

# SHELTON STATE COMMUNITY COLLEGE

## 2016 ALABAMA ENVIRONMENTAL COUNCIL POWER UP AWARD RECIPIENT

### BACKGROUND

SEA was tasked with improving the performance of the building operations systems for Shelton State Community College. Building space included administration, classroom instruction and a food court. In mid-June 2015 SEA started Phase 1 of the Continuous Commissioning® Project on the Martin Campus. The project involved evaluation and optimization of approximately 30% of the Heating, Ventilation and Air Conditioning (HVAC) while maintaining existing building operations. Phase 2 involved evaluating the remaining 70% of HVAC equipment and controls.

### RESULTS

SEA reviewed the electric bills for the months of July 2015 thru August 2016. These months were compared to the average of the previous three years.

The documented savings for these ten months was \$387,144.00. **Aggregate savings to date are \$663,144.00\*** which is 10,810,384 kWh.

The savings surpassed the projected annual goal of \$85,000 in only four months and will continue to grow with ongoing maintenance and careful oversight of the system.

### SOLUTION

The documented utility savings resulted from investigating, discovering, diagnosing, and optimizing HVAC equipment including controls strategies. Some examples of discovered issues and actions taken are listed below:

- Optimized hot water supply temperature to reduce boiler demand while still maintaining current heating needs
- Programmed control strategies to reduce or eliminate dehumidification based on space requirements
- Programmed air handling units to reset the supply air temperature based on space temperature and setpoints
- Monitored zone reheat valves to determine overcooled areas, verified flow rates versus design, making necessary corrections
- Modified terminal box flow rates to reduce the amount of unoccupied cooling and heating
- Investigated leaking or open preheat valves on air handling units and manually closed valves on units
- Implemented air handling unit schedules to shut down when unoccupied and to restart if spaces required conditioning
- Verified outside air and return air damper operation on air handling units
- Examined chilled water valves for leakage when commanded closed



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Continuous Commissioning®

SEA Role: Commissioning Authority

\*Savings period of June 2015 - June 2017