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ENGINEERING EXHIBIT EE-1:

WATERS & BROCK COMMUNICATIONS, INC. CLASS-A TELEVISION STATION WARZ-LP (CA)

DIGITAL CHANNEL 34 "FLASH-CUT" APPLICATION

MARCH 2008

FCC FACILITY NUMBER 71089

ENGINEERING EXHIBIT IN SUPPORT OF AN APPLICATION FOR AUTHORITY TO CONSTRUCT OR MAKE CHANGES IN A CLASS A TELEVISION BROADCAST STATION

WARZ-LP (CA)

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TABLE OF CONTENTS:

1.	F.C.C. Form 301-CA, Section III (engineering - digital)
2.	F.C.C. Form 301-CA, Section III (certification)
3.	Declaration of Engineer
4.	Narrative Statement
5.	Figure 1, Predicted Coverage Contours
6.	Figure 2, Directional Antenna Details
7.	Figure 3, Allocation Study

DECLARATION

I, Timothy Z. Sawyer, declare and that I have provided engineering services in the area of telecommunications since 1969. My qualifications are a matter of record with the Federal Communications Commission. I am a senior engineer with the firm of Mullaney Engineering, Inc., consulting radio telecommunications engineers with offices in Gaithersburg, Maryland.

The firm of Mullaney Engineering, Inc., has been retained by WATERS & BROCK COMMUNICATIONS, INC., to prepare the instant engineering exhibit in support of *an application for Authority to Construct or Make Changes in a Class A Television Broadcast Station, WARZ-LP(CA) FCC Facility ID Number 35090.*

All facts contained herein are true of my own knowledge except those stated to be on information and belief, and as to those facts, I believe them to be true. I declare under the penalty of perjury that the foregoing is true and correct.

Timothy Z. Sawyer

Executed on the 19th day of March 2008

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NARRATIVE STATEMENT:

I. <u>GENERAL</u>:

This engineering statement and the instant engineering exhibit of which it is part has been prepared on behalf of WATERS & BROCK COMMUNICATIONS, INC., (hereinafter "WB").

This engineering exhibit supports a "flash-cut" application for Class A station WARZ-LP.

Station WARZ-LP is licensed (BLTTA-20070619ABR) to operate on analog channel 34 with a directional antenna maximum (visual) effective radiated power (ERP) of 70.0 kilowatts and an antenna center of radiation height above mean sea level (RCAMSL) of 161.2 meters.

The proposed digital "flash-cut" facilities will operate on channel 34 with a maximum effective radiated power of 0.350 kilowatt (350 watts) and an antenna height above mean sea level of 161.2 meters, using the identical antenna system as currently authorized for analog service.

The proposed facilities will be built to comply with the FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields and the instant proposal is <u>categorically excluded from environmental processing</u> pursuant to the provisions of Section 1.1306 of the Commission's Rules. A more detailed discussion of environmental factors is included under the heading <u>Environmental</u> <u>Considerations</u> below.

Information requested by exhibits in response to questions on Section III of FCC Form 301-CA is incorporated in the following paragraphs, figures and/or tables.

Processing of this application is requested under the rules currently in effect at the time of filing.

ENGINEERING DISCUSSION

FREEZE COMPLIANCE

This application can be accepted for filing as it does not request a change which is consider "frozen" by FCC's Public Notice (DA 04-2446) released August 3, 2004, Freeze on the filing of Certain TV and DTV Requests for Allotment or Service Area Changes.

Specifically, the proposed 51 dBu contour will not result in an extension of the currently licensed 74 dBu contour.

Figure 1 is a map showing the licensed 74 dBu (analog) and proposed 51 dBu (digital) coverage contours. As can be seen on the map, the 51 dBu contour does not result in an extension of the 74 dBu contour.

PROPOSED FACILITIES

This application proposes digital operation on the current analog channel assignment (TV channel 34), at the current transmitter site and with the same antenna system. Only a reduction in station ERP and a change from analog to digital transmission service will be required.

Figure 2 contains a horizontal radiation (relative field) pattern of the currently authorized analog directional horizontal radiation pattern. This antenna will be used for digital service.

ALLOCATION CONSIDERATIONS

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital TV, LPTV/translator and Class A TV stations.

Using the procedures outlined in the FCC's OET-69 Bulletin, a 1 kilometer cell size resolution and 1990 U.S. Census, the proposal complies with the current FCC policy (i.e., less than 0.5% new interference caused to other pertinent assignments).

Each station of concern has been analyzed using the methods described in OET Bulletin No. 69, and the results indicate that no interference (unmasked) or interference above 0.5% of the service population of the station studied will occur.

The results of the OET Bulletin No. 69 styled study are contained with Figure 3.

The applicant recognizes the proposal is secondary to authorized full-service analog or digital operations.

ENVIRONMENTAL CONSIDERATIONS

The applicant believes its proposal will not significantly affect the environment for the following reasons.

The proposal does not meet any of the criteria specified in Section 1.1307 of the FCC Rules. More specifically, the proposed facilities are <u>not</u> known to fall within any of the categories enumerated in Sections 1.1307(a)(1)-(7) and will <u>not</u> involve the use of high intensity white lights.

This is an existing communications site with no new construction of towers, support buildings or other environmental sensitive items required. The site and this proposal are exempt from NHPA Section 106 review as no construction will occur that would trigger a review under NHPA Section 106.

Furthermore, operation of the proposed facility will not involve the exposure of workers or the general public to levels of radio frequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. (The current FCC guidelines are based upon criteria contained in the National Council of Radiation Protection and Measurements (NCRP) Report No.86 (1986) and ANSI/IEEE C95.1-1992.)

Based upon a worst case downward field value of 0.5 for all angles 20 degrees and greater below the horizon, and a digital power of 350 Watts, and an antenna height of 114.3 meters above ground. The power density level 2-meters above ground is predicted to be 0.0001 mW/cm^2 or less. The computed power density is 0.005% of the Commission's guidelines for a controlled area and 0.025% for an uncontrolled area. This level is well below the Commission's guidelines for maximum exposure levels to electromagnetic fields and no further study is required.

The applicant will fully-cooperate and coordinate with all site users as required by the Commission's rules.

II <u>SUMMARY</u>:

The proposed digital "flash-cut" will operate on Digital Television Channel 34 with a maximum ERP 350 Watts, utilizing a DIRECTIONAL antenna system. The estimated digital transmitter power output (TPO) is 25 Watts.

Operation as proposed herein would not cause/increase any normally prohibited contour overlap using a terrain dependant - OET Bulletin No. 69 review, and would not have any significant impact on the environment. The proposed operation will not create any new prohibited interference.

The proposed operation is fully in compliance with all other areas of the Commission's rules and applicable international agreements.

19 March 2008

Timothy Z. Sawyer

MULLANEY ENGINEERING, INC. 9049 SHADY GROVE COURT GAITHERSBURG, MARYLAND USA TEL.: (301) 921-0115



WARZ ANALOG/DIGITAL ANTENNA PATTERN FIGURE 2

Azimuth (deg)	Effective Field			
0.0	0.884			
10.0	0.958			
20.0	0.995			
30.0	1.000			
40.0	0.979			
50.0	0.941			
60.0	0.897			
70.0	0.862			
80.0	0.856			
90.0	0.884			
100.0	0.933			
110.0	0.976			
120.0	0.994			
130.0	0.976			
150.0	0.933			
160.0	0.856			
170.0	0.862			
180.0	0.897			
190.0	0.941			
200.0	0.979			
210.0	1.000			
220.0	0.995			
230.0	0.958			
240.0	0.884			
250.0	0.776			
260.0	0.643			
270.0	0.506			
280.0	0.386			
290.0	0.304			
300.0	0.275			
310.0	0.304			
320.0	0.386			
330.0	0.506			
340.0	0.643			
350.0	0.776			



FIGURE 3 OET BULLETIN NUMBER 69 INTERFERENCE STUDY SUMMARY RESULTS

Outgoing Interference Population Report

WARZ FLASH CUT (34) Smithfield-selma, NC - BLTTA20070619ABR Broadcast Type: Digital Service: G [Simple Emission Mask] Lat: 35-31-46 N Lng: 078-18-07 W ERP: 0.35 kW AMSL: 161.2 m TV Outgoing Interference Study

Signal Resolution: 1.0 km Consider NTSC Taboo: Yes Default # of radials computed for contours: 72 Contours calculated using 8 radial HAAT. LR Profile Spacing Increment: 1.0 km

Pop Centroid DB: 1990 US Census

Primary Terrain: NED 3 Second US Terrain Secondary Terrain: V-Soft 30 Second World Terrain

Population Database: 1990 US Census

Stations Conside	ered:						
Call Letters	City		State	Dist	Bear		
WPXU-D (34)	Jacksonville Fayetteville		NC	136.5	5 144.9		
W45CO-D.A (34)			NC	73.9	228.3		
WACN-L (34Z)	Raleigh		NC	26.0	308.2		
W45CO-D.C (34)	Fayettevill	е	NC	73.9	228.3		
WACN-L.A (34Z)	Raleigh		NC	50.3	294.1		
WACN-L.A (34Z)	Raleigh / D	urham	NC	53.3	289.6		
WPXU-D.R (34)	JACKSONVILLE		NC	136.5	144.9		
Call	Area	HUnits	Con	tour	Masked Ix	Unmasked Ix	00
WPXU-D (34)	0.0	0	481	,487	0	0	0.0
W45CO-D.A (34)	0.0	0	362	,298	0	0	0.0
WACN-L (34Z)	12.9	251	371	,192	37	617	0.2
W45CO-D.C (34)	0.0	0	362	,298	0	0	0.0
WACN-L.A (34Z)	0.0	0	35	,366	0	0	0.0
WACN-L.A (34Z)	0.0	0	185	,742	0	0	0.0
WPXU-D.R (34)	0.0	0	481	,170	0	0	0.0
	P	KORTEW2 F	UUND				