

## **ENGINEERING EXHIBIT**

### **Incentive Auction Channel Reassignment**

#### **Application for Digital Television Station Construction Permit**

prepared for

#### **Gray Television Licensee, LLC**

WNDU-TV South Bend, IN

Facility ID 41674

Ch. 27 650 kW 310 m

*Gray Television Licensee, LLC (“Gray”)* is the licensee of digital television station WNDU-TV, Channel 42, Facility ID 41674, South Bend, IN. *Gray* herein proposes construction of the WNDU-TV post-auction facility on Channel 27. Reassignment of WNDU-TV from Channel 42 to Channel 27 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice (“CCRPN”*, DA 17-317, released April 13, 2017).

The proposed Channel 27 operation will employ a new antenna system to be top-mounted on the WNDU-TV tower in lieu of the existing Channel 42 antenna. *Gray* proposes to operate WNDU-TV with an effective radiated power (“ERP”) of 650 kW at 310 meters antenna height above average terrain (“HAAT”).

The existing tower structure corresponds to FCC Antenna Structure Registration (“ASR”) number 1027596. Due to the downward change in frequency, the proposed Channel 27 antenna has a longer length than the existing Channel 42 antenna. The structure’s overall height will increase by 1.0 meter to 308.2 meters above ground level. The FAA will be notified of the proposed height increase and, upon receipt of an FAA Determination of No Hazard, an application to modify the FCC ASR will be submitted. At that time an amendment will be supplied to this application to supply the ASR number.<sup>1</sup>

---

<sup>1</sup>As discussed with FCC staff, the ASR number is omitted on the accompanying Form 2100 because the LMS electronic filing system automatically pre-fills the overall structure height from ASR data, which presently is set to the existing height of 307.2 meters AGL. By omitting the ASR number, the proposed overall height can be entered on the form.

The proposed antenna is an elliptically polarized nondirectional Dielectric model TFU-31ETT/VP-R O4 (50 percent vertical polarization). The horizontally polarized ERP is 650 kW and the vertically polarized ERP is 325 kW.

A map is supplied as Figure 1 which depicts the standard predicted coverage contours. This map includes the location of South Bend, WNDU-TV's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 48 dBμ contour.

The proposed noise limited service contour ("NLSC") extends beyond that of the *CCRPN* parameters of 591 kW ERP and 312 meters HAAT.<sup>2</sup> The proposal complies with §73.3700(b)(ii) as described in the following.

WNDU-TV's reassignment facility experiences a loss of interference-free coverage area within the NLSC when compared to that of its baseline<sup>3</sup> pre-auction facility. Detailed analysis shows that an area of 52.0 square kilometers having a population of 4,952 persons which received interference-free service from the baseline WNDU-TV facility does not receive interference-free service from the reassignment parameters. A map is supplied as Figure 2 which shows the interference-free results for the *CCRPN* parameters and the baseline interference-free individual cells that are lost at reassignment. Therefore, WNDU-TV qualifies under §73.3700(b)(ii)(A) for a contour extension due the loss of interference-free coverage area resulting from the new channel assignment.

Interference study per FCC OET Bulletin 69<sup>4</sup> shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and

---

<sup>2</sup>There is no change in antenna height above ground or above mean sea level. The proposed WNDU-TV antenna HAAT is recalculated to be 310.4 meters, based on FCC 30 meter terrain data developed by OET.

<sup>3</sup>"*Final Digital Television Baseline Coverage Area And Population Served Information Related To Incentive Auction Repacking*," DA 15-1296, Public Notice, Released November 12, 2015.

<sup>4</sup>FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's

Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1. This satisfies §73.3700(b)(ii)(C) for the proposed NLSC extension.

The amount of NLSC extension does not exceed one percent in any direction. Figure 3 supplies a coverage contour comparison of the proposed WNDU-TV facility to the reassignment facility's contour and a one percent extension distance of the reassignment facility's contour. Here, the contour level is adjusted with the dipole factor to match FCC application processing. Table 1's results also demonstrate that the proposed contour is within the baseline contour plus one percent. Therefore the proposed contour extension complies with §73.3700(b)(ii)(B).

The proposed WNDU-TV facility's terrain-limited population provides a 102.9 percent match of the *CCRPN* baseline facility, as detailed in the following table. The OET Bulletin 69 report summary in Table 1 also concludes that the proposed service area population is more than 95 percent of the baseline population.

<b>Terrain Limited Population - Match of Reassignment</b>		
Population Summary (2010 Census) OET Bulletin 69: TVStudy	Reassignment Parameters	Proposed
Within Noise Limited Contour	1,807,909	1,863,764
Not affected by terrain losses	1,783,617	1,835,398
Match of Reassignment	---	<b>102.90%</b>

One AM station is located within 3.2 kilometers of the site. WSBT (Facility ID 73985, DA-2, 960 kHz, South Bend, IN) is located 1.3 km from the WNDU-TV site. The WNDU-TV tower is detuned at the AM station's frequency. *Gray* recognizes its obligations pursuant to §1.30002 and will coordinate the proposed construction with WSBT.

The site location is within the Canadian coordination zone (268 km to the Canada border). There are no Canada television stations or allotments located within the pertinent culling distances for interference analysis consideration, based on current FCC LMS data. For

that reason, and compliance with the one percent contour extension limit, further international coordination should not be necessary beyond that which established *CCRPN* parameters.<sup>5</sup>

The nearest FCC monitoring station is 113 km distant at Allegan, MI. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with “quiet” zones specified in §73.1030(a) and (b).

### **Human Exposure to Radiofrequency Electromagnetic Field**

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC’s OET Bulletin Number 65. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $3.7 \mu\text{W}/\text{cm}^2$ , which is 1.0 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal’s contribution is less than five percent.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC’s guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field.

---

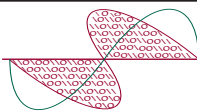
<sup>5</sup>See “*Incentive Auction Task Force and Media Bureau Announce Procedures for the Post-Incentive Auction Broadcast Transition*,” Public Notice, DA 17-106, released January 27, 2017, at para 38. “Applications in the U.S.-Canada border zone may not require additional coordination if they do not expand the noise-limited contour by more than one percent in any direction beyond that predicted by the technical parameters listed in the *Closing and Reassignment Public Notice*, provided that the proposed facilities would not cause more than 0.5 percent new station-to-station interference to Canadian assignments or allotments.”

*List of Attachments*

Figure 1	Proposed Coverage Contours
Figure 2	Reassignment Service Loss
Figure 3	Proposed Contour Expansion
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

**Chesapeake RF Consultants, LLC**

Joseph M. Davis, P.E.	June 27, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600

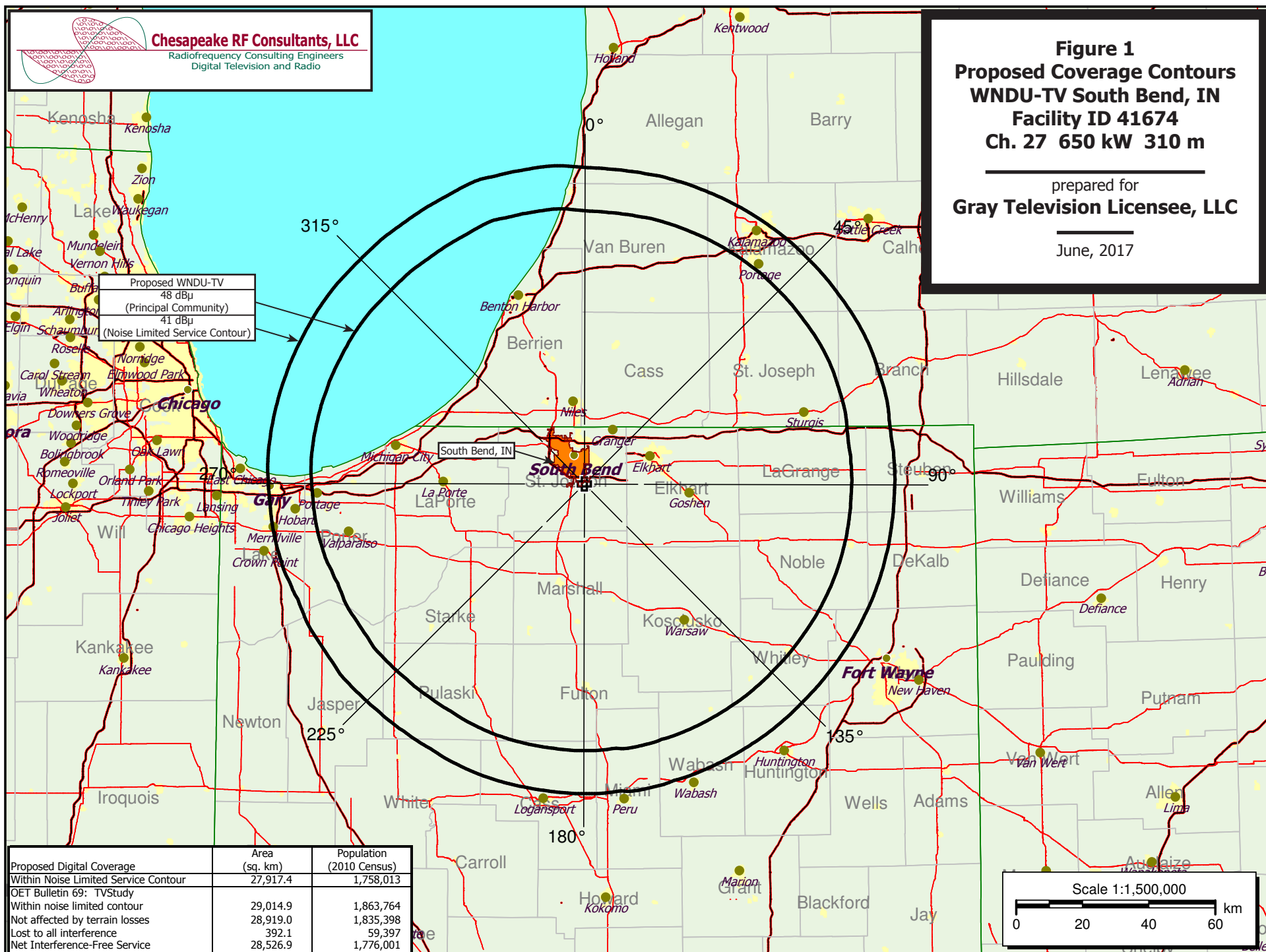


**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

**Figure 1**  
**Proposed Coverage Contours**  
**WNDU-TV South Bend, IN**  
**Facility ID 41674**  
**Ch. 27 650 kW 310 m**

prepared for  
**Gray Television Licensee, LLC**

June, 2017

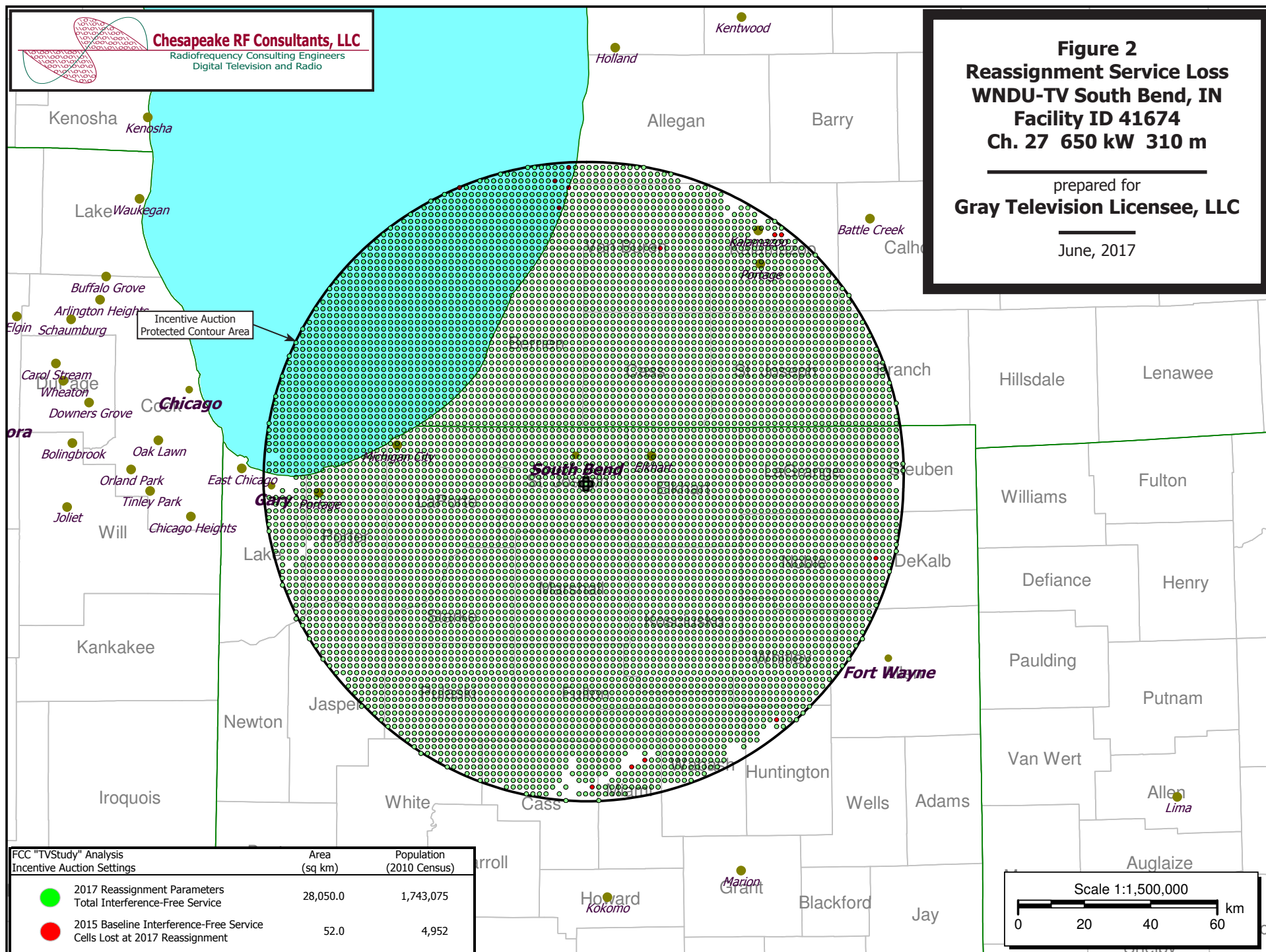


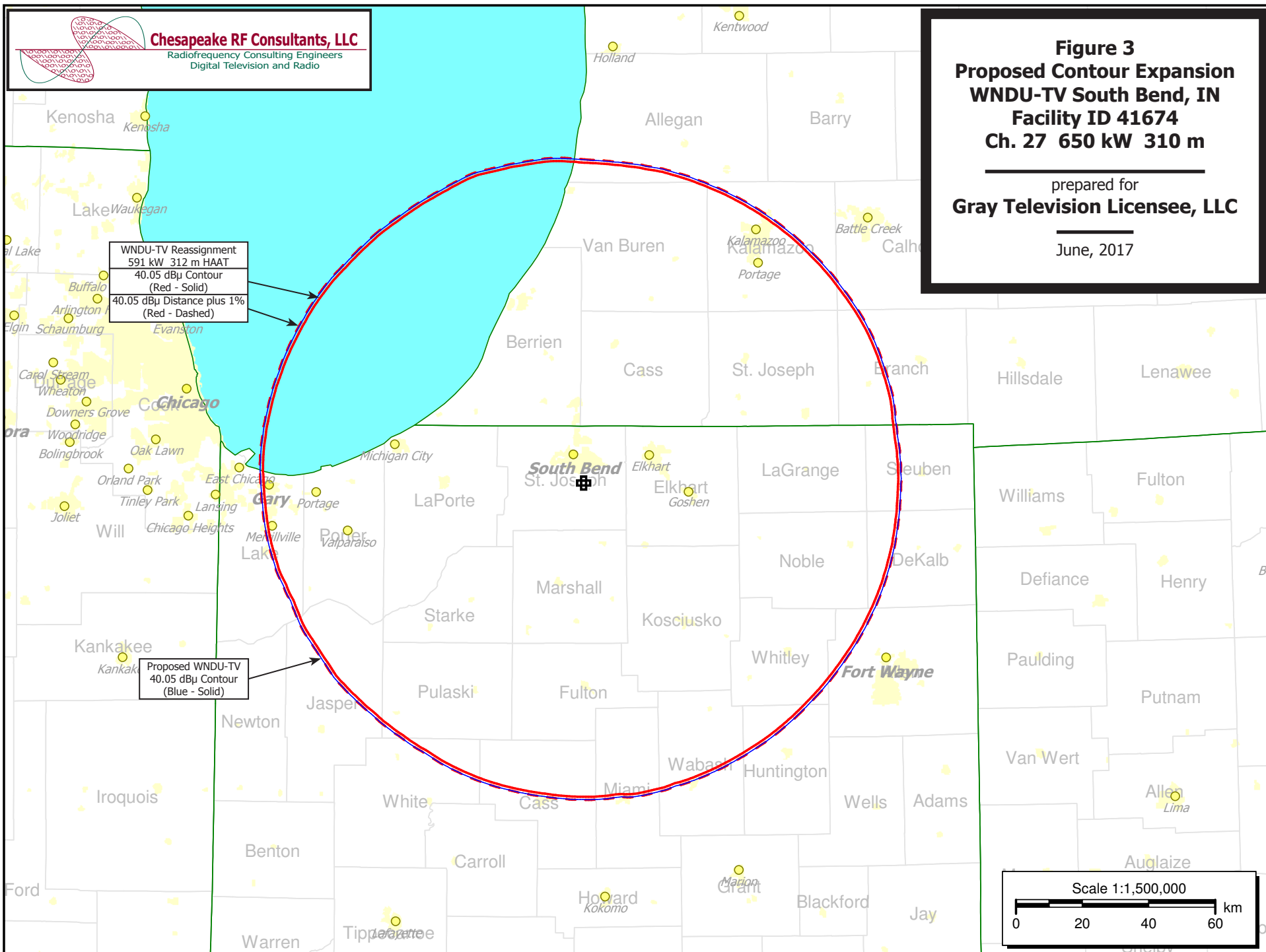




prepared for  
**Gray Television Licensee, LLC**

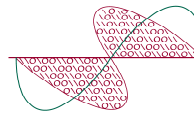
June, 2017







**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 1 of 11)



**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

tvstudy v2.2.2

Database: localhost, Study: WNDU-TV PROP 650KW, Model: Longley-Rice  
Start: 2017.06.27 11:26:34

Study created: 2017.06.27 11:26:28

Study build station data: LMS TV 2017-06-26 LMSTV

Proposal: WNDU-TV D27 DT APP SOUTH BEND, IN  
File number: WNDU-TV PROP 650KW  
Facility ID: 41674  
Station data: User record  
Record ID: 657  
Country: U.S.

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WPNV-CD	D26	DC	BL	CHICAGO, IL	DTVBL168237	121.4 km
WCMU-TV	D26	DT	LIC	MOUNT PLEASANT, MI	BLEDT20130710ABN	252.1
WUPW	D26	DT	APP	TOLEDO, OH	BLANK0000025186	230.0
WUPW	D26	DT	BL	TOLEDO, OH	DTVBL19190	230.0
W40CN-D	D27	DC	BL	SUGAR GROVE, IL	DTVBL71111	187.6
WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	244.4
WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	426.2
WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	293.9
W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	376.8
WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	326.4
WVTV	D27	DT	BL	MILWAUKEE, WI	DTVBL74174	216.2
WEDE-CD	D28	DC	BL	ARLINGTON HEIGHTS, IL	DTVBL66978	121.9
WIPX-TV	D28	DT	BL	BLOOMINGTON, IN	DTVBL10253	244.7
WIWU-CD	D28	DC	BL	MARION, IN	DTVBL29292	119.8
WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	160.6
WISN-TV	D28	DT	CP	MILWAUKEE, WI	BLANK0000024946	218.8
WISN-TV	D28	DT	BL	MILWAUKEE, WI	DTVBL65680	218.8

No non-directional AM stations found within 0.8 km

Directional AM stations within 3.2 km:

WSBT 960 L DA2 D SOUTH BEND, IN BL  
WSBT 960 L DA2 N SOUTH BEND, IN BL

Record parameters as studied:

Channel: D27  
Latitude: 41 36 20.00 N (NAD83)  
Longitude: 86 12 46.00 W  
Height AMSL: 555.1 m  
HAAT: 310.4 m  
Peak ERP: 650 kW  
Antenna: Omnidirectional

40.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	650 kW	320.3 m	97.2 km
45.0	650	322.2	97.4
90.0	650	303.2	95.3
135.0	650	298.8	94.7
180.0	650	301.4	95.1
225.0	650	296.5	94.4
270.0	650	318.9	97.0
315.0	650	322.2	97.4

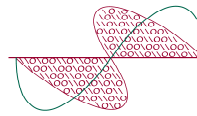
Proposal service area is within baseline plus 1.0%  
Proposal service area population is more than 95.0% of baseline

\*\*Proposal is within coordination distance of Canadian border  
Distance to Canadian border: 258.3 km

Distance to Mexican border: 1894.6 km

Conditions at FCC monitoring station: Allegan MI  
Bearing: 10.7 degrees Distance: 113.2 km

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 2 of 11)



**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

ERP: 650 kW Field strength: 47.1 dBu, 0.2 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 270.5 degrees Distance: 1602.7 km

Study cell size: 2.00 km  
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%  
Maximum new IX to LPTV: 2.00%

-----  
Interference to DTVBL168237 BL, scenario 1  
Proposal causes no interference.

-----  
Interference to DTVBL168237 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to BLEDT20130710ABN LIC, scenario 1  
Proposal causes no interference.

-----  
Interference to BLEDT20130710ABN LIC, scenario 2  
Proposal causes no interference.

-----  
Interference to BLEDT20130710ABN LIC, scenario 3  
Proposal causes no interference.

-----  
Interference to BLEDT20130710ABN LIC, scenario 4  
Proposal causes no interference.

-----  
Interference to BLANK0000025186 APP, scenario 1  
Proposal causes no interference.

-----  
Interference to BLANK0000025186 APP, scenario 2  
Proposal causes no interference.

-----  
Interference to BLANK0000025186 APP, scenario 3  
Proposal causes no interference.

-----  
Interference to BLANK0000025186 APP, scenario 4  
Proposal causes no interference.

-----  
Interference to DTVBL19190 BL, scenario 1  
Proposal causes no interference.

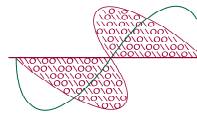
-----  
Interference to DTVBL19190 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to DTVBL19190 BL, scenario 3  
Proposal causes no interference.

-----  
Interference to DTVBL19190 BL, scenario 4  
Proposal causes no interference.

-----  
Interference to DTVBL71111 BL, scenario 1

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 3 of 11)



**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

Proposal causes no interference.

-----  
Interference to DTVBL71111 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to DTVBL56523 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	244.4 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	244.4
	WCPO-TV	D26	DT	BL	CINCINNATI, OH	DTVBL59438	145.3
	W40CN-D	D27	DC	BL	SUGAR GROVE, IL	DTVBL71111	329.4
	WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	215.5
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	273.9
	WIPX-TV	D28	DT	BL	BLOOMINGTON, IN	DTVBL10253	0.5
	WIWU-CD	D28	DC	BL	MARION, IN	DTVBL29292	140.9
-----							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	22816.4	2,362,145	22692.7	2,359,560	22340.7	2,346,369	0.02 0.00
-----							
Undesired			Total IX		Unique IX, before		Unique IX, after
WNDU-TV D27 DT BL			140.6	2,899	124.7	2,549	
WNDU-TV D27 DT APP			148.6	2,986		128.8	2,560
WTVQ-DT D27 DT BL			67.9	1,211	48.0	769	48.0 769
WTTE D27 DT BL			75.4	4,538	67.4	4,295	63.5 4,219
WIPX-TV D28 DT BL			96.0	5,228	92.0	5,136	92.0 5,136

-----  
Interference to DTVBL56523 BL, scenario 2

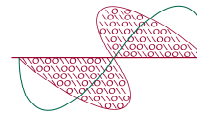
	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	244.4 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	244.4
	WCPO-TV	D26	DT	BL	CINCINNATI, OH	DTVBL59438	145.3
	W40CN-D	D27	DC	BL	SUGAR GROVE, IL	DTVBL71111	329.4
	WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	215.5
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	273.9
	WIPX-TV	D28	DT	BL	BLOOMINGTON, IN	DTVBL10253	0.5
	WIWU-CD	D28	DC	BL	MARION, IN	DTVBL29292	140.9
-----							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	22816.4	2,362,145	22692.7	2,359,560	22340.7	2,346,369	0.02 0.00
-----							
Undesired			Total IX		Unique IX, before		Unique IX, after
WNDU-TV D27 DT BL			140.6	2,899	124.7	2,549	
WNDU-TV D27 DT APP			148.6	2,986		128.8	2,560
WTVQ-DT D27 DT BL			67.9	1,211	48.0	769	48.0 769
WTTE D27 DT BL			75.4	4,538	67.4	4,295	63.5 4,219
WIPX-TV D28 DT BL			96.0	5,228	92.0	5,136	92.0 5,136

-----  
Interference to DTVBL51597 BL, scenario 1  
Proposal causes no interference.

-----  
Interference to DTVBL455 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	APP	TOLEDO, OH	BLANK0000025186	109.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
	WTAE-TV	D27	DT	CP	PITTSBURGH, PA	BLANK0000024642	360.5

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 4 of 11)



WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
WLPC-CD	D28	DC	CP	Redford, MI	BLANK0000024873	27.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11233.2 4,610,124	11157.3 4,604,486	11053.2 4,581,867	11045.2 4,579,839	0.07 0.04
5548.2 543,292	5548.2 543,292	5548.2 543,292	5548.2 543,292	0.00 0.00
(in Canada)				

Undesired	Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	104.0 22,619	104.0 22,619	
WNDU-TV D27 DT APP	112.1 24,647		112.1 24,647

-----  
Interference to DTVBL455 BL, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	BL	TOLEDO, OH	DTVBL19190	109.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
	WTAE-TV	D27	DT	CP	PITTSBURGH, PA	BLANK0000024642	360.5
	WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
	WLPC-CD	D28	DC	CP	Redford, MI	BLANK0000024873	27.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11233.2 4,610,124	11157.3 4,604,486	11053.2 4,581,867	11045.2 4,579,839	0.07 0.04
5548.2 543,292	5548.2 543,292	5548.2 543,292	5548.2 543,292	0.00 0.00
(in Canada)				

Undesired	Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	104.0 22,619	104.0 22,619	
WNDU-TV D27 DT APP	112.1 24,647		112.1 24,647

-----  
Interference to DTVBL455 BL, scenario 3

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	APP	TOLEDO, OH	BLANK0000025186	109.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
	WTAE-TV	D27	DT	CP	PITTSBURGH, PA	BLANK0000024642	360.5
	WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
	WLPC-CD	D28	DC	BL	Redford, MI	DTVBL168471	27.9

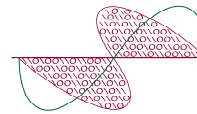
Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11233.2 4,610,124	11157.3 4,604,486	11053.2 4,581,867	11045.2 4,579,839	0.07 0.04
5548.2 543,292	5548.2 543,292	5548.2 543,292	5548.2 543,292	0.00 0.00
(in Canada)				

Undesired	Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	104.0 22,619	104.0 22,619	
WNDU-TV D27 DT APP	112.1 24,647		112.1 24,647

-----  
Interference to DTVBL455 BL, scenario 4

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	BL	TOLEDO, OH	DTVBL19190	109.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 5 of 11)



**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
WTAE-TV	D27	DT	CP	PITTSBURGH, PA	BLANK0000024642	360.5
WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
WLPC-CD	D28	DC	BL	Redford, MI	DTVBL168471	27.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
11233.2	4,610,124	11157.3	4,604,486	11053.2	4,581,867	11045.2	4,579,839	0.07	0.04
5548.2	543,292	5548.2	543,292	5548.2	543,292	5548.2	543,292	0.00	0.00

(in Canada)

Undesired		Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	104.0	22,619	104.0	22,619
WNDU-TV D27 DT APP	112.1	24,647		112.1 24,647

-----  
Interference to DTVBL455 BL, scenario 5

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	APP	TOLEDO, OH	BLANK0000025186	109.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
	WTAE-TV	D27	DT	BL	PITTSBURGH, PA	DTVBL65681	360.5
	WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
	WLPC-CD	D28	DC	CP	Redford, MI	BLANK0000024873	27.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
11233.2	4,610,124	11157.3	4,604,486	11053.2	4,581,867	11045.2	4,579,839	0.07	0.04
5548.2	543,292	5548.2	543,292	5548.2	543,292	5548.2	543,292	0.00	0.00

(in Canada)

Undesired		Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	104.0	22,619	104.0	22,619
WNDU-TV D27 DT APP	112.1	24,647		112.1 24,647

-----  
Interference to DTVBL455 BL, scenario 6

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	BL	TOLEDO, OH	DTVBL19190	109.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
	WTAE-TV	D27	DT	BL	PITTSBURGH, PA	DTVBL65681	360.5
	WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
	WLPC-CD	D28	DC	CP	Redford, MI	BLANK0000024873	27.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
11233.2	4,610,124	11157.3	4,604,486	11053.2	4,581,867	11045.2	4,579,839	0.07	0.04
5548.2	543,292	5548.2	543,292	5548.2	543,292	5548.2	543,292	0.00	0.00

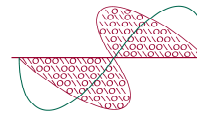
(in Canada)

Undesired		Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	104.0	22,619	104.0	22,619
WNDU-TV D27 DT APP	112.1	24,647		112.1 24,647

-----  
Interference to DTVBL455 BL, scenario 7

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	APP	TOLEDO, OH	BLANK0000025186	109.9

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 6 of 11)



W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1
WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
WTAE-TV	D27	DT	BL	PITTSBURGH, PA	DTVBL65681	360.5
WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
WLPC-CD	D28	DC	BL	Redford, MI	DTVBL168471	27.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11233.2 4,610,124	11157.3 4,604,486	11053.2 4,581,867	11045.2 4,579,839	0.07 0.04
5548.2 543,292	5548.2 543,292	5548.2 543,292	5548.2 543,292	0.00 0.00

(in Canada)

Undesired	Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL 104.0	22,619	104.0 22,619	
WNDU-TV D27 DT APP 112.1	24,647		112.1 24,647

-----  
Interference to DTVBL455 BL, scenario 8

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	293.9 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	293.9
	WUPW	D26	DT	BL	TOLEDO, OH	DTVBL19190	109.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	163.2
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	291.1
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	238.9
	WTAE-TV	D27	DT	BL	PITTSBURGH, PA	DTVBL65681	360.5
	WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	144.9
	WLPC-CD	D28	DC	BL	Redford, MI	DTVBL168471	27.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11233.2 4,610,124	11157.3 4,604,486	11053.2 4,581,867	11045.2 4,579,839	0.07 0.04
5548.2 543,292	5548.2 543,292	5548.2 543,292	5548.2 543,292	0.00 0.00

(in Canada)

Undesired	Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL 104.0	22,619	104.0 22,619	
WNDU-TV D27 DT APP 112.1	24,647		112.1 24,647

-----  
Interference to DTVBL41074 BL, scenario 1  
Proposal causes no interference.

-----  
Interference to DTVBL41074 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to DTVBL41074 BL, scenario 3  
Proposal causes no interference.

-----  
Interference to DTVBL41074 BL, scenario 4  
Proposal causes no interference.

-----  
Interference to DTVBL41074 BL, scenario 5  
Proposal causes no interference.

-----  
Interference to DTVBL41074 BL, scenario 6  
Proposal causes no interference.

-----  
Interference to DTVBL41074 BL, scenario 7  
Proposal causes no interference.

-----  
Interference to DTVBL41074 BL, scenario 8  
Proposal causes no interference.



**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 7 of 11)



-----  
Interference to DTVBL74137 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	326.4 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	326.4
	WCPO-TV	D26	DT	BL	CINCINNATI, OH	DTVBL59438	155.6
	WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	273.9
	WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	242.5
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	291.1
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	195.8
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	340.9
	WTAE-TV	D27	DT	CP	PITTSBURGH, PA	BLANK0000024642	276.2
	WPXR-TV	D27	DT	BL	ROANOKE, VA	DTVBL70251	393.6
	WSYX	D28	DT	BL	COLUMBUS, OH	DTVBL56549	0.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
26818.8		2,635,986		25983.2		2,557,291	0.06 0.24
				2,593,830		25402.2	
				2,563,402		25386.1	
Undesired			Total IX		Unique IX, before		Unique IX, after
WNDU-TV D27 DT BL			196.8		12,893		48.1 1,869
WNDU-TV D27 DT APP			216.9		19,249		64.2 7,980
WCPO-TV D26 DT BL			11.9		279		0.0 0
WTTV D27 DT BL			217.0		17,052		56.3 4,525
WTVQ-DT D27 DT BL			159.9		11,285		67.8 998
WADL D27 DT BL			68.1		1,449		8.0 194
W16DO-D D27 DC BL			44.0		1,106		8.0 113
WQLN D27 DT BL			12.0		535		0.0 0
WTAE-TV D27 DT CP			220.2		9,922		156.3 8,143

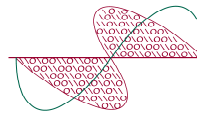
-----  
Interference to DTVBL74137 BL, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	326.4 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	326.4
	WCPO-TV	D26	DT	BL	CINCINNATI, OH	DTVBL59438	155.6
	WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	273.9
	WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	242.5
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	291.1
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	195.8
	WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	340.9
	WTAE-TV	D27	DT	CP	PITTSBURGH, PA	BLANK0000024642	276.2
	WPXR-TV	D27	DT	BL	ROANOKE, VA	DTVBL70251	393.6
	WSYX	D28	DT	BL	COLUMBUS, OH	DTVBL56549	0.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
26818.8		2,635,986		25983.2		2,557,291	0.06 0.24
				2,593,830		25402.2	
				2,563,402		25386.1	
Undesired			Total IX		Unique IX, before		Unique IX, after
WNDU-TV D27 DT BL			196.8		12,893		48.1 1,869
WNDU-TV D27 DT APP			216.9		19,249		64.2 7,980
WCPO-TV D26 DT BL			11.9		279		0.0 0
WTTV D27 DT BL			217.0		17,052		56.3 4,525
WTVQ-DT D27 DT BL			159.9		11,285		67.8 998
WADL D27 DT BL			68.1		1,449		8.0 194
W16DO-D D27 DC BL			44.0		1,106		8.0 113
WQLN D27 DT BL			12.0		535		0.0 0
WTAE-TV D27 DT CP			220.2		9,922		156.3 8,143

-----  
Interference to DTVBL74137 BL, scenario 3

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	326.4 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	326.4
	WCPO-TV	D26	DT	BL	CINCINNATI, OH	DTVBL59438	155.6

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 8 of 11)



**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	273.9
WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	242.5
WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	291.1
W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	195.8
WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	340.9
WTAE-TV	D27	DT	BL	PITTSBURGH, PA	DTVBL65681	276.2
WPXR-TV	D27	DT	BL	ROANOKE, VA	DTVBL70251	393.6
WSYX	D28	DT	BL	COLUMBUS, OH	DTVBL56549	0.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26818.8 2,635,986	25983.2 2,593,830	25390.2 2,562,866	25374.2 2,556,755	0.06 0.24

Undesired	Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	196.8 12,893	48.1 1,869	
WNDU-TV D27 DT APP	216.9 19,249		64.2 7,980
WCPO-TV D26 DT BL	11.9 279	0.0 0	0.0 0
WTTV D27 DT BL	217.0 17,052	56.3 4,525	52.3 4,280
WTVQ-DT D27 DT BL	159.9 11,285	67.8 998	67.8 998
WADL D27 DT BL	68.1 1,449	8.0 194	8.0 194
W16DO-D D27 DC BL	44.0 1,106	8.0 113	8.0 113
WQLN D27 DT BL	12.0 535	0.0 0	0.0 0
WTAE-TV D27 DT BL	232.2 10,458	168.2 8,679	168.2 8,679

Interference to DTVBL74137 BL, scenario 4

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	
Undesireds: WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	326.4 km
WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	326.4
WCPO-TV	D26	DT	BL	CINCINNATI, OH	DTVBL59438	155.6
WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	273.9
WTVQ-DT	D27	DT	BL	LEXINGTON, KY	DTVBL51597	242.5
WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	291.1
W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	195.8
WQLN	D27	DT	BL	ERIE, PA	DTVBL53716	340.9
WTAE-TV	D27	DT	BL	PITTSBURGH, PA	DTVBL65681	276.2
WPXR-TV	D27	DT	BL	ROANOKE, VA	DTVBL70251	393.6
WSYX	D28	DT	BL	COLUMBUS, OH	DTVBL56549	0.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26818.8 2,635,986	25983.2 2,593,830	25390.2 2,562,866	25374.2 2,556,755	0.06 0.24

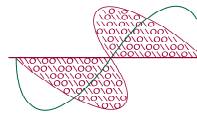
Undesired	Total IX	Unique IX, before	Unique IX, after
WNDU-TV D27 DT BL	196.8 12,893	48.1 1,869	
WNDU-TV D27 DT APP	216.9 19,249		64.2 7,980
WCPO-TV D26 DT BL	11.9 279	0.0 0	0.0 0
WTTV D27 DT BL	217.0 17,052	56.3 4,525	52.3 4,280
WTVQ-DT D27 DT BL	159.9 11,285	67.8 998	67.8 998
WADL D27 DT BL	68.1 1,449	8.0 194	8.0 194
W16DO-D D27 DC BL	44.0 1,106	8.0 113	8.0 113
WQLN D27 DT BL	12.0 535	0.0 0	0.0 0
WTAE-TV D27 DT BL	232.2 10,458	168.2 8,679	168.2 8,679

Interference to DTVBL74174 BL, scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WVTV	D27	DT	BL	MILWAUKEE, WI	DTVBL74174	
Undesireds: WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	216.2 km
WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	216.2
WPVN-CD	D26	DC	BL	CHICAGO, IL	DTVBL168237	136.0
WKOW	D26	DT	LIC	MADISON, WI	BLCDT20111006AAO	132.4
KFXA	D27	DT	LIC	CEDAR RAPIDS, IA	BLCDT20050713ABD	360.0
W40CN-D	D27	DC	BL	SUGAR GROVE, IL	DTVBL71111	151.4
WHWC-TV	D27	DT	LIC	MENOMONIE, WI	BLEDT20040824AAF	383.3
WEDE-CD	D28	DC	BL	ARLINGTON HEIGHTS, IL	DTVBL66978	137.0
WISN-TV	D28	DT	CP	MILWAUKEE, WI	BLANK0000024946	2.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
27061.8 2,999,694	26869.0 2,987,224	25838.4 2,912,845	25790.4 2,909,642	0.19 0.11

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 9 of 11)



Undesired		Total IX	Unique IX, before		Unique IX, after	
WNDU-TV D27 DT BL	432.2	50,295	320.5	25,641		
WNDU-TV D27 DT APP	484.2	53,513			368.5	28,844
WPVN-CD D26 DC BL	23.9	20,709	4.0	1,333	4.0	1,333
WKOW D26 DT LIC	638.0	25,109	546.3	20,522	542.4	20,507
KFXA D27 DT LIC	8.0	79	0.0	0	0.0	0
W40CN-D D27 DC BL	16.1	2,180	4.0	61	4.0	61
WHWC-TV D27 DT LIC	8.0	15	8.0	15	8.0	15
WISN-TV D28 DT CP	63.9	2,610	20.1	599	20.1	599

-----  
Interference to DTVBL74174 BL, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WVTV	D27	DT	BL	MILWAUKEE, WI	DTVBL74174	
Undesireds:	WNDU-TV	D27	DT	BL	SOUTH BEND, IN	DTVBL41674	216.2 km
	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	216.2
	WPVN-CD	D26	DC	BL	CHICAGO, IL	DTVBL168237	136.0
	WKOW	D26	DT	LIC	MADISON, WI	BLCDT20111006AAO	132.4
	KFXA	D27	DT	LIC	CEDAR RAPIDS, IA	BLCDT20050713ABD	360.0
	W40CN-D	D27	DC	BL	SUGAR GROVE, IL	DTVBL71111	151.4
	WHWC-TV	D27	DT	LIC	MENOMONIE, WI	BLEDT20040824AAF	383.3
	WEDE-CD	D28	DC	BL	ARLINGTON HEIGHTS, IL	DTVBL66978	137.0
	WISN-TV	D28	DT	BL	MILWAUKEE, WI	DTVBL65680	2.6
-----							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	27061.8	2,999,694	26869.0	2,987,224	25838.4	2,912,845	25790.4 2,909,642 0.19 0.11

Undesired		Total IX	Unique IX, before		Unique IX, after	
WNDU-TV D27 DT BL	432.2	50,295	320.5	25,641		
WNDU-TV D27 DT APP	484.2	53,513			368.5	28,844
WPVN-CD D26 DC BL	23.9	20,709	4.0	1,333	4.0	1,333
WKOW D26 DT LIC	638.0	25,109	546.3	20,522	542.4	20,507
KFXA D27 DT LIC	8.0	79	0.0	0	0.0	0
W40CN-D D27 DC BL	16.1	2,180	4.0	61	4.0	61
WHWC-TV D27 DT LIC	8.0	15	8.0	15	8.0	15
WISN-TV D28 DT BL	59.9	2,528	20.1	599	20.1	599

-----  
Interference to DTVBL66978 BL, scenario 1  
Proposal causes no interference.

-----  
Interference to DTVBL66978 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to DTVBL10253 BL, scenario 1  
Proposal causes no interference.

-----  
Interference to DTVBL10253 BL, scenario 2  
Proposal causes no interference.

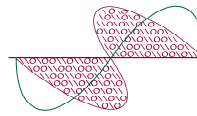
-----  
Interference to DTVBL10253 BL, scenario 3  
Proposal causes no interference.

-----  
Interference to DTVBL10253 BL, scenario 4  
Proposal causes no interference.

-----  
Interference to DTVBL10253 BL, scenario 5  
Proposal causes no interference.

-----  
Interference to DTVBL10253 BL, scenario 6  
Proposal causes no interference.

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 10 of 11)



**Chesapeake RF Consultants, LLC**  
Radiofrequency Consulting Engineers  
Digital Television and Radio

Interference to DTVBL10253 BL, scenario 7  
Proposal causes no interference.

-----  
Interference to DTVBL10253 BL, scenario 8  
Proposal causes no interference.

-----  
Interference to DTVBL29292 BL, scenario 1  
Proposal causes no interference.

-----  
Interference to DTVBL29292 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to DTVBL29292 BL, scenario 3  
Proposal causes no interference.

-----  
Interference to DTVBL29292 BL, scenario 4  
Proposal causes no interference.

-----  
Interference to DTVBL74094 BL, scenario 1  
Proposal causes no interference.

-----  
Interference to DTVBL74094 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to DTVBL74094 BL, scenario 3  
Proposal causes no interference.

-----  
Interference to DTVBL74094 BL, scenario 4  
Proposal causes no interference.

-----  
Interference to BLANK0000024946 CP, scenario 1  
Proposal causes no interference.

-----  
Interference to BLANK0000024946 CP, scenario 2  
Proposal causes no interference.

-----  
Interference to BLANK0000024946 CP, scenario 3  
Proposal causes no interference.

-----  
Interference to BLANK0000024946 CP, scenario 4  
Proposal causes no interference.

-----  
Interference to DTVBL65680 BL, scenario 1  
Proposal causes no interference.

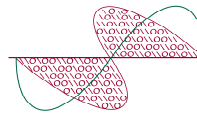
-----  
Interference to DTVBL65680 BL, scenario 2  
Proposal causes no interference.

-----  
Interference to DTVBL65680 BL, scenario 3  
Proposal causes no interference.

-----  
Interference to DTVBL65680 BL, scenario 4  
Proposal causes no interference.

-----  
Interference to proposal, scenario 1

**Table 1 WNDU-TV OET Bulletin 69 Interference Study**  
(page 11 of 11)



3.24% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WNDU-TV	D27	DT	APP	SOUTH BEND, IN	WNDU-TV PROP 650KW	
Undesireds:	WPVN-CD	D26	DC	BL	CHICAGO, IL	DTVBL168237	121.4 km
	W40CN-D	D27	DC	BL	SUGAR GROVE, IL	DTVBL71111	187.6
	WTTV	D27	DT	BL	BLOOMINGTON, IN	DTVBL56523	244.4
	WADL	D27	DT	BL	MOUNT CLEMENS, MI	DTVBL455	293.9
	W16DO-D	D27	DC	BL	CLEVELAND, OH	DTVBL41074	376.8
	WTTE	D27	DT	BL	COLUMBUS, OH	DTVBL74137	326.4
	WVTV	D27	DT	BL	MILWAUKEE, WI	DTVBL74174	216.2
	WEDE-CD	D28	DC	BL	ARLINGTON HEIGHTS, IL	DTVBL66978	121.9
	WIWU-CD	D28	DC	BL	MARION, IN	DTVBL29292	119.8
	WSYM-TV	D28	DT	BL	LANSING, MI	DTVBL74094	160.6

Service area		Terrain-limited		IX-free		Percent IX	
29014.9	1,863,764	28919.0	1,835,398	28526.9	1,776,001	1.36	3.24
Undesired		Total IX		Unique IX		Prcnt Unique IX	
WPVN-CD	D26 DC BL	8.0	0	0.0	0	0.00	0.00
WTTV	D27 DT BL	227.1	13,057	195.3	12,118	0.68	0.66
WADL	D27 DT BL	20.0	2,888	12.0	1,753	0.04	0.10
WTTE	D27 DT BL	8.1	127	4.0	89	0.01	0.00
WVTV	D27 DT BL	160.9	45,126	132.9	43,363	0.46	2.36
WIWU-CD	D28 DC BL	19.9	311	0.0	0	0.00	0.00

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	41674
	State	Indiana
	City	SOUTH BEND
	DTV Channel	27
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	1

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	No
	ASR Number	
Coordinates (NAD83)	Latitude	41° 36' 20.0" N+
	Longitude	086° 12' 46.0" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	308.2 meters
	Support Structure Height	288.6 meters
	Ground Elevation (AMSL)	257.6 meters
Antenna Data	Height of Radiation Center Above Ground Level	297.5 meters
	Height of Radiation Center Above Average Terrain	310.4 meters
	Height of Radiation Center Above Mean Sea Level	555.1 meters
	Effective Radiated Power	650 kW



Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TFU-31ETT/VP-R O4
	Rotation	
	Electrical Beam Tilt	0.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Elliptical
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Construction  
Permit  
Certifications

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	No
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See Section 1.1306 of 47 C.F.R.)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes