

TECHNICAL EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
LPTV STATION WEDD-LP  
FACILITY ID 65129  
ROANOKE, VIRGINIA  
CH 25 150 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of displacement relief application for LPTV station WEDD-LP at Roanoke, Virginia (Facility ID: 65129; File No. BLTT-19971001JC). Station WEDD-LP operates on channel 54 which has been auctioned off for other services. Pursuant to Section 73.3572(a)(4)(ii), WEDD-LP is considered to be displaced and permitted to file a displacement relief application at any time. Specifically, this application proposes to operate on channel 25, make a slight change in transmitter site location, decrease antenna radiation center height above mean sea level (RCAMSL), change the frequency offset designation (-), and increase effective radiated power (ERP). No other changes are proposed, including the community of license (Roanoke). The instant application is considered a "minor change" in facilities pursuant to Section 73.3572, as it is a displacement relief application and the change in site location is less than 0.1 km, which is less than the 16.1 km limit.

It is proposed to operate on channel 25 (536-542 MHz) with a "minus" carrier frequency offset using a Dielectric model TLP16-M "off-the-shelf" directional antenna (Antenna ID 19139) oriented at 150° true. The maximum ERP will be 150 kW and the RCAMSL will be 1171 meters.

Minor Change Application

Figure 1 depicts the licensed (BLTT-19971001JC) and herein proposed 74 dBu contours for WEDD-LP. As indicated, the proposed 74 dBu encompasses all of the licensed 74 dBu contour. Therefore, the proposed modification is considered a "minor" change in facilities pursuant to Section 73.3572.

Response to Paragraph 6 - Antenna Structure Registration Number

Station WEDD-LP proposes to side-mount the Dielectric antenna at the 25 meter level on a 30.5 meter tower.

As indicated by Figure 2, the proposed tower does not require tower registration based on the FCC's TOWAIR program.

Response to Paragraph 13

The proposed facility complies with all the following applicable rule Sections: Sections 74.705, 74.706, 74.707, 74.708, 74.709 and 74.710 based on OET-69 Bulletin.<sup>1</sup> It is noted that a nominal 2 km grid size resolution was utilized for the OET-69 Bulletin calculations.

Response to Paragraph 14 - Environmental Protection Act

The proposed WEDD-LP LPTV facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation."<sup>2</sup> The calculated power density at the base of the tower was calculated using the appropriate equation of the Bulletin. Using a greater than expected vertical relative field value of 0.19 (see Figure 3), a maximum visual effective radiated power of 150.0 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground level at the base of the tower is 0.1710 milliwatt per square centimeter (mW/cm<sup>2</sup>). This is 9.5% of the recommended limit of 1.80 mW/cm<sup>2</sup> for channel 25 applicable to controlled exposure areas and 47.6% of the 0.36 mW/cm<sup>2</sup> for channel 25 applicable to uncontrolled exposure areas. However, as this is a multi-user site, measurements will be made to show compliance with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect in the event that workers or other authorized personnel enter the

---

<sup>1</sup> 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 computer system was employed. The results have been found to be in agreement with the results of the FCC implementation of OET Bulletin 69.

<sup>2</sup> See Report and Order in ET Docket 93-62, FCC 96-326, adopted August 1, 1996, 11 FCC Rcd 15123 (1997). See also First Memorandum Opinion and Order, ET Docket 93-62, FCC 96-487, adopted December 23, 1996, 11 FCC Rcd 17512 (1997), and Second Memorandum Opinion and Order and Notice of Proposed Rulemaking, ET Docket 93-62, FCC 97-303, adopted August 25, 1997.

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 monitors or scheduling work when the stations are at reduced power or shut down.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.



W. Jeffrey Reynolds

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941)329-6000  
JEFF@DLR.COM

January 18, 2007

---



**\*\*\* NOTICE \*\*\***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

**DETERMINATION Results**

**Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.**

**Your Specifications**

**NAD83 Coordinates**

Latitude	37-11-35.5 north
Longitude	080-09-22.2 west

**Measurements (Meters)**

Overall Structure Height (AGL)	30.5
Support Structure Height (AGL)	30.5
Site Elevation (AMSL)	1146

**Structure Type**

TOWER - Free standing or Guyed Structure used for Communications Purposes

**[Tower Construction Notification](#)**

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

Note: Notification does NOT replace [Section 106 Consultation](#).

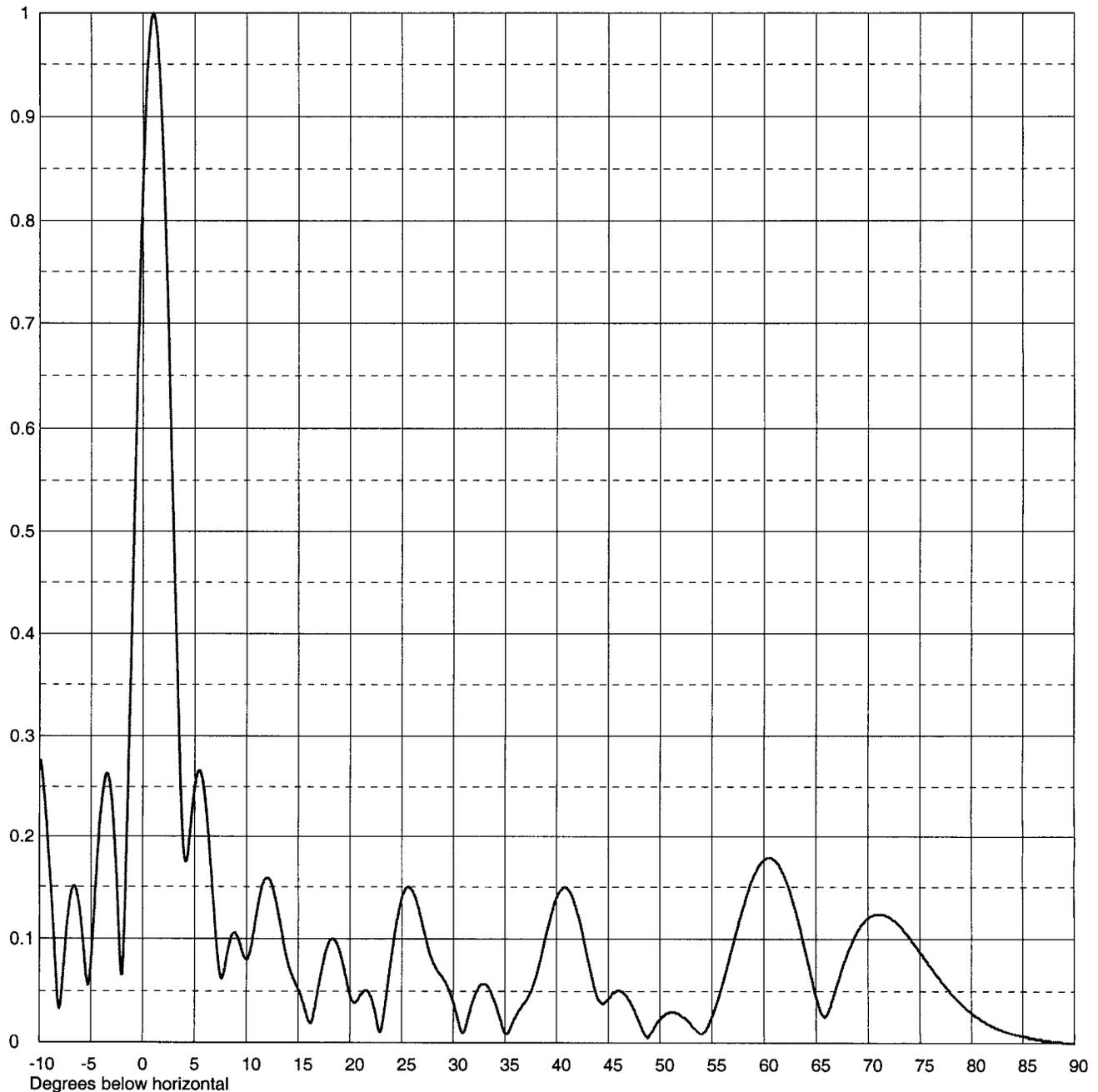
**CLOSE WINDOW**

Date  
Call Letters  
Location  
Customer  
Antenna Type **TLP-16M**

Channel **25**

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>16.0 (12.04 dB)</b>	Beam Tilt	<b>1.00 Degrees</b>
RMS Gain at Horizontal	<b>11.3 (10.53 dB)</b>	Frequency	<b>539.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>16L160100-90</b>



Remarks: