

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Modification of Digital Television Station Construction Permit

prepared for

Commonwealth Public Broadcasting

WCVE-TV Richmond, VA

Facility ID 9987

Ch. 22 310 kW 327 m

Commonwealth Public Broadcasting (“*Commonwealth*”) is the licensee of digital television station WCVE-TV, Channel 42, Facility ID 9987, Richmond, VA. Reassignment of WCVE-TV from Channel 42 to Channel 22 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (“*CCRPN*”, DA 17-317, released April 13, 2017). *Commonwealth* herein proposes modification of the WCVE-TV post-auction Channel 22 Construction Permit (“CP”, file# 0000027467). This application is intended to be filed during the second filing window.¹ The CP authorizes operation with an effective radiated power (“ERP”) of 150 kW at 327 meters antenna height above average terrain. *Commonwealth* proposes herein to increase the ERP to 310 kW.

WCVE-TV currently utilizes a tower having two stacked broadband nondirectional antennas which are shared between WCVE-TV and four other television stations. WCVE-TV’s licensed Channel 42 facility utilizes the upper broadband antenna. As with the current authorization, to accommodate the channel reassignments involving all five television stations at this site, WCVE-TV’s proposed post-auction Channel 22 facility will employ the lower broadband antenna. The antenna is a horizontally polarized Dielectric model TUD-O5-14/70H-1-B.

¹Public Notice “*Incentive Auction Task Force and Media Bureau Announce the Opening of the Second Filing Window for Eligible Full Power and Class A Television Station—October 3 Through November 2, 2017*” DA 17-911, released September 20, 2017.

The existing tower structure corresponds to FCC Antenna Structure Registration number 1018227. No change to the overall structure height will result.

Figure 1 supplies a map that demonstrates compliance with §73.625(a)(1) regarding coverage of the entire principal community. The proposed facility's predicted population exceeds 95 percent of the *CCRPN* baseline facility's population.

Interference study per FCC OET Bulletin 69² shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1.

The nearest FCC monitoring station is 196 km distant at Laurel, MD. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). The site location is beyond the border areas requiring international coordination. There are no authorized AM stations within 3 kilometers of the site.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $1.3 \mu\text{W}/\text{cm}^2$, which is 0.4 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in

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

§1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

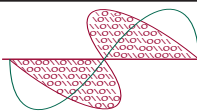
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No increase in structure height is proposed.

List of Attachments

Figure 1	Proposed Coverage Contours
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	October 24, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



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

Figure 1
Proposed Coverage Contours
WCVE-TV Richmond, VA
Facility ID 9987
Ch. 22 310 kW 327 m

prepared for
Commonwealth
Public Broadcasting

October, 2017

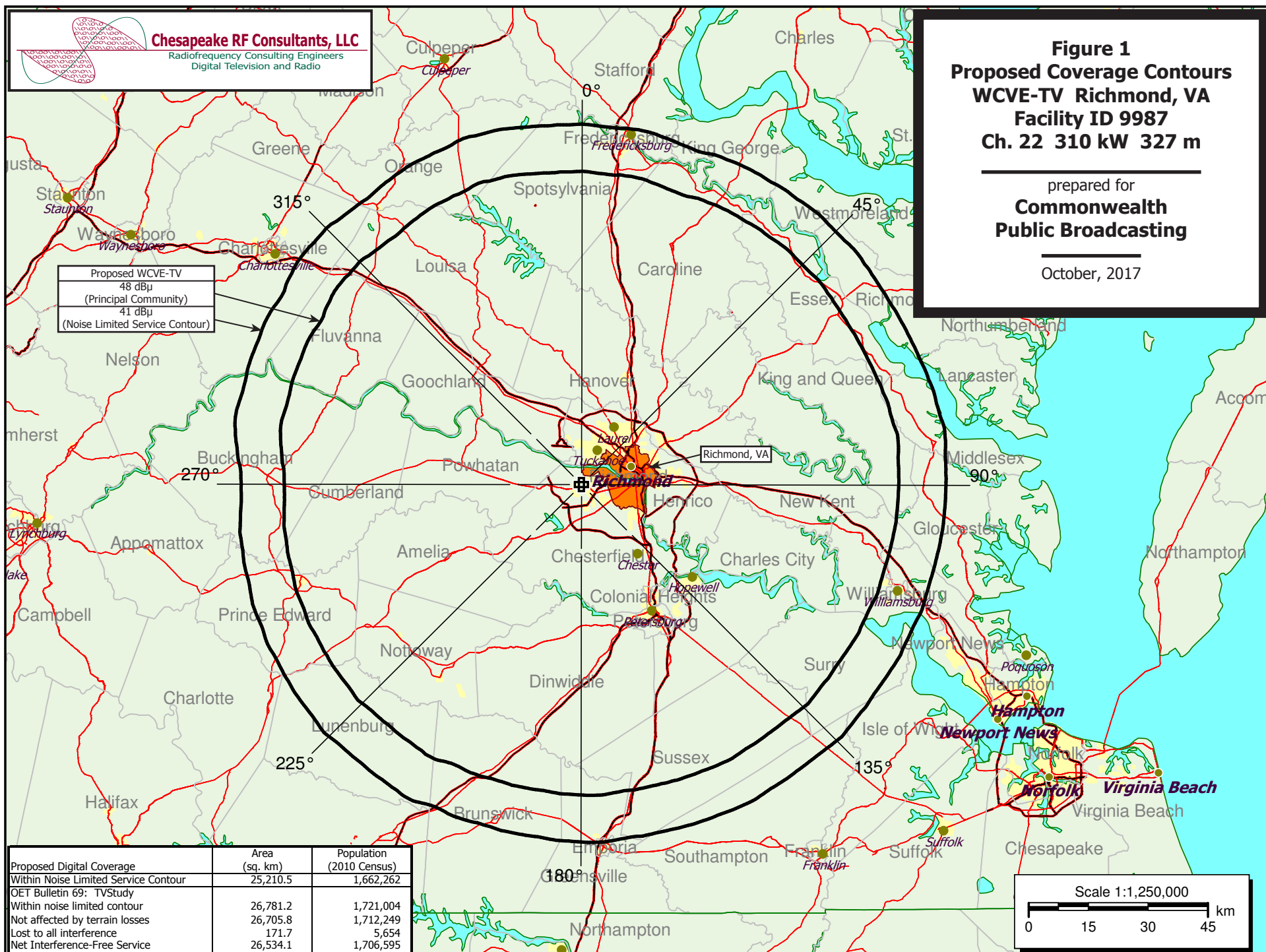
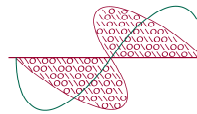


Table 1 WCVE-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

tvstudy v2.2.3 (6K70F1)
Database: localhost, Study: WCVE-TV 310kW Prop, Model: Longley-Rice
Start: 2017.10.24 08:32:35

Study created: 2017.10.24 08:31:49

Study build station data: LMS TV 2017-10-07 LMSTV

Proposal: WCVE-TV D22 DT APP RICHMOND, VA
File number: WCVE-TV 310kW Prop
Facility ID: 9987
Station data: User record
Record ID: 1397
Country: U.S.
Zone: I

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	187.6 km
No	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	195.9
No	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	201.1
Yes	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	180.6
Yes	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	123.4
Yes	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	226.6
Yes	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	226.6
Yes	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	254.1
No	WPHY-CD	D22	DC	CP	TRENTON, NJ	BLANK0000028171	353.0
No	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	319.7
No	WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	434.2
No	WWKH-CD	D22	DC	CP	UNIONTOWN, PA	BLANK0000027838	315.5
No	WSAZ-TV	D22	DT	CP	HUNTINGTON, WV	BLANK0000025191	419.3
No	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	241.0
No	WITD-CD	D23	DC	LIC	CHESAPEAKE, VA	BLANK0000001500	123.4
Yes	WTVR-TV	D23	DT	CP	RICHMOND, VA	BLANK0000024885	0.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D22
Latitude: 37 30 45.60 N (NAD83)
Longitude: 77 36 4.80 W
Height AMSL: 394.0 m
HAAT: 327.3 m
Peak ERP: 310 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 0.50

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	310 kW	333.4 m	93.0 km
45.0	310	329.1	92.6
90.0	310	342.8	93.9
135.0	310	335.6	93.2
180.0	310	325.7	92.2
225.0	310	324.5	92.1
270.0	310	291.1	87.8
315.0	310	336.5	93.3

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

Distance to Canadian border: 582.1 km

Distance to Mexican border: 2224.3 km

Conditions at FCC monitoring station: Laurel MD
Bearing: 20.1 degrees Distance: 195.9 km

Table 1 WCVE-TV OET Bulletin 69 Interference Study
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Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 285.6 degrees Distance: 2399.9 km

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

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

Interference to BLANK0000027725 CP, scenario 1

Desired:	Call WWCW	Chan D21	Svc DT	Status CP	City, State LYNCHBURG, VA	File Number BLANK0000027725	Distance
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	180.6 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	180.6
	WUNC-TV	D20	DT	CP	CHAPEL HILL, NC	BLANK0000025215	166.9
	WHSV-TV	D20	DT	APP	HARRISONBURG, VA	BLANK0000029912	98.0
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	324.1
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	373.8
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000025213	235.0
	WUNJ-TV	D21	DT	CP	WILMINGTON, NC	BLANK0000025131	356.6
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	354.3
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	282.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
38578.6 1,390,982	32171.2 1,212,453	30993.5 1,186,454	30965.6 1,185,838	0.09 0.05

Undesired	Total IX	Unique IX, before	Unique IX, after
WCVE-TV D22 DT BL	19.9 169	0.0 0	
WCVE-TV D22 DT APP	59.7 998		27.9 616
WUNC-TV D20 DT CP	95.9 6,422	40.0 2,686	40.0 2,686
WHSV-TV D20 DT APP	110.9 1,018	71.3 737	71.3 737
WMPT D21 DT APP	432.9 6,648	357.5 5,852	345.6 5,639
WCPB D21 DT CP	11.9 144	0.0 0	0.0 0
WUNG-TV D21 DT CP	597.7 15,001	458.1 8,656	458.1 8,656
WUNJ-TV D21 DT CP	119.8 5,883	8.0 206	8.0 206
WPNT D21 DT CP	19.8 0	7.9 0	7.9 0
WVBT D21 DT CP	39.7 393	11.9 8	11.9 8

Interference to BLANK0000027725 CP, scenario 2

Desired:	Call WWCW	Chan D21	Svc DT	Status CP	City, State LYNCHBURG, VA	File Number BLANK0000027725	Distance
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	180.6 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	180.6
	WUNC-TV	D20	DT	CP	CHAPEL HILL, NC	BLANK0000025215	166.9
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	324.1
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	373.8
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000025213	235.0
	WUNJ-TV	D21	DT	CP	WILMINGTON, NC	BLANK0000025131	356.6
	WPNT	D21	DT	CP	PITTSBURGH, PA	BLANK0000025702	354.3
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	282.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
38578.6 1,390,982	32171.2 1,212,453	31064.8 1,187,191	31036.9 1,186,575	0.09 0.05

Undesired	Total IX	Unique IX, before	Unique IX, after
WCVE-TV D22 DT BL	19.9 169	0.0 0	
WCVE-TV D22 DT APP	59.7 998		27.9 616
WUNC-TV D20 DT CP	95.9 6,422	40.0 2,686	40.0 2,686
WMPT D21 DT APP	432.9 6,648	377.3 5,933	365.4 5,720
WCPB D21 DT CP	11.9 144	0.0 0	0.0 0
WUNG-TV D21 DT CP	597.7 15,001	466.1 8,805	466.1 8,805
WUNJ-TV D21 DT CP	119.8 5,883	8.0 206	8.0 206
WPNT D21 DT CP	19.8 0	7.9 0	7.9 0

Table 1 WCVE-TV OET Bulletin 69 Interference Study
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WVBT D21 DT CP 39.7 393 15.9 9 15.9 9

Interference to BLANK0000028471 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	123.4 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	123.4
	WGNT	D20	DT	CP	PORTSMOUTH, VA	BLANK0000027476	1.5
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	243.5
	WCPB	D21	DT	CP	SALISBURY, MD	BLANK0000025176	191.9
	WWCW	D21	DT	CP	LYNCHBURG, VA	BLANK0000027725	282.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
21727.8 1,848,537		21727.8 1,848,537		21528.7 1,843,853		21508.7 1,843,837	0.09 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WCVE-TV D22 DT BL		16.0 49		0.0 0			
WCVE-TV D22 DT APP		39.9 113				20.0 16	
WGNT D20 DT CP		23.9 176		16.0 94		16.0 94	
WMPT D21 DT APP		163.2 4,290		131.3 3,926		131.3 3,918	
WCPB D21 DT CP		11.9 275		0.0 0		0.0 0	
WWCW D21 DT CP		32.0 358		16.0 258		16.0 258	

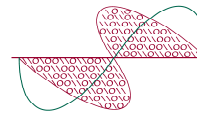
Interference to BLANK0000025181 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	226.6 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	226.6
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	50.8
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	50.2
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	178.6
	WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	207.8
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	104.3
	WMJF-CD	D23	DC	APP	TOWSON, MD	BLANK0000029914	16.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
17079.1 6,489,758		16570.6 6,396,062		14695.7 5,564,535		14623.3 5,537,058	0.49 0.49
Undesired		Total IX		Unique IX, before		Unique IX, after	
WCVE-TV D22 DT BL		144.4 70,280		56.1 13,699			
WCVE-TV D22 DT APP		401.5 173,955				128.5 41,176	
WMPT D21 DT APP		1064.3 702,580		1036.2 615,387		1024.2 572,464	
WFPT D21 DT CP		282.9 20,471		211.1 17,164		179.2 15,977	
WTOO-CD D22 DC CP		11.9 968		7.9 968		7.9 968	
WOLF-TV D22 DT CP		539.7 157,351		403.5 89,617		290.5 62,268	
WDVM-TV D23 DT CP		7.9 97		4.0 97		4.0 97	

Interference to BLANK0000029875 APP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	226.6 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	226.6
	WMPT	D21	DT	APP	ANNAPOLIS, MD	BLANK0000029874	50.8
	WFPT	D21	DT	CP	FREDERICK, MD	BLANK0000025177	50.2
	WTOO-CD	D22	DC	CP	BOLIVAR, PA	BLANK0000027766	178.6
	WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	207.8
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	104.3
	WMJF-CD	D23	DC	APP	TOWSON, MD	BLANK0000029914	16.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
19590.2 7,279,563		18946.1 7,190,696		16910.5 6,430,390		16842.6 6,401,653	0.40 0.45
Undesired		Total IX		Unique IX, before		Unique IX, after	
WCVE-TV D22 DT BL		128.1 58,539		40.2 7,453			

Table 1 WCVE-TV OET Bulletin 69 Interference Study
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WCVE-TV D22 DT APP	271.9	123,350			108.0	36,190
WMPT D21 DT APP	1217.1	615,875	1185.0	543,672	1173.0	510,484
WFPT D21 DT CP	251.0	22,016	199.2	18,851	179.3	18,380
WTOO-CD D22 DC CP	28.0	1,934	20.0	1,725	20.0	1,725
WOLF-TV D22 DT CP	567.3	179,390	439.4	96,343	411.3	94,319
WDVM-TV D23 DT CP	15.9	401	7.9	192	7.9	192

Interference to BLANK0000025149 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	254.1 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	254.1
	WUNG-TV	D21	DT	CP	CONCORD, NC	BLANK0000025213	148.8
	WUNJ-TV	D21	DT	CP	WILMINGTON, NC	BLANK0000025131	149.0
	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000027392	225.0
	WBTV	D23	DT	LIC	CHARLOTTE, NC	BLCDT19991025AEB	200.7
	WARZ-CD	D23	DC	CP	SMITHFIELD-SELMA, NC	BLANK0000026452	44.0
	WECT	D23	DT	CP	WILMINGTON, NC	BLANK0000025214	169.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
34122.0 3,524,371	33749.1 3,509,217	33015.6 3,477,188	32835.9 3,468,931	0.54 0.24

Undesired	Total IX	Unique IX, before	Unique IX, after
WCVE-TV D22 DT BL	135.7 4,994	135.7 4,994	
WCVE-TV D22 DT APP	319.4 13,381		315.4 13,251
WUNG-TV D21 DT CP	196.7 7,453	168.6 7,142	164.6 7,012
WUNJ-TV D21 DT CP	47.7 341	23.8 120	23.8 120
WACH D22 DT CP	75.6 4,829	59.6 4,801	59.6 4,801
WBTV D23 DT LIC	12.1 283	0.0 0	0.0 0
WARZ-CD D23 DC CP	289.8 14,255	289.8 14,255	289.8 14,255
WECT D23 DT CP	27.8 406	4.0 185	4.0 185

Interference to BLANK0000024885 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTVR-TV	D23	DT	CP	RICHMOND, VA	BLANK0000024885	
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	0.1 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	0.0
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	241.0
	WMJF-CD	D23	DC	APP	TOWSON, MD	BLANK0000029914	227.4
	WNJS	D23	DT	CP	CAMDEN, NJ	BLANK0000026717	343.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
28935.6 1,808,516	28693.6 1,802,164	28515.0 1,787,219	28518.9 1,787,261	-0.01 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WCVE-TV D22 DT BL	4.0 42	4.0 42	
WCVE-TV D22 DT APP	0.0 0		0.0 0
WDVM-TV D23 DT CP	170.6 14,903	150.8 5,900	150.8 5,900
WMJF-CD D23 DC APP	19.9 8,812	4.0 0	4.0 0
WNJS D23 DT CP	12.0 1,527	0.0 0	0.0 0

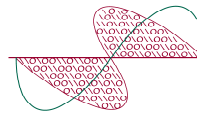
Interference to BLANK0000024885 CP, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTVR-TV	D23	DT	CP	RICHMOND, VA	BLANK0000024885	
Undesireds:	WCVE-TV	D22	DT	BL	RICHMOND, VA	DTVBL9987	0.1 km
	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	0.0
	WDVM-TV	D23	DT	CP	HAGERSTOWN, MD	BLANK0000027603	241.0
	WNJS	D23	DT	CP	CAMDEN, NJ	BLANK0000026717	343.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
28935.6 1,808,516	28693.6 1,802,164	28519.0 1,787,219	28523.0 1,787,261	-0.01 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WCVE-TV D22 DT BL	4.0 42	4.0 42	

Table 1 WCVE-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

WCVE-TV D22 DT APP	0.0	0			0.0	0
WDVM-TV D23 DT CP	170.6	14,903	158.7	13,376	158.7	13,376
WNJS D23 DT CP	12.0	1,527	0.0	0	0.0	0

Interference to proposal, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	
Undesireds:	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	123.4 km
	WMPB	D22	DT	CP	BALTIMORE, MD	BLANK0000025181	226.6
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	254.1
Service area		Terrain-limited		IX-free		Percent IX	
26781.2 1,721,004		26705.8 1,712,249		26534.1 1,706,595		0.64 0.33	
Undesired		Total IX		Unique IX		Prcnt Unique IX	
WVBT D21 DT CP		20.0 2,557		20.0 2,557		0.07 0.15	
WMPB D22 DT CP		51.6 2,596		47.6 2,595		0.18 0.15	
WUVC-DT D22 DT CP		104.1 502		100.1 501		0.37 0.03	

Interference to proposal, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WCVE-TV	D22	DT	APP	RICHMOND, VA	WCVE-TV 310kW Prop	
Undesireds:	WVBT	D21	DT	CP	VIRGINIA BEACH, VA	BLANK0000028471	123.4 km
	WMPB	D22	DT	APP	BALTIMORE, MD	BLANK0000029875	226.6
	WUVC-DT	D22	DT	CP	FAYETTEVILLE, NC	BLANK0000025149	254.1
Service area		Terrain-limited		IX-free		Percent IX	
26781.2 1,721,004		26705.8 1,712,249		26478.8 1,705,211		0.85 0.41	
Undesired		Total IX		Unique IX		Prcnt Unique IX	
WVBT D21 DT CP		20.0 2,557		20.0 2,557		0.07 0.15	
WMPB D22 DT APP		110.9 4,039		103.0 3,979		0.39 0.23	
WUVC-DT D22 DT CP		104.1 502		96.1 442		0.36 0.03	

**Channel and
Facility
Information**

Section	Question	Response
Proposed Community of License	Facility ID	9987
	State	Virginia
	City	RICHMOND
	DTV Channel	22
Facility Type	Facility Type	Noncommercial Educational
	Station Type	Main
Zone	Zone	1

**Antenna Location
Data**

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1018227
Coordinates (NAD83)	Latitude	37° 30' 45.6" N+
	Longitude	077° 36' 04.8" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	374.5 meters
	Support Structure Height	276.7 meters
	Ground Elevation (AMSL)	109.1 meters
Antenna Data	Height of Radiation Center Above Ground Level	284.9 meters
	Height of Radiation Center Above Average Terrain	327.3 meters
	Height of Radiation Center Above Mean Sea Level	394.0 meters
	Effective Radiated Power	310 kW

Antenna Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TUD-O5-14/70H-1-B
	Rotation	
	Electrical Beam Tilt	0.5
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Horizontal
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

**Construction
Permit
Certifications**

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