



## ENGINEERING EXHIBIT

### **Incentive Auction Channel Reassignment**

#### **Application for Minor Modification of Digital Television Station Construction Permit**

prepared for

#### **Woods Communications Corporation**

WC OV-TV Montgomery, AL  
Facility ID 73642  
Ch. 22 670 kW 528 m

*Woods Communications Corporation (“Woods”)* is the licensee of digital television station WCOV-TV, Channel 20, Facility ID 73642, Montgomery AL. Reassignment of WCOV-TV from Channel 20 to Channel 22 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (“CCRPN”, DA 17-317, released April 13, 2017). A Construction Permit (“CP” file# 0000034411) authorizes WCOV-TV to operate on Channel 22 at 700 kW effective radiated power (“ERP”) with a directional antenna side-mounted at 528 meters height above average terrain (“HAAT”). *Woods* proposes herein a minor modification of the reassignment CP to reduce the ERP. No other changes are sought.

As with the current authorization, the proposed Channel 22 operation will employ a new antenna system to be side-mounted on the WCOV-TV tower in lieu of the existing Channel 20 antenna. The tower structure corresponds to FCC Antenna Structure Registration number 1036432. No change to the overall structure height will result.

The proposed antenna is an elliptically polarized directional Dielectric model TFU-30DSC/VP-R S190 (42.9 percent vertical polarization). *Woods* proposes to operate WCOV-TV with an ERP of 670 kW at 528 meters HAAT. The maximum horizontally polarized ERP is 670 kW and the maximum vertically polarized ERP is 287 kW. The vertically polarized component will not exceed the horizontally polarized component at any azimuth. The directional antenna’s azimuthal patterns are depicted in Figures 1 and 1A for horizontal and vertical polarization, respectively. The antenna’s elevation pattern is depicted in Figure 2.

Figure 3 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.

At 700 kW ERP, the presently authorized WCOV-TV noise limited service contour ("NLSC") extends beyond that of the CCRPN facility and resulted from a minor modification application filed during the second filing window.<sup>1</sup> The modification sought herein to 670 kW ERP provides an NLSC which also exceeds that of the CCRPN facility but is within that of the present authorization. A comparison map of the WCOV-TV authorized, proposed, and reassignment NLSC is provided as Figure 4. Therefore, the proposal complies with the FCC's NLSC expansion "freeze" Public Notice<sup>2</sup> of April 5, 2013 (DA 13-618) to the extent it may be applicable to reassigned stations such as WCOV-TV.

Interference study per FCC OET Bulletin 69<sup>3</sup> 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 reassessments as required by §73.616. The interference study output report is provided as Table 1.

The proposed 670 kW ERP exceeds the maximum permitted by §73.622(f)(8)(i) for the proposed antenna HAAT of 528 meters. Section 73.622(f)(5) permits the maximum ERP to be exceeded in order to provide the same geographic coverage area as the largest station within the same market. As demonstrated in Figure 4, the total area within the proposed WCOV-TV NLSC is 34,368 square kilometers, which does not exceed the NLSC area of the currently authorized

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<sup>1</sup>Public 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.

<sup>2</sup>"Media Bureau Announces Limitations on the Filing and Processing of Full Power and Class A Television Station Modification Applications, Effective Immediately, and Reminds Stations of Spectrum Act Preservation Mandate," DA 13-618, Public Notice, released April 5, 2013.

<sup>3</sup>FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004. 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 FCCs implementation of TVStudy show excellent correlation.

WCOV-TV or that of WSFA(DT) (48,301 sq. km, Ch. 12, Montgomery AL, BLCDT-20090622ABN). Thus, the 670 kW ERP specified herein is in compliance with §73.622(f)(5) of the FCC's Rules.

### **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  $1.3 \mu\text{W/cm}^2$ , 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 §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.

**Engineering Exhibit**  
**Woods Communications Corporation** (WCOV-TV)  
(page 4 of 4)

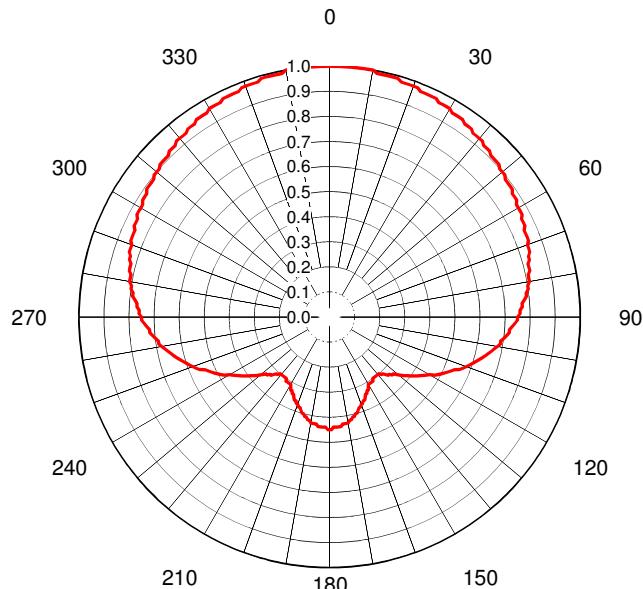


*List of Attachments*

- Figure 1, 1A Antenna Azimuthal Pattern
- Figure 2 Antenna Elevation Pattern
- Figure 3 Proposed Coverage Contours
- Figure 4 Coverage Contour Comparison, Maximum ERP per §73.622(f)
- Table 1 TVStudy Analysis of Proposal
- Form 2100 Saved Version of Engineering Sections from FCC Form at Time of Upload

**Chesapeake RF Consultants, LLC**

Joseph M. Davis, P.E. April 29, 2019  
207 Old Dominion Road Yorktown, VA 23692 703-650-9600



### AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. C-70600-5-5  
 Date 27-Oct-17  
 Call Letters WCOV  
 Channel 22  
 Frequency 521 MHz  
 Antenna Type TFU-30DSC/VP-R S190  
 Gain 1.9 (2.79dB)  
 Calculated

Deg	Value																						
0	1.000	36	0.940	72	0.840	108	0.600	144	0.300	180	0.450	216	0.300	252	0.600	288	0.840	324	0.940				
1	1.000	37	0.940	73	0.830	109	0.590	145	0.300	181	0.450	217	0.300	253	0.610	289	0.840	325	0.940				
2	1.000	38	0.930	74	0.830	110	0.580	146	0.310	182	0.440	218	0.300	254	0.620	290	0.840	326	0.950				
3	1.000	39	0.930	75	0.820	111	0.570	147	0.310	183	0.440	219	0.300	255	0.630	291	0.850	327	0.950				
4	1.000	40	0.930	76	0.820	112	0.560	148	0.310	184	0.440	220	0.300	256	0.640	292	0.850	328	0.950				
5	1.000	41	0.930	77	0.820	113	0.540	149	0.310	185	0.440	221	0.300	257	0.650	293	0.850	329	0.950				
6	1.000	42	0.920	78	0.810	114	0.530	150	0.310	186	0.440	222	0.300	258	0.660	294	0.850	330	0.960				
7	1.000	43	0.920	79	0.810	115	0.520	151	0.320	187	0.430	223	0.310	259	0.670	295	0.860	331	0.960				
8	1.000	44	0.920	80	0.810	116	0.510	152	0.330	188	0.430	224	0.320	260	0.680	296	0.860	332	0.960				
9	1.000	45	0.910	81	0.800	117	0.500	153	0.330	189	0.430	225	0.330	261	0.690	297	0.860	333	0.960				
10	1.000	46	0.910	82	0.800	118	0.490	154	0.340	190	0.430	226	0.330	262	0.690	298	0.870	334	0.970				
11	0.990	47	0.910	83	0.790	119	0.480	155	0.340	191	0.420	227	0.340	263	0.700	299	0.870	335	0.970				
12	0.990	48	0.910	84	0.790	120	0.460	156	0.350	192	0.420	228	0.340	264	0.710	300	0.870	336	0.970				
13	0.990	49	0.900	85	0.780	121	0.450	157	0.360	193	0.410	229	0.350	265	0.720	301	0.870	337	0.970				
14	0.990	50	0.900	86	0.770	122	0.440	158	0.360	194	0.410	230	0.360	266	0.720	302	0.880	338	0.970				
15	0.990	51	0.900	87	0.770	123	0.430	159	0.370	195	0.400	231	0.370	267	0.730	303	0.880	339	0.980				
16	0.990	52	0.890	88	0.760	124	0.420	160	0.370	196	0.400	232	0.380	268	0.740	304	0.880	340	0.980				
17	0.980	53	0.890	89	0.760	125	0.410	161	0.380	197	0.390	233	0.390	269	0.750	305	0.890	341	0.980				
18	0.980	54	0.890	90	0.750	126	0.400	162	0.380	198	0.380	234	0.400	270	0.750	306	0.890	342	0.980				
19	0.980	55	0.890	91	0.750	127	0.390	163	0.390	199	0.380	235	0.410	271	0.760	307	0.890	343	0.980				
20	0.980	56	0.880	92	0.740	128	0.380	164	0.400	200	0.370	236	0.420	272	0.760	308	0.890	344	0.990				
21	0.980	57	0.880	93	0.730	129	0.370	165	0.400	201	0.370	237	0.430	273	0.770	309	0.900	345	0.990				
22	0.970	58	0.880	94	0.720	130	0.360	166	0.410	202	0.360	238	0.440	274	0.770	310	0.900	346	0.990				
23	0.970	59	0.870	95	0.720	131	0.350	167	0.410	203	0.360	239	0.450	275	0.780	311	0.900	347	0.990				
24	0.970	60	0.870	96	0.710	132	0.340	168	0.420	204	0.350	240	0.460	276	0.790	312	0.910	348	0.990				
25	0.970	61	0.870	97	0.700	133	0.340	169	0.420	205	0.340	241	0.480	277	0.790	313	0.910	349	0.990				
26	0.970	62	0.870	98	0.690	134	0.330	170	0.430	206	0.340	242	0.490	278	0.800	314	0.910	350	1.000				
27	0.960	63	0.860	99	0.690	135	0.330	171	0.430	207	0.330	243	0.500	279	0.800	315	0.910	351	1.000				
28	0.960	64	0.860	100	0.680	136	0.320	172	0.430	208	0.330	244	0.510	280	0.810	316	0.920	352	1.000				
29	0.960	65	0.860	101	0.670	137	0.310	173	0.430	209	0.320	245	0.520	281	0.810	317	0.920	353	1.000				
30	0.960	66	0.850	102	0.660	138	0.310	174	0.440	210	0.310	246	0.530	282	0.810	318	0.920	354	1.000				
31	0.950	67	0.850	103	0.650	139	0.300	175	0.440	211	0.310	247	0.540	283	0.820	319	0.930	355	1.000				
32	0.950	68	0.850	104	0.640	140	0.300	176	0.440	212	0.310	248	0.560	284	0.820	320	0.930	356	1.000				
33	0.950	69	0.850	105	0.630	141	0.300	177	0.440	213	0.310	249	0.570	285	0.820	321	0.930	357	1.000				
34	0.950	70	0.840	106	0.620	142	0.300	178	0.440	214	0.310	250	0.580	286	0.830	322	0.930	358	1.000				
35	0.940	71	0.840	107	0.610	143	0.300	179	0.450	215	0.300	251	0.590	287	0.830	323	0.940	359	1.000				

**Figure 1**  
**Antenna Azimuthal Pattern**  
**Horizontal Polarization**  
**WCOV-TV Montgomery, AL**  
**Facility ID 73642**  
**Ch. 22 670 kW 528 m**

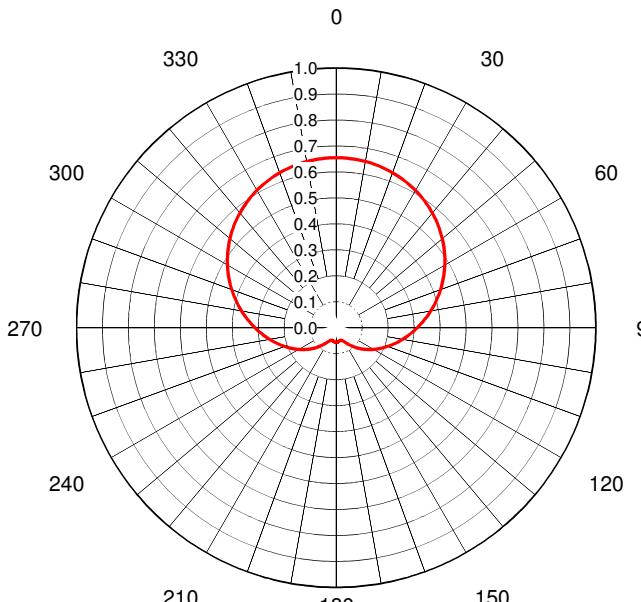
prepared for  
**Woods Communications Corporation**

April, 2019



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

# Dielectric®



## AZIMUTH PATTERN Vertical Polarization

In Free Space

Proposal No. C-70600-5-5  
 Date 27-Oct-17  
 Call Letters WCOV  
 Channel 22  
 Frequency 521 MHz  
 Antenna Type TFU-30DSC/VP-R S190  
 Gain 2.7 (4.32dB)  
 Calculated

Deg	Value																		
0	0.655	36	0.591	72	0.416	108	0.220	144	0.078	180	0.057	216	0.078	252	0.220	288	0.416	324	0.591
1	0.655	37	0.588	73	0.410	109	0.216	145	0.075	181	0.057	217	0.081	253	0.225	289	0.422	325	0.595
2	0.654	38	0.584	74	0.405	110	0.211	146	0.072	182	0.057	218	0.084	254	0.230	290	0.428	326	0.598
3	0.654	39	0.580	75	0.399	111	0.206	147	0.070	183	0.056	219	0.087	255	0.235	291	0.433	327	0.601
4	0.654	40	0.577	76	0.393	112	0.202	148	0.067	184	0.056	220	0.090	256	0.239	292	0.439	328	0.605
5	0.653	41	0.573	77	0.387	113	0.197	149	0.065	185	0.056	221	0.094	257	0.244	293	0.445	329	0.608
6	0.653	42	0.569	78	0.381	114	0.193	150	0.063	186	0.056	222	0.097	258	0.249	294	0.450	330	0.611
7	0.652	43	0.565	79	0.376	115	0.189	151	0.061	187	0.055	223	0.101	259	0.254	295	0.456	331	0.614
8	0.652	44	0.560	80	0.370	116	0.184	152	0.059	188	0.055	224	0.104	260	0.259	296	0.462	332	0.616
9	0.651	45	0.556	81	0.364	117	0.180	153	0.057	189	0.054	225	0.108	261	0.264	297	0.467	333	0.619
10	0.650	46	0.552	82	0.358	118	0.176	154	0.056	190	0.054	226	0.111	262	0.270	298	0.473	334	0.622
11	0.649	47	0.547	83	0.352	119	0.171	155	0.055	191	0.053	227	0.115	263	0.275	299	0.478	335	0.624
12	0.648	48	0.543	84	0.347	120	0.167	156	0.054	192	0.053	228	0.119	264	0.280	300	0.483	336	0.626
13	0.646	49	0.538	85	0.341	121	0.163	157	0.053	193	0.053	229	0.123	265	0.285	301	0.489	337	0.629
14	0.645	50	0.534	86	0.335	122	0.159	158	0.052	194	0.052	230	0.127	266	0.291	302	0.494	338	0.631
15	0.644	51	0.529	87	0.330	123	0.155	159	0.052	195	0.052	231	0.130	267	0.296	303	0.499	339	0.633
16	0.642	52	0.524	88	0.324	124	0.150	160	0.051	196	0.052	232	0.134	268	0.302	304	0.504	340	0.635
17	0.641	53	0.519	89	0.318	125	0.146	161	0.051	197	0.051	233	0.138	269	0.307	305	0.509	341	0.637
18	0.639	54	0.514	90	0.313	126	0.142	162	0.051	198	0.051	234	0.142	270	0.313	306	0.514	342	0.639
19	0.637	55	0.509	91	0.307	127	0.138	163	0.051	199	0.051	235	0.146	271	0.318	307	0.519	343	0.641
20	0.635	56	0.504	92	0.302	128	0.134	164	0.052	200	0.051	236	0.150	272	0.324	308	0.524	344	0.642
21	0.633	57	0.499	93	0.296	129	0.130	165	0.052	201	0.052	237	0.155	273	0.330	309	0.529	345	0.644
22	0.631	58	0.494	94	0.291	130	0.127	166	0.052	202	0.052	238	0.159	274	0.335	310	0.534	346	0.645
23	0.629	59	0.489	95	0.285	131	0.123	167	0.053	203	0.053	239	0.163	275	0.341	311	0.538	347	0.646
24	0.626	60	0.483	96	0.280	132	0.119	168	0.053	204	0.054	240	0.167	276	0.347	312	0.543	348	0.648
25	0.624	61	0.478	97	0.275	133	0.115	169	0.053	205	0.055	241	0.171	277	0.352	313	0.547	349	0.649
26	0.622	62	0.473	98	0.270	134	0.111	170	0.054	206	0.056	242	0.176	278	0.358	314	0.552	350	0.650
27	0.619	63	0.467	99	0.264	135	0.108	171	0.054	207	0.057	243	0.180	279	0.364	315	0.556	351	0.651
28	0.616	64	0.462	100	0.259	136	0.104	172	0.055	208	0.059	244	0.184	280	0.370	316	0.560	352	0.652
29	0.614	65	0.456	101	0.254	137	0.101	173	0.055	209	0.061	245	0.189	281	0.376	317	0.565	353	0.652
30	0.611	66	0.450	102	0.249	138	0.097	174	0.056	210	0.063	246	0.193	282	0.381	318	0.569	354	0.653
31	0.608	67	0.445	103	0.244	139	0.094	175	0.056	211	0.065	247	0.197	283	0.387	319	0.573	355	0.653
32	0.605	68	0.439	104	0.239	140	0.090	176	0.056	212	0.067	248	0.202	284	0.393	320	0.577	356	0.654
33	0.601	69	0.433	105	0.235	141	0.087	177	0.056	213	0.070	249	0.206	285	0.399	321	0.580	357	0.654
34	0.598	70	0.428	106	0.230	142	0.084	178	0.057	214	0.072	250	0.211	286	0.405	322	0.584	358	0.654
35	0.595	71	0.422	107	0.225	143	0.081	179	0.057	215	0.075	251	0.216	287	0.410	323	0.588	359	0.655

**Figure 1A**  
**Antenna Azimuthal Pattern**  
**Vertical Polarization**  
**WCOV-TV Montgomery, AL**  
**Facility ID 73642**  
**Ch. 22 670 kW 528 m**

prepared for  
**Woods Communications Corporation**

April, 2019



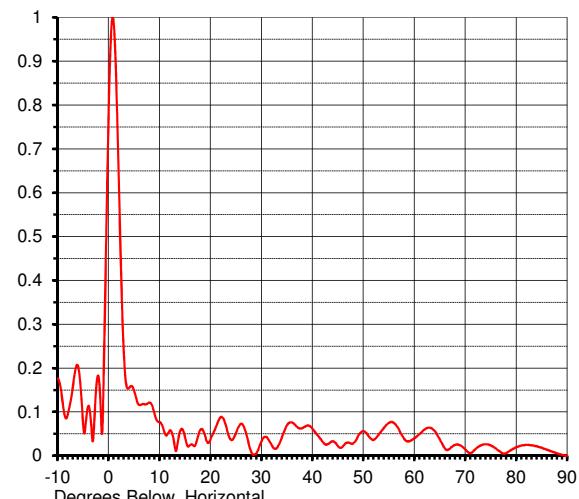
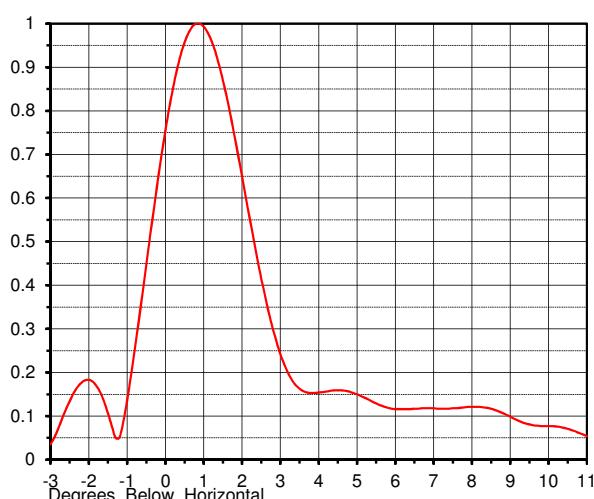
## ELEVATION PATTERN

Proposal No. **C-70600-5-5**  
 Date **27-Oct-17**  
 Call Letters **WCOV**  
 Channel **22**  
 Frequency **521 MHz**  
 Antenna Type **TFU-30DSC/VP-R S190**

RMS Directivity at Main Lobe  
 RMS Directivity at Horizontal

**25.5 ( 14.07 dB )**  
**16.6 ( 12.20 dB )**  
**Calculated**

Beam Tilt **0.75 deg**  
 Pattern Number **30Q255075**



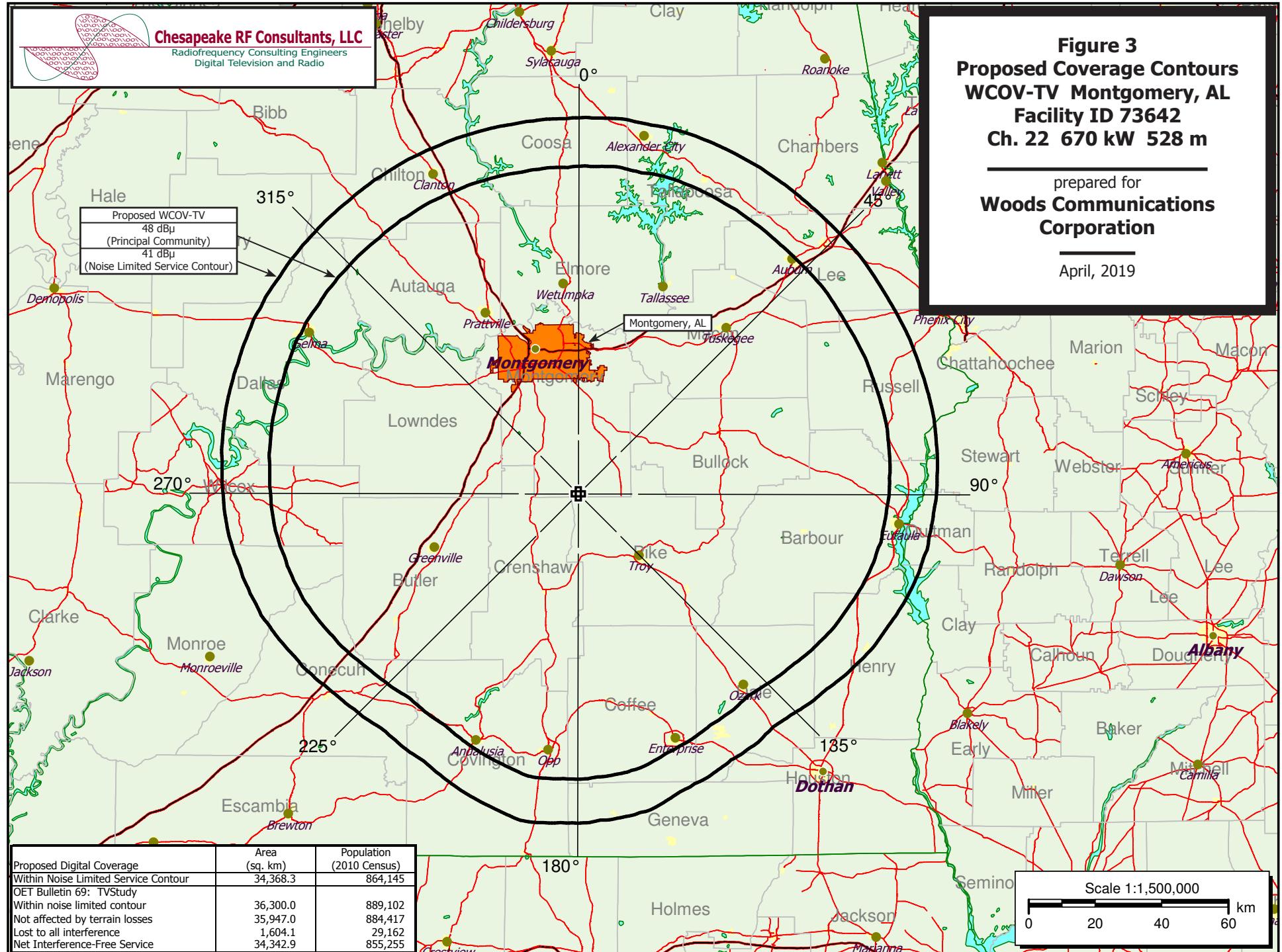
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.176	10.0	0.077	30.0	0.034	50.0	0.056	70.0	0.014
-9.0	0.116	11.0	0.051	31.0	0.042	51.0	0.044	71.0	0.006
-8.0	0.097	12.0	0.058	32.0	0.023	52.0	0.037	72.0	0.016
-7.0	0.163	13.0	0.017	33.0	0.018	53.0	0.049	73.0	0.024
-6.0	0.202	14.0	0.057	34.0	0.044	54.0	0.064	74.0	0.026
-5.0	0.065	15.0	0.040	35.0	0.071	55.0	0.075	75.0	0.023
-4.0	0.114	16.0	0.025	36.0	0.076	56.0	0.074	76.0	0.016
-3.0	0.051	17.0	0.025	37.0	0.065	57.0	0.058	77.0	0.007
-2.0	0.179	18.0	0.060	38.0	0.063	58.0	0.038	78.0	0.006
-1.0	0.193	19.0	0.040	39.0	0.069	59.0	0.033	79.0	0.014
0.0	<b>0.807</b>	20.0	0.039	40.0	0.061	60.0	0.040	80.0	0.020
1.0	0.980	21.0	0.066	41.0	0.046	61.0	0.050	81.0	0.023
2.0	0.601	22.0	0.088	42.0	0.031	62.0	0.060	82.0	0.025
3.0	0.219	23.0	0.067	43.0	0.027	63.0	0.064	83.0	0.024
4.0	0.155	24.0	0.036	44.0	0.033	64.0	0.055	84.0	0.021
5.0	0.146	25.0	0.054	45.0	0.021	65.0	0.036	85.0	0.018
6.0	0.116	26.0	0.073	46.0	0.023	66.0	0.016	86.0	0.014
7.0	0.117	27.0	0.047	47.0	0.030	67.0	0.017	87.0	0.009
8.0	0.121	28.0	0.007	48.0	0.029	68.0	0.025	88.0	0.005
9.0	0.094	29.0	0.006	49.0	0.047	69.0	0.023	89.0	0.002
								90.0	0.000

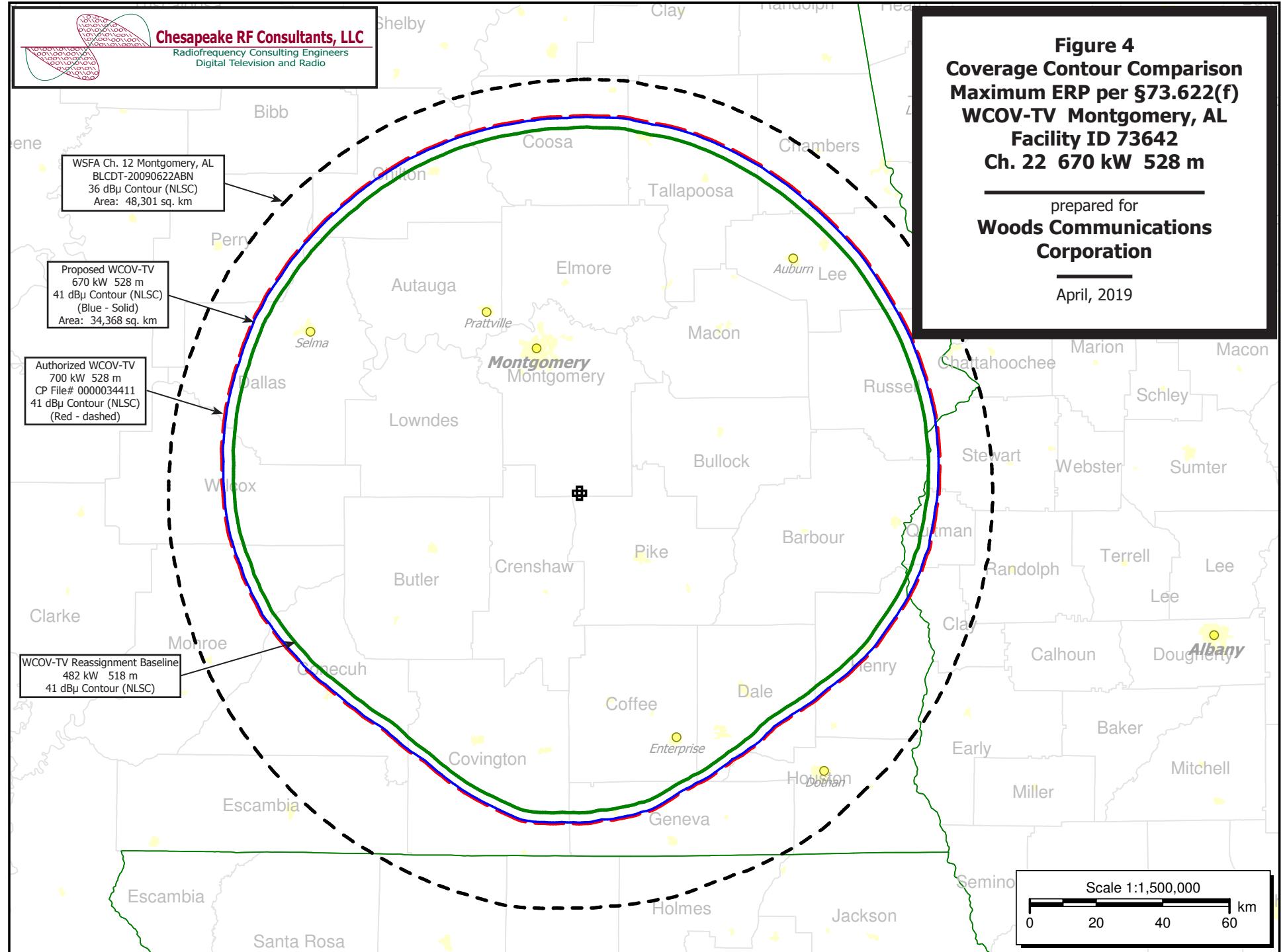
**Figure 2**  
**Antenna Elevation Pattern**  
**WCOV-TV Montgomery, AL**  
**Facility ID 73642**  
**Ch. 22 670 kW 528 m**

prepared for  
**Woods Communications Corporation**

April, 2019







**Table 1 WCOV-TV TVStudy Analysis of Proposal**  
(page 1 of 4)



tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: WCOV-TV 670kW-MOD, Model: Longley-Rice  
Start: 2019.04.29 11:55:06

Study created: 2019.04.29 11:55:06

Study build station data: LMS TV 2019-04-25

Proposal: WCOV-TV D22 DT APP MONTGOMERY, AL  
File number: WCOV-TV 670kW-MOD  
Facility ID: 73642  
Station data: User record  
Record ID: 2695  
Country: U.S.  
Zone: III

Search options:

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WDHN	D21	DT	LIC	DOOTHAN, AL	BLCDT20090303ACR	114.6 km
Yes	WTTO	D21	DT	CP	HOMWOOD, AL	BLANK0000029999	178.3
No	WPAN	D21	DT	CP	FORT WALTON BEACH, FL	BLANK0000029983	183.8
No	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	261.6
Yes	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	326.2
No	WDES-CD	D22	DC	LIC	DESTIN, FL	BLANK0000059931	178.4
No	WPFN-CD	D22	DC	LIC	PANAMA CITY, FL	BLANK0000062893	202.6
Yes	WTWC-TV	D22	DT	CP	TALLAHASSEE, FL	BLANK0000034393	252.8
Yes	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000034684	258.9
No	WJCL	D22	DT	LIC	SAVANNAH, GA	BLANK0000029019	454.7
Yes	WHLT	D22	DT	LIC	HATTIESBURG, MS	BLANK0000068599	297.6
No	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	472.8
No	WDPM-DT	D23	DT	LIC	MOBILE, AL	BLCDT20090420AAD	204.5
No	WOIL-CD	D23	DC	CP	TALLADEGA, AL	BLANK0000034660	159.8
No	WVUA-CD	D23	DC	LIC	TUSCALOOSA/NORTHPORT, AL	BLANK0000001646	182.8
No	WPGA-TV	D23	DT	CP	PERRY, GA	BLANK0000028377	259.3

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: 31 58 29.00 N (NAD83)  
Longitude: 86 9 44.00 W  
Height AMSL: 659.0 m  
HAAT: 527.6 m  
Peak ERP: 670 kW  
Antenna: DIE-TFU-30DSC/VP-R S190 (ID 1002301) 0.0 deg  
Elev Pattrn: Generic  
Elec Tilt: 0.75

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	670 kW	531.5 m	115.9 km
45.0	561	522.6	113.7
90.0	377	528.3	110.4
135.0	73.0	520.9	95.2
180.0	136	534.8	101.6
225.0	73.0	529.9	95.9
270.0	377	517.7	109.7
315.0	561	534.7	114.5

ERP exceeds maximum

ERP: 670 kW ERP maximum: 445 kW

Distance to Canadian border: 1121.7 km

Distance to Mexican border: 1239.8 km

**Table 1 WCOV-TV TVStudy Analysis of Proposal**  
(page 2 of 4)



Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 32.2 degrees Distance: 249.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 303.3 degrees Distance: 1931.8 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%

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Interference to BLCDT20090303ACR LIC scenario 1

Desired:	Call WDHN	Chan D21	Svc DT	Status LIC	City, State DOthan, AL	File Number BLCDT20090303ACR	Distance
Undesireds:	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	114.6 km
	WCOV-TV	D22	DT	APP	MONTGOMERY, AL	WCOV-TV 670kW-MOD	114.6
	WCTV	D20	DT	CP	THOMASVILLE, GA	BLANK0000033928	145.3
	WTTO	D21	DT	CP	HOMWOOD, AL	BLANK0000029999	286.2
	WPAN	D21	DT	CP	FORT WALTON BEACH, FL	BLANK0000029983	208.0
	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	294.5
	WTWC-TV	D22	DT	CP	TALLAHASSEE, FL	BLANK0000034393	142.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
22899.1	452,377	22746.1	451,978	22345.3	449,744	22293.4	448,671
Undesired							
WCOV-TV D22 DT BL	264.5	Total IX	1,226	Unique IX, before	228.2	1,217	Unique IX, after
WCOV-TV D22 DT APP	320.5		2,299			280.1	2,290
WCTV D20 DT CP	35.9		259		4.0	15	4.0
WTTO D21 DT CP	88.9		165		40.3	115	115
WPAN D21 DT CP	24.0		411		24.0	411	411
WPBA D21 DT LIC	16.2		41		0.0	0	0
WTWC-TV D22 DT CP	55.8		426		23.9	182	182

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Interference to BLANK0000029999 CP scenario 1

Desired:	Call WTTO	Chan D21	Svc DT	Status CP	City, State HOMWOOD, AL	File Number BLANK0000029999	Distance
Undesireds:	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	178.3 km
	WCOV-TV	D22	DT	APP	MONTGOMERY, AL	WCOV-TV 670kW-MOD	178.3
	WDHN	D21	DT	LIC	DOthan, AL	BLCDT20090303ACR	286.2
	WPAN	D21	DT	CP	FORT WALTON BEACH, FL	BLANK0000029983	313.9
	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	230.8
	WAPT	D21	DT	LIC	JACKSON, MS	BLCDT20081126ALZ	352.0
	WJKT	D21	DT	CP	JACKSON, TN	BLANK0000027712	331.1
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	308.9
	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	151.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
35741.7	1,864,577	34385.8	1,832,561	32924.7	1,793,716	32888.5	1,793,404
Undesired							
WCOV-TV D22 DT BL	249.0	Total IX	4,190	Unique IX, before	80.4	1,017	Unique IX, after
WCOV-TV D22 DT APP	281.2		4,733			116.5	1,329
WDHN D21 DT LIC	853.2		16,561		504.6	9,441	504.6
WPAN D21 DT CP	60.3		589		8.0	121	8.0
WPBA D21 DT LIC	263.9		8,237		80.0	2,425	80.0
WAPT D21 DT LIC	128.2		1,513		96.1	1,459	96.1
WJKT D21 DT CP	63.8		1,966		4.0	34	4.0
WUXP-TV D21 DT LIC	323.4		17,180		247.5	13,596	247.5
WFIQ D22 DT LIC	8.0		170		0.0	0	0.0

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**Table 1 WCOV-TV TVStudy Analysis of Proposal**  
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Interference to BLEDT20060718ACG LIC scenario 1

Desired:	Call WFIQ	Chan D22	Svc DT	Status LIC	City, State FLORENCE, AL	File Number BLEDT20060718ACG	Distance
Undesireds:	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	326.2 km
	WCOV-TV	D22	DT	APP	MONTGOMERY, AL	WCOV-TV 670kW-MOD	326.2
	WTTO	D21	DT	CP	HOMWOOD, AL	BLANK0000029999	151.2
	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000034684	328.2
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	283.5
Service area		Terrain-limited			IX-free, before	IX-free, after	Percent New IX
20448.9	546,563	20252.8	544,258	20084.5	540,912	20064.5	539,502
Undesired		Total IX			Unique IX, before	Unique IX, after	
WCOV-TV D22 DT BL	88.2	1,910	44.1	1,037			
WCOV-TV D22 DT APP	124.3	3,795			64.1	2,447	
WTTO D21 DT CP	96.2	2,118	60.1	1,333	44.1	858	
WHSG-TV D22 DT CP	32.0	267	4.0	12	4.0	12	
WCTE D22 DT LIC	12.0	91	8.0	32	8.0	32	

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Interference to BLANK0000034393 CP scenario 1

Desired:	Call WTWC-TV	Chan D22	Svc DT	Status CP	City, State TALLAHASSEE, FL	File Number BLANK0000034393	Distance
Undesireds:	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	252.8 km
	WCOV-TV	D22	DT	APP	MONTGOMERY, AL	WCOV-TV 670kW-MOD	252.8
	WDHN	D21	DT	LIC	DOTHAN, AL	BLCDT20090303ACR	142.0
	WPFN-CD	D22	DC	LIC	PANAMA CITY, FL	BLANK0000062893	181.9
	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000034684	342.5
	WJCL	D22	DT	LIC	SAVANNAH, GA	BLANK0000029019	293.1
Service area		Terrain-limited			IX-free, before	IX-free, after	Percent New IX
43834.8	1,061,101	43830.7	1,061,079	43416.7	1,056,933	43408.7	1,056,929
Undesired		Total IX			Unique IX, before	Unique IX, after	
WCOV-TV D22 DT BL	23.9	94	7.9	26			
WCOV-TV D22 DT APP	35.8	101			15.9	30	
WDHN D21 DT LIC	346.3	3,572	342.3	3,526	338.4	3,523	
WPFN-CD D22 DC LIC	32.1	446	28.0	400	28.0	400	
WHSG-TV D22 DT CP	8.0	2	0.0	0	0.0	0	
WJCL D22 DT LIC	27.7	148	19.8	126	19.8	126	

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Interference to BLANK0000034684 CP scenario 1

Desired:	Call WHSG-TV	Chan D22	Svc DT	Status CP	City, State MONROE, GA	File Number BLANK0000034684	Distance
Undesireds:	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	258.9 km
	WCOV-TV	D22	DT	APP	MONTGOMERY, AL	WCOV-TV 670kW-MOD	258.9
	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	2.8
	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	328.2
	WTWC-TV	D22	DT	CP	TALLAHASSEE, FL	BLANK0000034393	342.5
	WJCL	D22	DT	LIC	SAVANNAH, GA	BLANK0000029019	338.6
	WACH	D22	DT	CP	COLUMBIA, SC	BLANK0000034385	334.2
	WCTE	D22	DT	LIC	COOKEVILLE, TN	BLEDT20110413ACS	284.5
	WKTB-CD	D23	DC	CP	NORCROSS, GA	BLANK0000034685	24.1
	WPGA-TV	D23	DT	CP	PERRY, GA	BLANK0000028377	133.3
	WFLI-TV	D23	DT	CP	CLEVELAND, TN	BLANK0000034902	180.2
Service area		Terrain-limited			IX-free, before	IX-free, after	Percent New IX
29740.6	5,870,314	28610.1	5,808,605	27906.3	5,769,162	27818.4	5,766,151
Undesired		Total IX			Unique IX, before	Unique IX, after	
WCOV-TV D22 DT BL	348.3	19,651	240.2	11,305			
WCOV-TV D22 DT APP	468.2	23,531			328.1	14,316	
WPBA D21 DT LIC	8.0	566	4.0	305	4.0	305	
WFIQ D22 DT LIC	88.0	2,621	28.0	934	16.0	438	
WTWC-TV D22 DT CP	80.0	4,179	20.0	517	16.0	363	
WJCL D22 DT LIC	76.0	4,015	28.0	229	28.0	229	

**Table 1 WCOV-TV TVStudy Analysis of Proposal**  
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WACH D22 DT CP	96.0	6,913	56.0	3,178	56.0	3,178
WCTE D22 DT LIC	187.5	14,135	131.6	9,651	123.6	9,506
WKTB-CD D23 DC CP	8.0	456	4.0	195	4.0	195
WPGA-TV D23 DT CP	4.0	5	0.0	0	0.0	0
WFLI-TV D23 DT CP	23.9	611	8.0	256	8.0	256

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Interference to BLANK0000068599 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHLT	D22	DT	LIC	HATTIESBURG, MS	BLANK0000068599	
Undesireds:	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	297.6 km
	WCOV-TV	D22	DT	APP	MONTGOMERY, AL	WCOV-TV 670kW-MOD	297.6
	WAPT	D21	DT	LIC	JACKSON, MS	BLCDT20081126ALZ	139.2
	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	377.8
	WTNO-LP	D22	DC	LIC	NEW ORLEANS, LA	BLANK0000001586	181.1
	WDPM-DT	D23	DT	LIC	MOBILE, AL	BLCDT20090420AAD	178.6
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
26536.0	484,432	26318.8	483,532	25929.1	477,288	25909.2	477,035
Undesired		Total IX		Unique IX, before		Unique IX, after	
WCOV-TV D22 DT BL	127.8	1,306		123.8	1,302		
WCOV-TV D22 DT APP	147.7	1,559				143.7	1,555
WAPT D21 DT LIC	217.9	3,187		217.9	3,187	217.9	3,187
WFIQ D22 DT LIC	4.0	4		0.0	0	0.0	0
WTNO-LP D22 DC LIC	36.0	1,650		36.0	1,650	36.0	1,650
WDPM-DT D23 DT LIC	8.0	101		8.0	101	8.0	101

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Interference to proposal scenario 1  
3.30% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCOV-TV	D22	DT	APP	MONTGOMERY, AL	WCOV-TV 670kW-MOD	
Undesireds:	WDHN	D21	DT	LIC	DOOTHAN, AL	BLCDT20090303ACR	114.6 km
	WTTO	D21	DT	CP	HOMewood, AL	BLANK0000029999	178.3
	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	326.2
	WPFN-CD	D22	DC	LIC	PANAMA CITY, FL	BLANK0000062893	202.6
	WTWC-TV	D22	DT	CP	TALLAHASSEE, FL	BLANK0000034393	252.8
	WHSG-TV	D22	DT	CP	MONROE, GA	BLANK0000034684	258.9
	WHLT	D22	DT	LIC	HATTIESBURG, MS	BLANK0000068599	297.6
Service area		Terrain-limited		IX-free		Percent IX	
36300.0	889,102	35947.0	884,417	34342.9	855,255	4.46	3.30
Undesired		Total IX		Unique IX		Prcnt Unique IX	
WDHN D21 DT LIC	440.2	12,586		198.3	4,451	0.55	0.50
WTTO D21 DT CP	28.0	561		20.0	257	0.06	0.03
WFIQ D22 DT LIC	64.3	716		16.1	4	0.04	0.00
WPFN-CD D22 DC LIC	4.0	0		0.0	0	0.00	0.00
WTWC-TV D22 DT CP	731.3	17,951		360.5	6,416	1.00	0.73
WHSG-TV D22 DT CP	353.8	6,900		220.8	3,138	0.61	0.35
WHLT D22 DT LIC	413.6	2,999		369.4	2,649	1.03	0.30

Section	Question	Response
Proposed Community of License	Facility ID	73642
	State	Alabama
	City	MONTGOMERY
	DTV Channel	22
	Designated Market Area	Montgomery-Selma
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	3

Section	Question	Response
Antenna Location Data	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1036432
Coordinates (NAD83)	Latitude	31° 58' 29.0" N+
	Longitude	086° 09' 44.0" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	589.8 meters
	Support Structure Height	564.8 meters
Antenna Data	Ground Elevation (AMSL)	162.2 meters
	Height of Radiation Center Above Ground Level	496.8 meters
	Height of Radiation Center Above Average Terrain	527.6 meters
	Height of Radiation Center Above Mean Sea Level	659.0 meters
	Effective Radiated Power	670 kW

Antenna Technical Data	Section	Question	Response
	Antenna Type	Antenna Type	Directional Custom
		Do you have an Antenna ID?	Yes
		Antenna ID	1002301
	Antenna Manufacturer and Model	Manufacturer:	DIE
		Model	TFU-30DSC/VP-R S190
		Rotation	0 degrees
		Electrical Beam Tilt	0.75
		Mechanical Beam Tilt	Not Applicable
		toward azimuth	
		Polarization	Elliptical
	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	

#### Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	V <sub>A</sub> (Authorized Value)						
0	1.000	90	0.750	180	0.450	270	0.750
10	1.000	100	0.680	190	0.430	280	0.810
20	0.980	110	0.580	200	0.370	290	0.840
30	0.960	120	0.460	210	0.310	300	0.870
40	0.930	130	0.360	220	0.300	310	0.900
50	0.900	140	0.300	230	0.360	320	0.930
60	0.870	150	0.310	240	0.460	330	0.960
70	0.840	160	0.370	250	0.580	340	0.980
80	0.810	170	0.430	260	0.680	350	1.000

#### Additional Azimuths

Degree	V <sub>A</sub>

<b>Construction Permit Certifications</b>	<b>Section</b>	<b>Question</b>	<b>Response</b>
	<b>Post-Incentive Auction Expedited Processing</b>	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
	<b>Environmental Effect</b>	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
	<b>Broadcast Facility</b>	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