



Services Provided:

- Sustainability/LEED Consulting
- Energy Third Party Review
- Green Education Program

Fast Facts:

Project Type: Post-Secondary
Size: 14,591 m² (157,000 ft²)
Certification: LEED® Gold Certified
Construction Cost: \$24.7 million
Project Span: 2013 - 2017

Notable Achievements:

Energy Savings: 45%
Water Savings: 44%
Recycled Content: 15%
Waste Diversion: 91%

Owner Contact:

Patricia Baker, Associate Director, Facilities – Langara College
 (604) 323-5438
patriciabaker@langara.ca

Architect:

Kori Chan
 Principal

Proscenium Architects + Interiors

Langara College Science & Technology Building

Vancouver, British Columbia

The Science & Technology Building features over 12,000 square metres of new campus space allocated over five storeys. On the west side, a dramatic 16-metre cantilevered portion incorporates a skylight window that allows natural daylight to penetrate through to the ground below. Registrar & Enrolment Services and food outlets anchor the main floor, with event space and meeting rooms on the second level. State-of-the-art chemistry, biology, physics, astronomy, nursing, and computing science labs populate the upper three floors.



There are also collaborative study spaces, a greenhouse for instructional purposes, and an observation deck on the roof. The building achieved a LEED GOLD level of certification in Fall 2017, in part by incorporating green building features such as a low emissivity roof, the use of local, sustainable building materials, an energy-efficient building envelope, and low-flow fume hoods with adjustable sashes.

The Langara College Science & Technology Building project is located about 430 meters from the Langara-49th Skytrain station, which is less than a 4-minute walk. The Canada Line rapid transit rail runs from Vancouver to Richmond with a service frequency of 6-7 minutes in both directions at peak times of the day. Proximity to this rail line as well as frequent bus service along 49th Avenue creates ease in transit commuting to the Langara campus, delivering a high potential for reducing single-occupant vehicle demand. The campus is also located close to a major north-south cycling route on Ontario Street. Electric vehicle recharging stations are located in a preferred parking area to accommodate 3% of building occupants.

The primary source of heat for the building is provided from heat recovery modular chillers located on the roof, with back up boilers. Heat recovery coils also provide exhaust air streams, which recover heat and contribute to the heating load of the building. The building uses a water-side heat recovery system. The central cooling plant consists of these water-cooled heat recovery chillers and a cooling tower. The majority of the heat rejected from the chillers is injected back into the heating system through a Thermenex header. Thermenex technology uses a water-filled pipe that functions as a hub for thermal energy exchange. This unique method of space conditioning assisted in the building achieving a 45% energy cost savings.