



**ENGINEERING STATEMENT**  
**OF**  
**BENJAMIN L. PIDEK, P.E.**  
**IN SUPPORT OF**  
**APPLICATION FOR CONSTRUCTION PERMIT**  
**POST-INCENTIVE AUCTION ASSIGNMENT FACILITY**  
**KSHB-TV**  
**KANSAS CITY, MO**

**Background**

Scripps Broadcasting Holdings LLC (Scripps) is the licensee of KSHB, located at Kansas City, MO, which is presently authorized to operate its digital facility on Channel 42 with the following parameters:

**Pre-Incentive Auction Facility (Ch. 42)**

Coordinates: 38° 58' 42.0" N (NAD83)  
                  94° 32' 01.8" W  
ERP:            730 kW (omni)  
RCAMSL:       611.9m

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KSHB has been assigned Ch. 36 for its post-incentive auction facility with the following parameters:

Post-Incentive Auction Facility (Ch. 36)

Coordinates: 38° 58' 42.0" N (NAD83)  
94° 32' 01.8" W

ERP: 650 kW (omni)  
RCAMSL: 611.9m

**Antenna System and Tower**

The existing top-mounted omni-directional KSHB Ch. 42 antenna (Dielectric TFU-30GTH/VP-R O6 DC) is a coaxial slot antenna that is only usable on Ch. 42 and Ch. 41. Scripps intends to replace the existing top-mounted antenna with a new omni-directional coaxial slot antenna for Ch. 36 (Dielectric TFU-28GTH/VP-R O6).

The replacement of the top-mounted antenna will result in a 0.8m reduction in the overall height of the structure. Scripps plans to notify the FAA of the reduction in structure height and update the ASR (#1234587) after construction of the new Ch. 36 facility is complete.

The current Ch. 42 antenna is elliptically polarized and the new Ch. 36 antenna will also be elliptically polarized. The vertically polarized radiation will not exceed the horizontally polarized component in any azimuth.

The new Ch. 36 antenna will have a center of radiation of 612.4 m AMSL (with a calculated HAAT of 325m) which is 0.5m higher than the radiation center height of the assigned repack facility (611.9m AMSL). To offset the 0.5m increase in the height of the antenna radiation center, Scripps proposes to decrease the KSHB ERP from the assigned 650 kW to 647 kW. The proposed

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parameters of the KSHB post-repack facility result in a very minor increase in the noise-limited contour of the proposed station beyond the noise-limited contour of its assigned post-incentive auction facility.

Table 1, attached hereto, compares the calculated distances to the contour in every azimuth for both the assigned (baseline) facility and the proposed facility. The data comes from output files generated by the FCC TVStudy software for the contours of the assigned repack facility parameters and the proposed KSHB facility parameters. As can be seen from the table, the maximum difference between the two calculated contours is a de minimis 0.02 km (0.02%).

### **Coverage**

The entire principal community of Kansas City, MO is well within the predicted F(50,90) 48 dBu contour based on the proposed omni-directional 647 kW ERP.

### **Interference**

An interference check study was run using the FCC TVStudy software (Version 2.2.2) for the proposed KSHB post-repack facility parameters. The results of the study show that the proposed facility is not predicted to cause more than 0.5% new interference to any other surrounding co-channel or adjacent channel post-repack facilities.

### **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA

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are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed post-incentive auction facility is a multi-user site and it is assumed that the site is currently “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.004190 mW/cm<sup>2</sup>, which is less than 5% of the MPE for public exposure (0.404000 mW/cm<sup>2</sup>) at Ch. 36 (603-609 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

Scripps 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 trained on RFR issues and 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 potential RFR hazards is posted.

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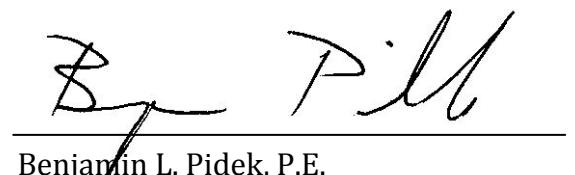
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### Certification

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.



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June 6, 2017

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