

# UNIVERSITÉ DE SAINT-BONIFACE

## Pavillon Marcel-A.-Desautels



## Eco•Facts

Université de Saint-Boniface's newly completed 25,000 sq. ft. Pavillon Marcel-A.-Desautels contributes to the enhancement of the health and social service programs. The \$11.5 million complex offers an innovative learning environment that helps bridge students into the modern workplace and it has brought a renewed sense of vitality to the entire university. It includes five classrooms, three nursing laboratories, a simulation centre, two video conference rooms, and 27 offices.

Université de Saint-Boniface's needs and programs have changed to reflect the evolving diversity of its community. As it moves from its historical position as an institution serving a local need to one with international significance, the university has used contemporary architectural design, which respects both ecological concerns and the local context. The building's design features a warm and sunlit atrium, which creates a visibly appealing and inviting space and serves as a counterbalance to the more traditional style of the rest of the university. The distinctive Tyndall stone cladding on the older structures has been incorporated into the new facility. This use of local stone helps integrate the newer construction into the existing aesthetic, preserving the institution's sense of permanence, stability and place.

The university's cupola has historically served as a symbol for the institution and as a landmark for the community. The cupola is thematically reintroduced by reproducing its silvery finish in the polished metal cladding on the outside of the building, and it is seen again in the anodized curtain walls. The glass-filled curtain walls are the counterpoint to the solidity of the existing Tyndall stone wall and integrate the new into the old. The offices lining the atrium on the first and second floors benefit from the walls made of full-height transparent glass, which flood them with indirect sunlight, reflected off the adjacent Tyndall stone walls. This also promotes better student access.

The building is a sustainable LEED® Gold Certified facility with its passive heating and cooling system and demonstrated use of sustainable materials, including recycled-content carpet tiles and unadorned polished concrete. Having opened in September 2011, the facility now provides Université de Saint-Boniface students with an unprecedented, modern space where they can enjoy an inspirational and technologically advanced learning environment.

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The following is a summary of the health, performance and environmental **features of the building based on the LEED® (Leadership in Energy and Environmental Design) criteria:**



### Sustainable Sites

Pavillon Marcel-A.-Desautels is built adjacent to an existing building on the campus's previously developed site in St. Boniface. The site is located near two major bus routes, encouraging alternative transportation methods for students and staff. Removal of the existing asphalt and the gravel track allowed for a landscape design that provided a large amount of open space while reducing the quantity of storm water run-off.

The heat island effect was mitigated by using a light coloured roofing material on more than 75% of the roof area. Careful thought and planning was put into interior and exterior lighting design so as to reduce light pollution into the night sky or adjacent properties.

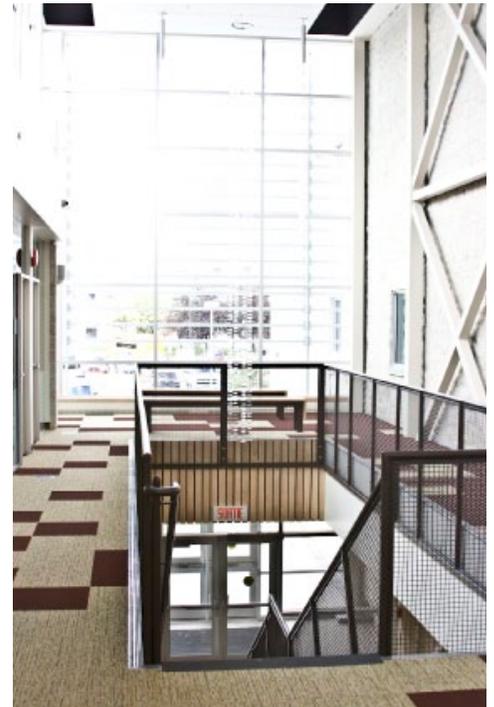


### Energy & Atmosphere

Elements of the building design were selected to maximize employee productivity and comfort and minimize energy consumption. The building achieved energy cost savings of 56.8% compared to a baseline building designed with the Model National Energy Code for Building standards. Some energy efficiency features include:

- High efficiency building envelope
- Horizontal ground loop heat exchanger for distributed heat pump system
- Dedicated fresh air system with demand control ventilation

To minimize the impact of the building on the depletion of the ozone layer, all systems are CFC and HCFC free, and the fire suppression system contains no halons.



### Indoor Environmental Quality

Pavillon Marcel-A.-Desautels is a non-smoking building and has been designed with optimal ventilation that includes a 100% fresh air ventilation system, to provide excellent indoor air quality for staff, students and visitors. All carpet, adhesives, sealants, paints and coatings used in the building were specifically chosen to have a low level of Volatile Organic Compounds (VOC). All composite wood used, including plywood, MDF and particleboard, contains no added urea-formaldehyde.

An Indoor Air Quality Management Plan was in effect during construction, including measures such as covering openings in ductwork, keeping a clean worksite, and scheduling, to protect the indoor air quality of the building.

The building was designed so that 75% of regularly occupied spaces receive natural daylight. The large atrium allows natural light to penetrate into the inner spaces.





### Water Efficiency

The building maximizes water efficiency by the use of aerator faucets, dual flush toilets, and low flow urinals. These measures contribute to a total water use reduction of 44%. There is no permanent irrigation equipment needed for the site's green spaces, as they have been designed with native, drought-tolerant species that will not require irrigation once established.

### Innovation & Design Process

Pavillon Marcel-A.-Desautels has implemented a green housekeeping policy for the building. The goal of this policy is to maintain high standards of cleanliness and protect occupants' health while minimizing negative impacts to the environment. This will be achieved, broadly, by ensuring that cleaning products used are certified by Environmental Choice (Canada), and by performing janitorial duties in accordance with Green Seal's GS-42: the Environmental Standard for Cleaning Services.

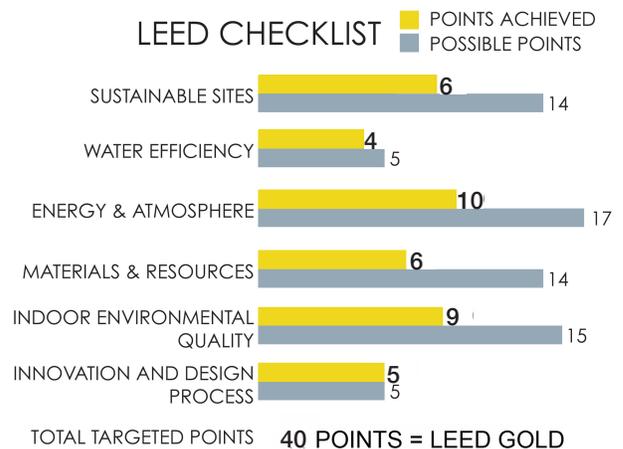
### Materials & Resources

During construction, 85% of construction wastes were diverted from the landfill and were either recycled or salvaged. Over 14% of new materials, including carpet, concrete and steel, contain recycled content and 32% of new building materials used were extracted and manufactured within an 800km radius of the project site or transported by rail within a 2400km radius.

Pavillon Marcel-A.-Desautels has a designed lifespan of 60 years. A durable building ensures the selection of durable materials and components, quality control during construction, and increases the service life of the building.



The university is committed to communicating the importance of green building and sharing the lessons it has learned with its staff, students and members of the community. The university offers tours of the building and displays information highlighting the building's energy-efficient design on digital screens in public areas.





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