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## 750 Marcel-Laurin Boulevard Renovations designed for comfort

The office building located at 750 Marcel-Laurin Boulevard, with 80,000 sq. ft. of rental space divided between four floors, is located in Montreal's Saint-Laurent borough. Built in 1968, it recently underwent a major renovation that primarily involved the heating, ventilation and air conditioning (HVAC) system. The system's air conditioning component needed to be overhauled given that excessive heat during the summer months was affecting occupant comfort.

The building owner, Cromwell Management, decided to address the problem and improve the tenants' working environment. The company contacted general contractor Dancon, which in turn hired Mécanique RH to carry out the building services work. Mécanique RH teamed up with Regulvar to design a solution to address the comfort issue and improve the building's energy performance. Regulvar sponsored a grant application with Hydro-Québec under its Buildings



Program, managed by ÉnerCible, which offers support for energy efficiency projects. After evaluating the proposed concept, the organizations provided \$270,000.

### An optimal ventilation system

For better air quality, increased comfort and lower energy consumption, the ventilation system required a major transformation. First, we converted the main dual duct constant air volume system, which was defective and consumed too much energy, into a dual duct variable air volume system. Efforts were made to maintain equipment that was still functional, for instance, existing natural gas boilers. Also, to ensure access to electricity outside peak hours, some electric heating coils that were no longer being used were equipped with electronic triac devices before being put back into operation.

*In this season of celebrations, we would like to offer our best wishes and our heartfelt thanks for your continued cooperation.*

*The team  
at Regulvar*





Other equipment had to be replaced, including two water towers and the chiller, the latter of which could no longer meet the demand and was replaced with two more powerful chillers.

## The right temperature

The implemented solution was also designed to reduce energy consumption related to the action of heating or cooling the air before distributing it. To do this, the two existing power supply fans were used exclusively for the cool air ducts, and two additional power supply fans were added for the hot air ducts. For better air flow management, all the fan motors were equipped with variable-speed drives. The air handling unit was also modified so that new features could be added. As a result, the new air is directed to the cool air ducts and the return air is directed to the hot air ducts. Some of the evacuated air will now be used to heat the parking area.

## Centralized management and efficiency

The building services equipment, namely the chillers, boilers, water heater, ventilation system, room control, and new gas detectors in the parking area, was connected to the Regulvar-designed building automation system. This helped

optimize energy efficiency and the equipment's operating sequences.

For instance, the 215 dual duct boxes were equipped with programmable BACnet controllers and wireless temperature sensors with adjustment buttons. With this change, air flow can be adjusted to ensure that cold and warm air is not mixed together, which in turn enhances occupant comfort.

Of course, this system supervises the main power supply and contains a power monitoring program. Electricity is therefore used to its full potential in a cost-effective manner.

As the results demonstrate, it's possible to benefit from the advantages of building automation and high-performance systems without having to replace all existing devices. Companies wishing to upgrade their systems and reduce their energy consumption can turn to customized solutions.

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## Did you know?

### The tablet

New ally of building automation

As anyone interested in new technologies will know, touch screen tablets are changing the way we do things. They are, in fact, more cost-effective than other more sophisticated types of interfaces, and companies offer many applications designed to maximize their usefulness. That's why Regulvar now provides its customers with the possibility of using a tablet with embedded software to manage their building automation system.

This solution applies to small projects and can be used to replace a conventional computer, providing savings for customers who want to maintain remote access. Each tablet uses the Android operating system and is customized based on individual need, which means that schedule, alarm, trend and set-point graphics can be displayed.

Do not hesitate to contact us for more information.

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## UPCOMING TRAINING

**Laval (French):**

**ORCAVIEW**  
intermediate level  
February 4•5

**ORCAVIEW**  
advanced level  
February 6•7

**GCL + PROGRAMMING**  
February 11•12•13

**CREATION OF  
GRAPHIC INTERFACE**  
February 20•21

2013

**Ottawa (English):**

**ORCAVIEW**  
intermediate level  
February 18•19

**ORCAVIEW**  
advanced level  
February 20•21

**GCL + PROGRAMMING**  
February 25•26•27

**CREATION OF  
GRAPHIC INTERFACE**  
Depending on enrollment

2013

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