



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR  
POST REPACK CONSTRUCTION PERMIT  
WABM - BIRMINGHAM, ALABAMA  
DTV - CH. 20 - 621 kW - 401 m HAAT**

Prepared for: BIRMINGHAM (WABM-TV) LICENSEE, INC.

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, License No. 7418, and in the State of New York, License No. 63418.

**GENERAL**

This office has been authorized by BIRMINGHAM (WABM-TV) LICENSEE, INC., licensee of WABM, channel 36, facility ID number 16820, licensed to Birmingham, Alabama, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for construction permit, in accordance with the Incentive Auction Closing and Channel Reassignment Public Notice, DA 17-314, and the technical information provided in the confidential reassignment letter from the FCC announcing the substitution for DTV channel 36 with new DTV channel 20 to be used by WABM for its post-reassignment broadcasting.

## **DIRECTIONAL ANTENNA**

The applicant proposes to install a new Dielectric TFU-26DSC/VP-R C170 elliptically polarized directional transmitting antenna with its center of radiation located at a height above ground of 306.5 meters, and a height above average terrain of 401 meters. The antenna manufacturer's directional 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.

## **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 Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 1 shows the predicted Noise Limited (39.36 dBu) contour, and the principal community (48 dBu) contour. The 48 dBu contour completely encompasses the principal community of license, Birmingham, Alabama.

## **ALLOCATION CONSIDERATIONS**

### ***Post-Transition DTV Considerations***

A study was performed, using the FCC's software, tv\_study, v. 2.2.2, 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. The study also shows that WABM's proposed service area is within the baseline plus 1%. (See Appendix B)

### ***International DTV Considerations***

The WABM site is located more than 900 kilometers from the nearest points on both the US-Canadian border and US-Mexican border. Therefore no international coordination is required.

## **BLANKETING AND INTERMODULATION INTERFERENCE**

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed WABM 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, primarily UHF TV stations, is determined for an "uncontrolled" environment by dividing the operating frequency in MHz by 1.5, and is similarly determined for a "controlled" environment by dividing the operating

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**WABM - Birmingham, Alabama**  
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frequency in MHZ by 0.3.

The predicted emissions of WABM must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WABM, which will operate on television Channel 20 (506-512 MHZ), the MPE is 339.33 microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ) in an "uncontrolled" environment and 1,696.7  $\mu\text{W}/\text{cm}^2$  in a "controlled" environment. The proposed WABM facility will operate with a maximum ERP of 621 kW from an elliptically polarized directional transmitting antenna with a centerline height of 306.5 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WABM facility is predicted to produce a power density at two meters above ground level of 28.765  $\mu\text{W}/\text{cm}^2$ , which is 8.477% of the FCC guideline value for an "uncontrolled" environment, and 1.695% of the FCC's guideline value for "controlled" environments. There are three other full-power DTV facilities, four full-power FM stations, five LPTV DTV facilities and eleven LPFM translators that are located at the WABM site. The total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations located within the relevant proximity, is 44.58% of the limit applicable to "uncontrolled" environments, and 8.916% of the limit for "controlled" environments. (See Appendix A)

**OCCUPATIONAL SAFETY**

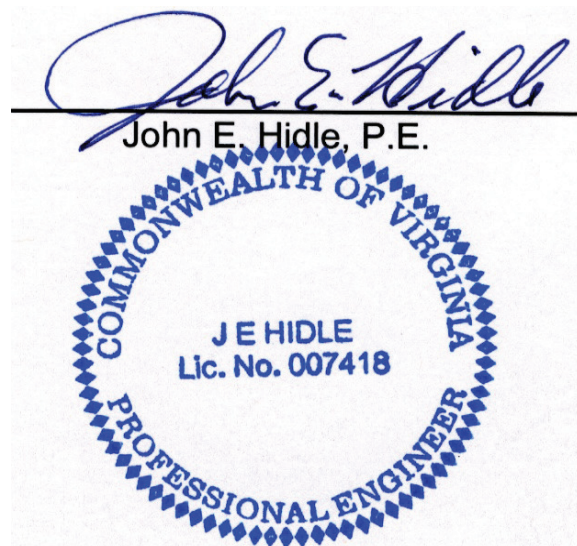
The licensee of WABM is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WABM antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

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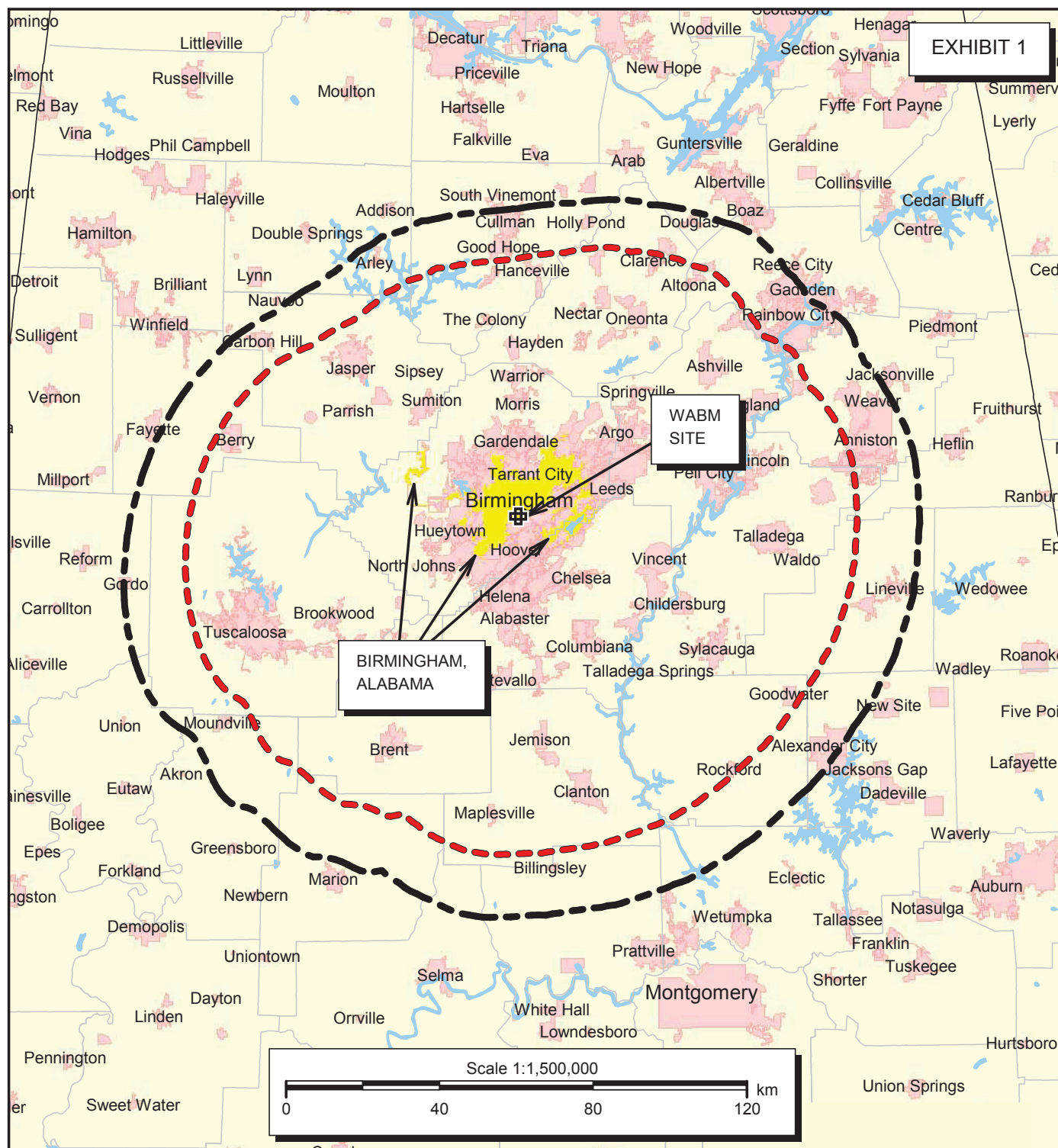
**SUMMARY**

It is submitted that the instant application for construction permit to change WABM from channel 36 to channel 20, 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: June 13, 2017







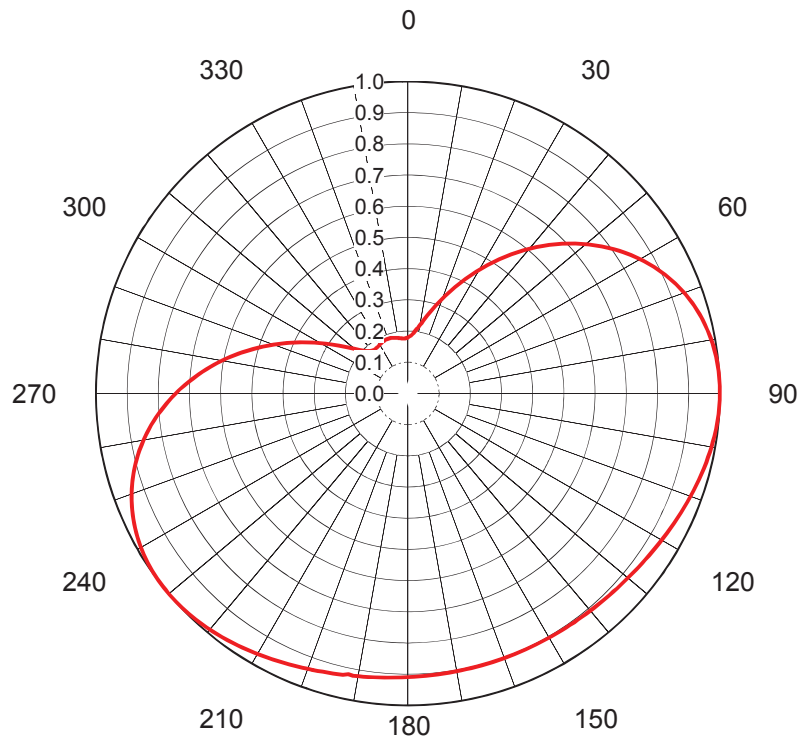
## PREDICTED COVERAGE CONTOURS

**WABM - BIRMINGHAM, ALABAMA**  
**DTV Channel 20 - 621 kW ERP - 401 M HAAT**  
**JUNE, 2017**

Predicted Noise Limited 39.36 dBu  
 F(50,90) Coverage Contour



Predicted Principal Community 48 dBu  
 F(50,90) Coverage Contour



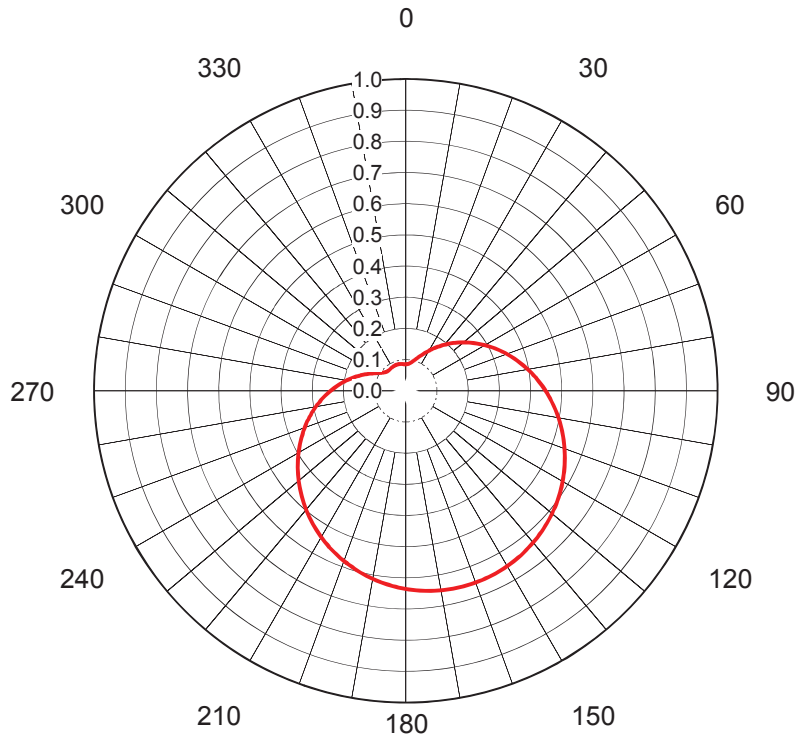
## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70026**  
 Date **11-Feb-17**  
 Call Letters **WABM 20**  
 Frequency **509 MHz**  
 Antenna Type **TFU-26DSC/VP-R C170**  
  
 Gain **1.69 (2.28dB)**  
**Calculated**  
  
 Directional  
 Drawing # **C170 CH 20 7 IN POLE**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.179	36	0.546	72	0.954	108	0.969	144	0.907	180	0.909	216	0.979	252	0.929	288	0.487
1	0.181	37	0.561	73	0.960	109	0.967	145	0.906	181	0.910	217	0.982	253	0.922	289	0.473
2	0.183	38	0.576	74	0.965	110	0.964	146	0.906	182	0.911	218	0.984	254	0.914	290	0.458
3	0.186	39	0.590	75	0.970	111	0.962	147	0.905	183	0.912	219	0.986	255	0.906	291	0.444
4	0.189	40	0.605	76	0.974	112	0.959	148	0.905	184	0.913	220	0.988	256	0.897	292	0.429
5	0.193	41	0.620	77	0.978	113	0.956	149	0.905	185	0.914	221	0.990	257	0.889	293	0.415
6	0.198	42	0.634	78	0.982	114	0.954	150	0.904	186	0.915	222	0.992	258	0.879	294	0.401
7	0.203	43	0.648	79	0.985	115	0.951	151	0.904	187	0.916	223	0.993	259	0.870	295	0.387
8	0.209	44	0.663	80	0.988	116	0.949	152	0.904	188	0.918	224	0.995	260	0.860	296	0.374
9	0.215	45	0.677	81	0.990	117	0.946	153	0.904	189	0.919	225	0.996	261	0.850	297	0.361
10	0.222	46	0.691	82	0.993	118	0.944	154	0.903	190	0.921	226	0.997	262	0.839	298	0.348
11	0.230	47	0.704	83	0.995	119	0.942	155	0.903	191	0.922	227	0.998	263	0.829	299	0.335
12	0.238	48	0.718	84	0.996	120	0.939	156	0.903	192	0.920	228	0.999	264	0.817	300	0.322
13	0.247	49	0.731	85	0.998	121	0.937	157	0.903	193	0.925	229	1.000	265	0.806	301	0.310
14	0.256	50	0.744	86	0.999	122	0.935	158	0.903	194	0.927	230	1.000	266	0.794	302	0.299
15	0.266	51	0.757	87	0.999	123	0.933	159	0.903	195	0.929	231	1.000	267	0.782	303	0.287
16	0.277	52	0.770	88	1.000	124	0.931	160	0.903	196	0.931	232	1.000	268	0.770	304	0.277
17	0.287	53	0.782	89	1.000	125	0.929	161	0.903	197	0.933	233	0.999	269	0.757	305	0.266
18	0.299	54	0.794	90	1.000	126	0.927	162	0.903	198	0.935	234	0.999	270	0.744	306	0.256
19	0.310	55	0.806	91	1.000	127	0.925	163	0.903	199	0.937	235	0.998	271	0.731	307	0.247
20	0.322	56	0.817	92	0.999	128	0.924	164	0.903	200	0.939	236	0.996	272	0.718	308	0.238
21	0.335	57	0.829	93	0.998	129	0.922	165	0.903	201	0.942	237	0.995	273	0.704	309	0.230
22	0.348	58	0.839	94	0.997	130	0.921	166	0.903	202	0.944	238	0.993	274	0.691	310	0.222
23	0.361	59	0.850	95	0.996	131	0.919	167	0.904	203	0.947	239	0.990	275	0.677	311	0.215
24	0.374	60	0.860	96	0.995	132	0.918	168	0.904	204	0.949	240	0.988	276	0.663	312	0.209
25	0.387	61	0.870	97	0.993	133	0.916	169	0.904	205	0.951	241	0.985	277	0.648	313	0.203
26	0.401	62	0.879	98	0.992	134	0.915	170	0.904	206	0.954	242	0.982	278	0.634	314	0.198
27	0.415	63	0.889	99	0.990	135	0.914	171	0.905	207	0.957	243	0.978	279	0.620	315	0.193
28	0.429	64	0.897	100	0.988	136	0.913	172	0.905	208	0.959	244	0.974	280	0.605	316	0.189
29	0.444	65	0.906	101	0.986	137	0.912	173	0.905	209	0.962	245	0.970	281	0.590	317	0.186
30	0.458	66	0.914	102	0.984	138	0.911	174	0.906	210	0.964	246	0.965	282	0.576	318	0.183
31	0.473	67	0.922	103	0.982	139	0.910	175	0.906	211	0.967	247	0.960	283	0.561	319	0.181
32	0.487	68	0.929	104	0.979	140	0.909	176	0.907	212	0.969	248	0.954	284	0.546	320	0.179
33	0.502	69	0.936	105	0.977	141	0.909	177	0.907	213	0.972	249	0.949	285	0.531	321	0.178
34	0.517	70	0.942	106	0.974	142	0.908	178	0.908	214	0.974	250	0.942	286	0.517	322	0.177
35	0.531	71	0.949	107	0.972	143	0.907	179	0.909	215	0.977	251	0.936	287	0.502	323	0.177

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## AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70026**  
Date **11-Feb-17**  
Call Letters **WABM 20**  
Frequency **509 MHz**  
Antenna Type **TFU-26DSC/VP-R C170**

Gain **2.56 (4.08dB)**  
**Calculated**

Directional  
Drawing # **C170 CH 20 7 IN POLE**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.085	36	0.174	72	0.355	108	0.533	144	0.643	180	0.636	216	0.516	252	0.334	288	0.157
1	0.085	37	0.179	73	0.361	109	0.538	145	0.644	181	0.634	217	0.511	253	0.329	289	0.152
2	0.085	38	0.183	74	0.366	110	0.542	146	0.645	182	0.632	218	0.507	254	0.324	290	0.148
3	0.086	39	0.188	75	0.371	111	0.546	147	0.647	183	0.630	219	0.502	255	0.319	291	0.144
4	0.086	40	0.193	76	0.376	112	0.550	148	0.648	184	0.627	220	0.497	256	0.313	292	0.140
5	0.087	41	0.197	77	0.381	113	0.554	149	0.649	185	0.625	221	0.493	257	0.308	293	0.137
6	0.087	42	0.202	78	0.387	114	0.558	150	0.650	186	0.623	222	0.488	258	0.303	294	0.133
7	0.088	43	0.207	79	0.392	115	0.562	151	0.651	187	0.620	223	0.483	259	0.298	295	0.129
8	0.089	44	0.212	80	0.397	116	0.566	152	0.652	188	0.618	224	0.478	260	0.293	296	0.126
9	0.090	45	0.217	81	0.402	117	0.570	153	0.652	189	0.615	225	0.473	261	0.287	297	0.122
10	0.091	46	0.221	82	0.407	118	0.574	154	0.653	190	0.612	226	0.468	262	0.282	298	0.119
11	0.093	47	0.226	83	0.413	119	0.577	155	0.653	191	0.610	227	0.463	263	0.277	299	0.116
12	0.094	48	0.231	84	0.418	120	0.581	156	0.654	192	0.607	228	0.458	264	0.272	300	0.113
13	0.096	49	0.236	85	0.423	121	0.584	157	0.654	193	0.604	229	0.453	265	0.267	301	0.110
14	0.098	50	0.241	86	0.428	122	0.588	158	0.654	194	0.601	230	0.448	266	0.262	302	0.107
15	0.100	51	0.246	87	0.433	123	0.591	159	0.655	195	0.598	231	0.443	267	0.257	303	0.105
16	0.102	52	0.252	88	0.438	124	0.594	160	0.655	196	0.594	232	0.438	268	0.252	304	0.102
17	0.105	53	0.257	89	0.443	125	0.598	161	0.655	197	0.591	233	0.433	269	0.246	305	0.100
18	0.107	54	0.262	90	0.448	126	0.601	162	0.654	198	0.588	234	0.428	270	0.241	306	0.098
19	0.110	55	0.267	91	0.453	127	0.604	163	0.654	199	0.584	235	0.423	271	0.236	307	0.096
20	0.113	56	0.272	92	0.458	128	0.607	164	0.654	200	0.581	236	0.418	272	0.231	308	0.094
21	0.116	57	0.277	93	0.463	129	0.610	165	0.653	201	0.577	237	0.413	273	0.226	309	0.093
22	0.119	58	0.282	94	0.468	130	0.612	166	0.653	202	0.574	238	0.407	274	0.221	310	0.091
23	0.122	59	0.287	95	0.473	131	0.615	167	0.652	203	0.570	239	0.402	275	0.217	311	0.090
24	0.126	60	0.293	96	0.478	132	0.618	168	0.652	204	0.566	240	0.397	276	0.212	312	0.089
25	0.129	61	0.298	97	0.483	133	0.620	169	0.651	205	0.562	241	0.392	277	0.207	313	0.088
26	0.133	62	0.303	98	0.488	134	0.623	170	0.650	206	0.558	242	0.387	278	0.202	314	0.087
27	0.137	63	0.308	99	0.493	135	0.625	171	0.649	207	0.554	243	0.381	279	0.197	315	0.087
28	0.140	64	0.313	100	0.497	136	0.627	172	0.648	208	0.550	244	0.376	280	0.193	316	0.086
29	0.144	65	0.319	101	0.502	137	0.630	173	0.647	209	0.546	245	0.371	281	0.188	317	0.086
30	0.148	66	0.324	102	0.507	138	0.632	174	0.645	210	0.542	246	0.366	282	0.183	318	0.085
31	0.152	67	0.329	103	0.511	139	0.634	175	0.644	211	0.538	247	0.361	283	0.179	319	0.085
32	0.157	68	0.334	104	0.516	140	0.636	176	0.643	212	0.533	248	0.355	284	0.174	320	0.085
33	0.161	69	0.340	105	0.520	141	0.638	177	0.641	213	0.529	249	0.350	285	0.170	321	0.085
34	0.165	70	0.345	106	0.525	142	0.639	178	0.639	214	0.525	250	0.345	286	0.165	322	0.085
35	0.170	71	0.350	107	0.529	143	0.641	179	0.638	215	0.520	251	0.340	287	0.161	323	0.085

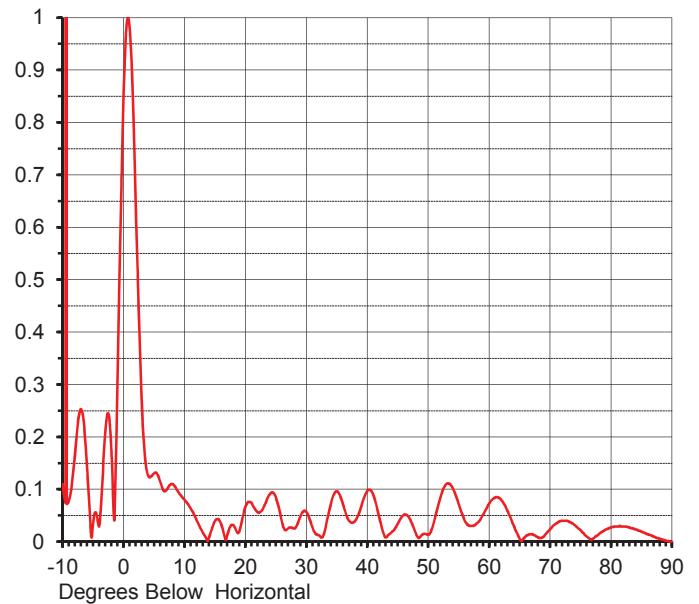
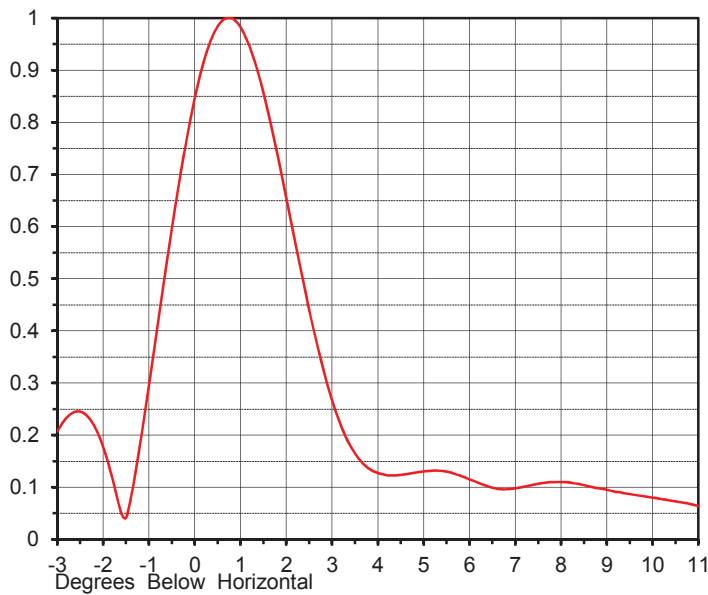
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## ELEVATION PATTERN

Proposal No. **C-70026**  
 Date **11-Feb-17**  
 Call Letters **WABM 20**  
 Frequency **509 MHz**  
 Antenna Type **TFU-26DSC/VP-R C170**

RMS Directivity at Main Lobe **22.50 ( 13.52 dB )**  
 RMS Directivity at Horizontal **16.10 ( 12.07 dB )**  
**Calculated**

Beam Tilt **0.75 deg**  
 Drawing Number **26Q225075**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.110	10.0	0.080	30.0	0.057	50.0	0.013	70.0	0.024
-9.0	0.077	11.0	0.064	31.0	0.028	51.0	0.040	71.0	0.035
-8.0	0.163	12.0	0.041	32.0	0.012	52.0	0.084	72.0	0.040
-7.0	0.253	13.0	0.018	33.0	0.019	53.0	0.110	73.0	0.039
-6.0	0.146	14.0	0.007	34.0	0.071	54.0	0.103	74.0	0.032
-5.0	0.034	15.0	0.039	35.0	0.096	55.0	0.072	75.0	0.022
-4.0	0.029	16.0	0.034	36.0	0.072	56.0	0.040	76.0	0.010
-3.0	0.207	17.0	0.011	37.0	0.040	57.0	0.030	77.0	0.005
-2.0	0.178	18.0	0.032	38.0	0.039	58.0	0.035	78.0	0.014
-1.0	0.295	19.0	0.019	39.0	0.067	59.0	0.051	79.0	0.022
0.0	0.846	20.0	0.066	40.0	0.097	60.0	0.072	80.0	0.027
1.0	0.983	21.0	0.074	41.0	0.089	61.0	0.084	81.0	0.029
2.0	0.656	22.0	0.056	42.0	0.045	62.0	0.080	82.0	0.029
3.0	0.267	23.0	0.066	43.0	0.008	63.0	0.059	83.0	0.027
4.0	0.127	24.0	0.090	44.0	0.018	64.0	0.032	84.0	0.024
5.0	0.130	25.0	0.085	45.0	0.034	65.0	0.006	85.0	0.019
6.0	0.115	26.0	0.038	46.0	0.051	66.0	0.010	86.0	0.014
7.0	0.098	27.0	0.025	47.0	0.043	67.0	0.014	87.0	0.010
8.0	0.110	28.0	0.025	48.0	0.015	68.0	0.008	88.0	0.005
9.0	0.095	29.0	0.047	49.0	0.013	69.0	0.010	89.0	0.002
								90.0	0.000

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# SUMMARY OF RADIOFREQUENCY RADIATION STUDY

WABM, Birmingham, AL

Channel 20, 621 kW, 406 m HAAT

June, 2017

CALL	SERVICE	CHANNEL	FREQUENCY	POLAR- IZATION	ANTENNA HEIGHT	ERP (kW)	VERT. RELATIVE FIELD FACTOR	WORST-CASE PREDICTED POWER DENSITY ( $\mu$ W/cm <sup>2</sup> )	FCC UNCONTROLLED LIMIT ( $\mu$ W/cm <sup>2</sup> )	PERCENT OF UNCONTROLLED LIMIT
WABM**	DT	20	509	H	306.5	621.000	0.300	20.139	339.33	5.93%
WABM**	DT	20	509	V	306.5	266.000	0.300	8.626	339.33	2.54%
WTO***	DT	21	515	H	327.7	654.000	0.300	18.538	343.33	5.40%
WTO***	DT	21	515	V	327.7	218.000	0.300	6.179	343.33	1.80%
WIAT	DT	30	569	H	326.4	1000.000	0.300	28.573	379.33	7.53%
WVUA	DT	6	85	H & V	307	26.000	0.300	1.681	200.00	0.84%
WUOA-LD (CP)	DT	17	491	H	115.8	15.000	0.300	3.483	327.33	1.06%
W21DM-D (APP)	DT	21	515	H	115.8	10.000	0.300	2.322	343.33	0.68%
WBXA-CD	DT	24	533	H	100	10.000	0.300	3.131	355.33	0.88%
WBUN-CD	DT	27	551	H	176	15.000	0.300	1.490	367.33	0.41%
W47EI-D	DT	16	485	H	93	7.830	0.300	2.843	323.33	0.88%
WZZK-FM	FM	284	104.7	H & V	308	97.800	<note 1>	0.644	200.00	0.32%
WBPT	FM	295	106.9	H & V	308	97.000	<note 2>	15.420	200.00	7.71%
WUHT	FM	299	107.7	H & V	308.3	42.000	<note 2>	6.685	200.00	3.34%
WERC	FM	288	105.5	H & V	94	29.500	<note 3>	7.260	200.00	3.63%
WBFR (CP)	FM	208	89.5	H & V	87	0.210	1.000	1.942	200.00	0.97%
W210CA	FM	210	89.9	H & V	258	0.180	1.000	0.184	200.00	0.09%
W241AI	FM	241	96.1	H & V	250	0.099	1.000	0.108	200.00	0.05%
W252BE (APP)	FM	252	98.3	H & V	136	0.100	1.000	0.372	200.00	0.19%
W256CD (CP)	FM	256	99.1	H & V	258	0.130	1.000	0.133	200.00	0.07%
W261BX	FM	261	100.1	H & V	258	0.035	1.000	0.036	200.00	0.02%
W271BNAI	FM	271	102.1	H	258	0.085	1.000	0.043	200.00	0.02%
W276BQ (CP)	FM	276	103.1	H & V	344	0.250	1.000	0.143	200.00	0.07%
W281AB	FM	281	104.1	H	250	0.250	1.000	0.136	200.00	0.07%
W286BK	FM	286	105.1	H	190	0.099	1.000	0.094	200.00	0.05%
W297BF	FM	297	107.3	H	258	0.099	1.000	0.050	200.00	0.03%

TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =

44.58%

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

\*\* WABM is proposing elliptical polarization, the table above includes both the proposed horizontal and vertical power levels

\*\*\* WTO is proposing elliptical polarization, the table above includes both the proposed horizontal and vertical power levels

note 1: FM Model Antenna: EPA Type 1; 8-bay, 0.5 wavelength spaced antenna

note 2: FM Model Antenna: EPA Type 1; 8-bay, 0.94 wavelength spaced antenna

note 3: Per the WERC-FM Application for Construction Permit, FCC File No. BPH-20030113ACN, the maximum ground level power density is 7.26  $\mu$ W/cm<sup>2</sup>.



## WABM - BIRMINGHAM, ALABAMA Longley-Rice Interference Analysis

tvstudy v2.2.2

Database: localhost, Study: WABM\_20\_401H\_DIE\_621K, Model: Longley-Rice  
Start: 2017.06.05 09:31:29

Study created: 2017.06.05 09:31:23

Study build station data: LMS TV 2017-06-02 (13)

Proposal: WABM D20 DT APP BIRMINGHAM, AL  
File number: WABM\_20\_401H\_DIE\_621K  
Facility ID: 16820  
Station data: User record  
Record ID: 527  
Country: U.S.  
Zone: II

Non-U.S. records included

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	159.6 km
WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	141.7
WIYC	D19	DT	BL	TROY, AL	DTVBL62207	177.4
WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDT20060113ACO	231.1
WKRQ-TV	D20	DT	BL	MOBILE, AL	DTVBL73187	325.3
KTEJ	D20	DT	LIC	JONESBORO, AR	BLEDT20110818AAQ	451.0
WANN-CD	D20	DC	BL	ATLANTA, GA	DTVBL168812	231.1
WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	215.4
WCTV	D20	DT	BL	THOMASVILLE, GA	DTVBL31590	413.1
WBII-CD	D20	DC	LIC	HOLLY SPRINGS, MS	BLDTA20090513AFM	264.5
WMPN-TV	D20	DT	LIC	JACKSON, MS	BLEDT20080807AAP	365.5
WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	429.3
WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	308.9
WTTO	D21	DT	BL	HOMEWOOD, AL	DTVBL74138	0.0
WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	230.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D20  
Latitude: 33 29 4.80 N (NAD83)  
Longitude: 86 48 25.20 W  
Height AMSL: 595.2 m  
HAAT: 401.0 m  
Peak ERP: 621 kW  
Antenna: DIE-TFU-26DSC/VP-R C170 0.0 deg

39.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	19.9 kW	415.8 m	80.0 km

**Appendix B - Interference Analysis**  
**WABM - Birmingham, Alabama**  
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45.0	283	361.0	95.2
90.0	621	390.6	104.3
135.0	520	394.9	103.0
180.0	513	410.3	104.2
225.0	614	405.6	105.5
270.0	344	415.1	100.8
315.0	25.0	411.9	81.3

Proposal service area is within baseline plus 1.0%  
 Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 980.1 km

Distance to Mexican border: 1283.3 km

Conditions at FCC monitoring station: Powder Springs GA  
 Bearing: 77.1 degrees Distance: 197.2 km  
 ERP: 590 kW Field strength: 20.3 dBu, 0.0 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
 Bearing: 299.6 degrees Distance: 1792.8 km

No land mobile station failures found

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

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

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 Interference to BLEDT20090511AHE LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	159.6 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	159.6
	WMPV-TV	D18	DT	BL	MOBILE, AL	DTVBL60827	196.3
	WBMM	D18	DT	BL	TUSKEGEE, AL	DTVBL68427	184.5
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	291.9
	WIYC	D19	DT	BL	TROY, AL	DTVBL62207	184.1
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDT20060113ACO	366.3
	WDSU	D19	DT	BL	NEW ORLEANS, LA	DTVBL71357	333.4
	WKRQ-TV	D20	DT	BL	MOBILE, AL	DTVBL73187	186.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
27205.0 353,241	26809.4	347,685	26486.2 344,603	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	32.0 211	12.0 132	
WABM D20 DT APP	32.0 211	12.0 132	
WHNT-TV D19 DT LIC	80.0 979	64.0 900	
WIYC D19 DT BL	64.3 385	48.3 322	
WGCL-TV D19 DT LIC	20.0 65	4.0 2	
WDSU D19 DT BL	56.0 220	44.1 143	
WKRQ-TV D20 DT BL	126.8 1,504	114.9 1,427	

**Appendix B - Interference Analysis**  
**WABM - Birmingham, Alabama**  
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Interference to BLCDT20111118COZ LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	141.7 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	141.7
	WZDX	D18	DT	BL	HUNTSVILLE, AL	DTVBL28119	0.2
	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	291.9
	WIYC	D19	DT	BL	TROY, AL	DTVBL62207	302.5
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDT20060113ACO	226.5
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	401.5
	WPSD-TV	D19	DT	BL	PADUCAH, KY	DTVBL51991	350.6
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	179.5
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	138.4
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	171.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
36360.2 1,569,885	34222.1 1,487,578	32492.1 1,426,845	32500.1 1,427,164	-0.02 -0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL 228.7	9,568	48.2 3,032	
WABM D20 DT APP 196.6	8,817	40.1 2,713	
WZDX D18 DT BL 120.3	2,400	120.3 2,400	
WIIQ D19 DT LIC 604.9	20,807	340.3 7,355	
WIYC D19 DT BL 8.0	389	0.0 0	
WGCL-TV D19 DT LIC 988.1	41,500	759.9 29,225	
WDKY-TV D19 DT BL 8.1	194	8.1 194	
WPSD-TV D19 DT BL 100.8	2,921	88.6 2,695	
WPDP-CD D19 DC BL 23.9	144	7.9 0	
WDNN-CD D20 DC BL 35.8	215	0.0 0	
WZTV D20 DT BL 24.2	349	20.1 322	

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Interference to BLCDT20111118COZ LIC, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	141.7 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	141.7
	WZDX	D18	DT	BL	HUNTSVILLE, AL	DTVBL28119	0.2
	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	291.9
	WIYC	D19	DT	BL	TROY, AL	DTVBL62207	302.5
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDT20060113ACO	226.5
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	401.5
	WPSD-TV	D19	DT	BL	PADUCAH, KY	DTVBL51991	350.6
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	179.5
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	138.4
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	171.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
36360.2 1,569,885	34222.1 1,487,578	32492.1 1,426,845	32500.1 1,427,164	-0.02 -0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL 228.7	9,568	48.2 3,032	
WABM D20 DT APP 196.6	8,817	40.1 2,713	
WZDX D18 DT BL 120.3	2,400	120.3 2,400	
WIIQ D19 DT LIC 604.9	20,807	340.3 7,355	
WIYC D19 DT BL 8.0	389	0.0 0	
WGCL-TV D19 DT LIC 988.1	41,500	759.9 29,225	



**Appendix B - Interference Analysis**  
**WABM - Birmingham, Alabama**  
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WDKY-TV D19 DT BL	8.1	194	8.1	194	8.1	194
WPSD-TV D19 DT BL	100.8	2,921	88.6	2,695	88.6	2,695
WPDP-CD D19 DC BL	23.9	144	7.9	0	7.9	0
WDNN-CD D20 DC BL	35.8	215	0.0	0	0.0	0
WZTV D20 DT BL	24.2	349	20.1	322	20.1	322

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Interference to DTVBL62207 BL, scenario 1  
Proposal causes no interference.  
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Interference to BLCDT20060113ACO LIC, scenario 1  
Proposal causes no interference.  
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Interference to BLCDT20060113ACO LIC, scenario 2  
Proposal causes no interference.  
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Interference to DTVBL73187 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WKRG-TV	D20	DT	BL	MOBILE, AL	DTVBL73187	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	325.3 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	325.3
	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	186.1
	WDSU	D19	DT	BL	NEW ORLEANS, LA	DTVBL71357	220.0
	WCTV	D20	DT	BL	THOMASVILLE, GA	DTVBL31590	371.8
	KZUP-CD	D20	DC	LIC	BATON ROUGE, LA	BLDTA20100308ABT	332.5
	WMPN-TV	D20	DT	LIC	JACKSON, MS	BLEDT20080807AAP	295.9

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
42792.6 1,499,595	42681.3 1,499,062	42204.6 1,494,691	42204.6 1,494,691	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	202.3 1,358	146.7 1,128	
WABM D20 DT APP	198.4 1,358	146.7 1,128	
WIIQ D19 DT LIC	4.1 180	4.1 180	
WCTV D20 DT BL	27.9 171	23.9 171	
WMPN-TV D20 DT LIC	298.1 2,892	246.4 2,662	250.4 2,662

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Interference to BLEDT20110818AAQ LIC, scenario 1  
Proposal causes no interference.  
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Interference to DTVBL168812 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WANN-CD	D20	DC	BL	ATLANTA, GA	DTVBL168812	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	231.1 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	231.1
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDT20060113ACO	0.0
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	149.8
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	120.3
	WCTV	D20	DT	BL	THOMASVILLE, GA	DTVBL31590	350.7
	WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	230.9
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	352.8
	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	5.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
9978.2 4,599,533	9870.2 4,580,019	9758.0 4,548,433	9762.0 4,548,911	-0.04 -0.01

**Appendix B - Interference Analysis**  
**WABM - Birmingham, Alabama**  
**Channel 20 - 621 kW - Page 5**

Undesired		Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	20.0	8,787	8.0	675
WABM D20 DT APP	16.0	8,309		4.0 197
WGCL-TV D19 DT LIC	4.0	1,527	4.0	1,527
WDNN-CD D20 DC BL	48.1	17,499	40.1	10,084
WUNF-TV D20 DD BL	20.1	1,259	16.1	562
WPBA D21 DT LIC	32.1	10,626	32.1	10,626

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Interference to DTVBL49236 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	215.4 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	215.4
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDDT20111118COZ	138.4
	WGCL-TV	D19	DT	LIC	ATLANTA, GA	BLCDDT20060113ACO	120.3
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	57.3
	WANN-CD	D20	DC	BL	ATLANTA, GA	DTVBL168812	120.3
	WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	219.5
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	234.1
	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	125.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
6802.7 642,636	5931.9 601,169	5840.5 598,604	5840.5 598,604	0.00 0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	31.8	928	31.8	928
WABM D20 DT APP	31.8	928		31.8 928
WANN-CD D20 DC BL	47.7	1,279	43.7	1,277
WZTV D20 DT BL	15.9	360	11.9	358

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Interference to DTVBL31590 BL, scenario 1

Proposal causes no interference.

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Interference to BLDTA20090513AFM LIC, scenario 1

Proposal causes no interference.

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Interference to BLEDT20080807AAP LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMPN-TV	D20	DT	LIC	JACKSON, MS	BLEDT20080807AAP	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	365.5 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	365.5
	KARD	D19	DT	BL	WEST MONROE, LA	DTVBL3658	166.9
	WKRQ-TV	D20	DT	BL	MOBILE, AL	DTVBL73187	295.9
	KLRA-CD	D20	DC	LIC	LITTLE ROCK, AR	BLANK0000004217	348.5
	KZUP-CD	D20	DC	LIC	BATON ROUGE, LA	BLDTA20100308ABT	223.2
	KLTL-TV	D20	DT	LIC	LAKE CHARLES, LA	BLEDT20100216ABR	317.1
	KBXS-CD	D20	DC	BL	SHREVEPORT, LA	DTVBL70420	316.0
	WBII-CD	D20	DC	LIC	HOLLY SPRINGS, MS	BLDTA20090513AFM	315.2
	WAPT	D21	DT	LIC	JACKSON, MS	BLCDDT20081126ALZ	14.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
36452.1 856,237	36344.2 854,089	35726.7 847,982	35726.7 847,982	0.00 0.00

Undesired		Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	36.3	193	8.0	31

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**WABM - Birmingham, Alabama**  
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WABM D20 DT APP	36.3	193			8.0	31
KARD D19 DT BL	40.2	99	32.3	51	32.3	51
WKRG-TV D20 DT BL	465.0	5,022	432.7	4,737	432.7	4,737
KZUP-CD D20 DC LIC	7.9	47	4.0	46	4.0	46
KLTL-TV D20 DT LIC	11.9	49	0.0	0	0.0	0
WAPT D21 DT LIC	100.4	1,031	96.3	908	96.3	908

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Interference to DTVBL69300 BL, scenario 1  
Proposal causes no interference.

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Interference to DTVBL69300 BL, scenario 2  
Proposal causes no interference.

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Interference to DTVBL418 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	308.9 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	308.9
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	171.2
	KTEJ	D20	DT	LIC	JONESBORO, AR	BLEDT20110818AAQ	359.4
	WANN-CD	D20	DC	BL	ATLANTA, GA	DTVBL168812	352.8
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	234.1
	WTSN-CD	D20	DC	LIC	EVANSVILLE, IN	BLDTL20120328AJA	196.1
	WBII-CD	D20	DC	LIC	HOLLY SPRINGS, MS	BLDTA20090513AFM	267.5
	WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	375.5
	WLWT	D20	DT	CP	CINCINNATI, OH	BLANK0000024626	375.5
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	0.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32315.8 2,290,381	31662.0 2,280,414	31561.6 2,278,626	31561.6 2,278,626	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	12.1 82	12.1 82	
WABM D20 DT APP	12.1 82		12.1 82
WHNT-TV D19 DT LIC	20.2 355	16.2 320	16.2 320
KTEJ D20 DT LIC	16.0 37	16.0 37	16.0 37
WTSN-CD D20 DC LIC	40.1 262	40.1 262	40.1 262
WLWT D20 DT CP	4.0 84	4.0 84	4.0 84
WUXP-TV D21 DT LIC	12.1 1,003	8.0 968	8.0 968

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Interference to DTVBL418 BL, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	308.9 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	308.9
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	171.2
	KTEJ	D20	DT	LIC	JONESBORO, AR	BLEDT20110818AAQ	359.4
	WANN-CD	D20	DC	BL	ATLANTA, GA	DTVBL168812	352.8
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	234.1
	WTSN-CD	D20	DC	LIC	EVANSVILLE, IN	BLDTL20120328AJA	196.1
	WBII-CD	D20	DC	LIC	HOLLY SPRINGS, MS	BLDTA20090513AFM	267.5
	WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	375.5
	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	375.5
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	0.0

**Appendix B - Interference Analysis**  
**WABM - Birmingham, Alabama**  
**Channel 20 - 621 kW - Page 7**

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32315.8 2,290,381	31662.0 2,280,414	31561.6 2,278,626	31561.6 2,278,626	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	12.1 82	12.1 82	
WABM D20 DT APP	12.1 82		12.1 82
WHNT-TV D19 DT LIC	20.2 355	16.2 320	16.2 320
KTEJ D20 DT LIC	16.0 37	16.0 37	16.0 37
WTSN-CD D20 DC LIC	40.1 262	40.1 262	40.1 262
WLWT D20 DT BL	4.0 84	4.0 84	4.0 84
WUXP-TV D21 DT LIC	12.1 1,003	8.0 968	8.0 968

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Interference to DTVBL74138 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTTO	D21	DT	BL	HOMEWOOD, AL	DTVBL74138	
Undesireds:	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	0.0 km
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	0.0
	WDHN	D21	DT	LIC	DOTHAN, AL	BLCDT20090303ACR	286.2
	WPBA	D21	DT	LIC	ATLANTA, GA	BLEDT20041013ABK	230.8
	WAPT	D21	DT	LIC	JACKSON, MS	BLCDT20081126ALZ	352.0
	WJKT	D21	DT	BL	JACKSON, TN	DTVBL68519	331.3
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	308.9
	WFIQ	D22	DT	LIC	FLORENCE, AL	BLEDT20060718ACG	151.2
	WCOV-TV	D22	DT	BL	MONTGOMERY, AL	DTVBL73642	178.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
32777.6 1,817,300	31704.5 1,788,191	30686.8 1,761,705	30678.8 1,761,705	0.03 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WABM D20 DT BL	0.0 0	0.0 0	
WABM D20 DT APP	8.0 0		8.0 0
WDHN D21 DT LIC	613.4 11,847	336.5 6,298	336.5 6,298
WPBA D21 DT LIC	131.9 4,339	68.0 1,825	68.0 1,825
WAPT D21 DT LIC	128.1 2,546	88.0 2,434	88.0 2,434
WJKT D21 DT BL	32.0 165	24.0 127	24.0 127
WUXP-TV D21 DT LIC	124.0 8,955	107.9 8,066	107.9 8,066
WCOV-TV D22 DT BL	285.2 5,088	96.4 1,282	96.4 1,282

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Interference to BLEDT20041013ABK LIC, scenario 1

Proposal causes no interference.

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Interference to proposal, scenario 1

0.67% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WABM	D20	DT	APP	BIRMINGHAM, AL	WABM_20_401H_DIE_621K	
Undesireds:	WIIQ	D19	DT	LIC	DEMOPOLIS, AL	BLEDT20090511AHE	159.6 km
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	141.7
	WIYC	D19	DT	BL	TROY, AL	DTVBL62207	177.4
	WKRG-TV	D20	DT	BL	MOBILE, AL	DTVBL73187	325.3
	WANN-CD	D20	DC	BL	ATLANTA, GA	DTVBL168812	231.1
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	215.4
	WBII-CD	D20	DC	LIC	HOLLY SPRINGS, MS	BLDTA20090513AFM	264.5
	WMPN-TV	D20	DT	LIC	JACKSON, MS	BLEDT20080807AAP	365.5
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	308.9
	WTTO	D21	DT	BL	HOMEWOOD, AL	DTVBL74138	0.0

**Appendix B - Interference Analysis**  
**WABM - Birmingham, Alabama**  
**Channel 20 - 621 kW - Page 8**

Service area		Terrain-limited		IX-free		Percent IX	
29807.2	1,696,718	28746.6	1,671,059	28189.3	1,659,941	1.94	0.67
Undesired		Total IX		Unique IX		Prcnt Unique IX	
WIIQ D19 DT LIC	64.2	203	32.1	58	0.11	0.00	
WHNT-TV D19 DT LIC	36.0	576	20.0	313	0.07	0.02	
WKRG-TV D20 DT BL	280.9	1,963	220.8	1,412	0.77	0.08	
WANN-CD D20 DC BL	19.9	219	19.9	219	0.07	0.01	
WDNN-CD D20 DC BL	16.0	1,110	16.0	1,110	0.06	0.07	
WMPN-TV D20 DT LIC	48.0	1,085	16.0	653	0.06	0.04	
WZTV D20 DT BL	60.1	2,300	44.1	2,037	0.15	0.12	
WTTO D21 DT BL	112.3	4,502	112.3	4,502	0.39	0.27	