

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF
DTV CONSTRUCTION PERMIT
DTV STATION WTLH-DT
BAINBRIDGE, GEORGIA
CH 50 230 KW 597 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for modification of construction permit for DTV station WTLH-DT on channel 50 at Bainbridge, Georgia. Station WTLH-DT is currently authorized (BPCDT-19980928KH) to operate on channel 50 with a non-directional effective radiated power (ERP) of 1000 kilowatts and an antenna radiation center height above average terrain (HAAT) of 578 meters. It is proposed to modify the authorized facility by increasing the antenna radiation center height above average terrain (HAAT) to 597 meters and decreasing the maximum directional ERP to 230 kW. No other changes are proposed.

Compliance with the current DTV Freeze

The proposed 41 dBu contour will not extend beyond the currently authorized 41 dBu contour in compliance with the FCC's *Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes*. Figure 2 is a map showing the 41 dBu contours for the authorized and proposed facilities. As shown on Figure 2, the proposed noise-limited contour is wholly encompassed by the authorized noise-limited contour.

Proposed Operation

It is proposed to operate on DTV channel 50 from the following site coordinates, N 30°40'51" W 83°58'21". It is also proposed to operate with an ERI ATW30H2-HTOU-49H horizontally polarized non-directional antenna, a maximum ERP of 230 kW and an HAAT of 597 meters.

Notification to the FAA is not necessary, as there is no proposed change in the overall height of the existing structure. The

antenna structure registration number (ASRN) for the existing tower is 1054890.

Response to Paragraph 10 - Antenna Data

Figure 1 provides the vertical plane radiation pattern data for the ERI ATW30H2-HTOU-49H antenna.

Response to Paragraph 12 - City Coverage

Figure 2 is a map showing the FCC predicted DTV coverage contours. The map provides the FCC predicted 41 dBu f(50,90) noise-limited contour and 48 dBu f(50,90) city grade contour. The extent of the contours has been calculated using the normal FCC prediction method and a 30-second digitized terrain database. The Bainbridge city limits were derived from information contained in the 2000 U.S. Census for Georgia. As shown, the 48 dBu contour encompasses the entire city limits of Bainbridge.

NTSC/DTV/Class A Allocation Considerations

Figure 3 is a DTV channel 50 separation study toward other NTSC and DTV allotments based on a 50 kilometer "buffer". Although the separation requirements are only applicable to new DTV allotments, they can be used as an indication of which stations have the potential of receiving interference from the proposed channel 50 DTV operation.

An interference analysis has been conducted using the procedures outlined in the FCC's OET-69 bulletin, which demonstrates that the proposal complies with the interference protection provisions of Section 73.623(c)(2).¹ Interference calculations for the proposed operation are summarized below with respect to all authorized NTSC, DTV, and Class A facilities.

¹ The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. A Sun based processor computer system was employed.

Station	Facility	Ch.	City	State	FCC Service Population	Proposed Interference Population	% of Baseline
WBVJ-LP	LIC	35	VALDOSTA	GA	--	--	None
WBXT-CA	LIC	43	TALLAHASSEE	FL	--	--	None
WTLH	LIC	49	BAINBRIDGE	GA	--	--	None
WXTX	CPMOD	49	COLUMBUS	GA	--	--	None
WBRC-DT	PLN	50	BIRMINGHAM	AL	--	--	None
WFGX-TV	LIC	50	FT. WALTON BEACH	FL	--	--	None
WFGX-DT	APP	50	FT. WALTON BEACH	FL	--	--	None
WFGX-DT	CPMOD	50	FT. WALTON BEACH	FL	--	--	None
WFTT	LIC	50	TAMPA	FL	--	--	None
WGNM-DT	PLN	50	MACON	GA	--	--	None
WGS-CA	LIC	50	SAVANNAH	GA	--	--	None
WBIF	LIC	51	MARIANNA	FL	--	--	None
WSST-DT	CPMOD	51	CORDELE	GA	--	--	None
WSST-DT	PLN	51	CORDELE	GA	--	--	None
W38DG	LIC	51	TIFTON	GA	--	--	None
WFXU	LIC	57	LIVE OAK	FL	--	--	None

As shown above, the proposal on channel 50 complies with the FCC's interference standards towards all authorized NTSC, DTV and Class A stations.

Objectionable Interference

There are no known authorized full service AM stations within 5 kilometers (3 miles) of the proposed transmitter site. Figure 4 provides a tabulation of the FM and TV stations within 16 kilometers of the proposed site. Although no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to correct problems, which are a result of its proposed DTV operation.

The proposed transmitter site is 1229 kilometers from the Canadian border. It is also more than 1056 kilometers from the US/Mexican border area. The closest FCC monitoring is at Powder Springs, Georgia, approximately 361 kilometers to the north. The proposed DTV site is outside the National Radio Quiet Zone (VA/WVA), the closest point being 823 kilometers to the north-northeast. The

closest point of the Table Mountain Radio Quiet Zone (CO) is more than 2185 kilometers to the northwest. The closest radio astronomy site operating on TV channel 37 is at Green Bank, West Virginia located approximately 941 kilometers to the north-northeast. These separations are sufficient to not be a concern for coordination purposes.

Response to Paragraph 13 - Environmental Protection Act

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields². The power density at the base of the tower was calculated using the appropriate procedures contained in the Bulletin.

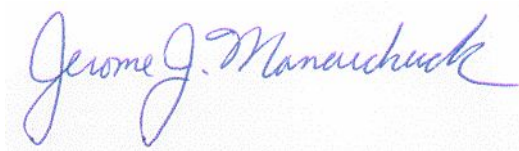
The radiation center for the proposed DTV antenna is located 598 meters above ground level. The maximum DTV ERP is 230 kW. A conservative vertical plane relative field value of 0.1 (for angles below 60 degrees downward) is assumed for the antenna's downward radiation (see Sheet 2 of Figure 1). The calculated power density at a point 2 meters above ground level is 0.0002 mW/cm². This is 0.04% of the FCC's recommended limit of 0.46 mW/cm² for DTV channel 50 for an "uncontrolled" environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the FCC'S RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with RFR warning signs. Furthermore, in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure.

² OET Bulletin 65, Second Edition 97-01, August, 1997.

Finally, it is noted that this technical exhibit only addresses the potential for radio frequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already has been provided to the FCC by the tower owner as part of the tower registration process.

If there are questions concerning the technical portion of this application, please contact the office of the undersigned.



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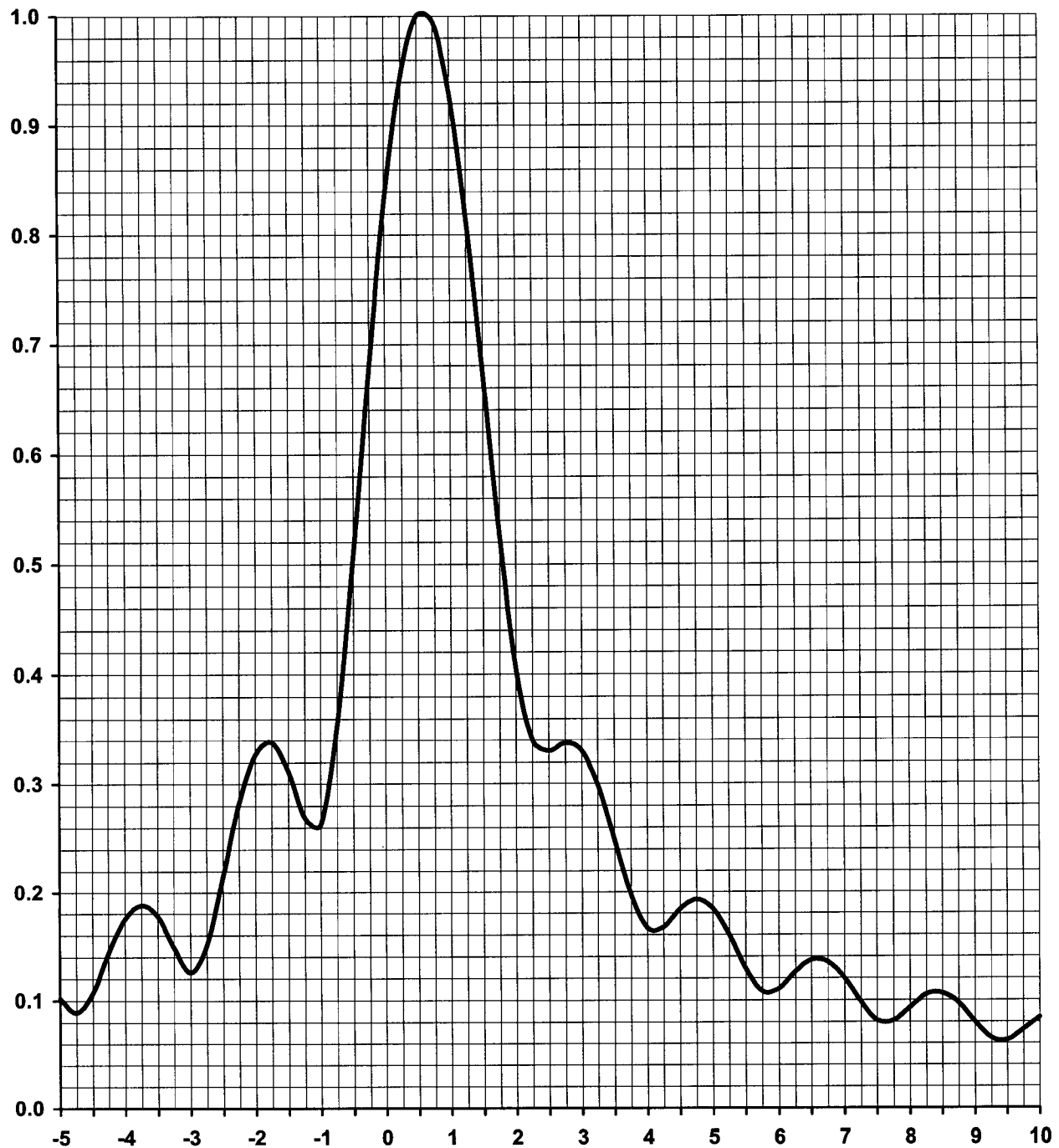
ELEVATION PATTERN

TYPE: ATW30H2H

Directivity:	<u>Numeric</u>	<u>dBd</u>
Main Lobe:	<u>30.00</u>	<u>14.77</u>
Horizontal:	<u>20.72</u>	<u>13.16</u>

Frequency: 50 (Digital)

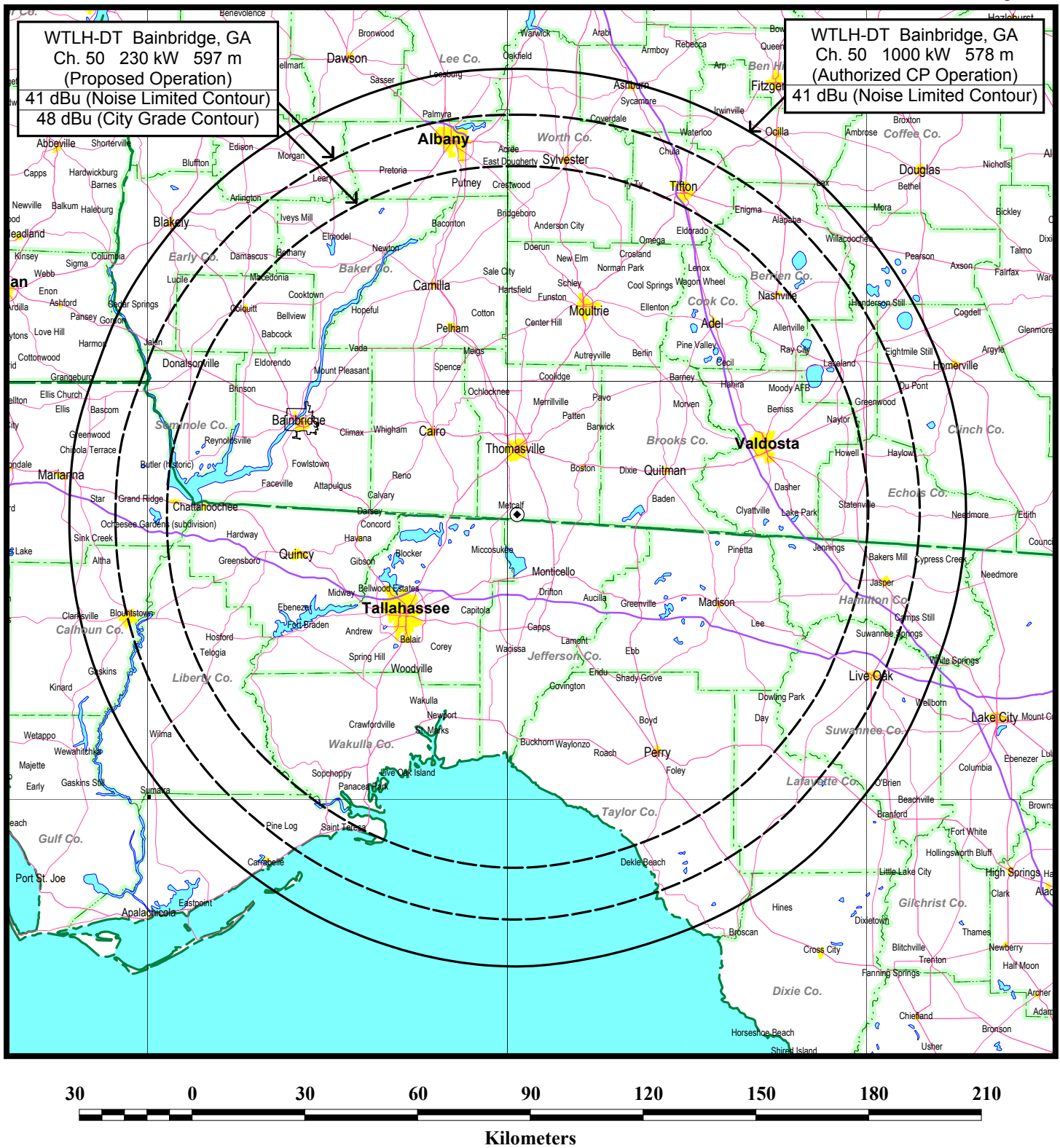
Location:	<u>Bainbridge, GA</u>
Beam Tilt:	<u>0.60</u>
Polarization:	<u>Horizontal</u>



TABULATED DATA FOR ELEVATION PATTERN**ATW30H2H****-5 to 10 degrees in 0.25 increments****10 to 90 degrees in 0.50 increments**

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.102	-19.83	6.75	0.135	-17.39	27.00	0.038	-28.40	50.50	0.028	-31.06	74.00	0.028	-31.06
-4.75	0.089	-21.01	7.00	0.120	-18.42	27.50	0.034	-29.37	51.00	0.022	-33.15	74.50	0.023	-32.77
-4.50	0.107	-19.41	7.25	0.098	-20.18	28.00	0.024	-32.40	51.50	0.022	-33.15	75.00	0.022	-33.15
-4.25	0.144	-16.83	7.50	0.081	-21.83	28.50	0.028	-31.06	52.00	0.029	-30.75	75.50	0.024	-32.40
-4.00	0.175	-15.14	7.75	0.081	-21.83	29.00	0.037	-28.64	52.50	0.034	-29.37	76.00	0.029	-30.75
-3.75	0.188	-14.52	8.00	0.093	-20.63	29.50	0.033	-29.63	53.00	0.034	-29.37	76.50	0.034	-29.37
-3.50	0.178	-14.99	8.25	0.105	-19.58	30.00	0.024	-32.40	53.50	0.027	-31.37	77.00	0.038	-28.40
-3.25	0.149	-16.54	8.50	0.106	-19.49	30.50	0.027	-31.37	54.00	0.021	-33.56	77.50	0.042	-27.54
-3.00	0.126	-17.99	8.75	0.097	-20.26	31.00	0.035	-29.12	54.50	0.023	-32.77	78.00	0.045	-26.94
-2.75	0.151	-16.42	9.00	0.080	-21.94	31.50	0.033	-29.63	55.00	0.030	-30.46	78.50	0.046	-26.74
-2.50	0.215	-13.35	9.25	0.065	-23.74	32.00	0.024	-32.40	55.50	0.035	-29.12	79.00	0.046	-26.74
-2.25	0.282	-11.00	9.50	0.063	-24.01	32.50	0.025	-32.04	56.00	0.035	-29.12	79.50	0.046	-26.74
-2.00	0.327	-9.71	9.75	0.073	-22.73	33.00	0.033	-29.63	56.50	0.030	-30.46	80.00	0.044	-27.13
-1.75	0.338	-9.42	10.00	0.084	-21.51	33.50	0.033	-29.63	57.00	0.023	-32.77	80.50	0.041	-27.74
-1.50	0.312	-10.12	10.50	0.082	-21.72	34.00	0.025	-32.04	57.50	0.022	-33.15	81.00	0.038	-28.40
-1.25	0.269	-11.40	11.00	0.056	-25.04	34.50	0.022	-33.15	58.00	0.028	-31.06	81.50	0.035	-29.12
-1.00	0.263	-11.60	11.50	0.060	-24.44	35.00	0.031	-30.17	58.50	0.035	-29.12	82.00	0.032	-29.90
-0.75	0.353	-9.04	12.00	0.075	-22.50	35.50	0.033	-29.63	59.00	0.037	-28.64	82.50	0.028	-31.06
-0.50	0.507	-5.90	12.50	0.062	-24.15	36.00	0.027	-31.37	59.50	0.035	-29.12	83.00	0.025	-32.04
-0.25	0.678	-3.38	13.00	0.044	-27.13	36.50	0.021	-33.56	60.00	0.029	-30.75	83.50	0.022	-33.15
0.00	0.831	-1.61	13.50	0.059	-24.58	37.00	0.027	-31.37	60.50	0.023	-32.77	84.00	0.019	-34.42
0.25	0.943	-0.51	14.00	0.064	-23.88	37.50	0.033	-29.63	61.00	0.023	-32.77	84.50	0.017	-35.39
0.50	1.000	0.00	14.50	0.047	-26.56	38.00	0.030	-30.46	61.50	0.030	-30.46	85.00	0.014	-37.08
0.75	0.995	-0.04	15.00	0.041	-27.74	38.50	0.022	-33.15	62.00	0.036	-28.87	85.50	0.013	-37.72
1.00	0.930	-0.63	15.50	0.056	-25.04	39.00	0.023	-32.77	62.50	0.040	-27.96	86.00	0.011	-39.17
1.25	0.817	-1.76	16.00	0.053	-25.51	39.50	0.031	-30.17	63.00	0.039	-28.18	86.50	0.009	-40.92
1.50	0.673	-3.44	16.50	0.037	-28.64	40.00	0.033	-29.63	63.50	0.034	-29.37	87.00	0.008	-41.94
1.75	0.525	-5.60	17.00	0.042	-27.54	40.50	0.026	-31.70	64.00	0.027	-31.37	87.50	0.007	-43.10
2.00	0.405	-7.85	17.50	0.053	-25.51	41.00	0.020	-33.98	64.50	0.023	-32.77	88.00	0.006	-44.44
2.25	0.340	-9.37	18.00	0.044	-27.13	41.50	0.026	-31.70	65.00	0.025	-32.04	88.50	0.004	-47.96
2.50	0.330	-9.63	18.50	0.032	-29.90	42.00	0.032	-29.90	65.50	0.032	-29.90	89.00	0.003	-50.46
2.75	0.337	-9.45	19.00	0.042	-27.54	42.50	0.032	-29.90	66.00	0.038	-28.40	89.50	0.001	-60.00
3.00	0.330	-9.63	19.50	0.048	-26.38	43.00	0.024	-32.40	66.50	0.042	-27.54	90.00	0.000	---
3.25	0.299	-10.49	20.00	0.037	-28.64	43.50	0.020	-33.98	67.00	0.042	-27.54			
3.50	0.249	-12.08	20.50	0.031	-30.17	44.00	0.027	-31.37	67.50	0.039	-28.18			
3.75	0.197	-14.11	21.00	0.042	-27.54	44.50	0.033	-29.63	68.00	0.034	-29.37			
4.00	0.166	-15.60	21.50	0.044	-27.13	45.00	0.031	-30.17	68.50	0.027	-31.37			
4.25	0.167	-15.55	22.00	0.031	-30.17	45.50	0.024	-32.40	69.00	0.023	-32.77			
4.50	0.184	-14.70	22.50	0.030	-30.46	46.00	0.020	-33.98	69.50	0.025	-32.04			
4.75	0.193	-14.29	23.00	0.041	-27.74	46.50	0.027	-31.37	70.00	0.030	-30.46			
5.00	0.184	-14.70	23.50	0.039	-28.18	47.00	0.033	-29.63	70.50	0.037	-28.64			
5.25	0.160	-15.92	24.00	0.028	-31.06	47.50	0.032	-29.90	71.00	0.042	-27.54			
5.50	0.129	-17.79	24.50	0.030	-30.46	48.00	0.025	-32.04	71.50	0.045	-26.94			
5.75	0.108	-19.33	25.00	0.040	-27.96	48.50	0.020	-33.98	72.00	0.045	-26.94			
6.00	0.110	-19.17	25.50	0.037	-28.64	49.00	0.025	-32.04	72.50	0.043	-27.33			
6.25	0.126	-17.99	26.00	0.026	-31.70	49.50	0.032	-29.90	73.00	0.039	-28.18			
6.50	0.137	-17.27	26.50	0.029	-30.75	50.00	0.033	-29.63	73.50	0.034	-29.37			

Figure 2



FCC PREDICTED COVERAGE CONTOURS

DTV STATION WTLH
 BAINBRIDGE, GEORGIA
 CH 50 230 KW 597 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 3

CDBS TV/DTV SEPARATION STUDY

Job Title:
Channel: 50
Class:
Type: DT

Separation Buffer: 50 km
Coordinates: 30-40-51 83-58-21
Zone: III

Call Id	City St	Status	File Num	Channel Zone	ERP HAAT	DA Id	Latitude Longitude	Bear	Dist. (km)	Req. min	max
WBVJ-LP 23487	VALDOSTA GA	BLTTL LIC C	20001128AA	35(+)	0.439	N 16947	30-50-30 083-18-26	74.1	66.1 30.46	0.0 Class A	0.0
WBXT-CA 70430	TALLAHASSEE FL	BLTTA LIC C	20040628AA	43(Z)	49.000	D 20352	30-29-32 084-17-02	234.9	36.5 12.36	0.0 Class A	0.0
WTLH 23486	BAINBRIDGE GA	BLCT LIC C	20011102ABIII	49(Z)	5000.000	N 597 43696	30-40-51 083-58-21	100.7	0.0 12.00	12.0 Close	106.0
WTLH 23486	BAINBRIDGE GA	BPCDT CP C	19980928KHIII	50()	1000.000	N 578 36740	30-40-51 083-58-21	100.7	0.0 223.70	223.7 Short	223.7
DWTLH	BAINBRIDGE GA	DTV		50() III	192.800 410	D	30-39-01 084-12-13	261.3	22.4 201.29	223.7 Short	223.7
DWGNM	MACON GA	DTV		50() II	50.000 185	D	32-44-58 083-33-35	9.5	232.7 8.98	223.7 Close	223.7
W38DG 49707	TIFTON GA	BLTTL LIC C	19890314IK	51(+)	1.860	N	31-28-18 083-30-48	26.3	98.0 7.98	0.0 Class A	0.0
WSST-TV 63867	CORDELE GA	BMPCD CP C	20000501ABIII	51()	200.000	N 109 32832	31-53-35 083-48-18	6.7	135.3 25.34	24.0 Clear	110.0
DWSSTT	CORDELE GA	DTV		51() III	50.000 125	D	31-54-15 083-48-12	6.7	136.6 26.59	24.0 Clear	110.0
WBIF 81594	MARIANNA FL	BLCT LIC C	20010910ACIII	51(Z)	1970.000	D 254 40741	30-30-42 085-29-17	263.0	146.6 40.56	12.0 Clear	106.0
WFXU 22245	LIVE OAK FL	BLCT LIC C	19980715KEIII	57(Z)	2510.000	D 135 24154	30-33-00 083-00-46	98.8	93.2 3.44	24.1 Short	96.6

du Treil, Lundin, and Rackley**Coordinates: 30-40-51 83-58-21 Frequency Range: 200-300****Range: 16**

Date: 6/13/2006

CDBS FM Inquiry List

Page: 1

Rec Type	Fac Id	Call	Status	Chan	Svc Class	Class	City	St	DA	Latitude	Longitude	ERP (kW)	HAAT (m)	RCAMSL (m)	Bear	Dist. (km)
C	61193	WAYT	LIC	201	FM	C1	THOMASVILLE	GA	D	30-40-06	083-58-10	35.000	392.0	438.0	168.2	1.4
C	21799	WFSU-F	LIC	205	FM	C	TALLAHASSEE	FL	N	30-40-13	083-56-26	95.000	379.0	427.0	111.0	3.3
C	93356	WKVH	LIC	220	FM	C3	MONTICELLO	FL	D	30-40-13	083-56-26	1.500	403.0	451.0	111.0	3.3

du Treil, Lundin, and Rackley**Coordinates: 30-40-51 83-58-21 Channel Range: 2-69****Range: 16**

Date: 6/13/2006

CDBS Tv Inquiry List

Page: 1

Rec Type	Facility Id	Call	Status	Chan	Svc Class	Class	City	St	DA	Latitude	Longitude	ERP (kW)	HAAT (m)	RCAMSL (m)	Bearing	Dist. (km)
C	66908	WTWC-T	LIC	2	DT		TALLAHASSEE	FL	D	30-40-51	083-58-21	9.200	582.9	631	0	0
C	23486	WTLH	CP	50	DT		BAINBRIDGE	GA	N	30-40-51	083-58-21	1000.00	578	626	0	0
C	66908	WTWC-T	APP	40	DT		TALLAHASSEE	FL	D	30-40-51	083-58-21	1000.00	600	648	0	0
C	23486	WTLH	LIC	49	TV		BAINBRIDGE	GA	N	30-40-51	083-58-21	5000.00	597	645	0	0
C	22245	WFXU	CP	48	DT		LIVE OAK	FL	N	30-40-51	083-58-21	1000.00	597.2	645	0	0
C	66908	WTWC-T	CP	40	TV		TALLAHASSEE	FL	N	30-40-51	083-58-21	2090.00	600	648	0	0
C	41065	WTXL-TV	STA	22	DS		TALLAHASSEE	FL		30-40-06	083-58-10	2.400	292	292	168.2	1.42
C	41065	WTXL-TV	CP	22	DT		TALLAHASSEE	FL	N	30-40-06	083-58-10	8.700	487	536	168.2	1.42
C	41065	WTXL-TV	LIC	27	TV		TALLAHASSEE	FL	N	30-40-06	083-58-10	2690.00	518	561	168.2	1.42
C	31590	WCTV	LIC	46	DT		THOMASVILLE	GA	N	30-40-13	083-56-26	1000.00	566	616	111.0	3.28
C	23917	WABW-T	CP	5	DT		PELHAM	GA	D	30-40-13	083-56-26	3.800	474	525	111.0	3.28
C	31590	WCTV	LIC	6	TV		THOMASVILLE	GA	N	30-40-13	083-56-26	97.700	619	667	111.0	3.28