

Engineering Statement
In Support of an Amendment to an Application to
Reduce Nighttime Power
WAUB ó Auburn, NY
1590 kHz Facility ID No. 43791

The following Engineering Statement and associated exhibits have been prepared to accompany an Amendment to an Application for Construction Permit to reduce nighttime power and employ the daytime directional antenna pattern at night for WAUB, Auburn, New York (BP-20150123AHG).

WAUB is currently authorized as a class B AM station operating on 1590 kHz with 0.5 kW directional daytime and 1 kW directional nighttime. 1590 kHz is a regional channel.

The application on file proposes in a minor change to use the existing daytime directional pattern for use at night (DA-1) in order to address problems with the day/night pattern switching and simplify operations. No changes were proposed to the licensed daytime facilities.

This application was found to have impermissible skywave interference to WAKR, Akron, Ohio as a result in a change in the facilities of CDKO, Oshawa, Ontario, which reduced the RSS night limit of WAKR.

In an effort to cure the defect in the application while achieving the goal of eliminating day/night pattern switching the applicant herewith withdraws the proposed changes to the WAUB nighttime facilities and instead seeks to utilize the nighttime directional antenna system and operating parameters at reduced power (0.45 kW) for daytime operation.

The existing directional array utilizes three vertical, uniform cross-section, steel, guyed radiators 48 meters in overall height and 47.1 meters in height above the base insulator (90 electrical degrees at 1590 kHz). None of the towers employ top loading or sectionalization. All towers are series fed. The ground system consists of 120 equally-spaced, buried copper radials about the base of each tower, 47.1 meters in length except where intersecting radials are shortened and bonded to a transverse strap. In addition, a 14.6 meter by 14.6 meter square copper ground screen is installed about the bases of the towers.

The entire technical operation will be in compliance with all applicable FCC Rules and will be constructed in accordance with the standards of good engineering practice. All elements of the antenna system are well in excess of the minimum physical vertical heights specified by 47 C.F.R. §73.189. The main element (#2) of the directional antenna system meets the minimum requirements of 47 C.F.R. §73.189 with respect to both height and effective field strength. The

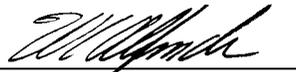
calculated effective field of the element is 305.78 mV/m at 1 km (adjusted for 1 kW). This value exceeds the 282 mV/m class minimum prescribed by 47 C.F.R. §73.189(b)(2)(ii).

Measured conductivity data from the WAUB January 1988 Directional Antenna Proof of Performance was used in the calculation of all contours.

There are no population centroids within the proposed daytime 1 V/m contour. The total population within the proposed daytime 25 mV/m contour has been determined to be 14,180 (2010 Census). The area within the 1 V/m contour is rural in nature with a zero population density. There are no houses within the 1 V/m contour. As such, the total population within the 1 V/m contour can be presumed to be well below the threshold of 1% of the population within the 25 mV/m specified in 47 C.F.R. §73.24(g).

The proposed facility is in compliance with all the engineering standards of allocation specified in the Commission's Rules.

Respectfully submitted,



W.C. Alexander
CPBE, AMD, DRB

09-15-2015 12:47

WAUB-P 42-54-34 N 76-36-09 W 0.450 kW

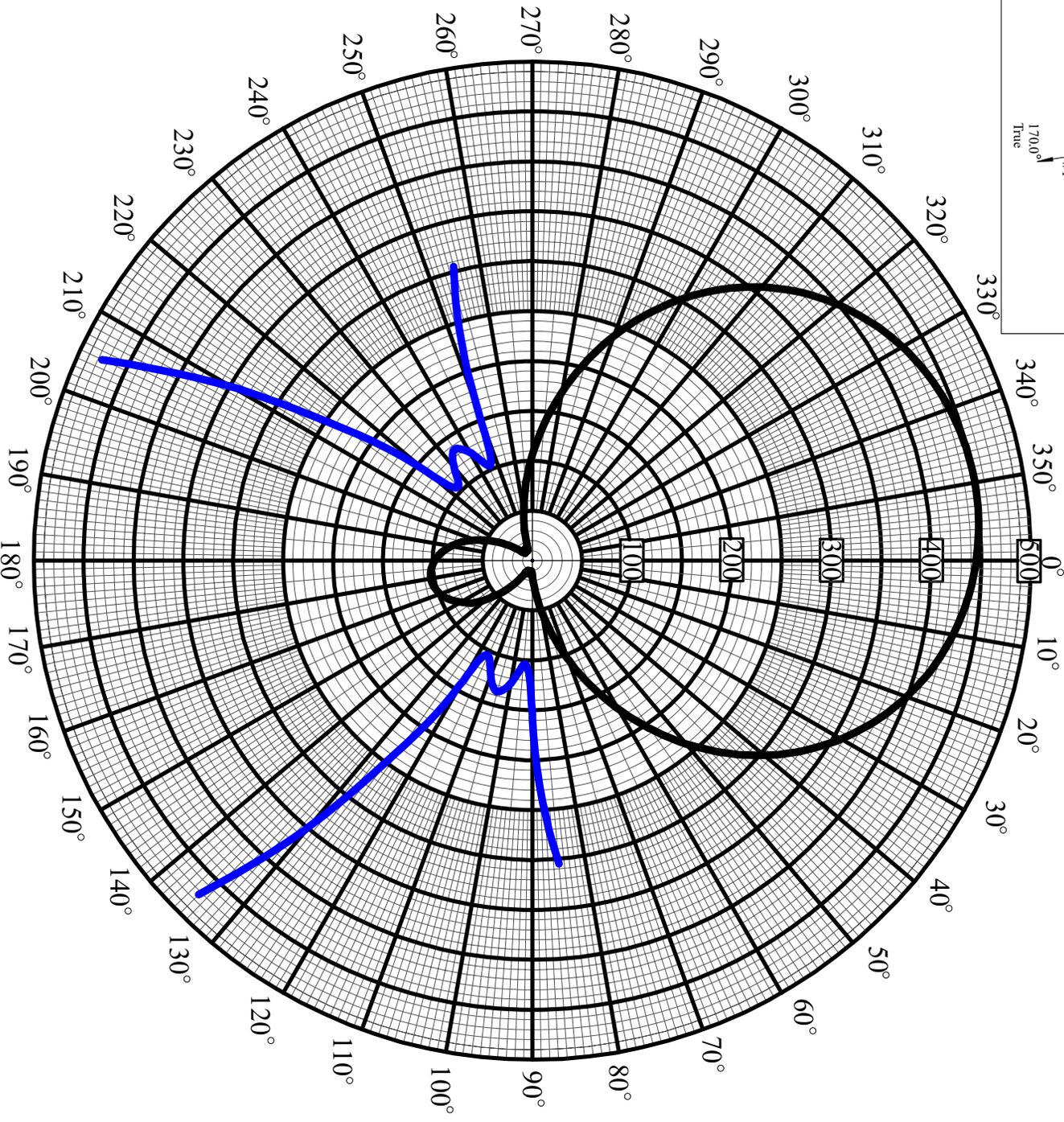
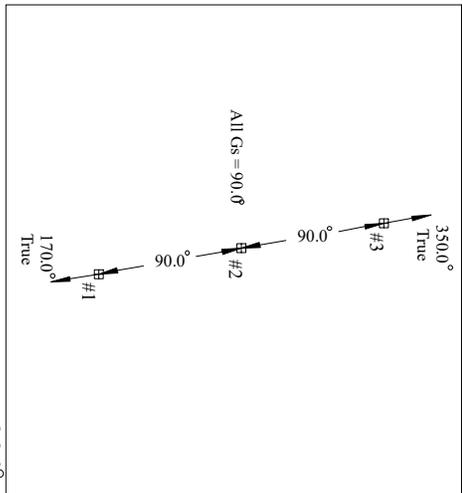
Auburn Broadcasting Inc.

Twr. No.	Field	Phasing	Spacing	Azimuth	Height
1	1.000	0.0	0.0	0.0	90.0
2	1.939	-142.6	90.0	350.0	90.0
3	1.000	-285.0	180.0	350.0	90.0

RMS 223.24 mV/m (kilometer) Q 10.00 mV/m

Standard Horizontal Plane Radiation Pattern

Azi.	mV/m	Azi.	mV/m
0	445.1	180	98.2
5	438.2	185	91.7
10	428.4	190	83.0
15	415.5	195	72.4
20	399.5	200	60.4
25	380.2	205	47.6
30	357.7	210	34.8
35	332.0	215	23.0
40	303.5	220	13.9
45	272.5	225	10.5
50	239.7	230	12.2
55	205.7	235	13.6
60	171.4	240	12.5
65	137.8	245	10.5
70	106.0	250	15.8
75	76.8	255	30.5
80	51.4	260	51.4
85	30.5	265	76.8
90	15.8	270	106.0
95	10.5	275	137.8
100	12.5	280	171.4
105	13.6	285	205.7
110	12.2	290	239.7
115	10.5	295	272.5
120	13.9	300	303.5
125	23.0	305	332.0
130	34.8	310	357.7
135	47.6	315	380.2
140	60.4	320	399.5
145	72.4	325	415.5
150	83.0	330	428.4
155	91.7	335	438.2
160	98.2	340	445.1
165	102.1	345	449.2
170	103.5	350	450.6
175	102.1	355	449.2



Twr.	Field	Phasing
1	1.000	0.0
2	1.939	-142.6
3	1.000	-285.0

RMS(TH) = 223.24
 RMS(STD) = 234.63
 RSS(TH) = 326.18
 Q = 10.00

SUBJECT TITLE		PROJECT NO.
Proposed Daytime Standard Horizontal Pattern		09/15/2015
PROJECT		AGCA
WALUB - Auburn, NY 1590 KHz, 0.45 kW/D/I, KWN, DA-2		
Au Contraire Software, Ltd. 18121-CR Hempden Ave #216 Auburn, NY 13021 (315)480-3454		
L. J. Linn		