

K. M. GARY CHEN, MASC, P Eng

CURRICULUM VITAE



Gary Chen is a professional engineer registered in BC, Manitoba, and Ontario. He earned a Master of Applied Science degree from the University of Waterloo, specializing in fire engineering and a bachelor's degree in Chemical Engineering from UBC. With over 18 years of experience, Gary has established a presence in the field of fire engineering, with a particular focus on computational fluid dynamics based fire modeling, evacuation modeling, and structural fire resistance. His expertise has been instrumental in diverse projects, including large institutional buildings, hospitals, and rapid transit systems. Furthermore, Gary's knowledge in risk analysis and performance-based design has been pivotal in formulating alternative solutions for compliance of large buildings and tall mass timber structures with building codes. He has also played a key role in collaborating with the province of BC to drive changes in building codes, enabling the construction of 6-storey wood-frame buildings in 2009 and the construction of the first 18 storey tall wood building at UBC in 2017.

SPECIALIZED EXPERTISE

- Design of steel, timber, and concrete structures for fire
- Heat transfer analysis
- Industrial fire engineering
- Fire hazard / risk analysis
- Fire modelling (CFD + Zone)
- Transit facilities
- Explosion prevention design

PROFESSIONAL EXPERIENCE

September 2005 - Present

GHL CONSULTANTS LTD, Building Code Consultants and Fire Science Engineers
Principal

SELECT PROJECT EXPERIENCE

- **UBC Gateway Building**
Vancouver, BC
Fire engineering and building code consulting on this 7 storey mass timber institutional (Group A-2) building.
- **Broadway Subway Project**
Vancouver, BC
Fire engineering and Translink Building Code and NFPA 130 compliance review for the 6 stations of the Broadway Subway Project. Key engineering work included station egress modelling, pedestrian Level of Service analysis and alternative solutions for the 6 stations.
- **Seabus Terminal Upgrade**
Vancouver & North Vancouver, BC
Fire engineering service for the Seabus terminals.
- **Skytrain Stations TI**
Vancouver, BC
Building Code compliance review for a number of Skytrain station tenant improvement projects.
- **The New Vancouver Art Gallery**
Vancouver, BC
Fire engineering and building code consulting on the new Vancouver Art Gallery project.
- **DHL at YVR**
Richmond, BC
Fire engineering and building code compliance services for the DHL warehouse / facility at YVR airport.



- **CBSA Container Examination Facility**
Tsawwassen, BC
Fire engineering and alternative solution services for the specialized container examination facility for the CBSA.
- **Vancouver Convention Centre West**
Vancouver, BC
Vancouver Building Bylaw review and fire engineering services to one of the largest convention centres in Canada.
- **Parq Casino**
Vancouver, BC
Fire engineering service to address atrium design and evacuation in conjunction with BC Place.
- **UBC Tallwood House**
Vancouver, BC
Risk analysis and alternative solution to address the construction of the 18 storey mass timber building; one of the tallest when completed in 2017.
- **UBC Earth Sciences Building**
Vancouver, BC
One of the first 6 storey assembly occupancy buildings of mass timber construction
- **Chinook Regional Hospital**
Lethbridge, AB
Building code consulting and fire engineering for a new hospital in Lethbridge, AB.

EDUCATION

- April 2007 – August 2010 **Master of Applied Science (MAsc), Mechanical Engineering**
University of Waterloo, Waterloo, Ontario
Thesis: Analysis of Semi-Rigid Connections subject to Fire Loads in a Steel Framework
- September 2000 – June 2005 **Bachelor of Applied Science (BAsc), Chemical Engineering**
University of British Columbia, Vancouver, BC

PROFESSIONAL DEVELOPMENT COURSES

- 2017 **Human Behaviour in Fire**
SFPE Conference, Montreal, QC
- 2014 **Various Timber Engineering Courses**
World Conference on Timber Engineering, Quebec, QC
- 2011 **Advanced Fire Dynamics Simulator**
SFPE Conference, Portland, OR
- 2009 **Fire Risk and Fire-Resistance, Graduate School Courses**
University of Waterloo, Waterloo, ON

PROFESSIONAL REGISTRATION

- Registered Professional Engineer - British Columbia, Manitoba, and Ontario

MEMBERSHIPS / COMMITTEES

- Society of Fire Protection Engineers, National and BC Chapter
- National Fire Protection Association