



## Introduction

Located in South Korea, Camp Humphrey is the largest overseas United States Military Base. It is the most active U.S. Army campus in the Pacific and was originally the largest construction project in the U.S. Department of Defense's history. With close to 500 buildings and amenities, the site's requirement for both comfort heat and hot water is crucial. Some of the amenities on site include residential, health care and fitness facilities as well as dining halls, schools, and offices.

Most sites in Korea use heating oil to power their systems and fulfill both

comfort heat and water heating needs. In 2023 there was need to retrofit domestic hot water applications as well as comfort heat.

PK has worked with RB Engineering in 2018 to work on solutions for the military base and when the need had presented the opportunity to revisit the base, both organizations were quick to provide an answer.



*For more information about Patterson-Kelley, please visit [pattersonkelley.com](https://www.pattersonkelley.com).*

### **Patterson-Kelley, LLC**

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# Boiler Room

## Patterson-Kelley Solution



Tasked with meeting these demands, **Patterson-Kelley** and **RB Engineering** were able to provide solutions to all of these challenges. The boiler room was fitted with (2) **ST5000** and (2) **ST3000** from PK's STORM family. These units were chosen due to their robust controls and efficiency at the size range needed for the application. These units allowed the space to not only increase efficiency, but also building turndown for the systems. Efficiencies are projected to be at the appliance level 20% more efficient, and at a system level with PK's mechanical turndown design, 20%-50% more efficient season to season.

The STORM family is proving to be a useful tool for Army facilities due to their product size range and capacity range with respect to a varying array of different applications.

## Challenges

Prior to the update with Patterson-Kelley solutions, the requirements for the facility were met with aging and inefficient boilers. Apart from these issues, footprint was a concern due to current boilers being three-times the size of units being offered by PK.

Humphreys Military Camp needed a system that provided maximum control over the boilers while increasing efficiency without sacrificing size requirements for the building. Further, a unit with more optimal turndown and an accommodating footprint would provide increased utilization of the footprint for this space.



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