

**CH 6 TV Protection Study**

The CH 6 TV station that is within the required study distance of 196 km for FM CH 208 is as follows:

KOIN (LIC)	45-30-58	100.0 kW ERP	Separation distance: 82.37 km
Portland, OR	122-43-59	533 m HAAT	CH 6 azimuth to FM: 104.7 deg.
BLCT2115		611 m COR AMSL	FM azimuth to CH 6: 284.7 deg.

The proposed FM will operate on CH 208 with a maximum ERP of 7.0 kW (DA), vertical-polarization only, at a COR AMSL of 1853 meters. Per Section 73.525, the maximum permissible vertically polarized ERP of 7.0 kW (DA) was calculated by multiplying the maximum horizontally polarized ERP of .175 kW by 40, as the FM predicted interference area lies entirely outside the limits of a city of 50,000 persons or more.

The tabulation of the HAAT & distances to the affected CH 6 protected contours from 90 through 120 degrees is as follows:

Azimuth	90	100	110	120
HAAT (m)	531.9	532.0	529.8	526.9
CH 6 Protected	Distance (km)			
55 dBu	100.8	100.8	100.6	100.4
56 dBu	98.2	98.2	98.1	97.8
57 dBu	95.7	95.7	95.6	95.4
58 dBu	93.3	93.3	93.2	93.0
59 dBu	91.0	91.0	90.8	90.6
60 dBu	88.6	88.6	88.5	88.3
61 dBu	86.3	86.3	86.2	86.0
62 dBu	84.0	84.0	83.8	83.7
63 dBu	81.6	81.6	81.5	81.3
64 dBu	79.2	79.2	79.0	78.9
65 dBu	76.7	76.7	76.6	76.4
66 dBu	74.2	74.2	74.1	73.9
67 dBu	71.7	71.7	71.6	71.4
68 dBu	69.2	69.2	69.1	68.9
69 dBu	66.7	66.7	66.6	66.4

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The tabulation of the HAAT & distances of the FM interference contours is as follows:

45-19-58 / 121-42-48  
.175 kW maximum horizontally polarized ERP  
(7.0 kW (DA) maximum permissible vertically polarized ERP)  
510 meters HAAT 1853 meters COR AMSL

Azimuth	CH 6 Protected dBu	U/D ratio dB	FM Interference dBu	ERP (kW)	HAAT (m)	Dist. (km)
0	63	4.9	67.9	.023	85.5	4.2
10	62	5.5	67.5	.023	69.8	3.9
20	62	5.5	67.5	.023	118.6	5.1
30	62	5.5	67.5	.023	74.0	4.0
40	61	6.3	67.3	.023	171.6	6.1
50	61	6.3	67.3	.023	255.3	7.4
60	60	7.0	67.0	.023	330.0	8.6
70	60	7.0	67.0	.023	329.6	8.6
80	59	7.8	66.8	.023	321.0	8.6
90	58	8.6	66.6	.037	362.3	10.5
100	58	8.6	66.6	.037	417.2	11.1
110	58	8.6	66.6	.037	368.8	10.6
120	57	9.5	66.5	.059	427.4	12.8
130	56	10.4	66.4	.093	540.3	16.6
140	55	11.3	66.3	.147	638.4	21.4
150	56	10.4	66.4	.175	628.9	22.1
160	57	9.5	66.5	.175	579.6	20.9
170	58	8.6	66.6	.175	584.9	20.9
180	59	7.8	66.8	.175	686.2	22.7
190	60	7.0	67.0	.175	672.3	22.1
200	62	5.5	67.5	.175	722.0	22.3
210	64	4.4	68.4	.175	661.7	20.0
220	65	3.8	68.8	.175	685.7	19.8
230	66	3.4	69.4	.175	647.2	18.4
240	67	3.0	70.0	.175	672.2	18.0
250	68	2.6	70.6	.175	882.2	19.7
260	69	2.3	71.3	.147	924.9	17.9
270	68	2.6	70.6	.093	748.7	14.1
280	67	3.0	70.0	.059	599.4	11.5
290	67	3.0	70.0	.037	834.2	10.8
300	66	3.4	69.4	.023	822.5	9.5
310	66	3.4	69.4	.015	720.6	7.6
320	65	3.8	68.8	.015	638.1	7.8
330	65	3.8	68.8	.023	542.7	8.9
340	65	3.8	68.8	.023	582.7	9.1
350	64	4.4	68.4	.023	280.9	7.2

The FM predicted interference area contains 1,154 persons (2000 Census), therefore, the proposed FM is in compliance with the CH 6 TV protection requirements of Section 73.525. Page 3 contains a map showing the affected CH 6 protected contours and the FM predicted interference area.

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