

ENGINEERING STATEMENT  
APPLICATION IN SUPPORT TO MODIFY  
CONSTRUCTION PERMIT (FCC FILE NO. 0000028600) FOR  
REPACKED FACILITIES PURSUANT TO DA 17-314  
IN ACCORDANCE WITH  
PUBLIC NOTICE DATED JULY 31, 2017 (DA 17-724)  
INDEPENDENCE TELEVISION COMPANY  
WMYO-DT, SALEM, INDIANA  
CHANNEL 16 725 KW ND HORIZONTAL ERP  
217.5 KW VERTICAL 390.4 METERS HAAT  
SEPTEMBER 2017

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         )

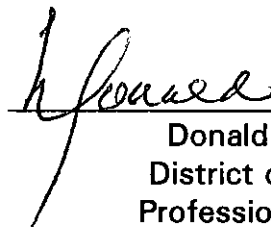
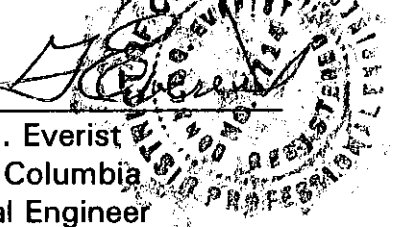
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

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;

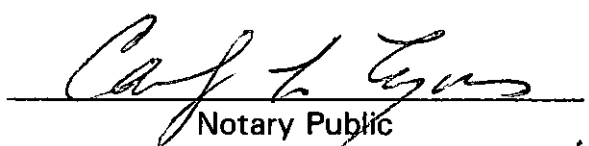
That the attached engineering report was prepared by him or under his supervision and direction and

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 13<sup>th</sup> day of September, 2017.



  
Notary Public

My Commission Expires: 2/28/2018

This engineering statement has been prepared in support of an application to modify construction permit (FCC File No. 0000028600) for repacked facilities on Channel 16 pursuant to DA 17-314 in accordance with the FCC Public Notice dated July 31, 2017 (DA 17-724). This engineering statement is on behalf of Independence Television Company, licensee of WMYO-DT, Salem, Indiana. The purpose of the application is to increase effective radiated power in order to help maintain the unique coverage attained from the current licensed non-directional diplexed antenna. Absent grant of this application, the station is predicted to experience a loss of population served in excess of one percent as a result of the repacking process. See *Incentive Auction Closing and Channel Reassignment Public Notice: The Broadcast Television Incentive Auction Closes: Reverse Auction and Forward Auction Results Announced*: Public Notice, 32 FCC Rcd 2786 (2017) at 2804, para. 56, with link to [https://fcc.gov/download/incentive-auctions/Transition\\_Files](https://fcc.gov/download/incentive-auctions/Transition_Files) that includes an indication of stations with reassignments that satisfy this criteria, including WMYO-DT.

Present

WMYO-DT operates on Channel 51 and its sister station WDRB-DT operates on Channel 49. The separation of only 2 channels permitted the stations to use a top-mounted single non-directional antenna thereby taking advantage of a maximum-unaltered radiation pattern.

Incentive Auction Channel Assignment and Effect On The Constraints on Coverage

The Incentive Auction technical technique did not take this important allocation fact into consideration when it assigned WDRB-DT Channel 32 and WMYO-DT Channel 16. As discussed above, WMYO-DT, Channel 16 is in the list entitled, "Greater Than 1% Population Loss" last

updated April 13, 2017 which demonstrates that the coverage determined by the reassignment channel and ERP reduced the actual service area by more than one percent.

Given the time constraints, WDRB-DT and WMYO-DT undertook an allocation analysis to determine if WDRB's channel could be modified to permit a replacement diplexed single antenna<sup>1</sup>. Based on this analysis, using TVStudy 2.2, no alternate channel was identified which would permit maximum equivalent coverage enjoyed by the current WMYO-DT 1000 kW non-directional 390.4 meter HAAT operation to off-the-air viewers. Accordingly, due to the new channel separation, a unique single antenna solution is not possible under current antenna design criteria. Therefore, other less perfect transmitter antenna techniques were examined. The least disruptive antenna arrangement is to modify the existing tower top to create a "T" bar. The "T" bar will be designed to handle both the Channel 32 and 16 antennas and will be designed to minimize the modification of either antenna radiation pattern.

As detailed in the WMYO-DT FCC Form 2100, Section 399, after conducting several structural analyses of the existing tower, the station has concluded that the facilities proposed by the FCC cannot be constructed on the current tower. Instead, the station plan to construct a new tower of the same basic height and dimensions as the existing tower on the same property.

WMYO-DT proposes to construct DTV facilities of 725 kW horizontal polarization/ 217.5 kW vertical non-directional at a height above average terrain of 390.4 meters.

---

<sup>1</sup>Of a design that meets industry acceptance offered by major domestic antenna manufacturer

Transmitter Site and Equipment Data

There are no AM stations located within 3.2 km of the proposed WMYO-DT tower site. There are no FM operations and there is one other full-service DTV facility, WDRB-DT, within 100 meters.

For purposes of this application, the proposed DTV antenna will be top-mounted on the existing tower. The construction permit will be modified to reflect the new tower once all detailed information about the new site on the existing property is available. Accordingly, for purposes of this application, the WMYO-DT proposed antenna will be located on the existing tower having a total overall structure height above ground of 304.8 meters (1000 feet). The existing transmitter site is located at 5257 South Skyline Drive, Floyds Knob, Indiana. The registration number for the tower is 1028421.

Since there is no change in overall height, FAA airspace approval is not required.

Exhibit E-1 is a vertical sketch of the existing tower and the proposed transmitting antenna configuration.

The geographic coordinates of the existing site are as follows:

North Latitude: 38° 21' 00"

West Longitude: 85° 50' 57"

NAD-27

North Latitude: 38° 21' 00"

West Longitude: 85° 50' 57"

NAD-83

Equipment Data

Antenna: ERI, Model ATW21H3-ETO-16H (or equivalent) elliptically polarized antenna with 0.75° electrical beam tilt. The vertical plane pattern and other exhibits required by Section 73.625(c) are herein included as Exhibit E-2.

Transmission Line: 350.6 meters (1150 ft) of ERI, Type EIA rigid, 7-3/16", 75 ohm or equivalent with loss of 0.276 dB/100 feet

Power Data

Transmitter output	58.22 kW	17.65 dBk
Transmission line efficiency/loss	80.06%	0.966 dB
Input power to the antenna	46.61 kW	16.68 dBk
Antenna power gain,	Horizontal	15.56
Main Lobe	Vertical	4.67
		11.92 dB
		6.69 dB
Effective Radiated Power,	Horizontal	725 kW
	Vertical	217.5 kW
		28.60 dBk
		23.37 dBk

Elevation Data

Vertical dimension for Channel WMYO-DT antenna	15.3 meters 50.1 feet
Overall height above ground of the existing antenna structure (including beacon and lightning rod)	304.8 meters 1000 feet
Center of radiation of Channel 16 antenna above ground	296 meters 971 feet
Elevation of site above mean sea level	292.9 meters 961 feet

Center of radiation of Channel 16 antenna above mean sea level	588.9 meters 1932 feet
Overall height above mean sea level of existing tower and proposed antenna (including beacon)	597.7 meters 1961 feet
Antenna height above average terrain	390.4 meters 1280.8 feet

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

#### Coverage

The average elevation data for 3.2 to 16.1 km along each radial are based upon the 3-second NGDC profile data and conforms very closely to the terrain information of that determined by using the 7.5 minute topographic maps on file at the Commission and has been previously established. For this filing, the one second terrain data and prediction of coverage contours are based solely on TVStudy 2.2.

Table I provides the F(50,90) DTV coverage contour has been computed every ten degrees in azimuth from reference TVStudy 2.2 which represents 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.

Utilizing the formula in Section 73.625(b)(2) of the Rules for the effective heights, it is found that the depression angle,  $A_h$ , varies from 0.503 to 0.595 degrees. Since the relative vertical field is greater than 90% of the maximum at these depression angles, the maximum power was used in determining the distance to the DTV contour.

Table I includes the distances to the 48 and 38.937 dBu F(50,90) coverage contours, the average elevation 3.2 to 16.1 km, and the antenna height above average terrain for each of the ten degree spaced radials. Exhibit E-4 provides the 48 and 38.937 dBu F(50,90) coverage contours and demonstrates that the community of license is covered by the F(50,90) 48 dBu contour.

Total Radiofrequency Field Levels at WDRB-DT Tower Site

The total contribution by the proposed WDRB-DT broadcast facilities and the addition of the proposed operation of WMYO-DT at 2 meters above ground level is less than two percent of the current FCC guidelines for uncontrolled/general population exposure.

For DTV operation, WDRB-DT proposes to use an ERI, Type ATW 21H3-ETO-16H or equivalent antenna. The elevation pattern for this antenna shows a maximum relative field of less than 0.067 towards the ground in the vicinity of the tower.

The total percentage of radiofrequency field levels ("RFF") can be calculated by combining the percentage contribution of each station.

<u>Station</u>	<u>ERP</u> (kW)	<u>Frequenc</u> <u>y</u> (MHz)	<u>Ch</u>	<u>RCAGL</u> (m)	<u>Relative Field</u> 20°-90°	<u>S</u> ( $\mu\text{W}/\text{cm}^2$ )	<u>RFF</u> (%)
WMYO-DT Proposed	725H 217.5	482-488	16	296	0.067	1.64	<1
WDRB-DT Proposed	724H 217.2V	578-584	32	296	0.043	0.672	<1

Using this relative field factor and the procedures prescribed in OET Bulletin 65, the maximum RFF resulting from the proposed operation is less than  $2 \mu\text{W}/\text{cm}^2$ . This is less than one



percent of the  $323 \mu\text{W}/\text{cm}^2$  maximum human exposure to RFF recommended by the current FCC guidelines for the uncontrolled/general population.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the 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\* tower is not located in an officially designated wilderness area.
- (a)(2) The existing\* tower is not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities on an existing\* tower will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities on an existing\* tower 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 on an existing\* tower located on a tower 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\* tower is not located near any known Indian religious sites.

- (a)(6) The existing\* tower is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing guyed tower 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 tower 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.

\*WMYO-DT will obtain all required approvals as needed for any new tower construction.

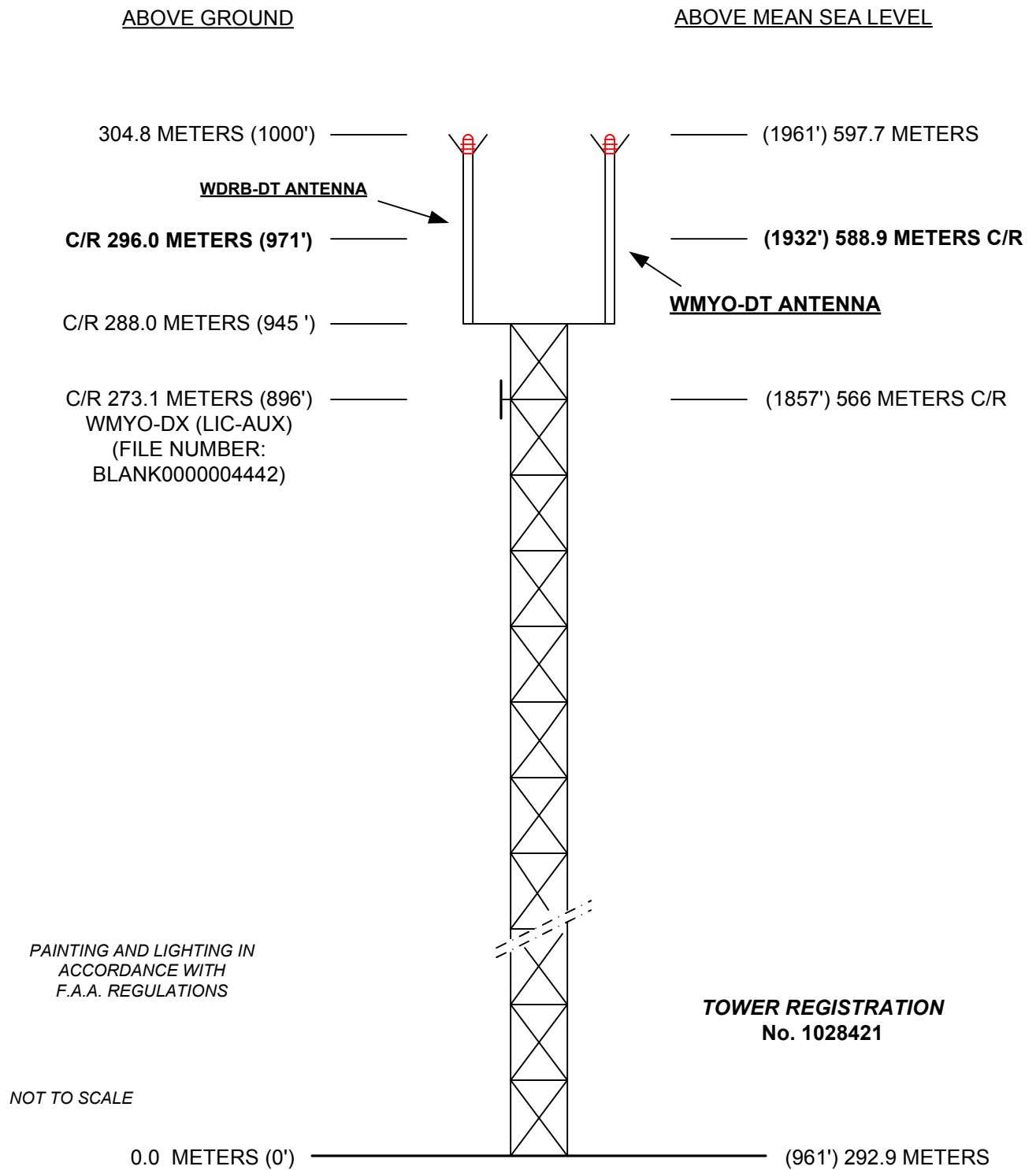


EXHIBIT E - 1  
TOWER SKETCH  
WMYO-DT, SALEM, INDIANA  
SEPTEMBER 2017

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

# **Preliminary Specification for TRASAR® Top Mounted UHF Elliptically Polarized Coaxial Slotted Array Television Antenna**

**WMYO (DT), RF Channel 16  
Block Communications, Salem, IN**

**September 12, 2017**

**Antenna Model:  
ATW21H3-ETO-16H**

**Specification Number  
20170523-587-45 Rev A**

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  
TRASAR® Top Mounted  
UHF Elliptically Polarized  
Coaxial Slotted Array Television Antenna**

**Electrical Characteristics:**

<b>Channel:</b>	16		
<b>Frequency:</b>	482 MHz to 488 MHz		
<b>Service:</b>	ATSC		
<b>Azimuth Pattern Number:</b>	Horizontal Polarization	ATW-O-H	
	Vertical Polarization	ATW-O-V	
<b>Elevation Pattern Number:</b>	Horizontal Polarization	ATW21H3H	
	Vertical Polarization	ATW18H3V	
<b>Azimuth Directivity:</b>	Horizontal Polarization	1.00	(0.00 dB)
	Vertical Polarization	1.00	(0.00 dB)
<b>Elevation Directivity:</b>	Horizontal Polarization	21.00	(13.22 dBd)
	Vertical Polarization	18.00	(12.55 dBd)
<b>Peak Power Gain:</b>	Horizontal Polarization	15.56	(11.92 dBd)
	Vertical Polarization	4.67	(6.69 dBd)
<b>Gain at Horizontal:</b>	Horizontal Polarization	11.69	(10.68 dBd)
	Vertical Polarization	3.49	(5.43 dBd)
<b>Vertical/Horizontal Ratio:</b>	0.30		
<b>Electrical Beam Tilt:</b>	0.75 Degrees		
<b>Input Power Required:</b>	46.61 kW (16.68 dBk)		
<b>RF Input:</b>	7-3/16-inch, 75 ohm, flanged male		
<b>Input Power Rating (maximum):</b>	60 kW Average Power, 8VSB		
<b>Antenna VSWR (maximum):</b>	1.10 Over 6 MHz Channel		

**Preliminary Specification for  
TRASAR® Top Mounted  
UHF Elliptically Polarized  
Coaxial Slotted Array Television Antenna**

**Mechanical Characteristics:**

Mounting Configuration:			Top Mount
Height of Antenna (D):		50.1 feet	(15.3 meters)
Height of Center of Radiation (B):		25.1 feet	(7.6 meters)
Overall Height (Includes four 3.5 ft lightning spurs) (A):		53.6 feet	(16.3 meters)
Deicing:		Fully enclosed pressurized radome	
Radome Diameter (C):		18.4 inches	(467 millimeters)
Radome Color:		Aviation Orange	
Climbing Device:		Fiberglass Ladder	
Calculated Weight <sup>1</sup> :		No Ice	7,775 lbm (3526.7 kg)
		0.5inch (13 mm) ice	(0.0 kg)
Windload Data <sup>3</sup> :	EPA	No Ice	66.0 sq.ft. (6.13 sq.m.)
		0.5inch (13 mm) ice	135.7 sq.ft. (12.61 sq.m.)
Effective Moment Arm <sup>3</sup> :	EPA	No Ice	27.7 feet (8.45 meters)
		0.5inch (13 mm) ice	27.1 feet (8.25 meters)

MOUNTING FLANGE BOLT CIRCLE<sup>2</sup>: Quantity (16), 1.38 inch holes for 1.25 inch bolts, equally spaced on a 21.50 inch bolt circle.

**This antenna is designed to be supported by a structure that can resist the antenna base reactions and which provides a support that is rigid in the three translational and three rotational degrees of freedom.**

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, beacon and lightning spurs only. Custom mounting brackets/adapters and/or antenna input section are NOT included.

2 The mounting flange specified is the standard ERI mounting flange used for this antenna configuration. In those instances where an existing top mounted antenna is being replaced the antenna supplied will be designed with a mounting flange to match that of the existing antenna unless electrical and /or mechanical requirements for the new antenna preclude the matching flange. Customer responsible for supplying verified flange requirements for the flange configuration being matched.

3 Based on a wind speed of 90miles per hour MPH (145 kph) (fastest mile) no ice and 30 MPH (48 kph) with 0.75-inches in base design ice (2.1-inches actual tiz) with a height above ground level (HAGL) of 971 feet (296m) per ANSI/TIA-222-G. Structure Class II, Exposure Category C and Topographic Category I. EPA values include four lightning spurs & a standard beacon.

**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

**WMYO (DT)**  
**Block Communications**  
**Salem, IN**  
**ATW21H3-ETO-16H**

**RF Channel: 16**

### Antenna Parameters

#### Azimuth Directivity:

Horizontal:	1.00	(0.00 dB)
Vertical:	1.00	(0.00 dB)

#### Elevation Directivity:

Horizontal:	21.00	(13.22 dB)
Vertical:	18.00	(12.55 dB)

### Transmission Line

#### Vertical Run:

Type:	7-3/16-inch, 75 ohm, rigid line	
Length:	950 feet	289.6 meters
Attenuation:	0.084 dB/100 feet	0.276 dB/100 mtrs

#### Horizontal Run:

Type:	7-3/16-inch, 75 ohm, rigid line	
Length:	200 feet	61.0 meters
Attenuation:	0.084 dB/100 feet	0.276 dB/100 mtrs

#### Effective Radiated Power:

Horizontal:	725.00 kW	(28.60 dBk)
Vertical:	217.50 kW	(23.37 dBk)

#### Power Gain:

Horizontal:	15.56 numeric	(11.92 dBd)
Vertical:	4.67 numeric	(6.69 dBd)

#### Antenna Input Power:

46.61 kW	(16.68 dBk)
----------	-------------

#### Transmission Line Losses:

-11.61 kW	(0.966 dB)
-----------	------------

<b>Total Losses:</b>	0.966 dB
----------------------	----------

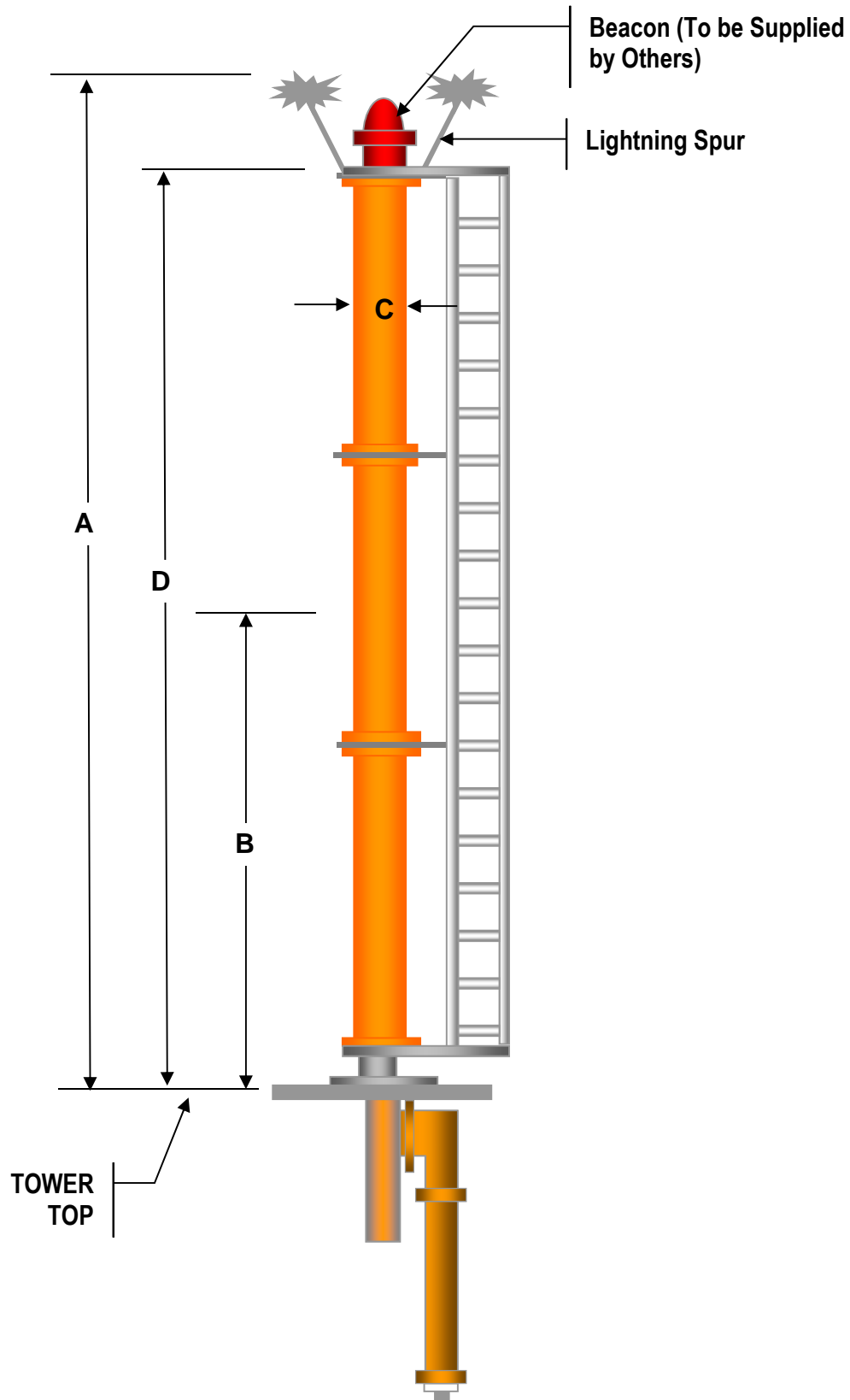
<b>Line Efficiency:</b>	80.06%
-------------------------	--------

#### Transmitter Power Output:

58.22 kW
(17.65 dBk)



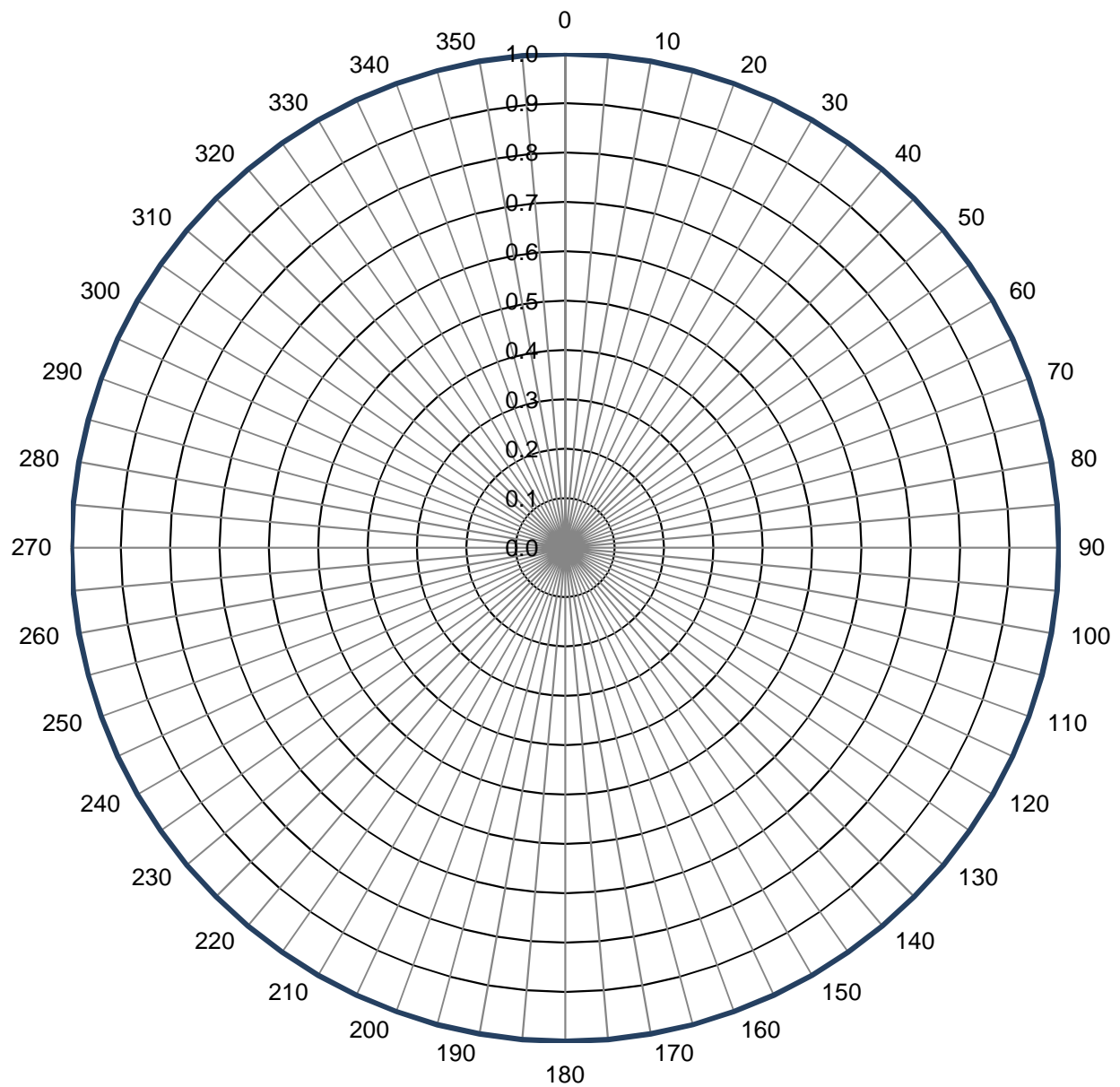
Typical Mounting Configuration Shown. Actual Configuration May Vary.



## Azimuth Pattern

Type:	ATW-O-H	Polarization:	Horizontal
Directivity:	1.00 numeric (0.00 dB)	Frequency:	16 (ATSC)
Peak(s) at:		Location:	Salem, IN
		NOTE: Pattern shape and directivity may vary with channel and mounting configuration.	

Relative Field

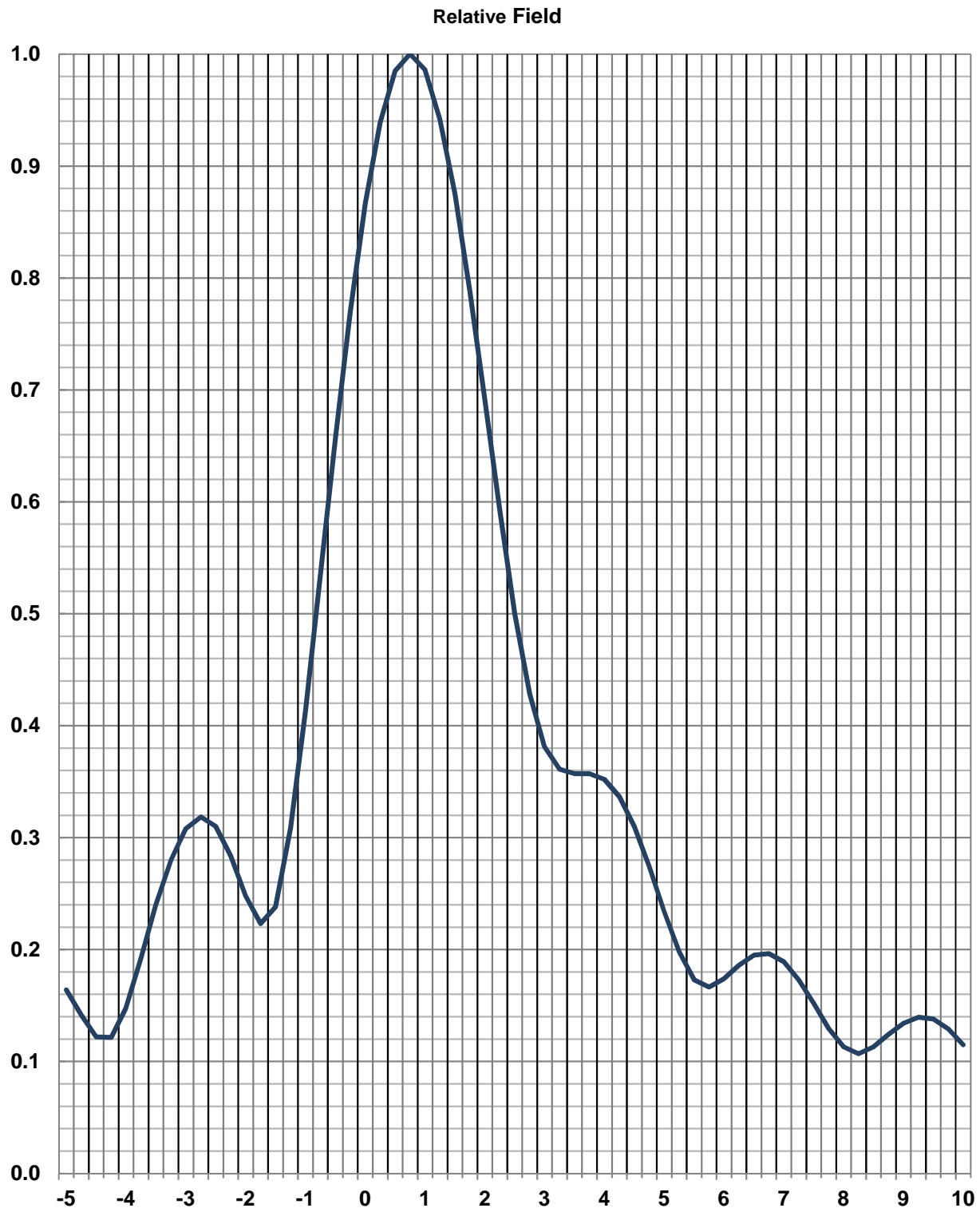


**Tabulated Data for Azimuth Pattern**Type: ATW-O-H

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0	1.000	0.00	100	1.000	0.00	200	1.000	0.00	300	1.000	0.00
2	1.000	0.00	102	1.000	0.00	202	1.000	0.00	302	1.000	0.00
4	1.000	0.00	104	1.000	0.00	204	1.000	0.00	304	1.000	0.00
6	1.000	0.00	106	1.000	0.00	206	1.000	0.00	306	1.000	0.00
8	1.000	0.00	108	1.000	0.00	208	1.000	0.00	308	1.000	0.00
10	1.000	0.00	110	1.000	0.00	210	1.000	0.00	310	1.000	0.00
12	1.000	0.00	112	1.000	0.00	212	1.000	0.00	312	1.000	0.00
14	1.000	0.00	114	1.000	0.00	214	1.000	0.00	314	1.000	0.00
16	1.000	0.00	116	1.000	0.00	216	1.000	0.00	316	1.000	0.00
18	1.000	0.00	118	1.000	0.00	218	1.000	0.00	318	1.000	0.00
20	1.000	0.00	120	1.000	0.00	220	1.000	0.00	320	1.000	0.00
22	1.000	0.00	122	1.000	0.00	222	1.000	0.00	322	1.000	0.00
24	1.000	0.00	124	1.000	0.00	224	1.000	0.00	324	1.000	0.00
26	1.000	0.00	126	1.000	0.00	226	1.000	0.00	326	1.000	0.00
28	1.000	0.00	128	1.000	0.00	228	1.000	0.00	328	1.000	0.00
30	1.000	0.00	130	1.000	0.00	230	1.000	0.00	330	1.000	0.00
32	1.000	0.00	132	1.000	0.00	232	1.000	0.00	332	1.000	0.00
34	1.000	0.00	134	1.000	0.00	234	1.000	0.00	334	1.000	0.00
36	1.000	0.00	136	1.000	0.00	236	1.000	0.00	336	1.000	0.00
38	1.000	0.00	138	1.000	0.00	238	1.000	0.00	338	1.000	0.00
40	1.000	0.00	140	1.000	0.00	240	1.000	0.00	340	1.000	0.00
42	1.000	0.00	142	1.000	0.00	242	1.000	0.00	342	1.000	0.00
44	1.000	0.00	144	1.000	0.00	244	1.000	0.00	344	1.000	0.00
46	1.000	0.00	146	1.000	0.00	246	1.000	0.00	346	1.000	0.00
48	1.000	0.00	148	1.000	0.00	248	1.000	0.00	348	1.000	0.00
50	1.000	0.00	150	1.000	0.00	250	1.000	0.00	350	1.000	0.00
52	1.000	0.00	152	1.000	0.00	252	1.000	0.00	352	1.000	0.00
54	1.000	0.00	154	1.000	0.00	254	1.000	0.00	354	1.000	0.00
56	1.000	0.00	156	1.000	0.00	256	1.000	0.00	356	1.000	0.00
58	1.000	0.00	158	1.000	0.00	258	1.000	0.00	358	1.000	0.00
60	1.000	0.00	160	1.000	0.00	260	1.000	0.00	360	1.000	0.00
62	1.000	0.00	162	1.000	0.00	262	1.000	0.00			
64	1.000	0.00	164	1.000	0.00	264	1.000	0.00			
66	1.000	0.00	166	1.000	0.00	266	1.000	0.00			
68	1.000	0.00	168	1.000	0.00	268	1.000	0.00			
70	1.000	0.00	170	1.000	0.00	270	1.000	0.00			
72	1.000	0.00	172	1.000	0.00	272	1.000	0.00			
74	1.000	0.00	174	1.000	0.00	274	1.000	0.00			
76	1.000	0.00	176	1.000	0.00	276	1.000	0.00			
78	1.000	0.00	178	1.000	0.00	278	1.000	0.00			
80	1.000	0.00	180	1.000	0.00	280	1.000	0.00			
82	1.000	0.00	182	1.000	0.00	282	1.000	0.00			
84	1.000	0.00	184	1.000	0.00	284	1.000	0.00			
86	1.000	0.00	186	1.000	0.00	286	1.000	0.00			
88	1.000	0.00	188	1.000	0.00	288	1.000	0.00			
90	1.000	0.00	190	1.000	0.00	290	1.000	0.00			
92	1.000	0.00	192	1.000	0.00	292	1.000	0.00			
94	1.000	0.00	194	1.000	0.00	294	1.000	0.00			
96	1.000	0.00	196	1.000	0.00	296	1.000	0.00			
98	1.000	0.00	198	1.000	0.00	298	1.000	0.00			

## Elevation Pattern

Type:	ATW21H3H	Polarization:	Horizontal
Directivity:		Frequency:	16 (ATSC)
Main Lobe:	21.00 numeric (13.22 dB)	Location:	Salem, IN
Horizontal:	15.79 numeric (11.98 dB)	Beam Tilt:	0.75 degrees



**Tabulated Data for Elevation Pattern**Type: ATW21H3H

-5 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
-5.00	0.164	-15.70	7.25	0.173	-15.24	29.00	0.041	-27.74	53.50	0.025	-32.04	78.00	0.036	-28.87
-4.75	0.142	-16.98	7.50	0.152	-16.36	29.50	0.032	-29.90	54.00	0.030	-30.46	78.50	0.030	-30.46
-4.50	0.122	-18.27	7.75	0.130	-17.75	30.00	0.035	-29.12	54.50	0.039	-28.18	79.00	0.025	-32.04
-4.25	0.122	-18.31	8.00	0.113	-18.94	30.50	0.045	-26.94	55.00	0.048	-26.38	79.50	0.021	-33.56
-4.00	0.148	-16.59	8.25	0.107	-19.41	31.00	0.051	-25.85	55.50	0.052	-25.68	80.00	0.018	-34.89
-3.75	0.193	-14.31	8.50	0.113	-18.94	31.50	0.048	-26.38	56.00	0.052	-25.68	80.50	0.016	-35.92
-3.50	0.240	-12.40	8.75	0.124	-18.13	32.00	0.037	-28.64	56.50	0.047	-26.56	81.00	0.016	-35.92
-3.25	0.280	-11.06	9.00	0.134	-17.46	32.50	0.029	-30.75	57.00	0.039	-28.18	81.50	0.017	-35.39
-3.00	0.308	-10.23	9.25	0.140	-17.11	33.00	0.033	-29.63	57.50	0.029	-30.75	82.00	0.018	-34.89
-2.75	0.319	-9.94	9.50	0.138	-17.20	33.50	0.044	-27.13	58.00	0.025	-32.04	82.50	0.020	-33.98
-2.50	0.310	-10.17	9.75	0.129	-17.79	34.00	0.049	-26.20	58.50	0.029	-30.75	83.00	0.021	-33.56
-2.25	0.284	-10.95	10.00	0.115	-18.79	34.50	0.046	-26.74	59.00	0.038	-28.40	83.50	0.022	-33.15
-2.00	0.248	-12.11	10.50	0.085	-21.41	35.00	0.036	-28.87	59.50	0.047	-26.56	84.00	0.022	-33.15
-1.75	0.223	-13.03	11.00	0.082	-21.72	35.50	0.028	-31.06	60.00	0.054	-25.35	84.50	0.022	-33.15
-1.50	0.238	-12.47	11.50	0.100	-20.00	36.00	0.031	-30.17	60.50	0.056	-25.04	85.00	0.022	-33.15
-1.25	0.309	-10.21	12.00	0.108	-19.33	36.50	0.041	-27.74	61.00	0.055	-25.19	85.50	0.021	-33.56
-1.00	0.414	-7.66	12.50	0.094	-20.54	37.00	0.047	-26.56	61.50	0.050	-26.02	86.00	0.020	-33.98
-0.75	0.535	-5.43	13.00	0.071	-22.97	37.50	0.046	-26.74	62.00	0.042	-27.54	86.50	0.018	-34.89
-0.50	0.657	-3.65	13.50	0.064	-23.88	38.00	0.038	-28.40	62.50	0.032	-29.90	87.00	0.016	-35.92
-0.25	0.770	-2.27	14.00	0.079	-22.05	38.50	0.028	-31.06	63.00	0.025	-32.04	87.50	0.014	-37.08
0.00	0.867	-1.24	14.50	0.089	-21.01	39.00	0.027	-31.37	63.50	0.025	-32.04	88.00	0.011	-39.17
0.25	0.939	-0.55	15.00	0.082	-21.72	39.50	0.036	-28.87	64.00	0.032	-29.90	88.50	0.009	-40.92
0.50	0.985	-0.13	15.50	0.062	-24.15	40.00	0.045	-26.94	64.50	0.041	-27.74	89.00	0.006	-44.44
0.75	1.000	0.00	16.00	0.053	-25.51	40.50	0.048	-26.38	65.00	0.050	-26.02	89.50	0.003	-50.46
1.00	0.986	-0.12	16.50	0.064	-23.88	41.00	0.043	-27.33	65.50	0.056	-25.04	90.00	0.000	---
1.25	0.942	-0.52	17.00	0.076	-22.38	41.50	0.034	-29.37	66.00	0.060	-24.44			
1.50	0.875	-1.16	17.50	0.074	-22.62	42.00	0.026	-31.70	66.50	0.061	-24.29			
1.75	0.789	-2.06	18.00	0.059	-24.58	42.50	0.029	-30.75	67.00	0.059	-24.58			
2.00	0.691	-3.21	18.50	0.046	-26.74	43.00	0.038	-28.40	67.50	0.054	-25.35			
2.25	0.592	-4.56	19.00	0.052	-25.68	43.50	0.046	-26.74	68.00	0.047	-26.56			
2.50	0.500	-6.02	19.50	0.064	-23.88	44.00	0.048	-26.38	68.50	0.038	-28.40			
2.75	0.428	-7.37	20.00	0.067	-23.48	44.50	0.043	-27.33	69.00	0.029	-30.75			
3.00	0.381	-8.38	20.50	0.057	-24.88	45.00	0.033	-29.63	69.50	0.023	-32.77			
3.25	0.361	-8.85	21.00	0.043	-27.33	45.50	0.026	-31.70	70.00	0.022	-33.15			
3.50	0.357	-8.95	21.50	0.042	-27.54	46.00	0.028	-31.06	70.50	0.028	-31.06			
3.75	0.357	-8.95	22.00	0.054	-25.35	46.50	0.037	-28.64	71.00	0.036	-28.87			
4.00	0.352	-9.07	22.50	0.061	-24.29	47.00	0.045	-26.94	71.50	0.044	-27.13			
4.25	0.337	-9.46	23.00	0.057	-24.88	47.50	0.049	-26.20	72.00	0.052	-25.68			
4.50	0.310	-10.17	23.50	0.044	-27.13	48.00	0.046	-26.74	72.50	0.058	-24.73			
4.75	0.274	-11.24	24.00	0.036	-28.87	48.50	0.038	-28.40	73.00	0.063	-24.01			
5.00	0.234	-12.62	24.50	0.044	-27.13	49.00	0.028	-31.06	73.50	0.066	-23.61			
5.25	0.198	-14.07	25.00	0.055	-25.19	49.50	0.025	-32.04	74.00	0.067	-23.48			
5.50	0.173	-15.24	25.50	0.056	-25.04	50.00	0.031	-30.17	74.50	0.067	-23.48			
5.75	0.167	-15.57	26.00	0.048	-26.38	50.50	0.041	-27.74	75.00	0.065	-23.74			
6.00	0.174	-15.19	26.50	0.036	-28.87	51.00	0.048	-26.38	75.50	0.062	-24.15			
6.25	0.186	-14.61	27.00	0.035	-29.12	51.50	0.050	-26.02	76.00	0.058	-24.73			
6.50	0.195	-14.20	27.50	0.045	-26.94	52.00	0.046	-26.74	76.50	0.053	-25.51			
6.75	0.197	-14.13	28.00	0.053	-25.51	52.50	0.039	-28.18	77.00	0.048	-26.38			
7.00	0.189	-14.47	28.50	0.051	-25.85	53.00	0.029	-30.75	77.50	0.042	-27.54			

**Azimuth Pattern**

Type: ATW-O-V

Polarization:

Vertical

Directivity: 1.00 numeric (0.00 dB)

Frequency:

16 (ATSC)

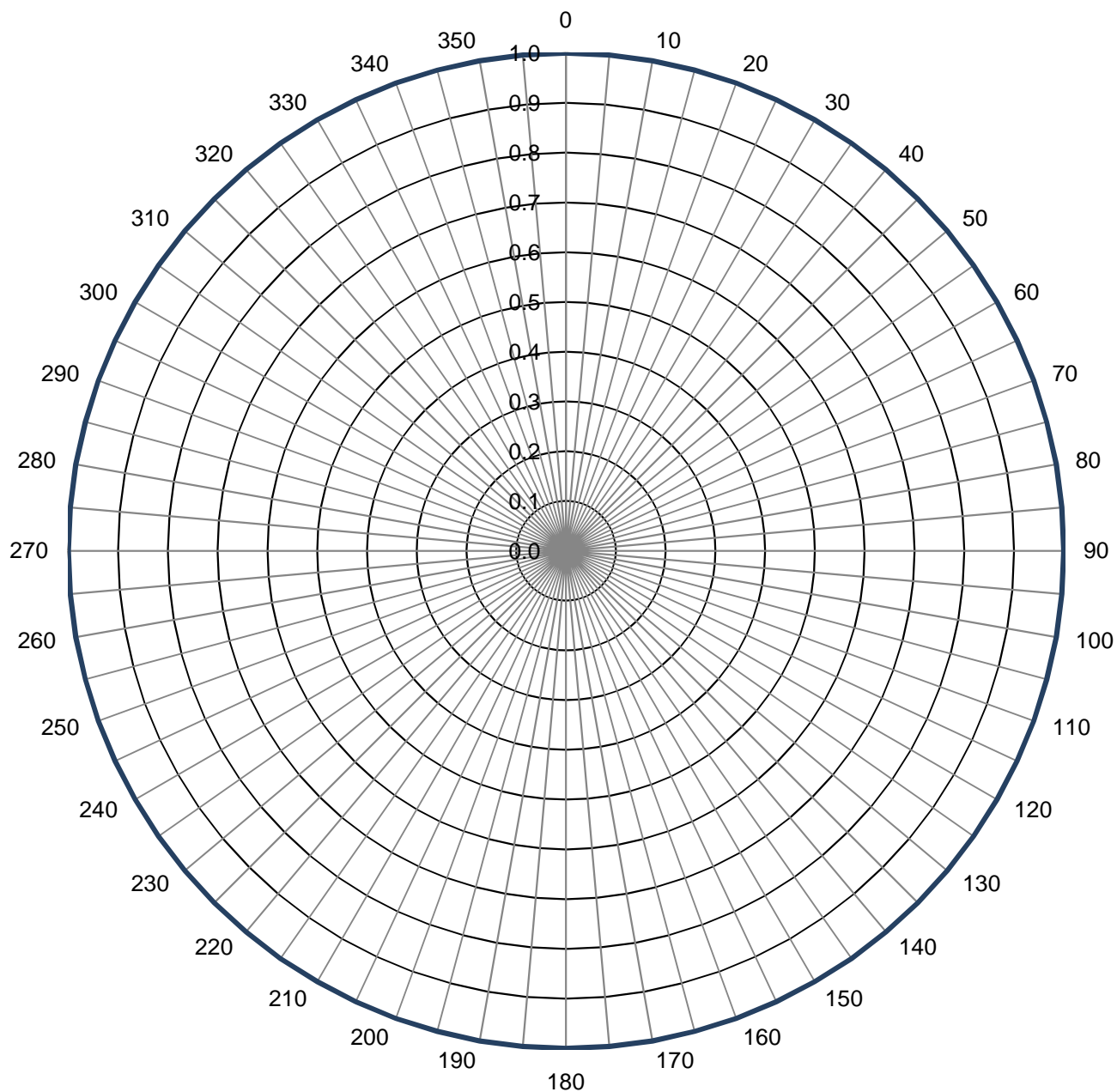
Peak(s) at:

Location:

Salem, IN

NOTE: Pattern shape and directivity may vary with channel and mounting configuration.

Relative Field



**Tabulated Data for Azimuth Pattern**Type: ATW-O-V

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0	1.000	0.00	100	1.000	0.00	200	1.000	0.00	300	1.000	0.00
2	1.000	0.00	102	1.000	0.00	202	1.000	0.00	302	1.000	0.00
4	1.000	0.00	104	1.000	0.00	204	1.000	0.00	304	1.000	0.00
6	1.000	0.00	106	1.000	0.00	206	1.000	0.00	306	1.000	0.00
8	1.000	0.00	108	1.000	0.00	208	1.000	0.00	308	1.000	0.00
10	1.000	0.00	110	1.000	0.00	210	1.000	0.00	310	1.000	0.00
12	1.000	0.00	112	1.000	0.00	212	1.000	0.00	312	1.000	0.00
14	1.000	0.00	114	1.000	0.00	214	1.000	0.00	314	1.000	0.00
16	1.000	0.00	116	1.000	0.00	216	1.000	0.00	316	1.000	0.00
18	1.000	0.00	118	1.000	0.00	218	1.000	0.00	318	1.000	0.00
20	1.000	0.00	120	1.000	0.00	220	1.000	0.00	320	1.000	0.00
22	1.000	0.00	122	1.000	0.00	222	1.000	0.00	322	1.000	0.00
24	1.000	0.00	124	1.000	0.00	224	1.000	0.00	324	1.000	0.00
26	1.000	0.00	126	1.000	0.00	226	1.000	0.00	326	1.000	0.00
28	1.000	0.00	128	1.000	0.00	228	1.000	0.00	328	1.000	0.00
30	1.000	0.00	130	1.000	0.00	230	1.000	0.00	330	1.000	0.00
32	1.000	0.00	132	1.000	0.00	232	1.000	0.00	332	1.000	0.00
34	1.000	0.00	134	1.000	0.00	234	1.000	0.00	334	1.000	0.00
36	1.000	0.00	136	1.000	0.00	236	1.000	0.00	336	1.000	0.00
38	1.000	0.00	138	1.000	0.00	238	1.000	0.00	338	1.000	0.00
40	1.000	0.00	140	1.000	0.00	240	1.000	0.00	340	1.000	0.00
42	1.000	0.00	142	1.000	0.00	242	1.000	0.00	342	1.000	0.00
44	1.000	0.00	144	1.000	0.00	244	1.000	0.00	344	1.000	0.00
46	1.000	0.00	146	1.000	0.00	246	1.000	0.00	346	1.000	0.00
48	1.000	0.00	148	1.000	0.00	248	1.000	0.00	348	1.000	0.00
50	1.000	0.00	150	1.000	0.00	250	1.000	0.00	350	1.000	0.00
52	1.000	0.00	152	1.000	0.00	252	1.000	0.00	352	1.000	0.00
54	1.000	0.00	154	1.000	0.00	254	1.000	0.00	354	1.000	0.00
56	1.000	0.00	156	1.000	0.00	256	1.000	0.00	356	1.000	0.00
58	1.000	0.00	158	1.000	0.00	258	1.000	0.00	358	1.000	0.00
60	1.000	0.00	160	1.000	0.00	260	1.000	0.00	360	1.000	0.00
62	1.000	0.00	162	1.000	0.00	262	1.000	0.00			
64	1.000	0.00	164	1.000	0.00	264	1.000	0.00			
66	1.000	0.00	166	1.000	0.00	266	1.000	0.00			
68	1.000	0.00	168	1.000	0.00	268	1.000	0.00			
70	1.000	0.00	170	1.000	0.00	270	1.000	0.00			
72	1.000	0.00	172	1.000	0.00	272	1.000	0.00			
74	1.000	0.00	174	1.000	0.00	274	1.000	0.00			
76	1.000	0.00	176	1.000	0.00	276	1.000	0.00			
78	1.000	0.00	178	1.000	0.00	278	1.000	0.00			
80	1.000	0.00	180	1.000	0.00	280	1.000	0.00			
82	1.000	0.00	182	1.000	0.00	282	1.000	0.00			
84	1.000	0.00	184	1.000	0.00	284	1.000	0.00			
86	1.000	0.00	186	1.000	0.00	286	1.000	0.00			
88	1.000	0.00	188	1.000	0.00	288	1.000	0.00			
90	1.000	0.00	190	1.000	0.00	290	1.000	0.00			
92	1.000	0.00	192	1.000	0.00	292	1.000	0.00			
94	1.000	0.00	194	1.000	0.00	294	1.000	0.00			
96	1.000	0.00	196	1.000	0.00	296	1.000	0.00			
98	1.000	0.00	198	1.000	0.00	298	1.000	0.00			

## Elevation Pattern

Type: ATW18H3V

Polarization: Vertical

Directivity:

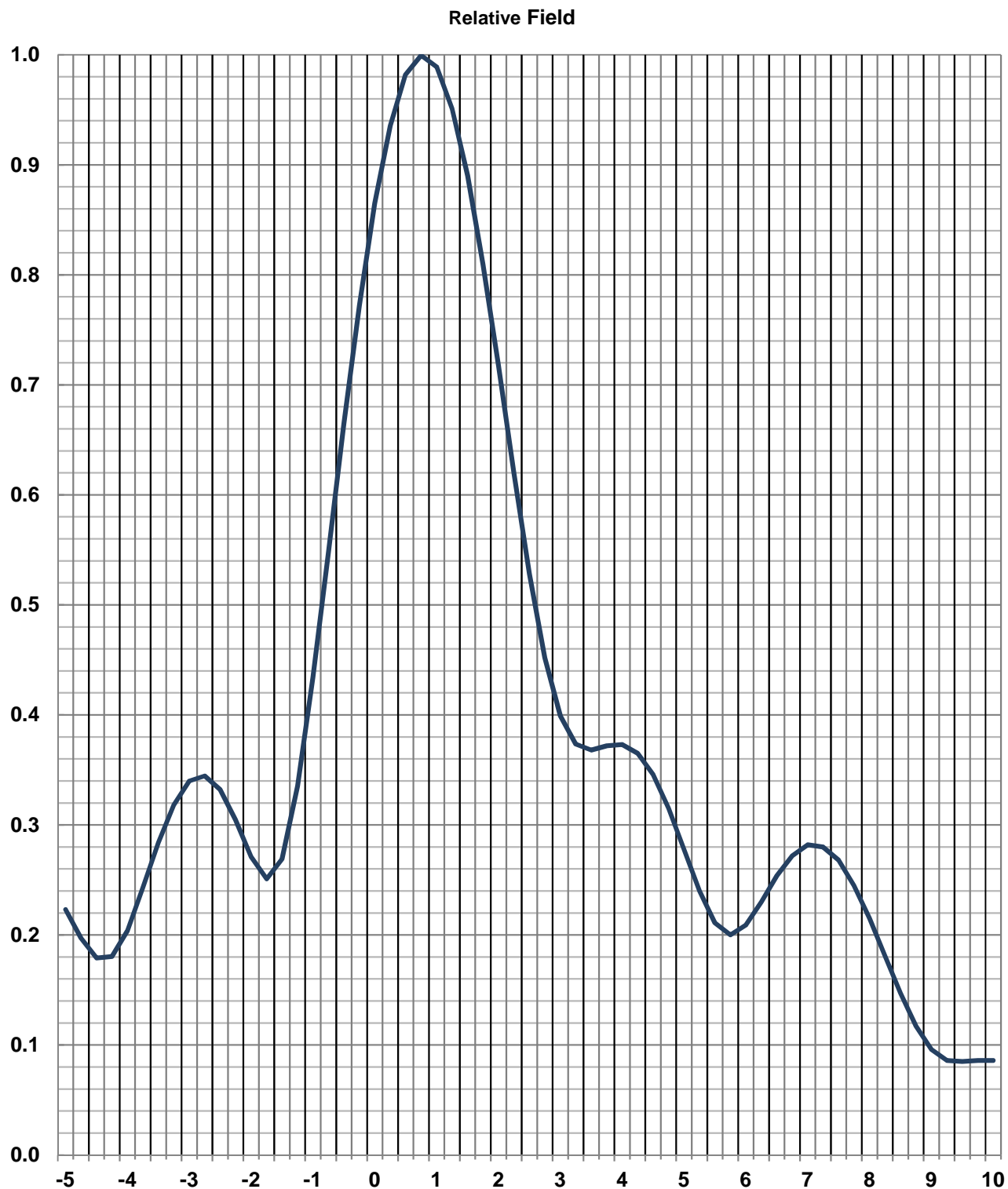
Frequency: 16 (ATSC)

Main Lobe: 18.00 numeric (12.55 dB)

Location: Salem, IN

Horizontal: 13.47 numeric (11.29 dB)

Beam Tilt: 0.75 degrees





**Tabulated Data for Elevation Pattern**Type: ATW18H3V

-5 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
-5.00	0.223	-13.03	7.25	0.280	-11.06	29.00	0.036	-28.87	53.50	0.066	-23.61	78.00	0.042	-27.54
-4.75	0.197	-14.11	7.50	0.268	-11.44	29.50	0.056	-25.04	54.00	0.067	-23.48	78.50	0.036	-28.87
-4.50	0.179	-14.94	7.75	0.245	-12.22	30.00	0.070	-23.10	54.50	0.067	-23.48	79.00	0.031	-30.17
-4.25	0.181	-14.87	8.00	0.215	-13.35	30.50	0.082	-21.72	55.00	0.065	-23.74	79.50	0.027	-31.37
-4.00	0.204	-13.81	8.25	0.181	-14.85	31.00	0.092	-20.72	55.50	0.060	-24.44	80.00	0.024	-32.40
-3.75	0.243	-12.29	8.50	0.147	-16.65	31.50	0.102	-19.83	56.00	0.053	-25.51	80.50	0.022	-33.15
-3.50	0.284	-10.93	8.75	0.118	-18.60	32.00	0.108	-19.33	56.50	0.044	-27.13	81.00	0.021	-33.56
-3.25	0.318	-9.95	9.00	0.096	-20.35	32.50	0.107	-19.41	57.00	0.035	-29.12	81.50	0.021	-33.56
-3.00	0.340	-9.37	9.25	0.086	-21.31	33.00	0.097	-20.26	57.50	0.031	-30.17	82.00	0.022	-33.15
-2.75	0.345	-9.26	9.50	0.085	-21.41	33.50	0.077	-22.27	58.00	0.033	-29.63	82.50	0.022	-33.15
-2.50	0.332	-9.58	9.75	0.086	-21.31	34.00	0.052	-25.68	58.50	0.039	-28.18	83.00	0.023	-32.77
-2.25	0.305	-10.33	10.00	0.086	-21.31	34.50	0.026	-31.70	59.00	0.045	-26.94	83.50	0.023	-32.77
-2.00	0.271	-11.34	10.50	0.074	-22.62	35.00	0.018	-34.89	59.50	0.048	-26.38	84.00	0.023	-32.77
-1.75	0.251	-12.01	11.00	0.063	-24.01	35.50	0.031	-30.17	60.00	0.047	-26.56	84.50	0.023	-32.77
-1.50	0.269	-11.40	11.50	0.073	-22.73	36.00	0.038	-28.40	60.50	0.042	-27.54	85.00	0.022	-33.15
-1.25	0.336	-9.49	12.00	0.092	-20.72	36.50	0.035	-29.12	61.00	0.034	-29.37	85.50	0.021	-33.56
-1.00	0.434	-7.25	12.50	0.098	-20.18	37.00	0.023	-32.77	61.50	0.022	-33.15	86.00	0.020	-33.98
-0.75	0.548	-5.22	13.00	0.091	-20.82	37.50	0.008	-41.94	62.00	0.008	-41.94	86.50	0.018	-34.89
-0.50	0.664	-3.56	13.50	0.090	-20.92	38.00	0.022	-33.15	62.50	0.009	-40.92	87.00	0.016	-35.92
-0.25	0.772	-2.25	14.00	0.115	-18.79	38.50	0.043	-27.33	63.00	0.024	-32.40	87.50	0.014	-37.08
0.00	0.865	-1.26	14.50	0.148	-16.59	39.00	0.061	-24.29	63.50	0.039	-28.18	88.00	0.011	-39.17
0.25	0.936	-0.58	15.00	0.169	-15.44	39.50	0.073	-22.73	64.00	0.053	-25.51	88.50	0.009	-40.92
0.50	0.982	-0.16	15.50	0.168	-15.49	40.00	0.080	-21.94	64.50	0.064	-23.88	89.00	0.006	-44.44
0.75	1.000	0.00	16.00	0.142	-16.95	40.50	0.083	-21.62	65.00	0.073	-22.73	89.50	0.003	-50.46
1.00	0.989	-0.10	16.50	0.100	-20.00	41.00	0.085	-21.41	65.50	0.078	-22.16	90.00	0.000	---
1.25	0.951	-0.44	17.00	0.054	-25.35	41.50	0.086	-21.31	66.00	0.080	-21.94			
1.50	0.890	-1.01	17.50	0.028	-31.06	42.00	0.086	-21.31	66.50	0.079	-22.05			
1.75	0.810	-1.84	18.00	0.036	-28.87	42.50	0.083	-21.62	67.00	0.075	-22.50			
2.00	0.717	-2.89	18.50	0.042	-27.54	43.00	0.075	-22.50	67.50	0.069	-23.22			
2.25	0.620	-4.15	19.00	0.034	-29.37	43.50	0.062	-24.15	68.00	0.062	-24.15			
2.50	0.528	-5.55	19.50	0.026	-31.70	44.00	0.046	-26.74	68.50	0.054	-25.35			
2.75	0.452	-6.90	20.00	0.035	-29.12	44.50	0.030	-30.46	69.00	0.047	-26.56			
3.00	0.399	-7.98	20.50	0.050	-26.02	45.00	0.023	-32.77	69.50	0.043	-27.33			
3.25	0.374	-8.55	21.00	0.062	-24.15	45.50	0.030	-30.46	70.00	0.043	-27.33			
3.50	0.368	-8.68	21.50	0.074	-22.62	46.00	0.039	-28.18	70.50	0.046	-26.74			
3.75	0.372	-8.59	22.00	0.090	-20.92	46.50	0.042	-27.54	71.00	0.051	-25.85			
4.00	0.373	-8.57	22.50	0.111	-19.09	47.00	0.038	-28.40	71.50	0.057	-24.88			
4.25	0.365	-8.75	23.00	0.128	-17.86	47.50	0.028	-31.06	72.00	0.063	-24.01			
4.50	0.346	-9.22	23.50	0.134	-17.46	48.00	0.013	-37.72	72.50	0.068	-23.35			
4.75	0.315	-10.03	24.00	0.125	-18.06	48.50	0.012	-38.42	73.00	0.071	-22.97			
5.00	0.278	-11.12	24.50	0.101	-19.91	49.00	0.031	-30.17	73.50	0.073	-22.73			
5.25	0.240	-12.40	25.00	0.068	-23.35	49.50	0.049	-26.20	74.00	0.074	-22.62			
5.50	0.211	-13.51	25.50	0.032	-29.90	50.00	0.064	-23.88	74.50	0.073	-22.73			
5.75	0.200	-13.98	26.00	0.017	-35.39	50.50	0.073	-22.73	75.00	0.071	-22.97			
6.00	0.209	-13.60	26.50	0.031	-30.17	51.00	0.078	-22.16	75.50	0.067	-23.48			
6.25	0.230	-12.77	27.00	0.037	-28.64	51.50	0.077	-22.27	76.00	0.063	-24.01			
6.50	0.254	-11.90	27.50	0.029	-30.75	52.00	0.074	-22.62	76.50	0.058	-24.73			
6.75	0.272	-11.31	28.00	0.012	-38.42	52.50	0.070	-23.10	77.00	0.053	-25.51			
7.00	0.282	-11.00	28.50	0.013	-37.72	53.00	0.067	-23.48	77.50	0.047	-26.56			

Cohen, Dippell and Everist, P.C.

**EXHIBIT E-3**

WMYO ALLOCATION ANALYSIS  
SEPTEMBER 2017

tvstudy v2.2.3 (Dxtpx3)  
Database: localhost, Study: WMYO 725 kW, Model: Longley-Rice  
Start: 2017.08.30 18:48:51

Study created: 2017.08.30 18:43:33

Study build station data: LMS TV 2017-08-29 (11)

Proposal: WMYO D16 DT BL SALEM, IN  
File number: PowerCheck1  
Facility ID: 34167  
Station data: User record  
Record ID: 55  
Country: U.S.

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	173.7 km
WLCU-CD	D15	DC	CP	CAMPBELLSVILLE, KY	BLANK0000028622	119.8
WXIX-TV	D15	DT	CP	NEWPORT, KY	BLANK0000025169	141.7
WRSP-TV	D16	DT	CP	SPRINGFIELD, IL	BLANK0000027778	349.6
WDNI-CD	D16	DC	CP	INDIANAPOLIS, IN	BLANK0000025370	162.4
WOSU-TV	D16	DT	CP	COLUMBUS, OH	BLANK0000026429	322.2
WHTN	D16	DT	CP	MURFREESBORO, TN	BLANK0000025312	257.2
WKSO-TV	D17	DT	CP	SOMERSET, KY	BLANK0000025331	159.3
WCET	D17	DT	CP	CINCINNATI, OH	BLANK0000026835	143.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16  
Latitude: 38 21 0.24 N (NAD83)  
Longitude: 85 50 56.88 W  
Height AMSL: 588.9 m  
HAAT: 390.4 m  
Peak ERP: 725 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic  
Elec Tilt: 0.8

38.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	725 kW	368.7 m	104.8 km
45.0	725	423.3	109.9
90.0	725	442.5	111.6
135.0	725	450.4	112.2
180.0	725	435.3	111.0

225.0	725	335.6	101.8
270.0	725	348.1	103.0
315.0	725	329.7	101.3

Database HAAT does not agree with computed HAAT  
Database HAAT: 390 m    Computed HAAT: 392 m

\*\*Proposal service area extends beyond baseline plus 1.0%  
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 456.4 km

Distance to Mexican border: 1708.0 km

Conditions at FCC monitoring station: Allegan MI  
Bearing: 358.9 degrees    Distance: 473.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 282.8 degrees    Distance: 1676.3 km

No land mobile station failures found

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 BLANK0000024884 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	173.7 km
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	173.7
	WICS	D15	DT	CP	SPRINGFIELD, IL	BLANK0000027418	278.3
	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	230.7
	WXIX-TV	D15	DT	CP	NEWPORT, KY	BLANK0000025169	165.5
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	199.7
	WQCW	D15	DT	CP	PORTSMOUTH, OH	BLANK0000025192	375.7
	WDNI-CD	D16	DC	CP	INDIANAPOLIS, IN	BLANK0000025370	14.5

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	27338.7	2,817,698	27143.1	2,795,837	26097.3	2,762,996	26097.3	2,762,996	0.00    0.00
Undesired			Total IX		Unique IX, before		Unique IX, after		

WMYO D16 DT BL	20.0	529	0.0	0		
WMYO D16 DT BL	20.0	529			0.0	0
WICS D15 DT CP	243.5	7,868	195.7	3,865	195.7	3,865
WYYW-CD D15 DC LIC	4.0	0	4.0	0	4.0	0
WXIX-TV D15 DT CP	842.1	28,911	722.5	21,834	722.5	21,834
WOHL-CD D15 DC BL	4.0	807	0.0	0	0.0	0
WQCW D15 DT CP	51.7	2,545	0.0	0	0.0	0
WDNI-CD D16 DC CP	8.0	215	4.0	65	4.0	65

-----  
Interference to BLANK0000028622 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLCU-CD	D15	DC	CP	CAMPBELLSVILLE, KY	BLANK0000028622	
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	119.8 km
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	119.8
	WXIX-TV	D15	DT	CP	NEWPORT, KY	BLANK0000025169	209.9
	WPBM-CD	D15	DC	CP	SCOTTSVILLE, KY	BLANK0000026401	85.7
	WTNZ	D15	DT	CP	KNOXVILLE, TN	BLANK0000025183	195.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
2527.0	54,009	2419.3	53,064	2387.4	52,972	2387.4 52,972	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WMYO D16 DT BL	0.0	0	0
WMYO D16 DT BL	4.0	0	0.0 0
WXIX-TV D15 DT CP	4.0	0	4.0 0
WPBM-CD D15 DC CP	24.0	92	24.0 92
WTNZ D15 DT CP	4.0	0	4.0 0

-----  
Interference to BLANK0000025169 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WXIX-TV	D15	DT	CP	NEWPORT, KY	BLANK0000025169	
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	141.7 km
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	141.7
	WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	165.5
	WEWS-TV	D15	DT	LIC	CLEVELAND, OH	BLCDDT20091211ACS	346.8
	WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	184.1
	WQCW	D15	DT	CP	PORTSMOUTH, OH	BLANK0000025192	212.8
	WTNZ	D15	DT	CP	KNOXVILLE, TN	BLANK0000025183	350.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
19526.9	2,826,829	19390.5	2,810,678	17370.4	2,706,208	17366.4 2,706,208	0.02 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WMYO D16 DT BL	28.0	53	4.0 0
WMYO D16 DT BL	56.0	227	8.0 0

WTTK D15 DT CP	1604.4	82,205	1136.4	48,172	1120.4	48,072
WEWS-TV D15 DT LIC	16.1	16,930	0.0	0	0.0	0
WOHL-CD D15 DC BL	16.1	11,009	0.0	0	0.0	0
WQCW D15 DT CP	855.6	45,507	403.7	22,168	403.7	22,168
WTNZ D15 DT CP	4.0	16	0.0	0	0.0	0

-----  
Interference to BLANK0000027778 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	WRSP-TV	D16	DT	CP	SPRINGFIELD, IL	BLANK0000027778			
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	349.6 km		
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	349.6		
	WICS	D15	DT	CP	SPRINGFIELD, IL	BLANK0000027418	1.4		
	WTVO	D16	DT	LIC	ROCKFORD, IL	BLCDT20021024AAS	277.5		
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
29000.6 904,190		28984.5 904,185		28876.1 902,101		28872.1 902,099	0.01 0.00		
Undesired				Total IX	Unique IX, before	Unique IX, after			
WMYO D16 DT BL				0.0	0				
WMYO D16 DT BL				4.0	2	4.0 2			
WICS D15 DT CP				88.4	498	80.3 480			
WTVO D16 DT LIC				28.1	1,604	20.0 1,586			

-----  
Interference to BLANK0000025370 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	WDNI-CD	D16	DC	CP	INDIANAPOLIS, IN	BLANK0000025370			
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	162.4 km		
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	162.4		
	WTTK	D15	DT	CP	KOKOMO, IN	BLANK0000024884	14.5		
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
6519.1 1,693,279		6519.1 1,693,279		5116.5 1,624,059		5076.8 1,619,939	0.78 0.25		
Undesired				Total IX	Unique IX, before	Unique IX, after			
WMYO D16 DT BL				83.5	1,981	63.6 1,083			
WMYO D16 DT BL				147.3	6,288	103.3 5,203			
WTTK D15 DT CP				1339.0	68,137	1294.9 67,052			

-----  
Interference to BLANK0000026429 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WOSU-TV	D16	DT	CP	COLUMBUS, OH	BLANK0000026429	
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	322.2 km

WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	322.2
WOHL-CD	D15	DC	BL	LIMA, OH	DTVBL68549	121.4
WSMH	D16	DT	LIC	FLINT, MI	BLCDT20090804ABG	354.0
WINP-TV	D16	DT	CP	PITTSBURGH, PA	BLANK0000026984	252.8

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
27331.3	2,649,612	26863.9	2,620,845	26238.6	2,596,408	26182.3	2,594,733	0.21	0.06

Undesired		Total IX		Unique IX, before		Unique IX, after	
WMYO D16 DT BL	116.9	6,176	108.9	6,074			
WMYO D16 DT BL	185.2	8,566			165.2	7,749	
WOHL-CD D15 DC BL	260.3	9,968	252.3	9,866	240.3	9,151	
WSMH D16 DT LIC	11.9	157	0.0	0	0.0	0	
WINP-TV D16 DT CP	256.0	8,395	244.1	8,238	244.1	8,238	

-----  
Interference to BLANK0000025312 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHTN	D16	DT	CP	MURFREESBORO, TN	BLANK0000025312	
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	257.2 km
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	257.2
	WAFF	D15	DT	CP	HUNTSVILLE, AL	BLANK0000025101	152.8
	WPBM-CD	D15	DC	CP	SCOTTSVILLE, KY	BLANK0000026401	89.0
	W47EI-D	D16	DC	APP	BIRMINGHAM, AL	BLANK0000027943	290.9
	WPXA-TV	D16	DT	CP	ROME, GA	BLANK0000027423	254.7
	WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDT20070405ABC	351.1
	WAAY-TV	D17	DT	CP	HUNTSVILLE, AL	BLANK0000027632	149.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
21521.1	1,872,713	20986.4	1,859,539	20244.3	1,841,019	20120.8	1,838,775	0.61	0.12

Undesired		Total IX		Unique IX, before		Unique IX, after	
WMYO D16 DT BL	398.2	10,422	227.2	6,879			
WMYO D16 DT BL	581.4	13,910			350.7	9,123	
WAFF D15 DT CP	16.2	102	0.0	0	0.0	0	
WPBM-CD D15 DC CP	389.8	8,319	218.8	4,776	159.1	3,532	
W47EI-D D16 DC APP	4.0	45	0.0	0	0.0	0	
WPXA-TV D16 DT CP	88.7	2,924	56.4	1,999	56.4	1,999	
WLOV-TV D16 DT LIC	24.2	554	12.0	376	12.0	376	
WAAY-TV D17 DT CP	44.5	812	28.3	667	28.3	667	

-----  
Interference to BLANK0000025312 CP, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHTN	D16	DT	CP	MURFREESBORO, TN	BLANK0000025312	
Undesireds:	WMYO	D16	DT	BL	SALEM, IN	DTVBL34167	257.2 km
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	257.2

WAFF	D15	DT	CP	HUNTSVILLE, AL	BLANK00000025101	152.8
WPBM-CD	D15	DC	CP	SCOTTSDALE, KY	BLANK00000026401	89.0
WPXA-TV	D16	DT	CP	ROME, GA	BLANK00000027423	254.7
WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDDT20070405ABC	351.1
WAAY-TV	D17	DT	CP	HUNTSVILLE, AL	BLANK00000027632	149.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
21521.1	1,872,713	20986.4	1,859,539	20244.3	1,841,019	20120.8	1,838,775	0.61	0.12

Undesired		Total IX		Unique IX, before		Unique IX, after	
WMO D16 DT BL	398.2	10,422	227.2	6,879			
WMO D16 DT BL	581.4	13,910			350.7	9,123	
WAFF D15 DT CP	16.2	102	0.0	0	0.0	0	
WPBM-CD D15 DC CP	389.8	8,319	218.8	4,776	159.1	3,532	
WPXA-TV D16 DT CP	88.7	2,924	56.4	1,999	56.4	1,999	
WLOV-TV D16 DT LIC	24.2	554	12.0	376	12.0	376	
WAAY-TV D17 DT CP	44.5	812	28.3	667	28.3	667	

-----  
Interference to BLANK00000025331 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WKSQ-TV	D17	DT	CP	SOMERSET, KY	BLANK00000025331	
Undesireds:	WMO	D16	DT	BL	SALEM, IN	DTVBL34167	159.3 km
	WMO	D16	DT	BL	SALEM, IN	PowerCheck1	159.3
	WAAY-TV	D17	DT	CP	HUNTSVILLE, AL	BLANK00000027632	310.8
	WKO	D17	DT	CP	OWENSBORO, KY	BLANK00000025311	233.5
	WCET	D17	DT	CP	CINCINNATI, OH	BLANK00000026835	219.1
	WVVA	D17	DT	CP	BLUEFIELD, WV	BLANK00000027470	322.7

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
22162.2	587,747	21457.0	574,623	21317.5	569,978	21317.5	569,978	0.00	0.00

Undesired		Total IX		Unique IX, before		Unique IX, after	
WMO D16 DT BL	4.0	35	4.0	35			
WMO D16 DT BL	4.0	35			4.0	35	
WAAY-TV D17 DT CP	39.8	2,312	31.9	2,122	31.9	2,122	
WKO D17 DT CP	16.0	183	12.0	162	12.0	162	
WCET D17 DT CP	35.8	1,586	23.9	1,375	23.9	1,375	
WVVA D17 DT CP	55.9	740	55.9	740	55.9	740	

-----  
Interference to BLANK00000026835 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCET	D17	DT	CP	CINCINNATI, OH	BLANK00000026835	
Undesireds:	WMO	D16	DT	BL	SALEM, IN	DTVBL34167	143.7 km
	WMO	D16	DT	BL	SALEM, IN	PowerCheck1	143.7
	WALV-CD	D17	DC	CP	INDIANAPOLIS, IN	BLANK00000028083	168.1



WKSQ-TV	D17	DT	CP	SOMERSET, KY	BLANK0000025331	219.1
WVVA	D17	DT	CP	BLUEFIELD, WV	BLANK0000027470	358.1
WKYI-CD	D18	DC	CP	LOUISVILLE, KY	BLANK0000025196	142.0
WSTR-TV	D18	DT	CP	CINCINNATI, OH	BLANK0000027774	8.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
23764.5 3,123,290	23563.8 3,110,519	22924.9 3,076,053	22892.9 3,074,034	0.14 0.07

Undesired	Total IX	Unique IX, before	Unique IX, after
WMYO D16 DT BL 112.2	4,928	96.2 2,831	
WMYO D16 DT BL 144.2	6,947		128.2 4,850
WALV-CD D17 DC CP 342.5	15,338	298.4 14,324	298.4 14,324
WKSQ-TV D17 DT CP 40.2	1,050	16.1 259	16.1 259
WVVA D17 DT CP 44.0	610	32.0 306	32.0 306
WKYI-CD D18 DC CP 4.0	1,909	0.0 0	0.0 0
WSTR-TV D18 DT CP 156.2	13,913	136.1 13,464	136.1 13,464

-----  
Interference to proposal, scenario 1  
1.23% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMYO	D16	DT	BL	SALEM, IN	PowerCheck1	
Undesireds:	WYYW-CD	D15	DC	LIC	EVANSVILLE, IN	BLDTA20130109AGB	130.5 km
	WLCU-CD	D15	DC	CP	CAMPBELLSVILLE, KY	BLANK0000028622	119.8
	WXIX-TV	D15	DT	CP	NEWPORT, KY	BLANK0000025169	141.7
	WRSP-TV	D16	DT	CP	SPRINGFIELD, IL	BLANK0000027778	349.6
	WDNI-CD	D16	DC	CP	INDIANAPOLIS, IN	BLANK0000025370	162.4
	WOSU-TV	D16	DT	CP	COLUMBUS, OH	BLANK0000026429	322.2
	WHTN	D16	DT	CP	MURFREESBORO, TN	BLANK0000025312	257.2
	WKOH	D17	DT	CP	OWENSBORO, KY	BLANK0000025311	140.8
	WCET	D17	DT	CP	CINCINNATI, OH	BLANK0000026835	143.7

Service area	Terrain-limited	IX-free	Percent IX
36008.0 2,060,166	35377.2 2,046,558	34549.0 2,021,327	2.34 1.23

Undesired	Total IX	Unique IX	Prcnt Unique IX
WYYW-CD D15 DC LIC 233.3	10,043	221.4 9,875	0.63 0.48
WLCU-CD D15 DC CP 119.6	1,477	79.7 1,122	0.23 0.05
WXIX-TV D15 DT CP 92.0	1,634	4.0 166	0.01 0.01
WRSP-TV D16 DT CP 36.1	548	32.0 451	0.09 0.02
WDNI-CD D16 DC CP 119.6	5,078	107.6 5,074	0.30 0.25
WOSU-TV D16 DT CP 108.1	2,351	68.1 1,769	0.19 0.09
WHTN D16 DT CP 111.5	1,402	59.7 990	0.17 0.05
WKOH D17 DT CP 4.0	43	0.0 0	0.00 0.00
WCET D17 DT CP 183.9	5,067	99.9 3,761	0.28 0.18

TABLE I  
COMPUTED COVERAGE DATA  
FOR THE PROPOSED DTV OPERATION OF  
WMYO-DT, SALEM, INDIANA  
CHANNEL 16 725 KW ERP 390.4 METERS HAAT  
SEPTEMBER 2017

<u>Radial</u> <u>Bearing</u> (N ° E, T)	<u>Average*</u> <u>Elevation</u>	<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 F(50/90)</u>	
	<u>3.2 to 16.1 km</u> meters				<u>48 dBu</u> <u>City Grade</u> km	<u>38.937 dBu</u> <u>Noise-Limited</u> km
0	220.1	368.8	0.532	725	87.8	104.8
10	208.0	380.9	0.541	725	88.7	105.9
20	195.9	393.0	0.549	725	89.5	107.1
30	183.8	405.2	0.558	725	90.3	108.2
40	171.6	417.3	0.566	725	90.9	109.3
50	163.5	425.4	0.571	725	91.4	110.1
60	159.2	429.7	0.574	725	91.6	110.5
70	154.9	434.0	0.577	725	91.8	110.8
80	150.7	438.2	0.580	725	92.0	111.2
90	146.4	442.5	0.583	725	92.3	111.6
100	144.6	444.3	0.584	725	92.4	111.7
110	142.9	446.0	0.585	725	92.5	111.9
120	141.1	447.8	0.586	725	92.6	112.0
130	139.4	449.5	0.587	725	92.7	112.2
140	140.2	448.7	0.587	725	92.7	112.1
150	143.5	445.4	0.585	725	92.5	111.8
160	146.8	442.1	0.582	725	92.3	111.5
170	150.2	438.7	0.580	725	92.1	111.3
180	153.5	435.4	0.578	725	91.9	111.0
190	175.7	413.2	0.563	725	90.7	109.0
200	197.8	391.1	0.548	725	89.4	106.9
210	220.0	368.9	0.532	725	87.8	104.8
220	242.2	346.7	0.516	725	85.8	102.8
230	251.9	337.0	0.509	725	84.7	102.0
240	249.1	339.8	0.511	725	85.0	102.2
250	246.4	342.5	0.513	725	85.3	102.5
260	243.6	345.3	0.515	725	85.6	102.7
270	240.9	348.0	0.517	725	85.9	103.0

TABLE I  
COMPUTED COVERAGE DATA  
FOR THE PROPOSED DTV OPERATION OF  
WMYO-DT, SALEM, INDIANA  
CHANNEL 16 725 KW ERP 390.4 METERS HAAT  
SEPTEMBER 2017

<u>Radial</u> <u>Bearing</u> (N ° E, T)	<u>Average*</u> <u>Elevation</u> <u>3.2 to 16.1 km</u>	<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 F(50/90)</u>	
	<u>meters</u>				<u>48 dBu</u> <u>City Grade</u> km	<u>38.937 dBu</u> <u>Noise-Limited</u> km
280	244.9	344.0	0.514	725	85.5	102.6
290	249.0	339.9	0.511	725	85.0	102.2
300	253.1	335.8	0.508	725	84.6	101.9
310	257.1	331.8	0.505	725	84.2	101.5
320	254.8	334.1	0.506	725	84.4	101.7
330	246.1	342.8	0.513	725	85.3	102.5
340	237.5	351.5	0.519	725	86.2	103.3
350	228.8	360.2	0.526	725	87.0	104.0

\*Based on data from FCC one-second data base.

DTV Channel 16 (482-488 MHz)  
Average Elevation 3.2 to 16.1 km 197.1 meters AMSL  
Center of Radiation 588.9 meters AMSL  
Effective Radiated Power 725 kW (26.9 dBk)  
Antenna Height Above Average Terrain 390.4 meters

North Latitude: 38° 21' 00"  
West Longitude: 85° 50' 57"

(NAD-27)

