

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In re:

WWAZ License, LLC

Petition For Rulemaking to Amend  
DTV Table Of Allotments for  
(Fond du Lac, Wisconsin)

MB Docket No. 09-115

BPRM-20080619ALY

To: The Secretary

Attn: Chief, Video Division  
Media Bureau

**SUPPLEMENT**

FILED/ACCEPTED

JAN - 7 2011

Federal Communications Commission  
Office of the Secretary

WWAZ License, LLC ("WWAZ"), by and through its attorneys, hereby submits this Supplement in response to the Letter, dated December 23, 2010 (DA 10-2408)(the "Letter"), requesting that WWAZ supplement the showings it had submitted in the above-referenced proceeding.

On August 12, 2009, the Commission granted the request of WWAZ to change the DTV channel allotment for Station WWAZ-TV, Fond du Lac, Wisconsin, from Channel 44 to Channel 5.<sup>1</sup> WWAZ's proposal incorporated the use of two replacement digital translator stations to provide service to certain areas within the predicted analog loss area in accordance with the Commission's rules.<sup>2</sup> Subsequently, WDJT-TV Limited Partnership filed a petition for reconsideration of the *Order*.

<sup>1</sup> *Fond du Lac, Wisconsin*, 24 FCC Rcd 10,659 (Vid. Div. 2009)(the "*Order*").

<sup>2</sup> *See Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Replacement Digital Low Power Television Translator Stations*, Report and Order, 24 FCC Rcd 5931 (2009).

No. of Copies rec'd 014  
List A B C D E

ORIGINAL

In the Letter, the Commission stated that the “loss figures contained in the Report and Order were not accurate”, and requested that WWAZ “re-engineer the proposed translators in order to cover the projected analog loss area, and file the requisite license modifications applications.”<sup>3</sup> Attached hereto as Exhibit A is the Engineering Statement prepared by WWAZ’s consulting engineer, Smith and Fisher, which addresses the issues raised in the Letter. In addition, on January 4, 2011, WWAZ submitted the minor change applications requested in the Letter. *See Exhibit B.*

In light of these submissions, WWAZ License, LLC, respectfully requests that the Commission deny the Petition for Reconsideration, and affirm the requested channel change proposal for Station WWAZ.

Respectfully submitted,

**WWAZ LICENSE, LLC**

By: 

Kathleen Victory, Esquire  
Lee G. Petro, Esquire  
FLETCHER, HEALD & HILDRETH, PLC  
1300 North 17<sup>th</sup> Street, 11<sup>th</sup> Floor  
Arlington, Virginia 22209  
703-812-0400 - Telephone

Its Attorneys

January 7, 2011

---

<sup>3</sup> *Letter*, pg. 2.

**EXHIBIT A**

## SMITH AND FISHER

---

### ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of WWAZ LICENSE, LLC, licensee of WWAZ-DT in Fond du Lac, Wisconsin, in support of this further supplement to its pending Petition for Rulemaking (BPRM-20080619ALY) to substitute Channel 5 for Channel 44 as its post-transition digital television allotment. In the referenced Rulemaking, it was also proposed to move the transmitter site from the Iron Ridge tower site to a tower located in the Milwaukee antenna farm. As a result of this change in transmitter site, a "loss" area is created along the western and northwestern edge of the Grade B service contour of the analog WWAZ-TV facility on Channel 68. In response, the proponent applied for and was granted by the Commission authorization to construct two fill-in translators. One (BDRTCT-20090223ABX) will be licensed on Channel 15 in Ripon, Wisconsin, and serve the northern portion of the loss area. The other (BDRTCT-20090223ABW) will be licensed on Channel 30 in Columbus, Wisconsin, and cover the southern part of the loss area. Whereas the original translator proposals were designed to place a predicted 41 dBu service contour over the loss area, we have recently been instructed by the Commission to modify these translator authorizations and place protected 51 dBu contours over the area of concern. Those modification applications have been filed and copies of the revised engineering proposals for the Ripon and Columbus fill-in translators are provided in Appendix A and Appendix B, respectively.

Attached hereto is a map on which we have plotted the Grade B (64 dBu) service contour of the now silent analog WWAZ-TV facility on Channel 68 and the 28 dBu service contour of the proposed WWAZ-DT facility on Channel 5. We have highlighted in green the

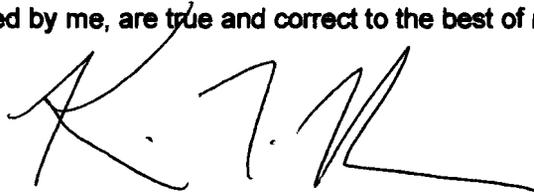
SMITH AND FISHER

---

loss area created by the change in transmitter sites proposed in the Channel 5 Petition for Rulemaking. To this map we have added the predicted 51 dBu service contours for the modified fill-in translator facilities in Ripon and Columbus. While the population within the 1,303-square kilometer loss area is only 43,325 (based on the 2000 U.S. Census), the combination of the two fill-in translators will serve all but 3,400 of people residing in this area comprised of 22.2 square kilometers. As a result, the combination of the two translators will serve 99.8 percent of the loss area and its population.

It is important to note that the original translator sites, power levels and antenna patterns were chosen in coordination with the Commission staff to maximize the coverage area of WWAZ-DT and these translators, while minimizing the extension of the service contours of the translators beyond the Grade B contour of the analog WWAZ-TV facility on Channel 68. The translator modifications proposed herein also attempt to continue to satisfy these twin goals – i.e., maximize coverage within the analog WWAZ-TV Grade B contour, while minimizing the extension of coverage beyond the Grade B contour. To the extent that the Commission is more concerned with the population within the proposed loss area, and finds that service to this population would better serve the public interest than minimizing the translators' contours, further adjustments can be made upon request.

I declare, under penalty of perjury, that the foregoing statements and attached exhibits, which have been prepared by me, are true and correct to the best of my knowledge and belief.

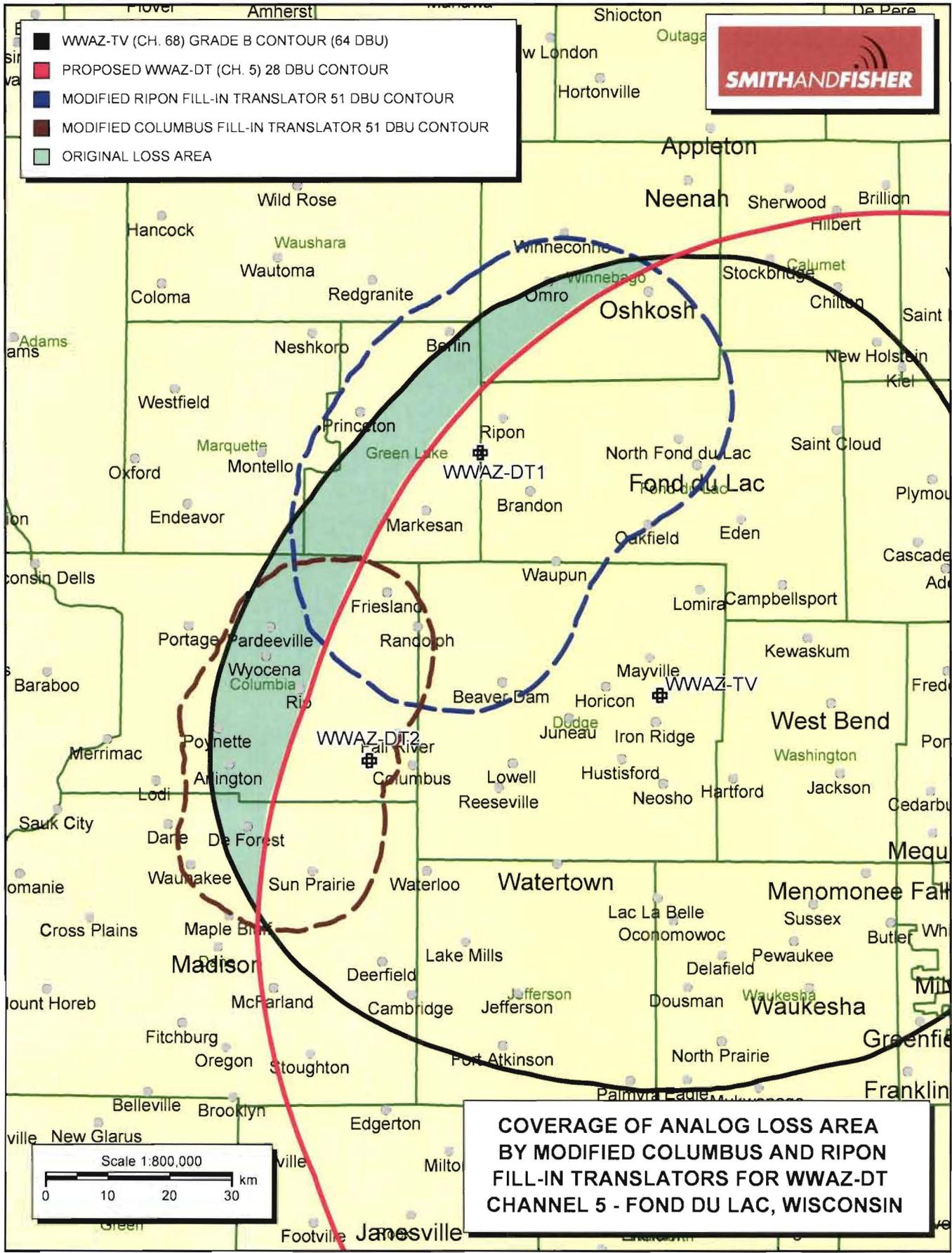


KEVIN T. FISHER

January 3, 2011



- WWAZ-TV (CH. 68) GRADE B CONTOUR (64 DBU)
- PROPOSED WWAZ-DT (CH. 5) 28 DBU CONTOUR
- MODIFIED RIPON FILL-IN TRANSLATOR 51 DBU CONTOUR
- MODIFIED COLUMBUS FILL-IN TRANSLATOR 51 DBU CONTOUR
- ORIGINAL LOSS AREA



**COVERAGE OF ANALOG LOSS AREA  
BY MODIFIED COLUMBUS AND RIPON  
FILL-IN TRANSLATORS FOR WWAZ-DT  
CHANNEL 5 - FOND DU LAC, WISCONSIN**

SMITH AND FISHER

---

APPENDIX A

Section III - Engineering (Digital)

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

- 1. Channel: 15
- 2. Translator Input Channel No. 5

3. Station proposed to be rebroadcast:

Call Sign WWAZ-DT	City Fond du Lac	State Wisconsin	Channel 5
----------------------	---------------------	--------------------	--------------

4. Antenna Location Coordinates: (NAD 27)

43 ° 47 31  N  S Latitude  
88 ° 52 54  E  W Longitude

5. Antenna Structure Registration Number: 1035940

- Not applicable
- See Explanation in Exhibit No.
- FAA Notification Filed with FAA

- 6. Antenna Location Site Elevation Above Mean Sea Level: 329.2 meters
- 7. Overall Tower Height Above Ground Level: 128.6 meters
- 8. Height of Radiation Center Above Ground Level: 100 meters
- 9. Maximum Effective Radiated Power (ERP): 7.0 kW
- 10. Transmitter Output Power: 7.0 kW

11. a. Transmitting Antenna:  Nondirectional  Directional  Directional composite

Manufacturer Andrew	Model ALP8L1-HSBR
------------------------	----------------------

b. Electrical Beam Tilt: 0.5 degrees  Not applicable

c. Directional Antenna Relative Field Values:

Rotation: 130 °  No rotation    N/A (Nondirectional)

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

12. Out-of-Channel Emission Mask: Simple  Stringent

**CERTIFICATION**

13. **Interference.** The proposed facility complies with all of the following applicable rule sections. 47 C.F.R. Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030.  Yes  No See Explanation in Exhibit No. E

14. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance. An **Exhibit is required.**  Yes  No See Explanation in Exhibit No. F

Exhibit No.  
F

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

15. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

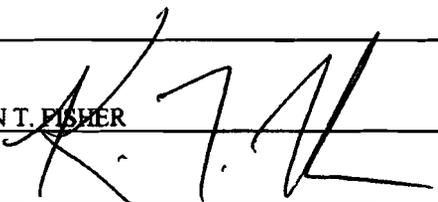
- The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.
- Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of

**PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.**

16. **Channels 60-69.** If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:

- Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees,
- Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreement(s) with 700 MHz public safety regional planning committee(s) and state frequency administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.
- Pursuant to Section 74.786(e), an applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name KEVIN T. FISHER		Relationship to Applicant (e.g., Consulting Engineer) ENGINEERING CONSULTANT	
Signature 		Date	
Mailing Address SMITH AND FISHER, 2237 Tackett's Mill Drive, Suite A			
City Lake Ridge		State or Country (if foreign address) Virginia	ZIP Code 22192
Telephone Number (include area code) (703) 494-2101		E-Mail Address (if available) kevin@smithandfisher.com	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of WWAZ LICENSE, LLC, licensee of Television Station WWAZ-DT in Fond du Lac, Wisconsin, and permittee of a fill-in translator on Channel 15 in Ripon, Wisconsin, in support of this application for modification of Construction Permit BDRTCT-20090223ABX, to specify an increase in effective radiated power. No change in site location, antenna model or antenna height is proposed herein.

WWAZ-DT is presently authorized to operate on Channel 44 at a site near Iron Ridge, Wisconsin. The station owner filed for and was granted a Petition for Rulemaking (BPRM-20080619ALY) to move the facility to the Milwaukee antenna farm and operate on digital Channel 5. An application for that facility is pending in front of the FCC. However, a Petition for Reconsideration was filed before the Channel 5 allotment became final and a Petition to Deny the pending application filed as well. The engineering basis of the Petitions revolves around the creation of a "loss area" that would be created along the western and northwestern edge of analog WWAZ-TV Grade B service contour by the digital station's move to the antenna farm. A grant of the instant proposal would allow this translator to place a predicted service contour over the northern half of the loss area.

It is still proposed to mount a standard ERI (Andrew) directional antenna at the 100-meter level of the existing 129-meter communications tower. Exhibit B is a map upon which the new predicted service contours are plotted. It is important to note that the proposed 51 dBu contour encompasses the station's city of license. Exhibit C depicts the coverage of the proposed translator with respect to the WWAZ-TV loss area.

SMITH AND FISHER

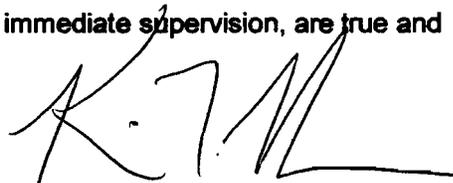
---

EXHIBIT A

Operating parameters for the proposed facility are tabulated in Exhibit D. An interference study is provided in Exhibit E, and a revised power density calculation follows as Exhibit F.

Because no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1035940 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.



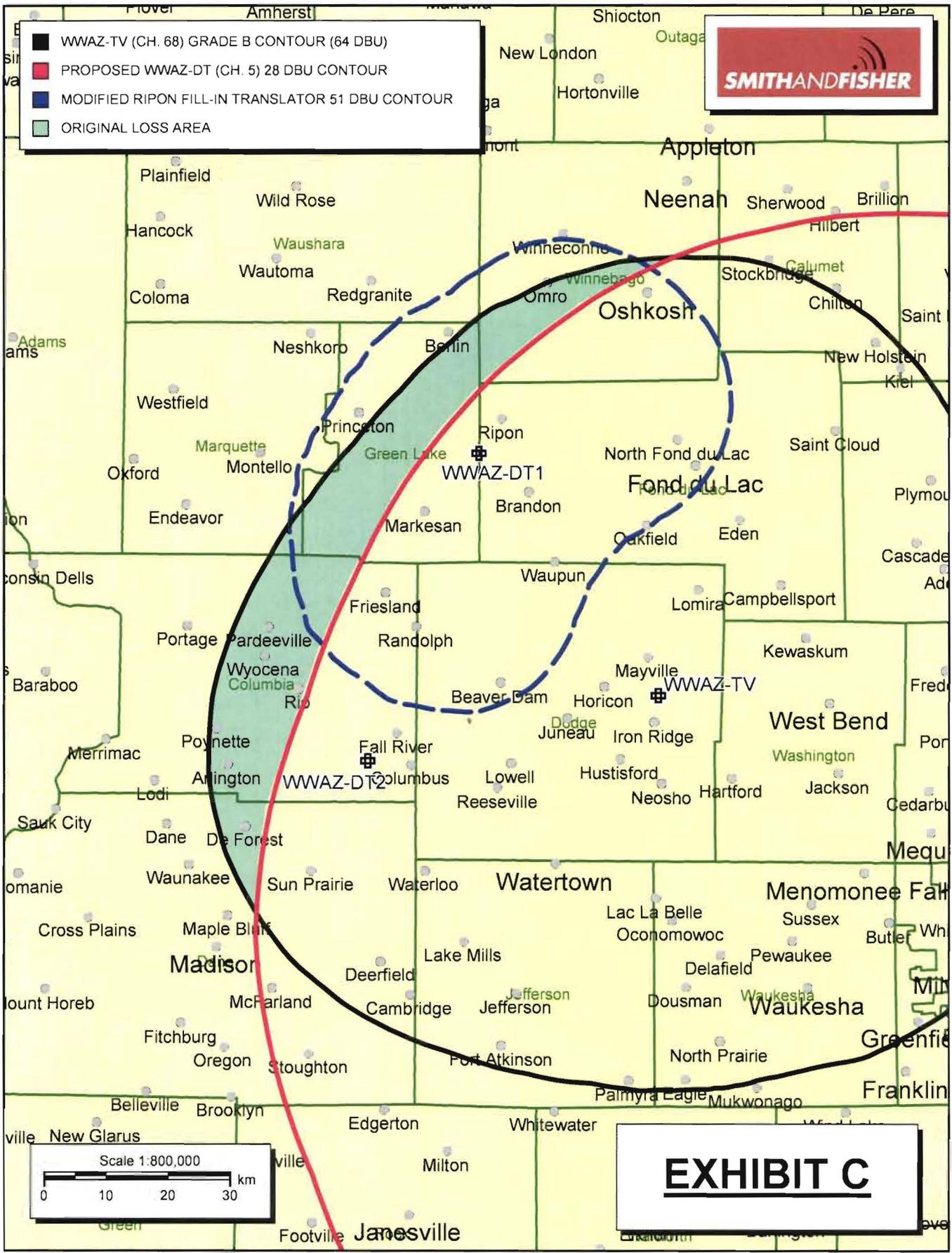
KEVIN T. FISHER

January 3, 2011

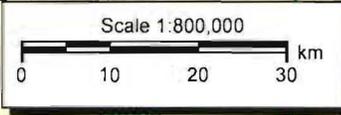




- WWAZ-TV (CH. 68) GRADE B CONTOUR (64 DBU)
- PROPOSED WWAZ-DT (CH. 5) 28 DBU CONTOUR
- MODIFIED RIPON FILL-IN TRANSLATOR 51 DBU CONTOUR
- ORIGINAL LOSS AREA



**EXHIBIT C**



SMITH AND FISHER

EXHIBIT D

PROPOSED OPERATING PARAMETERS

PROPOSED FILL-IN TRANSLATOR  
CHANNEL 15 - RIPON, WISCONSIN

[MODIFICATION OF BDRTCT-20090223ABX]

Transmitter Power Output:	0.41 kw
Transmission Line Efficiency:	68.7%
Antenna Power Gain – Toward Horizon:	24.89
Antenna Power Gain – Main Lobe:	24.89
Effective Radiated Power – Toward Horizon:	7.0 kw
Effective Radiated Power – Main Lobe:	7.0 kw
Transmitter Make and Model:	Type-accepted
Transmission Line Make and Model:	Andrew HJ7-50A
Size and Type:	1-5/8" air heliax
Length:	350 feet*
Antenna Make and Model:	ERI ALP8LI-HSBR
Orientation	130° T
Beam Tilt	0.5 degrees
Radiation Center Above Ground:	100 meters
Radiation Center Above Mean Sea Level:	429 meters

\*estimated

LONGLEY-RICE INTERFERENCE STUDY  
PROPOSED FILL-IN TRANSLATOR  
CHANNEL 15 – RIPON, WISCONSIN  
[MODIFICATION OF BDRTCT-20090223ABX]

We conducted a detailed interference study using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The software utilizes a 1-square kilometer cell size, calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 2000 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than that proposed herein) already is predicted to exist (also known as "masking"). A summary of the results of this study is provided in Exhibit E-2. It concludes that the facility proposed herein causes no significant new interference to any of the potentially affected full-power or low-power analog or digital (pre-transition or post-transition) television stations.

As a result, it is believed that the proposed facility complies with the requirements of Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030 of the Commission's Rules.

Summary Study

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Record Selected for Analysis

RIPON SI USERRECORD-01 OSHKOSH WI US  
 Channel 15 ERP 7. kW HAAT 147. m RCAMSL 00429 m SIMPLE MASK  
 Latitude 043-47-31 Longitude 0088-52-54  
 Status APP Zone 1 Border  
 Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth  
 130.  
 Last update Cutoff date Docket  
 Comments  
 Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	0.557	145.1	29.5
45.0	5.384	140.3	40.8
90.0	4.097	129.2	38.7
135.0	0.464	127.8	27.4
180.0	5.964	144.5	41.6
225.0	3.844	140.1	39.1
270.0	0.312	166.9	27.9
315.0	0.140	180.8	24.7

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

LANDMOBILE SPACING VIOLATIONS FOUND

To CHICAGO IL Channel 15 from Channel 15  
 Required separation 250.0 km Actual 236.0 km Short 14.0 km  
 Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

\*\*\*\*\*

Start of Interference Analysis

Channel	Proposed Station	ARN
15	Call City/State RIPON SI OSHKOSH WI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
14	WXOW-TV	LA CROSSE WI	199.4	CP MOD	BMPCDT	-
20080619AEF						
14	WIWB	SURING WI	115.8	LIC	BLCT	-
19980622KF						
15	KYOU-TV	OTTUMWA IA	383.0	CP MOD	BMPCDT	-
20080620AIS						
15	KYOU-TV	OTTUMWA IA	383.0	LIC	BLCT	-
19960528KO						
15	WXSP-CA	GRAND RAPIDS MI	267.9	LIC	BLTT	-
19910507JJ						
15	WXSP-CA	GRAND RAPIDS MI	267.9	CP	BDFCDTA	-
20060330AGO						
15	WXSP-CA	GRAND RAPIDS MI	267.9	APP	BMPDTA	-
20080804ADS						
15	W15BP	PINCONNING MI	384.1	LIC	BLTTL	-
20030609AAR						
15	W15BM	TRAVERSE CITY MI	276.4	APP	BPTTL	-
20040407ABB						
15	W15BM	TRAVERSE CITY MI	275.9	LIC	BLTTL	-
20001212AAE						
15	KSMQ-TV	AUSTIN MN	331.2	LIC	BMLET	-
20041214ADY						
15	WQOW-TV	EAU CLAIRE WI	234.1	CP MOD	BMPCDT	-
20041001AOM						
16	WTVO	ROCKFORD IL	168.9	LIC	BLCDT	-
20021024AAS						
16	W29DJ	SHEBOYGAN WI	91.2	CP	BDFCDTT	-
20060329AEI						
16	W16AY	WHITING WI	104.5	LIC	BLTTL	-
20001213ABK						
17	W17CF	OSHKOSH WI	41.4	LIC	BLTT	-
19990608JA						
18	WVTV	MILWAUKEE WI	110.4	LIC	BLCT	-
19870804KE						
22	960920YL	GREEN BAY WI	71.0	APP	BPCT	-
19960920YL						
23	W23BW	MADISON WI	95.3	LIC	BLTTA	-
20031125AAQ						
23	W23BW	MADISON WI	95.3	APP	BPTTA	-
20030326AHF						

\*\*\*\*\*

Study of this proposal found the following interference problem(s):

NONE.

POWER DENSITY CALCULATION  
PROPOSED FILL-IN TRANSLATOR  
CHANNEL 15 - RIPON, WISCONSIN  
[MODIFICATION OF BDRTCT-20090223ABX]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Ripon facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 7.0 kw, an antenna radiation center 100 meters above ground, and the vertical pattern of the MCI antenna, maximum power density two meters above ground of  $0.0014 \text{ mw/cm}^2$  is calculated to occur 40 meters northeast and southwest of the base of the tower. Since this is only 0.5 percent of the  $0.32 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 15 (476-482 MHz), this proposal may be excluded from consideration with respect to public exposure to nonionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive nonionizing radiation.

SMITH AND FISHER

---

APPENDIX B

**Section III - Engineering (Digital)**

**TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

**TECH BOX**

- 1. Channel: 30
- 2. Translator Input Channel No. 5

3. Station proposed to be rebroadcast:

Call Sign WWAZ-DT	City Fond du Lac	State Wisconsin	Channel 5
----------------------	---------------------	--------------------	--------------

4. Antenna Location Coordinates: (NAD 27)

43 ° 20 40  N  S Latitude  
89 ° 06 10  E  W Longitude

5. Antenna Structure Registration Number: 1224263

- Not applicable See Explanation in Exhibit No.  FAA Notification Filed with FAA

- 6. Antenna Location Site Elevation Above Mean Sea Level: 275 meters
- 7. Overall Tower Height Above Ground Level: 113 meters
- 8. Height of Radiation Center Above Ground Level: 99 meters
- 9. Maximum Effective Radiated Power (ERP): 5.0 kW
- 10. Transmitter Output Power: 0.55 kW

11. a. Transmitting Antenna:  Nondirectional  Directional  Directional composite

Manufacturer MCI	Model 955312
---------------------	-----------------

b. Electrical Beam Tilt: \_\_\_\_\_ degrees  Not applicable

c. Directional Antenna Relative Field Values:

Rotation: 240 °  No rotation  N/A (Nondirectional)

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

12. Out-of-Channel Emission Mask: Simple  Stringent

**CERTIFICATION**

13. **Interference.** The proposed facility complies with all of the following applicable rule sections. 47 C.F.R. Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030.  Yes  No See Explanation in Exhibit No. E

14. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance. An Exhibit is required.  Yes  No See Explanation in Exhibit No. F

Exhibit No.  
F

By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.

15. **Channels 52-59.** If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:

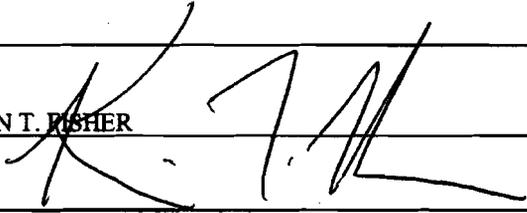
- The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.
- Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of

**PREPARER'S CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.**

16. **Channels 60-69.** If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:

- Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application, all commercial wireless licensees of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees,
- Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreement(s) with 700 MHz public safety regional planning committee(s) and state frequency administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.
- Pursuant to Section 74.786(e), an applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator(s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name KEVIN T. FISHER		Relationship to Applicant (e.g., Consulting Engineer) ENGINEERING CONSULTANT	
Signature 		Date	
Mailing Address SMITH AND FISHER, 2237 Tackett's Mill Drive, Suite A			
City Lake Ridge		State or Country (if foreign address) Virginia	ZIP Code 22192
Telephone Number (include area code) (703) 494-2101		E-Mail Address (if available) kevin@smithandfisher.com	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of WWAZ LICENSE, LLC, licensee of Television Station WWAZ-DT in Fond du Lac, Wisconsin, and permittee of a fill-in translator on Channel 30 in Columbus, Wisconsin, in support of this application for modification of Construction Permit BDRCT-20090223ABW, to specify an increase in effective radiated power and a different antenna model. No change in site location or antenna height is proposed herein.

WWAZ-DT is presently authorized to operate on Channel 44 at a site near Iron Ridge, Wisconsin. The station owner filed for and was granted a Petition for Rulemaking (BPRM-20080619ALY) to move the facility to the Milwaukee antenna farm and operate on digital Channel 5. An application for that facility is pending in front of the FCC. However, a Petition for Reconsideration was filed before the Channel 5 allotment became final and a Petition to Deny the pending application filed as well. The engineering basis of the Petitions revolves around the creation of a "loss area" that would be created along the western and northwestern edge of analog WWAZ-TV Grade B service contour by the digital station's move to the antenna farm. A grant of the instant proposal would allow this translator to place a predicted service contour over the southern half of the loss area.

It is now proposed to mount a standard MCI directional antenna at the 99-meter level of the existing 113-meter communications tower. Exhibit B is a map upon which the predicted service contours are plotted. It is important to note that the proposed 51 dBu contour encompasses the station's city of license. Exhibit C depicts the coverage of the proposed translator with respect to the WWAZ-TV loss area.

SMITH AND FISHER

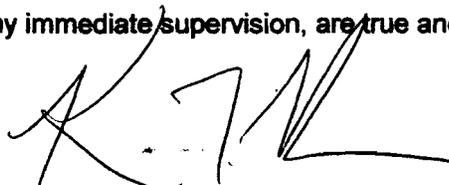
---

EXHIBIT A

Operating parameters for the proposed facility are tabulated in Exhibit D. An interference study is provided in Exhibit E, and a revised power density calculation follows as Exhibit F.

Because no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1224263 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

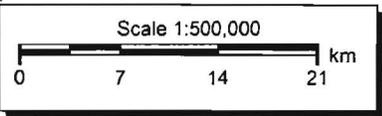
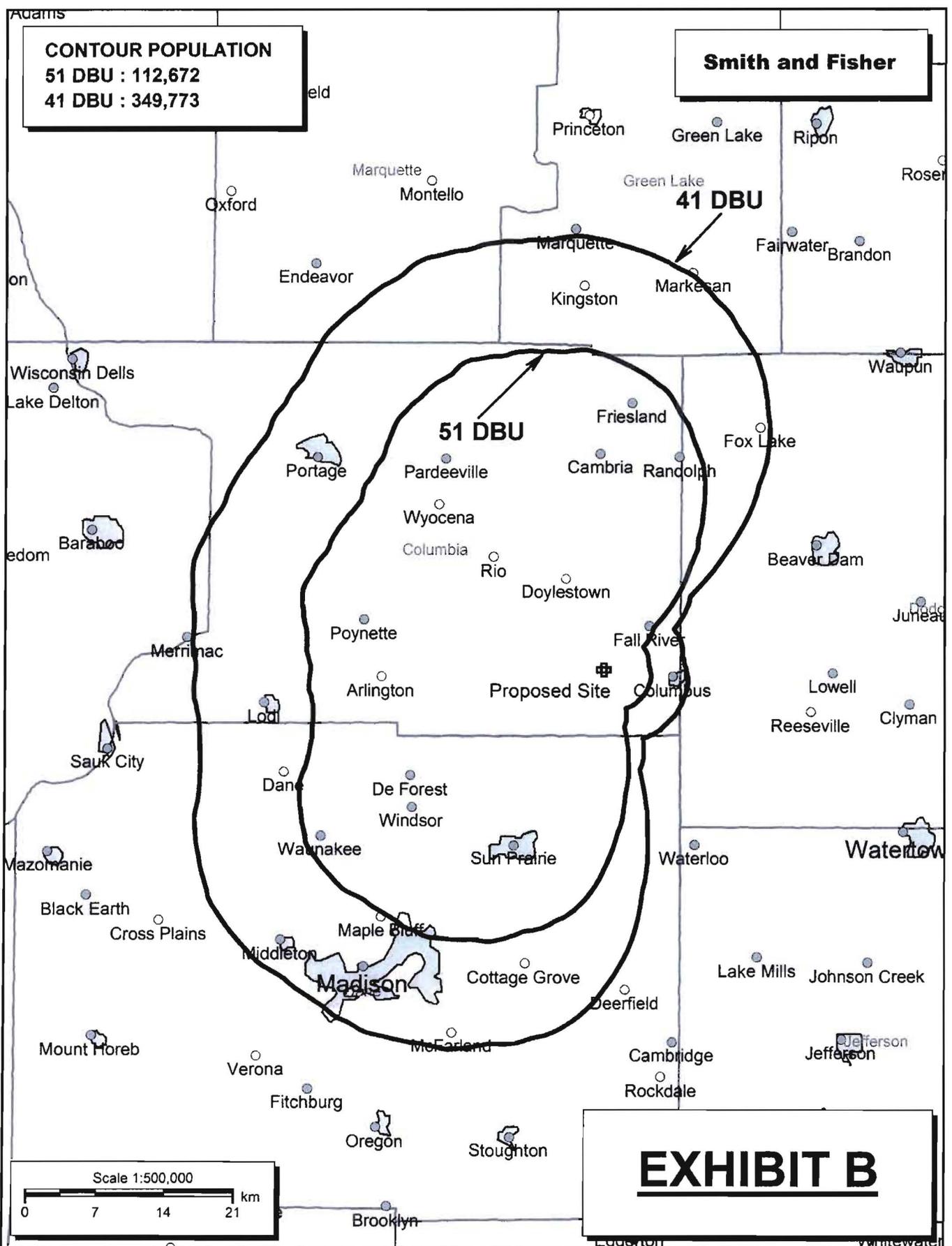
A handwritten signature in black ink, appearing to read 'K. T. Fisher', with a stylized flourish at the end.

KEVIN T. FISHER

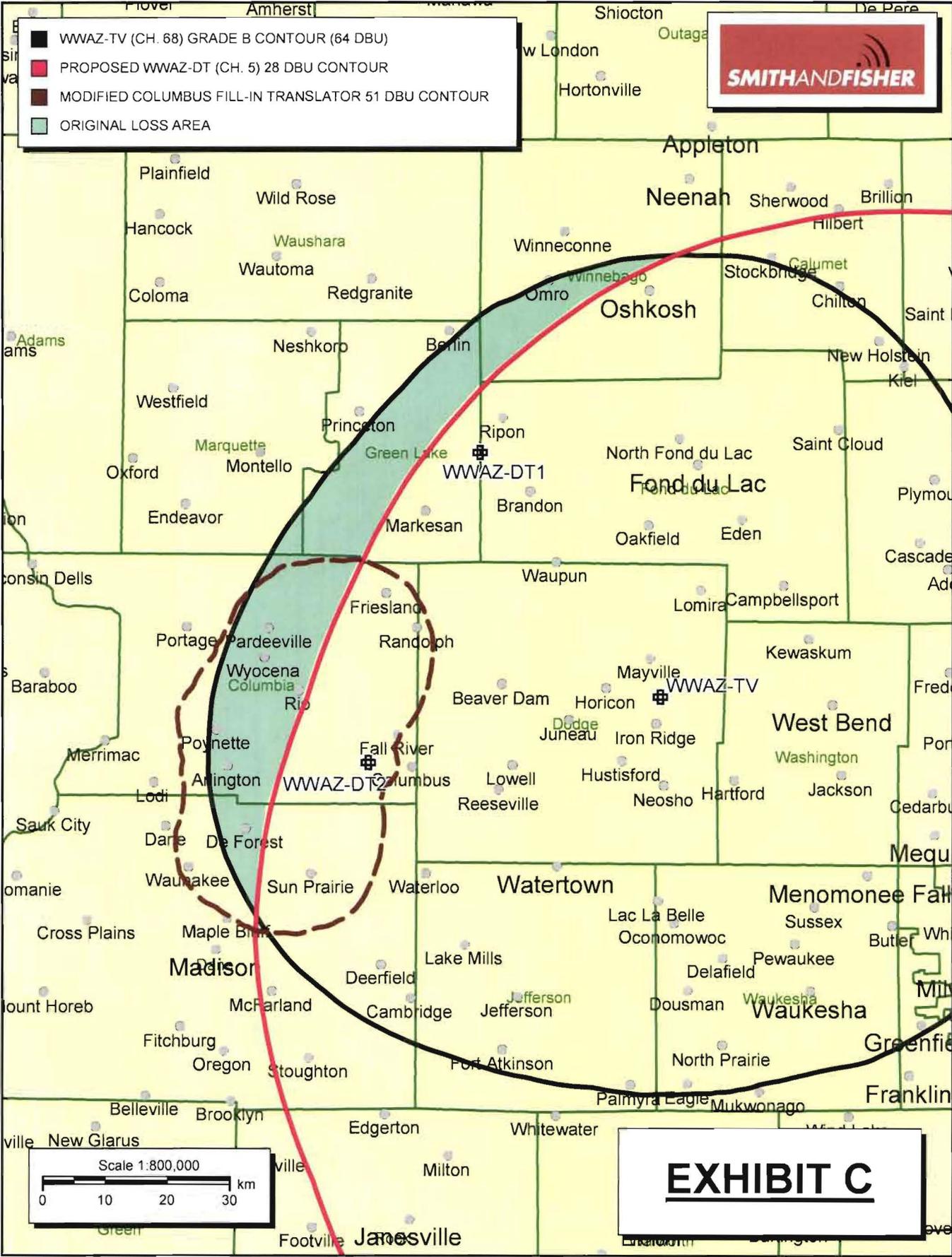
January 3, 2011

**CONTOUR POPULATION**  
51 DBU : 112,672  
41 DBU : 349,773

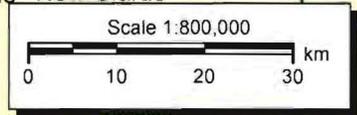
**Smith and Fisher**



**EXHIBIT B**



■ WWAZ-TV (CH. 68) GRADE B CONTOUR (64 DBU)  
 ■ PROPOSED WWAZ-DT (CH. 5) 28 DBU CONTOUR  
 ■ MODIFIED COLUMBUS FILL-IN TRANSLATOR 51 DBU CONTOUR  
 ■ ORIGINAL LOSS AREA



**EXHIBIT C**

SMITH AND FISHER

---

EXHIBIT D

PROPOSED OPERATING PARAMETERS

PROPOSED FILL-IN TRANSLATOR  
CHANNEL 30 – COLUMBUS, WISCONSIN

[MODIFICATION OF BDRTCT-20090223ABW]

Transmitter Power Output:	0.55 kw
Transmission Line Efficiency:	66.2%
Antenna Power Gain – Toward Horizon:	13.8
Antenna Power Gain – Main Lobe:	13.8
Effective Radiated Power – Toward Horizon:	5.0 kw
Effective Radiated Power – Main Lobe:	5.0 kw
Transmitter Make and Model:	Type-accepted
Transmission Line Make and Model:	Andrew HJ7-50A
Size and Type:	1-5/8" air heliax
Length:	350 feet*
Antenna Make and Model:	MCI 955312
Orientation	240° T
Beam Tilt	none
Radiation Center Above Ground:	99 meters
Radiation Center Above Mean Sea Level:	374meters

\*estimated

LONGLEY-RICE INTERFERENCE STUDY  
PROPOSED FILL-IN TRANSLATOR  
CHANNEL 30 – COLUMBUS, WISCONSIN  
[MODIFICATION OF BDRCT-20090223ABW]

We conducted a detailed interference study using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The software utilizes a 1-square kilometer cell size, calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 2000 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than that proposed herein) already is predicted to exist (also known as "masking"). A summary of the results of this study is provided in Exhibit E-2. It concludes that the facility proposed herein causes no significant new interference to any of the potentially affected analog or digital full-power or low-power television stations.

As a result, it is believed that the proposed facility complies with the requirements of Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030 of the Commission's Rules.



Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

\*\*\*\*\*

Start of Interference Analysis

Channel	Proposed Station		ARN
30	Call	City/State	USERRECORD01
	NEW SOUT	COLUMBUS WI	

Stations Potentially Affected by Proposed Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
15	WMTV	MADISON WI	45.1	LIC	BLCT	-
20040809	ABJ					
16	W16AY	WHITING WI	140.7	LIC	BLTTL	-
20001213	ABK					
22	960920YL	GREEN BAY WI	123.8	APP	BPCT	-
19960920	YL					
23	WIFR	FREEPORT IL	116.6	LIC	BMLCT	-
20040615	ABU					
23	W23BW	MADISON WI	44.5	LIC	BLTTA	-
20031125	AAQ					
23	W23BW	MADISON WI	44.5	APP	BPTTA	-
20030326	AHF					
27	WKOW-TV	MADISON WI	47.5	LIC	BLCT	-
20000306	AAW					
28	960722KR	SHEBOYGAN WI	72.1	APP	BPCT	-
19960722	KR					
29	960920IP	DUBUQUE IA	163.3	APP	BPET	-
19960920	IP					
29	WMAQ-TV	CHICAGO IL	202.3	LIC	BLCDDT	-
20010531	ACY					
29	W6SEE	JANESVILLE WI	73.3	CP	BPTT	-
20031218	AAAS					
29	W29DJ	SHEBOYGAN WI	100.9	CP	BDFCDTL	-
20080408	ABL					
29	W29DJ	SHEBOYGAN WI	96.2	LIC	BLTTL	-
20080221	AAP					
29	W29DJ	SHEBOYGAN WI	100.9	CP	BPTTL	-
20080311	ABX					
30	960710LA	DAVENPORT IA	229.4	APP	BPET	-
19960710	LA					
30	960508KF	DAVENPORT IA	247.5	APP	BPET	-
19960508	KF					
30	961001KU	DAVENPORT IA	235.2	APP	BPCT	-
19961001	KU					
30	WCRD-LP	CARTHAGE IL	116.6	CP	BDCCDTL	-
20061030	AMS					
30	W57DN	ELGIN IL	165.3	CP	BDISDTT	-
20060213	ACF					
30	WMBD-TV	PEORIA IL	303.3	CP MOD	BMPCDT	-
20060314	ABP					
30	WSPY-LP	PLANO IL	191.6	LIC	BLTTL	-
19900514	IR					

EXHIBIT E-2 continued

30	WTMS-LD	MINNEAPOLIS, ETC. MN	378.6	CP	BDCCDTL	-
20061010	ANC					
30	W30BU	GREEN BAY WI	144.0	LIC	BLTTL	-
20030923	AAD					
30	WHLA-TV	LA CROSSE WI	189.5	LIC	BMLEDT	-
20041013	AAL					
30	WVCY-TV	MILWAUKEE WI	101.3	LIC	BLCT	-
19830119	KI					
31	WFLD	CHICAGO IL	202.3	LIC	BLCDT	-
20050606	ABF					
31	WFLD	CHICAGO IL	202.3	CP	BPCDT	-
20080616	AAN					
31	W48BY	BEAVER DAM WI	16.8	APP	BPTTL	-
20011119	AAV					
31	WHLA-TV	LA CROSSE WI	189.5	LIC	BMLET	-
20041013	AAM					
31	WBWT-LP	MILWAUKEE WI	100.9	CP	BDCCDTL	-
20061025	ADF					
31	WFXS-DR	WITTENBERG WI	192.4	APP	BPRM	-
20080612	ADX					
31	WFXS	WITTENBERG WI	192.4	CP MOD	BMPCDT	-
20081117	ACB					
33	WFBN-LP	ROCKFORD IL	119.8	LIC	BLTTL	-
19890616	II					
34	W58CO	MADISON WI	42.8	APP	BPTTL	-
20020307	ABS					
38	W38CT	MADISON WI	44.5	LIC	BLTT	-
20021203	ACA					
38	WBWT-LP	MILWAUKEE WI	100.9	LIC	BLTTL	-
20070223	AGI					

\*\*\*\*\*

Study of this proposal found the following interference problem(s):

NONE.

POWER DENSITY CALCULATION  
PROPOSED FILL-IN TRANSLATOR  
CHANNEL 30 – COLUMBUS, WISCONSIN  
[MODIFICATION OF BDRCT-20090223ABW]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Columbus facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 5.0 kw, an antenna radiation center 99 meters above ground, and the vertical pattern of the MCI antenna, maximum power density two meters above ground of  $0.00022 \text{ mw/cm}^2$  is calculated to occur 90 meters northwest of the base of the tower. Since this is less than 0.1 percent of the  $0.38 \text{ mw/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 30 (566-572 MHz), this proposal may be excluded from consideration with respect to public exposure to nonionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive nonionizing radiation.

**EXHIBIT B**



## Application Search Details

[FCC](#)> [Media Bureau](#)> [MB-CDBS](#)> [CDBS Public Access](#)> [Application Search](#)

[Help](#) [site map](#)

## Application Search Details

**File Number:** BMPCDT-20110104ABC  
**Call Sign:** WWAZ-TV  
**Facility Id:** 60571  
**FRN:** 0010662575  
**Applicant Name:** WWAZ LICENSE, LLC  
**Frequency:**  
**Channel:** 15  
**Community of License:** RIPON, WI  
**Application Type:** MINOR MODIFICATION TO A CONSTRUCTION PERMIT  
**Status:** ACCEPTED FOR FILING  
**Status Date:** 01/05/2011  
**Expiration Date:**  
**Tolling Code:**  
**Application Service:** LD  
**Disposed Date:**  
**Accepted Date:** 01/05/2011  
**Last Public Notice:** 01/07/2011  
**Last Report Number:** 27398  
**Authorization** **Authorization not available**  
**Engineering Data** **[View Engineering Data](#)**  
**Legal Actions** **[View Legal Actions](#)**  
**PN Comment** **[Public Notice Comment](#)**  
**Correspondence Folder** **[View Correspondence Folder](#)**

[FCC Home](#) | [Search](#) | [Updates](#) | [E-Filing](#) | [Initiatives](#) | [For Consumers](#) | [Find People](#)

Please send comments via standard mail to the Federal Communications Commission, Consumer and Governmental Affairs Bureau, 445 12th Street, S.W., Washington, D.C., 20554. Questions can also be answered by calling the FCC's National Call Center, toll free, at 1-888-Call FCC (1-888-225-5322).

Federal Communications Commission  
 445 12th Street SW  
 Washington, DC 20554  
[More FCC Contact Information...](#)

Phone: 1-888-CALL-FCC (1-888-225-5322)  
 TTY: 1-888-TELL-FCC (1-888-835-5322)  
 Fax: 1-866-418-0232  
 E-mail: [fccinfo@fcc.gov](mailto:fccinfo@fcc.gov)

- [Privacy Policy](#)  
 - [Website Policies & Notices](#)  
 - [Required Browser Plug-ins](#)  
 - [Freedom of Information Act](#)



## Application Search Details

[FCC](#) > [Media Bureau](#) > [MB-CDBS](#) > [CDBS Public Access](#) > [Application Search](#)

[Help](#) [site map](#)

## Application Search Details

**File Number:** BMPCDT-20110104ABE  
**Call Sign:** WWAZ-TV  
**Facility Id:** 60571  
**FRN:** 0010662575  
**Applicant Name:** WWAZ LICENSE, LLC  
**Frequency:**  
**Channel:** 30  
**Community of License:** COLUMBUS, WI  
**Application Type:** MINOR MODIFICATION TO A CONSTRUCTION PERMIT  
**Status:** ACCEPTED FOR FILING  
**Status Date:** 01/05/2011  
**Expiration Date:**  
**Tolling Code:**  
**Application Service:** LD  
**Disposed Date:**  
**Accepted Date:** 01/05/2011  
**Last Public Notice:** 01/07/2011  
**Last Report Number:** 27398  
**Authorization** [Authorization not available](#)  
**Engineering Data** [View Engineering Data](#)  
**Legal Actions** [View Legal Actions](#)  
**PN Comment** [Public Notice Comment](#)  
**Correspondence Folder** [View Correspondence Folder](#)

---

[FCC Home](#) | [Search](#) | [Updates](#) | [E-Filing](#) | [Initiatives](#) | [For Consumers](#) | [Find People](#)

Please send comments via standard mail to the Federal Communications Commission, Consumer and Governmental Affairs Bureau, 445 12th Street, S.W., Washington, D.C., 20554. Questions can also be answered by calling the FCC's National Call Center, toll free, at 1-888-Call FCC (1-888-225-5322).

Federal Communications Commission  
 445 12th Street SW  
 Washington, DC 20554  
[More FCC Contact Information...](#)

Phone: 1-888-CALL-FCC (1-888-225-5322)  
 TTY: 1-888-TELL-FCC (1-888-835-5322)  
 Fax: 1-866-418-0232  
 E-mail: [fccinfo@fcc.gov](mailto:fccinfo@fcc.gov)

[- Privacy Policy](#)  
[- Website Policies & Notices](#)  
[- Required Browser Plug-ins](#)  
[- Freedom of Information Act](#)

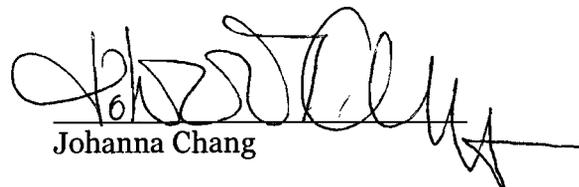
**Certificate of Service**

I, Johanna Chang, hereby certify that on this 7<sup>th</sup> day of January, 2011, I caused a copy of the foregoing "Supplement" to be served via U.S. mail, postage prepaid, or by hand delivery upon the following persons:

Barbara Kreisman, Chief\*  
Video Service Division  
Media Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

J. Brian DeBoice, Esquire  
Cohn and Marks LLP  
1920 N Street, NW, Suite 300  
Washington, DC 20036  
*Counsel for WDJT-TV Limited Partnership*

Tom W. Davidson, Esquire  
Akin Gump Strauss Hauer & Feld, LLP  
1333 New Hampshire Avenue, N.W.  
Washington, DC 20036  
*Counsel for WLS Television, Inc.*



Johanna Chang

\* indicates delivery by hand