

K. M. GARY CHEN, MASC, P Eng
CURRICULUM VITAE



Gary Chen is a professional engineer registered in BC, Alberta, Manitoba, and Ontario. He holds a master's degree in Mechanical Engineering from the University of Waterloo, specializing in fire engineering, and a bachelor's degree in Chemical Engineering from UBC. Gary has practiced fire engineering for 15 years and has developed specialized expertise in computational fluid dynamics (CFD) based fire modelling, evacuation modelling and structural fire resistance. His expertise has been applied in various large institutional buildings, hospitals and in transportation sector projects. In addition, his extensive knowledge in risk analysis has seen successful application in alternative solutions to building code compliance for a number of tall mass timber buildings, as well as in collaborating with the province of BC in development code changes to permit 6 storey wood-frame buildings.

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

SELECT PROJECT EXPERIENCE

- **Seabus Terminal Upgrade**
Vancouver & North Vancouver, BC
Fire engineering service for the Seabus terminals.
- **Edmonton LRT**
Edmonton, AB
Various stations; provided engineering peer review and building code (NFPA 130) compliance review.
- **Calgary LRT – Victoria / Stampede Station**
Calgary, AB
Provided fire engineering, including CFD fire modelling and evacuation modelling of the station, to address platform extension and NFPA 130 compliance.
- **Skytrain Stations TI**
Vancouver, BC
Building Code compliance review for a number of Skytrain station tenant improvement projects.
- **Broadway Subway Project - Pursuit**
Vancouver, BC
Provided pursuit stage fire engineering and Translink Building Code and NFPA 130 compliance review to the Acciona-Ghella Joint Venture (AGJV) for the Broadway Subway Project, which includes station egress and Level of Service analysis of 6 stations. AGJV has been selected as the preferred proponent by the province.
- **DHL at YVR**
Richmond, BC
Provided fire engineering and building code compliance services for the DHL warehouse / facility at YVR airport.
- **CBSA Container Examination Facility**
Tsawwassen, BC
Provided fire engineering and alternative solution services for the specialized container examination facility for the CBSA.



- **Vancouver Convention Centre West**
Vancouver, BC
Provided Vancouver Building Bylaw review and fire engineering services to one of the largest convention centers in Canada.
- **Parq Casino**
Vancouver, BC
Provided fire engineering service to address atrium design and evacuation in conjunction with BC Place.
- **UBC Tallwood House**
Vancouver, BC
Provided 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, Alberta, Manitoba, and Ontario

MEMBERSHIPS / COMMITTEES

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