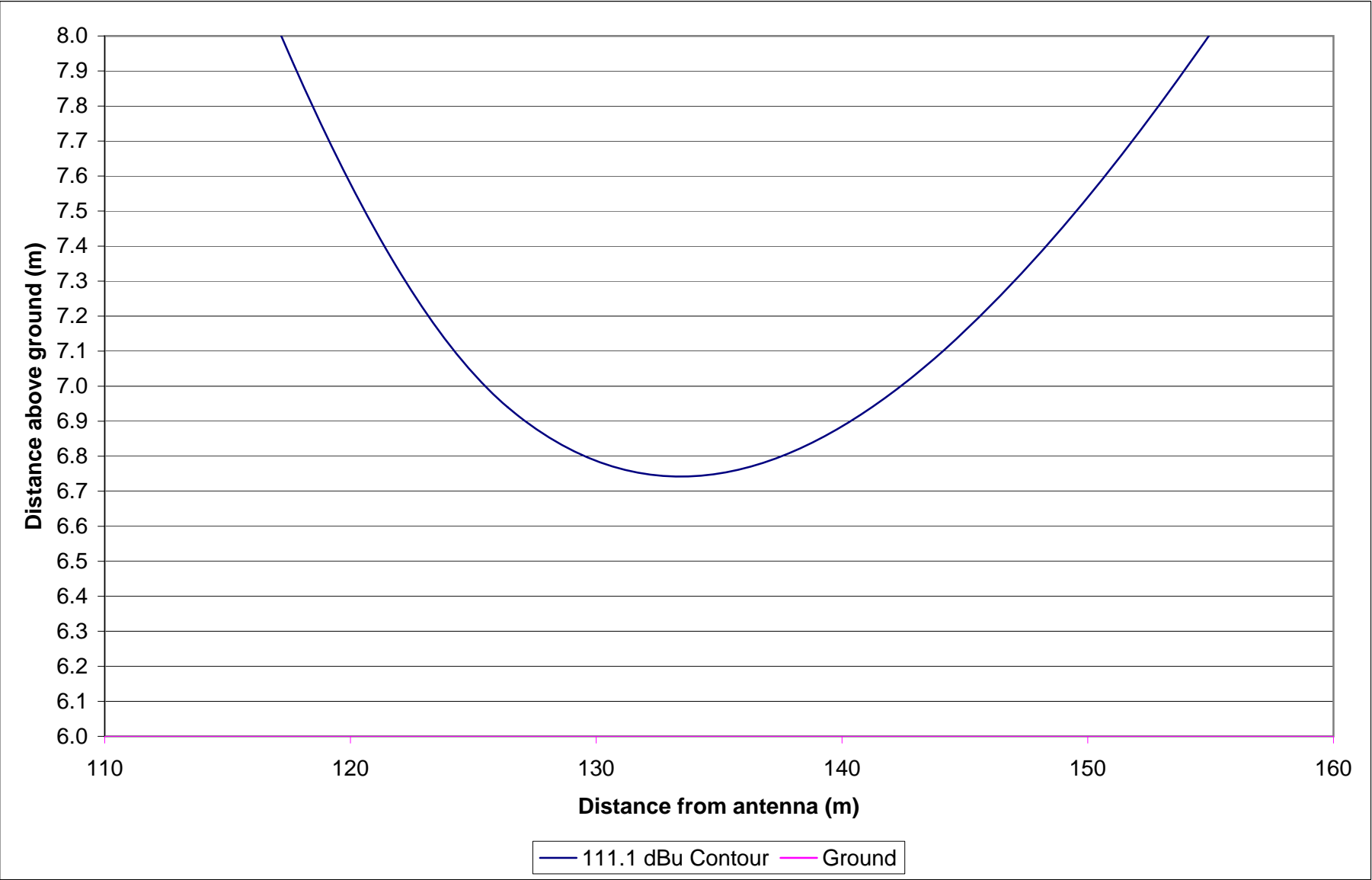
K300CM - Lockhart, TX
Section 74.1204 Contour Protection to KHFI-FM, Channel 244C1, Georgetown, TX

(111.1 dBu F(50,10) interfering contour shown)



The K300CI interfering contour with respect to KHFI-FM does not reach the ground.

K300CM - Lockhart, TX
Section 74.1204 Contour Protection to KHFI-FM, Channel 244C1, Georgetown, TX
(Close-Up of area where contour is closest to the ground)
(111.1 dBu F(50,10) interfering contour shown)



The K300CI interfering contour with respect to KHFI-FM does not reach the ground.



Google earth

feet
meters





**Concessions and Restroom Facility
for Baseball Complex.**