Embrace the Technology®
CircuitSolver®
A ThermOmegaTech® brand

Project Case Study

University of South Florida

Beacon Hall - 4207 Usf Dogwood Dr, Tampa, FL 33620

Installation Site Overview

The University of South Florida is a public university with its main campus located in Tampa, with two other satellite campuses. About 10% of the school's almost 40,000 undergraduate students live in one of the 44 on-campus dormitories.

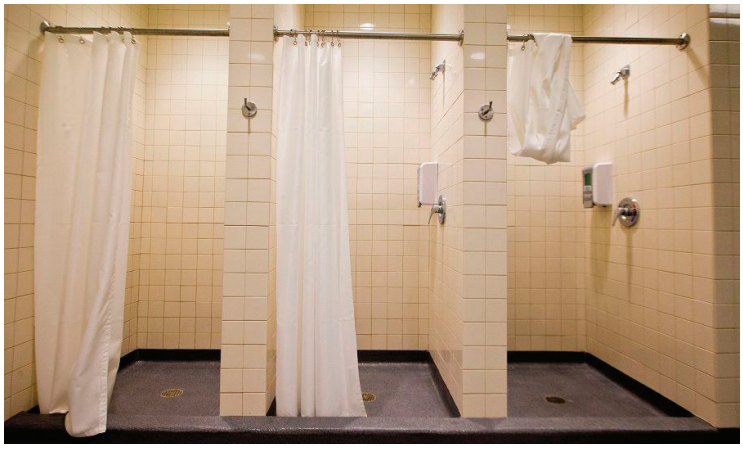
After temporarily shutting down during the height of the coronavirus pandemic in 2020, dorms reopened to students in the Fall of 2021.



The Opportunity

Beacon Hall, the newest addition to the university's on-campus dormitory buildings, opened in August of 2017. A coed, six-story construction, the dorm houses 378 residents in a mix of traditional and suite-style rooms.

Since opening, the 5th-floor gang shower, which is located in the center of the floor with student rooms lining the exterior of the building, had experienced a lot of hot water issues.



Mike Bishop, VP of Engineering at RGD Consulting Engineers explains how students dealt with the inevitable cold water when they turned the tap: "Students used to turn on the showers, go to breakfast for 30 minutes, then come back to shower when the water was hot. Otherwise, they were taking a cold shower."

A major inconvenience to students and a huge waste of water for the university, the system's hot water demands needed to be re-evaluated.

The Installation

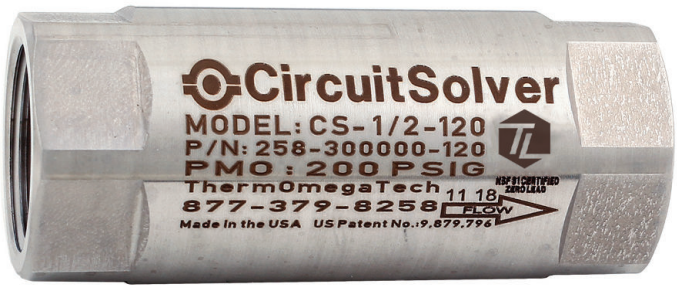
An ineffective attempt in 2019 was made to rectify the hot water supply issues and get the domestic hot water (DHW) system correctly balanced. The recirculation line size was increased from ¾" to 1 ½" and a second recirculation pump was added, but the issues and subsequently the complaints persisted.

At a loss, the developer contacted RGD Consulting Engineers.

Mike Bishop determined that the manual balancing valves were a major roadblock in the DHW system functioning correctly.

“The domestic hot water system couldn’t handle the variability and the fact that the gang restroom was at the end of the run,” Bishop said, explaining the manual balancing valves’ inherent inability to adapt to changing system demands.

Bishop recommended replacing the manual balancing valves with CircuitSolver® thermostatic balancing valves.



Working with Spirit Group, the CircuitSolver® representative in Florida, thirteen ½” CircuitSolver® valves were installed at the end of each branch and one 1½” CircuitSolver® was placed on the return line to the water heater.

The CircuitSolver® is a thermostatic balancing valve that automatically and continuously adjusts flow through a DHW system to maintain a specified temperature at the end of each hot water supply line. This keeps the system fully balanced with hot water available at all times and on all floors, even with variable and intermittent demands.

On startup of this install, the system automatically balanced itself in under 3 hours, all without manual labor. “In the meantime, the plumber actually went out a did another job,” Bishop mentions, “Then they went and got breakfast, and when they came back [the DHW system] was balanced.”

The Result

Since the installation of CircuitSolvers®, all balancing issues in the Beacon Hall dormitory have been resolved. Students are able to take hot showers without 30-minute wait times, and complaints have ceased. Water usage has plummeted, and the extra recirculation pump was removed, effectively reducing utility usage.

As for Mike Bishop, he says that the contractor on the job reported a favorable experience. “He was ecstatic! This was his first CircuitSolver® job, but he’s going to start using it everywhere.”

To learn about other successful CircuitSolver® installations, visit www.CircuitSolver.com.