

Project Name

Kailua Heights Wastewater Pump Station & Force Main, Kailua, Oahu, Hawaii

Client / Owner

City & County of Honolulu, Department of Design and Construction

Year Completed

2006

Project Description & Firm's Responsibility

The City and County of Honolulu will expand the existing Kailua Heights Wastewater Pump Station in order to handle projected peak flows from the Enchanted Lakes tributary area. The current station lacks the capacity to handle wet weather peak flow.

Engineering services included the preparation of a design report for the retrofit of the existing pump station with three large, non-clog, variable speed centrifugal pumps, generator fuel tank, instrumentation, flow meter, ventilation system, and noise abatement features. Construction plans, specifications, and cost estimates were prepared for three new pumps and variable speed controllers; renovation of the wet well, including concrete corrosion liner; replacement of the emergency generator and fuel storage system; and design of a flow measuring facility and 1,500 linear feet of 24-inch force main.

Providing a larger generator and VFD motor controllers was constrained by the small size of the station, which is bound by Kawainui Stream, urban streets, and a residential property. A compact generator room with remote engine radiator was constructed as a building addition, and the existing generator room was converted to the new VFD motor control center.

Permit applications were prepared for an NPDES dewatering permit and an SMA. An environmental assessment was also prepared in accordance with Chapter 342, Hawaii Revised Statutes. Post-design services included review of construction submittals and the preparation of an operation and maintenance manual.

