

Statement A
COMPREHENSIVE ENGINEERING STATEMENT

prepared for
Triple J Community Broadcasting, LLC
W47AO Berwick, PA
Facility ID 68136
Channel 47 15 kW

Triple J Community Broadcasting LLC (“*Triple J*”) is the licensee of Class A television station W47AO, Channel 47, Berwick, Pennsylvania, Facility ID 68136 (file number BLTTL-19940815IF). *Triple J* is hereby submitting a proposal for a flash cut to digital on Channel 47 for W47AO.

The proposed facility will operate on Channel 47 using a “stringent” out of channel emission mask with a directional antenna having an effective radiated power of 15 kW. The proposed RF system will utilize a new antenna, which is an SWR model SWDDP 4-4-0-0 panel antenna, horizontally polarized. **Figure 1** depicts the coverage contours of the licensed analog facility and the proposed digital facility. The proposed antenna will be side mounted at 42 meters on the existing W47AO antenna support structure, which is located at 41-0-20.3 N 76-12-48.7 W (NAD83). No increase in overall structure height is necessary for the instant proposal.

Allocation Considerations

The instant proposal complies with the Commission’s interference protection requirements toward all DTV, television translator, LPTV, and Class A stations. A detailed interference study was conducted in accordance with the terrain dependent Longley-Rice point-to-point propagation model, per the Commission’s Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 (“OET 69”)¹. The interference study examined the change in interference as experienced by nearby pertinent stations that would result from the proposed facility.

The results, summarized in **Table I**, show that no new interference is predicted to full power, Class A stations, or to secondary stations. Accordingly, the instant proposal complies

¹ The implementation of OET 69 for this study followed the guidelines of OET 69 as specified herein. **A cell size of 1 km was employed.**

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
(Page 2 of 5)

with §74.793 regarding interference protection to digital television, low power television, television translator, and Class A television facilities.

International Coordination and Other Matters

The proposed facility is located 295.92 km from the nearest U.S. - Canadian border, which is well beyond the coordination distance specified for international coordination. The nearest FCC monitoring station is at Laurel, Maryland, at a distance of 210.83 km from the proposed site. This exceeds by a great margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The proposed site is also located outside the area specified in §73.1030(a)(1). Thus, notification of the instant proposal to the National Radio Astronomy Observatory at Green Bank, West Virginia, is not required. Based on information extracted from the Commission's engineering database, directional AM broadcast station WBWX(AM), 1280 kHz, Hazleton, PA is located 8.76 km from the proposed site.

As described fully above, it is believed that the instant proposal complies with the Commission's allocation Rules and policies.

Environmental Considerations

The instant proposal is not believed to have a significant environmental impact as defined under §1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required. *Triple J Community Broadcasting, LLC* ("Triple J") herein proposes to construct the flash-cut facility on an existing tower structure, presently authorized for the analog W47AO facility under BLTTL-19940815IF.

The use of existing tower structures has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. No change in structure height is proposed, thus no change in current structure marking and lighting

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
(Page 3 of 5)

requirements is anticipated. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

Human Exposure to Radiofrequency Electromagnetic Field

The proposed operation was evaluated for human exposure to radiofrequency electromagnetic field using the procedures outlined in the Commission's OET Bulletin 65 ("OET-65"). OET 65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

The proposed W47AO digital flash cut will utilize an SWR model SWDDP 4-4-0-0 panel antenna. It will be situated such that its center of radiation will be 42 meters above ground level. According to elevation pattern data provided by the antenna manufacturer, the W47AO Channel 47 antenna has a maximum relative field of 30 percent from 15 to 90 degrees below the horizontal plane (i.e., below the antenna). Thus, a "worst-case" relative field value of 30 percent is used for purposes of the calculation. The "uncontrolled/general population" limit specified in §1.1310 for Channel 47 (center frequency 669 MHz) is $446 \mu\text{W}/\text{cm}^2$.

OET 65's formula for television transmitting antennas is based on the NTSC transmission standards, where the average power is normally much less than the peak power. For the DTV facility in the instant proposal, the peak-to-average ratio is different than the NTSC ratio. The DTV ERP figure herein refers to the average power level. The formula used for calculating DTV signal density in this analysis is essentially the same as equation (10) in OET 65.

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
(Page 4 of 5)

$$S = (33.4098) (F^2) (ERP) / D^2$$

Where:

- S = power density in microwatts/cm²
- ERP = total (average) ERP in Watts
- F = relative field factor
- D = distance in meters

Using this formula and the above assumptions, the proposed facility would contribute a power density of 28.2 $\mu\text{W}/\text{cm}^2$ at two meters above ground level near the antenna support structure, or 6.32 percent of the general population/uncontrolled limit.

Because there are no other non-exempt emitters in the area, it is believed that the impact of the proposed operation should not be considered to be a factor at or near ground level as defined under §1.1307(b).

Safety of Tower Workers and the General Public

As demonstrated herein, excessive levels of RF energy attributable to the proposal will not be caused at publicly accessible areas at ground level or near the base of the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will be restricted and controlled through the use of a fence and locked gate. Additionally, appropriate RF exposure warning signs will be posted.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level, and the base of the tower structure is at the roof level of the television station building, which has secured access and only is accessible to authorized employees and maintenance workers. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower or in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
(Page 5 of 5)

excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines would otherwise be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations.

Conclusion

Based on the preceding, it is believed that the instant proposal complies with all Commission Rules and policies.

FIGURE 1
PREDICTED COVERAGE CONTOURS
W47AO-D PROPOSED FACILITY

prepared March 2015 for
Triple J Community Broadcasting, LLC

W47AO Facility ID 68136

Channel 47 15 kW

Cavell Mertz & Associates, Inc.
Manassas, Virginia

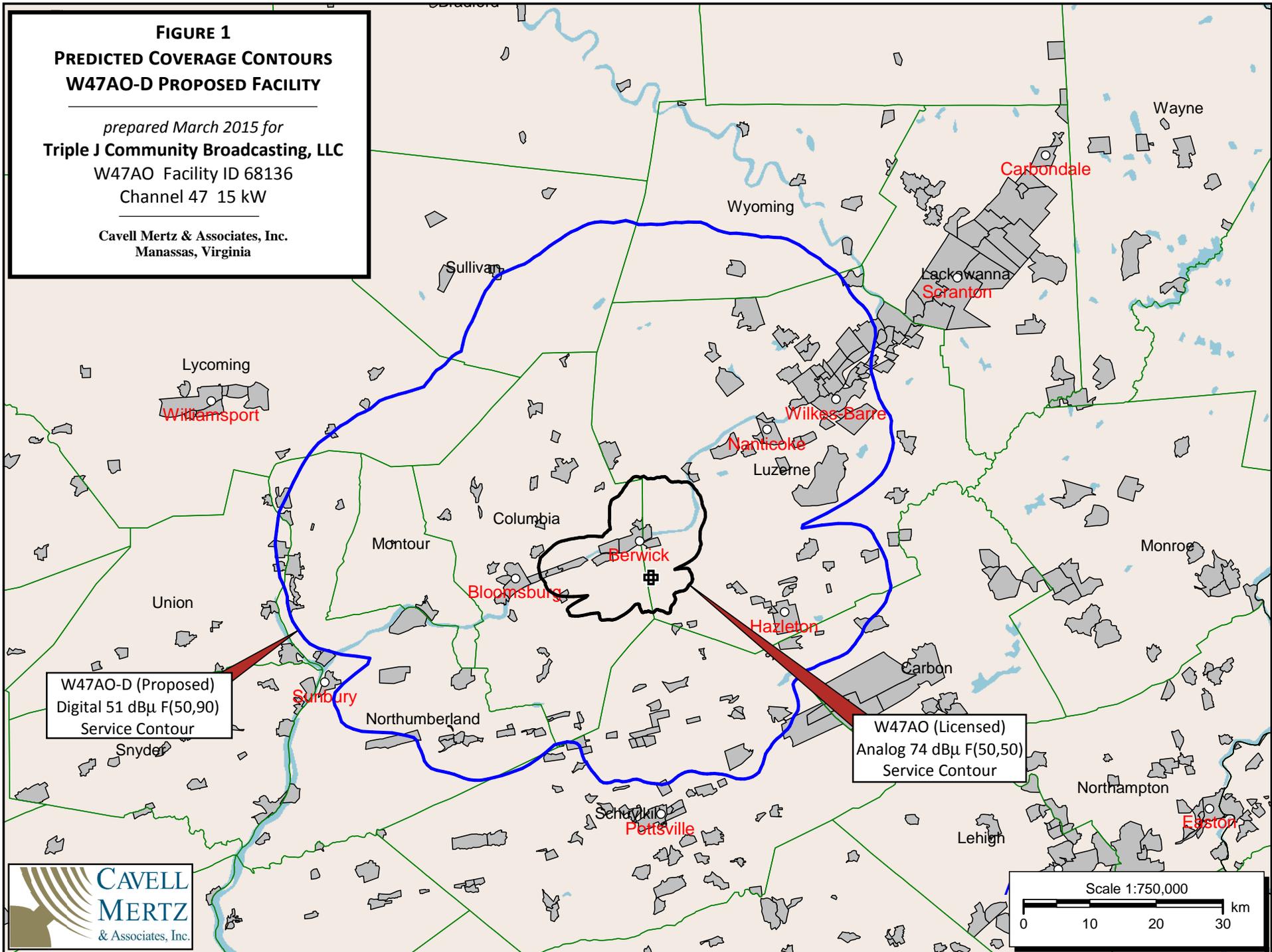


Table 1
INTERFERENCE STUDY RESULTS
 prepared for
Triple J Community Broadcasting, LLC
 W047AO Berwick, PA
 Facility ID 68136
 Ch. 47 15 kW

<u>Channel</u>	<u>Affected Station</u>	<u>City, State</u>	<u>File Number</u>	<u>Calculated Baseline (2000 Census)</u>	<u>Interference Population without Proposal (2000 Census)</u>	<u>Interference Population with Proposal (2000 Census)</u>	<u>New Interference Population</u>	<u>Percentage</u>
32	W32EI	Port Jervis, NY	BLTTL-20121024AAB			---		
43	W43CH	Belvidere, NJ	BLTT-20060622AAE			---		
46	WBFF	Baltimore, MD	BLCDDT-20110131ASE			---		
46	WNJJ-LD	Paterson, NJ	BDISDTL-20110818ACK			---		
46	W46EZ-D	Elmira, NY	BNPDTL-20100518AEE			---		
46	WMBQ-CD	New York, NY	BLDTA-20120404AAH			---		
46	W46DQ	Port Jervis, NY	BLTTL-20070223AHL			---		
46	WFMZ-TV	Allentown, PA	BPCDDT-20101214AAB	7,287,928	257,509	257,509	0	0.000 %
46	WFMZ-TV	Allentown, PA	BMLCDDT-20111230AAF	7,163,299	220,236	220,236	0	0.000 %
46	WKBS-TV	Altoona, PA	BLCDDT-20120518AEG			---		
47	WUTH-CD	Hartford, CT	BLDTA-20140512ACR			---		
47	WMDO-CA	Washington, DC	BLTTA-20080428AAQ			---		
47	WMDT	Salisbury, MD	BLCDDT-20090319ADC			---		
47	WVMA-CD	Claremont, NH	BLDTA-20141217ABE			---		
47	WNMF-LD	West Orange, NJ	BDISDTL-20130731ANW			---		
47	W47CM	Glens Falls, NY	BLTT-20011009ABI			---		
47	W47CM	Glens Falls, NY	BMPDCL-20120227AAF			---		
47	WLNY-TV	Riverhead, NY	BLCDDT-20090612AAC			---		
47	WTVH	Syracuse, NY	BLCDDT-20060809ACB	1,245,322	790	810	20	0.002 %
47	W47DH-D	Clarks Summit, Etc., PA	BLDCL-20090916AAI	253,284	8,257	9,617	1,360	0.537 %
47	WXTM-LD	Erie, PA	BMPDCL-20141124ACF			---		
47	WOLF-TV	Hazleton, PA	BLCDDT-20091217ACX	56,734	2,758	2,798	40	0.071 %
47	WFMZ-TV	Philadelphia, PA	BDRTCT-20090604ABI			---		
47	WWKH-CD	Uniontown, PA	BLDTA-20141020AAO			---		
47	WPMT	York, PA	BMLCDDT-20041025ABI	3,272,002	1,141,350	1,144,163	2,813	0.086 %
47	WUPV	Ashland, VA	BLCDDT-20060210ABA			---		
47	WAZW-CD	Winchester, VA	BDISDTL-20140328ALB			---		
48	WYDC	Corning, NY	BLCDDT-20090220ABG			---		
48	WRNN-TV	Kingston, NY	BLCDDT-20140925AFG			---		
48	WEFG-LD	Philadelphia, PA	BLDCL-20131212ABH			---		

Table 1
INTERFERENCE STUDY RESULTS
 prepared for
Triple J Community Broadcasting, LLC
 W047AO Berwick, PA
 Facility ID 68136
 Ch. 47 15 kW

<u>Channel</u>	<u>Affected Station</u>	<u>City, State</u>	<u>File Number</u>	<u>Calculated Baseline (2000 Census)</u>	<u>Interference Population without Proposal (2000 Census)</u>	<u>Interference Population with Proposal (2000 Census)</u>	<u>New Interference</u>		
							<u>Population</u>	<u>Percentage</u>	
48	WEFG-LD	Philadelphia, PA	BSTA-20120106AAZ				---	No Interference	---
49	W49BE	Hackettstown, NJ	BLTT-19930517IG				---	No Interference	---
49	W49DK	Port Jervis, NY	BLTTL-20100212ACB				---	No Interference	---
49	W49DK	Port Jervis, NY	BPTTL-20140530ARP				---	No Interference	---