



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR AN INTERIM
AUXILIARY POST REPACK CONSTRUCTION PERMIT
WTVD - DURHAM, NORTH CAROLINA
DTV - CH. 9 - 45 kW - 473.6 m HAAT**

Prepared for: WTVD TELEVISION, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, No. 7418, and in New York State, No. 63418.

GENERAL

This office has been authorized by WTVD TELEVISION, LLC, licensee of WTVD, channel 11, facility ID number 8617, licensed to Durham, North Carolina, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for a post repack auxiliary construction permit. The applicant proposes to replace its existing auxiliary channel 11 antenna with a new antenna of the same make and model for its post repack channel 9. Once the post repack channel 9 interim auxiliary facility is completed and ready for operation the applicant proposes to transition directly to the interim auxiliary facility on channel 9. Upon that transition WTVD will remove its main channel 11 antenna and replace it with its authorized channel 9 main antenna. When the new main channel 9 facility is licensed the applicant will license the "interim" channel 9 facility as the station's post-transition auxiliary.

DIRECTIONAL ANTENNA

The applicant proposes to install a new Dielectric model TLS-V8/VP-R S180 elliptically polarized directional transmitting antenna with its center of radiation located at a height above ground of 457.5 meters, and a height above average terrain of 473.6 meters. The antenna manufacturer's horizontal plane azimuth radiation pattern for the horizontally polarized component is shown and tabulated in exhibit 2. The manufacturer's horizontal plane azimuth pattern for the vertically polarized component is shown and tabulated in exhibit 3. The manufacturer's vertical plane elevation radiation pattern, illustrating the antenna's radiation characteristics above and below the horizontal plane is shown and tabulated in Exhibit 4.

The existing channel 11 auxiliary antenna will be removed from the tower structure and the new interim/auxiliary channel 9 antenna will be installed in its place with the same radiation center at 457.5 meters Above Ground Level (AGL). The the overall structure height will remain at 705 meters Above Mean Sea Level (AMSL). (See ASR #1010348)

PREDICTED COVERAGE CONTOURS

The predicted coverage contours were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC

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Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 1 shows the predicted Noise Limited (36 dBu) contour, and the principal community (43 dBu) contour. The 43 dBu contour completely encompasses the principal community of license, Durham, North Carolina.

ALLOCATION CONSIDERATIONS

Post-Transition DTV Considerations

A study was performed, using the FCC's software, tv_study, v. 2.2.5, to determine if the instant application for construction permit is predicted to cause new prohibited interference to post reassignment DTV stations, construction permits, DTV allotments or Class A DTV stations. The study results, shown in Appendix B, indicate that the instant application for construction permit is predicted to cause no new interference exceeding 0.5% to the populations served by any post reassignment DTV station, construction permit, allotment or Class A DTV stations. (See Appendix B)

International DTV Considerations

The WTVD site is located within neither the Canadian nor the Mexican international coordination zone, therefore there are no international DTV considerations required.

BLANKETING AND INTERMODULATION INTERFERENCE

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed WTVD site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

RADIO FREQUENCY IMPACT

The FCC's guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986) and by the American National Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines define a maximum permissible exposure (MPE) level for occupational or "controlled" situations, and for "uncontrolled" environments that apply in all other cases that might affect the general public. The FCC Office of Engineering and Technology's technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance to determine whether FCC-regulated transmitting facilities, operations or devices comply with guidelines for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. OET Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC's policies and guidelines.

The Maximum Permitted Exposure (MPE) level for broadcast facilities that operate on a frequency between 30 MHz and 300 MHz is 200 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) for an "uncontrolled" environment, and is 1000 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) for a "controlled" environment. The MPE level for broadcast facilities that operate on a frequency between 300 MHz and 1500 MHz is determined, in $\mu\text{W}/\text{cm}^2$, for an "uncontrolled" environment by dividing the operating frequency in MHz by 1.5, and is determined for a "controlled" environment by dividing the frequency in MHz by 0.3.

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The predicted emissions of WTVD must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WTVD, which will operate on television Channel 9 (186-192 MHz), the MPE is 200.0 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an "uncontrolled" environment and 1,000.0 $\mu\text{W}/\text{cm}^2$ in a "controlled" environment. The proposed WTVD facility will operate with a maximum ERP of 45 kW from an elliptically polarized directional transmitting antenna with a centerline height of 457.5 meters above ground level (AGL). Considering a predicted vertical plane relative field factor of 0.300 the WTVD facility is predicted to produce a power density at two meters above ground level of 1.316 $\mu\text{W}/\text{cm}^2$, which is 0.66% of the FCC guideline value for an "uncontrolled" environment, and 0.1316% of the FCC's guideline value for "controlled" environments. The WTVD channel 11 facility remains at the site until the transition to channel 9 is completed, therefore, the total percentage of the ANSI value at the proposed site, including the cumulative radiation from both WTVD authorizations is 1.04% of the limit applicable to "uncontrolled" environments, and 0.208% of the limit for "controlled" environments. (See Appendix A)

OCCUPATIONAL SAFETY

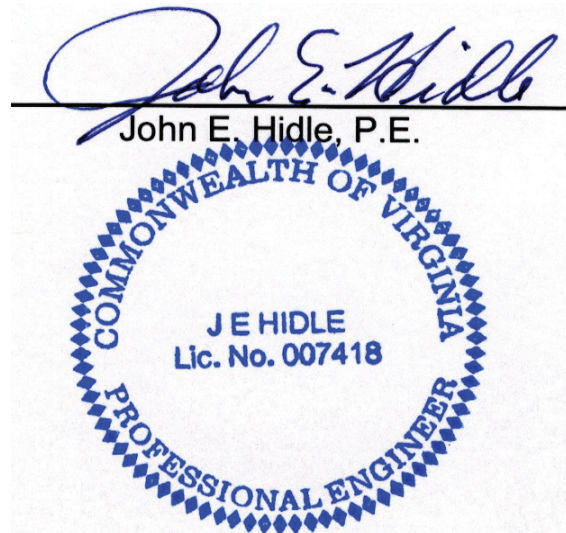
The licensee of WTVD is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WTVD antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

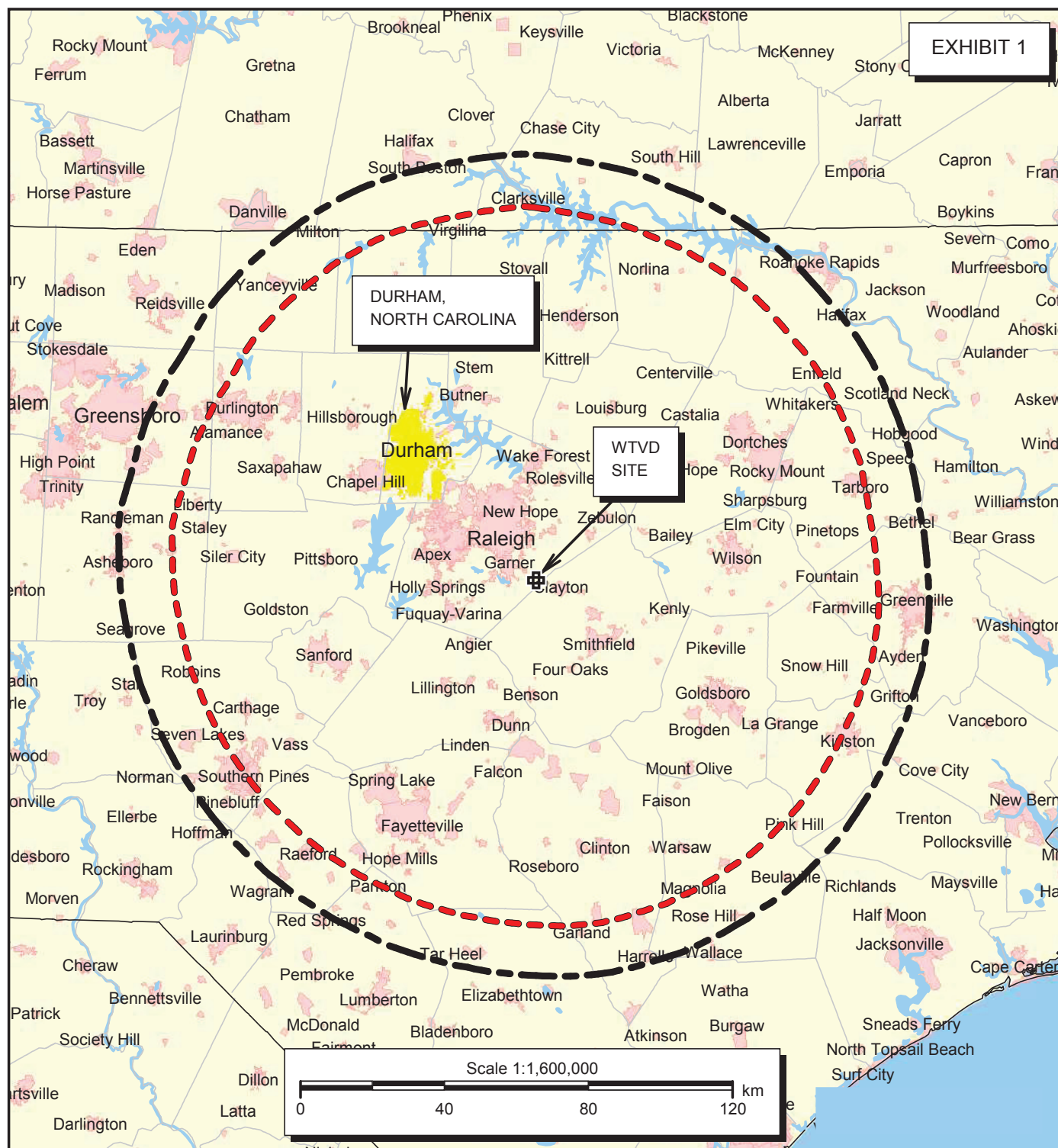
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SUMMARY

It is submitted that the instant application for construction permit for an interim antenna facility to implement the change of WTVD from channel 11 to channel 9, as described herein, complies with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

DATED: March 5, 2019





PREDICTED COVERAGE CONTOURS

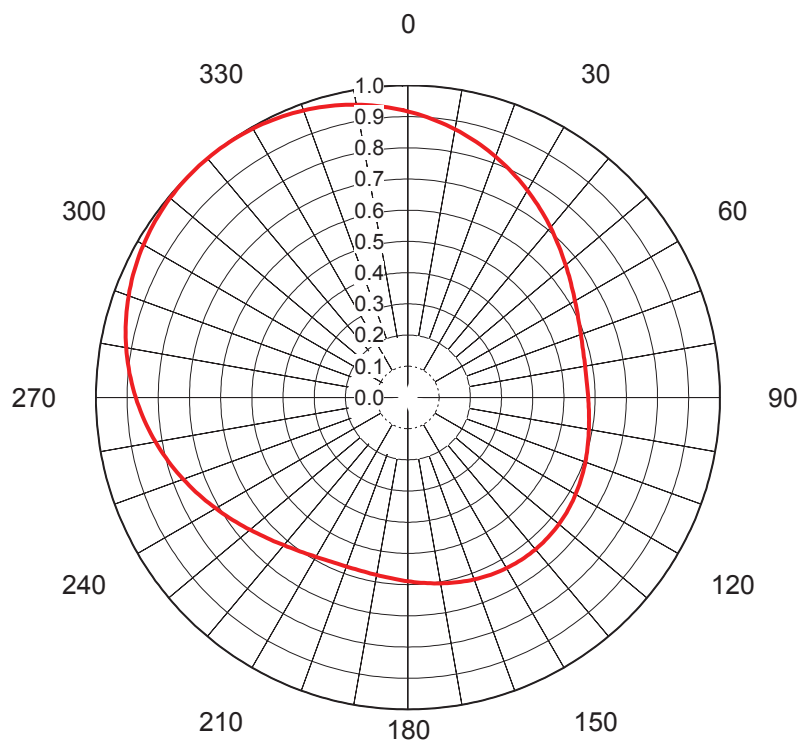
WTVD - DURHAM, NORTH CAROLINA
INTERIM FACILITY

DTV Channel 9 - 45 kW ERP - 473.6 M HAAT
MARCH, 2019

Predicted Noise Limited 36 dBu
F(50,90) Coverage Contour



Predicted Principal Community 43 dBu
F(50,90) Coverage Contour



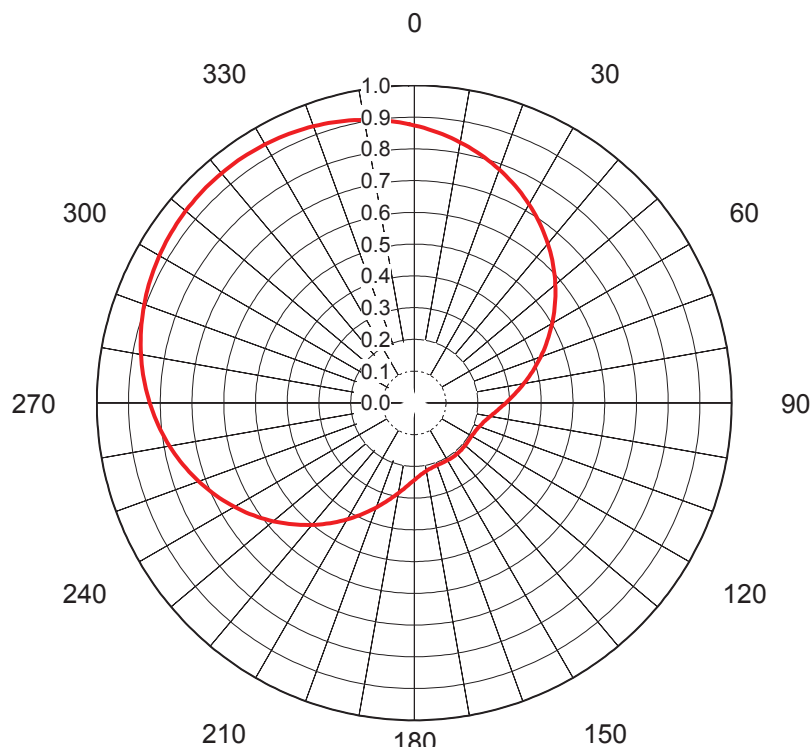
AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-70854**
 Date **23-May-17**
 Call Letters **WTVD**
 Channel **9**
 Frequency **189 MHz**
 Antenna Type **TLS-V8/VP-R S180**
 Gain **1.75 (2.44dB)**
 Calculated
 Circularity **+/- 3.0 dB**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.917	36	0.733	72	0.586	108	0.602	144	0.635	180	0.589	216	0.605	252	0.778	288	0.946
1	0.913	37	0.728	73	0.584	109	0.604	145	0.635	181	0.588	217	0.608	253	0.783	289	0.949
2	0.908	38	0.722	74	0.583	110	0.605	146	0.634	182	0.586	218	0.612	254	0.789	290	0.953
3	0.904	39	0.717	75	0.581	111	0.607	147	0.634	183	0.585	219	0.615	255	0.794	291	0.956
4	0.900	40	0.711	76	0.580	112	0.609	148	0.633	184	0.584	220	0.618	256	0.800	292	0.959
5	0.896	41	0.706	77	0.579	113	0.610	149	0.633	185	0.583	221	0.622	257	0.805	293	0.961
6	0.891	42	0.700	78	0.578	114	0.612	150	0.632	186	0.581	222	0.626	258	0.811	294	0.964
7	0.886	43	0.695	79	0.577	115	0.613	151	0.631	187	0.580	223	0.630	259	0.816	295	0.967
8	0.882	44	0.690	80	0.577	116	0.615	152	0.630	188	0.580	224	0.634	260	0.821	296	0.969
9	0.877	45	0.685	81	0.576	117	0.616	153	0.629	189	0.579	225	0.638	261	0.827	297	0.972
10	0.872	46	0.680	82	0.576	118	0.618	154	0.628	190	0.578	226	0.642	262	0.832	298	0.974
11	0.868	47	0.675	83	0.576	119	0.619	155	0.627	191	0.577	227	0.646	263	0.837	299	0.977
12	0.863	48	0.670	84	0.576	120	0.621	156	0.626	192	0.577	228	0.651	264	0.842	300	0.979
13	0.858	49	0.665	85	0.576	121	0.622	157	0.625	193	0.576	229	0.656	265	0.848	301	0.981
14	0.853	50	0.660	86	0.576	122	0.624	158	0.624	194	0.576	230	0.660	266	0.853	302	0.983
15	0.848	51	0.656	87	0.576	123	0.625	159	0.622	195	0.576	231	0.665	267	0.858	303	0.985
16	0.842	52	0.651	88	0.577	124	0.626	160	0.621	196	0.576	232	0.670	268	0.863	304	0.986
17	0.837	53	0.646	89	0.577	125	0.627	161	0.619	197	0.576	233	0.675	269	0.868	305	0.988
18	0.832	54	0.642	90	0.578	126	0.628	162	0.618	198	0.576	234	0.680	270	0.872	306	0.990
19	0.827	55	0.638	91	0.579	127	0.629	163	0.616	199	0.576	235	0.685	271	0.877	307	0.991
20	0.821	56	0.634	92	0.580	128	0.630	164	0.615	200	0.577	236	0.690	272	0.882	308	0.992
21	0.816	57	0.630	93	0.580	129	0.631	165	0.613	201	0.577	237	0.695	273	0.886	309	0.994
22	0.811	58	0.626	94	0.581	130	0.632	166	0.612	202	0.578	238	0.700	274	0.891	310	0.995
23	0.805	59	0.622	95	0.583	131	0.633	167	0.610	203	0.579	239	0.706	275	0.896	311	0.996
24	0.800	60	0.618	96	0.584	132	0.633	168	0.609	204	0.580	240	0.711	276	0.900	312	0.997
25	0.794	61	0.615	97	0.585	133	0.634	169	0.607	205	0.581	241	0.717	277	0.904	313	0.997
26	0.789	62	0.612	98	0.586	134	0.634	170	0.605	206	0.583	242	0.722	278	0.908	314	0.998
27	0.783	63	0.608	99	0.588	135	0.635	171	0.604	207	0.584	243	0.728	279	0.913	315	0.999
28	0.778	64	0.605	100	0.589	136	0.635	172	0.602	208	0.586	244	0.733	280	0.917	316	0.999
29	0.772	65	0.602	101	0.591	137	0.636	173	0.600	209	0.588	245	0.739	281	0.921	317	1.000
30	0.766	66	0.600	102	0.592	138	0.636	174	0.599	210	0.590	246	0.744	282	0.925	318	1.000
31	0.761	67	0.597	103	0.594	139	0.636	175	0.597	211	0.592	247	0.750	283	0.928	319	1.000
32	0.755	68	0.594	104	0.595	140	0.636	176	0.595	212	0.594	248	0.755	284	0.932	320	1.000
33	0.750	69	0.592	105	0.597	141	0.636	177	0.594	213	0.597	249	0.761	285	0.936	321	1.000
34	0.744	70	0.590	106	0.599	142	0.636	178	0.592	214	0.600	250	0.766	286	0.939	322	1.000
35	0.739	71	0.588	107	0.600	143	0.636	179	0.591	215	0.602	251	0.772	287	0.943	323	1.000

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AZIMUTH PATTERN Vertical Polarization

In Free Space

Proposal No. **C-70854**
 Date **23-May-17**
 Call Letters **WTVD**
 Channel **9**
 Frequency **189 MHz**
 Antenna Type **TLS-V8/VP-R S180**
 Gain **2.22 (3.47dB)**
 Calculated
 Circularity **+/- 7.0 dB**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.874	36	0.683	72	0.409	108	0.221	144	0.209	180	0.243	216	0.470	252	0.735	288	0.900
1	0.871	37	0.676	73	0.401	109	0.220	145	0.209	181	0.247	217	0.478	253	0.742	289	0.903
2	0.867	38	0.669	74	0.394	110	0.218	146	0.209	182	0.251	218	0.486	254	0.748	290	0.905
3	0.863	39	0.662	75	0.386	111	0.216	147	0.209	183	0.255	219	0.494	255	0.754	291	0.908
4	0.859	40	0.655	76	0.379	112	0.215	148	0.209	184	0.259	220	0.502	256	0.760	292	0.911
5	0.855	41	0.647	77	0.372	113	0.214	149	0.209	185	0.264	221	0.510	257	0.766	293	0.913
6	0.851	42	0.640	78	0.365	114	0.213	150	0.209	186	0.268	222	0.518	258	0.771	294	0.915
7	0.847	43	0.633	79	0.358	115	0.212	151	0.209	187	0.273	223	0.525	259	0.777	295	0.917
8	0.842	44	0.625	80	0.351	116	0.211	152	0.209	188	0.278	224	0.533	260	0.783	296	0.920
9	0.838	45	0.618	81	0.344	117	0.210	153	0.209	189	0.283	225	0.541	261	0.788	297	0.922
10	0.833	46	0.610	82	0.337	118	0.210	154	0.208	190	0.289	226	0.549	262	0.794	298	0.924
11	0.829	47	0.603	83	0.331	119	0.209	155	0.208	191	0.294	227	0.557	263	0.799	299	0.925
12	0.824	48	0.595	84	0.324	120	0.209	156	0.208	192	0.300	228	0.565	264	0.804	300	0.927
13	0.819	49	0.588	85	0.318	121	0.209	157	0.209	193	0.306	229	0.572	265	0.809	301	0.929
14	0.814	50	0.580	86	0.312	122	0.209	158	0.209	194	0.312	230	0.580	266	0.814	302	0.931
15	0.809	51	0.572	87	0.306	123	0.209	159	0.209	195	0.318	231	0.588	267	0.819	303	0.932
16	0.804	52	0.565	88	0.300	124	0.208	160	0.209	196	0.324	232	0.595	268	0.824	304	0.933
17	0.799	53	0.557	89	0.294	125	0.208	161	0.209	197	0.331	233	0.603	269	0.829	305	0.935
18	0.794	54	0.549	90	0.289	126	0.208	162	0.210	198	0.337	234	0.610	270	0.833	306	0.936
19	0.788	55	0.541	91	0.283	127	0.209	163	0.210	199	0.344	235	0.618	271	0.838	307	0.937
20	0.783	56	0.533	92	0.278	128	0.209	164	0.211	200	0.351	236	0.625	272	0.842	308	0.938
21	0.777	57	0.525	93	0.273	129	0.209	165	0.212	201	0.358	237	0.633	273	0.847	309	0.939
22	0.771	58	0.518	94	0.268	130	0.209	166	0.213	202	0.365	238	0.640	274	0.851	310	0.940
23	0.766	59	0.510	95	0.264	131	0.209	167	0.214	203	0.372	239	0.647	275	0.855	311	0.941
24	0.760	60	0.502	96	0.259	132	0.209	168	0.215	204	0.379	240	0.655	276	0.859	312	0.942
25	0.754	61	0.494	97	0.255	133	0.209	169	0.216	205	0.386	241	0.662	277	0.863	313	0.942
26	0.748	62	0.486	98	0.251	134	0.209	170	0.218	206	0.394	242	0.669	278	0.867	314	0.943
27	0.742	63	0.478	99	0.247	135	0.209	171	0.220	207	0.401	243	0.676	279	0.871	315	0.943
28	0.735	64	0.470	100	0.243	136	0.209	172	0.221	208	0.409	244	0.683	280	0.874	316	0.944
29	0.729	65	0.463	101	0.240	137	0.210	173	0.223	209	0.416	245	0.690	281	0.878	317	0.944
30	0.723	66	0.455	102	0.237	138	0.210	174	0.226	210	0.424	246	0.696	282	0.881	318	0.944
31	0.716	67	0.447	103	0.234	139	0.210	175	0.228	211	0.431	247	0.703	283	0.885	319	0.944
32	0.710	68	0.439	104	0.231	140	0.210	176	0.231	212	0.439	248	0.710	284	0.888	320	0.944
33	0.703	69	0.431	105	0.228	141	0.210	177	0.234	213	0.447	249	0.716	285	0.891	321	0.944
34	0.696	70	0.424	106	0.226	142	0.210	178	0.237	214	0.455	250	0.723	286	0.894	322	0.944
35	0.690	71	0.416	107	0.223	143	0.210	179	0.240	215	0.463	251	0.729	287	0.897	323	0.944

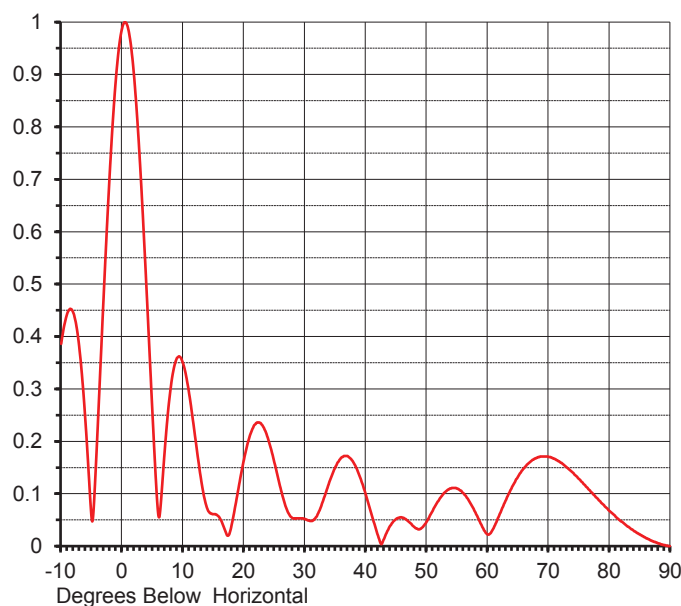
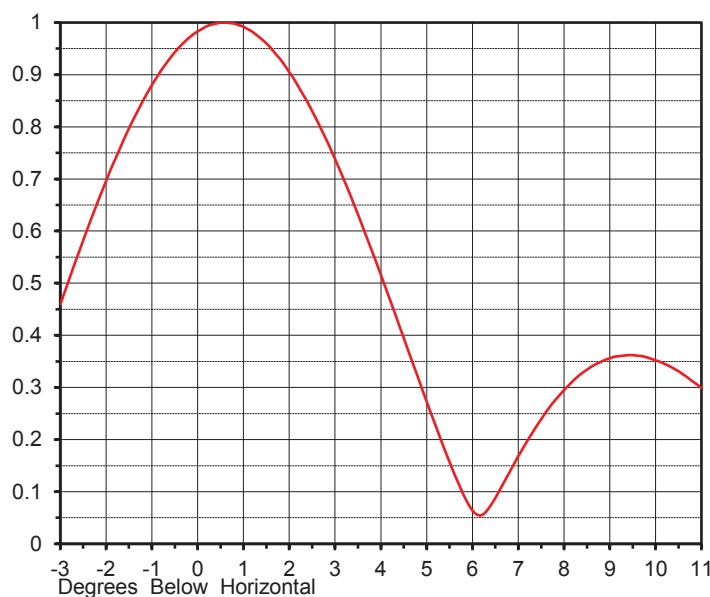
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ELEVATION PATTERN

Proposal No. **C-70854**
 Date **23-May-17**
 Call Letters **WTVD**
 Channel **9**
 Frequency **189 MHz**
 Antenna Type **TLS-V8/VP-R S180**

RMS Directivity at Main Lobe **8.0 (9.03 dB)**
 RMS Directivity at Horizontal **7.8 (8.92 dB)**
Calculated

Beam Tilt **0.50 deg**
 Pattern Number **050**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.386	10.0	0.349	30.0	0.052	50.0	0.047	70.0	0.170
-9.0	0.444	11.0	0.291	31.0	0.048	51.0	0.068	71.0	0.166
-8.0	0.445	12.0	0.207	32.0	0.058	52.0	0.088	72.0	0.159
-7.0	0.376	13.0	0.124	33.0	0.087	53.0	0.103	73.0	0.150
-6.0	0.235	14.0	0.071	34.0	0.122	54.0	0.110	74.0	0.140
-5.0	0.053	15.0	0.061	35.0	0.151	55.0	0.110	75.0	0.128
-4.0	0.228	16.0	0.054	36.0	0.169	56.0	0.101	76.0	0.116
-3.0	0.484	17.0	0.027	37.0	0.172	57.0	0.085	77.0	0.103
-2.0	0.718	18.0	0.042	38.0	0.159	58.0	0.064	78.0	0.091
-1.0	0.894	19.0	0.104	39.0	0.133	59.0	0.040	79.0	0.079
0.0	0.988	20.0	0.165	40.0	0.098	60.0	0.022	80.0	0.067
1.0	0.987	21.0	0.212	41.0	0.058	61.0	0.035	81.0	0.056
2.0	0.892	22.0	0.235	42.0	0.020	62.0	0.062	82.0	0.047
3.0	0.718	23.0	0.231	43.0	0.014	63.0	0.088	83.0	0.037
4.0	0.492	24.0	0.203	44.0	0.039	64.0	0.113	84.0	0.029
5.0	0.249	25.0	0.159	45.0	0.052	65.0	0.133	85.0	0.022
6.0	0.056	26.0	0.111	46.0	0.054	66.0	0.149	86.0	0.015
7.0	0.183	27.0	0.071	47.0	0.047	67.0	0.161	87.0	0.010
8.0	0.304	28.0	0.053	48.0	0.036	68.0	0.168	88.0	0.005
9.0	0.359	29.0	0.053	49.0	0.033	69.0	0.171	89.0	0.002
								90.0	0.000

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APPENDIX A

SUMMARY OF RADIOFREQUENCY RADIATION STUDY

WTVD, Durham, North Carolina
Channel 9, 45 kW, 473.6 m HAAT
MARCH, 2019

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLAR- IZATION</u>	<u>ANTENNA HEIGHT</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>WORST-CASE PREDICTED POWER DENSITY ($\mu\text{W}/\text{cm}^2$)</u>	<u>FCC UNCONTROLLED LIMIT ($\mu\text{W}/\text{cm}^2$)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WTVD-Aux	DT	9	189	H & V	455.5	45.000	0.300	1.316	200.00	0.66%
WTVD-CP	DT	9	189	H & V	596.5	45.000	0.300	0.383	200.00	0.19%
WTVD	DT	11	201	H & V	596.5	45.000	0.300	0.383	200.00	0.19%
TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =										1.04%

* For television stations a very conservative vertical relative field factor of 0.3 was assumed pursuant to OET Bulletin 65.



APPENDIX B **WTVD - DURHAM, NORTH CAROLINA** **DTV Channel 9 - 45 kW ERP - 473.6 meters HAAT** **Interim Antenna Facility** **Longley-Rice Interference Analysis**

tvstudy v2.2.5 (4uoc83)
 Database: localhost, Study: WTVD AUX 9 March 2019 #4199, Model: Longley-Rice
 Start: 2019.03.05 12:26:09

Study created: 2019.03.05 12:26:09

Study build station data: LMS TV 2019-03-05

Proposal: WTVD D9 DX LIC DURHAM, NC
 File number: WTVD AUX 9 March 2019
 Facility ID: 8617
 Station data: User record
 Record ID: 715
 Country: U.S.
 Zone: II

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

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WNCN	D8	DT	CP	GOLDSBORO, NC	BLANK0000034761	0.9 km
No	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	257.1
Yes	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	386.7
Yes	WTVI	D9	DT	CP	CHARLOTTE, NC	BLANK0000028208	200.3
Yes	WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	323.2
Yes	WJHL-TV	D9	DT	CP	JOHNSON CITY, TN	BLANK0000027557	334.9
No	WVPB-TV	D9	DT	CP	HUNTINGTON, WV	BLANK0000034622	452.1
Yes	WCTI-TV	D10	DT	CP	NEW BERN, NC	BLANK0000028166	125.2
No	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDT20090624ABZ	265.5
No	WWBT	D10	DT	CP	RICHMOND, VA	BLANK0000025185	224.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D9
 Latitude: 35 40 6.00 N (NAD83)
 Longitude: 78 31 58.00 W
 Height AMSL: 552.0 m
 HAAT: 473.6 m
 Peak ERP: 45.0 kW
 Antenna: DIE-TLS-V8/VP-R S180 0.0 deg
 Elev Pattern: Generic
 Elec Tilt: 0.50

36.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	37.8 kW	481.3 m	117.6 km
45.0	21.1	477.7	111.9
90.0	15.0	471.7	108.4

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135.0	18.1	468.6	109.9
180.0	15.6	478.5	109.2
225.0	18.4	465.5	109.8
270.0	34.2	458.6	115.2
315.0	44.8	461.5	118.0

Database HAAT does not agree with computed HAAT
 Database HAAT: 474 m Computed HAAT: 470 m

Distance to Canadian border: 747.1 km

Distance to Mexican border: 2054.3 km

Conditions at FCC monitoring station: Laurel MD
 Bearing: 20.7 degrees Distance: 417.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
 Bearing: 290.0 degrees Distance: 2383.5 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 BLANK0000034761 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WNCN	D8	DT	CP	GOLDSBORO, NC	BLANK0000034761	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	0.9 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	0.9
	WHFL-CD	D7	DC	CP	GOLDSBORO, NC	BLANK0000034561	56.5
	WNTV	D8	DT	CP	GREENVILLE, SC	BLANK0000034598	361.5
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	256.3
	WSWP-TV	D8	DT	CP	GRANDVIEW, WV	BLANK0000034625	330.1

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	47456.1		3,761,561		46929.5		3,744,234		45493.7 3,655,468
							45513.8		3,657,457 -0.04 -0.05

Undesired		Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	20.1	1,989	20.1	1,989
WTVD D9 DX LIC	0.0	0		0.0 0
WHFL-CD D7 DC CP	60.5	5,233	60.5	5,233
WNTV D8 DT CP	463.2	44,932	451.2	44,064
WUPV D8 DT CP	872.1	36,100	780.6	34,248
WSWP-TV D8 DT CP	123.5	3,232	19.9	512

 Interference to BLANK0000033300 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	APP	BETHLEHEM, PA	BPCDT20110518ADP	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2

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Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX	
32757.4 8,970,526	30137.6 8,609,624	28641.7	8,480,104	28653.5	8,480,119	-0.04	-0.00

Undesired		Total IX	Unique IX, before		Unique IX, after	
WTVD D9 DT BL	11.9	15	11.9	15		
WTVD D9 DX LIC	0.0	0			0.0	0
WGAL D8 DT APP	200.6	13,636	88.1	5,418	88.1	5,418
WUPV D8 DT CP	11.9	40	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	4.0	111	4.0	111
WBPH-TV D9 DT APP	1380.1	123,936	1263.7	113,613	1263.7	113,613

Interference to BLANK000033300 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDDT20111206ACB	340.2
	WBPH-TV	D9	DT	APP	BETHLEHEM, PA	BPCDDT20110518ADP	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2

Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX	
32757.4 8,970,526	30137.6 8,609,624	28681.6	8,482,115	28693.5	8,482,130	-0.04	-0.00

Undesired		Total IX	Unique IX, before		Unique IX, after	
WTVD D9 DT BL	11.9	15	11.9	15		
WTVD D9 DX LIC	0.0	0			0.0	0
WGAL D8 DT LIC	120.8	9,804	48.2	3,407	48.2	3,407
WUPV D8 DT CP	11.9	40	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	4.0	111	4.0	111
WBPH-TV D9 DT APP	1380.1	123,936	1303.5	115,434	1303.5	115,434

Interference to BLANK000033300 LIC scenario 3

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDDT20111206ACB	340.2
	WBPH-TV	D9	DT	APP	BETHLEHEM, PA	BPCDDT20110518ADP	227.6
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2

Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX	
32757.4 8,970,526	30137.6 8,609,624	28633.6	8,479,713	28645.4	8,479,728	-0.04	-0.00

Undesired		Total IX	Unique IX, before		Unique IX, after	
WTVD D9 DT BL	11.9	15	11.9	15		
WTVD D9 DX LIC	0.0	0			0.0	0
WGAL D8 DT APP	200.6	13,636	88.1	5,418	88.1	5,418
WUPV D8 DT CP	11.9	40	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	4.0	111	4.0	111
WBPH-TV D9 DT APP	1380.1	123,936	1263.7	113,613	1263.7	113,613
WHTM-TV D10 DT APP	24.3	1,063	8.1	391	8.1	391

Interference to BLANK000033300 LIC scenario 4

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	

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Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	APP	BETHLEHEM, PA	BPCDT20110518ADP	227.6
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	28673.5 8,481,724	28685.4 8,481,739	-0.04 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9 15	11.9 15	
WTVD D9 DX LIC	0.0 0		0.0 0
WGAL D8 DT LIC	120.8 9,804	48.2 3,407	48.2 3,407
WUPV D8 DT CP	11.9 40	11.9 40	11.9 40
WTOV-TV D9 DT LIC	7.9 2,216	4.0 111	4.0 111
WBPH-TV D9 DT APP	1380.1 123,936	1303.5 115,434	1303.5 115,434
WHTM-TV D10 DT APP	24.3 1,063	8.1 391	8.1 391

Interference to BLANK0000033300 LIC scenario 5

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000063055	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	29008.9 8,500,441	29020.7 8,500,456	-0.04 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9 15	11.9 15	
WTVD D9 DX LIC	0.0 0		0.0 0
WGAL D8 DT APP	200.6 13,636	96.1 6,245	96.1 6,245
WUPV D8 DT CP	11.9 40	11.9 40	11.9 40
WTOV-TV D9 DT LIC	7.9 2,216	4.0 2,105	4.0 2,105
WBPH-TV D9 DD APP	1005.0 100,778	896.5 93,276	896.5 93,276

Interference to BLANK0000033300 LIC scenario 6

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	LIC	BETHLEHEM, PA	BLANK0000064341	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	28964.8 8,509,819	28976.7 8,509,834	-0.04 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9 15	11.9 15	
WTVD D9 DX LIC	0.0 0		0.0 0
WGAL D8 DT APP	200.6 13,636	96.1 5,989	96.1 5,989
WUPV D8 DT CP	11.9 40	11.9 40	11.9 40

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WTOV-TV D9 DT LIC	7.9	2,216	7.9	2,216	7.9	2,216
WBPH-TV D9 DT LIC	1045.1	91,545	940.5	83,898	940.5	83,898

Interference to BLANK0000033300 LIC scenario 7

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	CP	BETHLEHEM, PA	BLANK0000067446	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32757.4		8,970,526		30137.6		28980.6	-0.04
				8,609,624		8,510,996	-0.00
				28968.7			
				8,510,981			

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	15
WTVD D9 DX LIC	0.0	0	0
WGAL D8 DT APP	200.6	13,636	96.1
WUPV D8 DT CP	11.9	40	11.9
WTOV-TV D9 DT LIC	7.9	2,216	7.9
WBPH-TV D9 DT CP	1041.2	90,383	936.6
			82,736

Interference to BLANK0000033300 LIC scenario 8

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000067447	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32757.4		8,970,526		30137.6		28944.9	-0.04
				8,609,624		8,502,559	-0.00
				28933.0			
				8,502,544			

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	15
WTVD D9 DX LIC	0.0	0	0
WGAL D8 DT APP	200.6	13,636	84.0
WUPV D8 DT CP	11.9	40	11.9
WTOV-TV D9 DT LIC	7.9	2,216	7.9
WBPH-TV D9 DD APP	1088.9	99,496	972.3
			91,173

Interference to BLANK0000033300 LIC scenario 9

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000063055	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX

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32757.4 8,970,526 30137.6 8,609,624 29048.7 8,502,297 29060.6 8,502,312 -0.04 -0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	11.9	15
WTVD D9 DX LIC	0.0	0		0
WGAL D8 DT LIC	120.8	9,804	56.2	4,389
WUPV D8 DT CP	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	4.0	2,105
WBPH-TV D9 DD APP	1005.0	100,778	936.4	95,252

Interference to BLANK0000033300 LIC scenario 10

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	LIC	BETHLEHEM, PA	BLANK0000064341	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	29008.7 8,512,179	29020.6 8,512,194	-0.04 -0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	11.9	15
WTVD D9 DX LIC	0.0	0		0
WGAL D8 DT LIC	120.8	9,804	52.2	3,629
WUPV D8 DT CP	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	7.9	2,216
WBPH-TV D9 DT LIC	1045.1	91,545	976.4	85,370

Interference to BLANK0000033300 LIC scenario 11

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	CP	BETHLEHEM, PA	BLANK0000067446	227.6
	WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	29012.6 8,513,341	29024.5 8,513,356	-0.04 -0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	11.9	15
WTVD D9 DX LIC	0.0	0		0
WGAL D8 DT LIC	120.8	9,804	52.2	3,629
WUPV D8 DT CP	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	7.9	2,216
WBPH-TV D9 DT CP	1041.2	90,383	972.5	84,208

Interference to BLANK0000033300 LIC scenario 12

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7

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WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000067447	227.6
WHTM-TV	D10	DT	LIC	HARRISBURG, PA	BLANK0000034336	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	28972.8 8,504,644	28984.7 8,504,659	-0.04 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL 11.9	15	11.9	15
WTVD D9 DX LIC 0.0	0		0.0 0
WGAL D8 DT LIC 120.8	9,804	44.2	3,213 44.2 3,213
WUPV D8 DT CP 11.9	40	11.9	40 11.9 40
WTOV-TV D9 DT LIC 7.9	2,216	7.9	2,216 7.9 2,216
WBPH-TV D9 DD APP 1088.9	99,496	1012.3	92,905 1012.3 92,905

Interference to BLANK0000033300 LIC scenario 13

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000063055	227.6
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	29000.8 8,500,050	29012.6 8,500,065	-0.04 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL 11.9	15	11.9	15
WTVD D9 DX LIC 0.0	0		0.0 0
WGAL D8 DT APP 200.6	13,636	92.0	5,979 92.0 5,979
WUPV D8 DT CP 11.9	40	11.9	40 11.9 40
WTOV-TV D9 DT LIC 7.9	2,216	4.0	2,105 4.0 2,105
WBPH-TV D9 DD APP 1005.0	100,778	896.5	93,276 896.5 93,276
WHTM-TV D10 DT APP 24.3	1,063	8.1	391 8.1 391

Interference to BLANK0000033300 LIC scenario 14

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	LIC	BETHLEHEM, PA	BLANK0000064341	227.6
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	28956.7 8,509,428	28968.6 8,509,443	-0.04 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL 11.9	15	11.9	15
WTVD D9 DX LIC 0.0	0		0.0 0
WGAL D8 DT APP 200.6	13,636	96.1	5,989 96.1 5,989
WUPV D8 DT CP 11.9	40	11.9	40 11.9 40
WTOV-TV D9 DT LIC 7.9	2,216	7.9	2,216 7.9 2,216
WBPH-TV D9 DT LIC 1045.1	91,545	940.5	83,898 940.5 83,898
WHTM-TV D10 DT APP 24.3	1,063	8.1	391 8.1 391

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Interference to BLANK0000033300 LIC scenario 15

	Call	Chan	Svc	Status	City, State	File Number	Distance			
Desired:	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300				
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km			
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7			
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8			
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1			
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2			
	WBPH-TV	D9	DT	CP	BETHLEHEM, PA	BLANK0000067446	227.6			
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2			
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
32757.4	8,970,526	30137.6	8,609,624	28960.6	8,510,590	28972.5	8,510,605	-0.04	-0.00	
Undesired				Total IX	Unique IX, before		Unique IX, after			
WTVD	D9	DT	BL	11.9	15	11.9	15			
WTVD	D9	DX	LIC	0.0	0			0.0	0	
WGAL	D8	DT	APP	200.6	13,636	96.1	5,989	96.1	5,989	
WUPV	D8	DT	CP	11.9	40	11.9	40	11.9	40	
WTOV-TV	D9	DT	LIC	7.9	2,216	7.9	2,216	7.9	2,216	
WBPH-TV	D9	DT	CP	1041.2	90,383	936.6	82,736	936.6	82,736	
WHTM-TV	D10	DT	APP	24.3	1,063	8.1	391	8.1	391	

Interference to BLANK0000033300 LIC scenario 16

Desired:	Call WUSA	Chan D9	Svc DT	Status LIC	City, State WASHINGTON, DC	File Number BLANK0000033300	Distance		
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km		
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7		
	WGAL	D8	DT	APP	LANCASTER, PA	BPCDT20110516ACI	126.8		
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1		
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2		
	WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000067447	227.6		
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
32757.4	8,970,526	30137.6	8,609,624	28924.9	8,502,153	28936.8	8,502,168	-0.04	-0.00
Undesired				Total IX	Unique IX, before		Unique IX, after		
WTVD D9 DT BL		11.9		15	11.9	15			
WTVD D9 DX LIC		0.0		0			0.0		0
WGAL D8 DT APP		200.6		13,636	84.0	5,313	84.0		5,313
WUPV D8 DT CP		11.9		40	11.9	40	11.9		40
WTOV-TV D9 DT LIC		7.9		2,216	7.9	2,216	7.9		2,216
WBPH-TV D9 DD APP		1088.9		99,496	972.3	91,173	972.3		91,173
WHTM-TV D10 DT APP		24.3		1,063	8.1	391	8.1		391

Interference to BLANK0000033300 LIC scenario 17

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000063055	227.6
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32757.4		8,970,526		30137.6		8,609,624	-0.04 -0.00
				29040.6		8,501,906	
				29052.5		8,501,921	

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Undesired		Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	11.9	15
WTVD D9 DX LIC	0.0	0		0.0
WGAL D8 DT LIC	120.8	9,804	52.2	4,123
WUPV D8 DT CP	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	4.0	2,105
WBPH-TV D9 DD APP	1005.0	100,778	936.4	95,252
WHTM-TV D10 DT APP	24.3	1,063	8.1	391

Interference to BLANK0000033300 LIC scenario 18

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	LIC	BETHLEHEM, PA	BLANK0000064341	227.6
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32757.4		8,970,526		30137.6		8,511,788	-0.04 -0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	11.9	15
WTVD D9 DX LIC	0.0	0		0.0
WGAL D8 DT LIC	120.8	9,804	52.2	3,629
WUPV D8 DT CP	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	7.9	2,216
WBPH-TV D9 DT LIC	1045.1	91,545	976.4	85,370
WHTM-TV D10 DT APP	24.3	1,063	8.1	391

Interference to BLANK0000033300 LIC scenario 19

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
	WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
	WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
	WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
	WBPH-TV	D9	DT	CP	BETHLEHEM, PA	BLANK0000067446	227.6
	WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32757.4		8,970,526		30137.6		8,512,950	-0.04 -0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9	15	11.9	15
WTVD D9 DX LIC	0.0	0		0.0
WGAL D8 DT LIC	120.8	9,804	52.2	3,629
WUPV D8 DT CP	11.9	40	11.9	40
WTOV-TV D9 DT LIC	7.9	2,216	7.9	2,216
WBPH-TV D9 DT CP	1041.2	90,383	972.5	84,208
WHTM-TV D10 DT APP	24.3	1,063	8.1	391

Interference to BLANK0000033300 LIC scenario 20

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	386.8 km

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WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	386.7
WGAL	D8	DT	LIC	LANCASTER, PA	BLCDT20110323ABF	126.8
WUPV	D8	DT	CP	ASHLAND, VA	BLANK0000029586	135.1
WTOV-TV	D9	DT	LIC	STEUBENVILLE, OH	BLCDT20111206ACB	340.2
WBPH-TV	D9	DD	APP	BETHLEHEM, PA	BLANK0000067447	227.6
WHTM-TV	D10	DT	APP	HARRISBURG, PA	BLANK0000035787	152.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32757.4 8,970,526	30137.6 8,609,624	28964.8 8,504,253	28976.6 8,504,268	-0.04 -0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	11.9 15	11.9 15	
WTVD D9 DX LIC	0.0 0		0.0 0
WGAL D8 DT LIC	120.8 9,804	44.2 3,213	44.2 3,213
WUPV D8 DT CP	11.9 40	11.9 40	11.9 40
WTOV-TV D9 DT LIC	7.9 2,216	7.9 2,216	7.9 2,216
WBPH-TV D9 DD APP	1088.9 99,496	1012.3 92,905	1012.3 92,905
WHTM-TV D10 DT APP	24.3 1,063	8.1 391	8.1 391

Interference to BLANK0000028208 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTVI	D9	DT	CP	CHARLOTTE, NC	BLANK0000028208	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	200.3 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	200.3
	WNTV	D8	DT	CP	GREENVILLE, SC	BLANK0000034598	160.6
	WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	278.2
	WJHL-TV	D9	DT	CP	JOHNSON CITY, TN	BLANK0000027557	181.8
	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDT20090624ABZ	129.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
23168.3 2,849,622	22457.5 2,821,692	20024.1 2,696,354	20535.7 2,717,393	-2.56 -0.78

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	1974.6 93,783	1459.5 68,972	
WTVD D9 DX LIC	1375.2 69,315		947.9 47,933
WNTV D8 DT CP	63.6 5,397	11.9 444	15.8 713
WITV D9 DT BL	262.7 7,058	15.9 446	11.9 335
WJHL-TV D9 DT CP	588.0 42,617	188.3 24,605	216.5 25,733
WIS D10 DT LIC	310.4 9,361	195.0 5,189	214.8 5,428

Interference to DTVBL61005 BL scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	323.2 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	323.2
	WGSC-CD	D8	DC	LIC	MURRELLS INLET, SC	BLANK0000053146	95.6
	WMUM-TV	D9	DT	CP	COCHRAN, GA	BLANK0000034191	336.4
	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDT20090624ABZ	165.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
34232.6 1,077,795	34232.6 1,077,795	34003.6 1,067,162	34031.7 1,068,113	-0.08 -0.09

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	28.1 951	28.1 951	
WTVD D9 DX LIC	0.0 0		0.0 0
WGSC-CD D8 DC LIC	28.2 8,509	28.2 8,509	28.2 8,509
WMUM-TV D9 DT CP	64.2 278	60.2 278	60.2 278
WIS D10 DT LIC	112.6 895	108.5 895	108.5 895

Interference to BLANK0000027557 CP scenario 1

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Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WJHL-TV	D9	DT	CP	JOHNSON CITY, TN	BLANK0000027557	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	334.9 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	334.9
	WNTV	D8	DT	CP	GREENVILLE, SC	BLANK0000034598	167.5
	WTVI	D9	DT	CP	CHARLOTTE, NC	BLANK0000028208	181.8
	WTVG	D9	DT	LIC	CHATTANOOGA, TN	BLCDT20090914ABU	319.6
	WVPB-TV	D9	DT	CP	HUNTINGTON, WV	BLANK0000034622	229.4
	WBIR-TV	D10	DT	LIC	KNOXVILLE, TN	BLCDT20090619ADG	168.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
49883.5 2,239,254	39036.7 1,604,436	36924.8 1,463,912	36980.9 1,468,809	-0.15 -0.33

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	661.8 69,522	204.2 13,130	
WTVD D9 DX LIC	533.4 53,907		148.1 8,233
WNTV D8 DT CP	44.4 704	24.2 535	24.2 535
WTVI D9 DT CP	1176.1 100,544	694.4 43,988	766.7 54,706
WTVG D9 DT LIC	216.1 9,182	136.0 5,033	136.0 5,033
WVPB-TV D9 DT CP	391.1 6,461	379.1 6,461	379.1 6,461
WBIR-TV D10 DT LIC	180.2 14,821	124.2 10,724	124.2 10,724

Interference to BLANK0000027557 CP scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WJHL-TV	D9	DT	CP	JOHNSON CITY, TN	BLANK0000027557	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	334.9 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	334.9
	WNTV	D8	DT	CP	GREENVILLE, SC	BLANK0000034598	167.5
	WTVI	D9	DT	CP	CHARLOTTE, NC	BLANK0000028208	181.8
	WTVG	D9	DT	APP	CHATTANOOGA, TN	BLANK0000035651	319.6
	WVPB-TV	D9	DT	CP	HUNTINGTON, WV	BLANK0000034622	229.4
	WBIR-TV	D10	DT	LIC	KNOXVILLE, TN	BLCDT20090619ADG	168.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
49883.5 2,239,254	39036.7 1,604,436	36840.8 1,460,376	36896.9 1,465,273	-0.15 -0.34

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	661.8 69,522	204.2 13,130	
WTVD D9 DX LIC	533.4 53,907		148.1 8,233
WNTV D8 DT CP	44.4 704	16.1 42	16.1 42
WTVI D9 DT CP	1176.1 100,544	694.4 43,988	766.7 54,706
WTVG D9 DT APP	328.2 14,082	220.0 8,569	220.0 8,569
WVPB-TV D9 DT CP	391.1 6,461	375.1 6,421	375.1 6,421
WBIR-TV D10 DT LIC	180.2 14,821	108.2 9,893	108.2 9,893

Interference to BLANK0000028166 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCTI-TV	D10	DT	CP	NEW BERN, NC	BLANK0000028166	
Undesireds:	WTVD	D9	DT	BL	DURHAM, NC	DTVBL8617	125.2 km
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	125.2
	WIS	D10	DT	LIC	COLUMBIA, SC	BLCDT20090624ABZ	331.2
	WVBT	D10	DT	CP	RICHMOND, VA	BLANK0000025185	267.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
47539.3 1,680,504	47503.0 1,678,077	45664.0 1,543,424	46340.0 1,592,978	-1.48 -3.21

Undesired	Total IX	Unique IX, before	Unique IX, after
WTVD D9 DT BL	1404.6 129,161	1252.2 121,703	
WTVD D9 DX LIC	628.6 75,251		576.2 72,149
WIS D10 DT LIC	342.6 8,599	222.4 2,610	310.3 6,787
WVBT D10 DT CP	244.3 4,351	212.1 2,882	224.2 3,061

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Interference to proposal scenario 1
4.76% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTVD	D9	DX	LIC	DURHAM, NC	WTVD AUX 9 March 2019	
Undesireds:	WNCN	D8	DT	CP	GOLDSBORO, NC	BLANK0000034761	0.9 km
	WUSA	D9	DT	LIC	WASHINGTON, DC	BLANK0000033300	386.7
	WTVI	D9	DT	CP	CHARLOTTE, NC	BLANK0000028208	200.3
	WITV	D9	DT	BL	CHARLESTON, SC	DTVBL61005	323.2
	WJHL-TV	D9	DT	CP	JOHNSON CITY, TN	BLANK0000027557	334.9
	WCTI-TV	D10	DT	CP	NEW BERN, NC	BLANK0000028166	125.2

Service area	Terrain-limited	IX-free	Percent IX
39815.1 3,426,531	39081.6 3,403,259	37075.2 3,241,186	5.13 4.76

Undesired	Total IX	Unique IX	Prcnt Unique IX
WNCN D8 DT CP	24.0 1,715	19.9 1,614	0.05 0.05
WUSA D9 DT LIC	47.8 1,629	47.8 1,629	0.12 0.05
WTVI D9 DT CP	471.9 33,689	372.4 27,478	0.95 0.81
WITV D9 DT BL	107.1 1,718	51.7 597	0.13 0.02
WJHL-TV D9 DT CP	71.9 6,047	27.9 829	0.07 0.02
WCTI-TV D10 DT CP	1387.3 123,715	1387.3 123,715	3.55 3.64