

LCBS: Kitchener Public Library Southwest Community Library Webinar

April 16, 2026

[Webinar Recording](#)

Southwest's net-zero design has achieved the Zero Carbon Building Certification from the Canadian Building Council and is one of the first public libraries in Canada to meet these criteria.

In this webinar, we highlighted the design, construction, and operational strategies and discussed lessons learned, from gaining stakeholder buy-in to overcoming cost and implementation barriers.

Presenters

- Amanda Wiley | Area Manager, Southwest Community Library | Kitchener Public Library
- Devyani Aswal and Josh Benoit | Project Managers | Colliers Project Leaders
- Adam McCaughan | Senior Associate, Architect | mCallumSather

Presentation Overview

Project Overview

- The Southwest Community Library is a 14,000-square-foot standalone facility that opened in March 2025.
- It is the Waterloo Region's first net-zero municipal building and one of the first libraries in Canada to receive a zero-carbon building (ZCB) designation.
- The project aimed to exceed LEED Silver requirements and serve as a public space for educating the community on sustainability and low-carbon living.

Sustainability & Design Features

- Energy Systems: The building is fully electric and uses no natural gas. It features:
 - Horizontal Geothermal Field: Located under the parking lot, this system was chosen over a vertical design due to specific soil conditions and potential drilling obstacles like boulders.
 - Solar Photovoltaics (PV): Solar panels are mounted directly onto the sloped metal roof to provide free renewable energy and offset carbon consumption.
- Building Envelope: A high-performance envelope was critical to reducing energy demand, featuring 9 inches of roof insulation, 5 inches of under-floor insulation, and a mix of double and triple-pane windows.
- Materials & Aesthetics: The design drew inspiration from traditional Indigenous longhouses and utilized mass timber (glulam beams and cross-laminated timber) for both carbon sequestration and a warm aesthetic.
- Water Management: The site uses bioswales and soil cells (plastic structures under pavers) to manage rainwater and support tree growth without damaging infrastructure

Project Management & Success Factors

- Collaboration: Success was attributed to clear project goals, transparent communication between stakeholders, and having a highly accessible leadership team.

- Risk Management: The team effectively managed challenges such as soil erosion during installation and light pollution concerns by using specific sensors and flexible scheduling.
- Commissioning: Given the complexity of the heat pumps, geothermal field, and climate controls, having an experienced commissioning agent was vital for tracking issues and training maintenance staff.

Financials & Technical Q&A

- Construction Cost: The total construction cost was approximately 770 per square foot.
- Incremental Net-Zero Costs: The team did not quantify a specific "extra" cost for net-zero features because these goals were integrated from day one rather than added to an existing design.
- Backup Power: The building does not have a backup generator. Because of its high-performing envelope, it can maintain interior temperatures for a period during power outages, and it was not designated as a disaster gathering center.

Indigenous Engagement

- The design process included significant engagement with the Mississauga's of the Credit and Six Nations of the Grand River.
- Indigenous influence is seen in the "Whispering Gallery" (a circular acoustic room), the longhouse-inspired form, and public art installations like "Wintertime Stories"

Contact Information

Please reach out to us at any time with questions, input, or for additional information.

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