



Carleton University

Ottawa Ontario



Designed by MORIYAMA & TESHIMA ARCHITECTURE
and GRIFFITHS RANKIN COOK ARCHITECTURE

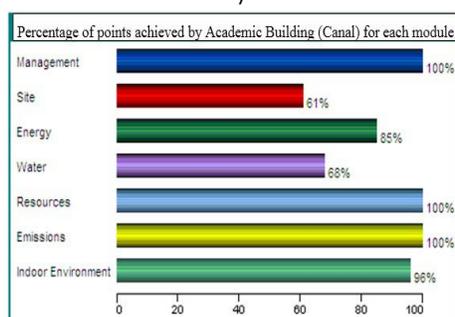
Certified December 2009

Canal Building Carleton University

In 2009, in response to increased enrollment numbers, Carleton University further expanded its already impressive campus with the addition of the Canal Building, intended to be a top-of-the-line facility and home to programs in biomedical, sustainable energy, environmental and aerospace engineering. The Canal Building minimized its energy consumption and achieved energy savings making it 28% more efficient than the equivalent base model of the Model National Energy Code. This was made possible through the deployment of green and smart building technologies that included a better building envelope, maximized daylighting that reduces energy demand for lighting and the need for cooling, thereby requiring a smaller mechanical plant. The performance of all systems is further optimized with the integration of a Building Automation System (BAS).

This building serves as a model for integrated green energy technologies. Using the comprehensive Green Globes design guidance framework, architects and engineers and were able to integrate a wide range of sustainable features including passive lighting combined with advanced mechanical systems, a selection of responsible and effective building materials, as well as innovative waste management

practices. The building also placed great importance on occupant health and comfort features including the elimination of VOCs and focusing on indoor air quality by manipulating the number of air changes and using heat recovery ventilators to ensure heat was not lost. Carleton University has a strong commitment to environmental stewardship, evidenced in both its infrastructure and the courses it offers to students. This latest addition to the campus follows a long line of certifications that other structures on the campus already enjoy. Students fortunate enough to spend time in this building can experience first-hand the benefits that a truly sustainable building can afford. Continuing its commitment to environmental stewardship will further cement Carleton University's reputation as an industry leader and responsible member of Ottawa's community.



Project Highlights

- Ventilation in accordance with ANSI/ASHRAE 62.1 – 2004
- A combination of green roof and high albedo materials
- At least 30% of impervious surfaces will be shaded to avoid adding to the heat island effect
- No net increase in stormwater run-off
- The building responds to microclimatic conditions
- Major energy uses are being sub-metered
- Public transportation within 500 yards, with service at least every 15 minutes
- Water-saving devices or proximity detectors included on urinals, toilets, showerheads, and faucets
- Greywater collection, storage and distribution system