

Toronto's Centennial College, Ontario's oldest public college, is putting a new 'face' on its Progress Avenue campus by erecting a four-storey Library and Academic Building at the campus entrance. Thanks to its height and proximity to major roads, this yet-to-be-officially-named facility will draw many an eye to a changing Centennial College.

It will also help Centennial handle rapid expansion. "Student enrolment has increased by a third in a few short years. New classrooms and lab spaces

Associates Landscape Architects. "This helps pedestrians feel comfortable as they are insulated from the lots."

Rain that falls on the roof flows to underground cisterns to be stored for use in toilets. Meanwhile, rain that hits the ground will flow through soil or permeable concrete pavement. Precipitation sinks into the ground, reducing strain on storm sewers. (The facility represents the second use of permeable concrete pavement in Ontario; the nearby athletic facility, the first.) "We used supplementary concrete materials



Library and Academic Building – Centennial College

by Luigi Benetton

are imperative," says Khurshed Irani, Centennial College's executive director, facilities and services. "The original campus library, built in 1977, is cramped and overused. The way libraries are used has changed, and students require a new model: a learning-centred environment that offers contemporary technology with access to digital resources, plus print and visual media collections."

Centennial offers programs related to sustainability so it's little wonder the facility was designed to qualify for LEED Gold status. "The roof will be home to two gardens: a modular roof garden will be installed over the auditorium, while an intensive garden will cover a portion of the library with 20 to 30 centimetres of black growing medium to support plant life," says Irani.

On the ground, the modern landscaping consists largely of native and drought-resistant species, a choice that enabled builders to do without an irrigation system. "There's one very large planting bed on the north side of the building, about 100 metres long (the building is about 75 metres long) and 13 metres deep, between the building and parking lots," says Ryan James, senior landscape architect for Basterfield &

(SCM) in the concrete to take the place of cement," notes Ezio Del Fatti, project manager for EllisDon Corporation, adding that builders took care handling SCM during winter months to achieve the expected finish.

The building's overall look will depart from that of its older neighbours, since it consists of "generous use of ironspot brick copper and expanses of glass," says Irani. Concrete, steel and most interior finishes come from recycled materials. To create a cleaner look, all mechanical equipment goes in the building itself, not in a mechanical penthouse.

"We used low-VOC paints, adhesives and carpeting to protect indoor air quality," Irani notes. "Construction workers are even banned from smoking on site."

To keep the facility's air fresh, the four-storey central atrium will feature a biowall. This living wall will receive plenty of sunlight, since the sawtooth pattern of the north-facing curtain wall carries over the top of the building to become sawtooth-patterned skylights above the atrium. "We suspended eight-foot-long cylindrical fixtures from the top of the atrium," notes Vivian Shum, an associate with Mulvey & Banani

International Inc. Every space in the building is designed to welcome natural light, reducing the need for artificial lighting, provided by fluorescents controlled by photo cells and occupancy sensors.

Variations in classroom design arose from the need for flexible teaching spaces. Some have flat floors some are tilted towards the front. A 200-seat auditorium will accommodate larger classes and events. "It will be set up to do simultaneous translations and accommodate videoconference connections to other campuses," says Sydney Browne, principal of Diamond + Schmitt Architects Inc.

The tight timeline drove several design decisions. For instance, concrete serves as the building's framing up to the top of the fourth floor, where structural steel takes over. "It makes for a faster construction process, whereas structural steel takes more time in co-ordination, lead time, fabrication and installation," says Craig Nicoletti, head of field review for Blackwell Bowick Partnership Limited.

The facility rose in the path of a pedestrian bridge that connects the parking lot with the second-floor main entrance to the campus. Centennial

kept the bridge but enclosed it to create a climate-controlled hallway connecting the facility with the rest of the campus.

For all its complexity, Del Fatti is pleased with the building. "Everything fit really well," he says. ■

LOCATION

Centennial College of Applied Arts and Technology Progress Campus
941 Progress Avenue
Toronto, Ontario

OWNER/DEVELOPER

Centennial College of Applied Arts and Technology

ARCHITECT/INTERIOR DESIGN

Diamond + Schmitt Architects Inc.

CONSTRUCTION MANAGER

EllisDon Corporation

STRUCTURAL CONSULTANT

Blackwell Bowick Partnership Limited

MECHANICAL CONSULTANT

Crossey Engineering Ltd.

ELECTRICAL CONSULTANT

Mulvey & Banani International Inc.

LANDSCAPE ARCHITECT

Basterfield & Associates Landscape Architects


GROSS BUILDING AREA


(NEW AND BRIDGE RENOVATION)


108,000 square feet

TOTAL CONSTRUCTION COST

\$52.5 million, including site services

<ul style="list-style-type: none"> - Building Science - Geotechnical - Geoenvironmental - Construction Materials - Inspection and Testing 	 <p>Peto MacCallum Ltd. CONSULTING ENGINEERS 188 Cartwright Avenue, Toronto, Ontario M5A 1V5 Tel: (416) 736-6130 • Fax: (416) 736-6130 www.petonacallum.com</p> <p>Proud to provide Building Envelope Services to the Library and Academic Facility at Centennial College</p> <p>BARRIE, HAMILTON, KITCHENER, TORONTO</p>
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