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**MULLANEY ENGINEERING, INC.**

9049 SHADY GROVE COURT  
GAITHERSBURG, MD 20877

**ENGINEERING EXHIBIT EE-1:**

**MINOR MODIFICATION OF CONSTRUCTION PERMIT**  
**DIGITAL TELEVISION FLASH-CUT**  
**APPLICATION**

**KM LPTV OF ATLANTA, L.L.C.**  
**CLASS A DIGITAL TELEVISION STATION**  
**WSKC-DC**  
**FCC FACILITY NUMBER**  
**35090**

**DIGITAL CHANNEL 22**  
**ATLANTA, GEORGIA**

**JULY, 2008**

**ENGINEERING EXHIBIT**  
**IN SUPPORT OF**  
**AN APPLICATION FOR AUTHORITY TO MAKE**  
**CHANGES IN CLASS A TELEVISION BROADCAST STATION**  
**WSKC-DC**  
**ATLANTA, GEORGIA**

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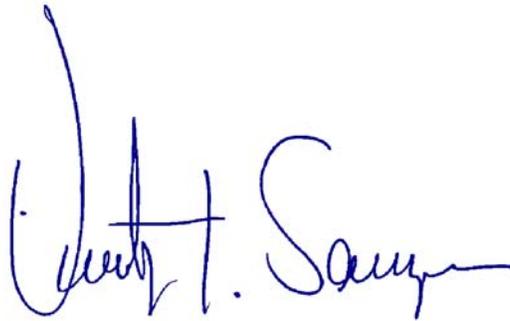
1. F.C.C. Form 301, Section III
2. F.C.C. Form 301, Section III (certification)
3. Declaration of Engineer
4. Narrative Statement
5. Figure 1, Predicted Service Contours
6. Figure 2, Directional Antenna Details
7. Figure 3, Allocation Study

## **DECLARATION**

I, Timothy Z. Sawyer, declare and that I have provided engineering services in the area of telecommunications since 1969. My qualifications are a matter of record with the Federal Communications Commission. I am a senior engineer with the firm of Mullaney Engineering, Inc., consulting radio telecommunications engineers with offices in Gaithersburg, Maryland.

The firm of Mullaney Engineering, Inc., has been retained by KM LPTV OF ATLANTA, L.L.C., to prepare the instant engineering exhibit in support of **an application for authority to make changes in CLASS A DIGITAL TELEVISION STATION WSKC-DC Atlanta, Georgia.** (FCC FACILITY ID NUMBER: 35090).

All facts contained herein are true of my own knowledge except those stated to be on information and belief, and as to those facts, I believe them to be true. I declare under the penalty of perjury that the foregoing is true and correct.



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Timothy Z. Sawyer

Executed on the 24<sup>th</sup> day of July 2008

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**ATLANTA, GEORGIA**

**JULY, 2008**

**NARRATIVE STATEMENT:**

**I. GENERAL:**

This engineering statement and the instant engineering exhibit of which it is part has been prepared on behalf of KM LPTV OF ATLANTA, L.L.C., (hereinafter "KM").

KM is the licensee of analog Class A Television Station WSKC-CA, Channel 22+, Atlanta, Georgia, FCC facility identification number 35090.

**Engineering - Minor Modification of Construction Permit**

By means of this application KM seeks to expand the requested digital "flash-cut" facility's coverage beyond that previously specified in its digital "flash-cut" construction permit.

The specified digital service area as authorized in the current construction permit does not exceed that of the currently authorized Class A analog Television service area in compliance with the Commission "freeze" order

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which prohibited expansion of Class A Television service areas beyond that already authorized.

The “freeze” on expansion of service areas beyond the authorized service area of a Class A Television Station has been terminated by the Commission.

Therefore, this application which seeks to optimize and expanded the service area of the digital “flash-cut” facility beyond that of the current analog facility is in compliance with the Commission’s Rules and Regulations.

The proposed digital "flash-cut" facilities will operate on digital Television Channel 22 with a maximum effective radiated power of 10-kilowatts and an antenna height above mean sea level of 546 meters using a directional antenna.

The proposed facilities will be built to comply with the *FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields* and the instant proposal is categorically excluded from environmental processing pursuant to the provisions of Section 1.1306 of the Commission’s Rules. A more detailed discussion of environmental factors is included under the heading Environmental Considerations below.

Information requested by exhibits in response to questions on Section III of FCC Form 301-CA is incorporated in the following paragraphs, figures and/or tables.

Processing of this application is requested under the rules currently in effect at the time of filing.

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**ENGINEERING DISCUSSION**

**PROPOSED FACILITIES**

This application proposes digital operation on Television Channel 22, at the current transmitter site with a directional antenna pattern. No change in the station location, or antenna height will occur.

Figure 2 contains a horizontal radiation (relative field) pattern of the proposed directional horizontal radiation pattern. KM proposes to use the existing analog antenna, rotated so that the main lobe of the directional antenna is at 140 degrees true. The current rotation of the main lobe of the analog antenna is at 90 degrees true. The antenna employs 1-degree of downward (negative) electrical beam tilt.

**ALLOCATION CONSIDERATIONS**

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital full-service Television Stations, LPTV Stations, or Television Translator Stations) or Class A Television Stations.

Using the procedures outlined in the FCC's OET-69 Bulletin, a **1-kilometer cell size resolution** and 2000 U.S. Census, the proposal complies with the current FCC policy (i.e., less than 0.5% new interference caused to other pertinent assignments). The Atlanta Georgia metro area is a mixed rural and high concentration urban area. The use of a population cell size of **1-kilometer in size** is appropriate in a mixed urban environment, as the use of a higher size would unfairly include adjacent urban populations that are not representative of the individual cell under study. The applicant request that the Commission study this

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proposal with a population cell size of 1-kilometer and a profile spacing of 1-kilometer.

Each station of concern has been analyzed using the methods described in OET Bulletin No. 69, and the results indicate that no interference (unmasked) or interference above 0.5% of the service population of the station studied will occur.

The results of the OET Bulletin No. 69 styled study are contained with Figure 3. As noted above the OET study was conducted using a population cell size of 1-kilometer and a path profile spacing of 1-kilometer.

**ENVIRONMENTAL CONSIDERATIONS**

The applicant believes its proposal will not significantly affect the environment for the following reasons.

This is an existing communications site with no new construction of towers, support buildings or other environmental sensitive items required.

The site and this proposal are exempt from NHPA Section 106 review as no construction will occur that would trigger a review under NHPA Section 106.

The proposal does not meet any of the criteria specified in Section 1.1307 of the FCC Rules. More specifically, the proposed facilities are not known to fall within any of the categories enumerated in Sections 1.1307(a)(1)-(7) and will not involve the use of high intensity white lights. Furthermore, operation of the proposed facility will not involve the

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exposure of workers or the general public to levels of radio frequency electromagnetic fields exceeding guidelines adopted by the Federal Communications Commission. (The current FCC guidelines are based upon criteria contained in the National Council of Radiation Protection and Measurements (NCRP) Report No.86 (1986) and ANSI/IEEE C95.1-1992.)

Based upon a worst case downward relative field value of 0.3 for all angles 10-degrees and greater below the horizon and a maximum power of 10-kilowatts, and an antenna height of 34 meters above the ground. The power density level 2-meters above ground level is predicted to be 0.0117 mW/cm<sup>2</sup> or less. The computed power density is 0.674 percent of the Commission's guidelines for a controlled area and 3.369 percent of an uncontrolled area - as this level is far below the Commission's maximum limits, the facility is in compliance with the Commission's standards. The minimum distance directly below the antenna for a controlled area is 2.7 meters, as this distance is greater than 31 meters above ground, no exposure in excess of the Commission's guidelines can occur to workers on the ground.

The applicant will fully-cooperate and coordinate with all site users as required by the Commission's rules.

**II SUMMARY:**

The proposed digital "flash-cut" will operate on Digital Television Channel 22 with a maximum ERP 10-Kilowatts utilizing a DIRECTIONAL antenna system. The estimated digital transmitter power output (TPO) is 1.0 kilowatts.

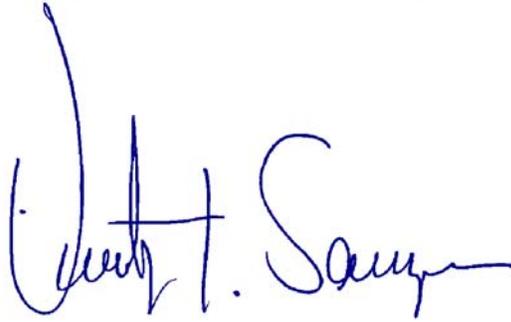
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Operation as proposed herein would not cause/increase any normally prohibited contour overlap using a terrain dependant - OET Bulletin No. 69 review, and would not have any significant impact on the environment. The proposed operation will not create any new prohibited interference.

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The proposed operation is fully in compliance with all other areas of the  
Commission's rules and applicable international agreements.

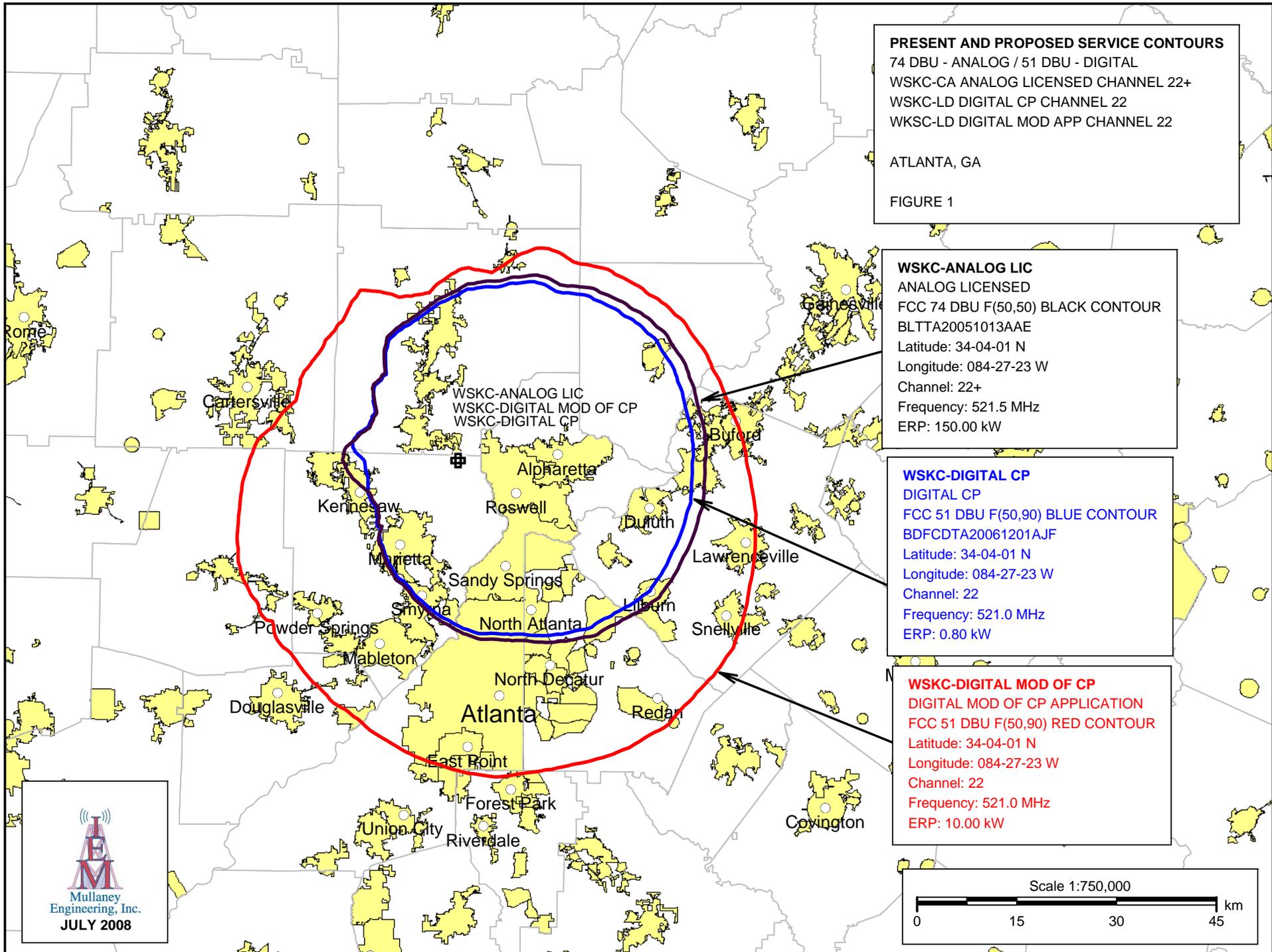
24 July 2008



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Timothy Z. Sawyer

MULLANEY ENGINEERING, INC.  
9049 SHADY GROVE COURT  
GAITHERSBURG, MARYLAND USA  
TEL.: 301-921-0115



**PRESENT AND PROPOSED SERVICE CONTOURS**  
 74 DBU - ANALOG / 51 DBU - DIGITAL  
 WSKC-CA ANALOG LICENSED CHANNEL 22+  
 WSKC-LD DIGITAL CP CHANNEL 22  
 WSKC-LD DIGITAL MOD APP CHANNEL 22  
 ATLANTA, GA  
 FIGURE 1

**WSKC-ANALOG LIC**  
 ANALOG LICENSED  
 FCC 74 DBU F(50,50) BLACK CONTOUR  
 BLTTA20051013AAE  
 Latitude: 34-04-01 N  
 Longitude: 084-27-23 W  
 Channel: 22+  
 Frequency: 521.5 MHz  
 ERP: 150.00 kW

**WSKC-DIGITAL CP**  
 DIGITAL CP  
 FCC 51 DBU F(50,90) BLUE CONTOUR  
 BDFCDTA20061201AJF  
 Latitude: 34-04-01 N  
 Longitude: 084-27-23 W  
 Channel: 22  
 Frequency: 521.0 MHz  
 ERP: 0.80 kW

**WSKC-DIGITAL MOD OF CP**  
 DIGITAL MOD OF CP APPLICATION  
 FCC 51 DBU F(50,90) RED CONTOUR  
 Latitude: 34-04-01 N  
 Longitude: 084-27-23 W  
 Channel: 22  
 Frequency: 521.0 MHz  
 ERP: 10.00 kW

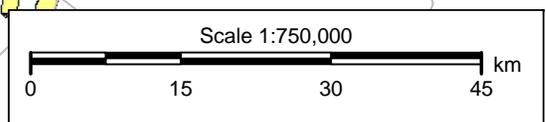
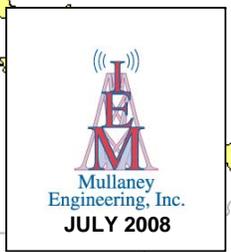


FIGURE 2

WKSC DIGITAL DIRECTIONAL ANTENNA PATTERN

Azimuth (deg)	Effective Field
0.0	0.130
10.0	0.130
20.0	0.205
30.0	0.237
40.0	0.276
50.0	0.323
60.0	0.375
70.0	0.438
80.0	0.520
90.0	0.617
100.0	0.721
110.0	0.822
120.0	0.912
130.0	0.976
140.0	1.000 <<- Max
150.0	0.976
160.0	0.912
170.0	0.822
180.0	0.721
190.0	0.617
200.0	0.520
210.0	0.438
220.0	0.375
230.0	0.323
240.0	0.276
250.0	0.237
260.0	0.205
270.0	0.172
280.0	0.130
290.0	0.099
300.0	0.103
310.0	0.099
320.0	0.103
330.0	0.133
340.0	0.103
350.0	0.099

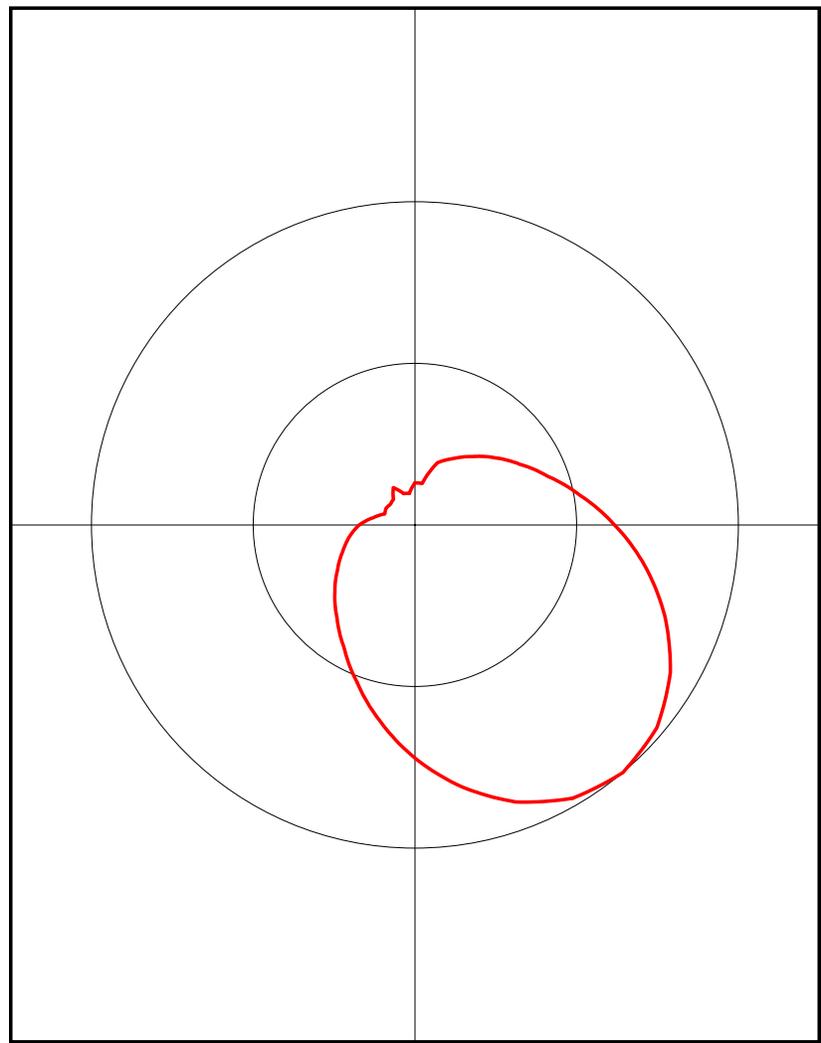


FIGURE 3 - OET BULLETIN NUMBER 69 INTERFERENCE STUDY RESULTS

Summary Study

2000 Census data selected

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

WSKC-C-D USERRECORD-01 ATLANTA GA US  
 Channel 22 ERP 10. kW HAAT 237. m RCAMSL 00546 m STRINGENT MASK  
 Latitude 034-04-01 Longitude 0084-27-23  
 Status APP Zone 1 Border  
 Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 50.  
 Last update Cutoff date Docket  
 Comments  
 Applicant

**Cell Size for Service Analysis 1.0 km/side**

**Distance Increments for Longley-Rice Analysis 1.00 km**

Not full service station

Facility meets maximum power limit

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	0.169	242.5	28.7
45.0	0.897	242.7	37.5
90.0	3.807	211.6	43.4
135.0	9.761	245.9	50.2
180.0	5.198	233.7	46.3
225.0	1.218	223.9	38.1
270.0	0.296	236.9	31.4
315.0	0.102	262.6	27.0

Contour Overlap to Proposed Station

Station

WPBA 21 ATLANTA GA BLEDT20041013ABK

Station inside contour of Digital LPTV station  
WSKC-C-D 22 ATLANTA GA USERRECORD01

Station  
WCTD-LP 22 DUCKTOWN TN BLTTL20070622ADD causes

Contour overlap to Digital LPTV station  
WSKC-C-D 22 ATLANTA GA USERRECORD01  
Required D/U ratio: 2.0

Station  
W23DN 23 ATLANTA GA BSTA20060628ACK

Station inside contour of Digital LPTV station  
WSKC-C-D 22 ATLANTA GA USERRECORD01

Station  
W23DN 23 ATLANTA GA BLTT20070126AFM

Station inside contour of Digital LPTV station  
WSKC-C-D 22 ATLANTA GA USERRECORD01

Contour Overlap Evaluation to Proposed Station Complete

LANDMOBILE SPACING VIOLATIONS FOUND  
NONE

Proposed facility OK to FCC Monitoring Stations  
Proposed facility OK toward West Virginia quite zone  
Proposed facility OK toward Table Mountain  
Proposed facility is beyond the Canadian coordination distance  
Proposed facility is beyond the Mexican coordination distance  
Proposed station is OK toward AM broadcast stations

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Start of Interference Analysis

Proposed Station

Channel	Call	City/State	ARN
22	WSKC-C-D	ATLANTA GA	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
14	WPXA	ROME GA	32.6	LIC	BLCT	-20040526AHJ
18	WNGH-TV	CHATSWORTH GA	79.7	APP	BSTA	-20060609AAB
18	WNGH-TV	CHATSWORTH GA	79.7	APP	BSTA	-20080125ADI
18	WNGH-TV	CHATSWORTH GA	79.7	LIC	BLET	-19891010KE
18	WNGH-TV	CHATSWORTH GA	79.7	APP	BSTA	-20080514AAJ
21	WPBA	ATLANTA GA	36.0	LIC	BLEDT	-20041013ABK
21	WPBA-DT	ATLANTA GA	35.9	PLN	DTVPLN	-DTVP0432
21	WANX-LD	COLUMBUS GA	193.1	CP	BDCCDTL	-20061025AFF
21	WKSJ-LP	SUMMERVILLE/TRION GA	93.4	LIC	BLTT	-20010301ABJ
21	WKSJ-LP	SUMMERVILLE/TRION GA	89.3	CP	BPTTL	-20071126AJK
21	WHNS	GREENVILLE SC	204.2	APP	BMPCDT	-20080619AFO
21	WHNS	GREENVILLE SC	204.2	CP	BPCDT	-20080225ABE
21	WHNS	GREENVILLE SC	204.2	LIC	BMLCT	-20030912AAE
21	W21BZ	COLLEGEDALE TN	120.6	LIC	BLTTA	-20010111AAI
21	W21BZ	COLLEGEDALE TN	120.6	CP	BPTTA	-20030304AAR
22	WJMY-LD	DEMOPOLIS AL	321.3	CP	BDCCDTL	-20061030ANZ
22	WFIQ	FLORENCE AL	310.7	APP	BPEDT	-20080619AGU
22	WFIQ-DT	FLORENCE AL	310.5	PLN	DTVPLN	-DTVP0468
22	WFIQ	FLORENCE AL	310.7	LIC	BLEDT	-20060718ACG
22	WBMM	TUSKEGEE AL	261.9	LIC	BLCT	-20020726ABV
22	WBMM	TUSKEGEE AL	261.9	APP	BPCDT	-20080618ADG
22	WTXL-DT	TALLAHASSEE FL	380.5	PLN	DTVPLN	-DTVP0476
22	WTXL-TV	TALLAHASSEE FL	380.5	LIC	BLCDT	-20060627ABK
22	W22BV	COLQUITT GA	315.1	LIC	BLTTL	-20001218ABU
22	W22AC	HARTWELL & ROYSTON GA	142.3	LIC	BLTT	-20021204AAN
22	WJCL	SAVANNAH GA	366.3	CP	BPCDT	-20080515ACT
22	WJCL	SAVANNAH GA	366.3	APP	BMPCDT	-20080619AFS
22	WJCL	SAVANNAH GA	366.3	LIC	BLCT	-19980514KF
22	W38CM	THOMASVILLE GA	361.9	LIC	BLTT	-19950726IB
22	WKPI-TV	PIKEVILLE KY	397.9	LIC	BMLET	-19830426KN
22	W22BS	TUPELO MS	392.1	LIC	BLTTL	-19970728JF
22	WCNC-TV	CHARLOTTE NC	332.2	APP	BPCDT	-20080617AEH
22	WCNC-DT	CHARLOTTE NC	332.2	PLN	DTVPLN	-DTVP0492
22	WCNC-TV	CHARLOTTE NC	332.2	LIC	BLCDT	-20031211ABN
22	WCTE	COOKEVILLE TN	247.7	APP	BMPEDT	-20080620ADW
22	WCTE	COOKEVILLE TN	247.7	LIC	BLET	-19880802KE
22	WCTE	COOKEVILLE TN	247.7	CP	BPEDT	-20080317ADB

22	WCTD-LP	DUCKTOWN TN	108.0	LIC	BLTTL	-20070622ADD
22	WJZC-LP	SEVIERVILLE TN	217.7	LIC	BLTTL	-19901017JE
23	W23DJ	DOTHAN AL	326.6	LIC	BLTT	-20070622ACF
23	W23DJ	DOTHAN AL	326.6	CP MOD	BMPPTTL	-20070511AAQ
23	W23AK	JASPER AL	264.0	STA	BSTA	-20020722ABZ
23	W23AK	JASPER AL	246.6	LIC	BLTTL	-19900102IH
23	W23DN	ATLANTA GA	30.8	APP	BSTA	-20060628ACK
23	W23DN	ATLANTA GA	30.8	LIC	BLTT	-20070126AFM
23	WGGD-LP	CLEVELAND GA	77.2	CP MOD	BMPPTTL	-20070216AAB
23	WJSP-TV	COLUMBUS GA	136.9	CP MOD	BMPEDT	-20070907ACX
23	WJSP-DT	COLUMBUS GA	136.9	PLN	DTVPLN	-DTVP0518
23	WELF-TV	DALTON GA	129.9	LIC	BLCT	-19940516KE
23	W23AF	CULLOWHEE NC	180.4	LIC	BLTT	-19901231JH
24	WJXS-CA	SYLACAUGA AL	139.8	LIC	BLTTL	-19970508JF
25	WPDP-LP	CLEVELAND TN	119.7	LIC	BLTTL	-19990810JD
26	W23DN	ATLANTA GA	30.8	APP	BDISTT	-20060707AFQ
26	WTBS-LP	ATLANTA GA	34.7	LIC	BLTTL	-20000620AEP
26	WTBS-LP	ATLANTA GA	33.5	CP	BPTTL	-20070411ACJ
29	W29AO	ANNISTON AL	140.7	LIC	BLTT	-19900316JI
30	WPBA	ATLANTA GA	35.9	LIC	BLET	-19910325KE

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Study of this proposal found the following interference problem(s):

NONE.