

ENGINEERING EXHIBIT

Digital Low Power Television Station Application for Modification of Construction Permit

prepared for

Gray Television Licensee, LLC
W35DV-D Augusta, GA
Facility ID 185538
Ch. 35 4 kW Directional

Gray Television Licensee, LLC (“*Gray*”) is the proposed assignee (file# 0000214776) of digital Low Power Television station W35DV-D, Channel 35, Facility ID 185538, Augusta GA. W35DV-D is licensed to operate at 0.2 kW effective radiated power (“ERP”) with a directional antenna (file# 0000179278). A Construction Permit (“CP” file# 0000212488) authorizes relocation of W35DV-D and increased power. *Gray* proposes herein a modification of the CP to specify use of an alternate transmitting location, increased ERP, and an alternate antenna pattern.

As proposed herein, W35DV-D will employ an antenna to be side-mounted on the tower structure associated with FCC Antenna Structure Registration number 1286309, located 41.0 km (25.5 miles) from the licensed site. No change to the overall structure height is proposed.

The proposed antenna is a Dielectric model DLP-4B having horizontal polarization. The proposed ERP is 4 kW using a “full service” out of channel emission mask. A plot of the directional antenna’s azimuthal pattern is supplied in Figure 1. Figure 2 depicts the coverage contour of the proposed facility as well as that of the licensed facility, demonstrating compliance with §73.3572 for a minor change.

Interference study per OET Bulletin 69¹ shows that the proposal complies with the FCC’s interference protection requirements toward all digital television, television translator, LPTV, and

¹FCC 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, 1 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCCs implementation of

Class A stations. The results, summarized in Table 1, show that any new interference does not exceed the FCC's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations) to any facility.

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 30 percent antenna relative field in downward elevations (antenna elevation pattern data shows 30 percent relative field or less for angles 20-90 degrees below the horizontal), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $7.3 \mu\text{W/cm}^2$, which is 1.8 percent of the general population/uncontrolled maximum permitted exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

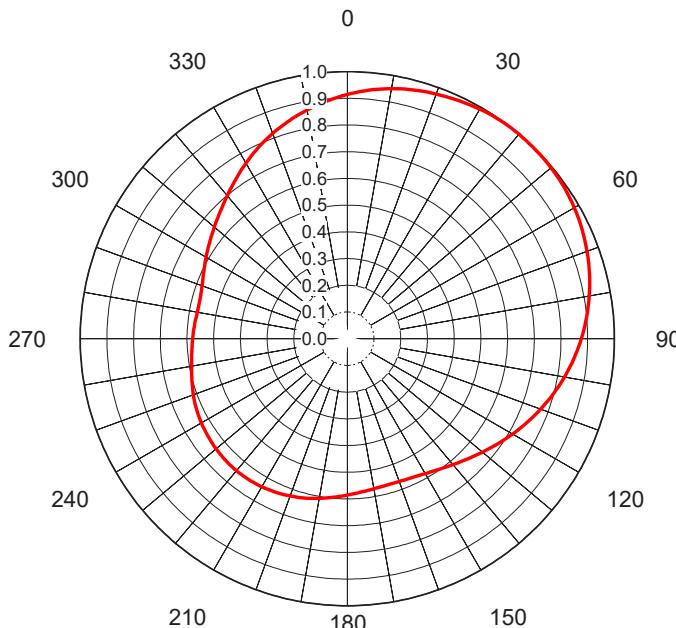
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power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

List of Attachments

- Figure 1 Antenna Azimuthal Pattern
- Figure 2 Coverage Contour Comparison
- Table 1 TVStudy Analysis of Proposal
- Form 2100 Saved Version of Engineering Sections of FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E. May 24, 2023
207 Old Dominion Road Yorktown, VA 23692 703-650-9600



Proposal No. 20230524jmd

Date 24-May-23

Call Letters W35DV-D

Channel 35

Frequency 599 MHz

Antenna Type DLP-4B

Gain 1.76 (2.45dB)

Calculated

Pattern Number TLP-B-35 Hpol

Deg	Value																		
0	0.914	36	0.999	72	0.949	108	0.782	144	0.601	180	0.586	216	0.644	252	0.609	288	0.575	324	0.722
1	0.919	37	0.999	73	0.946	109	0.776	145	0.597	181	0.588	217	0.645	253	0.607	289	0.577	325	0.728
2	0.923	38	0.999	74	0.942	110	0.771	146	0.594	182	0.590	218	0.645	254	0.605	290	0.579	326	0.734
3	0.927	39	1.000	75	0.939	111	0.765	147	0.591	183	0.592	219	0.645	255	0.602	291	0.581	327	0.740
4	0.930	40	1.000	76	0.935	112	0.759	148	0.589	184	0.594	220	0.645	256	0.600	292	0.584	328	0.747
5	0.934	41	1.000	77	0.932	113	0.754	149	0.586	185	0.596	221	0.645	257	0.598	293	0.587	329	0.753
6	0.938	42	0.999	78	0.928	114	0.748	150	0.583	186	0.598	222	0.645	258	0.596	294	0.590	330	0.759
7	0.941	43	0.999	79	0.924	115	0.742	151	0.581	187	0.600	223	0.645	259	0.594	295	0.593	331	0.765
8	0.944	44	0.999	80	0.920	116	0.737	152	0.579	188	0.603	224	0.645	260	0.592	296	0.596	332	0.771
9	0.948	45	0.998	81	0.916	117	0.731	153	0.577	189	0.605	225	0.644	261	0.590	297	0.600	333	0.777
10	0.951	46	0.998	82	0.912	118	0.726	154	0.575	190	0.607	226	0.644	262	0.589	298	0.603	334	0.783
11	0.954	47	0.998	83	0.908	119	0.720	155	0.574	191	0.609	227	0.643	263	0.587	299	0.607	335	0.789
12	0.956	48	0.997	84	0.904	120	0.714	156	0.573	192	0.611	228	0.643	264	0.586	300	0.610	336	0.795
13	0.959	49	0.996	85	0.899	121	0.709	157	0.571	193	0.614	229	0.642	265	0.584	301	0.614	337	0.801
14	0.962	50	0.996	86	0.895	122	0.703	158	0.570	194	0.616	230	0.641	266	0.583	302	0.618	338	0.806
15	0.964	51	0.995	87	0.890	123	0.698	159	0.569	195	0.618	231	0.640	267	0.582	303	0.622	339	0.812
16	0.966	52	0.994	88	0.886	124	0.692	160	0.569	196	0.619	232	0.640	268	0.581	304	0.625	340	0.817
17	0.968	53	0.993	89	0.881	125	0.687	161	0.568	197	0.621	233	0.639	269	0.580	305	0.629	341	0.823
18	0.971	54	0.992	90	0.876	126	0.682	162	0.568	198	0.623	234	0.638	270	0.579	306	0.633	342	0.828
19	0.973	55	0.990	91	0.872	127	0.676	163	0.568	199	0.625	235	0.637	271	0.578	307	0.637	343	0.834
20	0.975	56	0.989	92	0.867	128	0.671	164	0.568	200	0.627	236	0.636	272	0.577	308	0.641	344	0.839
21	0.977	57	0.987	93	0.862	129	0.666	165	0.568	201	0.628	237	0.634	273	0.576	309	0.646	345	0.844
22	0.979	58	0.985	94	0.857	130	0.661	166	0.568	202	0.630	238	0.633	274	0.575	310	0.650	346	0.849
23	0.980	59	0.983	95	0.852	131	0.656	167	0.569	203	0.632	239	0.632	275	0.574	311	0.654	347	0.854
24	0.982	60	0.981	96	0.847	132	0.651	168	0.569	204	0.633	240	0.631	276	0.573	312	0.659	348	0.859
25	0.984	61	0.979	97	0.842	133	0.646	169	0.570	205	0.634	241	0.629	277	0.572	313	0.663	349	0.864
26	0.986	62	0.977	98	0.836	134	0.641	170	0.571	206	0.636	242	0.628	278	0.572	314	0.668	350	0.869
27	0.988	63	0.975	99	0.831	135	0.637	171	0.572	207	0.637	243	0.626	279	0.571	315	0.673	351	0.874
28	0.990	64	0.972	100	0.826	136	0.632	172	0.573	208	0.638	244	0.625	280	0.570	316	0.678	352	0.879
29	0.991	65	0.970	101	0.820	137	0.628	173	0.574	209	0.639	245	0.623	281	0.570	317	0.683	353	0.883
30	0.993	66	0.967	102	0.815	138	0.624	174	0.575	210	0.640	246	0.621	282	0.570	318	0.688	354	0.888
31	0.994	67	0.964	103	0.810	139	0.619	175	0.577	211	0.641	247	0.619	283	0.570	319	0.694	355	0.893
32	0.995	68	0.961	104	0.804	140	0.615	176	0.578	212	0.642	248	0.618	284	0.570	320	0.699	356	0.897
33	0.996	69	0.958	105	0.799	141	0.612	177	0.580	213	0.643	249	0.616	285	0.571	321	0.705	357	0.902
34	0.997	70	0.955	106	0.793	142	0.608	178	0.582	214	0.643	250	0.613	286	0.572	322	0.711	358	0.906
35	0.998	71	0.952	107	0.787	143	0.604	179	0.584	215	0.644	251	0.611	287	0.573	323	0.716	359	0.910

Figure 1
Antenna Azimuthal Pattern
W35DV-D Augusta, GA
Facility ID 185538
Ch. 35 4 kW Directional

prepared for
Gray Television Licensee, LLC

May, 2023



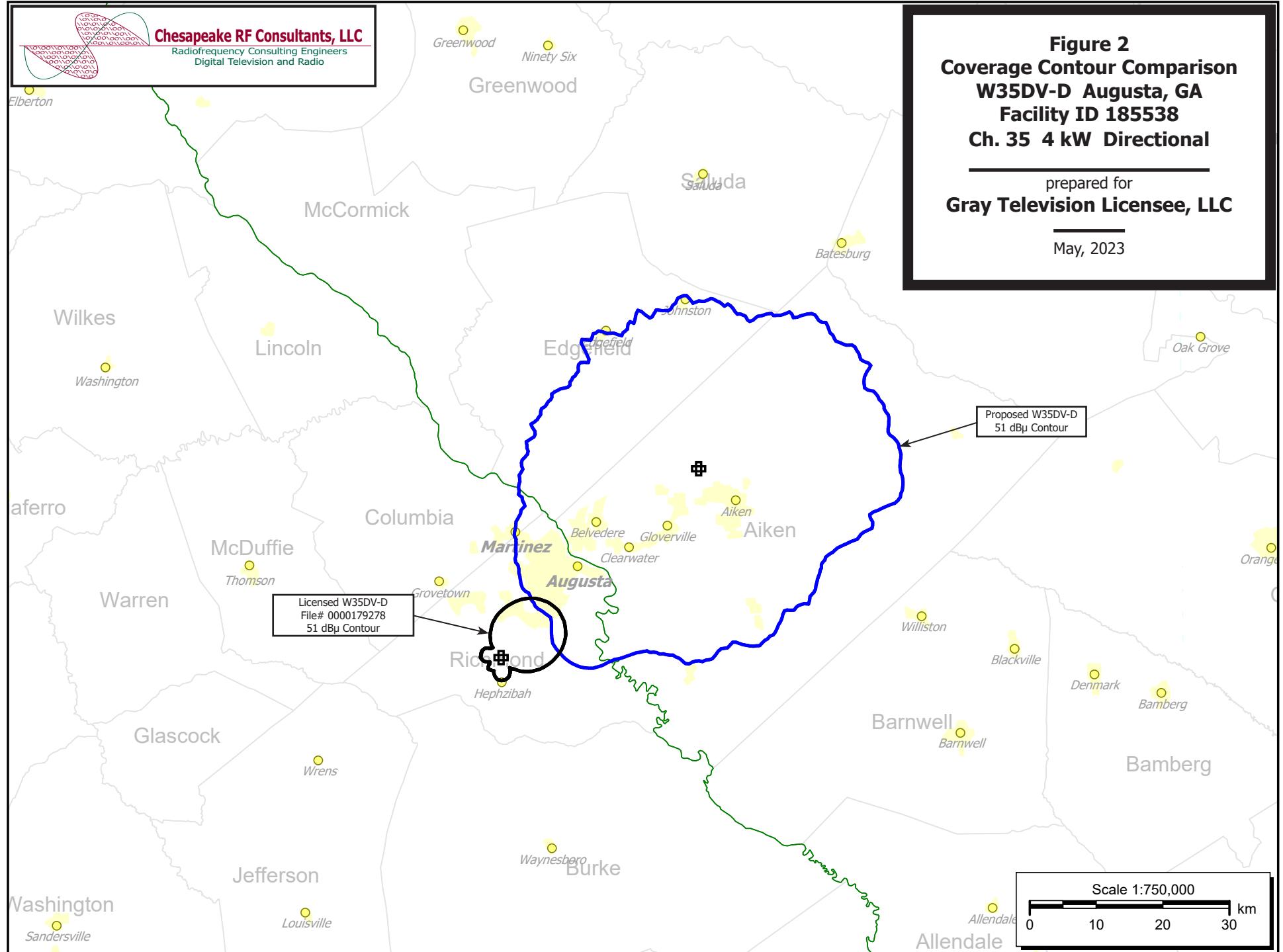


Table 1 W35DV-D TVStudy Analysis of Proposal
(page 1 of 4)



tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: W35DV-D 1286309 prop, Model: Longley-Rice
Start: 2023.05.24 12:16:51

Study created: 2023.05.24 12:16:51

Study build station data: LMS TV 2023-05-24

Proposal: W35DV-D D35 LD APP AUGUSTA, GA
File number: W35DV-D 1286309 prop
Facility ID: 185538
Station data: User record
Record ID: 320
Country: U.S.

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

Search options:
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WATC-DT	D34	DT	LIC	ATLANTA, GA	BLANK0000107129	252.3 km
No	W34FO-D	D34	LD	LIC	AUGUSTA, GA	BLANK0000179561	83.6
No	WSST-TV	D34	DT	LIC	CORDELE, GA	BLANK0000064103	268.2
No	W34FX-D	D34	LD	LIC	MONTROSE, GA	BLANK0000194505	154.3
No	W34FT-D	D34	LD	CP	WASHINGTON, GA	BNDTL20090825BXG	91.8
No	WGWG	D34	DT	LIC	CHARLESTON, SC	BLANK0000199719	207.5
No	WNSC-TV	D34	DT	LIC	ROCK HILL, SC	BLANK0000105822	154.3
No	WEAC-CD	D35	DC	LIC	JACKSONVILLE, AL	BLANK0000112954	378.8
No	W35DH-D	D35	LD	LIC	GREENVILLE, FL	BLANK0000178364	384.1
No	W35EC-D	D35	LD	LIC	JENNINGS, FL	BLANK0000194499	368.3
No	W35EC-D	D35	LD	CP	JENNINGS, FL	BLANK0000199607	381.8
No	WRCZ-LD	D35	LD	LIC	OCALEA, FL	BLANK0000013902	370.3
No	WUVG-DT	D35	LD	LIC	ATHENS, GA	BLANK0000081844	157.2
No	WDTA-LD	D35	LD	LIC	ATLANTA, GA	BLANK0000126643	239.2
Yes	WSCG	D35	DT	LIC	BAXLEY, GA	BLCDT20071120AJC	177.8
No	WLTZ	D35	DT	LIC	COLUMBUS, GA	BLCDT20060627ABT	316.2
No	W35BB-D	D35	LD	LIC	DUBLIN, GA	BLDTL20141230AAP	152.6
No	W35DA-D	D35	LD	CP	MACON, GA	BLANK0000197147	195.2
No	W35DA-D	D35	LD	LIC	MACON, GA	BLANK0000198001	195.2
No	WBVJ-CD	D35+	DC	LIC	VALDOSTA, GA	BLANK0000004708	325.0
No	WBVJ-CD	D35+	DC	CP	VALDOSTA, GA	BLANK0000035757	325.0
No	W35DT-D	D35	LD	LIC	BEAVER DAM, NC	BLANK0000114227	223.8
No	W35CO-D	D35-	LD	LIC	BURNSVILLE, NC	BLANK0000137595	263.8
No	WFMY-TV	D35	DT	LIC	GREENSBORO, NC	BLANK0000113927	308.1
No	W35CK-D	D35	LD	LIC	HIGHLANDS, NC	BLANK0000130265	207.2
No	WTMV-LD	D35	LD	LIC	OGDEN, NC	BLANK0000058471	374.9
Yes	WMYI-TV	D35	DT	LIC	ANDERSON, SC	BLANK0000190291	124.6
No	W35ED-D	D35	LD	LIC	FLORENCE, SC	BLANK0000177718	203.4
No	W35ED-D	D35	LD	CP	FLORENCE, SC	BLANK0000205744	202.3
No	W35ED-D	D35	LD	LIC	FLORENCE, SC	BLANK0000215078	202.3
No	WZCH-LD	D35	LD	LIC	MYRTLE BEACH, SC	BLANK0000194109	252.8
No	WZCH-LD	D35	LD	CP	MYRTLE BEACH, SC	BLANK0000198648	230.4
No	WTCI	D35	DT	CP	CHATTANOOGA, TN	BLANK0000034751	367.3
No	WTCI	D35	DT	LIC	CHATTANOOGA, TN	BLANK0000144354	367.3
No	WCYB-TV	D35	LD	CP	BRISTOL, VA	BLANK0000054449	317.8
No	WCYB-TV	D35	DT	LIC	BRISTOL, VA	BLANK0000206832	317.8
No	WJDW-LD	D35	LD	LIC	TAZEWELL, VA	BLDTL20110525ADU	399.5
No	WUPA	D36	DT	LIC	ATLANTA, GA	BLANK0000084466	237.8
No	WFXG	D36	DT	LIC	AUGUSTA, GA	BLANK0000081277	21.3
No	WGCB-LD	D36-	LD	LIC	HINESVILLE-RICHMOND, GA	BLANK0000080179	175.5
No	WUNE-TV	D36	DT	LIC	LINVILLE, NC	BLANK0000111606	273.6
No	WFXB	D36	DT	LIC	MYRTLE BEACH, SC	BLANK0000081825	248.2
No	WJNI-LD	D36	LD	CP	NORTH CHARLESTON, SC	BLANK0000210574	172.9

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Table 1 W35DV-D TVStudy Analysis of Proposal
(page 2 of 4)



Channel: D35
Mask: Full Service
Latitude: 33 36 9.70 N (NAD83)
Longitude: 81 46 46.10 W
Height AMSL: 194.5 m
HAAT: 0.0 m
Peak ERP: 4.00 kW
Antenna: DIE DLP-4B 40.0 deg
Elev Pattrn: Generic
Elec Tilt: 1.00

50.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.34 kW	40.4 m	25.5 km
45.0	3.98	49.9	28.8
90.0	3.07	66.4	30.5
135.0	1.63	51.2	24.7
180.0	1.37	78.0	28.2
225.0	1.65	92.6	31.0
270.0	1.34	63.4	26.0
315.0	1.82	42.7	23.2

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 61 m

Distance to Canadian border: 899.1 km

Distance to Mexican border: 1686.3 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 276.9 degrees Distance: 273.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 296.0 degrees Distance: 2199.4 km

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

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

Interference to BLCDT20071120AJC LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WSCG	D35	DT	LIC	BAXLEY, GA	BLCDT20071120AJC	
Undesireds:	W35DV-D	D35	LD	APP	AUGUSTA, GA	W35DV-D 1286309 prop	177.8 km
	WBVJ-CD	D35+	DC	LIC	VALDOSTA, GA	BLANK000004708	219.8
	WMYA-TV	D35	DT	LIC	ANDERSON, SC	BLANK0000190291	301.7
	WFXG	D36	DT	LIC	AUGUSTA, GA	BLANK0000081277	159.2
	Service area			Terrain-limited	IX-free, before	IX-free, after	Percent New IX
30062.3	868,271	30050.3		868,245	30010.2	868,009	30010.2 868,009
Undesired				Total IX	Unique IX, before	Unique IX, after	
W35DV-D D35 LD APP				4.0	30	0.0	0
WMYA-TV D35 DT LIC				20.0	49	12.0	10
WFXG D36 DT LIC				28.0	196	20.0	187

Interference to BLCDT20071120AJC LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WSCG	D35	DT	LIC	BAXLEY, GA	BLCDT20071120AJC	
Undesireds:	W35DV-D	D35	LD	APP	AUGUSTA, GA	W35DV-D 1286309 prop	177.8 km
	WBVJ-CD	D35+	DC	CP	VALDOSTA, GA	BLANK0000035757	219.8

Table 1 W35DV-D TVStudy Analysis of Proposal
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WMYA-TV	D35	DT	LIC	ANDERSON, SC	BLANK0000190291	301.7
WFXG	D36	DT	LIC	AUGUSTA, GA	BLANK0000081277	159.2
Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX
30062.3	868,271	30050.3	868,245	30009.2	868,009	0.00 0.00
Undesired		Total IX		Unique IX, before	Unique IX, after	
W35DV-D D35 LD APP	4.0	30		0.0	0	
WBVJ-CD D35+ DC CP	1.0	0	1.0	0	1.0	0
WMYA-TV D35 DT LIC	20.0	49	12.0	40	11.0	10
WFXG D36 DT LIC	28.0	196	20.0	187	20.0	187
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Interference to BLANK0000190291 LIC scenario 1						
Desired:	Call	Chan	Svc	Status	City, State	File Number
	WMYA-TV	D35	DT	LIC	ANDERSON, SC	BLANK0000190291
Undesireds:	W35DV-D	D35	LD	APP	AUGUSTA, GA	W35DV-D 1286309 prop
	WNSC-TV	D34	DT	LIC	ROCK HILL, SC	BLANK0000105822
	WSCG	D35	DT	LIC	BAXLEY, GA	BLCDT20071120AJC
	WFMY-TV	D35	DT	LIC	GREENSBORO, NC	BLANK0000113927
	WTCI	D35	DT	CP	CHATTANOOGA, TN	BLANK0000034751
	WCYB-TV	D35	DT	LIC	BRISTOL, VA	BLANK0000206832
	WFXG	D36	DT	LIC	AUGUSTA, GA	BLANK0000081277
	WUNE-TV	D36	DT	LIC	LINVILLE, NC	BLANK0000111606
Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX
25287.4	1,653,829	24408.6	1,568,850	23770.9	1,548,500	23652.4 1,547,146 0.50 0.09
Undesired		Total IX		Unique IX, before	Unique IX, after	
W35DV-D D35 LD APP	183.8	1,902		118.5	1,354	
WNSC-TV D34 DT LIC	113.2	3,968	82.2	82.2	3,515	
WSCG D35 DT LIC	83.2	1,101	23.8	10.9	203	
WFMY-TV D35 DT LIC	243.6	9,801	150.7	6,792	148.7	6,792
WTCI D35 DT CP	1.0	0	0.0	0	0.0	0
WCYB-TV D35 DT LIC	182.1	4,656	111.3	2,105	107.4	2,025
WFXG D36 DT LIC	62.2	401	23.7	303	11.9	170
WUNE-TV D36 DT LIC	129.5	4,535	98.6	3,656	98.6	3,656
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Interference to BLANK0000190291 LIC scenario 2						
Desired:	Call	Chan	Svc	Status	City, State	File Number
	WMYA-TV	D35	DT	LIC	ANDERSON, SC	BLANK0000190291
Undesireds:	W35DV-D	D35	LD	APP	AUGUSTA, GA	W35DV-D 1286309 prop
	WNSC-TV	D34	DT	LIC	ROCK HILL, SC	BLANK0000105822
	WSCG	D35	DT	LIC	BAXLEY, GA	BLCDT20071120AJC
	WFMY-TV	D35	DT	LIC	GREENSBORO, NC	BLANK0000113927
	WTCI	D35	DT	LIC	CHATTANOOGA, TN	BLANK0000144354
	WCYB-TV	D35	DT	LIC	BRISTOL, VA	BLANK0000206832
	WFXG	D36	DT	LIC	AUGUSTA, GA	BLANK0000081277
	WUNE-TV	D36	DT	LIC	LINVILLE, NC	BLANK0000111606
Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX
25287.4	1,653,829	24408.6	1,568,850	23770.9	1,548,500	23652.4 1,547,146 0.50 0.09
Undesired		Total IX		Unique IX, before	Unique IX, after	
W35DV-D D35 LD APP	183.8	1,902		118.5	1,354	
WNSC-TV D34 DT LIC	113.2	3,968	82.2	82.2	3,515	
WSCG D35 DT LIC	83.2	1,101	23.8	10.9	203	
WFMY-TV D35 DT LIC	243.6	9,801	150.7	6,792	148.7	6,792
WTCI D35 DT LIC	1.0	0	0.0	0	0.0	0
WCYB-TV D35 DT LIC	182.1	4,656	111.3	2,105	107.4	2,025
WFXG D36 DT LIC	62.2	401	23.7	303	11.9	170
WUNE-TV D36 DT LIC	129.5	4,535	98.6	3,656	98.6	3,656
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Interference to proposal scenario 1						
39.69% interference received						

Call	Chan	Svc	Status	City, State	File Number	Distance
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Table 1 W35DV-D TVStudy Analysis of Proposal
 (page 4 of 4)



Desired:	W35DV-D	D35	LD	APP	AUGUSTA, GA	W35DV-D	1286309	prop
Undesireds:	WSCG	D35	DT	LIC	BAXLEY, GA	BLCDT20071120AJC	177.8	km
	W35DA-D	D35	LD	CP	MACON, GA	BLANK0000197147	195.2	
	WBVJ-CD	D35+	DC	LIC	VALDOSTA, GA	BLANK0000004708	325.0	
	WMYA-TV	D35	DT	LIC	ANDERSON, SC	BLANK0000190291	124.6	
	W35ED-D	D35	LD	LIC	FLORENCE, SC	BLANK0000177718	203.4	
	WZCH-LD	D35	LD	LIC	MYRTLE BEACH, SC	BLANK0000194109	252.8	
	WFXG	D36	DT	LIC	AUGUSTA, GA	BLANK0000081277	21.3	
Service area								
2358.8	265,761	2255.6	250,736	1598.3	IX-free		Percent IX	
					151,213	29.14	39.69	
Undesired								
WSCG D35 DT LIC		69.4	9,782	3.0	Total IX	Unique IX	Prcnt Unique IX	
WMYA-TV D35 DT LIC		126.8	10,042	27.7		12	0.13	0.00
WFXG D36 DT LIC		618.8	98,460	501.8		974	1.23	0.39
						83,587	22.25	33.34

Channel and Facility Information

Section	Question	Response
Facility ID	185538	
State	Georgia	
City	AUGUSTA	
LPD Channel	35	

Section	Question	Response
Antenna Location Data	Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?
		Yes
Coordinates (NAD83)	ASR Number	1286309
	Latitude	33° 36' 09.7" N+
	Longitude	081° 46' 46.1" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	89.9 meters
	Support Structure Height	85.3 meters
Antenna Data	Ground Elevation (AMSL)	151.8 meters
	Height of Radiation Center Above Ground Level	42.7 meters
	Height of Radiation Center Above Mean Sea Level	194.5 meters
	Effective Radiated Power	4 kW

Antenna Technical Data	Section	Question	Response
	Antenna Type	Antenna Type	Directional Custom
		Do you have an Antenna ID?	No
		Antenna ID	
	Antenna Manufacturer and Model	Manufacturer:	Dielectric
		Model	TLP-4B
		Rotation	40 degrees
		Electrical Beam Tilt	1
		Mechanical Beam Tilt	Not Applicable
		toward azimuth	
		Polarization	Horizontal
	Elevation Radiation 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	
		Out-of-Channel Emission Mask:	Full Service

Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	Value	Degree	Value	Degree	Value	Degree	Value
0	1	90	0.661	180	0.645	270	0.650
10	0.996	100	0.615	190	0.641	280	0.699
20	0.981	110	0.583	200	0.631	290	0.759
30	0.955	120	0.569	210	0.613	300	0.817
40	0.920	130	0.571	220	0.592	310	0.869
50	0.876	140	0.586	230	0.579	320	0.914
60	0.826	150	0.607	240	0.570	330	0.951
70	0.771	160	0.627	250	0.579	340	0.975
80	0.714	170	0.640	260	0.610	350	0.993

Additional Azimuths

Degree	V _A