

Technical Report W252AR CP Minor Modification

This technical report is submitted for a minor modification to W252AR.CP at Decatur, IL, FCC file no. BPFT-20101119ABX. A change in the antenna is requested. The translator will continue to serve as a fill-in to rebroadcast the primary signal of WYDS(FM) 226A at Decatur, IL, FCC facility I.D. 71440.

The following exhibits are provided for the FCC form 349 application:

- E-1 W252AR.CP Mod. Overlap Study
- E-2 Interference Plot
- E-3 60 dBu Plots within WYDS(FM) 226A and Overlap to W252AR
- E-4 Directional Antenna Pattern
- E-5 ASR 1009650

W252AR.CP Modification Analysis:

An overlap study in exhibit E-1 shows the W252AR.CP modification will not produce any interference overlap to any other facilities. A directional antenna will be employed to avoid interference overlap to the 251D applications at Atlanta and Lincoln, IL, respectively (exhibit E-2).

Antenna System:

W252AR.CP will be relocated to an existing tower ASR #1009650. A Nicom BKG-77 single bay directional antenna (exhibit E-4) will be mounted at a COR AGL of 168 meters and operate at 0.250 kW ERP. The facility overlaps the current W252AR 60 dBu contour and is contained within the primary WYDS(FM) contour (exhibit E-3).

Anderson Associates

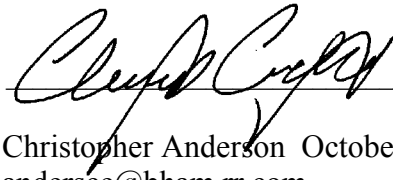
Broadcast Consultants
1519 Euclid Avenue
Bowling Green, KY 42103

RF Exposure Calculation:

The RF contribution from the 0.250 kW facility was calculated to be $0.61 \mu\text{W}/\text{cm}^2$ at a distance of 166 meters from the base of the tower, which is well below 5% of the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure. allowing its exclusion from consideration.

Conclusion:

It is concluded that the modification of W252AR.CP complies with the Commission rules and policies.



Christopher Anderson October 17, 2011
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E-1 W252AR Overlap Study

REFERENCE CH# 251D - 98.1 MHz, Pwr= 0.25 kW DA, HAAT= 165.0 M, COR= 365 M DISPLAY DATES
 39 49 28.0 N. Average Protected F(50-50)= 16.83 km DATA 11-17-10
 88 58 03.0 W. Standard Directional SEARCH 11-18-10

CH CITY	CALL	TYPE STATE	ANT AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
252D Decatur	W252AR	LIC _HN IL	27.1 207.1	2.6 BLFT19950829TA	39 50 43.0 88 57 13.0	0.100 30	8.0 232	5.6 Wejt, Inc.	-22.1*	-28.0*
252D Decatur	W252AR	CP _C_ IL	27.1 207.1	2.6 BPFT20090818ACI	39 50 43.0 88 57 13.0	0.250	10.1 229	7.1 Wejt, Inc.	-24.2*	-29.4*
251C1 St. Louis	KYKY	LIC _CX MO	220.5 39.6	181.8 BMLH20061006AAW	38 34 24.0 90 19 30.0	90.000 313	171.5 466	72.7 Cbs Radio Holdings Inc.	-6.6<	55.2
251D Atlanta	628751	APP _C_ IL	331.7 151.5	53.1 BNPFT20030310AAL	40 14 39.0 89 15 51.0	0.120	20.4 220	6.1 Cornerstone Community Radi	18.7	0.8
251D Lincoln	645715	APP _C_ IL	319.0 138.7	54.4 BNPFT20030317IBN	40 11 34.8 89 23 15.7	0.038	21.0 238	6.3 Radio Assist Ministry, Inc	19.4	1.9
252A Tower Hill	WRAN	LIC _CX IL	180.4 0.4	60.4 BLH20011120ABI	39 16 48.0 88 58 22.0	3.700 128	41.8 314	27.3 Kaskaskia Broadcasting, In	2.7	9.1
254B Springfield	WNNS	LIC _C_ IL	259.0 78.5	71.2 BMLH19890831KB	39 41 59.0 89 46 55.0	50.000 143	6.1 330	65.8 Long Nine, Inc.	47.3	3.3
248B Champaign	WHMS-FM	LIC _CN IL	64.5 245.0	67.9 BLH19911022KB	40 05 04.0 88 14 53.0	50.000 109	5.3 328	60.2 D.w.s., Inc.	45.6	5.7
250A Heyworth	WBBE	LIC _CX IL	0.3 180.3	69.7 BLH20050919AGU	40 27 08.0 88 57 48.0	5.400 105	45.2 342	29.4 Connoisseur Media, LIc	7.7	15.3
252A Farmer City	WWHP	LIC _CX IL	26.2 206.4	71.9 BLH20080804AEC	40 24 17.0 88 35 34.0	5.200 107	46.2 352	30.1 Wms1, Inc.	9.1	16.9
251D Petersburg	645749	APP _C_ IL	289.8 109.3	81.3 BNPFT20030317ICQ	40 04 09.8 89 52 00.6	0.013	20.2 272	6.1 Radio Assist Ministry, Inc	44.1	21.0
251B1 Earl Park	WIBN	LIC _CN IN	56.6 237.6	153.4 BLH19910524KD	40 34 22.0 87 27 12.0	25.000 100	112.9 329	44.0 Brothers Broadcasting Corp	23.4	47.1
251D Delavan	644745	APP _C_ IL	321.6 141.2	78.3 BNPFT20030317ANX	40 22 30.0 89 32 30.0	0.120	20.4 211	6.1 Covenant Network	44.0	26.2
250A Effingham	WXEF	LIC _CN IL	160.1 340.3	82.7 BLH19940908KB	39 07 25.0 88 38 28.0	6.000 95	40.3 272	26.1 Premier Broadcasting, Inc.	26.3	32.4
250D Champaign	W250BL	LIC DC_ IL	59.6 240.0	66.8 BLFT20090317AAH	40 07 35.0 88 17 25.0	0.250	10.1 337	7.2 Saga Communications Of III	39.8	34.4
249A Petersburg	WLCE	LIC _CX IL	278.7 98.2	64.8 BLH20020305AAR	39 54 35.0 89 43 01.0	6.000 100	2.8 273	28.8 Long Nine, Inc.	44.5	34.7
253B Paris	WIBQ	LIC _CN IL	102.5 283.3	109.2 BMLH452	39 36 21.0 87 43 35.0	50.000 152	6.0 360	65.6 Midwest Communications, In	86.1	41.5
251B Princeton	WRAY-FM	LIC _C_ IN	143.5 324.4	201.8 BLH19990528KC	38 21 25.0 87 35 25.0	50.000 133	137.7 268	65.1 Princeton Broadcasting Co.	47.7	66.8

Terrain database is NGDC 30 SEC , 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 = 1, Co to 3rd adjacent.
 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 protected contour.
 < = Contour Overlap

E-2 W252AR.CP Mod. Interference Plot

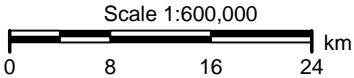
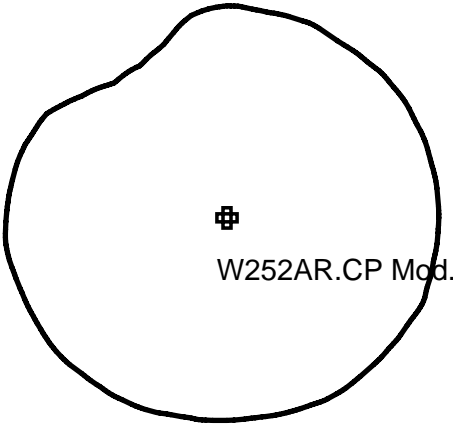
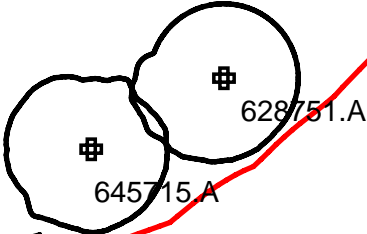
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W252AR.CP Mod.
BPFT20090818ACI
Latitude: 39-49-28 N
Longitude: 088-58-03 W
ERP: 0.25 kW
Channel: 251
Frequency: 98.1 MHz
AMSL Height: 365.0 m
Elevation: 197.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

628751 and 64517 251D.AP
60 dBu F(50-50) Contours

W252AR.CP Mod. at Ch. 251
60 dBu F(50-50) Contour

W252AR.CP Mod at Ch. 251
40 dBu F(50-10) Contour



E-3 W252AR.CP Mod. 60 dBu Contour Plot

W252AR.CP Mod.
BPFT20090818ACI
Latitude: 39-49-28 N
Longitude: 088-58-03 W
ERP: 0.25 kW
Channel: 251
Frequency: 98.1 MHz
AMSL Height: 365.0 m
Elevation: 197.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

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W252AR.CP Mod.
60 dBu F(50-50) Contour

W252AR.CP
60 dBu F(50-50) Contour

WYDS(FM) 226A
60 dBu F(50-50) Contour

WYDS

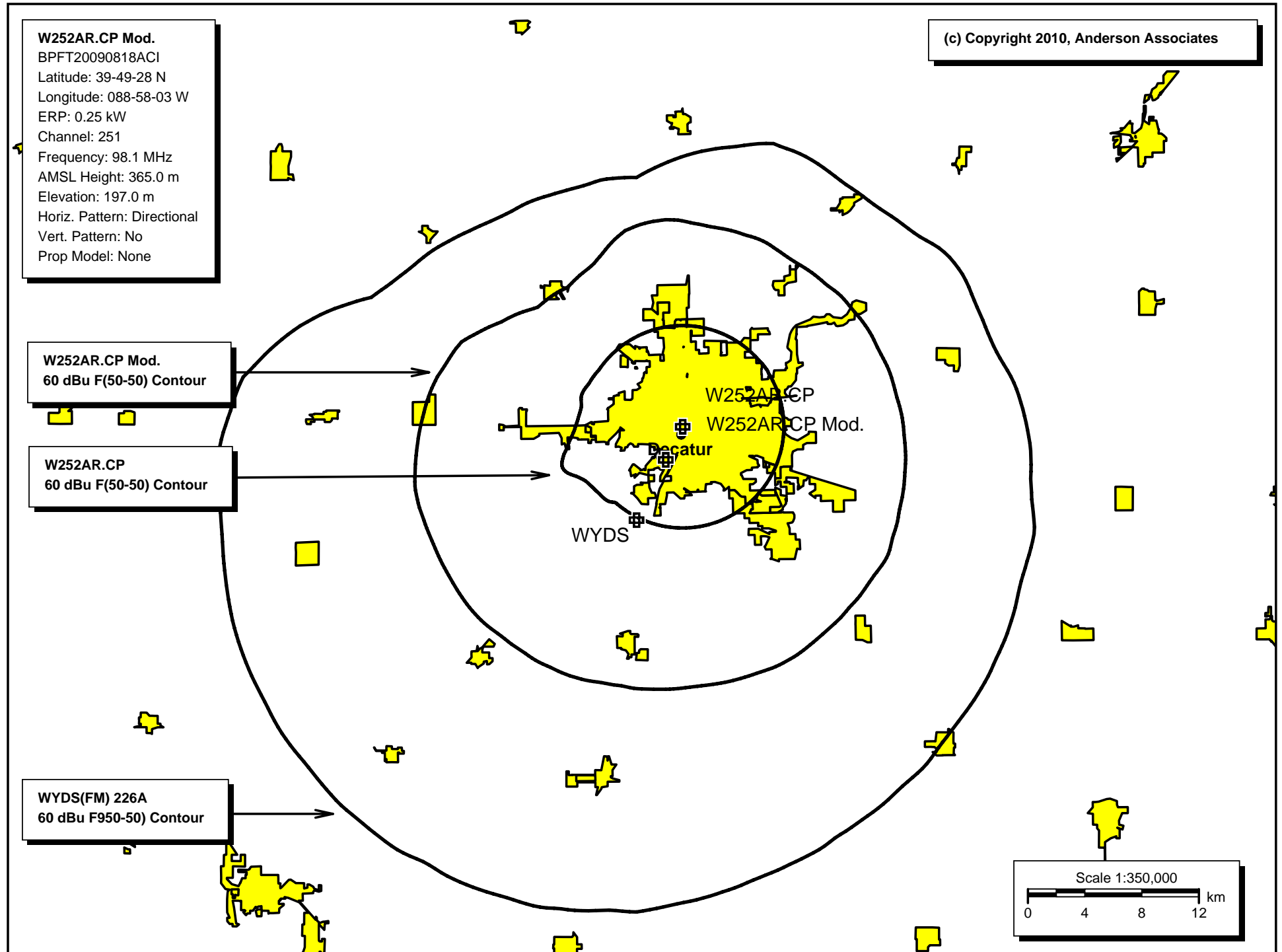
W252AR.CP

W252AR.CP Mod.

Decatur

Scale 1:350,000

0 4 8 12 km

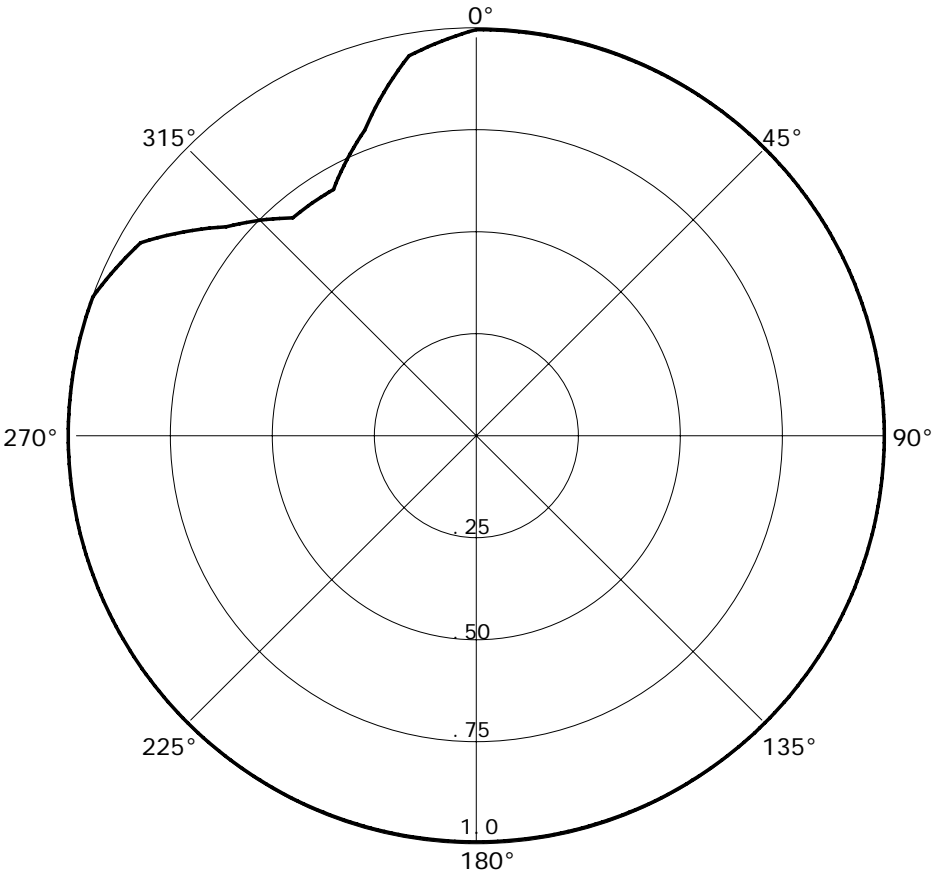


E-4 W232AR Directional Antenna Pattern

RMS(V)= .973

Graph is Relative Field

Azi	Field	dBk	kW
000	1.000	-06.0	0.250
010	1.000	-06.0	0.250
020	1.000	-06.0	0.250
030	1.000	-06.0	0.250
040	1.000	-06.0	0.250
050	1.000	-06.0	0.250
060	1.000	-06.0	0.250
070	1.000	-06.0	0.250
080	1.000	-06.0	0.250
090	1.000	-06.0	0.250
100	1.000	-06.0	0.250
110	1.000	-06.0	0.250
120	1.000	-06.0	0.250
130	1.000	-06.0	0.250
140	1.000	-06.0	0.250
150	1.000	-06.0	0.250
160	1.000	-06.0	0.250
170	1.000	-06.0	0.250
180	1.000	-06.0	0.250
190	1.000	-06.0	0.250
200	1.000	-06.0	0.250
210	1.000	-06.0	0.250
220	1.000	-06.0	0.250
230	1.000	-06.0	0.250
240	1.000	-06.0	0.250
250	1.000	-06.0	0.250
260	1.000	-06.0	0.250
270	1.000	-06.0	0.250
280	1.000	-06.0	0.250
290	1.000	-06.0	0.250
300	0.950	-06.5	0.226
310	0.800	-08.0	0.160
320	0.700	-09.1	0.122
330	0.700	-09.1	0.122
340	0.800	-08.0	0.160
350	0.950	-06.5	0.226



Registration 1009650 [Map Registration](#)**Registration Detail**

Reg Number	1009650	Status	Constructed
File Number	A0567647	Constructed	06/01/1953
FAA Study		EMI	No
FAA Issue Date		NEPA	No

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Communications Purposes

Location (in NAD83 Coordinates)

Lat/Long 39-49-28.0 N 088-58-03.0 W 904 SOUTHSIDE DR
City, State DECATUR , IL
Center of
AM Array

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
197.2	183.5
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
380.7	167.6

Painting and Lighting Specifications

FCC Paragraphs 1, 3, 5, 14, 21

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Owner & Contact Information

FRN	0003780202	Licensee ID	L00538250
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Owner

WAND(TV) Partnership
Attention To: Jodi Miehl
6450 Monroe Street
Sylvania , OH 43560

P: (419)724-6035
E: WANDTV.COM

Contact

Feore , John R Jr.
1200 New Hampshire Ave., Ste 800
Washington , DC 20036

P: (202)776-2000
E: jfeore@dowlohn.com

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Last Action Status

Status	Constructed	Received	10/29/2007
Purpose	Admin Update	Entered	10/29/2007
Mode	Interactive		

Related Applications