

**Non-Interference Compliance**  
**K288FT, Portland, OR FAC# 138942**  
**8/28/2023**

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 created by V-Soft Xfield.

Page 4 of this exhibit is an adjacent channel study created by ComStudy 2,2

Pages 5 and 6 are the vertical radiation data provided by the antenna manufacturer.

Page 7 of this exhibit is contour map demonstrating non-interference with KXRU-LP.

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

## 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.

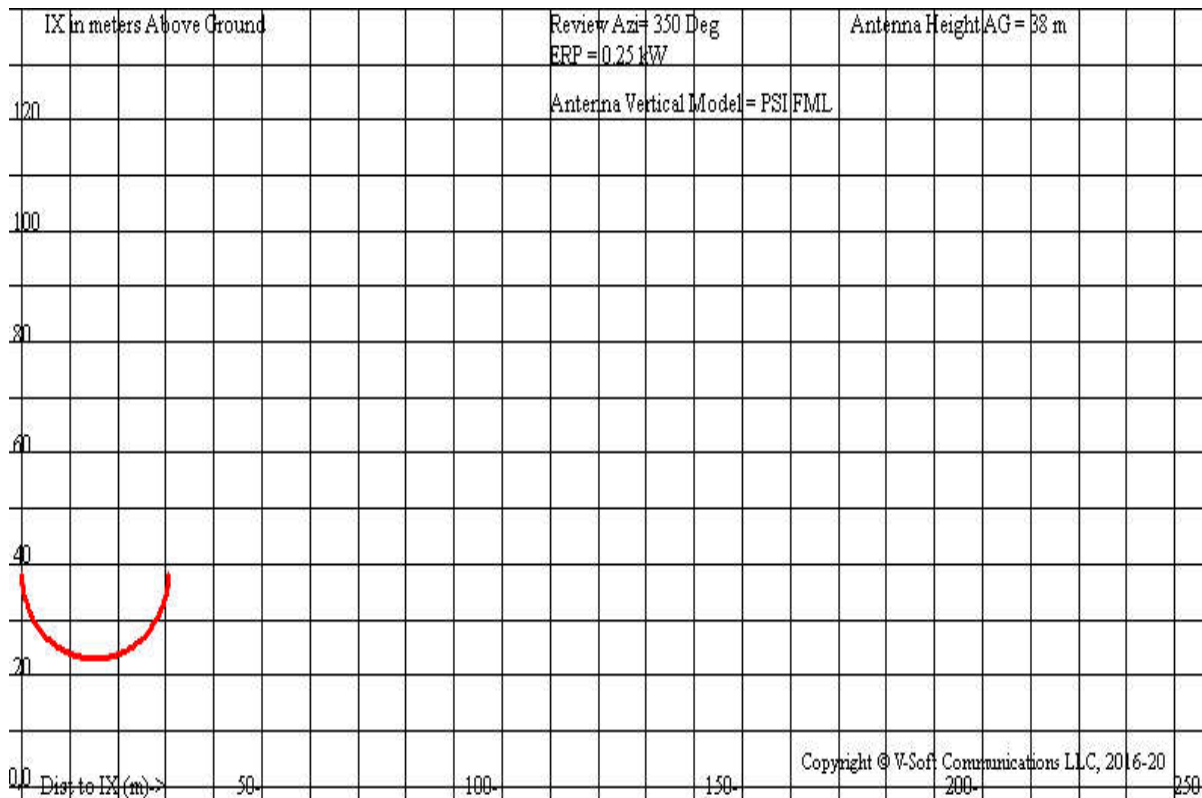
<b>File Number</b>	<b>Call Sign</b>	<b>Contour at Tower (dBμ)</b>
<b>BMLH-20040204ACC</b>	<b>KFBW</b>	<b>91.1</b>
<b>BLH-20040303ACH</b>	<b>KRSK</b>	<b>91.1</b>
<b>Minimum F(50,50) contour of Adjacent Station within Proposed Translator's Standard Interfering Contour</b>		<b>91.1</b>

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 dBμ. Since the minimum protected contour strength within the proposed translator's standard interference contour is **91.1 dBμ**, this makes the proposed translator's worst-case interfering contour **131.1 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **31.3 m** from the transmit antenna.

The vertical ground clearance of the proposed translator's interference contour has been calculated using V-Soft, XField. As shown on the following page, the area of interference clears the tower ground level (Height Above Ground) by **22.4 m** at the lowest point.

**Note: The tallest buildings in the zone of predicted interference are 10ft (3.0m) in height. This application provides a minimum of 22.4m (73.5ft) of 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.**

<b>Antenna Manufacturer:</b>	<b>PSI</b>
<b>Antenna Model:</b>	<b>FML-1-DA</b>
<b>CORAGL:</b>	<b>38 m</b>
<b>Maximum ERP:</b>	<b>.250 kW</b>
<b>Interfering Contour:</b>	<b>131.1 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>31.3 m</b>
<b>Min Ground Clearance:</b>	<b>22.4 m</b>



K288FT Portland, OR, Showing Protection to KRSK, Channel: 286

Geographic Coordinates: N. 453157.9 W. 1225605.2

74.1204(d) Study - Using FCC 30 SEC Terrain Database

Translator or LPFM Maximum Antenna ERP = 0.25 kW, Channel: 288

Translator or LPFM Antenna Height AG = 38 meters

K288FT Antenna Azimuth Model = Reference Station Antenna (NAD 83), Vertical Model = PSI FML

Protected Station's Contour = 90.99368 dBu

Translator's or LPFM's full Interference contour 130.99368

Review Azimuth = 350 Degrees True

Relative Field on the horizontal at Review Azimuth = 1.000

Translator/LPFM ERP on the horizontal at Review Azimuth = 0.25 kW

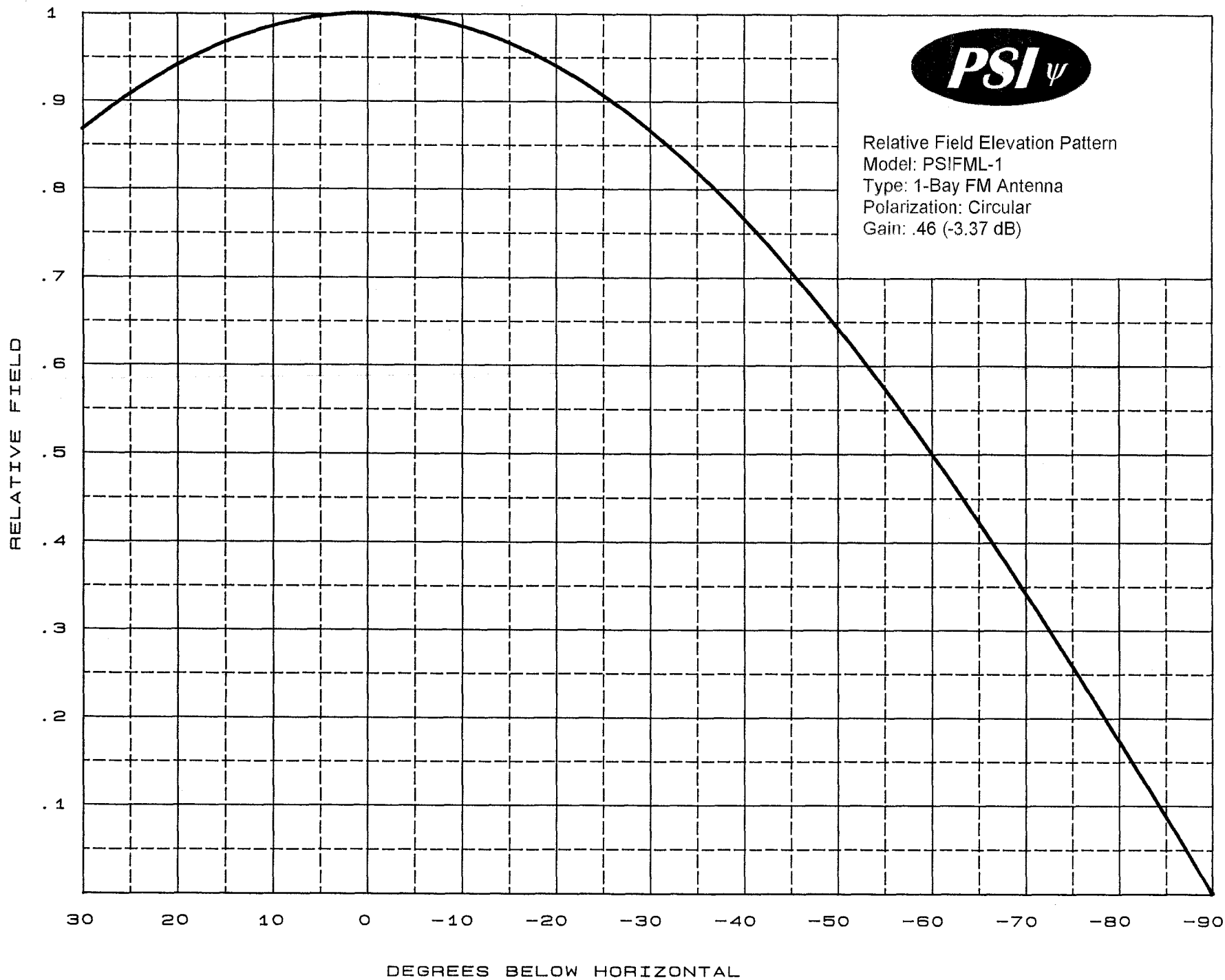
Distance between stations = 14.7 km

Protected Station= KRSK, 22.5 kW, 561 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	1.0	0.2500	031.2814	031.2814	038.000
05.0	0.996	1.0	0.2480	031.1563	031.0377	035.285
10.0	0.984	1.0	0.2422	030.7913	030.3235	032.653
15.0	0.966	1.0	0.2333	030.2178	029.1882	030.179
20.0	0.940	1.0	0.2209	029.4045	027.6312	027.943
25.0	0.906	1.0	0.2052	028.3409	025.6856	026.023
30.0	0.866	1.0	0.1875	027.0897	023.4604	024.455
35.0	0.819	1.0	0.1677	025.6195	020.9862	023.305
40.0	0.766	1.0	0.1467	023.9615	018.3556	022.598
45.0	0.707	1.0	0.1250	022.1159	015.6383	022.362
50.0	0.643	1.0	0.1034	020.1139	012.9290	022.592
55.0	0.573	1.0	0.0821	017.9242	010.2809	023.317
60.0	0.500	1.0	0.0625	015.6407	007.8203	024.455
65.0	0.423	1.0	0.0447	013.2320	005.5921	026.008
70.0	0.342	1.0	0.0292	010.6982	003.6590	027.947
75.0	0.259	1.0	0.0168	008.1019	002.0969	030.174
80.0	0.174	1.0	0.0076	005.4430	000.9452	032.640
85.0	0.087	1.0	0.0019	002.7215	000.2372	035.289
90.0	0.087	1.0	0.0019	002.7215	000.0000	035.279

**Adjacent Channel Study**  
**K288FT, Portland, OR FAC# 138942**  
**8/28/2023**

Callsign	State	City	Channel	ERP (W)	Class	Status	Distance (km)	Clr
KRSK	OR	MOLALLA	286	22500	C1	LIC	14.71	-32.13 dB
KFBW	WA	VANCOUVER	290	22500	C1	LIC	14.71	-32.13 dB
KFBW	WA	VANCOUVER	290	12500	C1	LIC	14.69	-28.94 dB
K288FT	OR	PORTLAND	288	50	D	LIC	17.88	-28.47 dB
KRSK	OR	MOLALLA	286	10000	C1	LIC	14.71	-27.98 dB
KFBW	WA	VANCOUVER	290	1700	C1	LIC	14.69	-20.28 dB
KXRU-LP	OR	PORTLAND	288	100	LP100	CP MOD	27.84	0.30 dB
KXRU-LP	OR	PORTLAND	288	13	LP100	LIC	31.08	0.01 dB
KNRK	WA	CAMAS	234	1200	C2	LIC	19.32	4.3
KNRK	WA	CAMAS	234	6300	C2	LIC	19.32	4.3
KUKN	WA	LONGVIEW	288	700	A	LIC	70.31	4.71 dB
KDEP	OR	GARIBALDI	288	320	A	LIC	77.44	8.29 dB
KSXM-LP	OR	SALEM	288	100	LP100	LIC	69.57	11.74 dB
KNRK	WA	CAMAS	234	6000	C2	LIC	31.57	16.6
KCGB-FM	OR	HOOD RIVER	288	1000	A	LIC	115.06	17.72 dB
KEUG	OR	VENETA	288	2800	C3	LIC	170.6	25.25 dB
KJET	WA	UNION	289	510	C3	LIC	201.17	28.12 dB
KEUG	OR	VENETA	288	650	C3	LIC	170.62	28.16 dB
KHJJ-LP	OR	ALBANY	287	100	LP100	CP MOD	103.51	33.34 dB
KCMS	WA	EDMONDS	287	54000	C1	LIC	232.42	33.06 dB
KHJJ-LP	OR	ALBANY	287	100	LP100	LIC	103.69	33.51 dB
KBKS-FM	WA	TACOMA	291	73000	C	LIC	231.39	36.12 dB
KBKS-FM	WA	TACOMA	291	58000	C	LIC	231.12	37.16 dB
KBKS-FM	WA	TACOMA	291	58000	C	LIC	231.12	37.16 dB
KQAK	OR	BEND	289	40000	C1	LIC	205.52	39.26 dB
KRSE	WA	YAKIMA	289	100000	C1	LIC	221.51	39.38 dB





**Propagation Systems Inc.**  
Elevation Pattern Tabulation  
Antenna: PSIFML-1

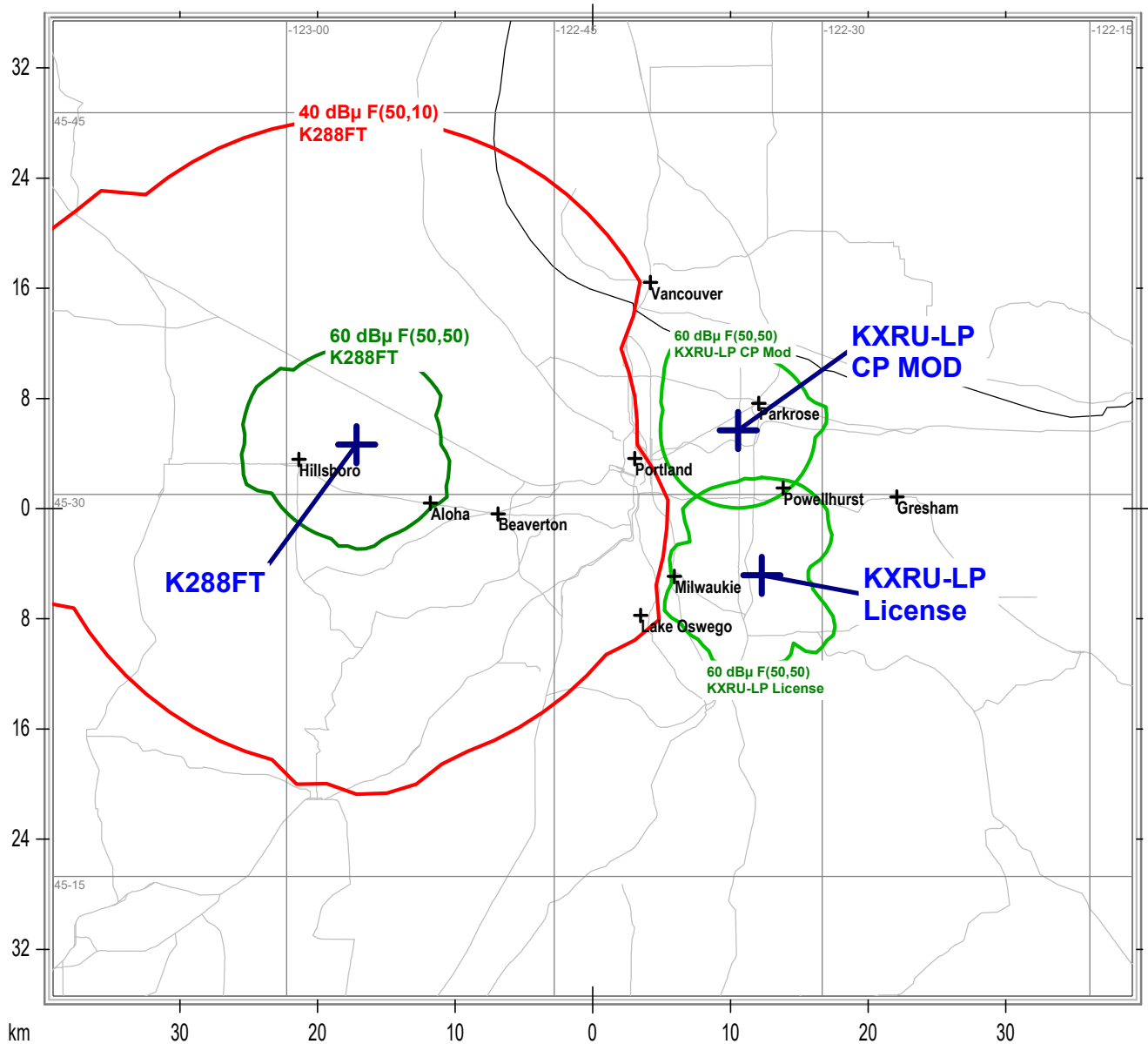
Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.00	0.001	-60.000	-50.00	0.643	-3.839	-10.00	0.985	-0.134
-89.00	0.017	-35.177	-49.00	0.656	-3.663	-9.00	0.988	-0.109
-88.00	0.035	-29.156	-48.00	0.669	-3.490	-8.00	0.990	-0.086
-87.00	0.052	-25.634	-47.00	0.682	-3.325	-7.00	0.992	-0.066
-86.00	0.070	-23.136	-46.00	0.695	-3.166	-6.00	0.994	-0.049
-85.00	0.087	-21.198	-45.00	0.707	-3.012	-5.00	0.996	-0.034
-84.00	0.104	-19.626	-44.00	0.719	-2.862	-4.00	0.997	-0.022
-83.00	0.122	-18.286	-43.00	0.731	-2.719	-3.00	0.998	-0.013
-82.00	0.139	-17.134	-42.00	0.743	-2.580	-2.00	0.999	-0.007
-81.00	0.156	-16.117	-41.00	0.755	-2.445	-1.00	1.000	-0.003
-80.00	0.174	-15.207	-40.00	0.766	-2.316	0.00	1.000	0.000
-79.00	0.191	-14.390	-39.00	0.777	-2.190	1.00	1.000	-0.003
-78.00	0.208	-13.644	-38.00	0.788	-2.071	2.00	0.999	-0.007
-77.00	0.225	-12.962	-37.00	0.798	-1.955	3.00	0.998	-0.013
-76.00	0.242	-12.330	-36.00	0.809	-1.842	4.00	0.997	-0.022
-75.00	0.259	-11.741	-35.00	0.819	-1.733	5.00	0.996	-0.034
-74.00	0.276	-11.194	-34.00	0.829	-1.630	6.00	0.994	-0.049
-73.00	0.292	-10.684	-33.00	0.839	-1.529	7.00	0.992	-0.066
-72.00	0.309	-10.203	-32.00	0.848	-1.432	8.00	0.990	-0.086
-71.00	0.325	-9.750	-31.00	0.857	-1.339	9.00	0.988	-0.109
-70.00	0.342	-9.320	-30.00	0.866	-1.251	10.00	0.985	-0.134
-69.00	0.358	-8.914	-29.00	0.875	-1.164	11.00	0.982	-0.162
-68.00	0.375	-8.530	-28.00	0.883	-1.082	12.00	0.978	-0.193
-67.00	0.391	-8.165	-27.00	0.891	-1.003	13.00	0.974	-0.227
-66.00	0.407	-7.815	-26.00	0.899	-0.928	14.00	0.970	-0.263
-65.00	0.423	-7.482	-25.00	0.906	-0.855	15.00	0.966	-0.301
-64.00	0.438	-7.164	-24.00	0.913	-0.786	16.00	0.961	-0.344
-63.00	0.454	-6.860	-23.00	0.920	-0.720	17.00	0.956	-0.389
-62.00	0.469	-6.569	-22.00	0.927	-0.657	18.00	0.951	-0.436
-61.00	0.485	-6.291	-21.00	0.933	-0.598	19.00	0.945	-0.487
-60.00	0.500	-6.023	-20.00	0.940	-0.542	20.00	0.940	-0.540
-59.00	0.515	-5.764	-19.00	0.945	-0.487	21.00	0.933	-0.598
-58.00	0.530	-5.517	-18.00	0.951	-0.437	22.00	0.927	-0.657
-57.00	0.545	-5.279	-17.00	0.956	-0.389	23.00	0.920	-0.720
-56.00	0.559	-5.050	-16.00	0.961	-0.344	24.00	0.913	-0.786
-55.00	0.573	-4.830	-15.00	0.966	-0.301	25.00	0.906	-0.855
-54.00	0.588	-4.616	-14.00	0.970	-0.263	26.00	0.899	-0.927
-53.00	0.602	-4.413	-13.00	0.974	-0.227	27.00	0.891	-1.003
-52.00	0.616	-4.214	-12.00	0.978	-0.193	28.00	0.883	-1.082
-51.00	0.629	-4.024	-11.00	0.982	-0.162	29.00	0.875	-1.164
						30.00	0.866	-1.251

file: FML 1-bay elevation tabulation

revision: A

Date: 1/28/08

## KXRU-LP Contour Non-Interference Map



ASR# 1024560, 38m, 250W, 288,FML-1-DA,, KAWZ

State Borders      Highways      Lat/Lon Grid

Map Scale: 1:477897   1 cm = 4.78 km   V/H Size: 70.80 x 78.46 km

Gene Wisniewski



**Aerial Photo Zone Of Predicted Interference**  
**K288FT, Portland, OR FAC# 138942**  
**August 28, 2023**

