

ENGINEERING REPORT FOR
AMKA BROADCAST NETWORK, INC.
FOR W48AY
CLASS A TELEVISION STATION
OLDSMAR, FL
CHANNEL 48 – 60 KW MAX. - 135 METERS AMSL

AUGUST 5, 2002

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BROADCAST CONSULTANTS
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HENDERSONVILLE, TN

Introduction

This engineering report has been prepared on behalf of Amka Broadcast Network, Inc. in support of a minor change application for W48AY-CA, FCC Facility ID No. 2130 for Channel 48 at Oldsmar, FL.

It is proposed to operate using a SWR directional antenna with an effective radiated power (ERP) of 60.0 Kw at horizon and a radiation center of 135 meters above mean sea level. Aural power is proposed at 10% of visual power value.

Transmitter Site

It is proposed to side-mount on an existing 195 meter guide tower at 103 ½ Dunbar Ave, Oldsmar, FL.

The NAD-27 geographic coordinates of the transmitter site are:

North Latitude: 28° 02' 21"
West Longitude: 82° 39' 21"

Equipment Data

Transmitter: Type-Verified, rated at 5.0 Kw visual and .50 Kw aural
Transmission Line: 138 meters of Andrew, Type LDF7-50A
1-5/8" Foam Dielectric 50-ohm line
Antenna: SWR SWLP16ABR Circular Polarized, Slot Antenna.

Power Data

Visual

Transmitter output	5.00 kW	7.00 dBk
Transmission line efficiency	53.95 %	-2.68 dB
Power input to antenna	2.70 kW	4.32 dBk
Antenna power gain (Horizon)	22.22	13.47 dB
Effective Radiated Power (Horizon)	60.00 kW	17.78 dBk

Elevation Data

Vertical dimension antenna	7.5 meters
Elevation of the site above mean sea level	3.0 meters
Height of top of structure above ground	195.0 meters
Height of top of supporting structure above mean sea level	194.8 meters
Radiation center above ground	132.0 meters

Other Stations

No objectionable interference problems are anticipated, however, if any problems occur, the applicant will take the necessary steps to resolve them.

FCC Rule, Section 1.1307

The proposed TV operation with a peak ERP of 60.0 kW visual and 6.0 kW aural will utilize an SWR circular polarized slot array directional channel 48 antenna. Calculations to determine power density levels from the proposed operation were performed using formulas outlined in OET Bulletin 65 (Edition 97-01) based on antenna relative field factor of .1 The formula used is:

$$S = \frac{(33.4)(F^2)(.4VERP+AERP)}{R^2}$$

The maximum power density levels at two meters above ground level are .593 $\mu\text{W}/\text{cm}^2$ computed for a radiation center of 132 meters above ground level. The maximum allowed by OET65 bulletin is:

Occupational/Controlled Exposure

Frequency / .3
2,257 $\mu\text{W}/\text{cm}^2$

General Population

Frequency / 1.5
451 $\mu\text{W}/\text{cm}^2$

The proposed operation will be in compliance with the FCC RF radiation guidelines since areas that exceed the FCC standards will be alerted to workers by posting warning signs and restricting areas. All stations on the tower will have a mutual written agreement and procedures for workers climbing the tower. Transmitter power of each station will be reduced or terminated when workers are near areas on the tower where power density levels are in excess of the FCC standard. An environmental assessment

(EA) is categorically excluded under Section 1.1307 of the FCC Rules and Regulations since the applicant indicates:

- (a)(1) The proposed facilities are not located in an officially designated wilderness area.
- (a)(2) The proposed facilities are not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities will not affect any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The proposed facilities are not located near any known Indian religious sites.
- (a)(6) The proposed facilities are not located in a flood plain.
- (a)(7) The side-mounted TV antenna on the existing tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) The existing tower structure is not equipped with high intensity white lights.
- (b) There will be a security fence with a locked gate to surround the tower. Workers and the general public will not be subjected to RF radiation levels in excess of FCC OET Bulletin 65 (Edition 97-01). Authorized personnel will be alerted to areas of the tower where potential radiation levels are in excess of the FCC standard. The transmitter power will be reduced or terminated when necessary.

Interference Study

A study was done and the following were found to cause possible objectionable interference.

W24AT	48-	Sarasota, FL	See attached Longley-Rice Study.
W24BF	33	St. Petersburg, FL	See attached Longley-Rice Study.
WBSH-DT	47	Tampa, FL	See attached Longley-Rice Study.
WFXU	48	Live Oak, FL	See attached Longley-Rice Study.
WOPX-DT	48	Melbourne, FL	See attached Longley-Rice Study.
WRMD-LP	49	Tampa, FL	See attached Longley-Rice Study.
WYKE-LP	48	Inglis-Yankeetown, FL	See attached Longley-Rice Study.

As can be seen, the proposed station meets the FCC criteria and is grantable.

Summary of Channel 48+

Lat: 28-02-21 N
 Lon: 82-39-21 W
 ERP: 60.00 Kw

ComStudy 2.2 RadioSoft
 Longley-Rice Study

Callsign	City	Ch#	Fac ID	ARN	Type	ERP	Status	Bearing	Dist	Clearance	% Pop Within Overlap	Pop Within Protected Contour	Pop Within Overlap
W24AT	SARASOTA	48 -	59630	BLTT20000725ABJ	LIC	26	Clean	166.35	79.9	18.9	0.00%	254289	0
W24BF	ST. PETERSBURG	33	61201	BMP TTL20000830BBN	CP MOD	3	Interf	206.45	23.7	-7	0.33%	559557	1868
WACX	LEESBURG	55 Z	60018	BLCT19860319KE	LIC	5000	Clean	52.79	163.3	63.3	0.00%	2040631	0
WBHS-DT	TAMPA	47	60559	BPCDT19980806KH	CP	200	Clean	119.47	44.4	-54.6	0.00%	3082161	0
WBHS-TV	TAMPA	50 Z	60559	BLCT19880616KH	LIC	4170	Clean	119.47	44.4	12.4	0.00%	3044112	0
WBHS-TV	TAMPA	50 Z	60559	BPCT19960710KG	CP	5000	Clean	119.47	44.4	12.4	0.00%	3073313	0
WBHS-TV*	TAMPA	47	60559	DTV ALLOTMENT	LIC	149.3	Clean	119.47	44.4	-52.3	0.00%	3042641	0
WBHS-TV*	TAMPA	47	60559	DTV ALLOTMENT	LIC	149.3	Clean	119.47	44.4	-52.3	0.00%	3042641	0
WFTT-DT	TAMPA	47	60559	BMP CDT20020603ABD	APP	1000	Clean	119.45	44.4	-57.6	0.00%	3013322	0
WFUN-LP	MIAMI	48 Z	60542	BLTTA20001208AEF	LIC	30	Clean	132.98	334.3	261.4	0.00%	1825427	0
WFUN-LP	MIAMI, ETC.	48 Z	60542	BL TTL19981214JB	LIC	30	Clean	132.98	334.3	261.4	0.00%	1825427	0
WFXU*	LIVE OAK	48	22245	DTV ALLOTMENT	LIC	50	Clean	353.1	281.5	7	0.00%	159800	0
WFXU-DT	LIVE OAK	48	22245	BPCDT19981028KF	CP	1000	Clean	336.84	320.2	-18	0.00%	824116	0
WJGV-LP	PALATKA	48 -	52240	BL TTL20010614ADP	LIC	21.6	Clean	28.3	195	120.6	0.00%	36045	0
WLCB-TV	LEESBURG	45 -	9881	BLET20001212AAT	LIC	1200	Clean	48.7	108.4	76.4	0.00%	1143438	0
WLCB-TV	LEESBURG	45 -	9881	BMPET20000717AAM	CP MOD	1200	Clean	48.7	108.4	76.4	0.00%	1143438	0
WNTD	DATYONA	49	131	BPCDT19991029AER	CP	150	Clean	52.79	163.3	67.6	0.00%	2025448	0
WNTD*	DAYTONA BEACH	49	131	DTV ALLOTMENT	LIC	145.7	Clean	39	179.1	95.5	0.00%	1243787	0
WNTD*	DAYTONA BEACH	49	131	DTV ALLOTMENT	LIC	145.7	Clean	39	179.1	95.5	0.00%	1243787	0
WOPX*	MELBOURNE	48	67602	DTV ALLOTMENT	LIC	170.8	Interf	87.33	150.4	-87.4	0.05%	2141101	980
WOPX-DT	MELBOURNE	48	67602	BPCDT19990507KH	CP	1000	Interf	87.33	150.4	-100.6	0.10%	2367373	2340
WRMD-LP	TAMPA	49 +	74559	BPTTL20020118AAY	APP	124	Interf	117.92	21.8	-13.9	0.30%	1131423	3444
WTCN-CA	STUART	48 -	63557	BMJPTTA20020613AAL	APP	60	Clean	114.19	269	189.2	0.00%	232562	0
WTGL-TV	COCOA	52 Z	24582	BPCT20010808AAW	APP	2500	Clear	68.06	165.6	133.6	N/C	N/C	N/C
WTGL-TV	COCOA	52 Z	24582	BLCT19821006KG	LIC	4680	Clear	79.69	173.4	141.4	N/C	N/C	N/C
WTOG	ST. PETERSBURG	44 +	74112	BLCT19990415KI	LIC	5000	Clean	121.27	44.8	12.8	0.00%	3140589	0
WWSB	SARASOTA	40 Z	61251	BPCT19991012AAS	CP	2880	Clean	151.79	60.9 -		0.00%	1997663	0
WWSB	SARASOTA	40 Z	61251	BLCT19790920KI	LIC	2880	Clean	151.94	60.6 -		0.00%	2006951	0
WYKE-LP	INGLIS-YANKEETOWN	47 +	63901	BMP TTA20020618AAR	APP	50	Clean	7.74	94.6	70.7	0.00%	58390	0
WYKE-LP	INGLIS-YANKEETOWN	48 Z	63901	BPTTL19980601XT	CP	20.2	Clean	7.74	94.6	6.1	0.00%	36440	0
WYKE-LP	INGLIS-YANKEETOWN	49	63901	BL TTL19830825IC	LIC	19.5	Clean	7.74	94.6	77.3	0.00%	36123	0

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