



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR  
A MINOR MODIFICATION OF A  
POST REPACK CONSTRUCTION PERMIT  
FILE # 0000028135  
WEMT - GREENEVILLE, TENNESSEE  
DTV - CH. 28 - 1000 kW - 719.3 m HAAT**

Prepared for: ESTEEM LICENSE HOLDINGS, 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 ESTEEM LICENSE HOLDINGS, INC., licensee of WEMT, channel 38, facility ID number 40761, licensed to Greeneville, Tennessee, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for a minor modification of its post-reassignment construction permit, File # 0000028135, that authorizes WEMT to use channel 28 for its post-reassignment broadcasting. The instant application proposes only to increase WEMT's ERP to 1000 kW. The proposed increase is in accord with Section 73.622(f)(5), to achieve a coverage area on par with the "largest station in the market", which appears to be WCYB-TV, Channel 5, licensed to Bristol, Virginia.

## **DETERMINATION OF THE "LARGEST STATION IN THE MARKET"**

It appears from an analysis of the stations that are licensed to communities located in the Tri-Cities, Tennessee-Virginia Designated Market Area (DMA) that the largest station in geographic area is WCYB-TV, channel 5, Bristol, Virginia with a predicted coverage area of 66,790 square kilometers. The instant application to increase WENT's ERP to 1000 kW results in a predicted coverage area of 41,494 square kilometers. Clearly WENT is entitled, according to Section 73.622(f)(5), to the proposed increase in its ERP to 1000 kW.

## **DIRECTIONAL ANTENNA**

The applicant proposes to install a new Dielectric model TFU-20DSC/VP-R P260 elliptically polarized directional transmitting antenna with its center of radiation located at a height above ground of 82 meters, and a height above average terrain of 719.3 meters. The manufacturer's horizontal plane azimuth 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 (40.14 dBu) contour, and the principal community (48 dBu) contour. The 48 dBu contour completely encompasses the principal community of license, Greeneville, Tennessee.

## **ALLOCATION CONSIDERATIONS**

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

An allocation study was performed, using the FCC's software, tv\_study, v. 2.2.3, 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 WENT site is located more than 500 km from any international border, therefore no international considerations are required.

## **BLANKETING AND INTERMODULATION INTERFERENCE**

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed WEMT 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 facilities 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 DTV stations, is determined for an “uncontrolled” environment by dividing the operating frequency in MHz by 1.5, and is determined for a “controlled” environment by dividing the operating frequency in MHz by 0.3.

The predicted emissions of WEMT must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WEMT, which will operate on television Channel 28 (554-560 MHz), the MPE is 371.33 microwatts per centimeter squared ( $\mu\text{W}/\text{cm}^2$ ) in an “uncontrolled” environment and  $1,856.7 \mu\text{W}/\text{cm}^2$  in a “controlled” environment. The proposed WEMT facility will operate with a maximum ERP of 1000 kW from an elliptically polarized directional transmitting antenna with a centerline height of 82 meters above ground level (AGL). Considering the antenna’s vertical plane relative field factor of 0.10 the WEMT facility is predicted to produce a power density at two meters above ground level of  $109.83 \mu\text{W}/\text{cm}^2$ , which is 29.58% of the FCC guideline value for an “uncontrolled” environment, and 5.92% of the FCC’s guideline value for “controlled” environments. There is one other full-power DTV station and one digital LPTV station that are located at the WEMT site. Therefore, the total percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations within relevant proximity, is 34.14% of the limit applicable to “uncontrolled” environments, and 6.83% of the limit for “controlled” environments. (See Appendix A)

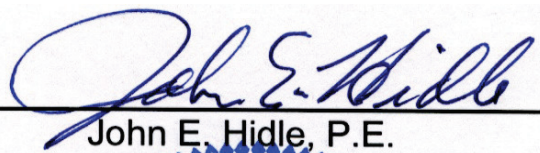
**OCCUPATIONAL SAFETY**


The licensee of WEMT is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WEMT 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.

**SUMMARY**

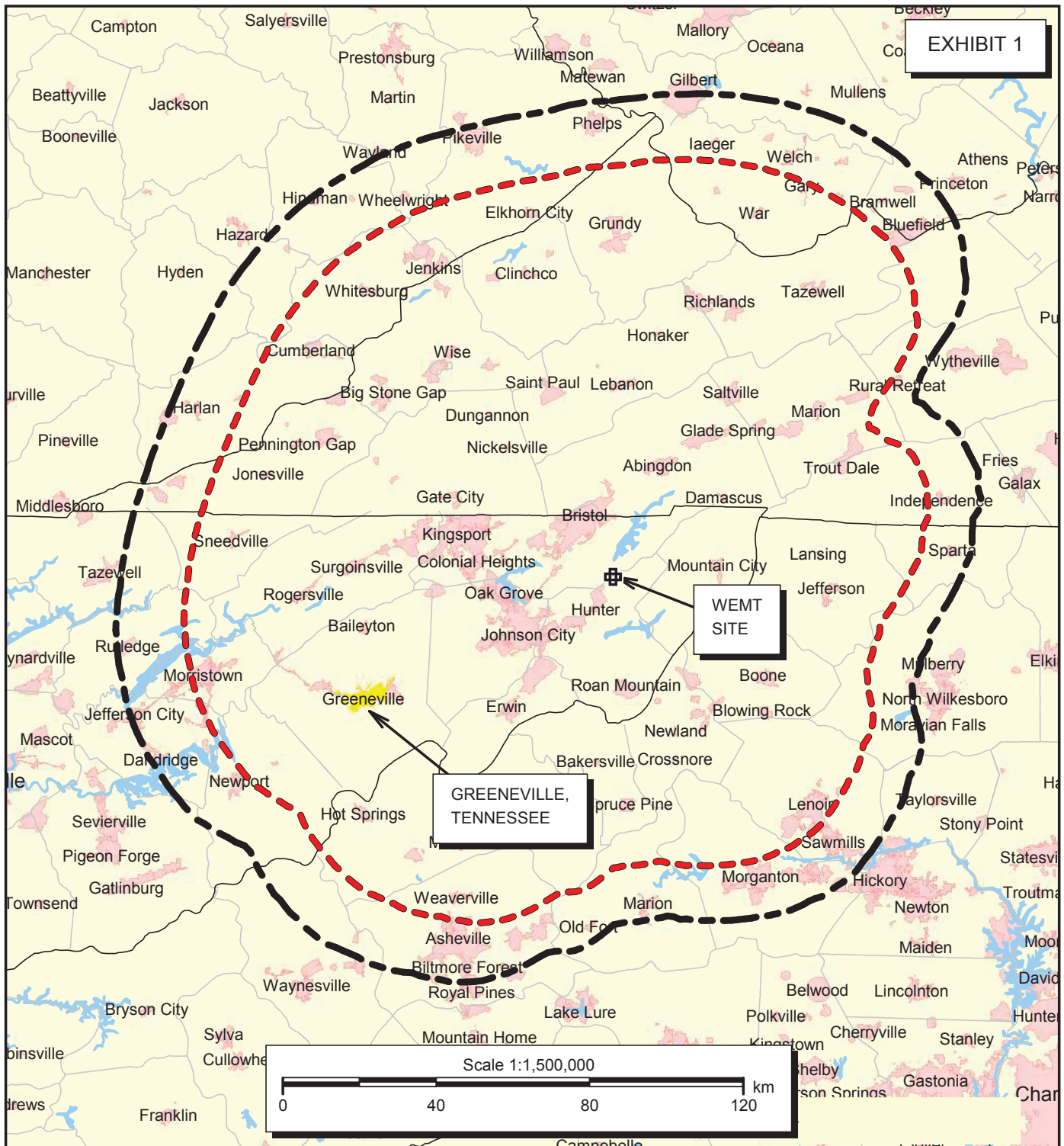
It is submitted that the instant application for minor modification of its post-reassignment channel 28 construction permit, file # 0000028135, to increase WEMT's ERP to 1000 kW, as described herein, complies with the Rules, Regulations and relevant Policies of the Federal Communications Commission. 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: October 25, 2017

  
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John E. Hidle, P.E.







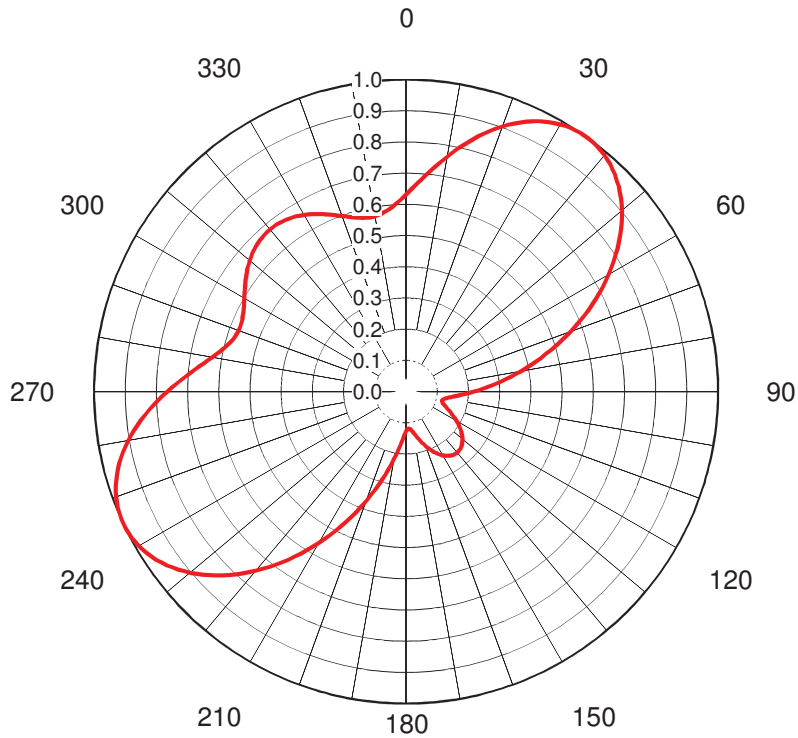
## PREDICTED COVERAGE CONTOURS

WENT - GREENEVILLE, TENNESSEE  
DTV Channel 28 -1000 kW ERP - 719 M HAAT  
OCTOBER, 2017

Predicted Noise Limited 40.14 dBu  
F(50,90) Coverage Contour



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



## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70180**  
 Date **27-Feb-17**  
 Call Letters **WENT 28**  
 Frequency **557 MHz**  
 Antenna Type **TFU-20DSC/VP-R P260**

Gain **2.52 (4.02dB)**  
**Calculated**

Directional  
 Drawing # **P260H D28**

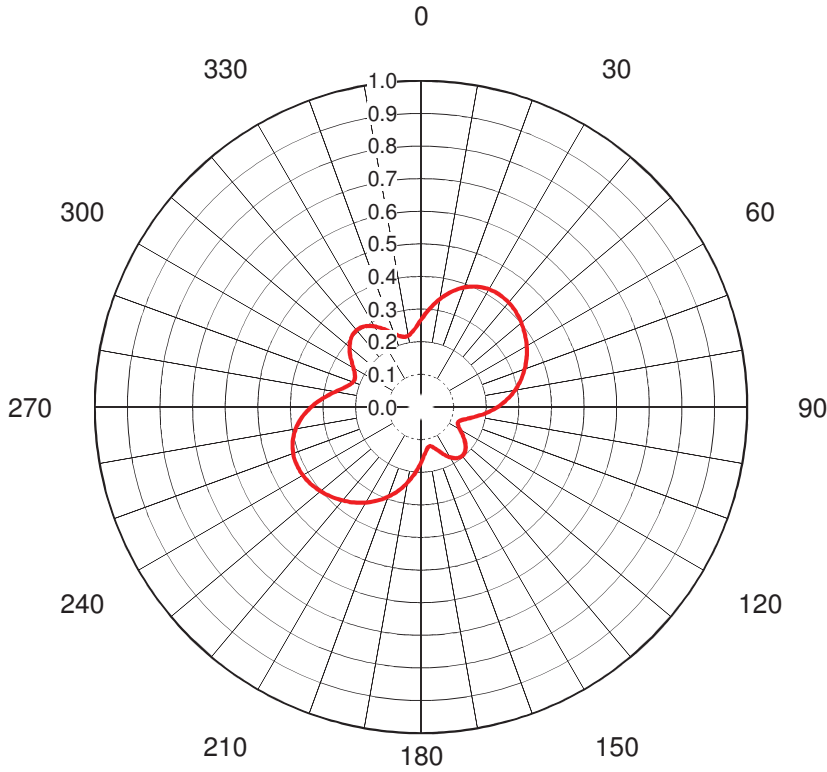
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.631	36	1.000	72	0.522	108	0.125	144	0.252	180	0.128	216	0.676	252	0.978	288	0.575	324	0.675
1	0.643	37	0.998	73	0.503	109	0.129	145	0.250	181	0.133	217	0.695	253	0.971	289	0.573	325	0.672
2	0.654	38	0.996	74	0.483	110	0.132	146	0.248	182	0.139	218	0.714	254	0.964	290	0.571	326	0.669
3	0.667	39	0.993	75	0.464	111	0.137	147	0.246	183	0.146	219	0.732	255	0.956	291	0.571	327	0.666
4	0.680	40	0.989	76	0.445	112	0.142	148	0.243	184	0.154	220	0.750	256	0.947	292	0.571	328	0.662
5	0.693	41	0.984	77	0.427	113	0.147	149	0.239	185	0.163	221	0.767	257	0.937	293	0.572	329	0.658
6	0.707	42	0.979	78	0.408	114	0.152	150	0.236	186	0.172	222	0.785	258	0.927	294	0.574	330	0.654
7	0.722	43	0.972	79	0.390	115	0.158	151	0.232	187	0.183	223	0.801	259	0.916	295	0.577	331	0.649
8	0.736	44	0.965	80	0.373	116	0.164	152	0.228	188	0.194	224	0.818	260	0.904	296	0.580	332	0.644
9	0.751	45	0.956	81	0.355	117	0.169	153	0.224	189	0.206	225	0.833	261	0.892	297	0.584	333	0.638
10	0.766	46	0.947	82	0.338	118	0.175	154	0.219	190	0.218	226	0.848	262	0.880	298	0.588	334	0.633
11	0.780	47	0.937	83	0.322	119	0.181	155	0.214	191	0.232	227	0.863	263	0.866	299	0.594	335	0.627
12	0.795	48	0.927	84	0.305	120	0.187	156	0.209	192	0.245	228	0.877	264	0.853	300	0.599	336	0.621
13	0.810	49	0.915	85	0.290	121	0.192	157	0.204	193	0.260	229	0.890	265	0.839	301	0.604	337	0.616
14	0.825	50	0.903	86	0.274	122	0.198	158	0.198	194	0.274	230	0.903	266	0.825	302	0.610	338	0.610
15	0.839	51	0.890	87	0.260	123	0.204	159	0.192	195	0.290	231	0.915	267	0.810	303	0.616	339	0.604
16	0.853	52	0.877	88	0.245	124	0.209	160	0.187	196	0.305	232	0.927	268	0.795	304	0.621	340	0.599
17	0.866	53	0.863	89	0.232	125	0.214	161	0.181	197	0.322	233	0.937	269	0.780	305	0.627	341	0.594
18	0.880	54	0.848	90	0.218	126	0.219	162	0.175	198	0.338	234	0.947	270	0.766	306	0.633	342	0.588
19	0.892	55	0.833	91	0.206	127	0.224	163	0.169	199	0.355	235	0.956	271	0.751	307	0.638	343	0.584
20	0.904	56	0.818	92	0.194	128	0.228	164	0.164	200	0.373	236	0.965	272	0.736	308	0.644	344	0.580
21	0.916	57	0.801	93	0.183	129	0.232	165	0.158	201	0.390	237	0.972	273	0.722	309	0.649	345	0.577
22	0.927	58	0.785	94	0.172	130	0.236	166	0.152	202	0.408	238	0.979	274	0.707	310	0.654	346	0.574
23	0.937	59	0.767	95	0.163	131	0.239	167	0.147	203	0.427	239	0.984	275	0.693	311	0.658	347	0.572
24	0.947	60	0.750	96	0.154	132	0.243	168	0.142	204	0.445	240	0.989	276	0.680	312	0.662	348	0.571
25	0.956	61	0.732	97	0.146	133	0.246	169	0.137	205	0.464	241	0.993	277	0.667	313	0.666	349	0.571
26	0.964	62	0.714	98	0.139	134	0.248	170	0.132	206	0.483	242	0.996	278	0.654	314	0.669	350	0.571
27	0.971	63	0.695	99	0.133	135	0.250	171	0.129	207	0.503	243	0.998	279	0.643	315	0.672	351	0.573
28	0.978	64	0.676	100	0.128	136	0.252	172	0.125	208	0.522	244	1.000	280	0.631	316	0.675	352	0.575
29	0.984	65	0.657	101	0.125	137	0.253	173	0.123	209	0.541	245	1.000	281	0.621	317	0.676	353	0.579
30	0.989	66	0.638	102	0.121	138	0.255	174	0.120	210	0.561	246	1.000	282	0.611	318	0.678	354	0.583
31	0.993	67	0.619	103	0.120	139	0.255	175	0.119	211	0.580	247	0.998	283	0.603	319	0.678	355	0.589
32	0.996	68	0.600	104	0.119	140	0.255	176	0.119	212	0.600	248	0.996	284	0.595	320	0.679	356	0.595
33	0.998	69	0.580	105	0.119	141	0.255	177	0.120	213	0.619	249	0.993	285	0.589	321	0.678	357	0.603
34	1.000	70	0.561	106	0.120	142	0.255	178	0.121	214	0.638	250	0.989	286	0.583	322	0.678	358	0.611
35	1.000	71	0.541	107	0.123	143	0.253	179	0.125	215	0.657	251	0.984	287	0.579	323	0.676	359	0.621

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## AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70180**  
 Date **27-Feb-17**  
 Call Letters **WEMT 28**  
 Frequency **557 MHz**  
 Antenna Type **TFU-20DSC/VP-R P260**  
 Gain **1.99 (3dB)  
Calculated**  
 Directional  
 Drawing # **P260V D28**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.267	36	0.420	72	0.330	108	0.131	144	0.193	180	0.171	216	0.361	252	0.414	288	0.227	324	0.304
1	0.274	37	0.420	73	0.326	109	0.128	145	0.192	181	0.177	217	0.364	253	0.412	289	0.224	325	0.302
2	0.281	38	0.419	74	0.321	110	0.126	146	0.189	182	0.183	218	0.368	254	0.409	290	0.222	326	0.299
3	0.288	39	0.419	75	0.317	111	0.124	147	0.187	183	0.190	219	0.371	255	0.407	291	0.221	327	0.296
4	0.295	40	0.418	76	0.312	112	0.123	148	0.184	184	0.196	220	0.374	256	0.404	292	0.220	328	0.293
5	0.302	41	0.417	77	0.308	113	0.123	149	0.181	185	0.203	221	0.377	257	0.401	293	0.221	329	0.290
6	0.309	42	0.416	78	0.303	114	0.124	150	0.178	186	0.210	222	0.381	258	0.398	294	0.222	330	0.286
7	0.316	43	0.415	79	0.298	115	0.125	151	0.175	187	0.216	223	0.383	259	0.394	295	0.223	331	0.281
8	0.323	44	0.413	80	0.293	116	0.127	152	0.171	188	0.222	224	0.386	260	0.390	296	0.225	332	0.277
9	0.330	45	0.412	81	0.287	117	0.129	153	0.167	189	0.229	225	0.389	261	0.386	297	0.228	333	0.272
10	0.336	46	0.410	82	0.282	118	0.132	154	0.163	190	0.235	226	0.392	262	0.381	298	0.231	334	0.268
11	0.343	47	0.408	83	0.277	119	0.135	155	0.159	191	0.241	227	0.395	263	0.377	299	0.235	335	0.263
12	0.349	48	0.406	84	0.271	120	0.138	156	0.155	192	0.248	228	0.397	264	0.372	300	0.239	336	0.258
13	0.355	49	0.404	85	0.265	121	0.142	157	0.150	193	0.254	229	0.399	265	0.366	301	0.244	337	0.253
14	0.361	50	0.402	86	0.260	122	0.146	158	0.146	194	0.260	230	0.402	266	0.361	302	0.248	338	0.248
15	0.366	51	0.399	87	0.254	123	0.150	159	0.142	195	0.265	231	0.404	267	0.355	303	0.253	339	0.244
16	0.372	52	0.397	88	0.248	124	0.155	160	0.138	196	0.271	232	0.406	268	0.349	304	0.258	340	0.239
17	0.377	53	0.395	89	0.241	125	0.159	161	0.135	197	0.277	233	0.408	269	0.343	305	0.263	341	0.235
18	0.381	54	0.392	90	0.235	126	0.163	162	0.132	198	0.282	234	0.410	270	0.336	306	0.268	342	0.231
19	0.386	55	0.389	91	0.229	127	0.167	163	0.129	199	0.287	235	0.412	271	0.330	307	0.272	343	0.228
20	0.390	56	0.386	92	0.222	128	0.171	164	0.127	200	0.293	236	0.413	272	0.323	308	0.277	344	0.225
21	0.394	57	0.383	93	0.216	129	0.175	165	0.125	201	0.298	237	0.415	273	0.316	309	0.281	345	0.223
22	0.398	58	0.381	94	0.210	130	0.178	166	0.124	202	0.303	238	0.416	274	0.309	310	0.286	346	0.222
23	0.401	59	0.377	95	0.203	131	0.181	167	0.123	203	0.308	239	0.417	275	0.302	311	0.290	347	0.221
24	0.404	60	0.374	96	0.196	132	0.184	168	0.123	204	0.312	240	0.418	276	0.295	312	0.293	348	0.220
25	0.407	61	0.371	97	0.190	133	0.187	169	0.124	205	0.317	241	0.419	277	0.288	313	0.296	349	0.221
26	0.409	62	0.368	98	0.183	134	0.189	170	0.126	206	0.321	242	0.419	278	0.281	314	0.299	350	0.222
27	0.412	63	0.364	99	0.177	135	0.192	171	0.128	207	0.326	243	0.420	279	0.274	315	0.302	351	0.224
28	0.414	64	0.361	100	0.171	136	0.193	172	0.131	208	0.330	244	0.420	280	0.267	316	0.304	352	0.227
29	0.415	65	0.357	101	0.165	137	0.195	173	0.134	209	0.334	245	0.420	281	0.261	317	0.305	353	0.230
30	0.417	66	0.354	102	0.159	138	0.196	174	0.138	210	0.338	246	0.420	282	0.255	318	0.306	354	0.234
31	0.418	67	0.350	103	0.153	139	0.196	175	0.143	211	0.342	247	0.419	283	0.249	319	0.307	355	0.238
32	0.419	68	0.346	104	0.148	140	0.196	176	0.148	212	0.346	248	0.419	284	0.243	320	0.307	356	0.243
33	0.419	69	0.342	105	0.143	141	0.196	177	0.153	213	0.350	249	0.418	285	0.238	321	0.307	357	0.249
34	0.420	70	0.338	106	0.138	142	0.196	178	0.159	214	0.354	250	0.417	286	0.234	322	0.306	358	0.255
35	0.420	71	0.334	107	0.134	143	0.195	179	0.165	215	0.357	251	0.415	287	0.230	323	0.305	359	0.261

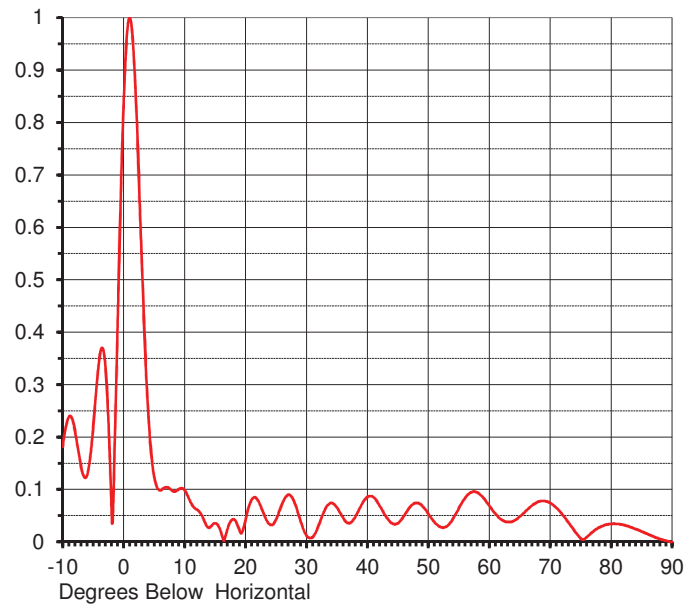
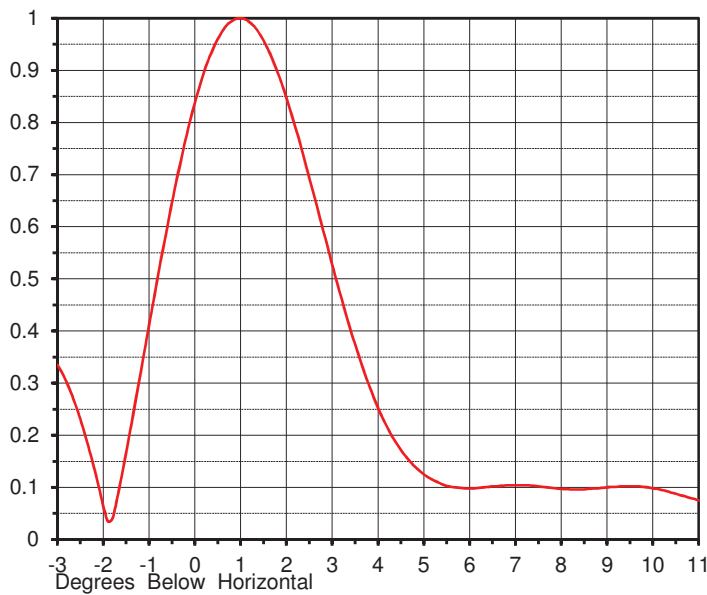
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## ELEVATION PATTERN

Proposal No. **C-70180**  
 Date **27-Feb-17**  
 Call Letters **WEMT 28**  
 Frequency **557 MHz**  
 Antenna Type **TFU-20DSC/VP-R P260**

RMS Directivity at Main Lobe **17.00 ( 12.30 dB )**  
 RMS Directivity at Horizontal **11.90 ( 10.76 dB )**  
**Calculated**

Beam Tilt **1.00 deg**  
 Drawing Number **20Q170100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.181	10.0	0.098	30.0	0.012	50.0	0.054	70.0	0.074
-9.0	0.238	11.0	0.075	31.0	0.008	51.0	0.038	71.0	0.065
-8.0	0.213	12.0	0.062	32.0	0.031	52.0	0.028	72.0	0.052
-7.0	0.144	13.0	0.046	33.0	0.060	53.0	0.029	73.0	0.037
-6.0	0.127	14.0	0.027	34.0	0.074	54.0	0.043	74.0	0.021
-5.0	0.219	15.0	0.035	35.0	0.065	55.0	0.064	75.0	0.006
-4.0	0.348	16.0	0.017	36.0	0.046	56.0	0.083	76.0	0.009
-3.0	0.335	17.0	0.023	37.0	0.035	57.0	0.094	77.0	0.019
-2.0	0.065	18.0	0.043	38.0	0.047	58.0	0.094	78.0	0.027
-1.0	0.411	19.0	0.022	39.0	0.070	59.0	0.084	79.0	0.032
0.0	0.838	20.0	0.042	40.0	0.085	60.0	0.069	80.0	0.034
1.0	1.000	21.0	0.080	41.0	0.085	61.0	0.054	81.0	0.034
2.0	0.847	22.0	0.080	42.0	0.069	62.0	0.042	82.0	0.032
3.0	0.527	23.0	0.053	43.0	0.049	63.0	0.038	83.0	0.029
4.0	0.253	24.0	0.033	44.0	0.036	64.0	0.040	84.0	0.024
5.0	0.125	25.0	0.042	45.0	0.035	65.0	0.048	85.0	0.020
6.0	0.098	26.0	0.072	46.0	0.049	66.0	0.059	86.0	0.015
7.0	0.104	27.0	0.090	47.0	0.066	67.0	0.069	87.0	0.010
8.0	0.097	28.0	0.076	48.0	0.074	68.0	0.076	88.0	0.005
9.0	0.100	29.0	0.041	49.0	0.069	69.0	0.078	89.0	0.002
								90.0	0.000

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## APPENDIX A

### SUMMARY OF RADIOFREQUENCY RADIATION STUDY

WEMT, Greeneville, TN  
Channel 28, 1000 kW, 719.3m HAAT  
October, 2017

<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 (<math>\mu\text{W}/\text{cm}^2</math>)</u>	<u>FCC UNCONTROLLED LIMIT (<math>\mu\text{W}/\text{cm}^2</math>)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WEMT	DT	28	557	H & V	80	1000.000	0.100	109.828	371.33	29.58%
WCYB-TV	DT	5	79	H & V	102	29.900	0.200	7.992	200.00	4.00%
WCYB-TV	DT	29	563	H	118	9.600	0.300	2.145	375.33	0.57%
<b>TOTAL PERCENTAGE OF FCC GUIDELINE VALUE =</b>										<b>34.14%</b>

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



## WEMT - GREENEVILLE, TENNESSEE Longley-Rice Interference Analysis

tvstudy v2.2.3 (Dxtpx3)

Database: localhost, Study: WEMT-28 DA 1MW 171004, Model: Longley-Rice

Start: 2017.10.04 21:33:02

Study created: 2017.10.04 21:32:01

Study build station data: LMS TV 2017-10-01 (38)

Proposal: WEMT D28 DT CP GREENEVILLE, TN  
File number: WEMT-28 DA 1MW 171004  
Facility ID: 40761  
Station data: User record  
Record ID: 1834  
Country: U.S.  
Zone: II

Search options:

Non-U.S. records included

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
WUNW	D27	DT	LIC	CANTON, NC	BLEDT20110921AAA	121.5 km
WELF-TV	D28	DT	CP	DALTON, GA	BLANK0000026361	349.4
WLEX-TV	D28	DT	CP	LEXINGTON, KY	BLANK0000028121	268.2
WMYV	D28	DT	CP	GREENSBORO, NC	BLANK0000027771	215.0
WKOP-TV	D29	DT	CP	KNOXVILLE, TN	BLANK0000024513	173.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D28  
Latitude: 36 26 58.20 N (NAD83)  
Longitude: 82 6 28.70 W  
Height AMSL: 1365.8 m  
HAAT: 719.3 m  
Peak ERP: 1000 kW  
Antenna: DIE-TFU-20DSC/VP-R P260 (ID 1001787) 0.0 deg  
Elev Pattn: Generic  
Elec Tilt: 1.0

40.1 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	398 kW	840.5 m	124.2 km
45.0	895	718.9	127.8
90.0	47.5	523.7	90.8
135.0	60.3	601.8	97.5
180.0	16.4	720.4	90.5
225.0	683	638.8	120.9
270.0	587	840.7	128.1
315.0	444	869.8	126.2

ERP exceeds maximum

ERP: 1000 kW ERP maximum: 238 kW

\*\*Proposal service area extends beyond baseline plus 1.0%

Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 581.5 km

# **Appendix B - Interference Analysis** **WEMT - Greeneville, Tennessee** **Channel 28 - 1000 kW - Page 2**

Distance to Mexican border: 1823.3 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 220.3 degrees Distance: 373.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 288.5 degrees Distance: 2051.6 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 BLEDT20110921AAA LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUNW	D27	DT	LIC	CANTON, NC	BLEDT20110921AAA	
Undesireds:	WEMT	D28	DT	BL	GREENEVILLE, TN	DTVBL40761	121.5 km
	WEMT	D28	DT	CP	GREENEVILLE, TN	WEMT-28 DA 1MW 171004	121.5
	WNEH	D26	DT	CP	GREENWOOD, SC	BLANK0000025027	149.1
	WATE-TV	D26	DT	LIC	KNOXVILLE, TN	BMLCDT20041203AEG	105.1
	WAGA-TV	D27	DT	LIC	ATLANTA, GA	BLCDDT20060728AEL	236.1
	WTVQ-DT	D27	DT	CP	LEXINGTON, KY	BLANK0000026675	304.3
	WGTB-CD	D27	DC	CP	CHARLOTTE, NC	BLANK0000028505	160.3
	WPDE-TV	D27	DT	CP	FLORENCE, SC	BLANK0000025691	352.1
	WPXR-TV	D27	DT	CP	ROANOKE, VA	BLANK0000026992	305.3
-----							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	23303.5	1,109,237	12071.7	570,072	11534.9	536,069	0.03 0.01
Undesired			Total IX	Unique IX, before		Unique IX, after	
WEMT D28 DT BL			36.0	4,244	16.0	1,431	
WEMT D28 DT CP			40.0	4,306		20.0	1,493
WNEH D26 DT CP			23.7	18	7.9	0	7.9 0
WATE-TV D26 DT LIC			232.5	22,637	184.4	18,765	184.4 18,765
WAGA-TV D27 DT LIC			179.7	6,367	147.9	4,642	147.9 4,642
WTVQ-DT D27 DT CP			84.1	5,852	28.1	1,019	28.1 1,019
WGTB-CD D27 DC CP			72.5	2,041	52.6	1,844	52.6 1,844
WPDE-TV D27 DT CP			12.0	630	0.0	0	0.0 0
WPXR-TV D27 DT CP			16.0	2,208	3.9	68	3.9 68

-----  
Interference to BLANK0000026361 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WELF-TV	D28	DT	CP	DALTON, GA	BLANK0000026361	
Undesireds:	WEMT	D28	DT	BL	GREENEVILLE, TN	DTVBL40761	349.4 km
	WEMT	D28	DT	CP	GREENEVILLE, TN	WEMT-28 DA 1MW 171004	349.4
	WAGA-TV	D27	DT	LIC	ATLANTA, GA	BLCDDT20060728AEL	151.3
	WMCF-TV	D28	DT	CP	MONTGOMERY, AL	BLANK0000026526	278.4
	WJBF	D28	DT	CP	AUGUSTA, GA	BLANK0000028403	365.5
-----							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	29351.0	1,477,691	25715.7	1,387,044	25235.5	1,359,849	25227.5 1,359,745 0.03 0.01
Undesired			Total IX	Unique IX, before		Unique IX, after	
WEMT D28 DT BL			84.5	6,568	84.5	6,568	
WEMT D28 DT CP			92.6	6,672		92.6	6,672
WAGA-TV D27 DT LIC			43.9	3,812	39.9	3,800	39.9 3,800
WMCF-TV D28 DT CP			339.8	16,051	335.8	16,039	335.8 16,039
WJBF D28 DT CP			19.9	788	15.9	776	15.9 776

**Appendix B - Interference Analysis**  
**WEMT - Greeneville, Tennessee**  
**Channel 28 - 1000 kW - Page 3**

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Interference to BLANK0000028121 CP, scenario 1

Desired:	Call WLEX-TV	Chan D28	Svc DT	Status CP	City, State LEXINGTON, KY	File Number BLANK0000028121	Distance		
Undesireds:	WEMT	D28	DT	BL	GREENEVILLE, TN	DTVBL40761	268.2 km		
	WEMT	D28	DT	CP	GREENEVILLE, TN	WEMT-28 DA 1MW 171004	268.2		
	WIPX-TV	D28	DT	CP	BLOOMINGTON, IN	BLANK0000026975	215.0		
	WEVV-TV	D28	DT	CP	EVANSVILLE, IN	BLANK0000027564	276.5		
	WSYX	D28	DT	CP	COLUMBUS, OH	BLANK0000027371	242.5		
	WPTO	D29	DT	CP	OXFORD, OH	BLANK0000026783	121.6		
Service area		Terrain-limited			IX-free, before		IX-free, after	Percent New IX	
21095.2	969,481	20665.1	964,735		20318.0	960,056	20282.3	959,821	0.18 0.02
Undesired				Total IX	Unique IX, before		Unique IX, after		
WEMT	D28	DT	BL	155.1	2,172	107.4	1,708		
WEMT	D28	DT	CP	194.8	2,423			143.2	1,943
WIPX-TV	D28	DT	CP	87.8	1,177	43.9	849	39.9	833
WEVV-TV	D28	DT	CP	27.8	104	15.9	59	15.9	59
WSYX	D28	DT	CP	160.0	1,945	96.2	986	96.2	986
WPTO	D29	DT	CP	4.0	373	0.0	0	0.0	0

-----  
Interference to BLANK0000027771 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance		
Desired:	WMYV	D28	DT	CP	GREENSBORO, NC	BLANK0000027771			
Undesireds:	WEMT	D28	DT	BL	GREENEVILLE, TN	DTVBL40761	214.9 km		
	WEMT	D28	DT	CP	GREENEVILLE, TN	WEMT-28 DA 1MW 171004	215.0		
	WPDE-TV	D27	DT	CP	FLORENCE, SC	BLANK0000025691	172.6		
	WPXR-TV	D27	DT	CP	ROANOKE, VA	BLANK0000026992	150.4		
	WJBF	D28	DT	CP	AUGUSTA, GA	BLANK0000028403	329.6		
	WUNM-TV	D28	DT	CP	JACKSONVILLE, NC	BLANK0000025768	240.5		
	WRIC-TV	D28	DT	CP	PETERSBURG, VA	BLANK0000028417	269.6		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
36670.0	3,808,852	35991.7	3,788,454	35209.9	3,740,343	35217.9	3,740,743	-0.02	-0.01
Undesired				Total IX	Unique IX, before	Unique IX, after			
WEMT D28 DT BL		43.9		1,635	27.9	1,309			
WEMT D28 DT CP		24.0		934			20.0	909	
WPDE-TV D27 DT CP		126.6		1,821	102.9	1,253	102.9	1,253	
WPXR-TV D27 DT CP		27.9		198	16.0	103	16.0	103	
WJBF D28 DT CP		55.9		2,155	36.1	1,587	36.1	1,587	
WUNM-TV D28 DT CP		52.0		17,189	16.0	5,372	16.0	5,372	
WRIC-TV D28 DT CP		559.1		37,919	511.2	25,896	519.1	26,129	

-----  
Interference to BLANK0000024513 CP, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WKOP-TV	D29	DT	CP	KNOXVILLE, TN	BLANK0000024513	
Undesireds:	WEMT	D28	DT	BL	GREENEVILLE, TN	DTVBL40761	173.3 km
	WEMT	D28	DT	CP	GREENEVILLE, TN	WEMT-28 DA 1MW 171004	173.2
	WELF-TV	D28	DT	CP	DALTON, GA	BLANK0000026361	185.8
	WBRC	D29	DT	CP	BIRMINGHAM, AL	BLANK0000025157	380.9
	WKGB-TV	D29	DT	CP	BOWLING GREEN, KY	BLANK0000025285	268.3
	WPTO	D29	DT	CP	OXFORD, OH	BLANK0000026783	351.4
	WCHS-TV	D29	DT	CP	CHARLESTON, WV	BLANK0000025700	323.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
32656.9		1,555,654		25636.6		1,382,098	0.03 0.06
				25348.4		1,368,138	



**Appendix B - Interference Analysis**  
**WEMT - Greeneville, Tennessee**  
**Channel 28 - 1000 kW - Page 4**

Undesired		Total IX	Unique IX, before	Unique IX, after
WEMT D28 DT BL	88.0	2,978	88.0	2,978
WEMT D28 DT CP	96.1	3,853		
WELF-TV D28 DT CP	12.1	353	12.1	353
WBRC D29 DT CP	20.2	804	20.2	804
WKGB-TV D29 DT CP	139.8	8,834	127.9	8,010
WPTO D29 DT CP	15.9	823	4.0	272
WCHS-TV D29 DT CP	35.8	1,543	20.0	715

-----  
Interference to proposal, scenario 1  
2.39% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WEMT	D28	DT	CP	GREENEVILLE, TN	WEMT-28 DA 1MW 171004	
Undesireds:	WUNW	D27	DT	LIC	CANTON, NC	BLEDT20110921AAA	121.5 km
	WPXR-TV	D27	DT	CP	ROANOKE, VA	BLANK0000026992	192.3
	WJBF	D28	DT	CP	AUGUSTA, GA	BLANK0000028403	339.2
	WELF-TV	D28	DT	CP	DALTON, GA	BLANK0000026361	349.4
	WLEX-TV	D28	DT	CP	LEXINGTON, KY	BLANK0000028121	268.2
	WMYV	D28	DT	CP	GREENSBORO, NC	BLANK0000027771	215.0
	WSYX	D28	DT	CP	COLUMBUS, OH	BLANK0000027371	395.8
	WKOP-TV	D29	DT	CP	KNOXVILLE, TN	BLANK0000024513	173.2

Service area	Terrain-limited	IX-free	Percent IX
41494.0 1,726,085	31140.8 1,186,706	30221.5 1,158,300	2.95 2.39

Undesired		Total IX	Unique IX	Prcnt Unique IX
WUNW D27 DT LIC	12.1	0	8.1	0.03
WPXR-TV D27 DT CP	8.0	182	4.0	0.01
WJBF D28 DT CP	48.3	1,646	40.2	0.13
WELF-TV D28 DT CP	75.9	3,207	51.9	0.17
WLEX-TV D28 DT CP	347.6	7,308	283.7	0.91
WMYV D28 DT CP	359.4	6,629	327.4	1.05
WSYX D28 DT CP	63.8	1,483	23.9	0.08
WKOP-TV D29 DT CP	104.1	9,437	88.1	0.28