

TECHNICAL SUMMARY
DISPLACEMENT APPLICATION FOR CONSTRUCTION PERMIT
LOW POWER ANALOG STATION WVCJ-LP
ORLANDO, FLORIDA
CHANNEL 4 3 KW (ND)

1. Application Purpose: The instant application is a displacement application for WVCJ-LP currently on analog channel 16 at Orlando, Florida (BLTTL-20030522AGC). As detailed below, WVCJ-LP is eligible for displacement due to impermissible interference caused and received with the authorized operation of Class A station WRCF-CD on repacked channel 16 at Orlando, Florida (LMS File No. 0000034010). Therefore, it is proposed to operate WVCJ-LP on “in core” VHF channel 4 with a nondirectional antenna maximum effective radiated power (ERP) of 3 kW using Dielectric model THB-03-1/3-1 horizontally polarized antenna. The antenna radiation center height will be 134.4 m AMSL. There will be no change in the overall structure height (ASRN 1064322).

2. Displacement Eligibility: Station WVCJ-LP is considered to be displaced due to impermissible interference caused and received with the authorized operation of Class A station WRCF-CD on repacked channel 16 at Orlando, Florida (LMS File No. 0000034010). Specifically, as indicated by the attached *TVStudy* analysis, WVCJ-LP’s licensed channel 16 analog operation is predicted to cause 20.57% new interference to WRCF-CD (up to 0.5% new interference is permitted) and will receive 99.26% new interference from WRCF-CD (a 2% threshold was used by the FCC for determination of displacement in the FCC Special Displacement Window PN).

3. Interference Compliance: As indicated in the attached *TVStudy* analysis, WVCJ-LP’s proposed channel 4 displacement operation meets the FCC’s interference protection requirements with respect to all protected facilities based on both a pre-transition and post-transition environment. A cell size of 1.0 km and a profile resolution of 1.0 points/km were utilized for the *TVStudy* analysis.

4. RFR Compliance: The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna will be located 107 meters above ground level. The total DTV ERP is 3 (horizontal polarization). A worst-case vertical plane relative

field value of 1.0 is presumed for the antenna's downward radiation (-60° to -90° elevation, see attached antenna information). The calculated power density at a point 2 meters above ground level is 9.09 $\mu\text{W}/\text{cm}^2$ which is 4.5% of the FCC's recommended limit of 200 $\mu\text{W}/\text{cm}^2$ for channel 4 for an uncontrolled environment. Thus, as this is less than the 5% threshold value, it is believed that the WVCII-LP facility is in full compliance with the FCC's requirements with regard to radio frequency radiation exposure.

Access to the transmitting site will be restricted and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, a formal RFR protection protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to RFR exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.