

Building Envelope Consulting



Morrison Hershfield is internationally recognized as a leader in the building envelope field. Our strength resides with our team of engineers, architects, technologists and construction trade specialists, who have a direct knowledge of the issues involved with providing a functional and durable building envelope.

Building envelope engineering focuses on solving or preventing performance problems associated with the enclosures of buildings. The building envelope includes exterior glazing, opaque wall assemblies, roofs and balconies and at-grade and below-grade waterproofing. We collaborate with owners and designers of new construction projects to create high performance building envelope systems. We have also been involved in thousands of investigations of buildings with envelope performance problems, often leading to remedial design and in many cases to the management of exterior wall, window and/or roof replacement or rehabilitation programs. Services include:

- **Building envelope condition assessments**
- **Investigation and failure analysis**
- **Design development and review for new construction**
- **Indoor air quality**
- **Design for rehabilitation of building envelopes**
- **Field review services**
- **Structural analysis of cladding and glazing**
- **Testing**
 - **Thermographic scanning and interpretation**
 - **Windows (air, water, thermal resistance and condensation)**
 - **Structural loading**
- **Research and Development**
 - **Product Development**
 - **Building envelope systems**
 - **Codes and standards consulting**
- **Litigation support and expert witness**



Museum Building
Envelope Review



Sustainable Building
Envelope for Retail
Building



Convention Center
Expansion Project



Building Envelope
Services for
Residential Building



Exterior Wall Repairs
for University
Residence



Langara College Library

We were the building envelope consultant for the design and construction review of this two to three storey concrete-frame building (7,700 m²). The library was registered as a LEED® Gold building. Its key sustainable features include wind-driven natural ventilation, a green roof, an optimized building envelope, thermal mass, building shape and orientation to create an aerodynamic building equipped with wind towers.



Supreme Court of Canada

The Supreme Court of Canada is a designated heritage building. A project was undertaken to correct the cause and consequences of water damage on the upper floors that could be traced to both water penetration and condensation collection. We were responsible for the design and construction review of the roof upgrade and repair, and for providing recommendations to the heritage architect responsible for intervention related to walls and windows.

