

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of NEW DYNASTY CULTURE CENTER in support of its amendment to Application for Construction Permit [BNPL- 20131114BRW ] to operate a Low Power FM station on Channel 250 (97.9 MHz) in Honolulu, Hawaii. The purpose of this amendment is to correct site coordinates and provide supplemental site data.

It is proposed to mount a standard two-bay circularly polarized antenna at the 78-meter level of an existing building. The proposed effective radiated power is 100 watts. Exhibit B is a map upon which the proposed 60 dBu service contour for the proposed facility is plotted. It is important to note that the proposed location meets all of the Commission's spacing requirements to pertinent co-channel and adjacent-channel full-power, FM translator and LPFM stations, except in one instance. The proposed site is short-spaced to second-adjacent-channel station KHCM(FM) in Honolulu, Hawaii. As a result, we request a waiver of the Commission's Rules with respect to KHCM(FM) and the justification appears in Exhibit C. We have also determined that the proposed facility should not cause objectionable interference to the input signal of any existing translator station, based on the information contained in the FCC's CDBS database. Exhibit D is a drawing of the proposed site. Overall height of the building will not increase by more than 20 feet with the addition of the FM antenna and supporting structure. Therefore, it will not require coordination with FAA nor FCC registration.

EXHIBIT A

Employing the methods of OET Bulletin No. 65, and based on the elevation pattern of a standard 2-bay FM antenna, maximum power density two meters above ground of  $0.00026 \text{ mW/cm}^2$  is calculated to occur 35 meters from the base of the tower. Since this is only 0.1 percent of the  $0.2 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating in the FM band, a grant of this proposal can be considered a minor environmental action with respect to human exposure to non-ionizing electromagnetic radiation. Further the station owner will take whatever precautionary steps are necessary to ensure that workers operating in the vicinity of the antenna are not exposed to RF energy in excess of the Commission's guideline values.

Due to the diminutive height of the existing building and its proximity to the nearest airport runways, the FAA has not been notified of this application. In addition, FCC registration of this structure is not required for the same reasons. This conclusion is supported by the Commission's TOWAIR program.

I declare under penalty of perjury that the foregoing statements and the attached exhibit, which was prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.



KYLE T. FISHER

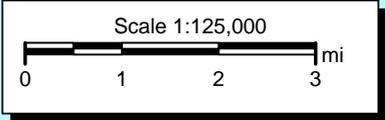
March 3, 2014

**CONTOUR POPULATION  
2010 U.S. CENSUS DATA  
272,180**



**Proposed Site**  
Latitude: 21-17-50 N  
Longitude: 157-50-36.70 W  
ERP: 0.10 kW  
Channel: 250  
Frequency: 97.9 MHz  
AMSL Height: 93.86 m  
Horiz. Pattern: Omni

**60 DBU FCC  
CONTOUR**



**PREDICTED SERVICE CONTOUR  
PROPOSED LPFM STATION  
97.9 MHZ - HONOLULU, HI**

SECOND-ADJACENT-CHANNEL WAIVER REQUEST  
PROPOSED LPFM STATION  
CHANNEL 250 – HONOLULU, HAWAII  
[AMENDMENT TO BNPL-20131114BRW]

The newly proposed site is located 0.42 kilometers from that of KHCM-FM, which operates on Channel 248C1 in Honolulu. Since the required spacing to this station is 73 kilometers, a waiver of the Commission's spacing rules with regard to second-adjacent-channel KHCM-FM is requested and believed to be justified for the reasons stated below.

Attached as Exhibit C-2 is a map upon which the proposed site is plotted. To that map, we have added the KHCM-FM 133.5 dBu service contour, which passes very close to the proposed site. Based on the FCC's 40 dB desired-to-undesired ratio that applies to second-adjacent-channel situations such as these, the proposed LPFM station's interference contour to KHCM-FM would be its 173.5 dBu contour.

We have calculated the maximum free-space field value that would obtain at the roof level of the building on which the antenna will be mounted. For this calculation, we assumed maximum effective radiated power of 100 watts and an antenna radiation center 5 meters above the level of the roof. We employed the following formula for calculating this field strength value  $F=137+10(\log ERP)-20(\log d)$ , where F is the field strength in terms of dBu, ERP is in watts and d is distance from the base of the tower in meters. Based on this formula, we calculate that the maximum field strength from the proposed LPFM station in the area surrounding the tower would be 150 dBu, or a clearance of 23.5 dB from the interference value of 173.5 dBu.

As a result, a waiver of the FCC's 2<sup>nd</sup>-adjacent-channel spacing Rule with regard to KHCM-FM is respectfully requested and believed to be justified.



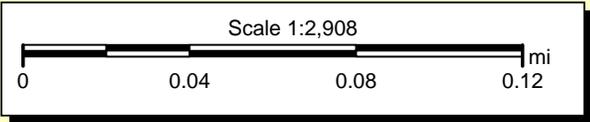
Proposed Site



KHCM-FM 133.5 DBU  
FCC CONTOUR

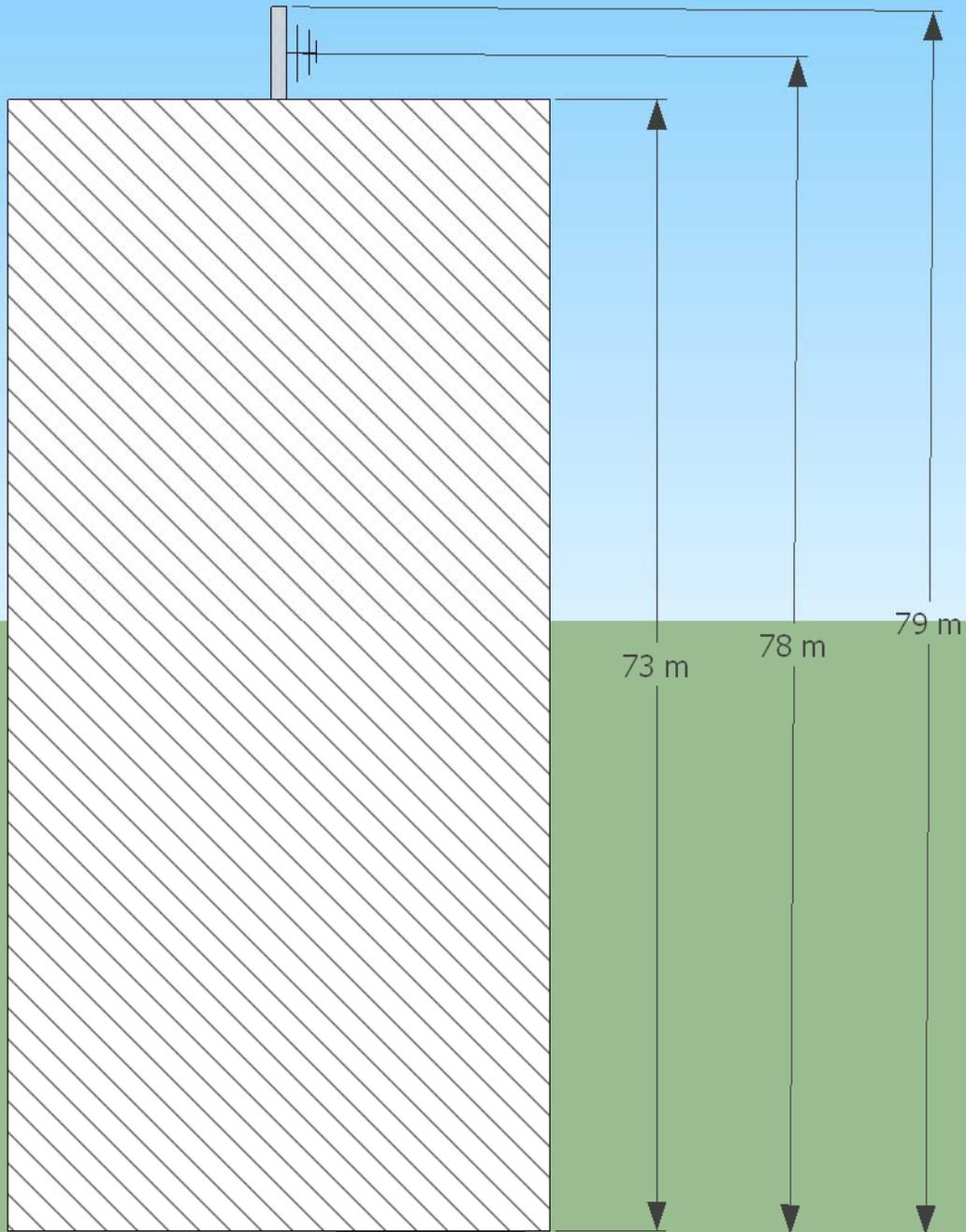


KHCM-FM



**EXHIBIT C-2**  
**WAIVER REQUEST FOR KHCM-FM**  
**PROPOSED LPFM STATION**  
**97.9 MHZ - HONOLULU, HI**

# EXHIBIT D



Overall height of the building will not increase by more than 20 feet with the addition of the FM antenna and supporting structure.

21 17 50 N 157 50 36.7 W Base Elevation 15.8 meters