

**STATEMENT OF JOHN E. HIDLE, JR.  
IN SUPPORT OF AN  
APPLICATION FOR CONSTRUCTION PERMIT  
FOR POST-TRANSITION  
“APPENDIX B CHECKLIST” FACILITIES  
WLFL-DT - RALEIGH, NORTH CAROLINA  
DTV - CH. 27, 568 kW, 610 M HAAT**

**Prepared for: WLFL LICENSEE, LLC**

**MARCH, 2008**

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Prepared for: WLFL Licensee, LLC

I am an Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission.

**GENERAL**

WLFL Licensee, LLC, licensee of WLFL(TV), Channel 22, Raleigh, North Carolina, and applicant for a Construction Permit to implement post-transition facilities for the paired Digital Television Allotment for WLFL-DT to operate on channel 27, (the current analog channel of WRDC(TV), Durham, North Carolina) has authorized this office to prepare this statement, FCC Form 301, Sections III and III-D and associated exhibits to be made a part of an Application for Construction Permit for it post-transition DTV Facility, on WRDC(TV)'s current analog channel 27 as reflected in “Appendix B” of the SEVENTH FURTHER NOTICE OF PROPOSED RULEMAKING, adopted October 10, 2006 (MB Docket 87-268).

### **PROPOSED TECHNICAL FACILITIES**

It is proposed herein to implement the post-transition facilities of WLFL-DT on channel 27 utilizing a non-directional transmitting antenna, a HAAT of 610 meters and an ERP of 568 kW, top-mounted in a “T-Bar” configuration on the existing antenna support structure, FCC antenna structure registration number 1027322, with the antenna radiation centerline at 580.0 meters above ground level (AGL). A Vertical Plan Antenna Sketch is shown in Exhibit 1.

### **PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.625 of the FCC’s Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699), power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 38 kilometers from the site, the antenna site elevation and coordinates were determined from those reflected in FCC antenna structure registration number 1027322. As shown in Exhibit 2, the predicted 48 dBu, (F50,90) principal community contour completely encompasses the principal community of license as required by the Commission’s rules. The predicted 41 dBu (F 50,90) “protected coverage contour” is also shown in Exhibit 2. Exhibit 2 also shows that the 41 dBu F(50,90) contour of the instant proposed facility does not exceed that of the Appendix B Facility. This proposal therefore meets the requirements for expedited processing.

### **ALLOCATION CONSIDERATIONS**

The Seventh Report and Order and Eighth Further NPRM (MB Docket 87-268) includes the recently adopted DTV Table of Allotments that identifies the specific technical facilities at which the Commission has proposed to allow DTV stations to operate after the DTV transition. In the sense that the instant proposed technical facility for which authorization is being sought is essentially identical to the technical facility as outlined in the Final DTV Table of Allotments, it is presumed this request will be treated in similar fashion to a “checklist application” for facilities as reflected in the initial DTV Table.

### **BLANKETING AND INTERMODULATION INTERFERENCE**

A number of broadcast and non-broadcast facilities are located within 10 km of the proposed WLFL-DT transmitter/antenna site. The applicant recognizes its responsibility to remedy complaints of interference created by this proposal in accordance with applicable Rules.

### **ENVIRONMENTAL CONSIDERATIONS**

#### **RADIO FREQUENCY IMPACT**

Effective October 15, 1997, the FCC adopted guidelines and procedures for evaluating environmental effects of radio frequency (RF) emissions. The guidelines are generally based on recommendations by the National Council on Radiation Protection and Measurements (NCRP) in NCRP Report No. 86 (1986), and by the American National

Standards Institute and the Institute of Electrical and Electronic Engineers, LLC (IEEE) in ANSI/IEEE C95.1-1992 (IEEE C95.1-1991). The guidelines provide a maximum permissible exposure (MPE) level for occupational or “controlled” situations that apply in cases that affect the general public. The FCC Office of Engineering and Technology’s technical bulletin No. 65 entitled, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (Edition 97-01, August 1997), provides assistance in the determination of whether FCC-regulated transmitting facilities, operations or devices comply with guideline limits for human exposure to radio frequency electromagnetic fields as adopted by the Commission in 1996. Bulletin No. 65 contains the technical information necessary to evaluate compliance with the FCC’s policies and guidelines.

The FCC’s Maximum Permitted Exposure (MPE) level for “uncontrolled” environments is 0.2 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) when applied to broadcast facilities operating between 30 MHz and 300 MHz, and for broadcast facilities operating between 300 MHz and 1500 MHz, primarily UHF TV stations, is derived from the formula,  $(\text{frequency}/1500)$ . The MPE level for “controlled” environments is 1.0 milliwatts per centimeter squared ( $\text{mW}/\text{cm}^2$ ) for operations between 30 MHz and 300 MHz, and for broadcast stations operating between 300 MHz and 1500 MHz in a “controlled” environment is derived from the formula,  $(\text{frequency}/300)$ .

The predicted emissions of WLFL-DT channel 27 must be considered, along with the predicted emissions of other stations that will operate from its site and within 315 km after

the digital transition. For WLFL-DT, which will operate on channel 27 (551 MHz), the MPE level for “uncontrolled” environments is  $0.367 \text{ mW/cm}^2$ , and for “controlled” environments is  $1.835 \text{ mW/cm}^2$ .

The proposed WLFL-DT facility, channel 27, will operate with a maximum ERP of 568 kW from a horizontally polarized non directional transmitting antenna with a centerline height of 580.0 meters above ground level (AGL). Considering a very conservative vertical plane relative field factor of 0.3, the WLFL-DT facility produces a predicted power density at two meters above ground level of  $0.00511 \text{ mW/cm}^2$ , which is 1.39% of the FCC guideline value for “uncontrolled” environments, and 0.278% of the FCC guideline value for “controlled” environments.

As shown in Appendix A, the total predicted percentage of the MPE value at WLFL’s site, considering the cumulative predicted radiation of all broadcast facilities at the site, is only 7.52% of the limit for “uncontrolled” environments, and 1.504% of the limit for “controlled” environments. The site is therefore in compliance with the FCC’s Maximum Permitted Exposure guidelines.

### **OCCUPATIONAL SAFETY**

The permittee of WLFL-DT is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WLFL-DT antenna. The applicant is committed to reducing power and/or ceasing operation during times of service or maintenance of the transmission systems, when necessary, to ensure protection to

personnel. In light of the above, the proposed modification of the WLFL-DT facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

**SUMMARY**

It is submitted that the proposal described herein complies with the Rules and Regulations of the Federal Communications Commission. This statement, FCC Form 301, Sections III and III-D, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

**Dated: March 13, 2008**



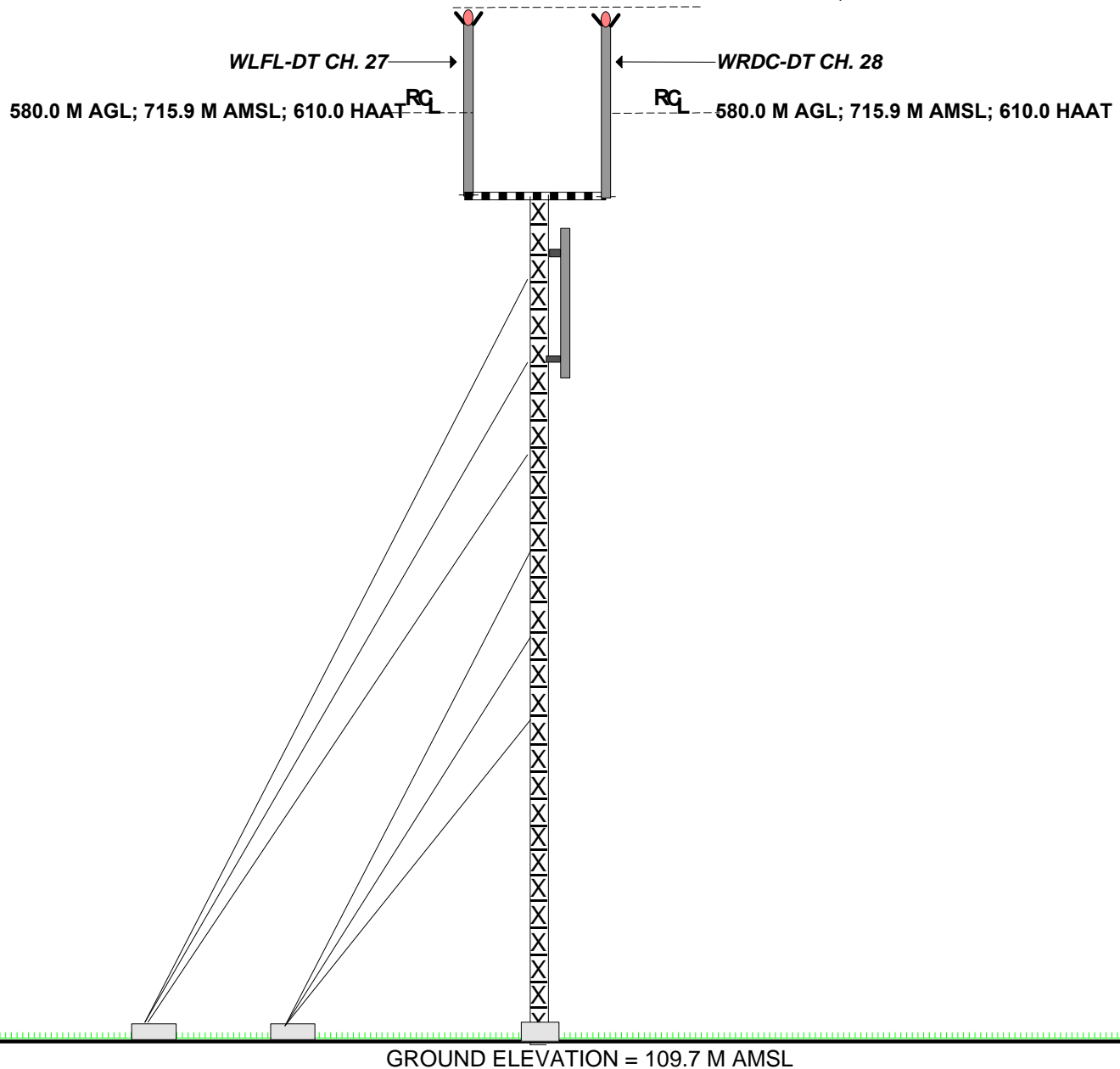
John E. Hidle, Jr.



35° 40' 28" NL  
078° 31' 40" WL

EXHIBIT 1

OVERALL HEIGHT  
178.3 M AGL; 369.7 M AMSL



## VERTICAL PLAN ANTENNA SKETCH

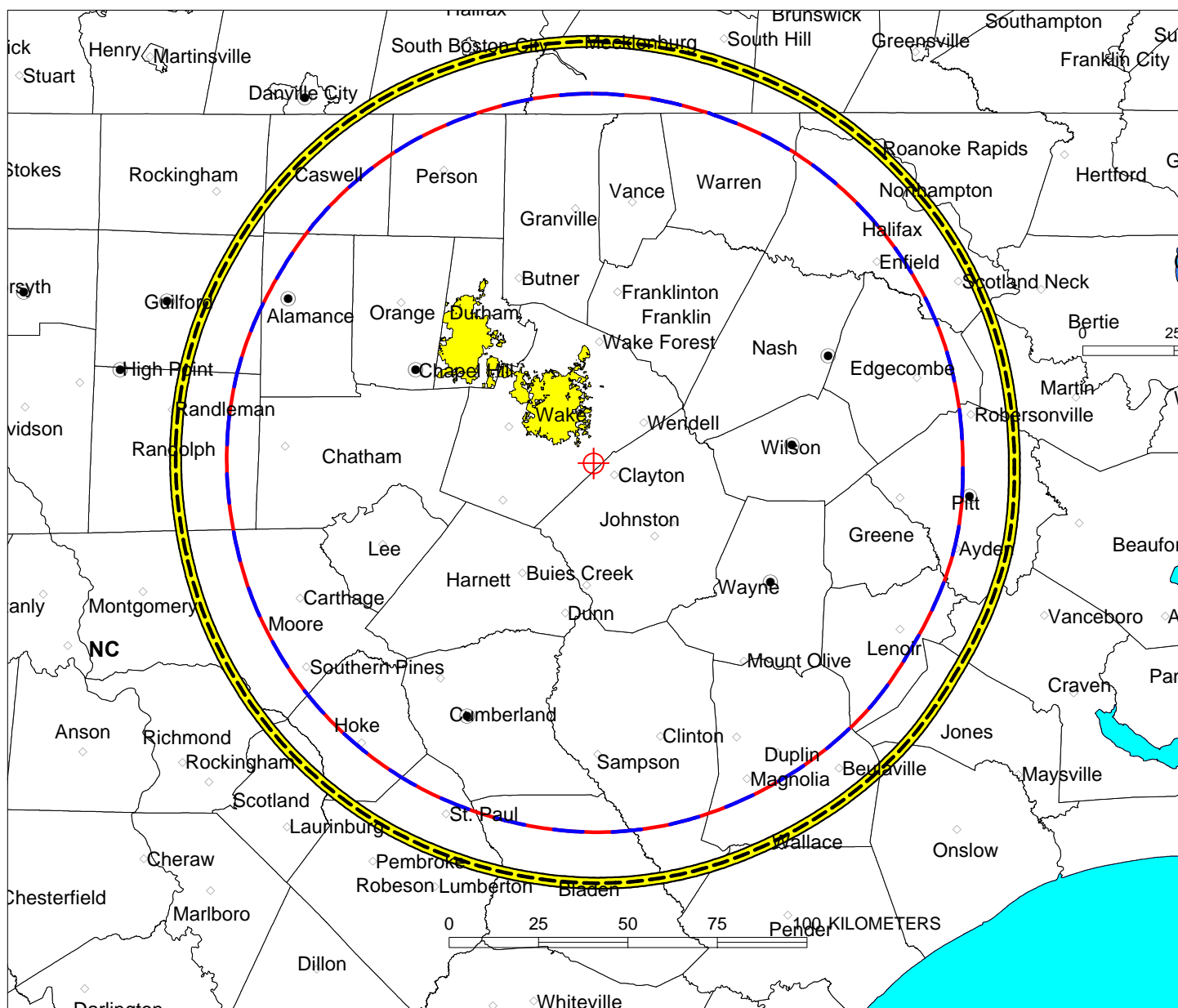
WLFL-DT RALEIGH, NORTH CAROLINA

CH. 27, 568 kW - 610.0 m HAAT

MARCH, 2008

**CARL T. JONES**  
CORPORATION

NOTE: NOT DRAWN TO SCALE



WLFL-DT Channel 27, DTV Proposed Facility  
Protected Coverage Contour  
568 kW ERP, 610 m HAAT, 41 dBu, F(50,90)  
Non-Directional Antenna

WLFL-DT Channel 27, DTV Proposed Facility  
Community Coverage Contour  
568 kW ERP, 610 m HAAT, 48 dBu, F(50,90)  
Non-Directional Antenna

WLFL-DT Channel 27, DTV Table Facility  
Protected Coverage Contour  
568 kW ERP, 610 m HAAT, 41 dBu, F(50,90)  
Non-Directional Antenna

WLFL-DT Channel 27, DTV Table Facility  
Community Coverage Contour  
568 kW ERP, 610 m HAAT, 48 dBu, F(50,90)  
Non-Directional Antenna

## PREDICTED COVERAGE CONTOURS

WLFL-DT, RALEIGH, NORTH CAROLINA  
COMMUNITY COVERAGE CONTOUR  
OF DTV TABLE OF ALLOTMENTS FACILITY  
VS. PROPOSED CHECKLIST FACILITY  
MARCH, 2008

**CARL T. JONES**  
CORPORATION

**SUMMARY OF RADIOFREQUENCY  
RADIATION STUDY**

WLFL-DT, RALEIGH, NORTH CAROLINA  
CHANNEL 27, 568 kW ERP, 610 m HAAT  
MARCH, 2008

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT ** mAGL</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm<sup>2</sup>)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm<sup>2</sup>)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
WLFL-DT	DT	27	551	H	578	568.000	0.300	0.00511	0.367	1.39%
WRDC-DT	DT	28	557	H	578	225.000	0.300	0.00202	0.371	0.55%
WACN-LP	TV	34	593	H	298	49.160	0.300	0.00083	0.395	0.21%
WRAZ-DT	DT	49	683	H	581.9	1000.000	0.300	0.00888	0.455	1.95%
WRAL-DT	DT	48	677	H	597	916.000	0.300	0.00773	0.451	1.71%
WNCN-DT	DT	17	491	H	596	525.000	0.300	0.00444	0.327	1.36%
W64CN	TV	64	773	H	150	27.000	0.300	0.00180	0.515	0.35%

**TOTAL PERCENTAGE OF ANSI VALUE= 7.52%**

*\*\* The antenna heights indicated above are 2 meters less than the actual antenna heights so that the predicted power densities consider the 2 meter human height allowance.*

*\*\*\*Includes the proposed station and all stations within 315 meters.*