

**Exhibit 12**  
**Comprehensive Engineering Statement**

prepared for

**Williams Broadcasting LLC**

NEW(FX) Enid, Oklahoma

Facility ID 202813

Channel 265D 0.25 kW 78 meters AGL

Williams Broadcasting LLC (“*Williams*”), seeks to propose a new cross-service FM translator for standard broadcast station KGWA(AM). The instant application is part of the Auction 100 filing window for identified Singletons<sup>1</sup>. In particular, *Williams* proposes to use one of the Parent station’s towers, ASRN 1011453 with coordinates of 36° 26’ 15.9”N, 97° 55’ 12.8”W (NAD 27). The proposed antenna will be omni-directional, circularly polarized and mounted at 78 meters AGL. An ERP of 250 Watts is being specified.

**Allocation Considerations**

The location of the 60 dB $\mu$  coverage contour of the proposed translator lies within both the 2 mV/m and the 40 km (25-mile) radius of the licensed coordinates of KGWA(AM), as shown in the map provided as **Figure 1**, thus complying with §74.1201(g).

The results of a study of nearby FM facilities on co-channel, adjacent-channel, and intermediate frequencies was conducted to identify which stations require further study to demonstrate compliance under §74.1204; first adjacent stations KWOX(FM), (Ch 266C0, Woodward, OK) and KPNC(FM), (Ch 264C3, Ponca City, OK) requires further study. However, as demonstrated in **Figure 2**, the 54 dB $\mu$  F(50,10) contour of the proposed facility does not overlap either protected 60 dB $\mu$  contour. There are no IF relationship (53 or 54 Channels removed) facilities within 29 km of the proposal.

The proposed transmitter site is co-located with KGWA(AM), on the proposed Parent station’s Tower #3 of the full time array. Per FCC requirements stated in §1.30003(a) through (d), *Williams* will coordinate modifications to the proposed tower to assure that the KGWA radiation pattern will not exceed the licensed pattern values, and will perform the necessary partial proofs, measurements and adjustments if needed to restore proper operation of the directional antenna. If

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<sup>1</sup> Public Notice Media Bureau Announces Auction 100 FM Translator Filing Window for Long-Form Applications, Released March 15, 2018, DA 18-256.

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KGWA(AM) operating parameters change, a Form 302-AM will be filed within 30 days after completion of installation.

The proposed site is located 1,384 km from the Canadian border and 808 km from the Mexican border, which is well beyond the 320 km distance requiring coordination. The nearest FCC monitoring station is 499.8 km distant at Grand Island, NE and the facility is 758.6 km from the Table Mountain Quiet Zone. These distances exceed the threshold minimum distance specified in §73.1030 that would suggest consideration.

It is therefore believed that the proposed facility satisfies all of the pertinent Commission Rules and Policies now in effect regarding allocation matters.

### **Environmental Considerations**

The proposed facility will operate with a circularly-polarized ERP of 250 Watts with an omni-directional antenna, at 78 meters AGL on a registered tower which is also the Parent stations' transmit antenna. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. Because no change in structure height is proposed, no change in current structure marking and lighting requirements is anticipated. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rules.

### **Human Exposure to Radiofrequency Radiation**

The proposed operation was evaluated for human exposure to radiofrequency energy using the procedures outlined in the Commission's OET Bulletin No. 65 ("OET 65"). OET 65 describes a means of determining whether a proposed facility meets the radiofrequency exposure guidelines adopted in §1.1310. Under present Commission policy, a facility may be presumed to comply with the limits specified in §1.1310 if it satisfies the exposure criteria set forth in OET 65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

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The general population/uncontrolled maximum permitted exposure (“MPE”) limit specified in §1.1310 for the entire FM broadcast band is  $200 \mu\text{W}/\text{cm}^2$ . For the purpose of this study, “public access” will be considered at the base of the tower at a location two-meters above ground. Using the FCC’s FM Model program and a worst-case EPA Type 1 antenna it was determined that the proposed facility would contribute a worst-case RF power density of  $1.74 \mu\text{W}/\text{cm}^2$  at two meters above ground level near the antenna support structure, or 0.87 percent of the general population/uncontrolled limit.

§1.1307(b)(3) states that facilities at locations with multiple emitters are categorically excluded from responsibility for taking any corrective action in the areas where their contribution is less than five percent of the pertinent MPE limit. Since the instant situation meets the five percent exclusion test at all ground level areas, the impact of any other facilities near this site may be considered independently from this proposal. Accordingly, it is believed that the impact of the proposed operation should not be considered to be a factor at ground level as defined under §1.1307(b).

### **Safety of Tower Workers and the General Public**

As demonstrated herein, excessive levels of RF energy will not be caused by the proposal at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will continue to be restricted and controlled through the use of a locked gate. According to information provided by the applicant, appropriate RF exposure warning signs are posted.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy will be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines would otherwise be exceeded. On-site RF

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exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations. Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under §1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.

### **Conclusion**

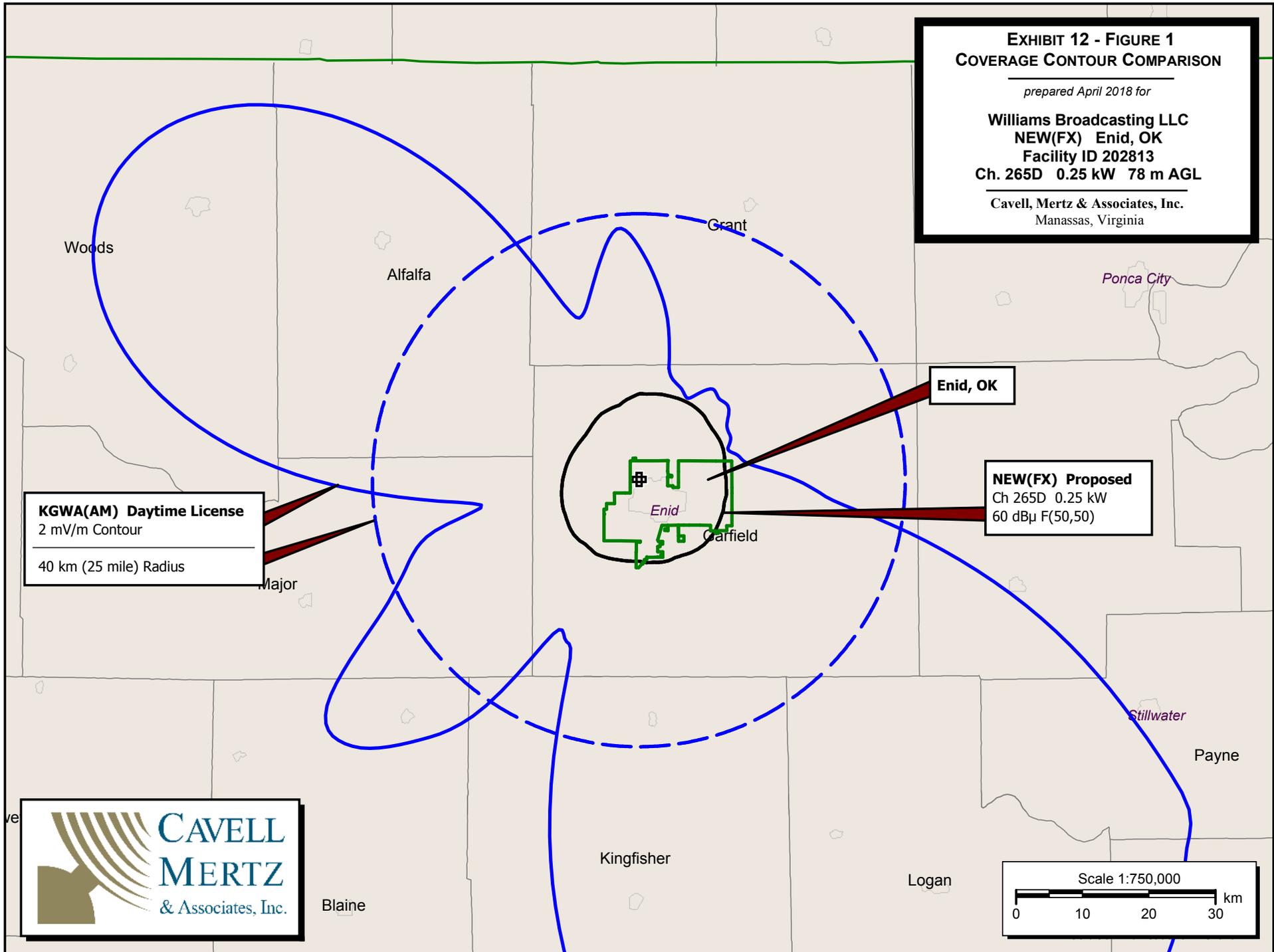
It is therefore believed that the proposed facility satisfies all of the pertinent Commission Rules and Policies now in effect.

**EXHIBIT 12 - FIGURE 1  
COVERAGE CONTOUR COMPARISON**

*prepared April 2018 for*

**Williams Broadcasting LLC  
NEW(FX) Enid, OK  
Facility ID 202813  
Ch. 265D 0.25 kW 78 m AGL**

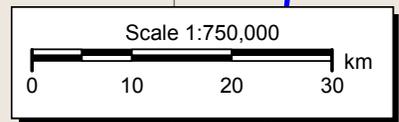
**Cavell, Mertz & Associates, Inc.  
Manassas, Virginia**



**KGWA(AM) Daytime License**  
2 mV/m Contour  
40 km (25 mile) Radius

**Enid, OK**

**NEW(FX) Proposed**  
Ch 265D 0.25 kW  
60 dBμ F(50,50)



**EXHIBIT 12 - FIGURE 2  
CONTOUR PROTECTION**

*prepared April 2018 for*

**Williams Broadcasting LLC  
NEW(FX) Enid, OK  
Facility ID 202813  
Ch. 265D 0.25 kW 78 m AGL**

**Cavell, Mertz & Associates, Inc.  
Manassas, Virginia**

**KPNX(FM) License**  
1st Adjacent Ch 264C3  
60 dB $\mu$  F(50,50)

**NEW(FX) Proposed**  
Ch 265D 0.25 kW  
60 dB $\mu$  F(50,50)  
54 dB $\mu$  F(50,10)

**KWOX(FM) License**  
1st Adjacent Ch 266C0  
60 dB $\mu$  F(50,50)

