

**Comprehensive Technical Exhibit**  
*Application for Construction Permit - Digital Flash-Cut*  
W35BB - Dublin, Georgia  
WDIG, LLC  
February, 2010

**Application for Construction Permit**

The following engineering statement and attached exhibits have been prepared for **WDIG, LLC**, licensee of low power television station W35BB at Dublin, Georgia, and are in support of their application to flash-cut that facility to digital.<sup>1</sup> This application seeks to flash-cut the current outstanding construction permit for that facility under FCC File No. BPTTL-20090805ABM.

The proposed low power digital facility would operate with a maximum effective radiated power of 8.0 kW. The proposed center of radiation of 165.1 meters above mean sea level.<sup>2</sup> This value for the center of radiation is an increase relative to the center of radiation authorized in the above referenced construction permit.

The proposed facility would utilize the same directional antenna authorized under the current construction permit.<sup>3</sup> This antenna is a directional antenna with a cardioid pattern. The antenna, under the facilities proposed in this application, would be oriented at 225 degrees true as in the construction permit.

The proposed facility would comply with the interference provisions of the Commission's Rules. In making these showings, the applicant has elected to utilize Longley-Rice interference studies as a basis for demonstrating compliance. Multiple studies have been included in order to demonstrate compliance.

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<sup>1</sup> The Facility ID No. for W35BB at Dublin, Georgia is 24157.

<sup>2</sup> Center of radiation is 91.9 meters AGL based on ASRN site elevation of 73.2 meters AMSL.

<sup>3</sup> Antenna is an Electronics Research, Inc. (ERI) Model ALP16M2-HSM-35.

Exhibit E-1 illustrates the areas of Longley-Rice predicted interference authorized under the current W35BB construction permit. The land area and population within the predicted interference regions, denoted by colored pixels on the map in Exhibit E-1, are tabulated in Exhibit E-2. Facilities listed in the transmitter list on the map with a colorless box are not predicted to receive interference from the proposed facility.<sup>4</sup>

Exhibits E-3 and E-4 contain the Longley-Rice interference study for the proposed facility based on a stringent emission mask. As the map and tabulation in these exhibits demonstrate, the full power station population predicted to receive interference is *reduced* by the change from analog to DTV operations. In the case of pending digital LPTV applications, predicted interference complies with the provisions of the Commission's Rules. It is therefore respectfully submitted that the proposed flash-cut facility would comply with the interference provisions of the Commission's Rules.

The proposed facility would not result in a significant environmental impact. As previously discussed, the proposed facility would be located on an existing tower that is registered with the Commission. The vertical relocation of the antenna on the tower would not necessitate excavation at the site. Furthermore, the operation of the proposed facility, including the vertical relocation of the antenna on the tower, would not increase the already present environmental impact from the structure.

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<sup>4</sup> All records contained within the FCC TV database potentially affected, regardless of their perceived validity, were included.

The proposed facility would not constitute an RF exposure hazard to the general public.

The predicted power density at 2 meters above ground level is based on the following equation from OET Bulletin 65:

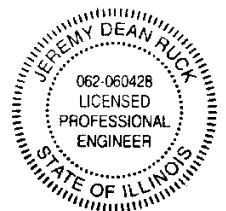
$$S = \frac{33.4(E_{Rel})^2(ERP_{DT})}{R^2}$$

In this case a value of 1.0 will be substituted for the relative field value, which results in a worst case scenario. The value of 8,000 will be substituted for the effective radiated power in Watts. The denominator term utilized is 89.9 to accommodate 2 meters as the average human height. After substitution in values the resulting calculated power density is 33.1  $\mu\text{W}/\text{cm}^2$ . Under the applicable safety standard, the frequency range in which W35BB operates has an upper limit on power density defined by the quotient of the frequency and 1500. The more conservative upper limit in the allowable power density is 397.3  $\mu\text{W}/\text{cm}^2$  based on the frequency of the lower edge of the channel. Since the predicted power density is considerably less than this value, which is the upper limit permissible value under the uncontrolled environment standard, it is apparent that the facility does not constitute an RF exposure hazard.

In order to protect workers having access to the site from being exposed to levels of non-ionizing radiation which may exceed the applicable safety standards, the applicant certifies that it will coordinate with other present and future users of the site. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power or cessation of operation.

**Affidavit**

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature  
License Expires November 30, 2011

Jeremy D. Ruck, PE  
February 4, 2010

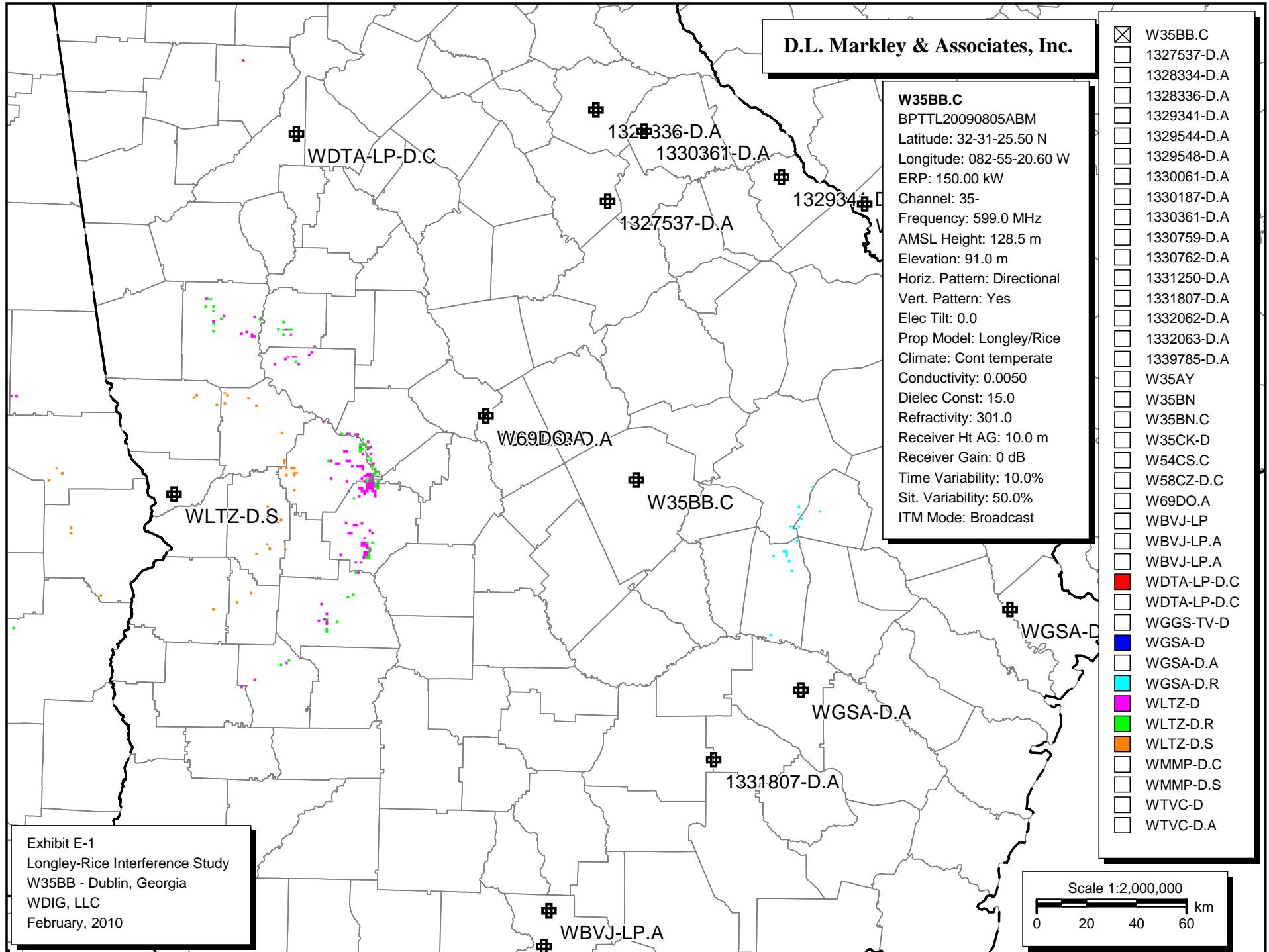


Exhibit E-2

Outgoing Interference Population Report

Study based on currently authorized NTSC facilities.

W35BB.C (35-) Dublin, GA - BPTTL20090805ABM

Broadcast Type: NTSC Service: X

Lat: 32-31-25.50 N Lng: 082-55-20.60 W ERP: 150.0 kW AMSL: 128.5 m

TV Outgoing Interference Study

Signal Resolution: 1.0 km

Consider NTSC Taboo: Yes

KWX error points are considered to  
be interference free coverage.

Default # of radials computed for contours: 360

Contours calculated using 8 radial HAAT.

LR Profile Spacing Increment: 0.1 km

Masked interference points are being  
counted as interference.

Using LPTV/translator D/U rules.

Pop Centroid DB: 2000 US Census (SF1)

Study Date: 2/4/2010

TV Database Date: 2/3/2010

Primary Terrain: V-Soft 3 Second US Terrain

Secondary Terrain: V-Soft 30 Second US Database

Population Database: 2000 US Census (SF1)

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Stations Considered:

Call Letters	City	State	Dist	Bear
1327537-D.A (34)	Crawfordville	GA	111.9	354.2
1328334-D.A (34)	Athens	GA	148.8	353.8
1328336-D.A (35)	Athens	GA	148.8	353.8
1329341-D.A (35)	Augusta	GA	134.2	25.6
1329544-D.A (34)	Macon	GA	65.3	293.2
1329548-D.A (36)	Macon	GA	65.3	293.2
1330061-D.A (35)	Chipley	FL	315.8	232.8
1330187-D.A (35)	Athens	GA	139.4	1.3
1330361-D.A (35)	Athens	GA	139.4	1.3
1330759-D.A (34)	Macon	GA	64.7	293.1
1330762-D.A (36)	Macon	GA	64.7	293.1
1331250-D.A (36)	Macon	GA	64.7	293.1
1331807-D.A (36)	Alma	GA	116.1	164.5
1332062-D.A (34)	Warner Robins	GA	64.8	292.9
1332063-D.A (36)	Warner Robins	GA	64.8	292.9
1339785-D.A (35)	Montgomery	AL	308.1	268.4
W35AY (35-)	Hilton Head Island	SC	194.4	98.2
W35BN (35+)	Tallahassee	FL	259.9	210.3
W35BN.C (35-)	Tallahassee	FL	259.9	210.3
W35CK-D (35)	Highlands	NC	280.3	354.5
W54CS.C (35Z)	Jacksonville	FL	271.7	153.4
W58CZ-D.C (36)	Augusta	GA	143.2	39.6

W69DO.A (42Z)	Macon	GA	65.3	293.1
WBVJ-LP (35+)	Valdosta	GA	190.0	191.2
WBVJ-LP.A (35+)	Valdosta	GA	175.7	191.4
WBVJ-LP.A (35+)	Valdosta	GA	175.7	191.4
WDTA-LP-D.C (35)	Atlanta	GA	193.8	315.5
WDTA-LP-D.C (35)	Atlanta	GA	193.8	315.5
WGGS-TV-D (35)	Greenville	SC	272.2	9.9
WGSA-D (35)	Baxley	GA	158.1	109.1
WGSA-D.A (35)	Baxley	GA	106.7	141.9
WGSA-D.R (35)	BAXLEY	GA	158.1	109.1
WLTZ-D (35)	Columbus	GA	184.7	268.3
WLTZ-D.R (35)	COLUMBUS	GA	184.7	268.3
WLTZ-D.S (35)	Columbus	GA	184.7	268.3
WMMP-D.C (35)	Charleston	SC	305.9	80.5
WMMP-D.S (35)	Charleston	SC	276.3	81.3
WTVC-D (35)	Chattanooga	TN	367.0	323.5
WTVC-D.A (35)	Chattanooga	TN	367.0	323.5

Call	Area	HUnits	Contour	Masked	Ix	Unmasked	Ix	%
1327537-D.A (34)	0.0	0	76,527	0	0	0	0.0	
1328334-D.A (34)	0.0	0	227,376	0	0	0	0.0	
1328336-D.A (35)	0.0	0	226,957	0	0	0	0.0	
1329341-D.A (35)	0.0	0	138,355	0	0	0	0.0	
1329544-D.A (34)	0.0	0	300,240	0	0	0	0.0	
1329548-D.A (36)	0.0	0	299,200	0	0	0	0.0	
1330061-D.A (35)	0.0	0	95,367	0	0	0	0.0	
1330187-D.A (35)	0.0	0	33,344	0	0	0	0.0	
1330361-D.A (35)	0.0	0	37,303	0	0	0	0.0	
1330759-D.A (34)	0.0	0	424,703	0	0	0	0.0	
1330762-D.A (36)	0.0	0	423,785	0	0	0	0.0	
1331250-D.A (36)	0.0	0	391,612	0	0	0	0.0	
1331807-D.A (36)	0.0	0	119,128	0	0	0	0.0	
1332062-D.A (34)	0.0	0	399,816	0	0	0	0.0	
1332063-D.A (36)	0.0	0	397,913	0	0	0	0.0	
1339785-D.A (35)	0.0	0	341,917	0	0	0	0.0	
W35AY (35-)	0.0	0	52,338	0	0	0	0.0	
W35BN (35+)	0.0	0	149,392	0	0	0	0.0	
W35BN.C (35-)	0.0	0	294,482	0	0	0	0.0	
W35CK-D (35)	0.0	0	33,654	0	0	0	0.0	
W54CS.C (35Z)	0.0	0	804,587	0	0	0	0.0	
W58CZ-D.C (36)	0.0	0	489,509	0	0	0	0.0	
W69DO.A (42Z)	0.0	0	278,655	0	0	0	0.0	
WBVJ-LP (35+)	0.0	0	54,580	0	0	0	0.0	
WBVJ-LP.A (35+)	0.0	0	3,706	0	0	0	0.0	
WBVJ-LP.A (35+)	0.0	0	8,116	0	0	0	0.0	
WDTA-LP-D.C (35)	1.0	66	3,053,225	0	169	0	0.0	
WDTA-LP-D.C (35)	0.0	0	3,542,656	0	0	0	0.0	
WGGS-TV-D (35)	0.0	0	1,681,896	0	0	0	0.0	
WGSA-D (35)	18.6	22	729,397	0	32	0	0.0	
WGSA-D.A (35)	0.0	0	11,003	0	0	0	0.0	
WGSA-D.R (35)	18.6	22	729,241	0	32	0	0.0	
WLTZ-D (35)	125.5	1,350	647,597	0	2,973	0	0.5	
WLTZ-D.R (35)	123.5	719	661,347	0	1,628	0	0.2	
WLTZ-D.S (35)	40.1	289	352,506	0	676	0	0.2	
WMMP-D.C (35)	0.0	0	651,660	0	0	0	0.0	

WMMP-D.S (35)	0.0	0	497,854	0	0	0.0
WTVC-D (35)	0.0	0	992,130	0	0	0.0
WTVC-D.R (35)	0.0	0	986,957	0	0	0.0

		Housing Units	Population
<b>Alabama</b>			
Barbour County			
Total		12,461	29,038
WLTZ-D.R (35)		4	8
Chambers County			
Total		16,256	36,583
WLTZ-D (35)		4	6
Lee County			
Total		50,329	115,092
WLTZ-D.S (35)		90	257
Macon County			
Total		10,627	24,105
WLTZ-D (35)		646	1,393
WLTZ-D.R (35)		11	31
Tallapoosa County			
Total		20,510	41,475
WLTZ-D (35)		15	28
WLTZ-D.R (35)		30	52
<b>Georgia</b>			
Candler County			
Total		3,893	9,577
WGSA-D (35)		1	5
WGSA-D.R (35)		1	5
Cobb County			
Total		237,522	607,751
WDTA-LP-D.C (35)		66	169
Crawford County			
Total		4,872	12,495
WLTZ-D (35)		1	0
WLTZ-D.R (35)		10	21
Emanuel County			
Total		9,419	21,837
WGSA-D (35)		0	0
WGSA-D.R (35)		0	0
Harris County			
Total		10,288	23,695
WLTZ-D.S (35)		91	196
Macon County			
Total		5,495	14,074
WLTZ-D (35)		230	558
WLTZ-D.R (35)		354	777
Marion County			
Total		3,130	7,144
WLTZ-D.S (35)		19	39
Meriwether County			
Total		9,211	22,534
WLTZ-D (35)		16	43
WLTZ-D.R (35)		72	203
Pike County			

Total	5,068	13,688
WLTZ-D (35)	7	15
WLTZ-D.R (35)	29	85
Randolph County		
Total	3,402	7,791
WLTZ-D (35)	0	0
Schley County		
Total	1,612	3,766
WLTZ-D.S (35)	0	0
Sumter County		
Total	13,700	33,200
WLTZ-D (35)	12	29
WLTZ-D.R (35)	13	30
Talbot County		
Total	2,871	6,498
WLTZ-D.S (35)	35	80
Taylor County		
Total	3,978	8,815
WLTZ-D (35)	279	585
WLTZ-D.R (35)	76	146
WLTZ-D.S (35)	54	104
Terrell County		
Total	4,460	10,970
WLTZ-D (35)	3	4
WLTZ-D.R (35)	1	0
Toombs County		
Total	11,371	26,067
WGSA-D (35)	21	27
WGSA-D.R (35)	21	27
Upson County		
Total	11,616	27,597
WLTZ-D (35)	137	312
WLTZ-D.R (35)	119	275

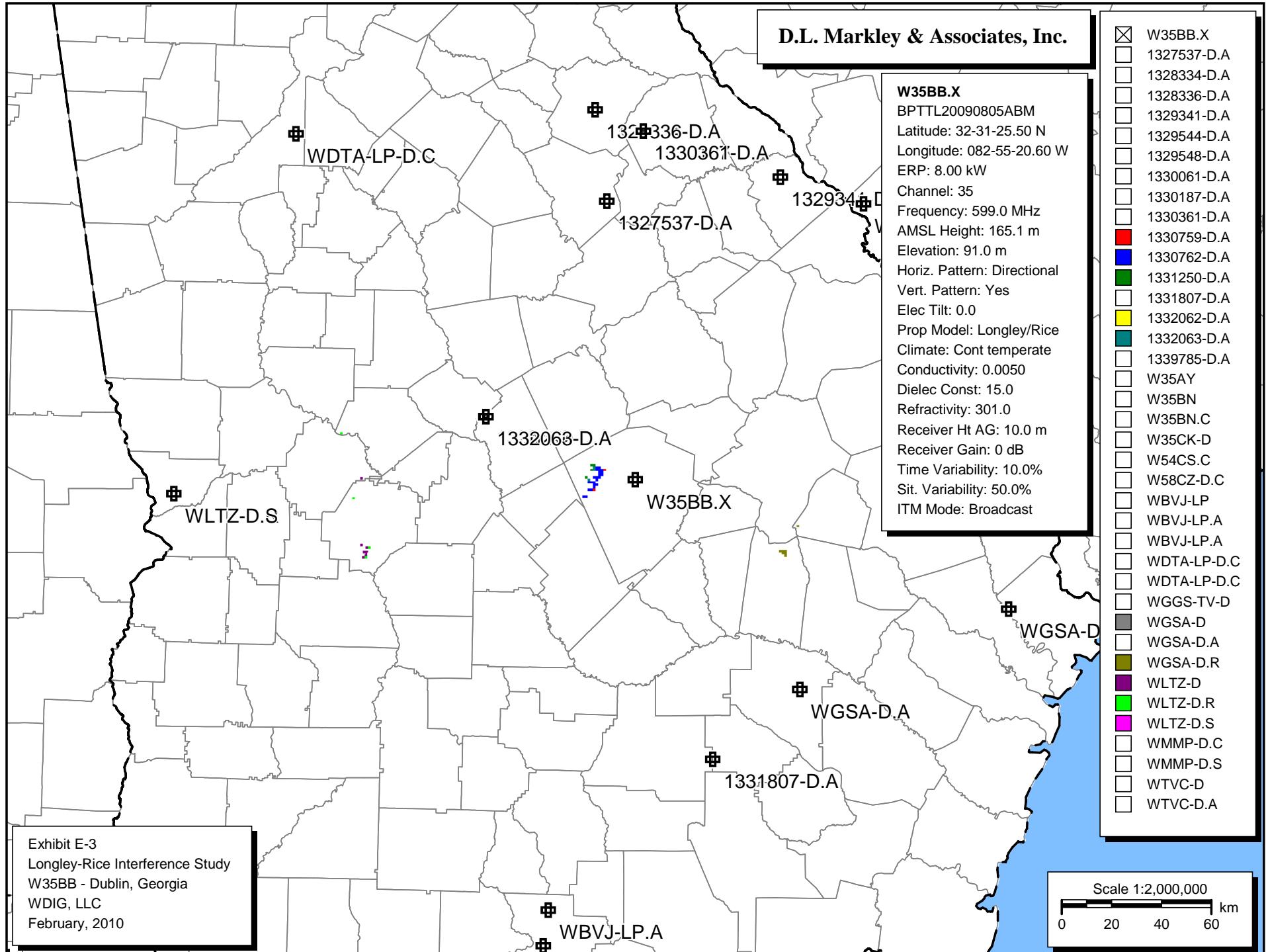


Exhibit E-4

Outgoing Interference Population Report

Study based on proposed DTV flash-cut facilities.

W35BB.X (35) Dublin, GA - BPTTL20090805ABM

Broadcast Type: Digital Service: G [Stringent Emission Mask]

Lat: 32-31-25.50 N Lng: 082-55-20.60 W ERP: 8.0 kW AMSL: 165.1 m

TV Outgoing Interference Study

Signal Resolution: 1.0 km

Consider NTSC Taboo: Yes

KWX error points are considered to  
be interference free coverage.

Default # of radials computed for contours: 360

Contours calculated using 8 radial HAAT.

LR Profile Spacing Increment: 0.1 km

Masked interference points are being  
counted as interference.

Using LPTV/translator D/U rules.

Pop Centroid DB: 2000 US Census (SF1)

Study Date: 2/4/2010

TV Database Date: 2/3/2010

Primary Terrain: V-Soft 3 Second US Terrain

Secondary Terrain: V-Soft 30 Second US Database

Population Database: 2000 US Census (SF1)

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Stations Considered:

Call Letters	City	State	Dist	Bear
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1328334-D.A (34)	Athens	GA	148.8	353.8
1328336-D.A (35)	Athens	GA	148.8	353.8
1329341-D.A (35)	Augusta	GA	134.2	25.6
1329544-D.A (34)	Macon	GA	65.3	293.2
1329548-D.A (36)	Macon	GA	65.3	293.2
1330061-D.A (35)	Chipley	FL	315.8	232.8
1330187-D.A (35)	Athens	GA	139.4	1.3
1330361-D.A (35)	Athens	GA	139.4	1.3
1330759-D.A (34)	Macon	GA	64.7	293.1
1330762-D.A (36)	Macon	GA	64.7	293.1
1331250-D.A (36)	Macon	GA	64.7	293.1
1331807-D.A (36)	Alma	GA	116.1	164.5
1332062-D.A (34)	Warner Robins	GA	64.8	292.9
1332063-D.A (36)	Warner Robins	GA	64.8	292.9
1339785-D.A (35)	Montgomery	AL	308.1	268.4
W35AY (35-)	Hilton Head Island	SC	194.4	98.2
W35BN (35+)	Tallahassee	FL	259.9	210.3
W35BN.C (35-)	Tallahassee	FL	259.9	210.3
W35CK-D (35)	Highlands	NC	280.3	354.5
W54CS.C (35Z)	Jacksonville	FL	271.7	153.4
W58CZ-D.C (36)	Augusta	GA	143.2	39.6

WBVJ-LP (35+)	Valdosta	GA	190.0	191.2
WBVJ-LP.A (35+)	Valdosta	GA	175.7	191.4
WBVJ-LP.A (35+)	Valdosta	GA	175.7	191.4
WDTA-LP-D.C (35)	Atlanta	GA	193.8	315.5
WDTA-LP-D.C (35)	Atlanta	GA	193.8	315.5
WGGS-TV-D (35)	Greenville	SC	272.2	9.9
WGSA-D (35)	Baxley	GA	158.1	109.1
WGSA-D.A (35)	Baxley	GA	106.7	141.9
WGSA-D.R (35)	BAXLEY	GA	158.1	109.1
WLTZ-D (35)	Columbus	GA	184.7	268.3
WLTZ-D.R (35)	COLUMBUS	GA	184.7	268.3
WLTZ-D.S (35)	Columbus	GA	184.7	268.3
WMMP-D.C (35)	Charleston	SC	305.9	80.5
WMMP-D.S (35)	Charleston	SC	276.3	81.3
WTVC-D (35)	Chattanooga	TN	367.0	323.5
WTVC-D.A (35)	Chattanooga	TN	367.0	323.5

Call	Area	HUnits	Contour	Masked	Ix	Unmasked	Ix	%
1327537-D.A (34)	0.0	0	76,527	0	0	0	0.0	
1328334-D.A (34)	0.0	0	227,376	0	0	0	0.0	
1328336-D.A (35)	0.0	0	226,957	0	0	0	0.0	
1329341-D.A (35)	0.0	0	138,355	0	0	0	0.0	
1329544-D.A (34)	0.0	0	300,240	0	0	0	0.0	
1329548-D.A (36)	0.0	0	299,200	0	0	0	0.0	
1330061-D.A (35)	0.0	0	95,367	0	0	0	0.0	
1330187-D.A (35)	0.0	0	33,344	0	0	0	0.0	
1330361-D.A (35)	0.0	0	37,303	0	0	0	0.0	
1330759-D.A (34)	26.8	203	424,703	0	448	0	0.1	
1330762-D.A (36)	24.7	203	423,785	0	448	0	0.1	
1331250-D.A (36)	4.1	5	391,612	0	10	0	0.0	
1331807-D.A (36)	0.0	0	119,128	0	0	0	0.0	
1332062-D.A (34)	6.2	13	399,816	0	30	0	0.0	
1332063-D.A (36)	6.2	13	397,913	0	30	0	0.0	
1339785-D.A (35)	0.0	0	341,917	0	0	0	0.0	
W35AY (35-)	0.0	0	52,338	0	0	0	0.0	
W35BN (35+)	0.0	0	149,392	0	0	0	0.0	
W35BN.C (35-)	0.0	0	294,482	0	0	0	0.0	
W35CK-D (35)	0.0	0	33,654	0	0	0	0.0	
W54CS.C (35Z)	0.0	0	804,587	0	0	0	0.0	
W58CZ-D.C (36)	0.0	0	489,509	0	0	0	0.0	
WBVJ-LP (35+)	0.0	0	54,580	0	0	0	0.0	
WBVJ-LP.A (35+)	0.0	0	8,116	0	0	0	0.0	
WBVJ-LP.A (35+)	0.0	0	3,706	0	0	0	0.0	
WDTA-LP-D.C (35)	0.0	0	3,053,225	0	0	0	0.0	
WDTA-LP-D.C (35)	0.0	0	3,542,656	0	0	0	0.0	
WGGS-TV-D (35)	0.0	0	1,681,896	0	0	0	0.0	
WGSA-D (35)	7.2	12	729,397	0	29	0	0.0	
WGSA-D.A (35)	0.0	0	11,003	0	0	0	0.0	
WGSA-D.R (35)	7.2	12	729,241	0	29	0	0.0	
WLTZ-D (35)	7.2	59	647,597	0	146	0	0.0	
WLTZ-D.R (35)	4.1	7	661,347	0	10	0	0.0	
WLTZ-D.S (35)	0.0	0	352,506	0	0	0	0.0	
WMMP-D.C (35)	0.0	0	651,660	0	0	0	0.0	
WMMP-D.S (35)	0.0	0	497,854	0	0	0	0.0	
WTVC-D (35)	0.0	0	992,130	0	0	0	0.0	

WTVC-D.A (35)	0 . 0	0	986 , 957	0	0	0 . 0
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	Housing Units	Population
<b>Georgia</b>		
<b>Laurens County</b>		
Total	19 , 687	44 , 874
1330759-D.A (34)	203	448
1330762-D.A (36)	203	448
1331250-D.A (36)	5	10
1332062-D.A (34)	13	30
1332063-D.A (36)	13	30
<b>Macon County</b>		
Total	5 , 495	14 , 074
WLTZ-D (35)	50	130
WLTZ-D.R (35)	7	10
<b>Taylor County</b>		
Total	3 , 978	8 , 815
WLTZ-D (35)	9	16
<b>Toombs County</b>		
Total	11 , 371	26 , 067
WGSA-D (35)	12	29
WGSA-D.R (35)	12	29