

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Digital Television Station Construction Permit

prepared for

Gray Television Licensee, LLC

WJHG-TV Panama City, FL

Facility ID 73136

Ch. 16 1000 kW 411 m

Gray Television Licensee, LLC (“Gray”) is the licensee of digital television station WJHG-TV, Channel 18, Facility ID 73136, Panama City, FL. *Gray* herein proposes construction of the WJHG-TV post-auction facility on Channel 16. Reassignment of WJHG-TV from Channel 18 to Channel 16 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice (“CCRPN”, DA 17-317, released April 13, 2017)*.

The proposed Channel 16 operation will employ a new antenna system to be side-mounted on the WJHG-TV tower in lieu of the existing Channel 18 antenna. The tower structure corresponds to FCC Antenna Structure Registration number 1043251. No change to the overall structure height will result.

The proposed antenna is an elliptically polarized directional Dielectric model TFU-28JSC/VP-R C140 (33.3 percent vertical polarization). *Gray* proposes to operate WJHG-TV with an effective radiated power (“ERP”) of 1000 kW at 411 meters antenna height above average terrain (“HAAT”). The maximum horizontally polarized ERP is 1000 kW and the maximum vertically polarized ERP is 333 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.

A map is supplied as Figure 3 which depicts the standard predicted coverage contours. This map includes the location of Panama City, WJHG-TV's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 48 dBμ contour.

The proposed noise limited service contour ("NLSC") extends beyond that of the *CCRPN* parameters of 952 kW ERP and 411 meters HAAT. The proposal complies with §73.3700(b)(ii) as described in the following.

The *CCRPN* facility specifies the directional antenna pattern corresponding to WJHG-TV's licensed Channel 18. The antenna manufacturer cannot provide the exact pattern on the new channel due to the change in frequency and corresponding mechanical limitations of antenna construction. The directional pattern proposed herein replicates the reassignment pattern as closely as possible. The proposal results in a slightly larger coverage contour in some directions in an attempt to achieve the *CCRPN* coverage contour. Due to the difference in directional pattern, WJHG-TV qualifies under §73.3700(b)(ii)(A) for a contour extension due to the loss of coverage area resulting from the new channel assignment.

Interference study per FCC OET Bulletin 69¹ 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 reassignments as required by §73.616. The interference study output report is provided as Table 1. This satisfies §73.3700(b)(ii)(C) for the proposed NLSC extension.

The amount of NLSC extension does not exceed one percent in any direction. Figure 4 supplies a coverage contour comparison of the proposed WJHG-TV facility to the reassignment facility's contour and a one percent extension distance of the reassignment facility's contour.

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation.

Here, the contour level is adjusted with the dipole factor to match FCC application processing. Table 1's results also demonstrate that the proposed contour is within the baseline contour plus one percent. Therefore the proposed contour extension complies with §73.3700(b)(ii)(B).

The proposed WJHG-TV facility's terrain-limited population provides a 100.8 percent match of the *CCRPN* baseline facility, as detailed in the following table. The OET Bulletin 69 report summary in Table 1 also concludes that the proposed service area population is more than 95 percent of the baseline population.

Terrain Limited Population - Match of Reassignment		
Population Summary (2010 Census) OET Bulletin 69: TVStudy	Reassignment Parameters	Proposed
Within Noise Limited Contour	856,886	864,121
Not affected by terrain losses	852,588	859,823
Match of Reassignment	---	100.85%

The proposed 1000 kW ERP exceeds the maximum permitted by §73.622(f)(8)(i) for the proposed antenna HAAT of 411 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 5, the total area within the proposed WJHG-TV NLSC is 33,455 square kilometers, which does not exceed the NLSC area of WMBB(DT) (35,807 sq. km, Ch. 13, Panama City FL, BLC DT-20090220AAF). Thus, the 1000 kW ERP specified herein is in compliance with §73.622(f)(5) of the FCC's Rules.

The nearest FCC monitoring station is 375 km distant at Powder Springs, GA. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). The site location is beyond the border areas requiring international coordination. There are no authorized AM stations within 3 kilometers of the site.

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 15 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 $2.6 \mu\text{W}/\text{cm}^2$, which is 0.8 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.

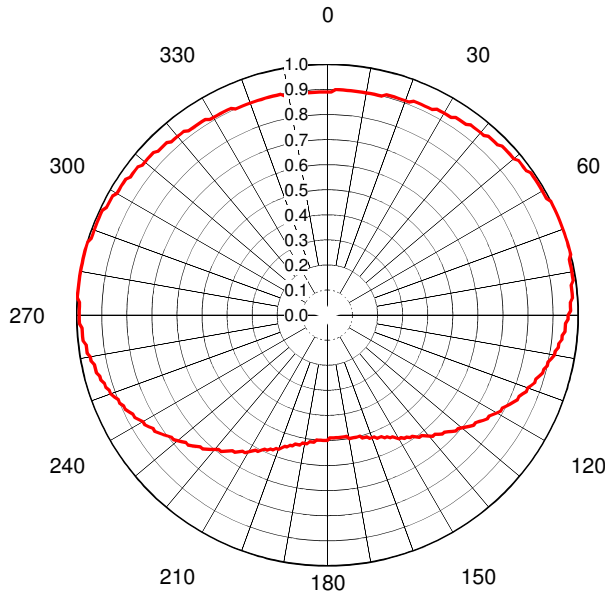
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power 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.

List of Attachments

Figure 1, 1A	Antenna Azimuthal Pattern
Figure 2	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Figure 4	Proposed Contour Expansion
Figure 5	Maximum ERP per §73.622(f)
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	June 28, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70418**
Date **11-Mar-17**
Call Letters **WJHG**
Channel **16**
Frequency **485 MHz**
Antenna Type **TFU-28JSC/VP-R C140**
Gain **1.39 (1.43dB)**
Calculated

Drawing # **WJHG C140**

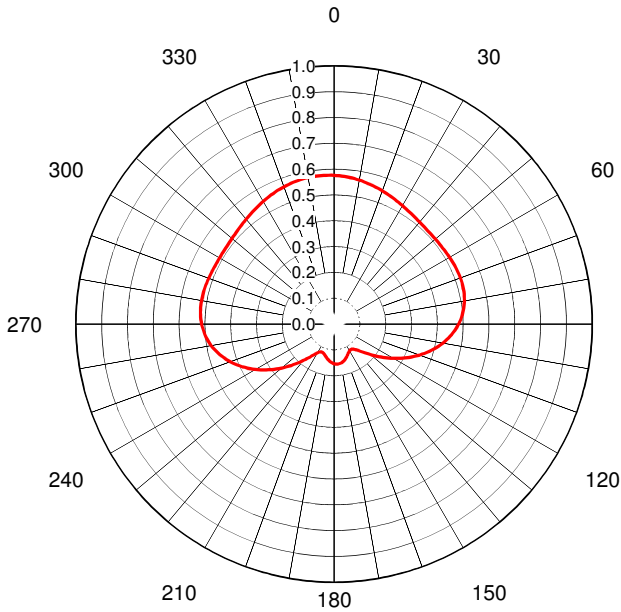
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0	0.890	36	0.940	72	1.000	108	0.870	144	0.600	180	0.500	216	0.670	252	0.930	288	0.990
1	0.890	37	0.950	73	1.000	109	0.860	145	0.590	181	0.500	217	0.680	253	0.930	289	0.990
2	0.900	38	0.950	74	1.000	110	0.850	146	0.590	182	0.500	218	0.690	254	0.940	290	0.990
3	0.900	39	0.950	75	1.000	111	0.850	147	0.580	183	0.500	219	0.690	255	0.940	291	0.990
4	0.900	40	0.950	76	1.000	112	0.840	148	0.580	184	0.500	220	0.700	256	0.950	292	0.990
5	0.900	41	0.950	77	0.990	113	0.830	149	0.570	185	0.500	221	0.710	257	0.950	293	0.990
6	0.900	42	0.960	78	0.990	114	0.830	150	0.570	186	0.510	222	0.720	258	0.950	294	0.990
7	0.900	43	0.960	79	0.990	115	0.820	151	0.560	187	0.510	223	0.730	259	0.960	295	0.990
8	0.900	44	0.960	80	0.990	116	0.810	152	0.550	188	0.510	224	0.730	260	0.960	296	0.980
9	0.900	45	0.960	81	0.990	117	0.800	153	0.550	189	0.520	225	0.740	261	0.970	297	0.980
10	0.900	46	0.970	82	0.990	118	0.790	154	0.540	190	0.520	226	0.750	262	0.970	298	0.980
11	0.900	47	0.970	83	0.980	119	0.790	155	0.540	191	0.520	227	0.760	263	0.970	299	0.980
12	0.900	48	0.970	84	0.980	120	0.780	156	0.530	192	0.530	228	0.760	264	0.980	300	0.970
13	0.900	49	0.970	85	0.980	121	0.770	157	0.530	193	0.530	229	0.770	265	0.980	301	0.970
14	0.900	50	0.970	86	0.980	122	0.760	158	0.530	194	0.530	230	0.780	266	0.980	302	0.970
15	0.910	51	0.980	87	0.970	123	0.760	159	0.520	195	0.540	231	0.790	267	0.980	303	0.970
16	0.910	52	0.980	88	0.970	124	0.750	160	0.520	196	0.540	232	0.790	268	0.990	304	0.970
17	0.910	53	0.980	89	0.970	125	0.740	161	0.520	197	0.550	233	0.800	269	0.990	305	0.960
18	0.910	54	0.980	90	0.960	126	0.730	162	0.510	198	0.550	234	0.810	270	0.990	306	0.960
19	0.910	55	0.990	91	0.960	127	0.730	163	0.510	199	0.560	235	0.820	271	0.990	307	0.960
20	0.910	56	0.990	92	0.950	128	0.720	164	0.510	200	0.570	236	0.830	272	0.990	308	0.960
21	0.910	57	0.990	93	0.950	129	0.710	165	0.500	201	0.570	237	0.830	273	0.990	309	0.950
22	0.920	58	0.990	94	0.950	130	0.700	166	0.500	202	0.580	238	0.840	274	1.000	310	0.950
23	0.920	59	0.990	95	0.940	131	0.690	167	0.500	203	0.580	239	0.850	275	1.000	311	0.950
24	0.920	60	0.990	96	0.940	132	0.690	168	0.500	204	0.590	240	0.850	276	1.000	312	0.950
25	0.920	61	0.990	97	0.930	133	0.680	169	0.500	205	0.590	241	0.860	277	1.000	313	0.950
26	0.920	62	0.990	98	0.930	134	0.670	170	0.500	206	0.600	242	0.870	278	1.000	314	0.940
27	0.920	63	1.000	99	0.920	135	0.660	171	0.490	207	0.610	243	0.870	279	1.000	315	0.940
28	0.930	64	1.000	100	0.920	136	0.660	172	0.490	208	0.610	244	0.880	280	1.000	316	0.940
29	0.930	65	1.000	101	0.910	137	0.650	173	0.490	209	0.620	245	0.890	281	1.000	317	0.940
30	0.930	66	1.000	102	0.900	138	0.640	174	0.490	210	0.630	246	0.890	282	1.000	318	0.930
31	0.930	67	1.000	103	0.900	139	0.640	175	0.490	211	0.640	247	0.900	283	1.000	319	0.930
32	0.930	68	1.000	104	0.890	140	0.630	176	0.490	212	0.640	248	0.900	284	1.000	320	0.930
33	0.940	69	1.000	105	0.890	141	0.620	177	0.490	213	0.650	249	0.910	285	1.000	321	0.930
34	0.940	70	1.000	106	0.880	142	0.610	178	0.490	214	0.660	250	0.920	286	1.000	322	0.930
35	0.940	71	1.000	107	0.870	143	0.610	179	0.490	215	0.660	251	0.920	287	1.000	323	0.920



Figure 1
Antenna Azimuthal Pattern
Horizontal Polarization
WJHG-TV Panama City, FL
Facility ID 73136
Ch. 16 1000 kW 411 m

prepared for
Gray Television Licensee, LLC

June, 2017



AZIMUTH PATTERN

Proposal No.	C-70418
Date	11-Mar-17
Call Letters	WJHG
Channel	16
Frequency	485 MHz
Antenna Type	TFU-28JSC/VP-R C140
Gain	1.83 (2.62dB)
	Calculated

Drawing # C140V D16

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.576	36	0.520	72	0.521	108	0.368	144	0.120	180	0.154	216	0.157	252	0.440
1	0.575	37	0.519	73	0.520	109	0.360	145	0.119	181	0.153	217	0.163	253	0.446
2	0.575	38	0.518	74	0.520	110	0.352	146	0.118	182	0.152	218	0.170	254	0.452
3	0.574	39	0.517	75	0.519	111	0.343	147	0.118	183	0.150	219	0.177	255	0.458
4	0.573	40	0.516	76	0.518	112	0.335	148	0.118	184	0.149	220	0.184	256	0.463
5	0.572	41	0.515	77	0.517	113	0.326	149	0.119	185	0.147	221	0.191	257	0.469
6	0.571	42	0.514	78	0.516	114	0.317	150	0.120	186	0.146	222	0.199	258	0.474
7	0.570	43	0.514	79	0.515	115	0.309	151	0.121	187	0.144	223	0.207	259	0.478
8	0.569	44	0.513	80	0.513	116	0.300	152	0.123	188	0.142	224	0.215	260	0.483
9	0.567	45	0.513	81	0.511	117	0.291	153	0.124	189	0.140	225	0.223	261	0.487
10	0.566	46	0.512	82	0.509	118	0.283	154	0.126	190	0.138	226	0.231	262	0.491
11	0.564	47	0.512	83	0.506	119	0.274	155	0.128	191	0.136	227	0.239	263	0.494
12	0.563	48	0.512	84	0.504	120	0.265	156	0.130	192	0.134	228	0.248	264	0.498
13	0.561	49	0.512	85	0.501	121	0.257	157	0.132	193	0.132	229	0.257	265	0.501
14	0.560	50	0.512	86	0.498	122	0.248	158	0.134	194	0.130	230	0.265	266	0.504
15	0.558	51	0.512	87	0.494	123	0.239	159	0.136	195	0.128	231	0.274	267	0.506
16	0.556	52	0.513	88	0.491	124	0.231	160	0.138	196	0.126	232	0.283	268	0.509
17	0.554	53	0.513	89	0.487	125	0.223	161	0.140	197	0.124	233	0.291	269	0.511
18	0.552	54	0.513	90	0.483	126	0.215	162	0.142	198	0.123	234	0.300	270	0.513
19	0.551	55	0.514	91	0.478	127	0.207	163	0.144	199	0.121	235	0.309	271	0.515
20	0.549	56	0.514	92	0.474	128	0.199	164	0.146	200	0.120	236	0.317	272	0.516
21	0.547	57	0.515	93	0.469	129	0.191	165	0.147	201	0.119	237	0.326	273	0.517
22	0.545	58	0.516	94	0.463	130	0.184	166	0.149	202	0.118	238	0.335	274	0.518
23	0.543	59	0.516	95	0.458	131	0.177	167	0.150	203	0.118	239	0.343	275	0.519
24	0.541	60	0.517	96	0.452	132	0.170	168	0.152	204	0.118	240	0.352	276	0.520
25	0.539	61	0.517	97	0.446	133	0.163	169	0.153	205	0.119	241	0.360	277	0.520
26	0.537	62	0.518	98	0.440	134	0.157	170	0.154	206	0.120	242	0.368	278	0.521
27	0.535	63	0.519	99	0.434	135	0.151	171	0.154	207	0.121	243	0.376	279	0.521
28	0.533	64	0.519	100	0.427	136	0.146	172	0.155	208	0.123	244	0.384	280	0.521
29	0.531	65	0.520	101	0.421	137	0.141	173	0.155	209	0.126	245	0.392	281	0.521
30	0.530	66	0.520	102	0.414	138	0.137	174	0.156	210	0.129	246	0.399	282	0.521
31	0.528	67	0.521	103	0.406	139	0.133	175	0.156	211	0.133	247	0.406	283	0.521
32	0.526	68	0.521	104	0.399	140	0.129	176	0.156	212	0.137	248	0.414	284	0.520
33	0.525	69	0.521	105	0.392	141	0.126	177	0.155	213	0.141	249	0.421	285	0.520
34	0.523	70	0.521	106	0.384	142	0.123	178	0.155	214	0.146	250	0.427	286	0.519
35	0.522	71	0.521	107	0.376	143	0.121	179	0.154	215	0.151	251	0.434	287	0.519



Figure 1A
Antenna Azimuthal Pattern
Vertical Polarization
WJHG-TV Panama City, FL
Facility ID 73136
Ch. 16 1000 kW 411 m

prepared for
Gray Television Licensee, LLC

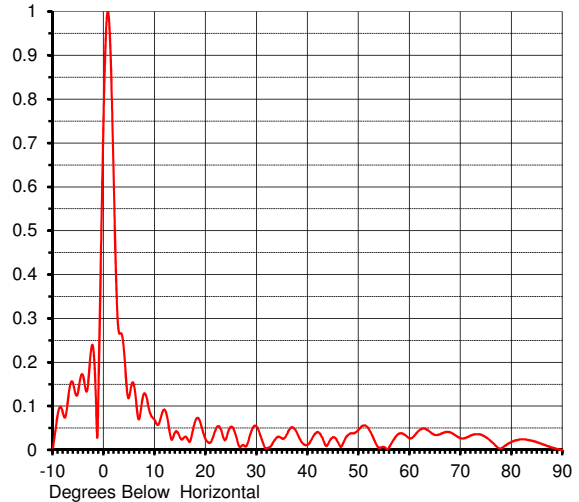
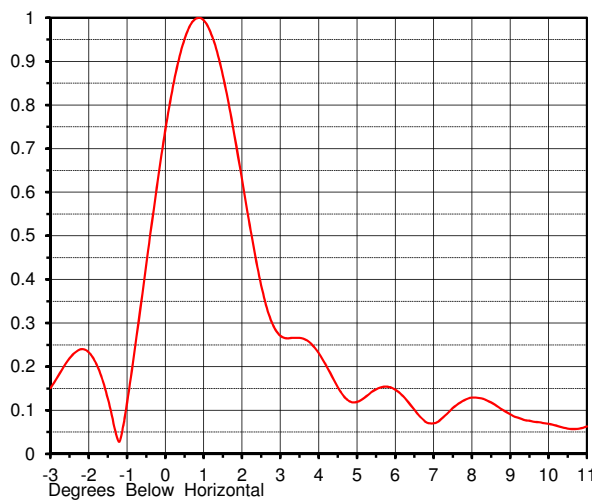
June, 2017

ELEVATION PATTERN

Proposal No. **C-70418**
 Date **11-Mar-17**
 Call Letters **WJHG**
 Channel **16**
 Frequency **485 MHz**
 Antenna Type **TFU-28JSC/VP-R C140**

RMS Directivity at Main Lobe **26.5 (14.23 dB)**
 RMS Directivity at Horizontal **14.6 (11.64 dB)**
Calculated

Beam Tilt **0.75 deg**
 Drawing Number **28J265075**

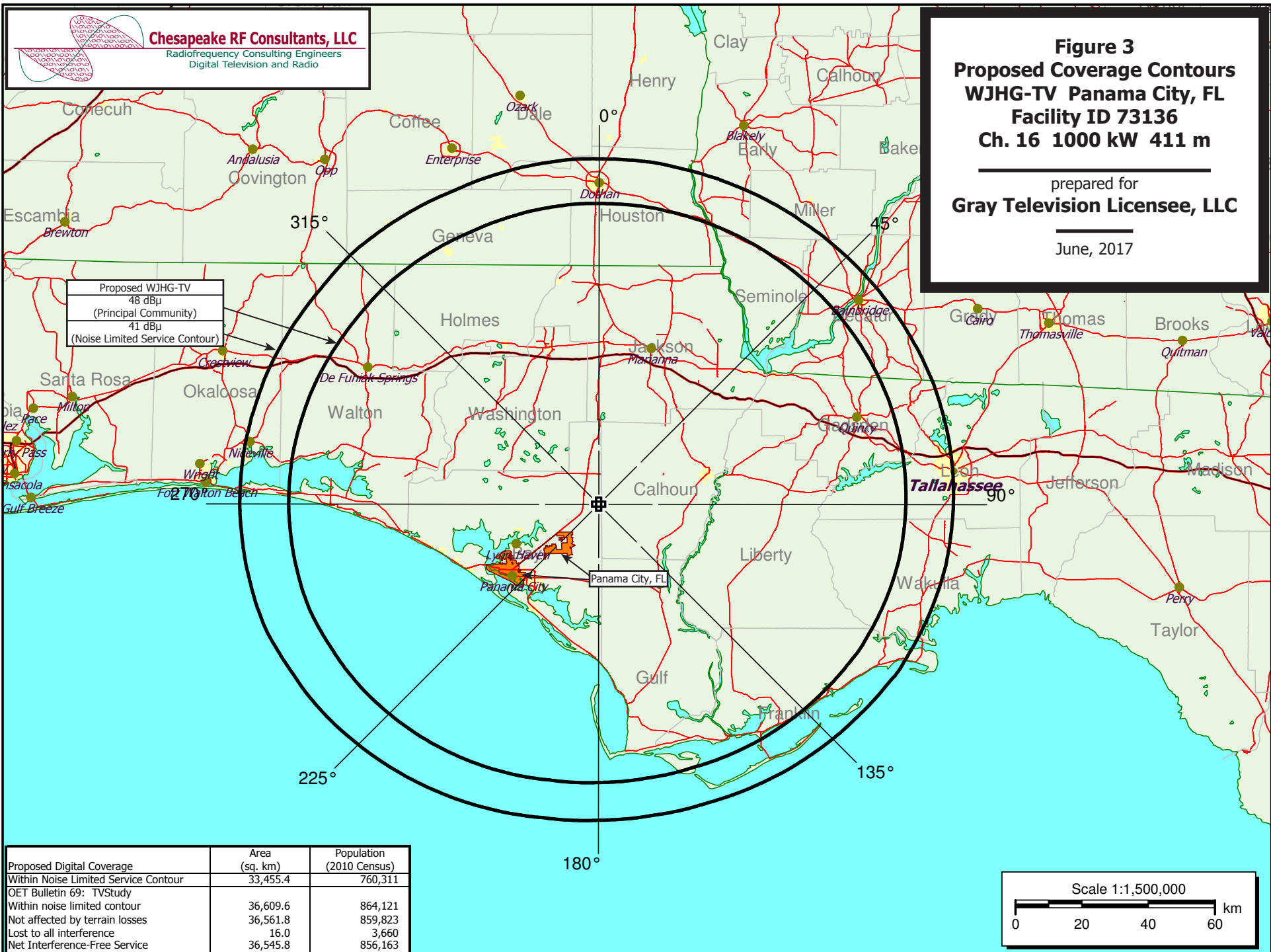


Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
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-9.0	0.084	11.0	0.067	31.0	0.023	51.0	0.056	71.0	0.028
-8.0	0.083	12.0	0.090	32.0	0.004	52.0	0.047	72.0	0.033
-7.0	0.119	13.0	0.035	33.0	0.013	53.0	0.023	73.0	0.036
-6.0	0.150	14.0	0.041	34.0	0.029	54.0	0.004	74.0	0.035
-5.0	0.137	15.0	0.027	35.0	0.026	55.0	0.006	75.0	0.028
-4.0	0.165	16.0	0.030	36.0	0.038	56.0	0.007	76.0	0.019
-3.0	0.164	17.0	0.022	37.0	0.052	57.0	0.026	77.0	0.008
-2.0	0.222	18.0	0.068	38.0	0.036	58.0	0.038	78.0	0.004
-1.0	0.176	19.0	0.060	39.0	0.015	59.0	0.035	79.0	0.012
0.0	0.795	20.0	0.023	40.0	0.012	60.0	0.026	80.0	0.019
1.0	0.982	21.0	0.018	41.0	0.030	61.0	0.034	81.0	0.022
2.0	0.577	22.0	0.049	42.0	0.041	62.0	0.046	82.0	0.024
3.0	0.266	23.0	0.045	43.0	0.023	63.0	0.048	83.0	0.023
4.0	0.217	24.0	0.027	44.0	0.014	64.0	0.041	84.0	0.021
5.0	0.123	25.0	0.053	45.0	0.029	65.0	0.034	85.0	0.017
6.0	0.141	26.0	0.028	46.0	0.016	66.0	0.036	86.0	0.013
7.0	0.073	27.0	0.009	47.0	0.017	67.0	0.041	87.0	0.009
8.0	0.129	28.0	0.010	48.0	0.035	68.0	0.040	88.0	0.005
9.0	0.086	29.0	0.045	49.0	0.038	69.0	0.033	89.0	0.002
								90.0	0.000

Figure 2
Antenna Elevation Pattern
WJHG-TV Panama City, FL
Facility ID 73136
Ch. 16 1000 kW 411 m

prepared for
Gray Television Licensee, LLC

June, 2017





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

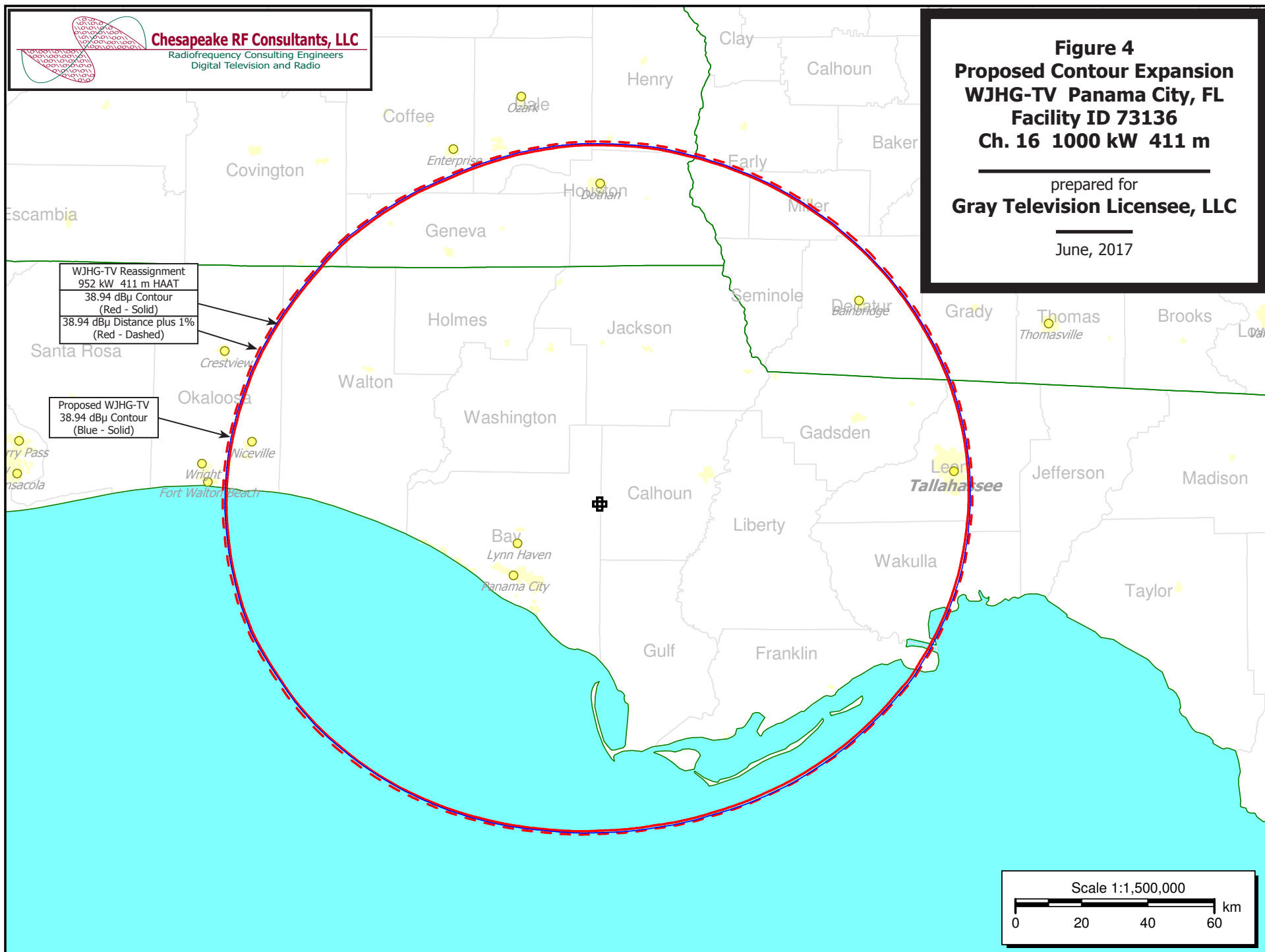
Figure 4
Proposed Contour Expansion
WJHG-TV Panama City, FL
Facility ID 73136
Ch. 16 1000 kW 411 m

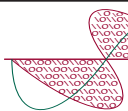
prepared for
Gray Television Licensee, LLC

June, 2017

WJHG-TV Reassignment
952 kW 411 m HAAT
38.94 dBμ Contour
(Red - Solid)
38.94 dBμ Distance plus 1%
(Red - Dashed)

Proposed WJHG-TV
38.94 dBμ Contour
(Blue - Solid)





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

Figure 5
Maximum ERP per §73.622(f)
WJHG-TV Panama City, FL
Facility ID 73136
Ch. 16 1000 kW 411 m

prepared for
Gray Television Licensee, LLC

June, 2017

WMBB(DT) Ch. 13 Panama City, FL
BLCDDT-20090220AAF
36 dBμ Contour (NLSC)
Area: 35,807 sq. km

Proposed WJHG-TV
41 dBμ Contour (NLSC)
Area: 33,455 sq. km

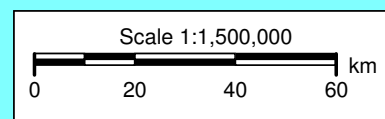
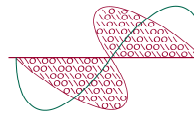


Table 1 WJHG-TV OET Bulletin 69 Interference Study
(page 1 of 8)



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

tvstudy v2.2.2

Database: localhost, Study: WJHG-TV 1000KW PROP, Model: Longley-Rice
Start: 2017.06.28 19:31:28

Study created: 2017.06.28 19:31:18

Study build station data: LMS TV 2017-06-27 LMSTV

Proposal: WJHG-TV D16 DT APP PANAMA CITY, FL
File number: WJHG-TV 1000KW PROP
Facility ID: 73136
Station data: User record
Record ID: 670
Country: U.S.

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WPMI-TV	D15	DT	LIC	MOBILE, AL	BLCDT20090618ABA	214.2 km
WRBL	D15	DT	LIC	COLUMBUS, GA	BLCDT20061013ABV	226.1
W47EI-D	D16	DC	BL	BIRMINGHAM, AL	DTVBL24257	372.9
WCJB-TV	D16	DT	LIC	GAINESVILLE, FL	BLCDT20071119AJB	302.0
WDMA-CD	D16	DC	CP	MACON, GA	BLANK0000024851	321.0
WDMA-CD	D16	DC	BL	MACON, GA	DTVBL21150	321.0
WPXA-TV	D16	DT	BL	ROME, GA	DTVBL51969	445.7
WSAV-TV	D16	DT	BL	SAVANNAH, GA	DTVBL48662	432.8
WMAH-TV	D16	DT	LIC	BILOXI, MS	BLEDT20110404AGM	343.1
WLGA	D17	DT	BL	OPELIKA, AL	DTVBL11113	226.1
WEAR-TV	D17	DT	LIC	PENSACOLA, FL	BLCDT20050627AAK	217.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16
Latitude: 30 21 9.00 N (NAD83)
Longitude: 85 23 28.00 W
Height AMSL: 439.0 m
HAAT: 410.9 m
Peak ERP: 1000 kW
Antenna: TFU-28JSC C140 20170628 0.0 deg

38.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	792 kW	398.2 m	108.5 km
45.0	922	398.0	110.1
90.0	922	412.3	111.4
135.0	442	413.4	103.9
180.0	250	416.7	98.9
225.0	548	421.1	106.8
270.0	980	420.0	112.8
315.0	884	407.9	110.6

ERP exceeds maximum

ERP: 1000 kW ERP maximum: 820 kW

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

Distance to Canadian border: 1281.9 km

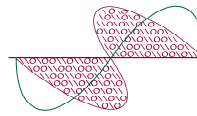
Distance to Mexican border: 1229.6 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 9.0 degrees Distance: 395.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 306.6 degrees Distance: 2095.3 km

Table 1 WJHG-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

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%

Interference to BLCDT20090618ABA LIC, scenario 1
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 1
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 2
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 3
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 4
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 5
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 6
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 7
Proposal causes no interference.

Interference to BLCDT20061013ABV LIC, scenario 8
Proposal causes no interference.

Interference to DTVBL24257 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL24257 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL24257 BL, scenario 3
Proposal causes no interference.

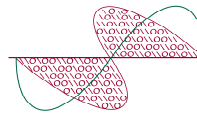
Interference to DTVBL24257 BL, scenario 4
Proposal causes no interference.

Interference to BLCDT20071119AJB LIC, scenario 1
Proposal causes no interference.

Interference to BLCDT20071119AJB LIC, scenario 2
Proposal causes no interference.

Interference to BLCDT20071119AJB LIC, scenario 3
Proposal causes no interference.

Table 1 WJHG-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Interference to BLCDT20071119AJB LIC, scenario 4
Proposal causes no interference.

Interference to BLCDT20071119AJB LIC, scenario 5
Proposal causes no interference.

Interference to BLCDT20071119AJB LIC, scenario 6
Proposal causes no interference.

Interference to BLCDT20071119AJB LIC, scenario 7
Proposal causes no interference.

Interference to BLCDT20071119AJB LIC, scenario 8
Proposal causes no interference.

Interference to BLANK0000024851 CP, scenario 1
Proposal causes no interference.

Interference to BLANK0000024851 CP, scenario 2
Proposal causes no interference.

Interference to DTVBL21150 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL21150 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 4
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 5
Proposal causes no interference.

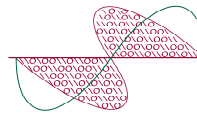
Interference to DTVBL51969 BL, scenario 6
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 7
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 8
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 9
Proposal causes no interference.

Table 1 WJHG-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Interference to DTVBL51969 BL, scenario 10
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 11
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 12
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 13
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 14
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 15
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 16
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 17
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 18
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 19
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 20
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 21
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 22
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 23
Proposal causes no interference.

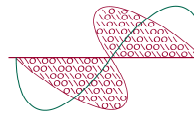
Interference to DTVBL51969 BL, scenario 24
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 25
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 26
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 27
Proposal causes no interference.

Table 1 WJHG-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Interference to DTVBL51969 BL, scenario 28
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 29
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 30
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 31
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 32
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 33
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 34
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 35
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 36
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 37
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 38
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 39
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 40
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 41
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 42
Proposal causes no interference.

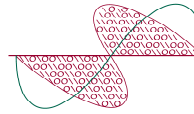
Interference to DTVBL51969 BL, scenario 43
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 44
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 45
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 46

Table 1 WJHG-TV OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 47
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 48
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 49
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 50
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 51
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 52
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 53
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 54
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 55
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 56
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 57
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 58
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 59
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 60
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 61
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 62
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 63
Proposal causes no interference.

Interference to DTVBL51969 BL, scenario 64
Proposal causes no interference.

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Interference to DTVBL48662 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 3
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 4
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 5
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 6
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 7
Proposal causes no interference.

Interference to DTVBL48662 BL, scenario 8
Proposal causes no interference.

Interference to BLEDT20110404AGM LIC, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMAH-TV	D16	DT	LIC	BILOXI, MS	BLEDT20110404AGM	
Undesireds:	WJHG-TV	D16	DT	BL	PANAMA CITY, FL	DTVBL73136	343.1 km
	WJHG-TV	D16	DT	APP	PANAMA CITY, FL	WJHG-TV 1000KW PROP	343.1
	WPMI-TV	D15	DT	LIC	MOBILE, AL	BLCDT20090618ABA	128.9
	WNOL-TV	D15	DT	LIC	NEW ORLEANS, LA	BLCDT20121019AAR	132.0
	W47EI-D	D16	DC	BL	BIRMINGHAM, AL	DTVBL24257	363.9
	KADN-TV	D16	DT	LIC	LAFAYETTE, LA	BLCDT20060630AFZ	315.9
	WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDT20070405ABC	338.1
	WEAR-TV	D17	DT	LIC	PENSACOLA, FL	BLCDT20050627AAK	125.3
	WUPL	D17	DT	BL	SLIDELL, LA	DTVBL13938	139.1
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
31970.3	1,257,393	31938.5	1,256,995	30339.6	1,056,873	30339.6 1,056,873	0.00 0.00
Undesired			Total IX	Unique IX, before		Unique IX, after	
WJHG-TV D16 DT BL	71.7		4,062	15.9		2	
WJHG-TV D16 DT APP	71.7		4,062			15.9 2	
WPMI-TV D15 DT LIC	1070.7		176,775	19.9		3,891	
WNOL-TV D15 DT LIC	184.6		8,635	0.0		0	
KADN-TV D16 DT LIC	71.8		2,151	55.8		517	
WLOV-TV D16 DT LIC	7.9		54	7.9		54	
WEAR-TV D17 DT LIC	1214.4		182,121	163.6		9,237	
WUPL D17 DT BL	285.0		13,537	100.4		4,902	

Interference to DTVBL11113 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL11113 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL11113 BL, scenario 3
Proposal causes no interference.

Table 1 WJHG-TV OET Bulletin 69 Interference Study
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Interference to DTVBL11113 BL, scenario 4
Proposal causes no interference.

Interference to BLCDT20050627AAK LIC, scenario 1
Proposal causes no interference.

Interference to proposal, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WJHG-TV	D16	DT	APP	PANAMA CITY, FL	WJHG-TV 1000KW PROP	
Undesireds:	W47EI-D	D16	DC	BL	BIRMINGHAM, AL	DTVBL24257	372.9 km
	WCJB-TV	D16	DT	LIC	GAINESVILLE, FL	BLCDT20071119AJB	302.0
	WDMA-CD	D16	DC	CP	MACON, GA	BLANK0000024851	321.0
	WMAH-TV	D16	DT	LIC	BILOXI, MS	BLEDT20110404AGM	343.1
	Service area	Terrain-limited		IX-free	Percent IX		
	36609.6 864,121	36561.8	859,823	36545.8	856,163	0.04 0.43	
Undesired				Total IX	Unique IX	Prcnt Unique IX	
WCJB-TV D16 DT LIC				12.0 3,578 12.0	3,578	0.03 0.42	
WMAH-TV D16 DT LIC				4.0 82 4.0	82	0.01 0.01	

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	73136
	State	Florida
	City	PANAMA CITY
	DTV Channel	16
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	3

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1043251
Coordinates (NAD83)	Latitude	30° 21' 09.0" N+
	Longitude	085° 23' 28.0" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	446.7 meters
	Support Structure Height	427.7 meters
	Ground Elevation (AMSL)	24.0 meters
Antenna Data	Height of Radiation Center Above Ground Level	415.0 meters
	Height of Radiation Center Above Average Terrain	410.9 meters
	Height of Radiation Center Above Mean Sea Level	439.0 meters
	Effective Radiated Power	1000 kW

Antenna
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TFU-28JSC/VP-R C140
	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 _A (Authorized Value)	Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)
0	0.890	90	0.960	180	0.500	270	0.990
10	0.900	100	0.920	190	0.520	280	1.000
20	0.910	110	0.850	200	0.570	290	0.990
30	0.930	120	0.780	210	0.630	300	0.970
40	0.950	130	0.700	220	0.700	310	0.950
50	0.970	140	0.630	230	0.780	320	0.930
60	0.990	150	0.570	240	0.850	330	0.910
70	1.000	160	0.520	250	0.920	340	0.900
80	0.990	170	0.500	260	0.960	350	0.890

Additional Azimuths

Degree	V _A
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Construction
Permit
Certifications

Section	Question	Response
Post-Incentive Auction Expedited Processing	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
Environmental Effect	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
Broadcast Facility	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