

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
FOR DIGITAL DISPLACEMENT CONSTRUCTION PERMIT
K65BV TRANSLATOR
LIHUE, HAWAII
CH 32 0.6 KW (MAX-DA)

Technical Exhibit

The technical exhibit supports an application to modify the digital displacement facility for K65BV assigned to Lihue, Hawaii.

Summary of Proposed Facilities

Below is a tabulation of the proposed paired digital facility:

Channel:	32
Geographic Coordinates:	21° 58' 35.2" North Latitude 159° 29' 54.8" West Longitude
Antenna Structure Registration:	n/a
Overall Tower Height:	4.9 meters
Ground Elevation:	835.2 meters
Radiation Center:	839.4 meters AMSL 4.2 meters (13 feet) AGL
Antenna Type:	Scala, 4DR-4-3HC
Antenna Major Lobe Orientation:	150° True
Transmitter Power Output:	0.25 kilowatt (25 watts)
Transmission Line:	7/8" Helix 90'
Emissions Mask:	Stringent
Effective Radiated Power:	0.6 kilowatt (600 watts)

Figure 1 is a map depicting the proposed translator's contour digital protected contour.

Allocation Considerations

A study has been conducted to assure that the proposal will not create prohibited interference with other post-transition licensed, authorized or pending analog or digital TV, LPTV/translator and Class A TV stations. Using the procedures outlined in the FCC's OET-69 Bulletin, the allocation study is provided in Figure 2.

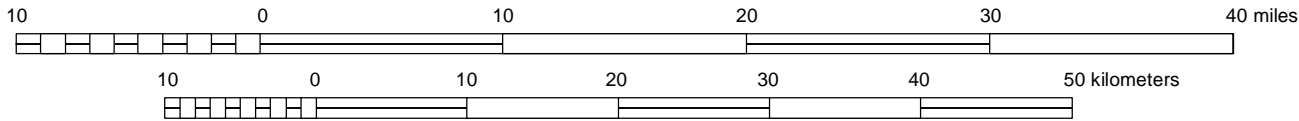
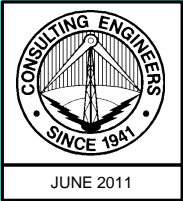
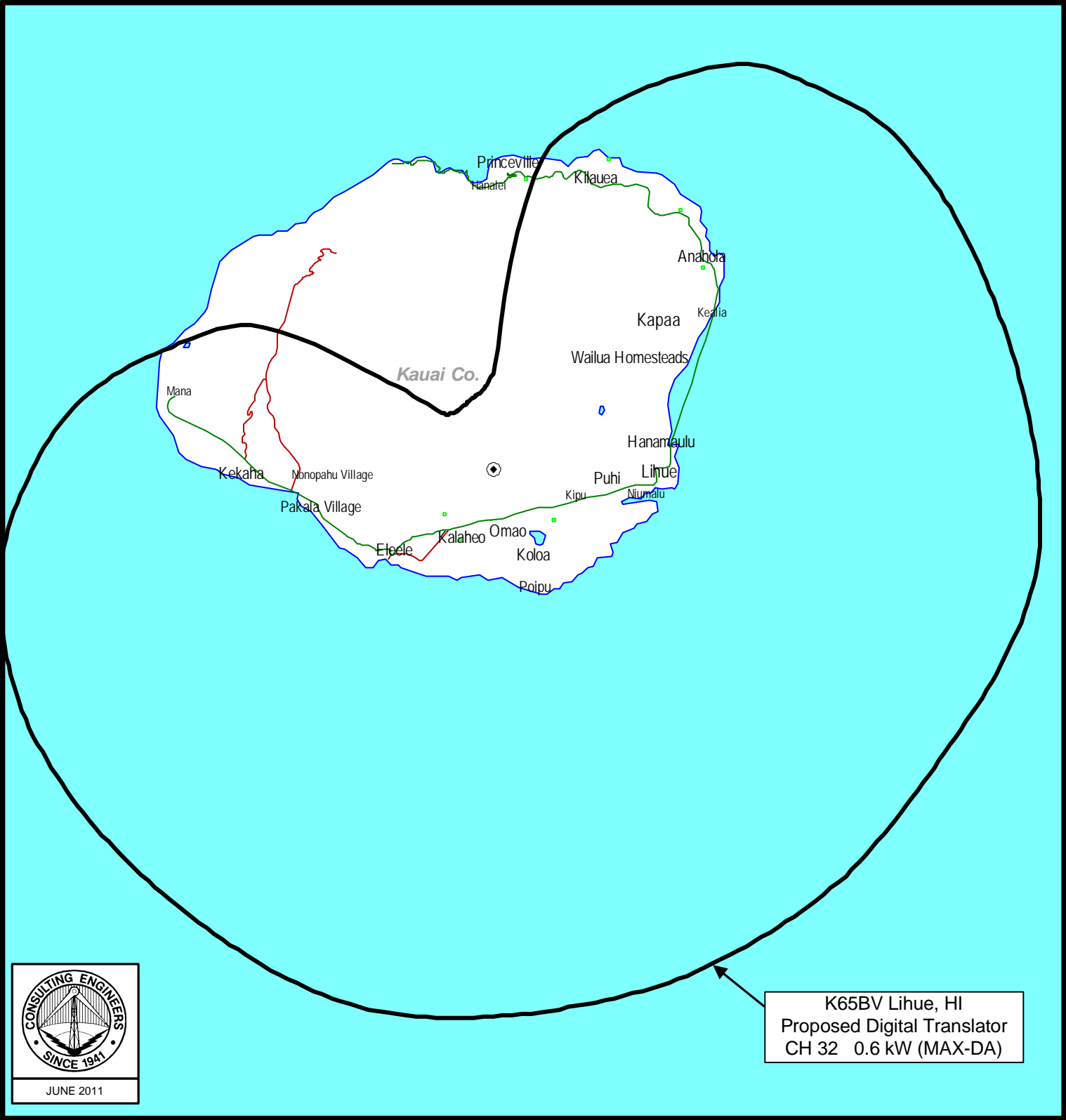
Radiofrequency Electromagnetic Field Exposure

The proposed facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the antenna is located 4 meters above ground level. The proposed ERP of 0.6 kW is assumed. A conservative relative field value of 0.5 was assumed for the Scala antenna's downward radiation. The calculated power density at ground level is 0.31 mW/cm^2 . This is approximately 15% of the FCC's recommended limit of 1.95 mW/cm^2 for channel 32 for an "controlled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner as part of the tower registration process.

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June 1, 2011



FCC PREDICTED PROTECTED COVERAGE CONTOURS

TV TRANSLATOR K65BV

LIHUE, HAWAII

CH 32 0.6 kW (MAX-DA)

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Figure 2

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OET-69 Allocation Analysis

Percent allowed new interference: 0.500
Percent allowed new interference to non Class A LPTV: 2.000
TW Census data selected 2000
Data Base Selected
/export/home/cdb/pt_tvdb.sff
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-02-2011 Time: 15:54:24

Record Selected for Analysis

K65BV USERRECORD-01 LIHUE HI US
Channel 32 ERP 0.6 kW HAAT 525. m RCMSL 00839 m STRINGENT MASK
Latitude 021-58-35 Longitude 0159-29-55
Status APP Zone 2 Border Site number: 01
Dir Antenna Make CDB Model 00000000020742 Beam tilt N Ref Azimuth 150.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station
Service Class = LD
Maximum height/power limits not checked

Site number	1			
Azimuth	ERP	HAAT	51.0 dBu F(50,90)	
(Deg)	(kW)	(m)	(km)	
0.0	0.067	33.0	8.9	
45.0	0.457	659.9	46.2	
90.0	0.573	736.5	48.9	
135.0	0.497	722.4	47.8	
180.0	0.563	759.5	49.2	
225.0	0.542	707.8	48.1	
270.0	0.303	528.2	41.5	
315.0	0.025	53.2	9.0	

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

NO LANDMOBILE SPACING VIOLATIONS FOUND

Checks to Site Number 01

Figure 2

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
32	K65BV	LIHUE HI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
31	KWHE	HONOLULU HI	184.4	LIC	BLCDT -20060628AAN
33	KBFD-DT	HONOLULU HI	184.4	LIC	BLCDT -20080618ACG

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application Ref. No.
31	KWHE	HONOLULU HI	BLCDT -20060628AAN

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
32	K65BV	LIHUE HI	184.4	APP	USERRECORD-01

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
33	KBFD-DT	HONOLULU HI	BLCDT -20080618ACG

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
32	K65BV	LIHUE HI	184.4	APP	USERRECORD-01

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
32	K65BV	LIHUE HI	USERRECORD-01

Stations Potentially Affecting This Station

Figure 2

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
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Total scenarios = 1

Result key: 1
Scenario 1 Affected station 3
Before Analysis

Results for: 32A HI LIHUE USERRECORD01 APP
HAAT 525.0 m, ATV ERP 0.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	54974	5486.6
not affected by terrain losses	51989	5170.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

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