

SAIT SENATOR BURNS

Mechanical and Electrical Upgrade Project



Managing Building Information to Optimize Lifecycle Performance

Location

Calgary, Alberta

Project Completion

March 2018

Project Cost

\$20 Million

PROJECT DESCRIPTION

Bird-Stuart Olson provided construction management services for the mechanical and electrical upgrades for the Sait Senator Burns building. This project includes complete mechanical change outs of pumps, AHU's, and related infrastructure as well as new switchgear, transformers, panels distribution and infrastructure.

This \$20m project was the result of our ongoing support of Sait's long range re-development plan and deep-rooted relationships. The project will include mechanical upgrades to pumps and AHU's and electrically, the panels and infrastructure. Associated with this, there will be some civil works including demo of existing housekeeping pads and pouring of new to suit the new equipment along with some external penetrations.

This specialized project is unique in that the building will remain operational during construction. Our main consideration is to ensure the functionality of the building while maintaining the safety of Sait's students and staff for the duration of the project.

INNOVATION AT WORK

Through analytics, we have been able to discover and track number of building operational anomalies and work with the team to provide improvements in areas such as:

- Building pressure control
- Maintenance and misc. missing points
- Heating and cooling performance

Outdoor Air Temperature Diversity

The significant operational issue identified by analytics relates to the building outdoor air temperature sensors and how they control the building heating plant systems. The historical data from the Outdoor Air Temperature Building sensors when compared to the Weather Channel are consistently between +4°C and +10°C higher than expected.

For example, if the external ambient temperature is 0°C the heating system might think it is 4°C or even 10°C. As a result, the building heating system isn't operating as it relies on these readings to start. It appears that the sensors are picking up heat from the building, so we have implemented a change with JCI to average the temperature readings, this currently is proving to be effective.