

LPFM SECOND ADJACENT CHANNEL WAIVER STUDY

Based on a study by Fairhope Radio, it has been determined that the proposed station at this site qualifies for a second channel waiver as specified in Section 73.807(e) of the Commission rules.

Station WPCS (Facility ID 52230), Pensacola, FL, operates on channel 208C0 with an ERP of 95kW (Table 1.). The center of radiation is 403.8 meters above average terrain and is located 32.7 km from the proposed LPFM transmitter site. WPCS places an 81.7 dBu service contour at the proposed LPFM transmitter site (Figure 1.).

The proposed LPFM station will operate from a radiation center located 23 meters above ground level or 28 meters above average terrain. Therefore the proposed station will operate at a full 0.100kW in compliance with Section 73.811(a) of the Commission rules.

Using the U/D method¹, the proposed LPFM station is predicted to produce an undesired interference overlap with WPCS at the 121.7 dBu interference contour ("overlap zone"). The overlap zone extends 58 meters from the radiation center (Figure 2.). However, at the edges of the zone, the interference contour is more than 18 meters above ground level (Table 2 and figure 4.).

The proposed LPFM station will utilize a two bay Micronetixx FML, circularly polarized antennas with 7/8 wave spacing. Based on manufacture's data (Figure 3 and Table 2, columns 1 & 2.), and using the depression angle method, a 100 watt signal will produce a field strength of 121.7 dBu along the contour shown in figure 4. As can be seen in Figure 4, the interference contour reaches no closer than 4.92 meters above ground level. Where there could be potential interference to listeners (in the buildings at the buildings North and South of the antenna) the interference contour is no less than 14 meters above the ground and 7 to 15 meters above the buildings. The building to the West Northwest of the antenna is a church which is 24 meters from the base of the antenna and is below the interference contour at that point. Thus, there are not nor will there ever be during the life of the radio station at this site any FM receivers within the interference area (Figure 4.).

Based on the information presented, Fairhope Radio submits that the proposed station will not create any interference to existing or potential listeners to the second adjacent channel station WPCS. The applicant requests a waiver of Section 73.807 of the Commission rules in respect to WPCS.

Report completed by
Fairhope Radio,
John Allen,
President.
August 26, 2016
Cell (251) 504-0740

¹ See *Living Way Ministries, Inc.* Memorandum and Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5, Recon denied 23 FCC Rcd 15070 (2008).

Amendment for WYFR-LP, Fairhope, AL
Fairhope Radio
BNPL-20131106AGP

PROPOSED 60dBu F(50,50) SERVICE CONTOUR

RED CURVE: WPCS, Pensacola FL, 81.7 dBu

FAIRHOPE, AL – Channel 210L1 (89.9 MHz) ~ ERP 0.100 kW

Elev: 31 meters ~ RCAGL: 23 meters ~ RCAMSL: 54 meters ~ HAAT: 28 meters

Overall tower height: 25 meters – ASR: None Required (no nearby airports)

NAD83 Latitude: 30° 33' 35.3" NL – Longitude: 87° 53' 32.8" WL

NAD27 Latitude: 30° 33' 34.6" NL – Longitude: 87° 53' 32.8" WL

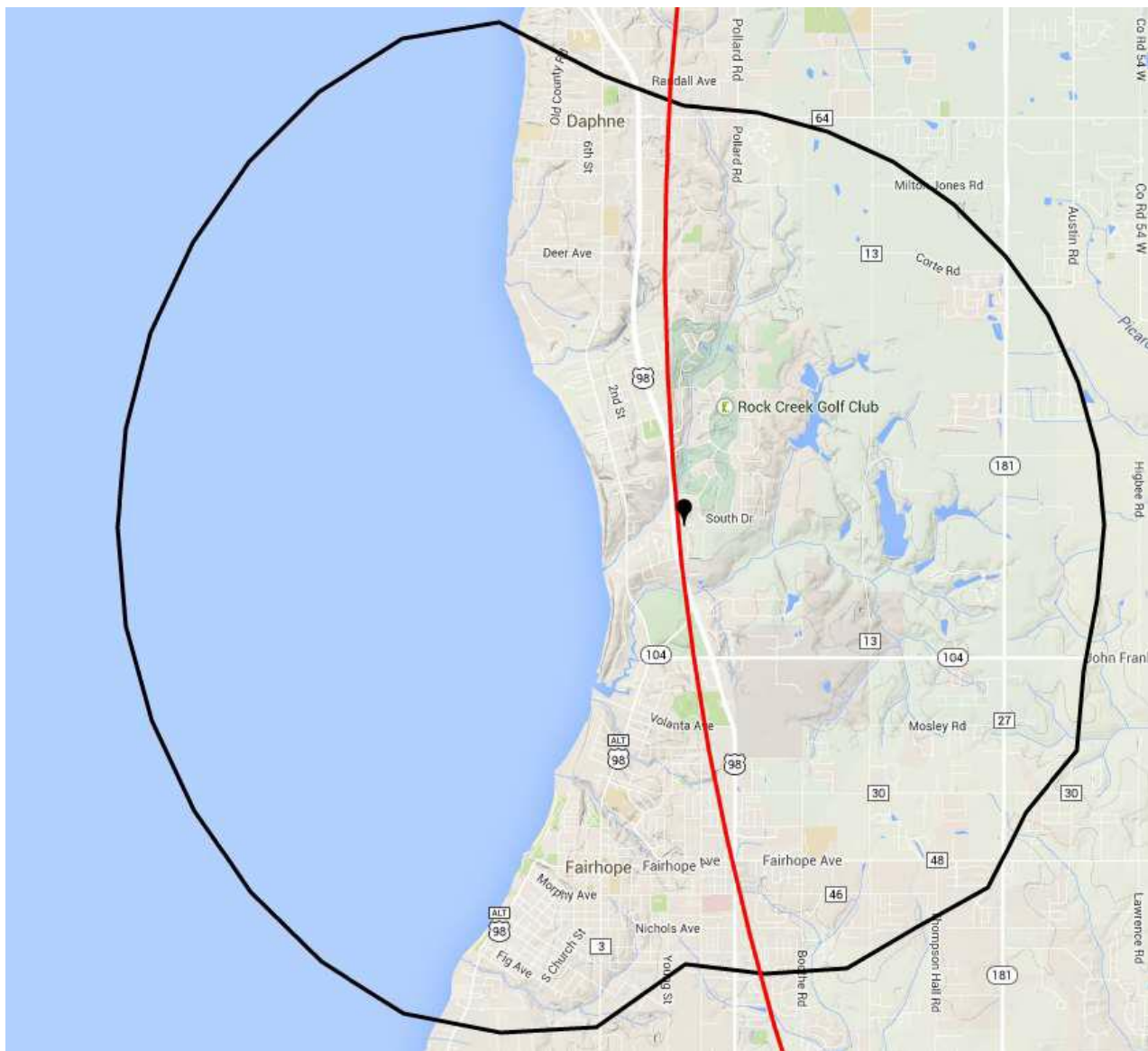


Figure 1: Proposed 60 dBu F(50,50) Service Contour (Black) and WPCS, Pensacola, FL, 81.7 dBu Contour (Red)

FAIRHOPE RADIO
CHANNEL REPORT

NAD27 LATITUDE: 30 - 33' 34.6" - LONGITUDE: 87 - 53' 32.8"
CHANNEL: 210 - CLASS: LPFM(LP-100)

CHAN	FREQ	CALL	LOCATION	CLS	DIST	REQ	CLEAR	BEAR
207	89.3	WJIK : PENFOLD COMMUNICATIONS, INC.	FULTON	AL A	148.6	0.0	148.6	6.5
207	89.3	WAIH : AMERICAN FAMILY ASSOCIATION	HATTIESBURG	MS A	160.8	0.0	160.8	300.3
207	89.3	WDWZ : B. JORDAN COMMUNICATIONS CORPORATION	ANDALUSIA	AL A	157.7	0.0	157.7	58.0
208	89.5	WPCS : PENSACOLA CHRISTIAN COLLEGE, INC.	PENSACOLA	FL C0	32.7	84.0	-51.3	84.4
209	89.7	WZKM : AMERICAN FAMILY ASSOCIATION	WAYNESBORO	MS C1	169.5	100.0	69.5	326.9
210	89.9	WWNO : UNIVERSITY OF NEW ORLEANS	NEW ORLEANS	LA C1	217.2	111.0	106.2	251.3
210	89.9	WTSU : TROY UNIVERSITY * Station carries radio reading service.	MONTGOMERY-TROY	AL C1	243.8	111.0	132.8	46.3
210	89.9	WJTF : FAMILY LIFE BROADCASTING, INC.	PANAMA CITY	FL C1	213.2	111.0	102.2	96.4
211	90.1	WTJT : OKALOOSA PUBLIC RADIO, INC.	BAKER	FL C2	116.9	80.0	36.9	75.2
212	90.3	WMAH-FM MISSISSIPPI AUTHORITY FOR EDUCATIONAL TV * Station carries radio reading service.	BILOXI	MS C	103.2	93.0	10.2	282.3 :
213	90.5	WTGF : FAITH BIBLE COLLEGE, INC. : Nearest third-adjacent channel station	MILTON	FL C3	73.4	0.0	73.4	85.9
213	90.5	WVPL : TOWNSEND BROADCASTING ENTERPRISE	DOZIER	AL A	175.5	0.0	175.5	56.2
213	90.5	WQLS : TOWNSEND BROADCASTING ENTERPRISE	CAMDEN	AL A	166.2	0.0	166.2	20.7
213	90.5	WQLS TOWNSEND BROADCASTING ENTERPRISE	CAMDEN	AL C3	160.4	0.0	160.4	22.6 :

Table 1: Channel Report

BLUE CURVE – 58 meter interference contour around transmitter site at radiation center.

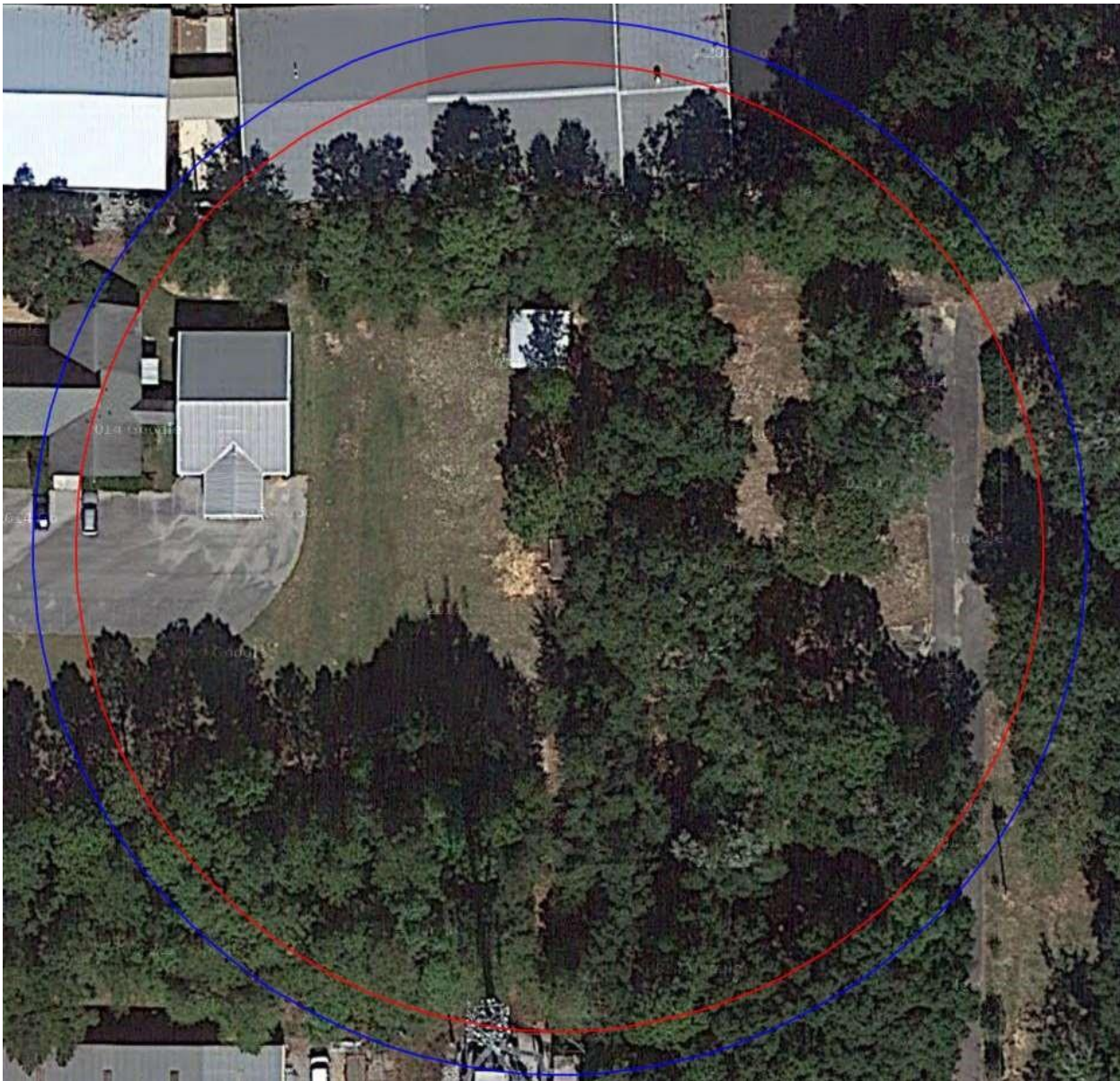


Figure 2. Radius of Interference Contour at Height (See figure 4).

To the north is a two story structure, to the West is a single story structure. Due to the use of a Micronetixx FML-2, two-bay 7/8 wave spaced antenna, no interference will reach any point lower than 12 meters above ground level in the vicinity of an occupied building; therefore it will not reach any occupied area of any of the structures located within the area of possible interference (See figure 4.).

Proposed Power:	0.1 kW
Antenna Height AGL:	23 m
Interference Contour:	121.7 dBu
Antenna Type	Micronetixx fml-2, two bay at 7/8 wave spacing.

Proposed ERP: 0.1kW
 Antenna Height: 23 m
 Interference Contour: 121.7dBu
 Antenna Type: Micronetixx FML-2

Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Antenna to Interference Contour in Meters	The Horizontal Distance from the Tower to the Interference Contour in Meters	The Vertical Distance of the Interference Contour above Ground in Meters.	Distance from Radiation Center to Ground Level in Meters
5	0.968	0.0937	-10.282	55.83	55.62	18.13	263.90
10	0.875	0.077	-11.160	50.47	49.70	14.24	132.45
15	0.715	0.051	-12.914	41.24	39.83	12.33	88.87
20	0.554	0.031	-15.130	31.95	30.03	12.07	67.25
25	0.36	0.013	-18.874	20.76	18.82	14.22	54.42
30	0.169	0.003	-25.442	9.75	8.44	18.13	46.00
35	0.005	0.000	-56.021	0.29	0.24	22.83	40.10
40	0.149	0.002	-26.536	8.59	6.58	17.48	35.78
45	0.258	0.007	-21.768	14.88	10.52	12.48	32.53
50	0.328	0.011	-19.683	18.92	12.16	8.51	30.02
55	0.361	0.013	-18.850	20.82	11.94	5.94	28.08
60	0.362	0.013	-18.826	20.88	10.44	4.92	26.56
65	0.336	0.011	-19.473	19.38	8.19	5.44	25.38
70	0.29	0.008	-20.752	16.73	5.72	7.28	24.48
75	0.229	0.005	-22.803	13.21	3.42	10.24	23.81
80	0.158	0.002	-26.027	9.11	1.58	14.03	23.35
85	0.08	0.001	-31.938	4.61	0.40	18.40	23.09
			-				
90	0.000	0.000	150.000	0.00	0.00	23.00	23.00

Table 2: Interference Contour Calculations

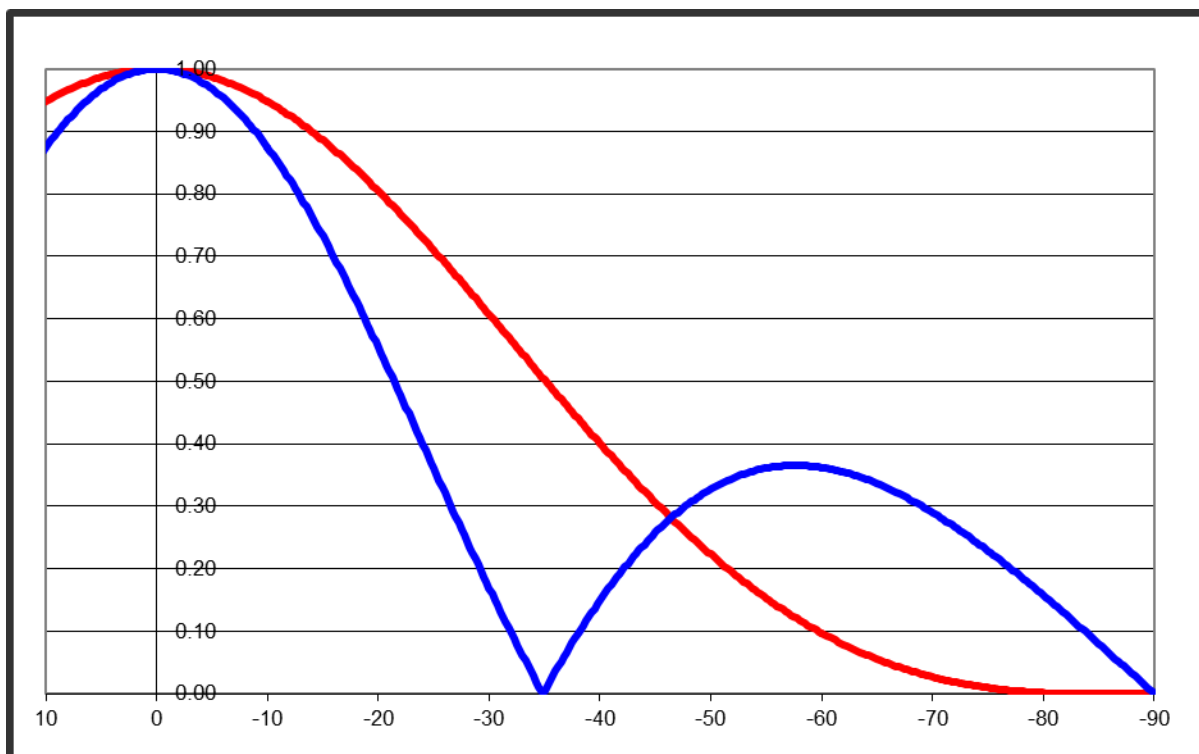


Figure 3: The Blue Line Represents the Vertical Radiation Pattern of the FML-2, Two Bay Antenna System.

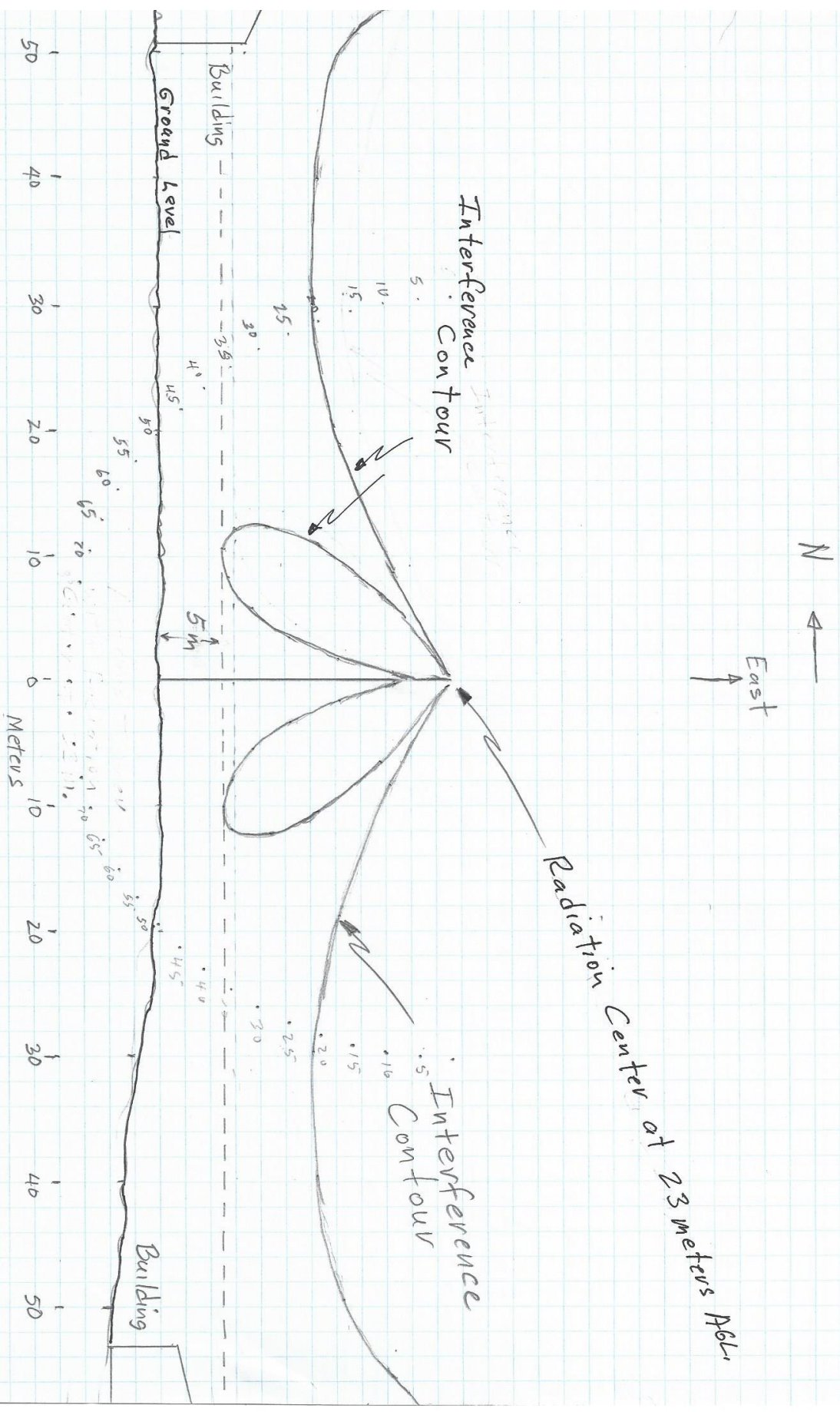


Figure 4: Plot of Interference Contour

TOWAIR Determination Results

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DETERMINATION Results	
Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.	
Your Specifications	
NAD83 Coordinates	
Latitude	30-33-35.2 north
Longitude	087-53-33.5 west
Measurements (Meters)	
Overall Structure Height (AGL)	25
Support Structure Height (AGL)	25
Site Elevation (AMSL)	30
Structure Type	
MTOWER - Monopole	

[Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.