

# **ENGINEERING EXHIBIT**

## **Application for Digital Television Translator Construction Permit**

prepared for

### **Hawaii Public Television Foundation**

K67AV Lihue, Hawaii

Facility ID 26425

Ch. 30 (Digital) 0.1 kW

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FCC Form 346, Section III (Digital)

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*This material supplies a "hard copy" of the engineering portions of this application as entered March 31, 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.*

<b>SECTION III - ENGINEERING DATA (Digital)</b>																																																																																																											
<b>TECHNICAL SPECIFICATIONS</b>																																																																																																											
Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.																																																																																																											
<b>TECH BOX</b>																																																																																																											
1.	Channel Number: 30																																																																																																										
2.	Translator Input Channel No. : 11																																																																																																										
3.	Primary station proposed to be rebroadcast:																																																																																																										
	Call Sign	City	State	Channel																																																																																																							
	KHET	HONOLULU	HI	11																																																																																																							
4.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 21 Minutes 58 Seconds 35.2 <input checked="" type="radio"/> North <input type="radio"/> South  Longitude: Degrees 159 Minutes 29 Seconds 54.8 <input checked="" type="radio"/> West <input type="radio"/> East																																																																																																										
5.	Antenna Structure Registration Number: <input checked="" type="checkbox"/> Not Applicable [Exhibit 10] <input type="checkbox"/> Notification filed with FAA																																																																																																										
6.	Antenna Location Site Elevation Above Mean Sea Level: 835.2 meters																																																																																																										
7.	Overall Tower Height Above Ground Level: 4.9 meters																																																																																																										
8.	Height of Radiation Center Above Ground Level: 3 meters																																																																																																										
9.	Maximum Effective Radiated Power (ERP): 0.1 kW																																																																																																										
10.	Transmitter Output Power: 0.029 kW																																																																																																										
11.	<p><b>a. Transmitting Antenna:</b>            Before selecting Directional "Off-the-Shelf", refer to "Search for Antenna Information" under <a href="http://svartifoss2.fcc.gov/prod/cdbspubacc/prod/cdbsp_a.htm">CDBS Public Access</a> (http://svartifoss2.fcc.gov/prod/cdbspubacc/prod/cdbsp_a.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.  <input type="radio"/> Nondirectional    <input checked="" type="radio"/> Directional "Off-the-shelf"    <input type="radio"/> Directional composite             Manufacturer SCA    Model 4DR-4-3HC</p> <p><b>b. Electrical Beam Tilt:</b> degrees <input checked="" type="checkbox"/> Not Applicable</p> <p><b>c. Directional Antenna Relative Field Values:</b> <input checked="" type="checkbox"/> N/A (Nondirectional or Directional "Off-the-shelf")            Rotation (Degrees): 150    <input type="checkbox"/> No Rotation</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th></tr> </thead> <tbody> <tr><td>0</td><td></td><td>10</td><td></td><td>20</td><td></td><td>30</td><td></td><td>40</td><td></td><td>50</td><td></td></tr> <tr><td>60</td><td></td><td>70</td><td></td><td>80</td><td></td><td>90</td><td></td><td>100</td><td></td><td>110</td><td></td></tr> <tr><td>120</td><td></td><td>130</td><td></td><td>140</td><td></td><td>150</td><td></td><td>160</td><td></td><td>170</td><td></td></tr> <tr><td>180</td><td></td><td>190</td><td></td><td>200</td><td></td><td>210</td><td></td><td>220</td><td></td><td>230</td><td></td></tr> <tr><td>240</td><td></td><td>250</td><td></td><td>260</td><td></td><td>270</td><td></td><td>280</td><td></td><td>290</td><td></td></tr> <tr><td>300</td><td></td><td>310</td><td></td><td>320</td><td></td><td>330</td><td></td><td>340</td><td></td><td>350</td><td></td></tr> <tr> <td colspan="2">Additional Azimuths</td><td colspan="10"></td></tr> </tbody> </table>											Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	0		10		20		30		40		50		60		70		80		90		100		110		120		130		140		150		160		170		180		190		200		210		220		230		240		250		260		270		280		290		300		310		320		330		340		350		Additional Azimuths											
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Relative Field Polar Plot

<b>NOTE:</b> 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.	
12.	<b>Out-of-channel Emission Mask:</b> <input checked="" type="radio"/> Simple <input type="radio"/> Stringent
<b>CERTIFICATION</b>	
13.	<p><b>Interference :</b> The proposed facility complies with all of the following applicable rule sections. 47.C.F.R Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030.</p> <p style="text-align: right;"><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p style="text-align: right;">See Explanation in [Exhibit 11]</p>
14.	<p><b>Environmental Protection Act.</b> 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 <b>Exhibit is required.</b></p> <p>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 radiofrequency electromagnetic exposure in excess of FCC guidelines.</p> <p style="text-align: right;"><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p style="text-align: right;">See Explanation in [Exhibit 12]</p>
15.	<p><b>Channels 52-59.</b> If the proposed channel is within channels 52-59, the applicant certifies compliance with the following requirements, as applicable:</p> <p><input type="checkbox"/> The applicant is applying for a digital companion channel for which no suitable channel from channel 2-51 is available.</p> <p><input type="checkbox"/> Pursuant to Section 74.786(d), the applicant has notified, within 30 days of filing this application, all commercial wireless licenses of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.</p>
16.	<p><b>Channels 60-69.</b> If the proposed channel is within channels 60-69, the applicant certifies compliance with the following requirements, as applicable:</p> <p><input type="checkbox"/> Pursuant to Section 74.786(e), the applicant has notified, within 30 days of filing this application , all commercial wireless licenses of the spectrum comprising the proposed TV channel and the first adjacent channels thereto, for which the proposed digital LPTV or TV translator antenna site lies inside the licensed geographic boundaries of the wireless licensees or within 75 miles and 50 miles, respectively, of the geographic boundaries of co-channel and adjacent-channel wireless licensees.</p> <p><input type="checkbox"/> Pursuant to Section 74.786(e), the applicant proposing operation on channel 63, 64, 68 and 69 ("public safety channels") has secured a coordinated spectrum use agreements(s) with 700 MHz public safety regional planning committee(s) and state administrator(s) of the region(s) and state(s) within which the antenna site of the digital LPTV or TV translator station is proposed to locate, and those adjoining regions and states with boundaries within 75 miles of the proposed station location.</p> <p><input type="checkbox"/> Pursuant to Section 74.786(e), the applicant for a channel adjacent to channel 63, 64, 68 or 69 has notified, within 30 days of filing this application, the 700 MHz public safety regional planning committee(s) and state administrator (s) of the region and state containing the proposed digital LPTV or TV translator antenna site and regions and states whose geographic boundaries lie within 50 miles of the proposed LPTV or TV translator antenna site.</p>
<b>PREPARERS CERTIFICATION ON PAGE 3 MUST BE COMPLETED AND SIGNED.</b>	

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**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 ROBERT J. CLINTON	Relationship to Applicant (e.g., Consulting Engineer) CONSULTANT	
Signature	Date 3/31/2006	
Mailing Address CAVELL, MERTZ & DAVIS, INC. 7839 ASHTON AVENUE		
City MANASSAS	State or Country (if foreign address) VA	Zip Code 20109 - 2883
Telephone Number (include area code) 7033929090	E-Mail Address (if available) BCLINTON@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).

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**Exhibits****Exhibit 10**

**Description:** EXHIBIT 10

EXHIBIT 10 - SEE EXHIBIT 11 - STATEMENT A FOR ANTENNA STRUCTURE DISCUSSION

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**Attachment 10**

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**Exhibit 11**

**Description:** EXHIBIT 11 - STATEMENT A

EXHIBIT 11 - STATEMENT A - ALLOCATION CONSIDERATIONS

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**Attachment 11**

Description
EXHIBIT 11 - STATEMENT A

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**Exhibit 12**

**Description:** EXHIBIT 12 - STATEMENT B

EXHIBIT 12 - STATEMENT B - ENVIRONMENTAL CONSIDERATIONS

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**Attachment 12**

Description
EXHIBIT 12 - STATEMENT B



Exhibit 12 - Statement B  
**ENVIRONMENTAL CONSIDERATIONS**  
prepared for  
**Hawaii Public Television Foundation**  
K67AV Lihue, Hawaii  
Facility ID 26425  
Ch. 30 (Digital) 0.1 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.

*Hawaii Public Television Foundation* (“*Hawaii PTV*”) proposes to convert television translator station K67AV, Channel 67, Lihue, HI, Facility ID 26425 (BLTT-19920325JC) to digital operation on a new channel. A replacement transmitting antenna will be side-mounted on the existing antenna support structure employed by K67AV. 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 K67AV antenna will continue to be located on the existing structure associated with its current license. The transmitting location is on a ridge of the Lihue-Koloa Forest Preserve, an area approximately 12 km west of Lihue. There are numerous other transmitting facilities at this site area situated on various antenna supporting structures.

*Hawaii PTV* will participate in a radiofrequency (“RF”) electromagnetic field exposure safety program, along with any other FCC licensees that utilize the same Lihue-Koloa ridge area. Following construction of the proposed facility, *Hawaii PTV* will conduct RF exposure

Exhibit 12 - Statement B  
**ENVIRONMENTAL CONSIDERATIONS**  
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measurements (and/or detailed calculations) to evaluate the level of RF exposure resulting from the K67AV facility. As necessary, based on these results and considering all emitters, appropriate exposure abatement procedures will be established and followed, in order to comply with the Commission's exposure limits. Such abatement procedures may involve the restriction of access to certain areas and/or facility modifications to reduce RF levels.

Considering the post-construction measurement and an appropriate abatement program, the general public and workers will not be exposed to RF levels in excess of the Commission's guidelines. RF exposure warning signs will continue to be posted.

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

With respect to worker safety, authorized personnel will be trained and/or supervised as necessary for access to any "controlled" areas. 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 will be exceeded. RF exposure measurements may also be undertaken to establish the bounds of safe working areas. *Hawaii PTV* 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.