

ENGINEERING STATEMENT  
AMENDMENT OF PENDING DISPLACEMENT APPLICATION  
DIGITAL TRANS LATOR LICENSE TO CHANGE CHANNEL  
PER FCC LETTER DATED OCTOBER 1, 2018  
ON BEHALF OF WITF, INC.  
W33CR-D, CHAMBERSBURG, PENNSYLVANIA  
CHANNEL 34 15 KW ND ERP 720.3 METERS RC/AMSL  
FACILITY ID 73081

DECEMBER 2018

COHEN, DIPPELL AND EVERIST, P.C.  
CONSULTING ENGINEERS  
RADIO AND TELEVISION  
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington                    )  
  ) ss  
District of Columbia                )

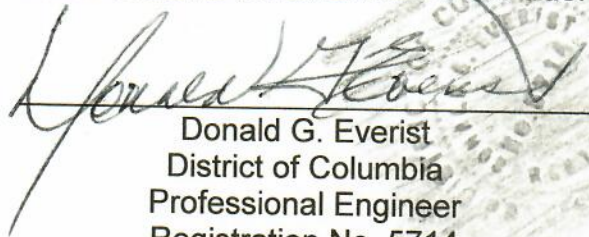
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;

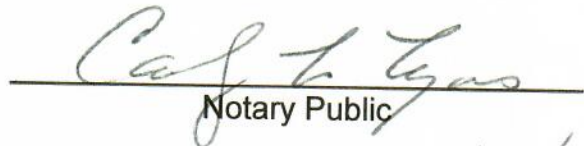
That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

  
Donald G. Everist  
District of Columbia  
Professional Engineer  
Registration No. 5714

Subscribed and sworn to before me this 4<sup>th</sup> day of December, 2018.

  
Notary Public

My Commission Expires: 2/28/2023



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AMENDMENT APPLICATION  
W33CR-D, CHAMBERSBURG, PENNSYLVANIA

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This engineering statement has been prepared on behalf of WITF, Inc., licensee of WITF-DT, Harrisburg, Pennsylvania in support of a displacement application to change licensed channel 33 to channel 34. The initial displacement application (FCC File No. 0000053818) was in accordance with the Special Displacement Window announced by the FCC in the Public Notice dated February 9, 2018. This amendment is in accordance with the FCC letter dated October 1, 2018 response 1800E3-RLG.

Transmitter Site

The proposed Channel 34 DTV translator operation will be located on the same tower as now licensed W33CR-D.

The proposed Channel 34 antenna will be mounted on a pole extending from the deck of an existing observation tower with a total overall antenna height above ground of 28 meters (92 feet).

There is no change in overall height of the state-owned structure. The site is located at Blue Mountain (Clarks Knob) approximately 3.2 kilometers west of Upper Strasburg in Franklin County, Pennsylvania. Exhibit E-1 is a vertical sketch of the existing observation tower and the proposed translator transmitting antenna.

The geographic coordinates of the existing site are as follows:

North Latitude: 40° 03' 00"

West Longitude: 77° 44' 54"

NAD-27

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AMENDMENT APPLICATION  
W33CR-D, CHAMBERSBURG, PENNSYLVANIA

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North Latitude: 40° 03' 00.3"

West Longitude: 77° 44' 52.9"

NAD-83

Equipment Data

Transmitter:	Type-approved
Transmission Line:	Andrew, Type LDF5-50, 7/8 inch concentric copper length 30 feet (9.2 meters)–0.903 dB/100 Ft
Antenna:	ERI, Model AL8OC-34-E, non-directional antenna with 1.75° electrical beam tilt and no null fill
Out-of-Channel Emission Mask:	Full-Service

Power Data

Transmitter:		1.44 kW	1.57 dBk
Transmission Line Loss:		93.95%	0.27 dB
Input Into Antenna:		1.35 kW	1.30 dBk
Antenna Power Gain:	Horizontal	11.12	10.46 dBd
	Vertical	3.34	5.23 dBd
Effective Radiated Power, Maximum	Horizontal	15 kW	11.76 dBk
	Vertical	4.50 kW	6.53 dBk

Elevation Data

Vertical dimension of the Channel 34 antenna	5.3 meters
	17.3 feet

Overall height above ground of the proposed antenna	28 meters 722.9 feet
Center of radiation of Channel 34 antenna above ground	25.4 meters 83.3 feet
Elevation of site above mean sea level	694.9 meters 2279.9 feet
Center of radiation of Channel 34 antenna above mean sea level	720.3 meters 2363.2 feet
Overall height above mean sea level of existing tower	722.9 meters 2371.7 feet

Note: Slight height differences may result due to conversion to metric.

As indicated above, the transmitter with typical power output of 1.44 kW will deliver 1.35 kW to the input of the antenna. The antenna, having a maximum horizontal power gain of 11.12 will produce a maximum horizontal ERP of 15 kW. A coverage map providing the normally protected contour of the proposed digital translator facility has been included as Exhibit E-4 of this report.

#### Other Broadcast Facilities

An analysis was completed to determine the presence of stations in the vicinity of the W33CR tower using the Consolidated Data Base Systems ("CDBS") data and within the Commission's Licensing and Management System ("LMS").] Within 0.2 km of the proposed site, there are no authorized FM radio or FM translator stations, no DTV and NTSC or TV translator television stations other than the licensed W33CR operation. There are no AM facilities within

3.22 km of the existing tower. Although no adverse technical effects are expected due to the proposed changes, the licensee will take measures to resolve any problems proven to be related to the changes proposed in this application.

#### Interference Analysis

A study of predicted interference caused by the proposed Channel 34 W33CR-D operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at [fcc.gov/oet/tvstudy](http://fcc.gov/oet/tvstudy). Comparison of service/interference areas and population indicates this model closely matches the FCC's digital TVStudy 2.2 evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using one-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 2010 census centroids, all studies are based upon data in the Commission's current Licensing and Management System ("LMS") database update of the FCC's engineering database.

#### Contour Data

Utilizing the formula in Section 73.625(b)(2) for the effective heights along each radial, the depression angle  $A_h$ , for each azimuth has been calculated. The maximum radiation value has been used to calculate the ERP where the vertical radiation pattern field value at these angles is greater than 90% of the maximum.

Table I provides the distances calculated by TVStudy 2.2 along each radial spaced every ten degrees in azimuth to the predicted F(50,90) 51 dBu contour, the effective radiated power and the effective antenna heights. The predicted 51 dBu contour determined from these distances are shown on the attached map (Exhibit E-4).

#### Coverage

The average elevation data for 3.2 to 16.1 km along each radial are based upon the one-second NGDC profile data.

The F(50,90) DTV coverage contour has been computed using TVStudy 2.2 which has as its basis the propagation data for Channels 14-69, as published by the FCC in Figure 10b and Figure 10c, Section 73.699 of the FCC Rules and Regulations.

Table I includes the distances to the 51 dBu F(50,90) normally protected coverage contour, the average elevation 3.2 to 16.1 km, and the antenna height above average terrain along azimuth angles spaced every 10° starting from true north.

#### Radiofrequency Field Level

##### W33CR-D

Channel	34	Frequency: 590-596 MHz Range
		Total ERP = 19,500 watts
		Polarization = Elliptical
		RCAGL-2 meters = 23.4 meters

The proposed Channel 34 proposes to use a ERI Type AL8OC-34-E with a field factor less than 0.170 at any angle 20° to 90° below the horizontal in the vicinity of the existing tower site. A value of 0.170 will be used in the calculation.

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W33CR-D, CHAMBERSBURG, PENNSYLVANIA

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$$S = \frac{33.4 (F^2) \text{ Total ERP}}{R^2}$$

Total ERP = 19,500 watts (Elliptical Polarization)  
R = 23.4 meters  
F = 0.170 (field factor)

$$S = 31.3 \mu\text{W}/\text{cm}^2$$

The proposed Channel 34 contributes  $34.3 \mu\text{W}/\text{cm}^2$  at two meters above ground level. The limit for an uncontrolled environment is  $395.3 \mu\text{W}/\text{cm}^2$  and the limit for a controlled environment is  $1976.7 \mu\text{W}/\text{cm}^2$  for a station broadcasting in the 590-596 MHz range.

Therefore:

The proposed Channel 34 operation contributes less than 9% RFF for an uncontrolled environment two meters above ground in the vicinity of the existing tower site and less than 2% for the controlled environment.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the proposed station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

Environmental Assessment

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

- (a)(1) The existing structure is not located in an officially designated wilderness area.
- (a)(2) The existing structure is not located in an officially designated wildlife preserve.



- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities located on a structure which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The existing structure is not located near any known Indian religious sites.
- (a)(6) The existing structure is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing structure will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the structure with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

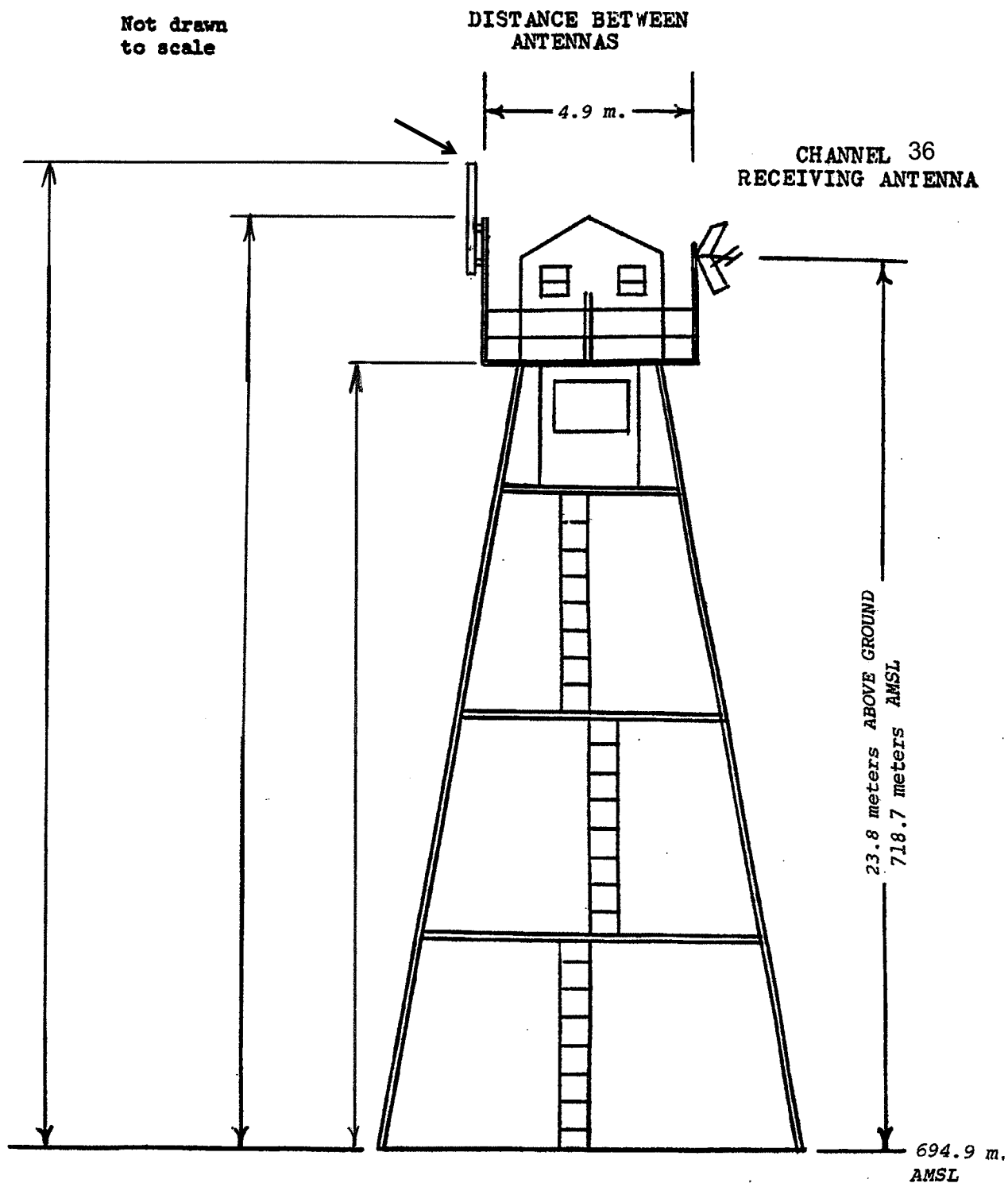


EXHIBIT E-1  
VERTICAL SKETCH  
FOR THE PROPOSED OPERATION OF  
W33CR-D, CHAMBERSBURG, PENNSYLVANIA  
OCTOBER 2009

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

# **Preliminary Specification for AL™ Series Side Mounted UHF Elliptically Polarized Coaxial Slotted Array Television Antenna**

**W33CR-D, RF Channel 34  
WITF for W33CR-D Translator, Chambersburg, PA  
November 30, 2018**

**Antenna Model:  
AL8OC-34-E**

**Specification Number  
TBD**

Electronics Research, Inc. 7777 Gardner Road Chandler IN 47610-9219 USA  
+1 812 925-6000 (tel) +1 812 925-4030 (fax)

Your Single Source for Broadcast Solutions™ Call Toll-free at 877 ERI-LINE Visit Online at [www.eriinc.com](http://www.eriinc.com)

**Preliminary Specification for  
AL™ Series Side Mounted  
UHF Elliptically Polarized  
Coaxial Slotted Array Television Antenna**

**Electrical Characteristics:**

Channel:		34	
Frequency:		590 MHz to 596 MHz	
Service:		ATSC	
Azimuth Pattern Number:	Horizontal Polarization	AL-OC	
	Vertical Polarization	AL-OC	
Elevation Pattern Number:	Horizontal Polarization	AL8L7	
	Vertical Polarization	AL8L7	
Azimuth Directivity:	Horizontal Polarization	1.62	(2.10 dB)
	Vertical Polarization	2.37	(3.75 dB)
Elevation Directivity:	Horizontal Polarization	8.27	(9.18 dBd)
	Vertical Polarization	8.27	(9.18 dBd)
Peak Power Gain:	Horizontal Polarization	11.12	(10.46 dBd)
	Vertical Polarization	3.34	(5.23 dBd)
Gain at Horizontal:	Horizontal Polarization	9.35	(9.71 dBd)
	Vertical Polarization	2.80	(4.48 dBd)
ERP Vertical/Horizontal Ratio:		0.300	
Power Ratio:		0.205	
Electrical Beam Tilt:		1.75 Degrees	
Input Power Required:		1.35 kW	(1.30 dBk)
RF Input:		7/8-inch EIA, 50 Ω, flanged male	
Input Power Rating (maximum):		2.5 kW Average Power, 8VSB	
Antenna VSWR (maximum):		1.10 Over 6 MHz Channel	

**Preliminary Specification for  
AL™ Series Side Mounted  
UHF Elliptically Polarized  
Coaxial Slotted Array Television Antenna**

**Antenna Mechanical Characteristics:**

Mounting Configuration:	Side Mounted		
Height of Antenna	17.3 feet	(5.3 meters)	
Height of Center of Radiation (above RF input)	8.6 feet	(2.6 meters)	
Deicing:	Unpressurized radome slot covers		
Radome Height:	3.50 inches	(88.9 millimeters)	
Radome Color:	Gray		
Climbing Device:	Not Applicable		
Calculated Weight <sup>1</sup> :	No Ice	97.2 lb	44.1 kg
	0.5inch (13 mm) ice	156.4 lb	71.0 kg
Windload Data <sup>1, 2</sup>	EPA No Ice	8.2 ft <sup>2</sup>	(0.8 m <sup>2</sup> )
	0.5inch (13 mm) ice	9.9 ft <sup>2</sup>	(0.9 m <sup>2</sup> )

1) Please note, the listed weights and effective wind areas are based on the PRELIMINARY design of the antenna. Final As-Built values for the antenna are typically within +/-10% of the Preliminary design values, and will be provided in the technical manual that accompanies the antenna. Specified loads include the antenna, standard mounts, and power divider and jumper feed harnessing where applicable. Custom mounting brackets/adapters are NOT included.

2) Loads calculated in accordance with the ANSI/TIA-222-G standard.

**NOTE:** The purchaser or their representative shall be required to contact the tower owner, state and/or local building officials for specific design requirements and suitable parameters for a particular structure. Any variation from the parameters shown above must be communicated to ERI for comprehensive assessment.

## Broadcast Antenna System Power Analysis

**W33CR-D**                      **RF Channel: 34**  
**WITF for W33CR-D Translator**  
**Chambersburg, PA**  
**AL8OC-34-E**

### Antenna Parameters

#### Azimuth Directivity:

Horizontal:	1.62	(2.10 dB)
Vertical:	2.37	(3.75 dB)

#### Elevation Directivity:

Horizontal:	8.27	(9.18 dB)
Vertical:	8.27	(9.18 dB)

### Transmission Line

#### Vertical Run:

Type:	7/8-Inch Virtual Air™ Low Loss Foam HEL	
Length:	15 feet	4.6 meters
Attenuation:	0.903 dB/100 feet	2.962 dB/100 mtrs

#### Horizontal Run:

Type:	7/8-Inch Virtual Air™ Low Loss Foam HEL	
Length:	15 feet	4.6 meters
Attenuation:	0.903 dB/100 feet	2.962 dB/100 mtrs

#### Effective Radiated Power:

Horizontal:	15.00 kW	(11.76 dBk)
Vertical:	4.50 kW	(6.53 dBk)

#### Power Gain:

Horizontal:	11.12 numeric	(10.46 dBd)
Vertical:	3.34 numeric	(5.23 dBd)

#### Antenna Input Power:

1.35 kW	(1.30 dBk)
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#### Transmission Line Losses:

-0.09 kW	(0.271 dB)
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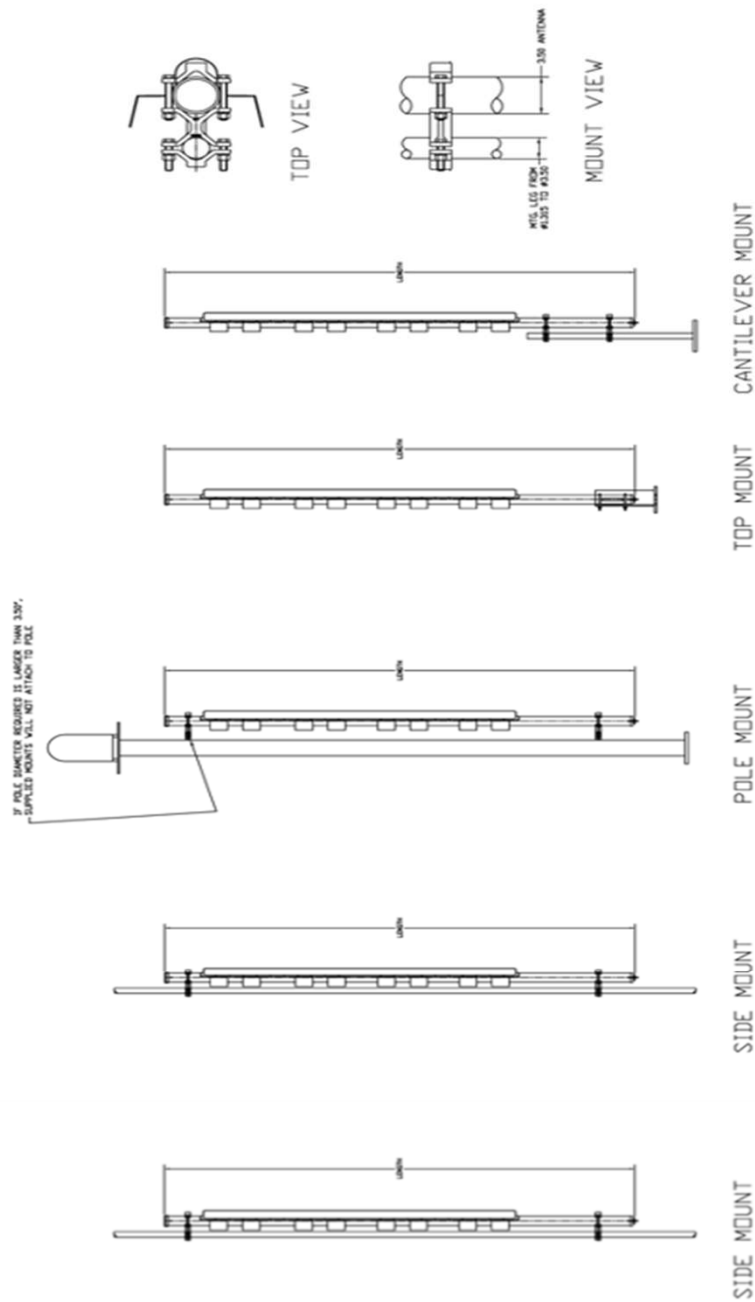
<b>Total Losses:</b>	0.271 dB
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<b>Line Efficiency:</b>	93.95%
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#### Transmitter Power Output:

1.44 kW
(1.57 dBk)

Dimensions may vary.

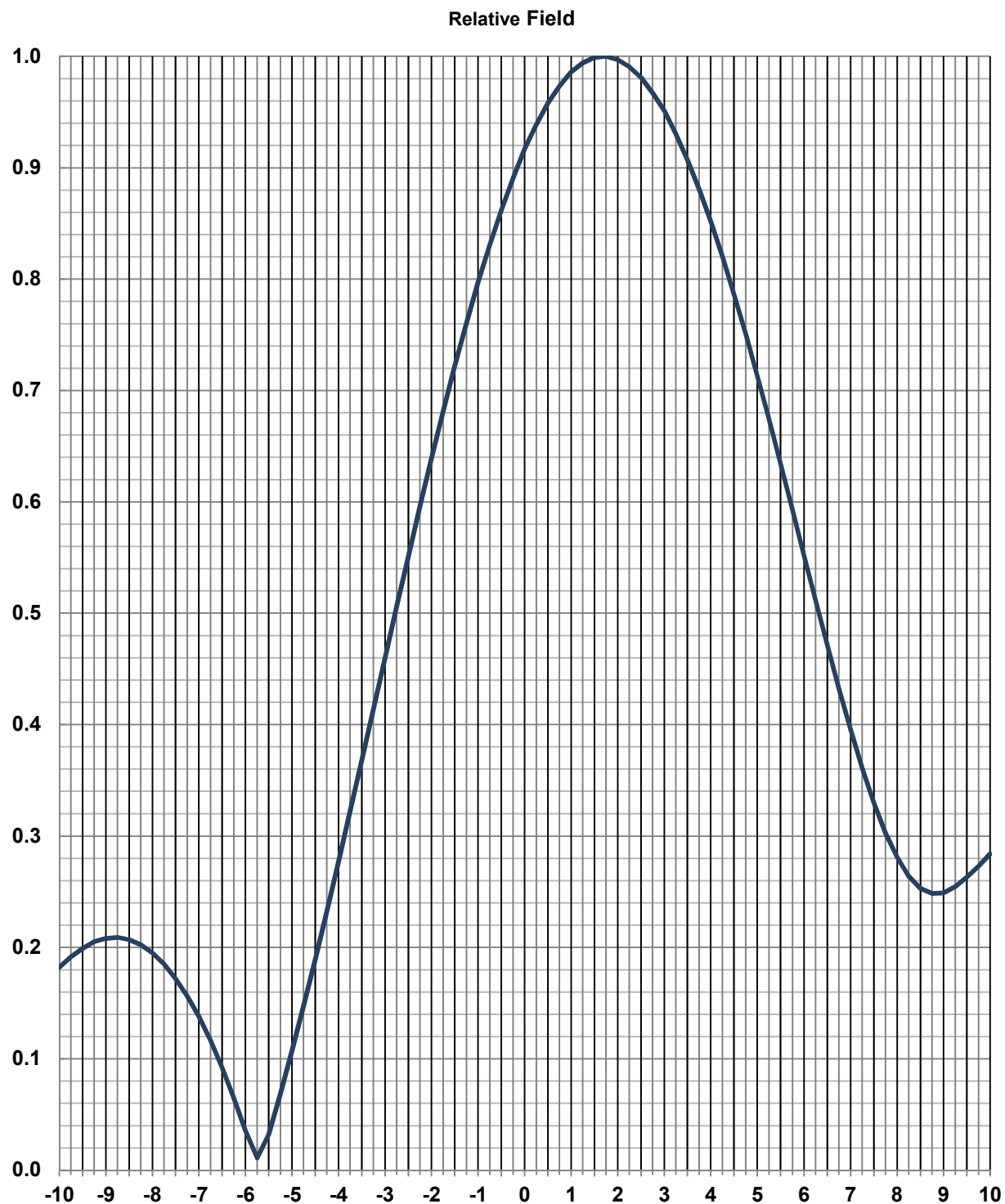


Typical Mounting Configurations for AL Series UHF Television Antennas



### Elevation Pattern

Type:	AL8L7	Polarization:	Horizontal
Directivity:		Channel:	34 (ATSC)
Main Lobe:	8.27 numeric (9.18 dB)	Location:	Chambersburg, PA
Horizontal:	6.95 numeric (8.42 dB)	Beam Tilt:	1.75 degrees



## Tabulated Data for Elevation Pattern

Type: AL8L7

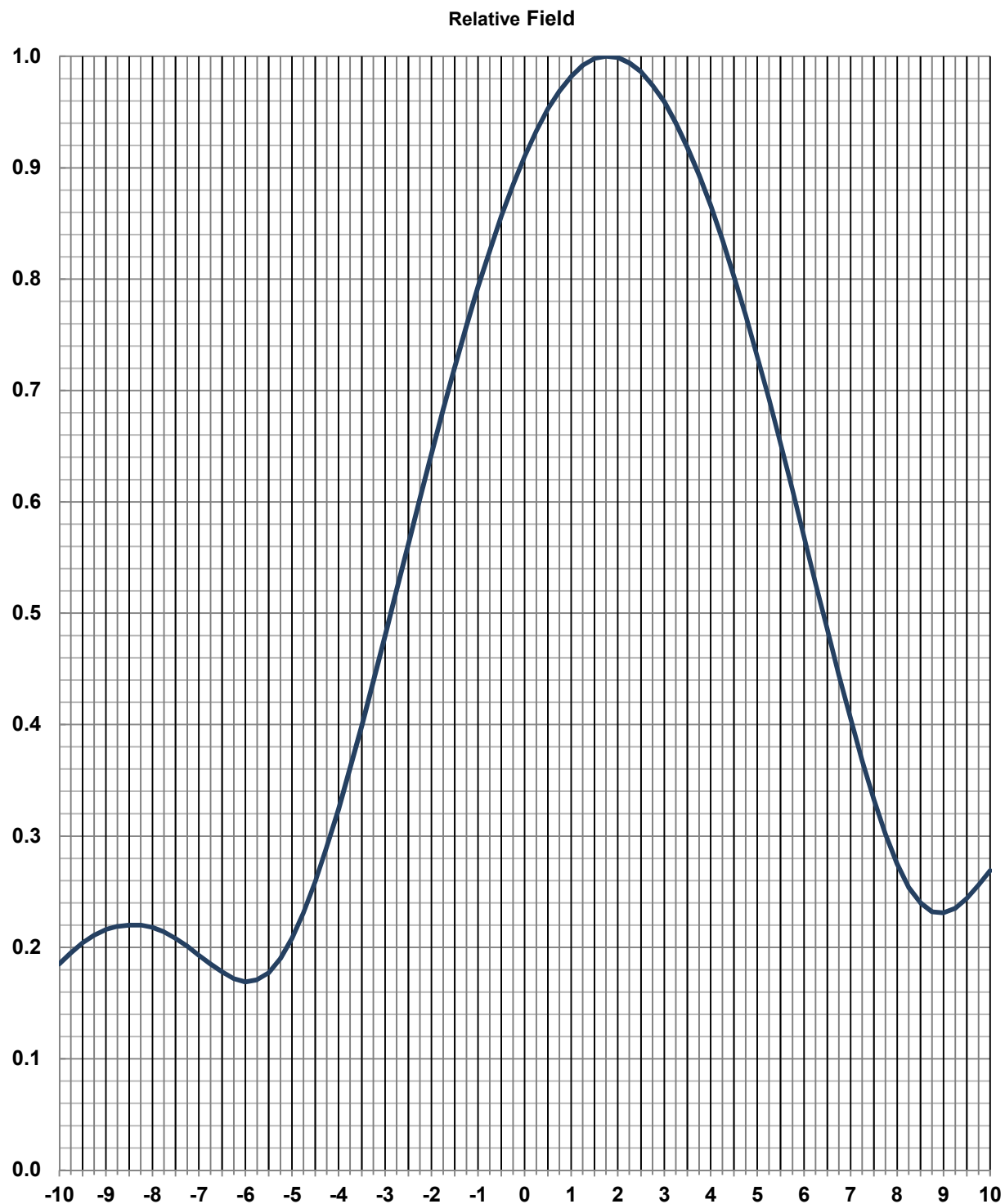
-10 to 10 degrees in 0.25 degree increments.

10 to 90 degrees in 0.50 degree increments.

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-10.00	0.182	-14.80	2.25	0.991	-0.08	19.00	0.162	-15.81	43.50	0.028	-31.06	68.00	0.068	-23.35
-9.75	0.192	-14.36	2.50	0.981	-0.17	19.50	0.173	-15.24	44.00	0.044	-27.13	68.50	0.064	-23.88
-9.50	0.199	-14.02	2.75	0.967	-0.29	20.00	0.180	-14.89	44.50	0.059	-24.58	69.00	0.060	-24.44
-9.25	0.205	-13.76	3.00	0.951	-0.44	20.50	0.182	-14.80	45.00	0.073	-22.73	69.50	0.057	-24.88
-9.00	0.208	-13.64	3.25	0.931	-0.63	21.00	0.178	-14.99	45.50	0.086	-21.31	70.00	0.054	-25.35
-8.75	0.209	-13.60	3.50	0.907	-0.85	21.50	0.169	-15.44	46.00	0.097	-20.26	70.50	0.051	-25.85
-8.50	0.207	-13.68	3.75	0.881	-1.11	22.00	0.156	-16.14	46.50	0.107	-19.41	71.00	0.049	-26.20
-8.25	0.203	-13.87	4.00	0.852	-1.39	22.50	0.138	-17.20	47.00	0.115	-18.79	71.50	0.048	-26.38
-8.00	0.195	-14.20	4.25	0.820	-1.72	23.00	0.117	-18.64	47.50	0.121	-18.34	72.00	0.046	-26.74
-7.75	0.185	-14.66	4.50	0.786	-2.09	23.50	0.093	-20.63	48.00	0.125	-18.06	72.50	0.046	-26.74
-7.50	0.172	-15.29	4.75	0.751	-2.49	24.00	0.069	-23.22	48.50	0.127	-17.92	73.00	0.046	-26.74
-7.25	0.157	-16.11	5.00	0.713	-2.94	24.50	0.047	-26.56	49.00	0.127	-17.92	73.50	0.046	-26.74
-7.00	0.138	-17.20	5.25	0.674	-3.43	25.00	0.033	-29.63	49.50	0.125	-18.06	74.00	0.046	-26.74
-6.75	0.117	-18.67	5.50	0.634	-3.96	25.50	0.037	-28.64	50.00	0.122	-18.27	74.50	0.047	-26.56
-6.50	0.092	-20.72	5.75	0.593	-4.54	26.00	0.054	-25.35	50.50	0.116	-18.71	75.00	0.048	-26.38
-6.25	0.065	-23.74	6.00	0.552	-5.16	26.50	0.072	-22.85	51.00	0.110	-19.17	75.50	0.049	-26.20
-6.00	0.036	-28.87	6.25	0.512	-5.81	27.00	0.089	-21.01	51.50	0.101	-19.91	76.00	0.049	-26.20
-5.75	0.011	-39.17	6.50	0.472	-6.52	27.50	0.104	-19.66	52.00	0.092	-20.72	76.50	0.050	-26.02
-5.50	0.032	-29.90	6.75	0.433	-7.27	28.00	0.114	-18.86	52.50	0.082	-21.72	77.00	0.051	-25.85
-5.25	0.069	-23.29	7.00	0.396	-8.05	28.50	0.121	-18.34	53.00	0.071	-22.97	77.50	0.051	-25.85
-5.00	0.107	-19.41	7.25	0.362	-8.84	29.00	0.124	-18.13	53.50	0.059	-24.58	78.00	0.051	-25.85
-4.75	0.147	-16.65	7.50	0.330	-9.63	29.50	0.123	-18.20	54.00	0.047	-26.56	78.50	0.051	-25.85
-4.50	0.189	-14.47	7.75	0.303	-10.37	30.00	0.118	-18.56	54.50	0.034	-29.37	79.00	0.051	-25.85
-4.25	0.232	-12.69	8.00	0.281	-11.03	30.50	0.109	-19.25	55.00	0.022	-33.15	79.50	0.051	-25.85
-4.00	0.277	-11.15	8.25	0.264	-11.57	31.00	0.098	-20.18	55.50	0.011	-39.17	80.00	0.050	-26.02
-3.75	0.322	-9.84	8.50	0.253	-11.94	31.50	0.084	-21.51	56.00	0.007	-43.10	80.50	0.049	-26.20
-3.50	0.368	-8.68	8.75	0.249	-12.09	32.00	0.068	-23.35	56.50	0.016	-35.92	81.00	0.048	-26.38
-3.25	0.414	-7.67	9.00	0.249	-12.08	32.50	0.050	-26.02	57.00	0.027	-31.37	81.50	0.047	-26.56
-3.00	0.460	-6.74	9.25	0.255	-11.89	33.00	0.032	-29.90	57.50	0.037	-28.64	82.00	0.045	-26.94
-2.75	0.506	-5.92	9.50	0.263	-11.60	33.50	0.016	-35.92	58.00	0.047	-26.56	82.50	0.043	-27.33
-2.50	0.551	-5.18	9.75	0.273	-11.28	34.00	0.013	-37.72	58.50	0.056	-25.04	83.00	0.041	-27.74
-2.25	0.596	-4.50	10.00	0.284	-10.93	34.50	0.028	-31.06	59.00	0.064	-23.88	83.50	0.039	-28.18
-2.00	0.639	-3.89	10.50	0.307	-10.26	35.00	0.043	-27.33	59.50	0.071	-22.97	84.00	0.037	-28.64
-1.75	0.682	-3.33	11.00	0.325	-9.76	35.50	0.057	-24.88	60.00	0.077	-22.27	84.50	0.034	-29.37
-1.50	0.722	-2.83	11.50	0.336	-9.47	36.00	0.070	-23.10	60.50	0.082	-21.72	85.00	0.032	-29.90
-1.25	0.761	-2.38	12.00	0.340	-9.37	36.50	0.080	-21.94	61.00	0.086	-21.31	85.50	0.029	-30.75
-1.00	0.797	-1.97	12.50	0.334	-9.53	37.00	0.087	-21.21	61.50	0.089	-21.01	86.00	0.026	-31.70
-0.75	0.831	-1.61	13.00	0.321	-9.87	37.50	0.092	-20.72	62.00	0.091	-20.82	86.50	0.023	-32.77
-0.50	0.862	-1.29	13.50	0.300	-10.46	38.00	0.094	-20.54	62.50	0.093	-20.63	87.00	0.020	-33.98
-0.25	0.891	-1.00	14.00	0.273	-11.28	38.50	0.093	-20.63	63.00	0.093	-20.63	87.50	0.017	-35.39
0.00	0.917	-0.75	14.50	0.242	-12.32	39.00	0.089	-21.01	63.50	0.093	-20.63	88.00	0.013	-37.72
0.25	0.939	-0.55	15.00	0.208	-13.64	39.50	0.082	-21.72	64.00	0.092	-20.72	88.50	0.010	-40.00
0.50	0.958	-0.37	15.50	0.175	-15.14	40.00	0.073	-22.73	64.50	0.090	-20.92	89.00	0.007	-43.10
0.75	0.974	-0.23	16.00	0.145	-16.77	40.50	0.063	-24.01	65.00	0.088	-21.11	89.50	0.003	-50.46
1.00	0.986	-0.12	16.50	0.123	-18.20	41.00	0.050	-26.02	65.50	0.086	-21.31	90.00	0.000	---
1.25	0.994	-0.05	17.00	0.114	-18.86	41.50	0.036	-28.87	66.00	0.082	-21.72			
1.50	0.999	-0.01	17.50	0.118	-18.56	42.00	0.021	-33.56	66.50	0.079	-22.05			
1.75	1.000	0.00	18.00	0.130	-17.72	42.50	0.006	-44.44	67.00	0.075	-22.50			
2.00	0.997	-0.03	18.50	0.147	-16.65	43.00	0.012	-38.42	67.50	0.072	-22.85			

**Elevation Pattern**

Type:	AL8L7	Polarization:	Vertical
Directivity:		Channel:	34 (ATSC)
Main Lobe:	8.27 numeric (9.18 dB)	Location:	Chambersburg, PA
Horizontal:	6.95 numeric (8.42 dB)	Beam Tilt:	1.75 degrees



## Tabulated Data for Elevation Pattern

Type: AL8L7

-10 to 10 degrees in 0.25 degree increments.

10 to 90 degrees in 0.50 degree increments.

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-10.00	0.185	-14.66	2.25	0.994	-0.05	19.00	0.132	-17.59	43.50	0.017	-35.39	68.00	0.115	-18.79
-9.75	0.195	-14.20	2.50	0.986	-0.12	19.50	0.149	-16.54	44.00	0.014	-37.08	68.50	0.113	-18.94
-9.50	0.204	-13.81	2.75	0.974	-0.23	20.00	0.162	-15.81	44.50	0.022	-33.15	69.00	0.111	-19.09
-9.25	0.211	-13.51	3.00	0.959	-0.36	20.50	0.170	-15.39	45.00	0.033	-29.63	69.50	0.108	-19.33
-9.00	0.216	-13.31	3.25	0.940	-0.54	21.00	0.171	-15.34	45.50	0.045	-26.94	70.00	0.106	-19.49
-8.75	0.219	-13.19	3.50	0.918	-0.74	21.50	0.167	-15.55	46.00	0.056	-25.04	70.50	0.104	-19.66
-8.50	0.220	-13.15	3.75	0.893	-0.98	22.00	0.158	-16.03	46.50	0.066	-23.61	71.00	0.102	-19.83
-8.25	0.220	-13.15	4.00	0.866	-1.25	22.50	0.144	-16.83	47.00	0.075	-22.50	71.50	0.100	-20.00
-8.00	0.218	-13.23	4.25	0.835	-1.57	23.00	0.125	-18.06	47.50	0.082	-21.72	72.00	0.098	-20.18
-7.75	0.214	-13.39	4.50	0.802	-1.92	23.50	0.104	-19.66	48.00	0.088	-21.11	72.50	0.097	-20.26
-7.50	0.208	-13.64	4.75	0.767	-2.30	24.00	0.081	-21.83	48.50	0.092	-20.72	73.00	0.095	-20.45
-7.25	0.201	-13.94	5.00	0.730	-2.73	24.50	0.058	-24.73	49.00	0.094	-20.54	73.50	0.093	-20.63
-7.00	0.193	-14.29	5.25	0.692	-3.20	25.00	0.039	-28.18	49.50	0.095	-20.45	74.00	0.092	-20.72
-6.75	0.185	-14.66	5.50	0.652	-3.72	25.50	0.033	-29.63	50.00	0.094	-20.54	74.50	0.090	-20.92
-6.50	0.178	-14.99	5.75	0.611	-4.28	26.00	0.045	-26.94	50.50	0.092	-20.72	75.00	0.088	-21.11
-6.25	0.172	-15.29	6.00	0.569	-4.90	26.50	0.063	-24.01	51.00	0.089	-21.01	75.50	0.087	-21.21
-6.00	0.169	-15.44	6.25	0.527	-5.56	27.00	0.082	-21.72	51.50	0.085	-21.41	76.00	0.085	-21.41
-5.75	0.171	-15.34	6.50	0.486	-6.27	27.50	0.098	-20.18	52.00	0.080	-21.94	76.50	0.083	-21.62
-5.50	0.177	-15.04	6.75	0.445	-7.03	28.00	0.112	-19.02	52.50	0.074	-22.62	77.00	0.082	-21.72
-5.25	0.190	-14.42	7.00	0.406	-7.83	28.50	0.122	-18.27	53.00	0.068	-23.35	77.50	0.080	-21.94
-5.00	0.208	-13.64	7.25	0.368	-8.68	29.00	0.127	-17.92	53.50	0.063	-24.01	78.00	0.078	-22.16
-4.75	0.231	-12.73	7.50	0.333	-9.55	29.50	0.129	-17.79	54.00	0.059	-24.58	78.50	0.076	-22.38
-4.50	0.259	-11.73	7.75	0.302	-10.40	30.00	0.127	-17.92	54.50	0.056	-25.04	79.00	0.074	-22.62
-4.25	0.290	-10.75	8.00	0.275	-11.21	30.50	0.121	-18.34	55.00	0.055	-25.19	79.50	0.072	-22.85
-4.00	0.324	-9.79	8.25	0.254	-11.90	31.00	0.112	-19.02	55.50	0.056	-25.04	80.00	0.069	-23.22
-3.75	0.361	-8.85	8.50	0.240	-12.40	31.50	0.100	-20.00	56.00	0.059	-24.58	80.50	0.067	-23.48
-3.50	0.399	-7.98	8.75	0.232	-12.69	32.00	0.086	-21.31	56.50	0.063	-24.01	81.00	0.064	-23.88
-3.25	0.439	-7.15	9.00	0.231	-12.73	32.50	0.069	-23.22	57.00	0.069	-23.22	81.50	0.061	-24.29
-3.00	0.480	-6.38	9.25	0.235	-12.58	33.00	0.051	-25.85	57.50	0.075	-22.50	82.00	0.058	-24.73
-2.75	0.521	-5.66	9.50	0.244	-12.25	33.50	0.033	-29.63	58.00	0.082	-21.72	82.50	0.055	-25.19
-2.50	0.562	-5.01	9.75	0.256	-11.84	34.00	0.017	-35.39	58.50	0.088	-21.11	83.00	0.052	-25.68
-2.25	0.603	-4.39	10.00	0.269	-11.40	34.50	0.015	-36.48	59.00	0.094	-20.54	83.50	0.049	-26.20
-2.00	0.643	-3.84	10.50	0.297	-10.54	35.00	0.029	-30.75	59.50	0.100	-20.00	84.00	0.046	-26.74
-1.75	0.683	-3.31	11.00	0.321	-9.87	35.50	0.045	-26.94	60.00	0.106	-19.49	84.50	0.042	-27.54
-1.50	0.721	-2.84	11.50	0.338	-9.42	36.00	0.060	-24.44	60.50	0.110	-19.17	85.00	0.039	-28.18
-1.25	0.758	-2.41	12.00	0.346	-9.22	36.50	0.073	-22.73	61.00	0.114	-18.86	85.50	0.035	-29.12
-1.00	0.793	-2.01	12.50	0.346	-9.22	37.00	0.083	-21.62	61.50	0.118	-18.56	86.00	0.031	-30.17
-0.75	0.826	-1.66	13.00	0.336	-9.47	37.50	0.091	-20.82	62.00	0.121	-18.34	86.50	0.028	-31.06
-0.50	0.857	-1.34	13.50	0.318	-9.95	38.00	0.097	-20.26	62.50	0.123	-18.20	87.00	0.024	-32.40
-0.25	0.885	-1.06	14.00	0.293	-10.66	38.50	0.100	-20.00	63.00	0.124	-18.13	87.50	0.020	-33.98
0.00	0.910	-0.82	14.50	0.261	-11.67	39.00	0.100	-20.00	63.50	0.125	-18.06	88.00	0.016	-35.92
0.25	0.933	-0.60	15.00	0.226	-12.92	39.50	0.098	-20.18	64.00	0.126	-17.99	88.50	0.012	-38.42
0.50	0.953	-0.42	15.50	0.187	-14.56	40.00	0.093	-20.63	64.50	0.125	-18.06	89.00	0.008	-41.94
0.75	0.969	-0.27	16.00	0.149	-16.54	40.50	0.086	-21.31	65.00	0.125	-18.06	89.50	0.004	-47.96
1.00	0.982	-0.16	16.50	0.115	-18.79	41.00	0.077	-22.27	65.50	0.124	-18.13	90.00	0.000	---
1.25	0.992	-0.07	17.00	0.090	-20.92	41.50	0.066	-23.61	66.00	0.123	-18.20			
1.50	0.998	-0.02	17.50	0.082	-21.72	42.00	0.054	-25.35	66.50	0.121	-18.34			
1.75	1.000	0.00	18.00	0.092	-20.72	42.50	0.042	-27.54	67.00	0.119	-18.49			
2.00	0.999	-0.01	18.50	0.111	-19.09	43.00	0.029	-30.75	67.50	0.117	-18.64			

EXHIBIT E-3

ALLOCATION STUDY

tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: W33CR-Ch34FinalHeight, Model: Longley-Rice  
Start: 2018.12.06 15:44:25

Study created: 2018.12.06 15:44:25

Study build station data: LMS TV 2018-12-06

Proposal: W33CR-D D34 LD LIC CHAMBERSBURG, PA  
File number: Ch34FinalHeight  
Facility ID: 73081  
Station data: User record  
Record ID: 137  
Country: U.S.

Build options:  
Protect pre-transition records not on baseline channel

Search options:  
Non-U.S. records included  
Baseline record excluded if station has CP

Individual records excluded:  
20051123AKN WJAC-TV D34 DT LIC JOHNSTOWN, PA BLCDDT20051123AKN

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WHUT-TV	D33	DT	APP	WASHINGTON, DC	BLANK0000035679	135.0 km
No	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	135.0
Yes	WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	135.0
No	WFMJ-TV	D33	DT	CP	YOUNGSTOWN, OH	BLANK0000033638	269.7
No	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000034323	213.2
No	WQPX-TV	D33	DT	CP	SCRANTON, PA	BLANK0000034918	229.5
No	W33DZ-D	D33	LD	CP	WILLIAMSPORT, PA	BDCCDTT20130103ACT	142.6
No	W40AS-D	D33	LD	APP	MOOREFIELD, WV	BLANK0000054682	154.8
No	WNPB-TV	D33	DT	LIC	MORGANTOWN, WV	BLEDT20121205ACJ	176.3
No	W23DR-D	D33	LD	APP	ROMNEY, WV	BLANK0000054636	116.8
No	WTIC-TV	D34	DT	CP	HARTFORD, CT	BLANK0000025068	452.1
Yes	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	136.0
Yes	WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	213.4
No	WSJZ-LD	D34	LD	CP	Ocean View, NJ	BLANK0000053138	268.0
No	WIVT	D34	DT	LIC	BINGHAMTON, NY	BLCDDT20090819AGR	269.9

No	WKBW-TV	D34	DT	CP	BUFFALO, NY	BLANK0000034829	296.6
No	W34DI-D	D34+	LD	LIC	NEW YORK, NY	BLANK0000048491	306.7
No	WPXN-TV	D34	DT	CP	NEW YORK, NY	BLANK0000034356	324.7
No	W34DI-D	N34+	TX	LIC	NEW YORK, NY	BLTTL20070223AHK	297.0
No	WVTT-CD	D34	DC	LIC	OLEAN, NY	BLDTA20141217ABD	274.4
No	WMHT	D34	DT	LIC	SCHENECTADY, NY	BLEDT20040108ALV	423.3
No	WONO-CD	D34	DC	LIC	SYRACUSE, ETC., NY	BLANK0000001647	359.3
No	WFXV	D34	DT	CP	UTICA, NY	BLANK0000029986	405.0
No	WQHS-DT	D34	DT	LIC	CLEVELAND, OH	BLCDT20031030AGJ	364.5
No	W38ET-D	D34	LD	APP	EASTLAKE, OH	BLANK0000054261	331.8
No	W45BT-D	D34	LD	CP	BROOKVILLE, PA	BLANK0000050401	165.6
No	NEW	D34	LD	APP	ERIE, PA	BNPDTL20090825BRL	294.0
Yes	WCAU	D34	DT	LIC	PHILADELPHIA, PA	BLANK0000053192	213.7
No	WPXI	D34	LD	CP	PITTSBURGH, PA	BLANK0000054534	237.0
Yes	WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	229.4
No	W34EV-D	D34	LD	CP	Charlottesville, VA	BLANK0000008300	235.1
Yes	WHSV-TV	D34	LD	APP	HARRISONBURG, VA	BLANK0000054695	204.1
Yes	WPXW-TV	D34	DT	LIC	MANASSAS, VA	BLCDT20090612AIZ	135.0
No	WJHJ-LP	D34+	LD	APP	NEWPORT NEWS, ETC., VA	BLANK0000054621	374.7
No	WZTD-LD	D34	LD	CP	RICHMOND, VA	BLANK0000053792	282.3
No	WSLS-TV	D34	DT	CP	ROANOKE, VA	BLANK0000029619	379.1
No	WVPB-TV	D34	DT	LIC	HUNTINGTON, WV	BLEDT20120214AAS	420.3
Yes	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	176.3
No	W51EG-D	D34	LD	CP	PARKERSBURG, WV	BLANK0000054632	341.9
No	WENY-TV	D35	DT	CP	ELMIRA, NY	BLANK0000034793	239.2
Yes	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	110.7
No	WGAL	D35	LD	CP	LANCASTER, PA	BLANK0000053203	81.5
No	WFPA-CD	D35	DC	CP	PHILADELPHIA, PA	BLANK0000034670	213.7
No	WPPT	D35	DT	LIC	PHILADELPHIA, PA	BLEDT20091222ARE	213.7
Yes	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	135.0
No	W42CK	N42+	TX	LIC	HAGERSTOWN, MD	BLTTL19991020AAP	48.9

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D34  
Mask: Full Service  
Latitude: 40 3 0.30 N (NAD83)  
Longitude: 77 44 52.90 W  
Height AMSL: 720.3 m

HAAT: 0.0 m  
Peak ERP: 15.0 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic

50.7 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	15.0 kW	363.9 m	59.1 km
45.0	15.0	453.7	63.4
90.0	15.0	515.9	65.3
135.0	15.0	508.6	65.1
180.0	15.0	525.3	65.5
225.0	15.0	172.5	48.6
270.0	15.0	376.3	59.7
315.0	15.0	376.1	59.7

Database HAAT does not agree with computed HAAT  
Database HAAT: 0 m    Computed HAAT: 412 m

Distance to Canadian border: 324.2 km

Distance to Mexican border: 2365.7 km

Conditions at FCC monitoring station: Laurel MD  
Bearing: 140.8 degrees    Distance: 126.4 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 279.2 degrees    Distance: 2326.7 km

Study cell size: 1.00 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%

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Interference to BLANK0000035679 APP scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
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Desired:	WHUT-TV	D33	DT	APP	WASHINGTON, DC	BLANK0000035679	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	135.0 km
	WCBS-TV	D33	DT	LIC	NEW YORK, NY	BLANK0000048556	326.9
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000034323	198.9
	WQPX-TV	D33	DT	CP	SCRANTON, PA	BLANK0000034918	299.1
	WTVZ-TV	D33	DT	LIC	NORFOLK, VA	BLCDT20090602ABA	243.3
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	1.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
20589.2 7,839,629	20044.3 7,810,010	19329.3 7,743,027	19326.4 7,741,933	0.02 0.01

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC 3.0	1,094	3.0 1,094	
WCBS-TV D33 DT LIC 14.8	970	3.0 184	
WPSG D33 DT CP 483.7	44,240	365.7 34,334	
WQPX-TV D33 DT CP 3.0	99	0.0 0	
WTVZ-TV D33 DT LIC 221.8	17,775	134.5 12,022	
WRC-TV D34 DT CP 119.7	14,120	91.7 10,534	

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Interference to BPEDT20120627AAD CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	135.0 km
	WBOC-TV	D32	DT	CP	SALISBURY, MD	BLANK0000033790	134.0
	WHP-TV	D32	DT	CP	HARRISBURG, PA	BLANK0000033781	156.1
	WCAV	D32	DT	CP	CHARLOTTESVILLE, VA	BLANK0000034188	162.5
	WCBS-TV	D33	DT	LIC	NEW YORK, NY	BLANK0000048556	326.9
	WFMJ-TV	D33	DT	CP	YOUNGSTOWN, OH	BLANK0000033638	384.5
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000034323	198.9
	WQPX-TV	D33	DT	CP	SCRANTON, PA	BLANK0000034918	299.1
	WTVZ-TV	D33	DT	LIC	NORFOLK, VA	BLCDT20090602ABA	243.3
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	1.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26325.1 8,293,909	25325.0 8,234,406	24225.2 8,148,232	24192.5 8,143,156	0.13 0.06

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC 50.5	6,979	32.7 5,076	
WBOC-TV D32 DT CP 71.2	1,492	11.0 159	

WHP-TV D32 DT CP	12.1	868	7.1	307	7.1	307
WCAV D32 DT CP	1.0	51	0.0	0	0.0	0
WCBS-TV D33 DT LIC	11.0	1,890	1.0	536	1.0	536
WFMJ-TV D33 DT CP	1.0	0	1.0	0	0.0	0
WPSG D33 DT CP	818.7	68,415	623.3	58,394	606.4	56,491
WQPX-TV D33 DT CP	1.0	169	0.0	0	0.0	0
WTVZ-TV D33 DT LIC	387.7	20,616	228.3	15,224	228.3	15,224
WRC-TV D34 DT CP	54.8	4,835	31.8	1,533	31.8	1,533

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Interference to BLANK0000034340 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	136.0 km
	WHUT-TV	D33	DT	APP	WASHINGTON, DC	BLANK0000035679	1.2
	WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	200.0
	WPXN-TV	D34	DT	CP	NEW YORK, NY	BLANK0000034356	327.7
	WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	300.3
	WSLS-TV	D34	DT	CP	ROANOKE, VA	BLANK0000029619	330.7
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	245.3
	WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	161.6
	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	1.2

Service area	25115.9	8,189,633	Terrain-limited	24260.9	8,143,362	IX-free, before	23881.1	8,103,958	IX-free, after	23540.1	8,071,513	Percent New IX	1.43	0.40
Undesired			Total IX			Unique IX, before			Unique IX, after					
W33CR-D D34 LD LIC		564.3		52,904					341.0		32,445			
WHUT-TV D33 DT APP		12.9		767		0.0	0		0.0		0			
WPPX-TV D34 DT CP		47.8		4,901		21.9	856		15.9		703			
WPXN-TV D34 DT CP		5.9		570		2.0	317		1.0		315			
WSWB D34 DT CP		8.9		2,163		1.0	16		0.0		0			
WSLS-TV D34 DT CP		37.9		1,568		16.0	1,169		10.0		1,114			
WNPB-TV D34 DT CP		200.4		21,017		175.6	18,544		11.9		1,967			
WAHU-CD D35 DC CP		2.0		0		2.0	0		0.0		0			
WPXW-TV D35 DT CP		130.6		15,848		107.7	12,525		96.8		11,539			

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Interference to BLANK0000034340 CP scenario 2

Call	Chan	Svc	Status	City, State	File Number	Distance
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Desired:	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	136.0 km
	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	1.2
	WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	200.0
	WPXN-TV	D34	DT	CP	NEW YORK, NY	BLANK0000034356	327.7
	WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	300.3
	WSLS-TV	D34	DT	CP	ROANOKE, VA	BLANK0000029619	330.7
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	245.3
	WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	161.6
	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	1.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
25115.9 8,189,633	24260.9 8,143,362	23881.1 8,103,958	23540.1 8,071,513	1.43 0.40

Undesired		Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC	564.3	52,904		341.0 32,445
WHUT-TV D33 DT LIC	5.0	55	0.0 0	0.0 0
WPPX-TV D34 DT CP	47.8	4,901	21.9 856	15.9 703
WPXN-TV D34 DT CP	5.9	570	2.0 317	1.0 315
WSWB D34 DT CP	8.9	2,163	1.0 16	0.0 0
WSLS-TV D34 DT CP	37.9	1,568	16.0 1,169	10.0 1,114
WNPB-TV D34 DT CP	200.4	21,017	175.6 18,544	11.9 1,967
WAHU-CD D35 DC CP	2.0	0	2.0 0	0.0 0
WPXW-TV D35 DT CP	130.6	15,848	112.7 13,217	101.8 12,231

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Interference to BLANK0000034340 CP scenario 3

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	136.0 km
	WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	1.2
	WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	200.0
	WPXN-TV	D34	DT	CP	NEW YORK, NY	BLANK0000034356	327.7
	WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	300.3
	WSLS-TV	D34	DT	CP	ROANOKE, VA	BLANK0000029619	330.7
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	245.3
	WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	161.6
	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	1.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
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25115.9	8,189,633	24260.9	8,143,362	23881.1	8,103,958	23540.1	8,071,513	1.43	0.40
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Undesired			Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC	564.3		52,904		341.0 32,445
WHUT-TV D33 DT CP	77.7		13,395	0.0 0	0.0 0
WPPX-TV D34 DT CP	47.8		4,901	21.9 856	15.9 703
WPXN-TV D34 DT CP	5.9		570	2.0 317	1.0 315
WSWB D34 DT CP	8.9		2,163	1.0 16	0.0 0
WSLS-TV D34 DT CP	37.9		1,568	16.0 1,169	10.0 1,114
WNPB-TV D34 DT CP	200.4		21,017	175.6 18,544	11.9 1,967
WAHU-CD D35 DC CP	2.0		0	2.0 0	0.0 0
WPXW-TV D35 DT CP	130.6		15,848	50.9 1,476	48.9 1,313

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Interference to BLANK0000034931 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	213.4 km
	WCBS-TV	D33	DT	LIC	NEW YORK, NY	BLANK0000048556	127.8
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000034323	0.2
	WTIC-TV	D34	DT	CP	HARTFORD, CT	BLANK0000025068	273.8
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	200.0
	WPXN-TV	D34	DT	CP	NEW YORK, NY	BLANK0000034356	127.8
	WFXV	D34	DT	CP	UTICA, NY	BLANK0000029986	344.7
	WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	160.1
	WNJU	D35	DT	CP	LINDEN, NJ	BLANK0000053139	127.8
	WFPA-CD	D35	DC	CP	PHILADELPHIA, PA	BLANK0000034670	0.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
20621.5 7,965,284	19956.9 7,767,295	16734.5 6,877,721	16700.5 6,873,175	0.20 0.07

Undesired			Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC	208.2		29,992		34.0 4,546
WCBS-TV D33 DT LIC	170.7		64,227	0.0 0	0.0 0
WPSG D33 DT CP	546.6		116,098	314.2 75,536	314.2 75,536
WTIC-TV D34 DT CP	3.0		1,123	0.0 0	0.0 0
WRC-TV D34 DT CP	677.2		151,285	255.8 35,610	200.7 30,756
WPXN-TV D34 DT CP	2566.5		712,662	1813.1 509,531	1783.0 507,058
WFXV D34 DT CP	1.0		87	0.0 0	0.0 0
WSWB D34 DT CP	163.7		106,392	36.9 51,366	31.9 49,741
WNJU D35 DT CP	243.5		84,345	0.0 0	0.0 0

WFPA-CD D35 DC CP 10.0 804 6.0 469 6.0 469

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Interference to BLANK0000053192 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WCAU	D34	DT	LIC	PHILADELPHIA, PA	BLANK0000053192	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	213.7 km
	WHUT-TV	D33	DT	APP	WASHINGTON, DC	BLANK0000035679	199.3
	WCBS-TV	D33	DT	LIC	NEW YORK, NY	BLANK0000048556	127.6
	WIVT	D34	DT	LIC	BINGHAMTON, NY	BLCDT20090819AGR	232.1
	WMHT	D34	DT	LIC	SCHENECTADY, NY	BLEDT20040108ALV	304.8
	WPXW-TV	D34	DT	LIC	MANASSAS, VA	BLCDT20090612AIZ	199.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
33446.3 11,016,158	32286.7 10,846,084	30415.8 10,318,123	30146.8 10,281,784	0.88 0.35

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC 464.3	94,167	269.0 36,339	
WCBS-TV D33 DT LIC 562.9	328,741	470.1 274,211	
WIVT D34 DT LIC 91.7	19,488	47.8 7,643	
WMHT D34 DT LIC 9.9	1,897	1.0 171	
WPXW-TV D34 DT LIC 1347.9	245,106	1221.3 183,778	1061.0 134,802

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Interference to BLANK0000034421 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	229.4 km
	WCBS-TV	D33	DT	LIC	NEW YORK, NY	BLANK0000048556	164.7
	WPSG	D33	DT	CP	PHILADELPHIA, PA	BLANK0000034323	160.2
	WQPX-TV	D33	DT	CP	SCRANTON, PA	BLANK0000034918	0.2
	WTIC-TV	D34	DT	CP	HARTFORD, CT	BLANK0000025068	242.7
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	300.3
	WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	160.1
	WKBW-TV	D34	DT	CP	BUFFALO, NY	BLANK0000034829	273.5
	WPXN-TV	D34	DT	CP	NEW YORK, NY	BLANK0000034356	164.7
	WFXV	D34	DT	CP	UTICA, NY	BLANK0000029986	195.3
	WNJU	D35	DT	CP	LINDEN, NJ	BLANK0000053139	164.7
	WENY-TV	D35	DT	CP	ELMIRA, NY	BLANK0000034793	136.6

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
23929.7 1,592,694	19635.6 1,149,368	17725.3 1,054,496	17712.4 1,054,047	0.07 0.04

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC 91.7	3,062		13.0 449
WCBS-TV D33 DT LIC 10.1	0	0.0 0	0.0 0
WPSG D33 DT CP 8.0	12	1.0 0	0.0 0
WQPX-TV D33 DT CP 205.5	7,114	187.4 6,651	187.4 6,651
WTIC-TV D34 DT CP 77.3	3,022	13.0 225	13.0 225
WRC-TV D34 DT CP 192.0	6,151	50.2 1,087	37.2 864
WPPX-TV D34 DT CP 1053.0	63,812	458.9 24,310	451.9 24,303
WKBW-TV D34 DT CP 147.0	6,313	53.0 3,137	49.0 2,832
WPXN-TV D34 DT CP 1010.0	53,325	405.2 16,881	400.3 16,861
WFXV D34 DT CP 114.1	4,527	20.0 387	19.0 387
WNJU D35 DT CP 12.1	0	0.0 0	0.0 0
WENY-TV D35 DT CP 31.0	528	10.0 130	10.0 130

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Interference to BLANK0000054695 APP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHSV-TV	D34	LD	APP	HARRISONBURG, VA	BLANK0000054695	

Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	204.1 km
	WHUT-TV	D33	DT	APP	WASHINGTON, DC	BLANK0000035679	159.2
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	158.7
	WACN-LP	D34z	LD	CP	RALEIGH, NC	BLANK0000050869	268.5
	W34EV-D	D34	LD	CP	Charlottesville, VA	BLANK0000008300	34.9
	WZTD-LD	D34	LD	CP	RICHMOND, VA	BLANK0000053792	141.6
	WSLS-TV	D34	DT	CP	ROANOKE, VA	BLANK0000029619	179.5
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	168.2
	WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	52.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
11893.6 496,860	7480.0 297,847	7320.3 296,006	7315.3 296,006	0.07 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC 11.0	1		5.0 0
WRC-TV D34 DT CP 74.3	36	42.1 8	42.1 8
W34EV-D D34 LD CP 9.1	1,004	0.0 0	0.0 0
WZTD-LD D34 LD CP 16.1	1,004	3.0 0	3.0 0
WSLS-TV D34 DT CP 93.5	830	72.4 802	71.4 802

WNPB-TV D34 DT CP	10.0	0	5.0	0	4.0	0
WAHU-CD D35 DC CP	12.1	1,003	0.0	0	0.0	0

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Interference to BLCDT20090612AIZ LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPXW-TV	D34	DT	LIC	MANASSAS, VA	BLCDT20090612AIZ	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	135.0 km
	WHUT-TV	D33	DT	APP	WASHINGTON, DC	BLANK0000035679	0.0
	WIVT	D34	DT	LIC	BINGHAMTON, NY	BLCDT20090819AGR	358.8
	WCAU	D34	DT	LIC	PHILADELPHIA, PA	BLANK0000053192	199.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
24147.8		8,092,088		23286.7		22424.2	1.59 0.44
				8,043,024		7,957,242	
Undesired				Total IX		Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC		483.3		41,375		361.9	35,162
WIVT D34 DT LIC		1.0		169		0.0	0
WCAU D34 DT LIC		500.6		50,620		499.6	50,451
						379.3	44,407

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Interference to BLANK0000034624 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	176.3 km
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	245.3
	WKBW-TV	D34	DT	CP	BUFFALO, NY	BLANK0000034829	340.6
	WKEF	D34	DT	CP	DAYTON, OH	BLANK0000034522	384.1
	WSLS-TV	D34	DT	CP	ROANOKE, VA	BLANK0000029619	279.3
	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	100.2
	WTAP-TV	D35	DT	CP	PARKERSBURG, WV	BLANK0000025208	159.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
30735.8		2,137,054		27166.7		26472.3	0.42 0.04
				1,941,169		1,922,081	
Undesired				Total IX		Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC		274.7		2,865		112.6	779
WRC-TV D34 DT CP		229.0		3,008		79.0	1,157
WKBW-TV D34 DT CP		29.0		4,560		19.0	4,177
						18.0	4,146

WKEF D34 DT CP	12.9	121	9.9	121	9.9	121
WSLS-TV D34 DT CP	21.8	59	14.9	29	10.9	29
WJAC-TV D35 DT CP	312.2	11,223	282.0	10,593	267.0	10,128
WTAP-TV D35 DT CP	21.9	147	18.9	147	18.9	147

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Interference to BLANK0000027312 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	110.7 km
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	100.2
	WENY-TV	D35	DT	CP	ELMIRA, NY	BLANK0000034793	253.1
	WVIZ	D35	DT	CP	CLEVELAND, OH	BLANK0000034584	253.9
	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	226.8
	WTAP-TV	D35	DT	CP	PARKERSBURG, WV	BLANK0000025208	247.9
	WITF-TV	D36	DT	APP	HARRISBURG, PA	BLANK0000035782	179.0
	WWLM-CD	D36	DC	CP	WASHINGTON, PA	BLANK0000027840	107.9

	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
	29163.5	2,212,117	24820.2	1,927,184	23913.7
				1,811,045	23881.6
					1,810,635
					0.13
					0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC	62.2	527	32.1
WNPB-TV D34 DT CP	128.3	4,704	61.0
WENY-TV D35 DT CP	71.1	2,021	36.9
WVIZ D35 DT CP	156.4	50,921	49.2
WPXW-TV D35 DT CP	447.7	26,943	391.8
WTAP-TV D35 DT CP	323.4	86,052	175.1
WITF-TV D36 DT APP	1.0	0	1.0
WWLM-CD D36 DC CP	3.0	0	0.0

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Interference to BLANK0000027312 CP scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	110.7 km
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	100.2
	WENY-TV	D35	DT	CP	ELMIRA, NY	BLANK0000034793	253.1
	WVIZ	D35	DT	CP	CLEVELAND, OH	BLANK0000034584	253.9



WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	226.8
WTAP-TV	D35	DT	CP	PARKERSBURG, WV	BLANK0000025208	247.9
WWLM-CD	D36	DC	CP	WASHINGTON, PA	BLANK0000027840	107.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
29163.5 2,212,117	24820.2 1,927,184	23914.8 1,811,045	23881.6 1,810,635	0.14 0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC 62.2 527	33.1 410		
WNPB-TV D34 DT CP 128.3 4,704	61.0 1,224	61.0 1,224	
WENY-TV D35 DT CP 71.1 2,021	36.9 514	35.9 514	
WVIZ D35 DT CP 156.4 50,921	49.2 17,339	49.2 17,339	
WPXW-TV D35 DT CP 447.7 26,943	391.8 8,198	368.8 8,092	
WTAP-TV D35 DT CP 323.4 86,052	175.1 48,822	175.1 48,822	
WWLM-CD D36 DC CP 3.0 0	0.0 0	0.0 0	

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Interference to BLANK0000034923 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	135.0 km
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	1.2
	WNJU	D35	DT	CP	LINDEN, NJ	BLANK0000053139	326.9
	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	226.8
	WFPA-CD	D35	DC	CP	PHILADELPHIA, PA	BLANK0000034670	199.3
	WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	162.5
	WTTG	D36	DT	APP	WASHINGTON, DC	BLANK0000035718	2.7
	WITF-TV	D36	DT	APP	HARRISBURG, PA	BLANK0000035782	156.1
	WSVF-CD	D36	DC	CP	HARRISONBURG, VA	BLANK0000034406	159.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26071.0 8,271,919	25079.9 8,211,498	24285.2 8,140,780	24285.2 8,140,780	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC 14.8 501	0.0 0		
WRC-TV D34 DT CP 33.9 4,125	14.9 1,781	14.9 1,781	
WNJU D35 DT CP 15.9 2,271	4.0 685	4.0 685	
WJAC-TV D35 DT CP 236.2 22,794	196.4 18,955	182.5 18,454	
WFPA-CD D35 DC CP 15.9 1,244	4.9 623	4.9 623	
WAHU-CD D35 DC CP 509.8 36,075	461.9 32,233	461.9 32,233	
WTTG D36 DT APP 65.7 11,757	40.8 8,941	40.8 8,941	

WITF-TV D36 DT APP	4.0	402	2.0	127	2.0	127
WSVF-CD D36 DC CP	2.0	35	2.0	35	2.0	35

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Interference to BLANK0000034923 CP scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	135.0 km
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	1.2
	WNJU	D35	DT	CP	LINDEN, NJ	BLANK0000053139	326.9
	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	226.8
	WFPA-CD	D35	DC	CP	PHILADELPHIA, PA	BLANK0000034670	199.3
	WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	162.5
	WTTG	D36	DT	APP	WASHINGTON, DC	BLANK0000035718	2.7
	WITF-TV	D36	DT	LIC	HARRISBURG, PA	BLANK0000039358	156.1
	WSVF-CD	D36	DC	CP	HARRISONBURG, VA	BLANK0000034406	159.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26071.0 8,271,919	25079.9 8,211,498	24287.2 8,140,907	24287.2 8,140,907	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC	14.8 501	0.0 0	
WRC-TV D34 DT CP	33.9 4,125	14.9 1,781	
WNJU D35 DT CP	15.9 2,271	4.0 685	
WJAC-TV D35 DT CP	236.2 22,794	182.5 18,454	
WFPA-CD D35 DC CP	15.9 1,244	4.9 623	
WAHU-CD D35 DC CP	509.8 36,075	461.9 32,233	
WTTG D36 DT APP	65.7 11,757	40.8 8,941	
WITF-TV D36 DT LIC	2.0 275	0.0 0	
WSVF-CD D36 DC CP	2.0 35	2.0 35	

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Interference to BLANK0000034923 CP scenario 3

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	135.0 km
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	1.2
	WNJU	D35	DT	CP	LINDEN, NJ	BLANK0000053139	326.9
	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	226.8

WFPA-CD	D35	DC	CP	PHILADELPHIA, PA	BLANK0000034670	199.3
WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	162.5
WTTG	D36	DT	LIC	WASHINGTON, DC	BLANK0000058564	0.7
WITF-TV	D36	DT	APP	HARRISBURG, PA	BLANK0000035782	156.1
WSVF-CD	D36	DC	CP	HARRISONBURG, VA	BLANK0000034406	159.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26071.0 8,271,919	25079.9 8,211,498	24288.1 8,141,462	24288.1 8,141,462	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC	14.8 501	0.0 0	
WRC-TV D34 DT CP	33.9 4,125	16.9 1,880	16.9 1,880
WNJU D35 DT CP	15.9 2,271	4.0 1,000	4.0 1,000
WJAC-TV D35 DT CP	236.2 22,794	198.4 19,152	184.5 18,651
WFPA-CD D35 DC CP	15.9 1,244	4.9 623	4.9 623
WAHU-CD D35 DC CP	509.8 36,075	460.9 32,223	460.9 32,223
WTTG D36 DT LIC	57.8 10,561	37.8 8,259	37.8 8,259
WITF-TV D36 DT APP	4.0 402	2.0 127	2.0 127
WSVF-CD D36 DC CP	2.0 35	2.0 35	2.0 35

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Interference to BLANK0000034923 CP scenario 4

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	
Undesireds:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	135.0 km
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	1.2
	WNJU	D35	DT	CP	LINDEN, NJ	BLANK0000053139	326.9
	WJAC-TV	D35	DT	CP	JOHNSTOWN, PA	BLANK0000027312	226.8
	WFPA-CD	D35	DC	CP	PHILADELPHIA, PA	BLANK0000034670	199.3
	WAHU-CD	D35	DC	CP	CHARLOTTESVILLE, VA	BLANK0000034100	162.5
	WTTG	D36	DT	LIC	WASHINGTON, DC	BLANK0000058564	0.7
	WITF-TV	D36	DT	LIC	HARRISBURG, PA	BLANK0000039358	156.1
	WSVF-CD	D36	DC	CP	HARRISONBURG, VA	BLANK0000034406	159.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26071.0 8,271,919	25079.9 8,211,498	24290.2 8,141,589	24290.2 8,141,589	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
W33CR-D D34 LD LIC	14.8 501	0.0 0	
WRC-TV D34 DT CP	33.9 4,125	16.9 1,880	16.9 1,880
WNJU D35 DT CP	15.9 2,271	4.0 1,000	4.0 1,000

WJAC-TV D35 DT CP	236.2	22,794	198.4	19,152	184.5	18,651
WFPA-CD D35 DC CP	15.9	1,244	4.9	623	4.9	623
WAHU-CD D35 DC CP	509.8	36,075	460.9	32,223	460.9	32,223
WTTG D36 DT LIC	57.8	10,561	37.8	8,259	37.8	8,259
WITF-TV D36 DT LIC	2.0	275	0.0	0	0.0	0
WSVF-CD D36 DC CP	2.0	35	2.0	35	2.0	35

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Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	
Undesireds:	WHUT-TV	D33	DT	APP	WASHINGTON, DC	BLANK0000035679	135.0 km
	WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	136.0
	WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	213.4
	W34DI-D	D34+	LD	LIC	NEW YORK, NY	BLANK0000048491	306.7
	WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	229.4
	WHSV-TV	D34	LD	APP	HARRISONBURG, VA	BLANK0000054695	204.1
	WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	176.3
	WGAL	D35	LD	CP	LANCASTER, PA	BLANK0000053203	81.5
	WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	135.0

Service area	Terrain-limited	IX-free	Percent IX
11896.2	676,166	7754.8	501,839
		7467.4	493,061
			3.71
			1.75

Undesired	Total IX	Unique IX	Prcnt Unique IX
WHUT-TV D33 DT APP	2.0	60	0.0
WRC-TV D34 DT CP	259.4	7,557	220.5
WPPX-TV D34 DT CP	9.0	178	1.0
WSWB D34 DT CP	18.0	1,306	8.0
WHSV-TV D34 LD APP	10.9	148	4.0
WNPB-TV D34 DT CP	34.0	1,186	12.0
WGAL D35 LD CP	1.0	0	0.0
WPXW-TV D35 DT CP	8.9	63	0.0

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Interference to proposal scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	
Undesireds:	WHUT-TV	D33	DT	LIC	WASHINGTON, DC	BLEDT20071018AIJ	135.0 km

WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	136.0
WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	213.4
W34DI-D	D34+	LD	LIC	NEW YORK, NY	BLANK0000048491	306.7
WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	229.4
WHSV-TV	D34	LD	APP	HARRISONBURG, VA	BLANK0000054695	204.1
WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	176.3
WGAL	D35	LD	CP	LANCASTER, PA	BLANK0000053203	81.5
WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	135.0

Service area	Terrain-limited	IX-free	Percent IX
11896.2	676,166	7754.8	501,839
7467.4	493,061	3.71	1.75

Undesired	Total IX	Unique IX	Prcnt Unique IX
WRC-TV D34 DT CP	259.4	7,557	220.5
WPPX-TV D34 DT CP	9.0	178	1.0
WSWB D34 DT CP	18.0	1,306	8.0
WHSV-TV D34 LD APP	10.9	148	4.0
WNPB-TV D34 DT CP	34.0	1,186	12.0
WGAL D35 LD CP	1.0	0	0.0
WPXW-TV D35 DT CP	8.9	63	0.0

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Interference to proposal scenario 3

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: W33CR-D	D34	LD	LIC	CHAMBERSBURG, PA	Ch34FinalHeight	
Undesireds: WHUT-TV	D33	DT	CP	WASHINGTON, DC	BPEDT20120627AAD	135.0 km
WRC-TV	D34	DT	CP	WASHINGTON, DC	BLANK0000034340	136.0
WPPX-TV	D34	DT	CP	WILMINGTON, DE	BLANK0000034931	213.4
W34DI-D	D34+	LD	LIC	NEW YORK, NY	BLANK0000048491	306.7
WSWB	D34	DT	CP	SCRANTON, PA	BLANK0000034421	229.4
WHSV-TV	D34	LD	APP	HARRISONBURG, VA	BLANK0000054695	204.1
WNPB-TV	D34	DT	CP	MORGANTOWN, WV	BLANK0000034624	176.3
WGAL	D35	LD	CP	LANCASTER, PA	BLANK0000053203	81.5
WPXW-TV	D35	DT	CP	MANASSAS, VA	BLANK0000034923	135.0

Service area	Terrain-limited	IX-free	Percent IX
11896.2	676,166	7754.8	501,839
7467.4	493,061	3.71	1.75

Undesired	Total IX	Unique IX	Prcnt Unique IX
WHUT-TV D33 DT CP	6.9	60	0.0
WRC-TV D34 DT CP	259.4	7,557	220.5

WPPX-TV D34 DT CP	9.0	178	1.0	0	0.01	0.00
WSWB D34 DT CP	18.0	1,306	8.0	765	0.10	0.15
WHSV-TV D34 LD APP	10.9	148	4.0	36	0.05	0.01
WNPB-TV D34 DT CP	34.0	1,186	12.0	420	0.15	0.08
WGAL D35 LD CP	1.0	0	0.0	0	0.00	0.00
WPXW-TV D35 DT CP	8.9	63	0.0	0	0.00	0.00

TABLE I  
COMPUTED COVERAGE DATA  
FOR THE PROPOSED OPERATION OF  
W33CR-D, CHAMBERSBURG, PENNSYLVANIA  
CHANNEL 34 15 KW ND ERP 720.3 METERS RC/AMSL  
DECEMBER 2018

<u>Radial</u> N ° E, T	<u>Average</u> <u>Elevation</u> meters	<u>Effective</u> <u>Height</u> meters	<u>Depression</u> <u>Angle</u> degrees	<u>Effective</u> <u>Radiated</u> <u>Power</u> kW	<u>Distance to Contour</u> <u>51 dBu</u> km
0	356.4	363.6	0.528	15	58.7
10	405.4	314.6	0.491	15	56.2
20	415.9	304.1	0.483	15	55.6
30	393.5	326.5	0.501	15	56.8
40	383.1	336.9	0.508	15	57.4
50	233.1	486.9	0.611	15	64.0
60	213.1	506.9	0.624	15	64.6
70	208.7	511.3	0.626	15	64.7
80	200.9	519.1	0.631	15	64.9
90	204.4	515.6	0.629	15	64.8
100	213.5	506.5	0.623	15	64.5
110	214.4	505.6	0.623	15	64.5
120	214.5	505.5	0.623	15	64.5
130	214.7	505.3	0.623	15	64.5
140	205.6	514.4	0.628	15	64.8
150	200.8	519.2	0.631	15	64.9
160	206.3	513.7	0.628	15	64.8
170	202.4	517.6	0.630	15	64.9
180	195.0	525.0	0.635	15	65.1
190	198.6	521.4	0.633	15	65.0
200	218.8	501.2	0.620	15	64.4
210	329.7	390.3	0.547	15	59.9
220	533.6	186.4	0.378	15	49.0
230	449.6	270.4	0.455	15	53.8
240	365.7	354.3	0.521	15	58.2
250	331.5	388.5	0.546	15	59.8
260	348.1	371.9	0.534	15	59.1
270	344.1	376.0	0.537	15	59.3

TABLE I  
COMPUTED COVERAGE DATA  
FOR THE PROPOSED OPERATION OF  
W33CR-D, CHAMBERSBURG, PENNSYLVANIA  
CHANNEL 34 15 KW ND ERP 720.3 METERS RC/AMSL  
DECEMBER 2018

<u>Radial</u>	<u>Average</u>	<u>Effective</u>	<u>Depression</u>	Effective	<u>Distance to Contour</u>
<u>N ° E, T</u>	<u>Elevation</u>	<u>Height</u>	<u>Angle</u>	<u>Radiated</u>	<u>51 dBu</u>
	meters	meters	degrees	Power	km
280	324.6	395.4	0.551	15	60.2
290	318.1	401.9	0.555	15	60.5
300	323.6	396.4	0.551	15	60.2
310	337.5	382.5	0.542	15	59.6
320	345.3	374.8	0.536	15	59.2
330	345.0	375.0	0.536	15	59.2
340	341.7	378.3	0.539	15	59.4
350	341.8	378.2	0.539	15	59.4



