

TECHNICAL ATTACHMENT
NEW LPFM FOR ELLENSBURG, WA

State: WA
City: ELLENSBURG
Channel: 252

Antenna Structure Registration: N/A
Do you have an FCC Antenna Structure Registration Number?: N
Yes/No/Filed with the FAA No

Latitude: 46 59 47.0 N
Longitude: 120 32 49.4 W
Structure Type: MAST ON BUILDING
Overall Structure Height: 22.1
Support Structure: 21.6
Ground Elevation: 468

Antenna Data

	HORIZONTAL	VERTICAL
Height of Radiation Center Above Ground Level	20.1	20.1
Height of Radiation Center AMSL	(FORM CALCULATES)	
MIn Radiated Power	(FORM CALCULATES)	
Max Radiated Power	(FORM CALCULATES)	

Antenna Type

Directional
Non-Directional X

Directional Antenna

Technical Certification

Environmental Effect

*Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? See 47 C.F.R. Section 1.1306?

NO

Interference

*Does the applicant certify that the proposed facility complies with engineering requirements...?

YES

SPACING

```

REFERENCE                                     CLASS = L1                                     DISPLAY DATES
46 59 47.00 N.                                Current Spacings to 2nd Adj.                DATA 10-16-23
120 32 49.40 W.                                Channel 252 - 98.3 MHz                      SEARCH 12-04-23
-----

```

Call	Channel	Location		Azi	Dist	FCC	Margin
KING-FMLIC-D	251C	Seattle	WA	298.1	121.99	119.5	2.5
KMNA	LIC-N 254C2	Mabton	WA	152.0	65.54	52.5	13.0
K251AZ	LIC 251D	Malaga	WA	32.8	42.81	20.5	22.3
KEYW	LIC-N 252C1	Pasco	WA	133.3	146.99	110.5	36.5
KLGW	LIC 253C0	Grand Coulee	WA	52.3	152.50	110.5	42.0
KLGW	STA 253C0	Grand Coulee	WA	52.3	152.50	110.5	42.0

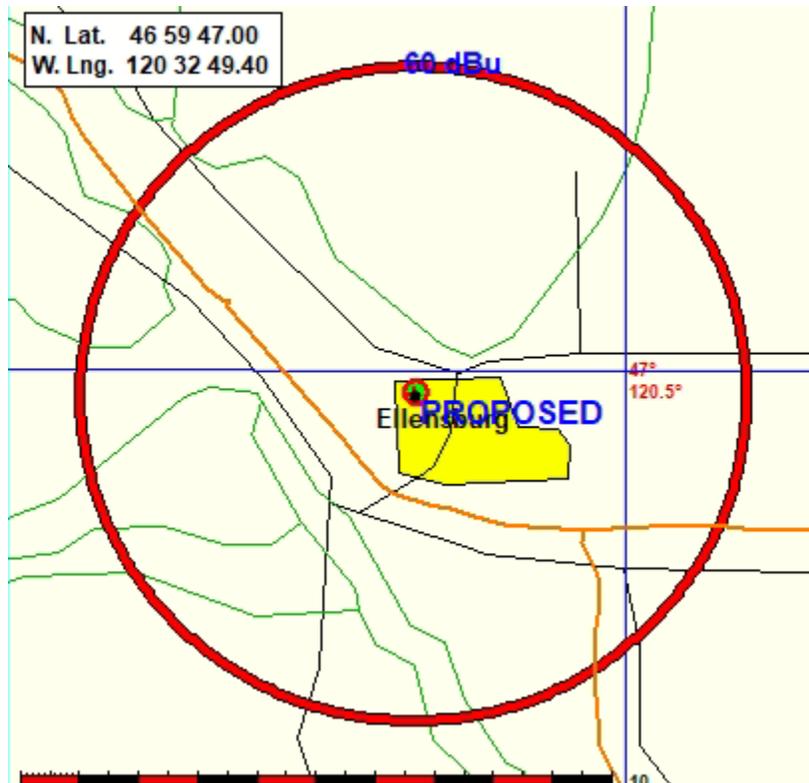
Reference station has protected zone issue: Canada
All separation margins include rounding

LPFM Channel Finder Study for 46-59-47.00 N, 120-32-49.42 W

252 98.3 MHz	Available
-----------------	-----------



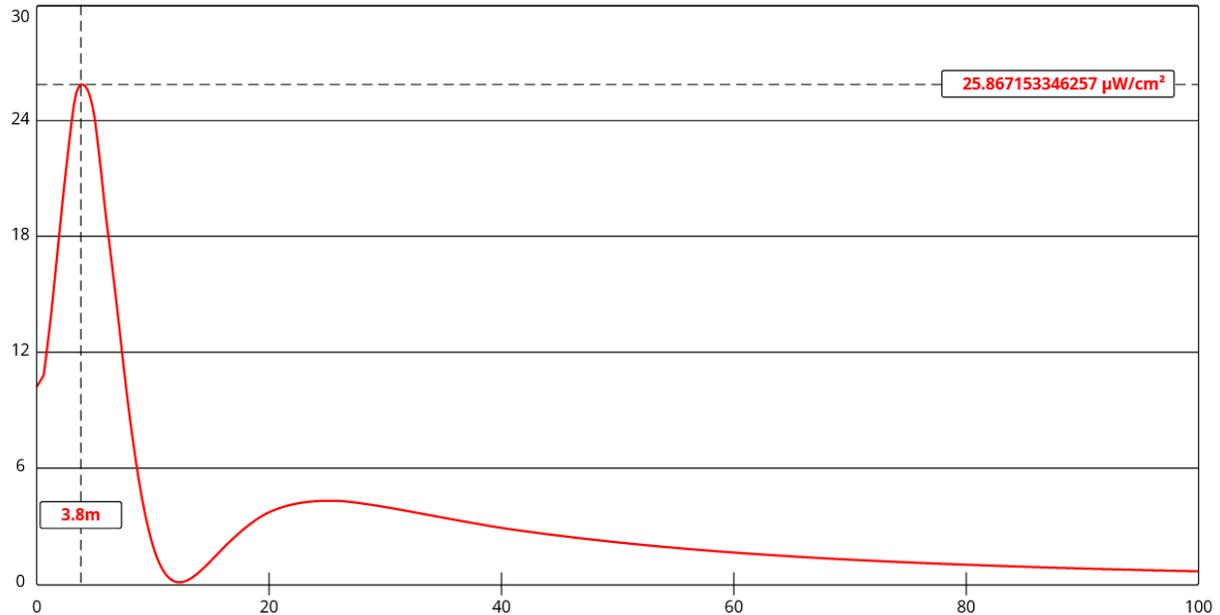
FCC 60 dBu F(50,50)



TOWAIR (PASS)

DETERMINATION Results							
PASS SLOPE(100:1)NO FAA REQ - 4232.0 Meters (13884.3 Feet)away & below slope by 124.0 Meters (406.819 Feet)							
Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	47-01-50.00N	120-31-21.00W	BOWERS FLD	KITTITAS ELLENSBURG, WA	532.5	1310.5999999999999
Your Specifications							
NAD83 Coordinates							
Latitude						46-59-47.0 north	
Longitude						120-32-49.4 west	
Measurements (Meters)							
Overall Structure Height (AGL)						22.1	
Support Structure Height (AGL)						11	
Site Elevation (AMSL)						428	
Structure Type							
BMAST - Building with Mast							

NON IONIZING ELECTROMAGNETIC RADIATION



Antenna: Opposed V
Horizontal ERP (W): 100
Vertical ERP (W): 100
Antenna Height (M): 9.1
Elements: 2
Spacing: 1.0

Using these settings, the maximum predicted RF exposure for a human standing on the ground would be 25.9 $\mu\text{W}/\text{cm}^2$ at 3.8 m at roof level of the building (for a 1.6 m person on the roof that level is 44.3 $\mu\text{W}/\text{cm}^2$). This represents less than 13% of the FCC Maximum Permissible Exposure (MPE) of 200 $\mu\text{W}/\text{cm}^2$ for uncontrolled environments. A warning sign for radiation shall be placed next to the mast.