

**TECHNICAL EXHIBIT**

**APPLICATION FOR  
LPTV CONSTRUCTION PERMIT**

**NEW LPTV  
FCC FACILITY ID: 131158**

**KM BROADCASTING OF GUAM, L.L.C.  
TAMUNING, GUAM**

**CH 26 54.0 KW 235 M RCAMSL**

**NOVEMBER 2002**

T.Z. Sawyer Technical Consultants  
5272 River Road, Suite 460  
Bethesda, Maryland 20816-1440

Telephone (301) 913-9287  
TeleFAX (301) 913-5799

Internet E-mail: *engineers@sawyer.com*



Copyright, 2002 T.Z. Sawyer Technical Consultants

Reproduction of this material by parties for the purpose of use in competing applications is expressly prohibited.  
Permission is granted to copy all or portions of this material for *reference purposes* only.

**TECHNICAL EXHIBIT**  
**APPLICATION FOR**  
**LPTV CONSTRUCTION PERMIT**

**NEW LPTV**  
**FCC FACILITY ID: 131158**

**KM BROADCASTING OF GUAM, L.L.C.**  
**TAMUNING, GUAM**

**CH 26 54.0 KW 235 M RCAMSL**

**NOVEMBER 2002**

**TABLE OF CONTENTS**

	Technical Narrative.
Exhibit E-1	Vertical Tower Sketch
Exhibit E-2	Proposed 74 dBu Service Contour
Exhibit E-3	Allocation Study - LPTV Channel 26

**TECHNICAL EXHIBIT  
APPLICATION FOR  
LPTV CONSTRUCTION PERMIT**

**NEW LPTV  
FCC FACILITY ID: 131158**

**KM BROADCASTING OF GUAM, L.L.C.  
TAMUNING, GUAM**

**CH 26 54.0 KW 235 M RCAMSL**

**NOVEMBER 2002**

**TECHNICAL NARRATIVE**

The technical exhibit, of which this narrative is part, was prepared on behalf of KM Broadcasting of Guam, L.L.C., in support of an application to construct a new Low-Power Television Station (LPTV) at Tamuning, Guam. The FCC facility identification number is 131158.

The proposed station will operate on TV Channel 26 with an effective radiated power of 54.0 kilowatts and an antenna height above mean sea level of average terrain (RCAMSL) of 234.9 meters (rounds to 235 meters).

The proposal would not be subject to environmental processing in accordance with 47 C.F.R. §1.1306. This proposal does not involve a site location specified under 47 C.F.R. §1.1307(a)(1)-(7), or involve high intensity lighting under 47 C.F.R. §1.1307(a)(8) or result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in 47 C.F.R. §1.1307(b).

This application conforms with all applicable rules and regulations of the Federal Communications Commission.

The proposed transmitting facility will consist of a 12-bay Andrew ALP12M2-HSOC-26 nondirectional antenna, side-mounted on a guyed, uniform cross-section, steel tower. The tower has been registered with the Commission and issued a tower registration number of 1236658. A vertical sketch of the proposed tower is included herein as **Exhibit E-1**.

### **FCC F(50,50) COVERAGE CONTOURS (EXHIBIT E-2)**

The predicted 74 dBu coverage contour was calculated in accordance with the provisions of 47 C.F.R. §73.313. In accordance with current FCC practice, no consideration was given to terrain roughness correction factors.

The average terrain elevations from 3 to 16 kilometers from the proposed site were obtained from the N.G.D.C. 30-second terrain database. 72 radials, evenly spaced at 5-degree intervals were used for determining the average terrain elevations and the distance to the service contour.

The antenna radiation center heights above average terrain in the individual radial directions and the effective radiated power in the appropriate directions were used in conjunction with the appropriate F(50,50) curve contained with the Commission's rules.

### **LPTV INTERFERENCE STUDY EXHIBIT E-3)**

Exhibit E-3 contains an LPTV interference study (tabulation) No prohibitive overlap with other stations is predicted to occur.

### **OTHER CONSIDERATIONS**

The applicant recognizes its responsibility to remedy complaints of blanketing interference as required, and to protect existing facilities in accordance with the applicable rules.

No adverse impact (intermodulation or otherwise) on existing facilities or pending applications is anticipated. However, the applicant recognizes its responsibility to correct such matters if they occur as a result of its operation.

### **ENVIRONMENTAL CONSIDERATIONS**

The proposed facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields."

Power density contribution from the proposed operation was computed using the appropriate equations of the OST Bulletin. The maximum radiated power is 54.0-kilowatts on analog Television Channel 26. Using a "worst-case" relative field pattern of 0.3 for values all values 8 degrees or greater below the horizon, the power density was computed at a level of 2 meters above ground to be 0.0793 mW/cm<sup>2</sup> or 4.39 % of the recommended limit of 1.807 mW/cm<sup>2</sup> for a controlled area at the base of the tower and 21.9 % of the recommended limit of 0.361 mW/cm<sup>2</sup> for an uncontrolled area.

Therefore, at ground level (and 2 meters above), at the base of the tower, the potential for radiofrequency radiation exposure will be well within the FCC guidelines.

The "worst-case" minimum distance from the antenna was computed to be 7.0 meters for a controlled environment. As the minimum distance is more than 26 meters above ground level, no exposure in excess of the guidelines to workers is predicted to occur from this proposal at ground level.

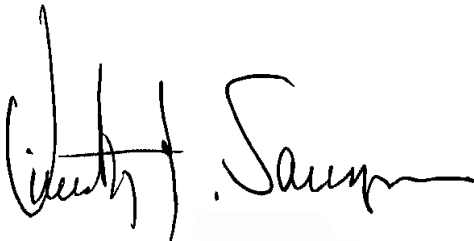
This is a multiple use site to be shared with FM Broadcast Station KTKB, Agana, Guam. The power density percentages from KTKB(FM) have been submitted to the Commission (See

BMPH-2002-612AEG). KTKB's power density values as a percentage of its respective limits are: 13.33 % for a controlled area and 66.7 % percent for an uncontrolled area. The combined percentage limits from both operations are: 17.7% for a controlled area and 88.6 % for an uncontrolled area. Both limits are within the Commission's guidelines.

Suitable warning signs and a fence or other devices will be placed at the base of the tower to prevent unauthorized access. If work is required on the tower, the power to the antenna will be terminated or reduced as required. The applicant will fully comply with the provisions contained within the OET bulletin.

Inquiries concerning the technical portion of this application should be directed to the office of the undersigned.

November 26, 2002

A handwritten signature in black ink, appearing to read "Timothy Z. Sawyer". The signature is fluid and cursive, with the first name "Timothy" and last name "Sawyer" clearly distinguishable.

Digitized Signature - Original ON FILE - Timothy Z. Sawyer

Timothy Z. Sawyer

***T.Z. Sawyer Technical Consultants***

5272 River Road, Suite 460

Bethesda, MD 20816-1440

Tel.: (301) 913-9287

Internet E-mail: [tzsawyer@sawyer.com](mailto:tzsawyer@sawyer.com)

Site Coordinates:

GUAM 1963 Datum (FCC)

13 ° 29 ' 15.9 " N. Lat.

144 ° 49' 36.3 E. Lon.

NAD 83 (FAA)

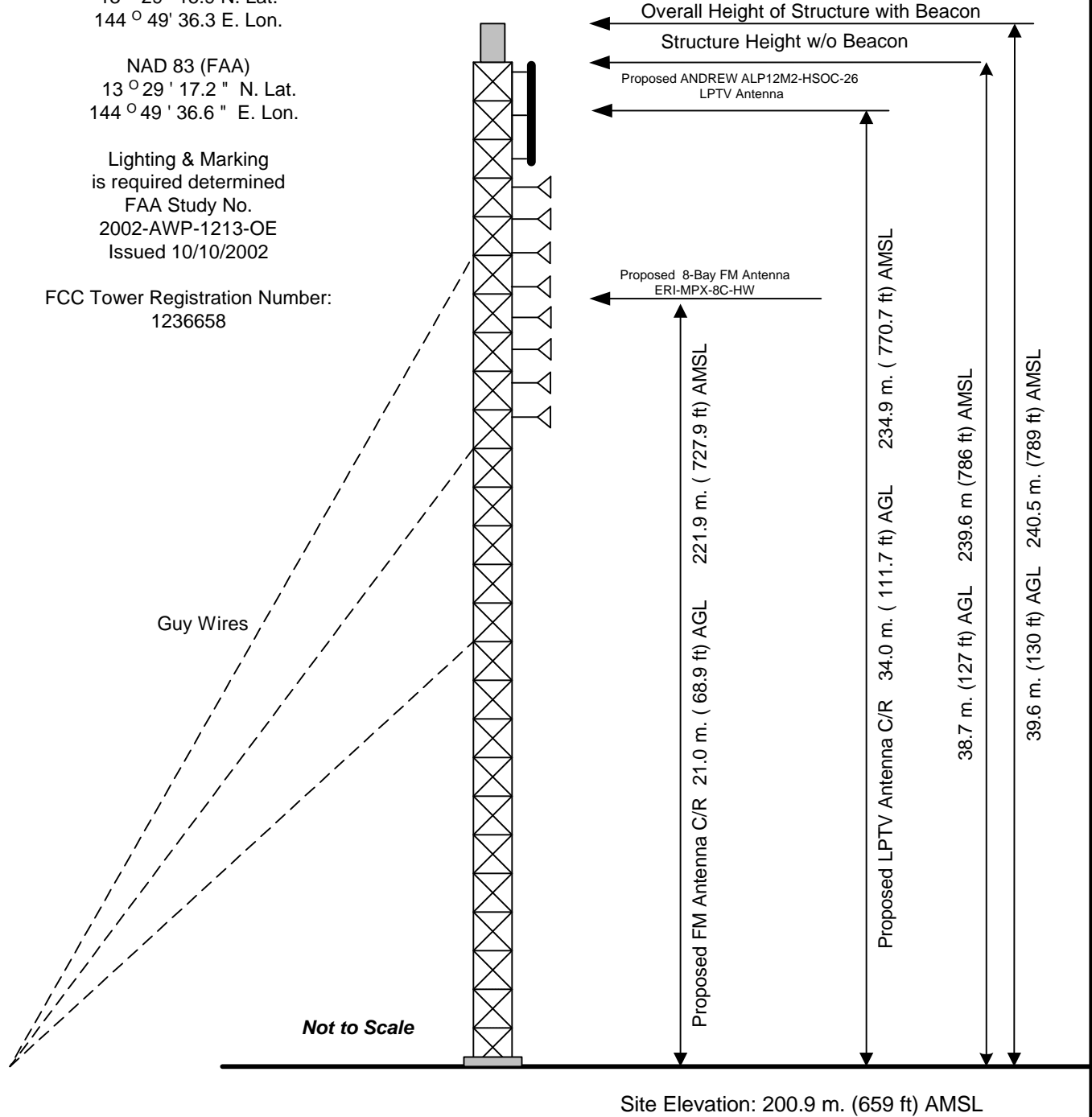
13 ° 29 ' 17.2 " N. Lat.

144 ° 49' 36.6 " E. Lon.

Lighting & Marking  
is required determined

FAA Study No.  
2002-AWP-1213-OE  
Issued 10/10/2002

FCC Tower Registration Number:  
1236658



***T.Z. Sawyer Technical  
Consultants***

**VERTICAL SKETCH OF ANTENNA / TOWER**

KTKB (FM) CH. 270C2 AGANA, GUAM  
NEW(LPTV) CH. 26 TAMUNING, GUAM

**EXHIBIT  
E-1**

**BETHESDA, MARYLAND U.S.A**

SIZE  
A

FSCM NO  
N/A

DWG NO  
KMC20021203-E1

REV  
12/03/02

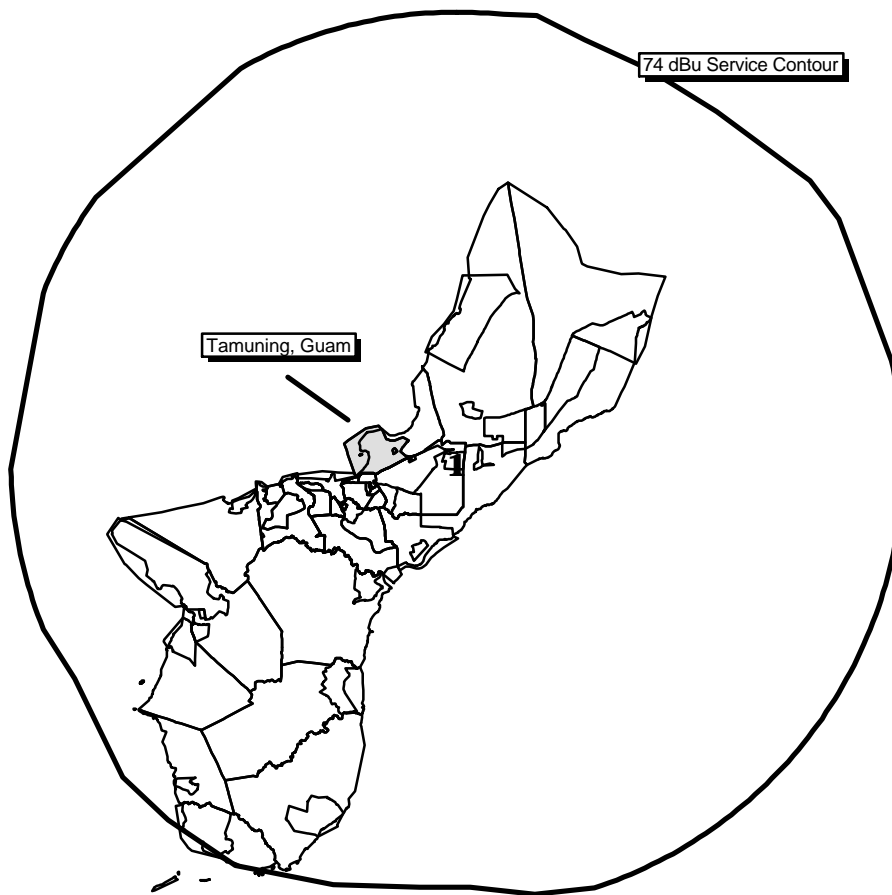
**(c) 2002, ALL RIGHTS RESERVED**

SCALE N/A

DECEMBER 2002

SHEET

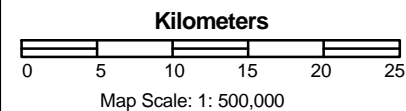
1 OF 1



# **NEW LPTV Channel 26**



## **Predicted Service Contour**

### **Tamuning, Guam**



Map Source:  
U.S.G.S. Digital Line Graph - 100K Series  
Dept. of Commerce - TigerLine 2000 Digital Data

## **Map Legend - Exhibit E-2**

- 1** Transmitter Site
-  Tamuning, Guam
-  Predicted 74 dBu Service Contour



**TECHNICAL EXHIBIT  
APPLICATION FOR  
LPTV CONSTRUCTION PERMIT**

**NEW LPTV  
FCC FACILITY ID: 131158**

**KM BROADCASTING OF GUAM, L.L.C.  
TAMUNING, GUAM**

**CH 26 54.0 KW 235 M RCAMSL**

**NOVEMBER 2002**

**LPTV INTERFERENCE STUDY**

Job Title : GUAM LPTV  
Channel 26 (542 - 548 MHz)  
ERP = 54.000 kW HAAT = 185.0 meters Coordinates : 13-29-16 144-49-36  
Call City Channel ERP(kW) Latitude Bearing Dist. Req.  
Status State FCC File No. Zone HAAT(m) Longitude deg-Tru (km) (km)  
-----

NEW	AGANA		*22	.970 DA	13-29-17	80.6	.19	.0
CP	GU BNPTTL-00801ADB			220amsl	144-49-30		.00	CLEAR
NEW	AGANA		*28(+)	25.0	13-29-20	323.5	.16	.0
CP	GU BNPTT -00830AYU			240amsl	144-49-39		.00	CLEAR
NEW	AGANA		30(+)	25.0	13-29-20	323.5	.16	.0
CP	GU BNPTT -00830AYV			240amsl	144-49-39		.00	CLEAR
NEW	AGANA		34(+)	25.0	13-29-20	323.5	.16	.0
CP	GU BNPTT -00830AYW			240amsl	144-49-39		.00	CLEAR

**\*\* End of Interference Study for TV Channel 26 \*\***