

# **ENGINEERING EXHIBIT**

## **Amendment to Application for Construction Permit**

prepared for

### **Caballero Acquisition Inc.**

KGBS-CA Austin, Texas

Facility ID 38562

Ch. 32 86 kW

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FCC Form 301-CA, Section III (Analog)

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#### **Exhibit 7**

Statement B	Environmental Considerations
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*This material supplies a "hard copy" of the engineering portions of this application as entered August 2, 2006 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's name and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.*

Section III - Engineering (Analog)

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. All items must be completed. The response "on file" is not acceptable.

NOTEC: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

TECH BOX

1.

Channel:  
32

2.

Frequency Offset: ☐ No offset ☐ Zero offset ☒ Plus offset ☐ Minus offset

3.

Antenna Location Coordinates: (NAD 27)  
Latitude:  
Degrees 30 Minutes 19 Seconds 10 ☒ North ☐ South  
  
Longitude:  
Degrees 97 Minutes 48 Seconds 6 ☒ West ☐ East

4.

Antenna Structure Registration Number: 1059965  
☐ Not Applicable [Exhibit 5] ☐ Notification filed with FAA

5.

Antenna Location Site Elevation Above Mean Sea Level: 224.8 meters

6.

Overall Tower Height Above Ground Level: 398.8 meters

7.

Height of Radiation Center Above Ground Level: 198.1 meters

8.

Maximum Effective Radiated Power (ERP) Towards Radio Horizon: 86 kW

9.

Maximum ERP in any Horizontal and Vertical Angle: 86 kW

10.

Transmitting Antenna:  
Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under [CDBS Public Access](#) ([http://svartifoss2.fcc.gov/prod/cdb/pubacc/prod/cdb\\_pa.htm](http://svartifoss2.fcc.gov/prod/cdb/pubacc/prod/cdb_pa.htm)). Make sure that the Standard Pattern is marked Yes and that the relative field values shown match your values. Enter the Manufacturer (Make) and Model exactly as displayed in the Antenna Search.  
☐ Nondirectional ☐ Directional "Off-the-shelf" ☒ Directional composite  
  
Manufacturer PSI Model PSILP14MOY-32

Directional Antenna Relative Field Values: ☐ N/A (Nondirectional or Directional "Off-the-shelf")  
Rotation (Degrees): 0 ☒ No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0	0.315	10	0.402	20	0.503	30	0.595	40	0.693	50	0.768
60	0.832	70	0.905	80	0.96	90	0.98	100	1	110	0.98
120	0.96	130	0.905	140	0.832	150	0.768	160	0.693	170	0.595
180	0.503	190	0.402	200	0.315	210	0.25	220	0.198	230	0.155
240	0.105	250	0.055	260	0.075	270	0.112	280	0.122	290	0.112
300	0.075	310	0.055	320	0.105	330	0.155	340	0.198	350	0.25
Additional Azimuths											

Relative Field Polar Plot

CERTIFICATION

11.

Interference : The proposed facility complies with all of the following applicable rule sections. 47.C.F.R Sections 73.6011, 73.6012, 73.6013, 73.6014, 73.6020, 73.1030 and 74.709.

☒ Yes ☐ No

See Explanation in [Exhibit 6]

12.

Environmental Protection Act. The proposed facility is excluded from environmental processing under 47.C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments). Unless the applicant can determine RF compliance, an **Exhibit is required**.  
  
By checking "Yes" above, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from

☒ Yes ☐ No

See Explanation in [Exhibit 7]

radiofrequency electromagnetic exposure in excess of FCC guidelines.

SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name	Relationship to Applicant (e.g., Consulting Engineer)	
JOSEPH M. DAVIS, P.E.	CONSULTING ENGINEER	
Signature	Date	
	8/2/2006	
Mailing Address		
CAVELL, MERTZ & DAVIS, INC.		
7839 ASHTON AVENUE		
City	State or Country (if foreign address)	Zip Code
MANASSAS	VA	20109-
Telephone Number (include area code)	E-Mail Address (if available)	
7033929090	JOSEPH.DAVIS@CMDCONSULTING.COM	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

Exhibits

Exhibit 2

Description: AMENDMENT PURPOSE

THE INSTANT AMENDMENT SPECIFIES A DIFFERENT DIRECTIONAL ANTENNA MAKE/MODEL WITH SLIGHT VARIATIONS IN THE DIRECTIONAL PATTERN (SECTION III 'TECH BOX' ITEM 10) AS WELL AS A REDUCTION IN ERP TO 86 KW ('TECH BOX' ITEM 8 AND 9).

TECHNICAL EXHIBITS AS ATTACHED ARE REVISED TO CORRESPOND TO THE 'TECH BOX' CHANGES.

Attachment 2

Exhibit 6

Description: EXHIBIT 6 - STATEMENT A

Attachment 6

Description
<a href="#">Exhibit 6 - Statement A</a>

Exhibit 7

Description: EXHIBIT 7 - STATEMENT B

Attachment 7

Description
<a href="#">Exhibit 7 - Statement B</a>

Exhibit 7 - Statement B  
**ENVIRONMENTAL CONSIDERATIONS**  
prepared for  
**Caballero Acquisition Inc.**  
KGBS-CA Austin, Texas  
Facility ID 38562  
Ch. 32 86 kW

**Introduction**

The instant proposal is not believed to have a significant environmental impact as defined under Section 1.1306 of the Commission's Rules. Consequently, preparation of an Environmental Assessment is not required.

*Caballero Acquisition Inc. ("CAI")* is the licensee of Class A television station KGBS-CA, Channel 32, Austin, TX, Facility ID 38562 (BLTTA-20040217ACL). CAI proposes herein to increase effective radiated power ("ERP") and employ a replacement transmitting antenna. The proposed antenna will be side-mounted on an antenna support structure at the same elevation as the licensed KGBS-CA antenna. No change in structure overall height is necessary to carry out this proposal.

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. No change in structure height is proposed, thus 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 Electromagnetic Field**

The proposed operation was evaluated for human exposure to radiofrequency electromagnetic field 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 exceeds 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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**ENVIRONMENTAL CONSIDERATIONS**  
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The proposed KGBS-CA Channel 32 antenna center of radiation is 198.1 meters above ground level. An ERP of 86 kilowatts, horizontally polarized, will be employed. According to elevation pattern data provided by the antenna manufacturer, the proposed KGBS-CA Channel 32 antenna has a relative field of less than 10 percent from 15 to 90 degrees below the horizontal plane (i.e., below the antenna). Thus, a value of 10 percent relative field is used for this calculation. The “uncontrolled/general population” limit specified in §1.1310 for Channel 32 (center frequency 581 MHz) is  $387.3 \mu\text{W}/\text{cm}^2$ . The formula used for calculating NTSC signal density in this analysis is the same as formula (2) in Supplement A of OET-65.

$$S = [(33.4098) (F)^2 (0.4\text{ERP}_{\text{Visual}} + \text{ERP}_{\text{Aural}})] / D^2$$

Where:

S	=	power density in microwatts/cm <sup>2</sup>
ERP	=	ERP in Watts (peak visual and average aural)
F	=	relative field factor
D	=	distance in meters

Using this formula, assuming a 10 percent aural carrier level, the proposed facility would contribute a power density of  $0.37 \mu\text{W}/\text{cm}^2$  at two meters above ground level near antenna support structure, or 0.1 percent of the general population/uncontrolled limit. At ground level locations away from the base of the tower, the calculated RF power density is even lower, due to the increasing distance from the transmitting antenna.

§1.1307(b)(3) states that facilities contributing less than five percent of the exposure limit at locations with multiple transmitters are categorically excluded from responsibility for taking any corrective action in the areas where their contribution is less than five percent. 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 or near ground level as defined under §1.1307(b).

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

As demonstrated herein, excessive levels of RF energy attributable to the proposal will not be caused 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 be restricted and controlled through the use of a locked fence. Additionally, appropriate RF exposure warning signs will be 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 or nearby towers 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 will be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations.

**Conclusion**

Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under Section 1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.