Georgian College

Education • Barrie, Ontario, Canada

About Georgian College

Georgian College, established in 1968, offers a wide range of programs including business and computer studies, transportation studies, engineering technology, general studies and other programs. Today there are more than 9,000 full-time and about 28,000 part-time students attending classes at Georgian College. The college also has partnerships with several universities.

Project Summary

- $145,000 in HVAC energy savings
- Comfort complaints eliminated
- No disruption of students or faculty
- Project completed on time, on budget

Building C at Georgian College is equipped with 36 Trane high-efficiency heat pumps providing Georgian College with significant energy savings, reduced maintenance costs and eliminating comfort complaints. In addition to Trane, the project team included Aegis Engineering Ltd., consulting mechanical engineer, and Sexton's Mechanical Ltd., mechanical contractor.

Systems Installed

- 36 Trane High Efficiency Heat Pumps
- Venmar ERV
- LonTalk Communications Cards

Challenge

Renovating the HVAC system at Georgian College's Building C, built in 1971, was an easy decision. The 85,000 square-foot building, which houses administration staff, book store and cafeteria, was equipped with old multizone rooftop systems that not only couldn't meet heating and cooling requirements, but were frequently broken down causing numerous comfort complaints from students, staff and faculty. And when the old systems did run, they consumed excessive energy. Georgian College needed an HVAC solution that would generate enough energy savings to pay for the new equipment out of the operating budget. Also, the project had to be completed in only three months so that the building had heat before the fall weather. All contractors had to work in very tight proximity requiring careful coordination and project management to avoid disrupting staff and students.

Solution

Jeff Choma, Manager of Electrical Mechanical Services at Georgian College, selected Trane as a member of the renovation team. Choma decided to install 36 Trane high-efficiency heat pumps and a Venmar Energy Recovery Ventilation (ERV) system. The ERV not only recovers heat, it also recuperates energy trapped in moisture, enhancing overall efficiency. Trane also provided LonTalk communications cards with each heat pump for interface with the building's existing Siemens building automation system. Choma said, "Trane has an excellent, quality product that's quiet, well-built and easily serviced. We also appreciate the Trane controls team's willingness to work with our existing control system."

Results

The project was highly successful and completed on schedule, due largely to Trane's fast delivery. The heat pumps were installed in a single, enclosed area to minimize noise while reducing installation costs. There were no disruptions to occupants during the renovation. Comfort complaints have stopped and the staff no longer needs to use space heaters to remain comfortable during winter. They also appreciate having temperature control of their own spaces. Indoor air quality has also dramatically improved. Projected energy savings were $282,000: $145,000 for HVAC and $137,000 for the lighting retrofit. Combined energy savings a year after project completion are $321,801. In addition to rebates from the electric and gas utilities, the Ontario Power Authority recognized Georgian College with its Award of Recognition for Energy Efficiency and Reduction of Greenhouse Gases. Georgian College has also received the Bell Canada "Green Award."

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