

# **ENGINEERING STATEMENT**

OF

JOHN F.X. BROWNE, P.E.
IN SUPPORT OF AN APPLICATION FOR
MINOR CHANGE TO A LICENSED FACILITY
WOSU-DT
COLUMBUS, OH

# **Background**

The Ohio State University is the licensee of WOSU-DT which has been authorized to operate its post-transition DTV facility on Channel 38 (BLEDT-20040130AHB) at Columbus, OH, with an ERP of 250 kW at an HAAT of 291m. The tower is located at the following coordinates:

(NAD27) 40° 09′ 33″ N

82° 55′ 23″ W

WOSU now wishes to "maximize" the post-transition facility ERP to 503 kW and move the digital antenna to the top of the tower. All other facility parameters will remain the same.



## Site

The proposed facility is located within the Canadian border zone and coordination with the Canadian government is requested to the extent necessary in light of the FCC's ongoing negotiations with the Canadian administration.

# **Antenna System and Tower**

WOSU proposes to operate with its existing digital Dielectric TFU-20GTH-RO4 omnidirectional antenna (which will be used for post-transition operation). After the end of the transition, the antenna will be moved to the top of the tower after the existing analog antenna is removed. The antenna is installed on a tower (ASR#1054358) that presently has an overall height of 623.6m AMSL (with appurtenances). After the digital antenna is moved to the top of the tower, the structure will have a new overall height of 618m AMSL (with appurtenances) which is 5.6m lower than the present overall tower height of 623.6m AMSL and the antenna will have a center of radiation of 611.5m AMSL (with a calculated HAAT of 329m). The FAA will be notified of the decrease in height of the overall structure and the ASR will be amended accordingly.

#### Coverage

The entire principal community of Columbus, OH is well within the predicted F(50,90) 48 dBu contour based on the proposed 503 kW ERP.

#### Interference

Studies were conducted with the proposed parameters using software that emulates the software used by the FCC (OET-69 analysis). The results of the study indicate that there are no post-transition domestic stations that would receive more than 0.5% new interference.

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# Environmental/RFR

The proposed construction does not require preparation of an Environmental Assessment as it does not involve any of the factors listed in Section 1.1306.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.001524 mW/cm<sup>2</sup> which is less than 5% of the MPE for public exposure (0.41 mW/cm<sup>2</sup>) at the proposed frequency and, therefore, the proposal is excluded from further consideration.

WOSU agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of RFR hazards is posted.

### Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

John F. X. Browne, P.E.

June 11, 2008