

## PROJECT:

Kealakehe Elementary School Library

## LOCATION

Kailua-Kona, Hawaii

## COMPLETION DATE

December, 2015

## THE TEAM:

### OWNER

Kealakehe Elementary School

### HVAC ENGINEER

Murayama & Associates

### HVAC CONTRACTOR

Hilo Mechanical

### HVAC DISTRIBUTOR

Admor HVAC

## SO QUIET, THEY DON'T DISRUPT

Kealakehe School was erected in 1969. Named for the area in which it is located, Kealakehe School is appropriately matched to the location. "Ala" or "keala" means "the path, road or highway; also, "ke'e" means "crooked or winding." So, Kealakehe is "winding road." On the slopes of Hualalai, overlooking Kailua Bay on the Kona Coast, Kealakehe Elementary School is home to 1080 students in pre-K to Grade 5 from a wide range of ethnic and economic backgrounds.

## DESIGN CHALLENGE

As with many school classrooms and libraries, Kealakehe utilized "jealousy" windows to allow the ocean breeze to naturally cool and ventilate the school's library and computer center. Though the climate is bearable, when the library was mostly occupied, temperatures would rise and make the space hard to learn, work, and be in, especially when no breeze was present.

## WHY FUJITSU WAS CHOSEN

To overcome the heat of occupancy, Fujitsu was chosen to help alleviate the issue and provide cooling for the library.

With the price of energy being some of the highest in the United States, Fujitsu's ductless VRF proved to be extremely efficient in neighboring buildings. As well, with the lack of true ceiling space, it was almost impossible to accommodate air ducts. With the small copper piping sizes and the small footprint of the ductless units, it was possible to fit 10 tons of air conditioning under one roof. Lastly, with Fujitsu's "library quiet" ductless units, it was possible to provide a quiet HVAC solution that allows for comfort and silence in a learning environment.

## THE RESULTS

Construction was completed quickly and during the school's winter break. This allowed for minimal disruption to the library and school. The library's staff was thankful for finally having cooling during the hottest times of the year and for providing a more suitable space for their student's educational resources.





# CASE STUDY



## AIRSTAGE EQUIPMENT LIST:

1	AOUA120TLBV - VR-II Heat Recovery Outdoor Unit
6	ABUA24TLAV - Floor/Ceiling Mount Indoor Unit
6	UTY-RNRU - Touch Panel Wired remote Control
3	UTP-BX090A - Indoor Separation Tube
2	UTP-BX180A - Indoor Separation Tube
6	UTP-RU01AH - Single Type Refrigerant Branch Unit







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