

## TECHNICAL REPORT

### K223CR - MORRILTON, AR

#### 250 Mile Translator Modification

#### **Non-adjacent channel change from channel 223 (92.5 MHz) to Channel 255 (98.9 MHz) to substantially reduce interference received.**

This technical report is submitted in support of a minor modification to K223CR at Morrilton, AR, FCC Facility I.D. 146181. A non-adjacent move to channel 255D is requested in accordance with CFR §74.1233(a)(1) since the current facility receives interference to 10.8% of its 60 dBu population and 12.2% of its 60 dBu contour area. The translator will continue to serve as a fill-in facility to rebroadcast KVOM(AM) 800 kHz at Morrilton, AR (FCC Facility ID 43830).

Furthermore, *FCC 17-14* footnote 22 also permits the change proposed herein<sup>1</sup> since those translators designated as 250 mile move translators have been permitted to change to any channel in the non-reserved band as long as long as they continue to rebroadcast their associated AM station and their 60 dBu remains within the AM 2 mV/m or 25 mile radius as is the case here.

<sup>1</sup> FCC 17-14

Footnote 22. As noted in paragraph 1, *supra*, we wish to provide those applicants who participated in the Commission-ordered 2016 translator modification windows with maximum flexibility in providing service to their authorized communities and nearby areas. Accordingly, such an applicant may apply to further move its cross-service FM translator already relocated pursuant to the 2016 modification windows, as a minor modification application, as long as the proposed further modification complies with both the amended 47 CFR § 74.1201(g) adopted here and with the 250-mile limitation imposed in the First Report and Order in this proceeding, see AMR FNPRM, 30 FCC Rcd at 12152, para. 15. We also reiterate the Commission's statement in the First Report and Order, that a waiver of an Auction 83 FM translator construction deadline is presumptively in the public interest for applicants participating in one of the 2016 modification windows, provided that the AM station licensee proposing to use the FM translator for rebroadcasting its AM station commits to prompt FM translator station construction and initiation of broadcast operations. See *id.* at 12152 n.36. See also Ex Parte Comments of Blount Masscom, et al., MB Docket No. 13-249, at 1-2 (filed Feb. 14, 2017). In the interest of prompt station construction and initiation of service, we limit any extensions of construction deadlines to not more than six months after the effective date of this Second Report and Order.

**Non-adjacent channel move per §74.1233(a)(1) analysis:**

A non-adjacent channel change to 255D (98.9 MHz) is requested in accordance with CFR §74.1233(a)(1) as modified in *FCC 19-40, May 9, 2019*. In that Report and Order, the Commission explained that:

*6. For these reasons, we modify section 74.1233(a)(1) of the Commission's rules (Rules) to define an FM translator's change to any available same-band FM channel as a minor change, upon a showing of actual or predicted interference to or from any other broadcast station.*

Exhibit E-1 shows current incoming interference to K223CR from KIPR(FM) 222C1 at Pine Bluff, AR to 9.66% of its 60 dBu population and from KCON(FM) 224C3 at Vilonia, AR to 4.15% of its 60 dBu population. The proposed channel 255D facility will eliminate interference overlap from other facilities (exhibit E-2). Therefore, a modification to channel 255D is requested in accordance with the modified rules. Interference calculations were performed using the V-Soft Probe 4 FM interference feature, 30 meter FCC terrain and the FCC -6 dB adjacent channel U/D ratio.

**Allocation Analysis:**

An overlap study in exhibit E-3 shows the proposed facility complies with §74.1204 with the exception of second adjacent channel KURB(FM) 253C0 at Little Rock, AR. The +40 121.14 F(50-10) dBu contour within the second adjacent protected contour (exhibit E-4) does not encompass any population, major roads or buildings, as shown in the aerial photo (exhibit E-5). Therefore, a waiver of Section 74.1204, if required, is requested in accordance with *Living Way Ministries, Inc.* (FCC 08-242).

The proposed K223CR 60 F(50-50) dBu contour overlaps the current facility and

is within a 25 mile/40 km radius from the primary KVOM(AM) daytime site (exhibit E-6).

**Antenna System:**

The K223CR modification to 255D will be located on the existing 60 meter tower at coordinates:

**35 06 30.6N 092 31 08.3W NAD 83**

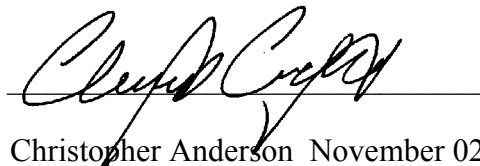
A TOWAIR determination (exhibit E-7) shows the tower does not require registration. A Bext TFC2K-1 directional antenna (exhibit E-8) will be mounted at a COR AGL of 51.0 meters, 201.9 meters AMSL, 102.1 meter HAAT (exhibit E-9) and operate at 0.250 kW ERP.

**RF Exposure Calculation:**

The RF contribution was calculated using FMModel (exhibit E-10). The RF is calculated to be  $1.91 \mu\text{W}/\text{cm}^2$  at a distance of 50.2 meters from the base of the tower, which is below 5% of the  $200 \mu\text{W}/\text{cm}^2$  maximum permissible for general population exposure, allowing exclusion from consideration.

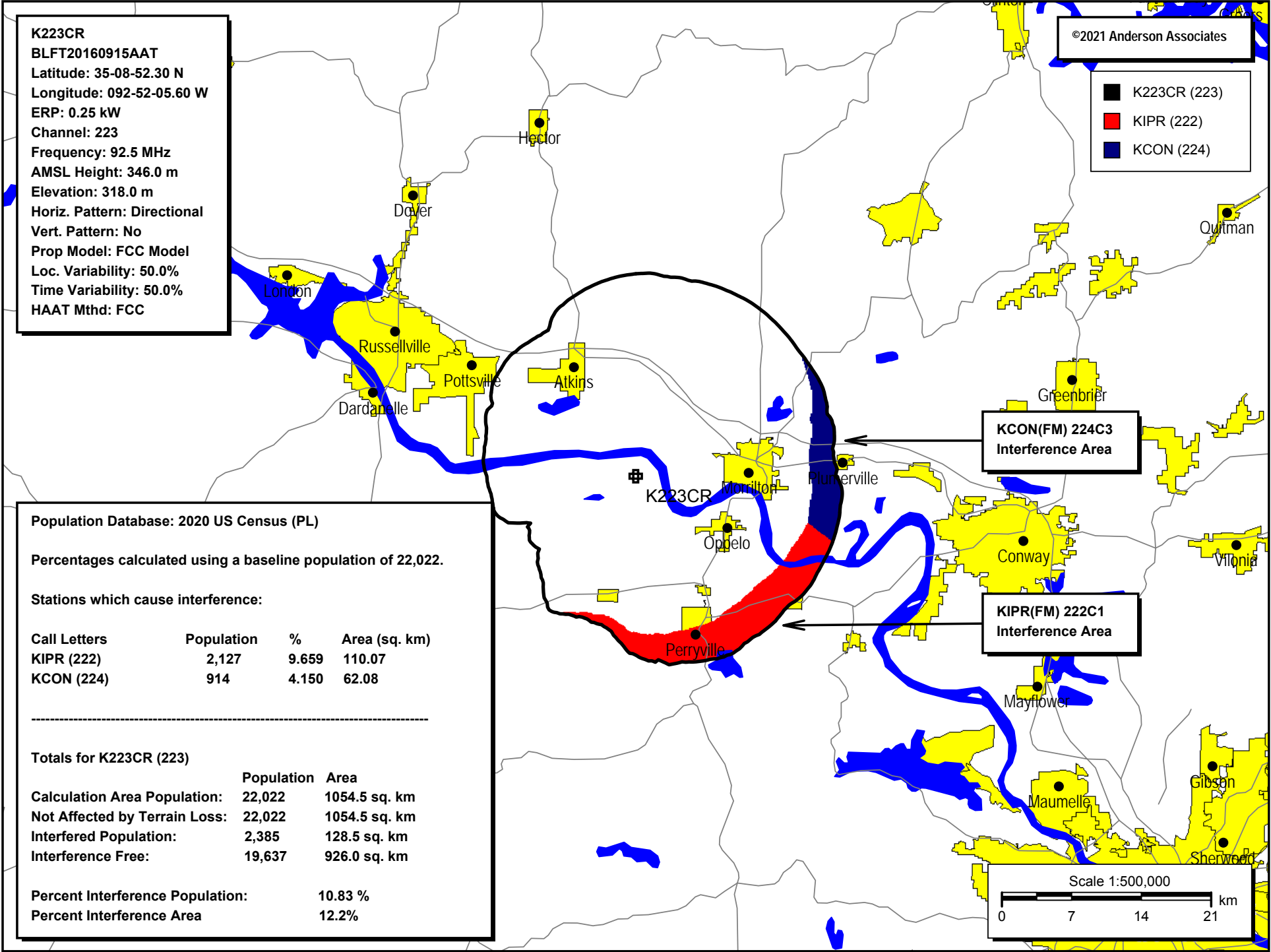
**Conclusion:**

It is concluded that the K223CR modification to 255D complies with all Commission rules and policies.

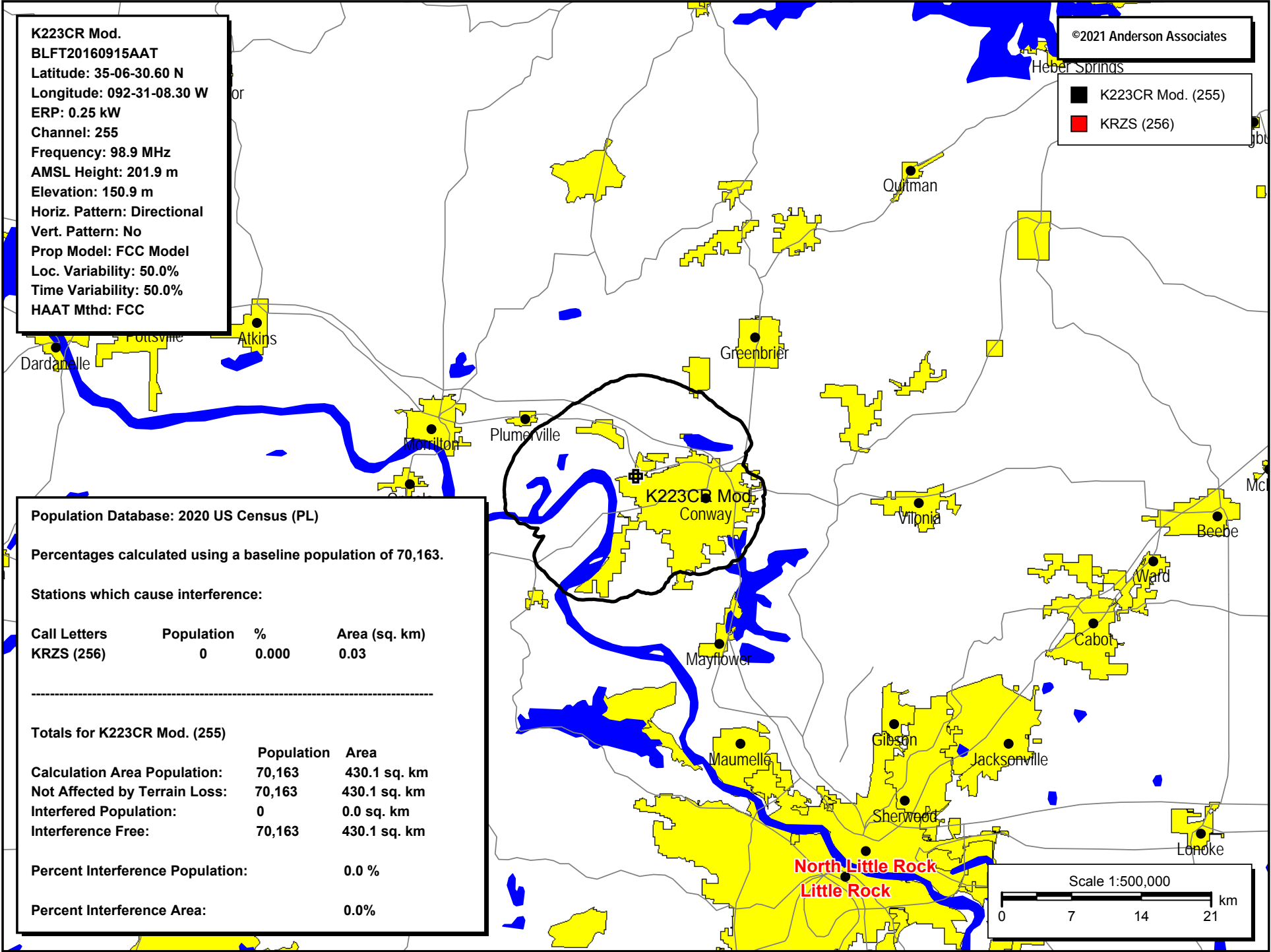


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E-1 K223CR Lic. 60 dBu Contour Interference Plot



E-2 K223CR Mod. 255D 60 dBu Contour Interference Plot



# E-3 K223CR Mod. 255D Overlap Study

REFERENCE 35 06 30.60 N. 92 31 08.30 W.		CH# 255D - 98.9 MHz, Pwr= 0.25 kW DA, HAAT= 102.1 M, COR= 201.9 M Average Protected F(50-50)= 12.99 km Standard Directional				DISPLAY DATES DATA 11-01-21 SEARCH 11-02-21				
CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (Overlap in km)
253C0 KURB Little Rock		LIC_CN AR	176.5 356.5	34.47 BLH19880727KA	34 47 56.30 92 29 44.60	100.000 392	11.7 518	80.8 Radio License Holding Cbc,	11.0	-47.3*(1)
256C3 KRZS Pangburn		LIC_ZCN AR	65.6 246.0	77.73 BLH20021127ACD	35 23 43.30 91 44 17.50	25.000 100	65.9 217	43.8 Crain Media Group, LLC	-0.1<	16.3
255C3 NEW Rison		APP_NCN AR	172.6 352.7	124.21 0000158963	34 00 01.80 92 20 41.10	21.000 100	111.5 162	39.4	0.8	44.1
255L1 KWCP-LP Little Rock		LIC_CN AR	163.0 343.1	46.01 BLL20160630ABQ	34 42 45.30 92 22 18.50	0.100 30	139	16.4 John Barrow Neighborhood A	2.7	
257A KCON/KASR Atkins		CP_CN AR	294.8 114.6	36.22 0000145837	35 14 41.20 92 52 51.60	5.000 110	3.1 244	32.8 Eab Of Morrilton, LLC	22.0	2.7
257A KASR Atkins		LIC_CN AR	294.8 114.6	36.22 BMLH20040317ABU	35 14 41.30 92 52 51.60	4.100 120	2.9 244	31.2 Eab Of Morrilton, LLC	22.2	4.3
258A KDIS-FM Little Rock		LIC_CN AR	151.6 331.8	43.22 BLH20140220ADC	34 45 58.30 92 17 38.50	6.000 95	2.8 197	29.1 Salem Communications Holdi	29.3	13.2
202C1 KABF Little Rock		LIC_CN AR	173.8 353.9	35.31 BLED19900803KC	34 47 31.30 92 28 38.50	91.000 237	107.5 362	42.4 Arkansas Broadcasting Foun	21.5R	13.8M
256L1 KILB-LP Paron		LIC_CN AR	210.6 30.5	46.44 BLL20170202ABN	34 44 55.30 92 46 40.60	0.100 30	211	24.8 Amazing Grace Church	20.2	
255A AL6232 Rison		RSV-A ____ AR	172.0 352.1	124.22	34 00 07.37 92 19 49.54	6.000 100	88.2 162	29.5 La Gigante Siembra Inc.	24.1	54.0
255D K255DM Marshall		LIC_CN AR	354.3 174.3	88.59 BLFT20190909AAL	35 54 05.00 92 36 58.00	0.250	46.8 526	13.7 Ichthus Outreach Ministrie	31.7	40.8
255A AL6234 Rison		RSV-A ____ AR	164.2 344.5	130.86	33 58 30.36 92 08 00.51	6.000 100	85.4 166	27.3 La Gigante Siembra Inc.	34.3	65.7
255A AU7057827 Rison		VAC ____ AR	167.4 347.5	132.89 RM10246	33 56 30.36 92 12 13.53	6.000 100	86.3 159	28.0 Charles Crawford	34.9	64.9
256C KMAG Fort Smith		LIC_CN AR	269.5 88.3	196.64 BLH19900430KB	35 04 26.30 94 40 48.80	100.000 600	137.9 780	92.8 Ihm Licenses, LLC	45.7	84.2

Terrain database is FCC 30 meter , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
Contour distances are on direct line to and from reference station. Reference zone= West Zone, Co to 3rd adjacent.  
All separation margins (if shown) include rounding.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
\*\*\*affixed to 'IN' or 'OUT' values = site inside restricted contour.  
« = Station meets FCC minimum distance spacing for its class.  
< = Contour Overlap

(1) The +40 121.14 F(50-10) dBu contour within the KURB(FM) 253C0 second-adjacent protected contour (exhibit E-4) does not encompass any population, buildings or major roads (exhibit E-5).

# E-4 K223CR Mod. 255D +40 F(500-10) dBu Calculation Within KURB(FM) 253C0

K223CR Morrilton, AR, Showing Protection to KURB, Channel: 253

Geographic Coordinates: N. 350630.60 W. 923108.30

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

Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 255

Translator or LPFM Antenna Height AG = 51 meters

K223CR Antenna Model = BEXT TFC2K-1

Protected Station's Contour = 81.14244 dBu

Translator's or LPFM's full Interference contour 121.14244

Review Azimuth = 240 Degrees True

Horizontal Relative Field at Review Azimuth = 0.999

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

Distance between stations = 34.5 km

Protected Station= KURB, 100 kW, 518 M meters COR AMSL

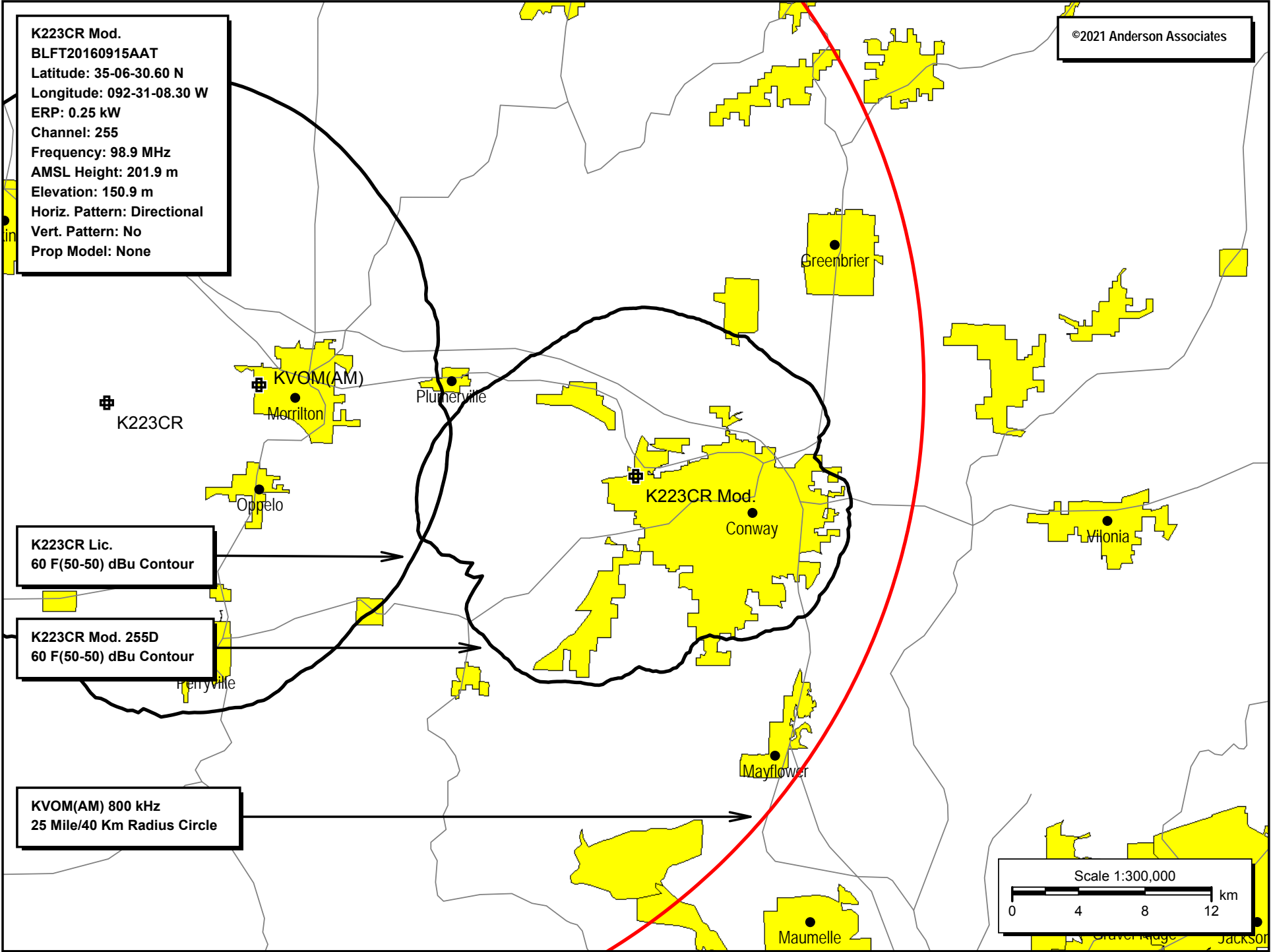
Depression Angle From Degree(Deg) (m)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground(m)
00.00	0.933	1.0	0.2174	090.6802	090.6802	051.000
05.00	0.932	1.0	0.2169	090.5830	090.2383	043.105
10.00	0.940	1.0	0.2207	091.3605	089.9726	035.135
15.00	0.941	1.0	0.2209	091.4091	088.2944	027.342
20.00	0.927	1.0	0.2146	090.0970	084.6635	020.185
25.00	0.906	1.0	0.2048	088.0074	079.7618	013.806
30.00	0.884	1.0	0.1952	085.9178	074.4070	008.041
35.00	0.858	1.0	0.1836	083.3422	068.2699	003.197
40.00	0.817	1.0	0.1667	079.4059	060.8285	-000.041
45.00	0.755	1.0	0.1422	073.3314	051.8531	-000.853
50.00	0.673	1.0	0.1131	065.4102	042.0449	000.893
55.00	0.575	1.0	0.0824	055.8368	032.0267	005.261
60.00	0.469	1.0	0.0549	045.5831	022.7915	011.524
65.00	0.365	1.0	0.0332	035.4265	014.9719	018.893
70.00	0.269	1.0	0.0181	026.1447	008.9420	026.432
75.00	0.186	1.0	0.0086	018.0777	004.6789	033.538
80.00	0.115	1.0	0.0033	011.1771	001.9409	039.993
85.00	0.057	1.0	0.0008	005.5399	000.4828	045.481
90.00	0.031	1.0	0.0002	003.0130	000.0000	047.987







E-6 K223CR Mod. 255D 60 dBu Contour Plot



## TOWAIR Determination Results

\*\*\* NOTICE \*\*\*

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

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	35-06-30.6 north
Longitude	092-31-08.3 west

**Measurements (Meters)**

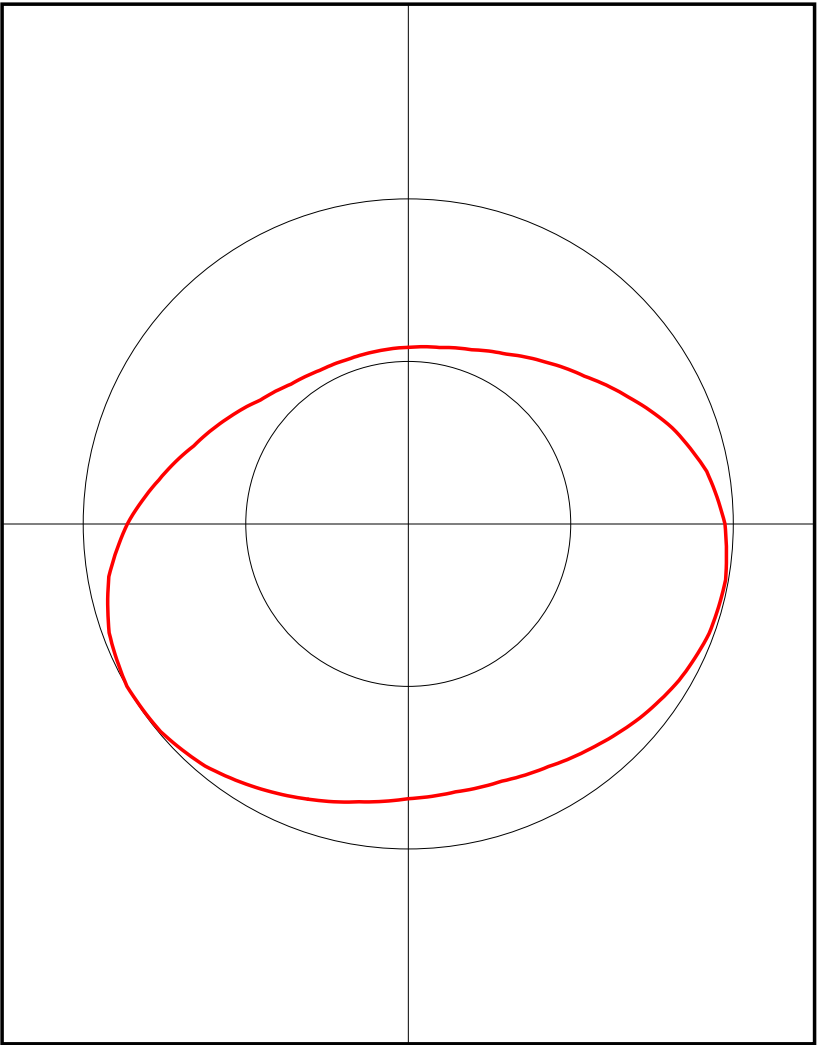
Overall Structure Height (AGL)	60
Support Structure Height (AGL)	0
Site Elevation (AMSL)	150.9

**Structure Type**

LTOWER - Lattice Tower

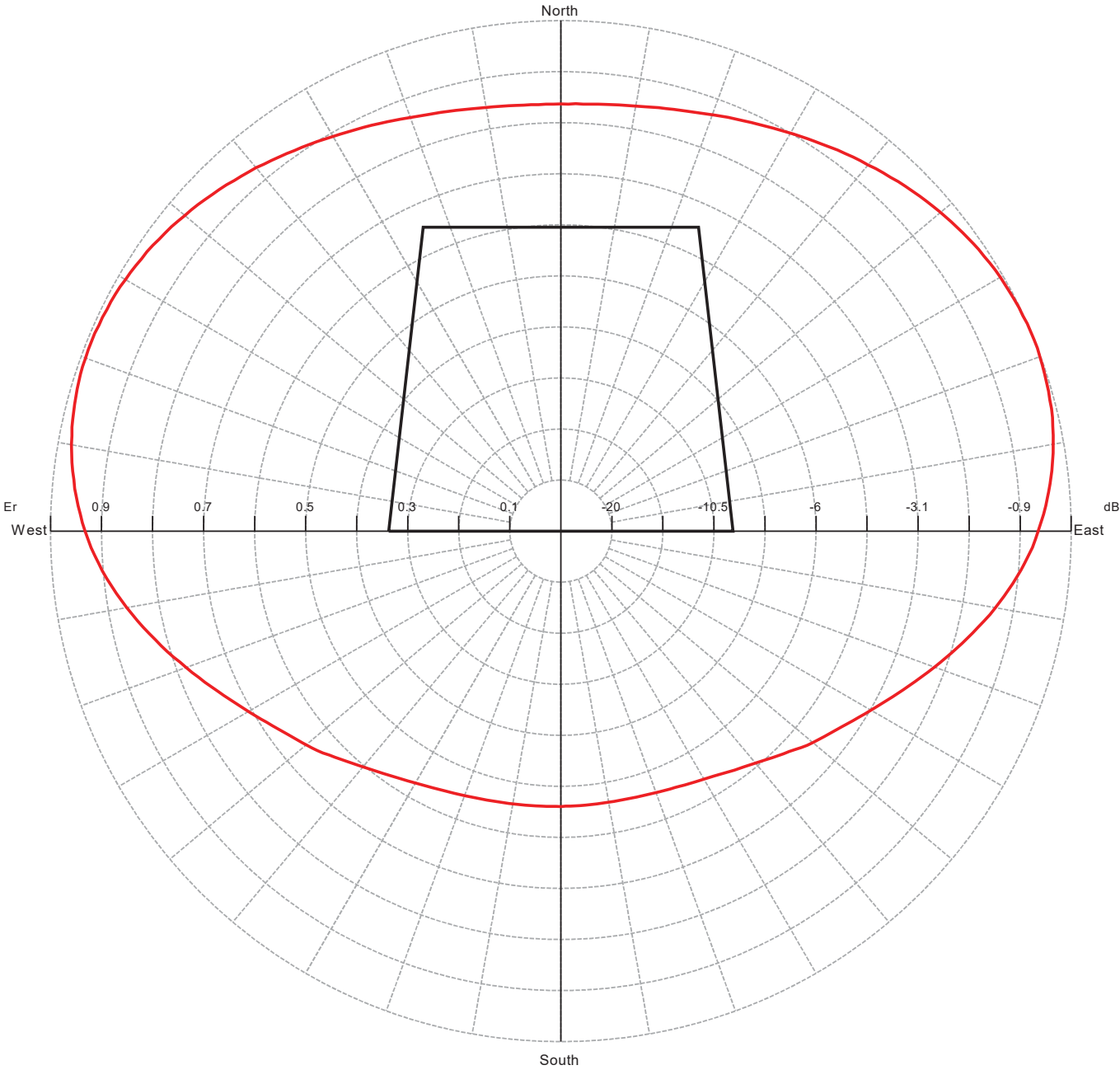
E-8 K223CR Mod. 255D Antenna Pattern

Azimuth (deg)	Relative Field
0.0	0.543
10.0	0.551
20.0	0.57
30.0	0.603
40.0	0.651
50.0	0.707
60.0	0.781
70.0	0.864
80.0	0.932
90.0	0.974
100.0	0.991
110.0	0.985
120.0	0.962
130.0	0.929
140.0	0.893
150.0	0.862
160.0	0.842
170.0	0.837
180.0	0.845
190.0	0.868
200.0	0.901
210.0	0.936
220.0	0.972
230.0	0.994
240.0	1.00
250.0	0.979
260.0	0.935
270.0	0.864
280.0	0.779
290.0	0.702
300.0	0.645
310.0	0.593
320.0	0.561
330.0	0.545
340.0	0.539
350.0	0.543



Bext TFC-2K 1 Bay oriented at 170 Degrees True.

Horizontal diagram at 0.0° tilt (Total Antenna)



0.0° Tilt (Total Antenna), Gain (dBd): -3.41

ERP T.Max(KW): 0 ERP E.Max(KW): 0



### Horizontal diagram at 0.0° tilt (Total Antenna)

Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)
0.0	83.7	0.3	60.0	99.4	0.5	120.0	70.2	0.2
1.0	83.7	0.3	61.0	99.5	0.5	121.0	69.5	0.2
2.0	83.8	0.3	62.0	99.7	0.5	122.0	68.8	0.2
3.0	83.8	0.3	63.0	99.8	0.5	123.0	68.2	0.2
4.0	83.8	0.3	64.0	99.9	0.5	124.0	67.6	0.2
5.0	83.9	0.3	65.0	99.9	0.5	125.0	67.0	0.2
6.0	84.0	0.3	66.0	100.0	0.5	126.0	66.5	0.2
7.0	84.1	0.3	67.0	100.0	0.5	127.0	66.0	0.2
8.0	84.2	0.3	68.0	100.0	0.5	128.0	65.4	0.2
9.0	84.4	0.3	69.0	100.0	0.5	129.0	64.9	0.2
10.0	84.5	0.3	70.0	99.9	0.5	130.0	64.5	0.2
11.0	84.7	0.3	71.0	99.8	0.5	131.0	63.9	0.2
12.0	84.9	0.3	72.0	99.7	0.5	132.0	63.3	0.2
13.0	85.1	0.3	73.0	99.5	0.5	133.0	62.8	0.2
14.0	85.3	0.3	74.0	99.4	0.5	134.0	62.2	0.2
15.0	85.5	0.3	75.0	99.2	0.4	135.0	61.7	0.2
16.0	85.7	0.3	76.0	99.1	0.4	136.0	61.2	0.2
17.0	86.0	0.3	77.0	98.9	0.4	137.0	60.7	0.2
18.0	86.2	0.3	78.0	98.5	0.4	138.0	60.2	0.2
19.0	86.5	0.3	79.0	98.3	0.4	139.0	59.7	0.2
20.0	86.8	0.3	80.0	97.9	0.4	140.0	59.3	0.2
21.0	87.1	0.3	81.0	97.6	0.4	141.0	58.9	0.2
22.0	87.4	0.3	82.0	97.3	0.4	142.0	58.5	0.2
23.0	87.7	0.4	83.0	96.9	0.4	143.0	58.2	0.2
24.0	88.0	0.4	84.0	96.5	0.4	144.0	57.9	0.2
25.0	88.3	0.4	85.0	96.1	0.4	145.0	57.5	0.2
26.0	88.6	0.4	86.0	95.6	0.4	146.0	57.2	0.1
27.0	88.9	0.4	87.0	95.2	0.4	147.0	56.9	0.1
28.0	89.3	0.4	88.0	94.6	0.4	148.0	56.6	0.1
29.0	89.6	0.4	89.0	94.1	0.4	149.0	56.3	0.1
30.0	90.1	0.4	90.0	93.5	0.4	150.0	56.1	0.1
31.0	90.4	0.4	91.0	93.0	0.4	151.0	55.9	0.1
32.0	90.7	0.4	92.0	92.4	0.4	152.0	55.7	0.1
33.0	91.1	0.4	93.0	91.8	0.4	153.0	55.5	0.1
34.0	91.4	0.4	94.0	91.1	0.4	154.0	55.3	0.1
35.0	91.8	0.4	95.0	90.4	0.4	155.0	55.1	0.1
36.0	92.3	0.4	96.0	89.6	0.4	156.0	55.0	0.1
37.0	92.6	0.4	97.0	88.9	0.4	157.0	54.9	0.1
38.0	93.0	0.4	98.0	88.1	0.4	158.0	54.8	0.1
39.0	93.3	0.4	99.0	87.3	0.3	159.0	54.6	0.1
40.0	93.6	0.4	100.0	86.4	0.3	160.0	54.5	0.1
41.0	94.1	0.4	101.0	85.6	0.3	161.0	54.4	0.1
42.0	94.4	0.4	102.0	84.8	0.3	162.0	54.3	0.1
43.0	94.7	0.4	103.0	83.9	0.3	163.0	54.3	0.1
44.0	95.2	0.4	104.0	83.0	0.3	164.0	54.2	0.1
45.0	95.5	0.4	105.0	82.2	0.3	165.0	54.1	0.1
46.0	95.8	0.4	106.0	81.3	0.3	166.0	54.1	0.1
47.0	96.2	0.4	107.0	80.5	0.3	167.0	54.0	0.1
48.0	96.5	0.4	108.0	79.6	0.3	168.0	54.0	0.1
49.0	96.8	0.4	109.0	78.8	0.3	169.0	53.9	0.1
50.0	97.2	0.4	110.0	77.9	0.3	170.0	53.9	0.1
51.0	97.4	0.4	111.0	77.0	0.3	171.0	53.9	0.1
52.0	97.7	0.4	112.0	76.2	0.3	172.0	53.9	0.1
53.0	97.9	0.4	113.0	75.4	0.3	173.0	53.9	0.1
54.0	98.2	0.4	114.0	74.6	0.3	174.0	53.9	0.1
55.0	98.5	0.4	115.0	73.8	0.2	175.0	53.9	0.1
56.0	98.7	0.4	116.0	73.1	0.2	176.0	53.9	0.1
57.0	98.9	0.4	117.0	72.3	0.2	177.0	53.9	0.1
58.0	99.1	0.4	118.0	71.5	0.2	178.0	53.9	0.1
59.0	99.3	0.4	119.0	70.8	0.2	179.0	53.9	0.1

### Horizontal diagram at 0.0° tilt (Total Antenna)

Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)
180.0	54.0	0.1	240.0	70.7	0.2	300.0	98.5	0.4
181.0	54.0	0.1	241.0	71.3	0.2	301.0	98.4	0.4
182.0	54.0	0.1	242.0	72.0	0.2	302.0	98.2	0.4
183.0	54.0	0.1	243.0	72.7	0.2	303.0	97.9	0.4
184.0	54.0	0.1	244.0	73.5	0.2	304.0	97.8	0.4
185.0	54.1	0.1	245.0	74.2	0.3	305.0	97.6	0.4
186.0	54.1	0.1	246.0	75.0	0.3	306.0	97.3	0.4
187.0	54.1	0.1	247.0	75.8	0.3	307.0	97.1	0.4
188.0	54.1	0.1	248.0	76.5	0.3	308.0	96.8	0.4
189.0	54.2	0.1	249.0	77.4	0.3	309.0	96.5	0.4
190.0	54.3	0.1	250.0	78.1	0.3	310.0	96.2	0.4
191.0	54.3	0.1	251.0	78.9	0.3	311.0	95.9	0.4
192.0	54.4	0.1	252.0	79.8	0.3	312.0	95.6	0.4
193.0	54.4	0.1	253.0	80.6	0.3	313.0	95.3	0.4
194.0	54.5	0.1	254.0	81.5	0.3	314.0	95.0	0.4
195.0	54.6	0.1	255.0	82.2	0.3	315.0	94.6	0.4
196.0	54.7	0.1	256.0	83.1	0.3	316.0	94.3	0.4
197.0	54.8	0.1	257.0	84.0	0.3	317.0	93.9	0.4
198.0	54.9	0.1	258.0	84.8	0.3	318.0	93.5	0.4
199.0	55.0	0.1	259.0	85.6	0.3	319.0	93.2	0.4
200.0	55.1	0.1	260.0	86.4	0.3	320.0	92.9	0.4
201.0	55.3	0.1	261.0	87.2	0.3	321.0	92.5	0.4
202.0	55.5	0.1	262.0	88.0	0.4	322.0	92.2	0.4
203.0	55.6	0.1	263.0	88.7	0.4	323.0	91.7	0.4
204.0	55.7	0.1	264.0	89.4	0.4	324.0	91.4	0.4
205.0	55.9	0.1	265.0	90.2	0.4	325.0	91.0	0.4
206.0	56.1	0.1	266.0	90.8	0.4	326.0	90.7	0.4
207.0	56.3	0.1	267.0	91.4	0.4	327.0	90.4	0.4
208.0	56.5	0.1	268.0	92.1	0.4	328.0	89.9	0.4
209.0	56.7	0.1	269.0	92.7	0.4	329.0	89.6	0.4
210.0	57.0	0.1	270.0	93.2	0.4	330.0	89.3	0.4
211.0	57.3	0.1	271.0	93.8	0.4	331.0	88.9	0.4
212.0	57.5	0.2	272.0	94.2	0.4	332.0	88.6	0.4
213.0	57.8	0.2	273.0	94.7	0.4	333.0	88.3	0.4
214.0	58.1	0.2	274.0	95.2	0.4	334.0	88.0	0.4
215.0	58.5	0.2	275.0	95.6	0.4	335.0	87.7	0.4
216.0	58.8	0.2	276.0	95.9	0.4	336.0	87.4	0.3
217.0	59.1	0.2	277.0	96.4	0.4	337.0	87.1	0.3
218.0	59.5	0.2	278.0	96.7	0.4	338.0	86.8	0.3
219.0	59.9	0.2	279.0	97.1	0.4	339.0	86.5	0.3
220.0	60.3	0.2	280.0	97.4	0.4	340.0	86.2	0.3
221.0	60.7	0.2	281.0	97.6	0.4	341.0	86.0	0.3
222.0	61.2	0.2	282.0	97.9	0.4	342.0	85.7	0.3
223.0	61.6	0.2	283.0	98.2	0.4	343.0	85.5	0.3
224.0	62.1	0.2	284.0	98.3	0.4	344.0	85.3	0.3
225.0	62.6	0.2	285.0	98.5	0.4	345.0	85.1	0.3
226.0	63.1	0.2	286.0	98.7	0.4	346.0	84.9	0.3
227.0	63.7	0.2	287.0	98.9	0.4	347.0	84.7	0.3
228.0	64.2	0.2	288.0	99.0	0.4	348.0	84.5	0.3
229.0	64.7	0.2	289.0	99.1	0.4	349.0	84.4	0.3
230.0	65.1	0.2	290.0	99.1	0.4	350.0	84.2	0.3
231.0	65.6	0.2	291.0	99.2	0.4	351.0	84.1	0.3
232.0	66.1	0.2	292.0	99.2	0.4	352.0	84.0	0.3
233.0	66.5	0.2	293.0	99.2	0.4	353.0	83.9	0.3
234.0	67.1	0.2	294.0	99.1	0.4	354.0	83.8	0.3
235.0	67.6	0.2	295.0	99.1	0.4	355.0	83.8	0.3
236.0	68.2	0.2	296.0	99.0	0.4	356.0	83.8	0.3
237.0	68.8	0.2	297.0	99.0	0.4	357.0	83.7	0.3
238.0	69.4	0.2	298.0	98.9	0.4	358.0	83.7	0.3
239.0	70.0	0.2	299.0	98.7	0.4	359.0	83.7	0.3

## E-9 HAAT Tabulation

N. Lat. = 35-06-30.6 W. Lng. = 92-31-08.3

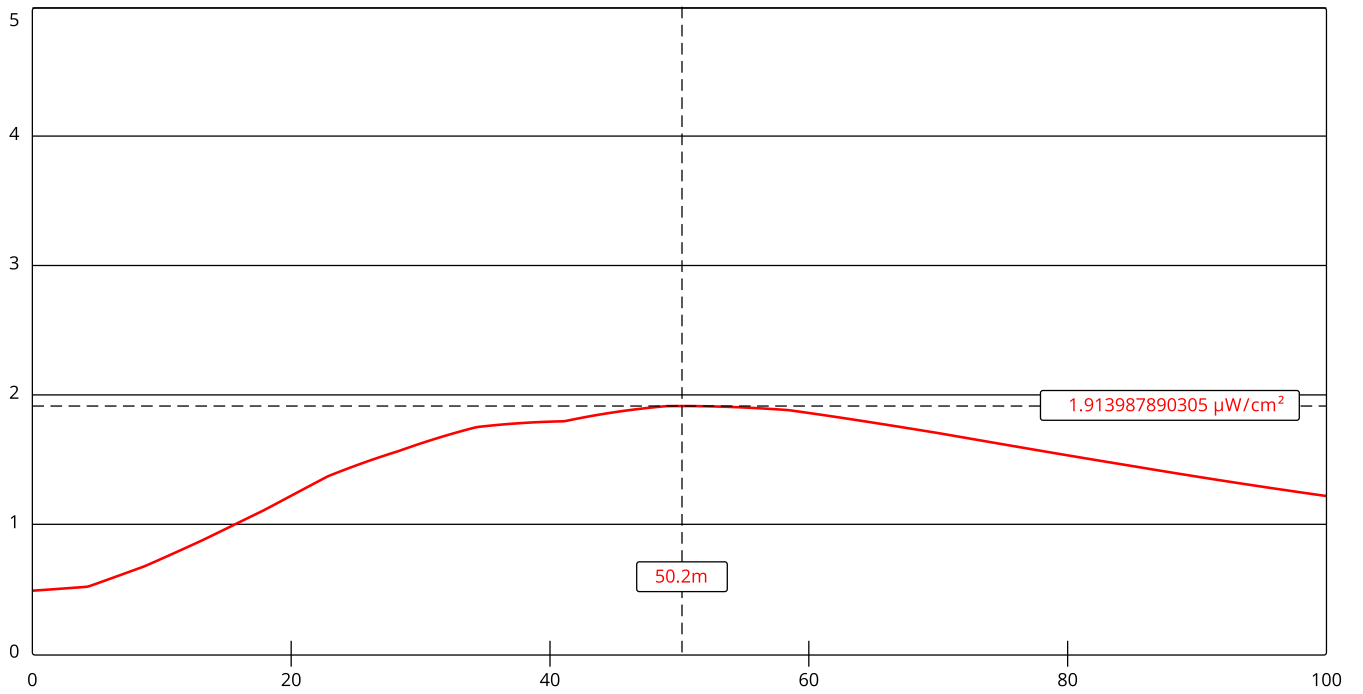
HAAT and Distance to Contour

FCC FM 2-10 Miles, 51 points Method - FCC 30 Meter Terrain

Azi.	AV EL	HAAT	ERP kW	60-F5
000	90.1	111.8	0.0737	10.10
030	98.3	103.6	0.0909	10.25
060	98.1	103.8	0.1525	11.62
090	111.6	90.3	0.2372	12.09
120	90.7	111.2	0.2314	13.29
150	114.0	87.9	0.1858	11.27
180	107.0	94.9	0.1785	11.56
210	81.0	120.9	0.2190	13.65
240	118.8	83.1	0.250	11.77
270	82.7	119.2	0.1866	13.03
300	99.5	102.4	0.1040	10.53
330	106.1	95.8	0.0743	9.39

Ave EI = 99.82 M HAAT= 102.08 M AMSL= 201.9 M

# FM Model



Channel Selection	Channel 255 (98.9 MHz) ▼		
<a href="#">Antenna Type +</a>	EPA Type 2: Opposed V Dipole ▼		
Height (m)	<input type="text" value="51"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="250"/>	ERP-V (W)	<input type="text" value="250"/>
Num of Elements	<input type="text" value="1"/>	Element Spacing ( $\lambda$ )	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>		