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## **Merrill Weiss Group** LLC

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### **Technical Statement for Construction Permit Minor Modification:**

**WFTV, LLC  
Station WFTV, Facility ID 72076  
Channel 35  
Orlando, FL**

### **Modification of Construction Permit in File No. 0000025100**

#### ***Introduction***

This Technical Statement provides supplemental technical data and information associated with an application for a Minor Modification of the FCC Construction Permit (CP) for Minor Modification of a Licensed Facility associated with the Commission's Broadcast Television Spectrum Repack, in File Number 0000025100 granted on June 21, 2017 and expiring on January 17, 2020. The current application for modification of the WFTV facilities on Channel 35 in Orlando, FL seeks to maintain the existing antenna and to increase the station's Effective Radiated Power (ERP) to maximize the service that WFTV can deliver to the public. The antenna used by WFTV is a broadband panel array that is shared with another station. The plan is to move WFTV back to the ERP of 1 MW with which it operated on Channel 39 before the FCC reassigned it to Channel 35 in the Spectrum Repack. The higher power is more appropriate since many consumers today do not install the sorts of big outdoor antennas that inspired the "dipole factor" power adjustment built into the Commission's rules and OET Bulletin No. 69. For small and indoor antennas pure power is most important, and all channels are about equal when delivering signals to relatively small (compared to the size of a resonant dipole) antennas. Due to the change in power, several of the attachments to the original CP application are updated with the filing of the current application, and the updates are described in the following sections.

#### ***Facilities & Largest-In-Market Comparison***

The antenna currently authorized for use by WFTV on Channel 35 post-repack has a "star" azimuth pattern shape and uses elliptical polarization. The station seeks to upgrade by increasing power while

keeping the same pattern that it currently has authorized. Therefore the relative field pattern plots will remain unchanged, but since a power increase is proposed, there will be changes in the required pattern plots showing power in dBk. Consequently, a new set of pattern plots has been uploaded to the LMS and is found in the file named <DIE TUM20-O4SP-14-56H-2-R-T Plots for FCC Application Attachment v2 – 1000 kW>. With the increase in power proposed, new predicted interference also is possible, so new interference studies were conducted. The results of the recent interference studies are described in the following section of this Technical Statement.

In running the predicted-interference studies using the Commission's TVStudy software, TVStudy reported that the "ERP exceeds maximum. ERP: 1000kW. ERP maximum: 544 kW." Indeed, the FCC rules, in §73.622(f)(8) do specify that, for an antenna radiation center HAAT of 489 m, the ERP is limited to 544 kW. But the rules also specify, in §73.622(f)(5), that stations may request facilities "up to that needed to provide the same geographic coverage area as the largest station within their market ...." The "market" is defined elsewhere in the rules as the "DMA." In the Orlando DMA, Station WRDQ, which shares the antenna with WFTV, operates on Channel 27 at 1000 kW ERP and at the same HAAT as WFTV. Comparing the service areas of WRDQ as licensed and WFTV as proposed in the current application, WRDQ has a service area within its 40.0 dBu dipole-factor-adjusted noise-limited contour of 38,461.48 km<sup>2</sup>, while WFTV, upon grant of its application, would have a service area within its 40.8 dBu dipole-factor-adjusted noise-limited contour of 36,776.41 km<sup>2</sup>. Since the proposed WFTV facilities would not equal or exceed in contour-contained area the facilities of WRDQ, WFTV is entitled under §73.622(f)(5) to even larger facilities than it currently is requesting. On that basis, the facilities requested by WFTV, even though they exceed the provisions of §73.622(f)(8), must be allowed under the provisions of §73.622(f)(5). Analysis of the service areas was carried out using SignalPro software from EDX Wireless and azimuth pattern data for 360 bearings spaced at 1-degree increments provided for each channel by the antenna manufacturer.

### ***Interference Analysis***

As a result of the proposed power increase described in the preceding section, interference studies were conducted to confirm that interference protection to neighboring stations would be maintained after the proposed change. The studies were conducted using the Commission's TVStudy software, version 2.2.3. The Licensing and Management System (LMS) database dated October 26, 2017 was applied.

TVStudy found six records requiring analysis, representing the respective Construction Permit and Baseline facilities of two full-service television stations and one Class A station. There also was one record with Application status in the currently open filing window. The station, records, and results are included in the following table.

Call	Chan	Svc	Status	City, State	File Number	Dist. km	IX % Incr.
WUCF-TV	D34	DT	CP	ORLANDO, FL	BLANK0000027156	5.3	0.12
WUCF-TV	D34	DT	BL	ORLANDO, FL	DTVBL12855	5.3	0.16
WFLX	D35	DT	APP	WEST PALM BEACH, FL	BLANK0000034158	235.6	0.01
WFLX	D35	DT	CP	WEST PALM BEACH, FL	BLANK0000025089	235.6	0.00
WFLX	D35	DT	BL	WEST PALM BEACH, FL	DTVBL39736	235.4	0.02
WHDO-CD	D36	DC	CP	ORLANDO, FL	BLANK0000028164	39.5	0.00
WHDO-CD	D36	DC	BL	ORLANDO, FL	DTVBL10521	39.5	0.12

As can be seen in the table, four of the records show either zero or near-zero increases in predicted interference from the proposed power increase of WFTV. The other three records fall in the range between 0.1 and 0.2 percent increases in predicted interference. With a permissible increase in the level of predicted interference of 0.5 percent, there is no impermissible new interference predicted to be caused. Complete data from the interference studies described are provided in a file uploaded to the LMS record named < WFTV Ch35 DIE TUM20-O4SP-14-56H-2-R-T 1MW tvixstudy.pdf>.

### ***Environmental Impact/Radio Frequency Radiation***

The power increase impacts the determination of predicted Radio Frequency Radiation (RFR) previously made and filed with the Commission. Consequently, the RFR percentage of the Maximum Permissible Exposure (MPE) has been recalculated using the increased power level, and the results are reported in the file < Environmental Impact - Radio Frequency Radiation - WFTV Orlando - 1000kW 482mAGL 25% Vpol v3.pdf>, which has been uploaded to the LMS record for this application.

### ***Other Changes***

The recent run of TVStudy regarding WFTV produced a slightly different value for Height Above Average Terrain (HAAT) for the Center of Radiation of the antenna than was in the LMS database previously. Consequently, the value in the LMS record has been updated to the value computed by TVStudy.