

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
prepared for
Triple J Community Broadcasting, LLC
WYLN-CD Hazleton, PA
Facility ID 68135
Channel 35 5.5 kW

Triple J Community Broadcasting LLC (“*Triple J*”) is the licensee of Class A television station WYLN-LP, Channel 35, Hazleton Pennsylvania, Facility ID 68135 (file number BLTTL-19950324IE). *Triple J* is hereby submitting an **amendment** of the proposal (0000001156) for a flash cut to digital on channel 35 for WYLN-LP. **The amendments include the substitution of a “full service” mask to replace the “stringent” mask to eliminate possible adjacent-channel interference, correction of the antenna rotation, and the correction of the RCAMSL on the form and in the calculations.**

The proposed facility will operate on Channel 35 using a “full service” out of channel emission mask with a directional antenna having an effective radiated power of 5.5 kW. The proposed RF system will re-use the existing antenna, which is a Scala model 4DR-16-2HW panel antenna, horizontally polarized. **Figure 1** depicts the coverage contours of the licensed analog facility and the proposed digital facility. The proposed antenna will continue to be side mounted on the existing WYLN-LP antenna support structure, which has been designated Antenna Structure Registration Number 1060097 and is located at 40-58-10.0 N 75-57-23.0 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*,

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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 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 304.03 km from the nearest U.S. - Canadian border, which is within the 400 km coordination distance specified in the 2000 Canadian Letter of Understanding for full service facilities, but greater than the 100 km required coordination distance specified for digital low power television stations.² Additionally, as demonstrated in **Figure 2**, the worst-case interfering contour of 7.4 dBμ F(50,10) does not reach the Canadian border. Thus, it is believed that international coordination will not be necessary for the instant proposal. The nearest FCC monitoring station is at Laurel, Maryland, at a distance of 213.5 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, the nearest AM broadcast station is WAZL(AM), 1490 kHz, Hazleton, PA is located 3.4 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.

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.**

² The Letter of Understanding Between the Federal Communications Commission of the United States of America and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border, September 29, 2000, paragraph 12.

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 WYLN-LP facility under BLTTL-19950324IE.

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 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 WYLN-LP digital flash cut will utilize the same Channel 35 antenna the current analog facility is using. It is situated such that its center of radiation will be 29 meters above ground level. According to elevation pattern data provided by the antenna manufacturer, the WYLN-LP Channel 35 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 35 (center frequency 599 MHz) is 399.3 $\mu\text{W}/\text{cm}^2$.

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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.

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

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 22.7 µW/cm² at two meters above ground level near the antenna support structure, or 5.78 percent of the general population/uncontrolled limit.

FM Translator W233CB is located on the same tower, which is licensed to operate with 0.13 kW circularly polarized, with an antenna that is located 22 meters above ground. Using a worst-case relative field value of 100 percent and the same formula above, W233CB contributes 17.9 µW/cm² at two meters above ground level near the antenna support structure, or 9.0 percent of the general population/uncontrolled limit.

When the contribution of these two stations are combined, they contribute less than the "uncontrolled/general population" limit specified in §1.1310. Accordingly, 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

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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 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
WYLN-CD PROPOSED DIGITAL FACILITY

prepared March 2015 for
Triple J Community Broadcasting, LLC
 WYLN-LP Hazleton, PA Fac ID 68135
 Channel 35 5.5 kW ERP

Cavell Mertz & Associates, Inc.
 Manassas, Virginia

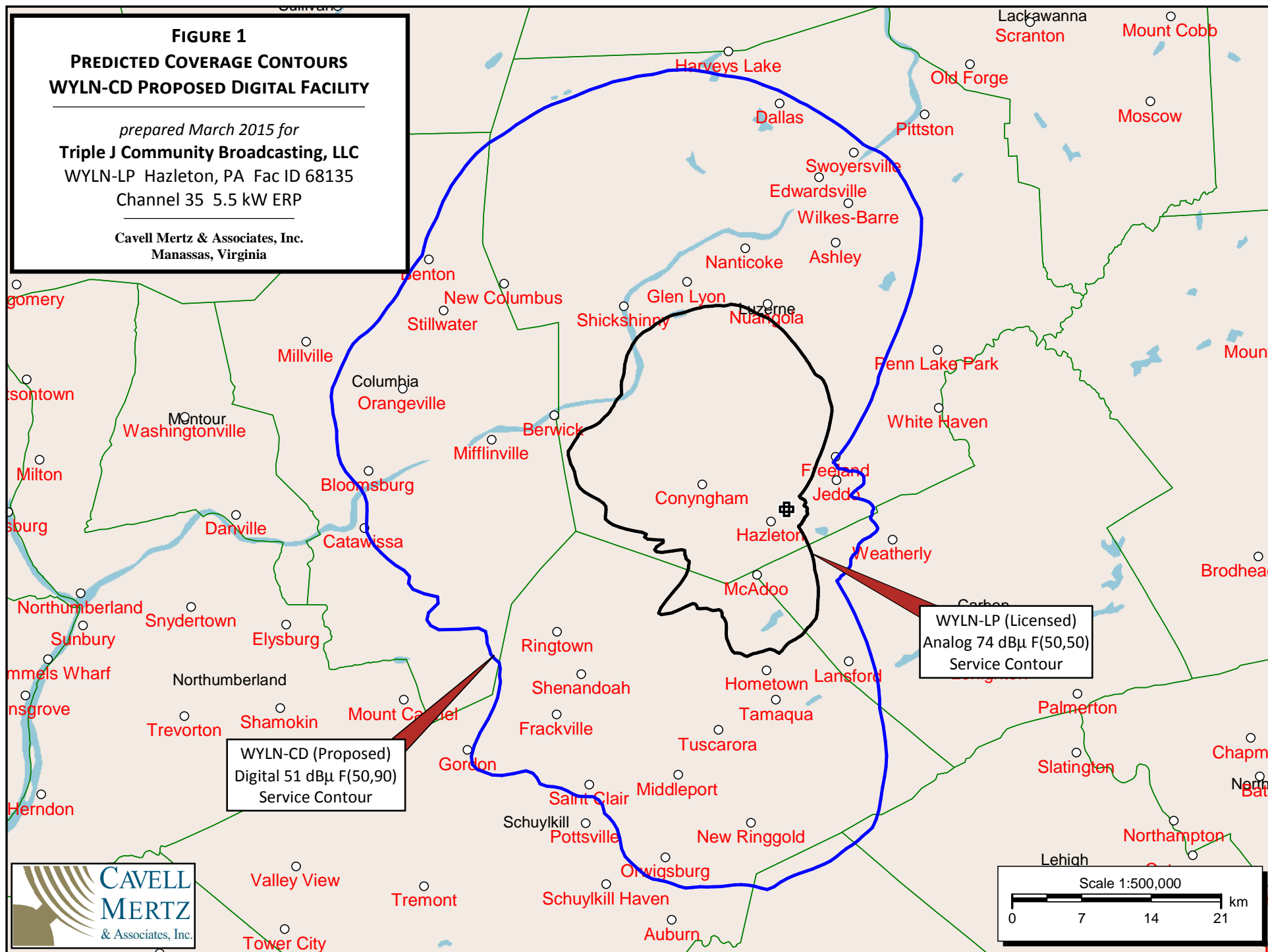




FIGURE 2
PREDICTED INTERFERENCE CONTOUR
WYLN-CD PROPOSED FACILITY

prepared for
Triple J Community Broadcasting, LLC
WYLN-LP Hazleton, Pennsylvania Fac ID 68135
Channel 35 (Flash Cut) 5.5 kW ERP

Cavell Mertz & Associates, Inc.
Manassas, Virginia

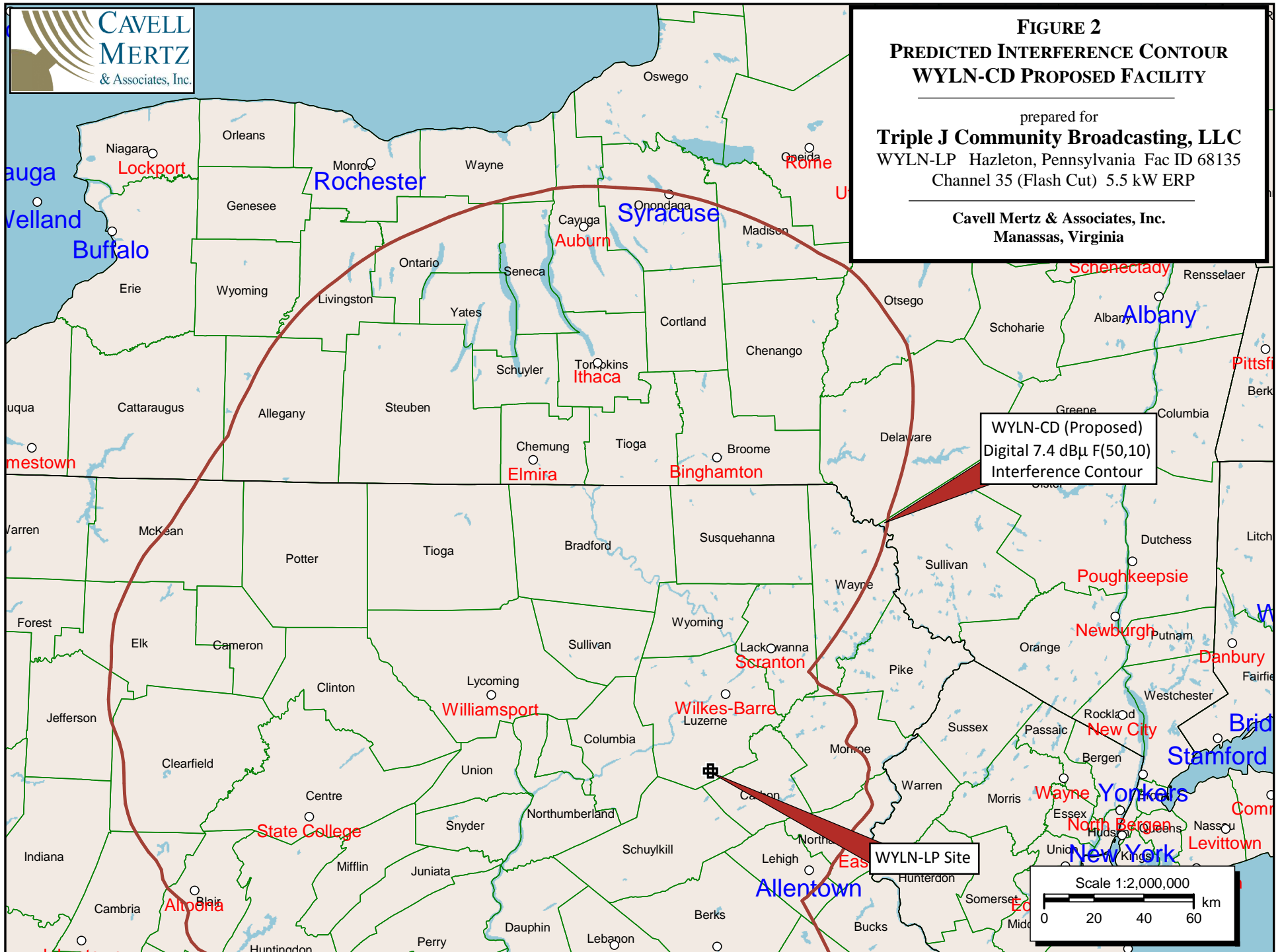


Table I
INTERFERENCE STUDY RESULTS
 prepared for
Triple J Community Broadcasting, LLC
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 Ch. 35 5.5 kW

<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>
20	WBGH-CA	Binghamton, NY	BLTTA-20050505AAV			---	No Interference	---
20	W20CM	Port Jervis, NY	BLTTTL-20071129AIS			---	No Interference	---
28	WFPA-CA	Philadelphia, PA	BLTTTL-20000428ABK			---	No Interference	---
32	W32EI	Port Jervis, NY	BLTTTL-20121024AAB			---	No Interference	---
34	WWOR-TV	Alpine, NJ	BDRTCDT-20140106DIE			---	No Interference	---
34	WPXO-LD	East Orange, NJ	BLDTL-20090511AYH			---	No Interference	---
34	WIVT	Binghamton, NY	BLCDDT-20090819AGR			---	No Interference	---
34	W34DI	Port Jervis, NY	BLTTTL-20070223AHK			---	No Interference	---
34	WCAU	Philadelphia, PA	BLCDDT-20090914AAX			---	No Interference	---
35	WVIT	New Britain, CT	BLCDDT-20041203AEF			---	No Interference	---
35	WDCA	Washington, DC	BLCDDT-20070411AAH	6,933,344	34,116	34,116	0	0.000 %
35	WDCA	Washington, DC	BPCDDT-20121105ANF	7,092,215	33,577	33,577	0	0.000 %
35	W35CS-D	Ocean City, MD	BLDTL-20090803ADY			---	No Interference	---
35	W35DF-D	Salisbury, MD	BNPDTL-20100204AAW			---	No Interference	---
35	WNYX-LD	New York, NY	BLDTL-20090908ACQ			---	No Interference	---
35	WOBX-LP	Syracuse, NY	BLTTA-20050922ACH			---	No Interference	---
35	DW53AM	Utica, NY	BDISDTL-20060403AHV			---	No Interference	---
35	WNYF-CD	Watertown, NY	BLDTL-20090924ABW			---	No Interference	---
35	NEW	Erie, PA	BNPDTL-20090825BID			---	No Interference	---
35	W07DP-D	Harrisburg, PA	BDFCDTL-20080801ARU	410,980	62,498	62,498	0	0.0000 %
35	WBYD-CA	Johnstown, PA	BLTTTL-19970528JD			---	No Interference	---
35	WYBE	Philadelphia, PA	BLEDT-20091222ARE	8,483,521	501,417	519,817	18,400	0.217 %
35	W35DJ-D	Crozet, VA	BNPDTL-20090825ARZ			---	No Interference	---
36	WNJU	Linden, NJ	BLANK-0000001043			---	No Interference	---
36	WNJU	Linden, NJ	BPCDDT-20111220AFK			---	No Interference	---
36	W36AZ	Sussex, NJ	BLTT-19970806JC			---	No Interference	---
36	WENY-TV	Elmira, NY	BLCDDT-20090730AAH			---	No Interference	---
36	W36DO-D	Darby, PA	BLDTT-20110711ACA			---	No Interference	---
36	WTF-TV	Harrisburg, PA	BLEDT-20000922AHE			---	No Interference	---
36	WSWB	Scranton, PA	BLCDDT-20091217AEX			---	No Interference	---
36	W36BE-D	State College, PA	BLDTT-20091023AIW			---	No Interference	---
38	W59DG	Elmira, NY	BSTA-20121029AAC			---	No Interference	---
42	W42CX	Port Jervis, NY	BLTTTL-20070223AHH			---	No Interference	---
43	W43CH	Belvidere, NJ	BLTT-20060622AAE			---	No Interference	---