

APPENDIX

Allocation Study [Modified LPONE Output]

SOUTHERN TV CORPORATION
LPTV Displacement Application - W39BV
April 2002

MULLANEY ENGINEERING, INC.

PROPOSED W39BV HINESVILLE-RICHMOND GA
Channel 41 Minus Offset N Lat 31 49 52 W Long 81 47 21
ERP: 17,500 kW; RCAMSL: 82.4 m.; GAMSL: 24.4 m.; max HAAT: 68.4 m.
Directional Antenna Make: SWR; Model: SWLP240I ; Ref Az: 80.0
Tendered 000000 Last Updated manual Cutoff Date: 991231 Tier 0

ALAN Page 1
Receive Antenna Discrimination Employed

Following are the HAATs for W39BV which will be used in this study:

Az	HAAT(m.)	Az	HAAT(m.)	Az	HAAT(m.)	Az	HAAT(m.)	Az	HAAT(m.)	Az	HAAT(m.)	Az	HAAT(m.)	Az	HAAT(m.)
0	58.0	45	64.9	90	60.6	135	64.2	180	67.1	225	68.1	270	60.7	315	46.6
1	58.7	46	64.9	91	60.7	136	64.4	181	67.2	226	68.1	271	60.3	316	46.7
2	59.4	47	64.8	92	60.7	137	64.6	182	67.3	227	68.1	272	60.1	317	46.9
3	60.1	48	64.6	93	60.7	138	64.7	183	67.5	228	68.1	273	59.9	318	47.2
4	60.7	49	64.4	94	60.7	139	64.8	184	67.7	229	68.1	274	59.7	319	47.6
5	61.1	50	64.4	95	60.6	140	65.1	185	68.0	230	68.0	275	59.5	320	47.9
6	61.4	51	64.3	96	60.5	141	65.3	186	68.2	231	67.9	276	59.2	321	48.2
7	61.6	52	64.3	97	60.5	142	65.5	187	68.4	232	67.9	277	58.8	322	48.4
8	61.8	53	64.3	98	60.3	143	65.5	188	68.4	233	67.9	278	58.4	323	48.7
9	61.8	54	64.3	99	60.1	144	65.3	189	68.4	234	67.9	279	58.0	324	48.7
10	61.8	55	64.4	100	59.8	145	65.1	190	68.4	235	67.8	280	57.6	325	48.3
11	61.7	56	64.4	101	59.4	146	65.1	191	68.4	236	67.8	281	57.1	326	47.7
12	61.7	57	64.5	102	59.0	147	65.1	192	68.4	237	67.7	282	56.6	327	47.2
13	61.6	58	64.5	103	58.6	148	65.0	193	68.4	238	67.6	283	56.1	328	46.8
14	61.4	59	64.7	104	58.4	149	65.0	194	68.4	239	67.4	284	55.5	329	46.7
15	61.3	60	64.8	105	58.2	150	64.9	195	68.4	240	67.1	285	55.0	330	46.9
16	61.2	61	65.0	106	58.1	151	65.0	196	68.3	241	66.7	286	54.3	331	47.4
17	61.2	62	65.0	107	58.0	152	65.0	197	68.3	242	66.4	287	53.6	332	48.0
18	61.1	63	65.0	108	58.0	153	65.1	198	68.3	243	66.1	288	52.9	333	48.3
19	61.1	64	64.9	109	58.0	154	65.2	199	68.3	244	65.9	289	52.2	334	48.4
20	61.1	65	64.7	110	58.0	155	65.2	200	68.3	245	66.0	290	51.4	335	48.4
21	61.1	66	64.4	111	58.0	156	65.3	201	68.2	246	66.1	291	50.6	336	48.7
22	61.2	67	64.1	112	58.0	157	65.3	202	68.2	247	66.2	292	49.9	337	49.2
23	61.5	68	63.7	113	58.0	158	65.3	203	68.2	248	66.4	293	49.2	338	49.8
24	61.8	69	63.3	114	58.1	159	65.2	204	68.2	249	66.4	294	48.5	339	50.5
25	62.1	70	63.1	115	58.1	160	65.1	205	68.1	250	66.4	295	47.8	340	51.1
26	62.3	71	63.0	116	58.1	161	65.1	206	68.1	251	66.3	296	47.4	341	51.5
27	62.6	72	62.9	117	58.1	162	65.1	207	68.1	252	66.2	297	47.0	342	51.8
28	63.0	73	62.9	118	58.2	163	65.1	208	68.1	253	66.2	298	46.8	343	52.0
29	63.4	74	62.8	119	58.2	164	65.2	209	68.0	254	66.0	299	46.5	344	52.2
30	63.7	75	62.7	120	58.3	165	65.5	210	68.0	255	65.8	300	46.3	345	52.5
31	63.9	76	62.6	121	58.4	166	65.7	211	68.0	256	65.5	301	46.5	346	52.9
32	63.9	77	62.6	122	58.6	167	65.8	212	68.0	257	65.1	302	46.8	347	53.3
33	63.8	78	62.5	123	58.9	168	65.8	213	68.0	258	64.7	303	47.3	348	53.7
34	63.8	79	62.5	124	59.5	169	65.9	214	67.9	259	64.2	304	47.5	349	54.1
35	63.9	80	62.5	125	60.2	170	66.0	215	67.9	260	63.7	305	47.3	350	54.4
36	64.0	81	62.4	126	61.0	171	66.0	216	67.9	261	63.4	306	46.9	351	54.6
37	64.1	82	62.3	127	61.7	172	66.1	217	68.0	262	63.3	307	46.5	352	54.6
38	64.0	83	62.1	128	62.3	173	66.2	218	68.1	263	63.1	308	46.4	353	54.8
39	64.0	84	61.9	129	62.7	174	66.4	219	68.0	264	63.0	309	46.6	354	55.0
40	64.0	85	61.7	130	63.0	175	66.5	220	68.0	265	62.7	310	46.8	355	55.5
41	64.2	86	61.4	131	63.2	176	66.7	221	68.0	266	62.3	311	46.9	356	56.1
42	64.3	87	61.0	132	63.4	177	66.8	222	68.0	267	61.9	312	46.9	357	56.5
43	64.4	88	60.7	133	63.6	178	66.9	223	68.1	268	61.5	313	46.8	358	57.0
44	64.6	89	60.6	134	63.9	179	67.0	224	68.1	269	61.1	314	46.6	359	57.4

Studies for W39BV will cover from Channel 26 to Channel 56

The following operations are considered in detail:

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Channel 41 Minus Offset N Lat 31 49 52 W Long 81 47 21
ERP: 17.500 kW; RCAMSL: 82.4 m.; GMSL: 24.4 m.; max HAAT: 68.4 m.
Directional Antenna Make: SWR; Model: SWLP240I ; Ref Az: 80.0
Tendered 000000 Last Updated manual Cutoff Date: 991231 Tier 0

ALAN Page 2
Receive Antenna Discrimination Employed

BPET960724KW 960724KW LAKE CITY FL ORAL ROBERTS UNIVERSITY
Channel 41 Zero Offset APP N Lat 30 17 07 W Long 82 11 01
ERP: 5000.000 kW; RCAMSL: 278.0 m.; HAAT: 243.0 m.; Maximum HAAT: 253.0 m.
Directional Antenna Make: SWR; Model: 24105 ; Ref Az: 0.0
Tendered 960724 Last Updated Cutoff Date:
FAC_ID: 82803/CURRENT DATA/FAC_ID: 82803/CURRENT DATA/
Distance from W39BV is 175.5 kilometers on a Bearing of 192.4 degrees

From Desired Operation (960724KW LAKE CITY	FL	BPET960724KW	Ch 41) to Protected Contour:	
Azimuth	12.2	22.2	32.2	42.2
Distance (km)	64.2	65.7	69.0	72.4
ERP (kW)	826.969	1043.083	1701.965	2689.612
HAAT (m.)	248.4	249.1	249.7	251.6
Sig Level (dBu)	64.0	64.0	64.0	64.0

From Undesired Operation (W39BV) to Protected Contour:	
Azimuth	192.4	186.6	180.4
Distance (km)	111.4	111.5	113.2
ERP (kW)	6.460	6.659	6.927
HAAT (m.)	68.4	68.3	67.1
Sig (dBu-R.ANT)	24.8	25.0	24.8

QRM Ratios (Desired to Undesired)	
Required (dB)	28.0
Actual (dB)	39.2

Results	OK	OK	OK	OK	OK	OK	OK	OK	OK
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From Desired Operation (960724KW LAKE CITY	FL	BPET960724KW	Ch 41) to Protected Contour:	
Azimuth	312.2	322.2	332.2	342.2
Distance (km)	63.8	65.1	66.3	66.8
ERP (kW)	836.058	1007.624	1173.496	1227.811
HAAT (m.)	240.7	242.7	246.5	248.6
Sig Level (dBu)	64.0	64.0	64.0	64.0

From Undesired Operation (W39BV) to Protected Contour:	
Azimuth	213.4	212.8	211.2
Distance (km)	154.1	142.9	132.0
ERP (kW)	6.444	6.419	6.353
HAAT (m.)	68.0	68.0	68.0
Sig (dBu-R.ANT)	17.1	19.2	21.0

QRM Ratios (Desired to Undesired)	
Required (dB)	28.0
Actual (dB)	46.9

Results	OK	OK	OK	OK	OK	OK
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Interference Caused

Overall Conclusion

From Desired Operation (BPET960724KW
960724KW Ch 41) to Protected Contour:
Azimuth 22.2
Distance (km) 65.7
ERP (kW) 1043.083
HAAT (m.) 249.1
Sig Level (dBu) 64.0

W39BV does not cause interference
to 960724KW BPET960724KW. No problem.

Summary: No problem.

From undesired operation (W39BV
W39BV Ch 41) to Protected Contour:
Azimuth 186.6
Distance (km) 111.5
ERP (kW) 6.659
HAAT (m.) 68.3
Sig (dBu-6.0) 25.0

QRM Ratios (Desired-to-Undesired):
Required (dB) 28.0
Actual (dB) 39.0

Result: No Problem

PROPOSED W39BV	HINESVILLE-RICHMOND	GA
Channel 41 Minus Offset	N Lat 31 49 52 W Long 81 47 21	
ERP: 17.500 kW; RCAMSL:	82.4 m.; GMSL: 24.4 m.; max HAAT:	68.4 m.
Directional Antenna Make:	SWR; Model: SWLP240I	; Ref Az: 80.0
Tendered 000000	Last Updated manual	Cutoff Date: 991231 Tier 0

ALAN Page 3
Receive Antenna Discrimination Employed

BNPPTT0000829AV NEW WILLACOOCHIE GA KM COMMUNICATIONS, INC.
Channel 41 Minus Offset APP N Lat 31 19 36 W Long 82 51 54
ERP: 150.000 kW; RCAMSL: 178.8 m.; Maximum HAAT: 137.0 m.
Directional Antenna Make: ANT; Model: 17729 ; Ref Az: 250.0
Tendered 000829 Last Updated Cutoff Date: 000831 Tier 0
FAC_ID:131037/CURRENT DATA/FAC_ID:131037/CURRENT DATA/
Distance from W39BV is 116.4 kilometers on a Bearing of 241.5 degrees

[illegible]

From Undesired Operation (W39BV) to Protected Contour:									
Azimuth	241.5	240.9	240.4	240.0	239.6	239.3	239.0	238.8	238.7
Distance (km)	110.8	110.8	111.1	111.5	112.2	112.9	113.7	114.6	115.6
ERP (kW)	7.657	7.645	7.633	7.622	7.605	7.590	7.578	7.568	7.563
HAAT (m.)	66.5	66.7	66.9	67.1	67.2	67.3	67.4	67.4	67.4
Sig (dBu-R.ANT)	25.6	25.6	25.6	25.5	25.4	25.2	25.1	24.9	24.7

QRM Ratios (Desired to Undesired)									
Required (dB)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Actual (dB)	48.4	48.4	48.4	48.5	48.6	48.8	48.9	49.1	49.3

[illegible][illegible]

From Undesired Operation (W39BV) to Protected Contour:									
Azimuth	238.7	238.8	238.9	237.9	236.0	235.5	249.4	247.6	244.8
Distance (km)	116.5	117.5	118.5	120.9	127.2	133.7	128.0	122.0	117.9
ERP (kW)	7.564	7.569	7.572	7.528	7.437	7.415	7.842	7.800	7.735
HAAT (m.)	67.4	67.4	67.4	67.6	67.8	67.8	66.4	66.3	66.0
Sig (dBu-R.ANT)	24.5	24.4	24.2	23.7	22.5	21.4	22.6	23.6	24.3

QRM Ratios (Desired to Undesired)									
Required (dB)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Actual (dB)	49.5	49.6	49.8	50.3	51.5	52.6	51.4	50.4	49.7

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From Undesired Operation (W39BV) to Protected Contour:								
Azimuth	244.0	244.0	243.9	243.7	243.5	243.2	242.8	241.9
Distance (km)	116.6	115.7	114.8	114.0	113.2	112.5	111.9	111.1
ERP (kW)	7.716	7.716	7.714	7.709	7.703	7.697	7.688	7.668
HAAT (m.)	65.9	65.9	65.9	66.0	66.0	66.0	66.1	66.4
Sig (dBu-R.ANT)	24.6	24.7	24.9	25.0	25.2	25.3	25.4	25.6

QRM Ratios (Desired to Undesired)									
Required (dB)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Actual (dB)	49.4	49.3	49.1	49.0	48.8	48.7	48.6	48.5	48.4

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Tendered 000000 Last Updated manual Cutoff Date: 991231 Tier 0

ALAN Page 4
Receive Antenna Discrimination Employed

From Desired Operation (W39BV	HINESVILLE-RICHMOND	GA	W39BV	Ch 41)	to Protected Contour:				
Azimuth	241.5	251.5	261.5	271.5	281.5	291.5	301.5	311.5	321.5
Distance (km)	11.0	11.1	10.9	10.6	10.3	9.5	9.0	8.9	9.0
ERP (kW)	7.657	7.856	7.856	7.822	7.556	7.103	6.664	6.300	6.331
HAAT (m.)	66.5	66.3	63.4	60.2	56.9	50.3	46.6	46.9	48.3
Sig Level (dBU)	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0

From Undesired Operation (BNPTTL000829AV) to Protected Contour:									
Azimuth	60.9	59.8	58.9	58.1	57.4	57.1	56.9	56.7	56.5
Distance (km)	105.4	105.5	106.3	107.3	108.7	110.5	112.2	113.7	115.2
ERP (Watts)	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00
HAAT (m.)	127.9	127.1	126.4	125.7	125.2	124.9	124.8	124.6	124.4
Sig (dBU-R.ANT)	11.4	11.3	11.2	10.9	10.7	10.3	10.0	9.7	9.4

QRM Ratios (Desired to Undesired)									
Required (dB)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Actual (dB)	62.6	62.7	62.8	63.1	63.3	63.7	64.0	64.3	64.6

Results	OK	OK	OK	OK	OK	OK	OK	OK	OK
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From Desired Operation (W39BV	HINESVILLE-RICHMOND	GA	W39BV	Ch 41)	to Protected Contour:				
Azimuth	331.5	341.5	141.5	151.5	161.5	171.5	181.5	191.5	201.5
Distance (km)	9.0	9.6	12.1	11.6	11.2	11.0	10.8	10.8	10.7
ERP (kW)	6.574	7.042	11.518	9.915	8.642	7.523	6.882	6.481	6.300
HAAT (m.)	47.7	51.7	65.4	65.0	65.1	66.1	67.2	68.4	68.2
Sig Level (dBU)	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0

From Undesired Operation (BNPTTL000829AV) to Protected Contour:									
Azimuth	56.4	56.3	66.6	66.6	66.4	66.1	65.7	65.2	64.5
Distance (km)	116.7	118.4	119.2	117.1	115.1	113.2	111.5	109.9	108.5
ERP (Watts)	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00	135.00
HAAT (m.)	124.4	124.3	130.8	130.8	130.7	130.6	130.4	130.1	129.8
Sig (dBU-R.ANT)	9.1	8.7	8.8	9.2	9.6	9.9	10.3	10.6	10.8

QRM Ratios (Desired to Undesired)									
Required (dB)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Actual (dB)	64.9	65.3	65.2	64.8	64.4	64.1	63.7	63.4	63.2

Results	OK	OK	OK	OK	OK	OK	OK	OK	OK
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From Desired Operation (W39BV	HINESVILLE-RICHMOND	GA	W39BV	Ch 41)	to Protected Contour:				
Azimuth	211.5	221.5	231.5						
Distance (km)	10.7	10.8	11.0						
ERP (kW)	6.361	6.790	7.233						
HAAT (m.)	68.0	68.0	67.9						
Sig Level (dBU)	74.0	74.0	74.0						

From Undesired Operation (BNPTTL000829AV) to Protected Contour:			
Azimuth	63.7	62.9	61.9
Distance (km)	107.3	106.3	105.6
ERP (Watts)	135.00	135.00	135.00
HAAT (m.)	129.5	129.2	128.7
Sig (dBU-R.ANT)	11.0	11.2	11.4

QRM Ratios (Desired to Undesired)			
Required (dB)	45.0	45.0	45.0
Actual (dB)	63.0	62.8	62.6

Results	OK	OK	OK
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Results	OK	OK	OK	OK	OK	OK
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ERP: 17.500 kW; RCAMSL: 82.4 m.; GMSL: 24.4 m.; max HAAT: 68.4 m.
Directional Antenna Make: SWR; Model: SWLP240I ; Ref Az: 80.0
Tendered 000000 Last Updated manual Cutoff Date: 991231 Tier 0

ALAN Page 6
Receive Antenna Discrimination Employed

Interference Caused

From Desired Operation (BPCDT991101AC
WIS Ch 41) to Protected Contour:
Azimuth 191.0
Distance (km) 109.3
ERP (kW) 1000.000
HAAT (m.) 434.1
Sig Level (dBu) 41.0

From undesired operation (W39BV
W39BV Ch 41) to Protected Contour:
Azimuth 27.0
Distance (km) 165.8
ERP (kW) 12.789
HAAT (m.) 62.6
Sig (dBu-14.0) 9.7

QRM Ratios (Desired-to-Undesired):
Required (dB) 21.0
Actual (dB) 31.3

Result: No Problem

Overall Conclusion

W39BV does not cause interference
to WIS BPCDT991101AC. No problem.

Summary: No problem.

SSSS	U	U	M	M	M	M	AA	RRRRR	Y	Y
S	U	U	MM	MM	MM	MM	A A	R R	Y Y	
SSSS	U	U	M	MM	M	M	A A	RRRRR	Y	
S	U	U	M	M	M	M	AAAAAA	R R	Y	
S	U	U	M	M	M	M	A A	R R	Y	
SSSSS	UUUU		M	M	M	M	A A	R R	Y	

Summary of Results of Study of W39BV

This study has not discovered any problems that warrant return of W39BV

272 records were considered in the range from Channel 26 to 56