

ANDREW HARMSWORTH, M ENG, P ENG, CP, FEC

CURRICULUM VITAE



With 30 years' experience in Fire Science and Building Code consulting, Andrew Harmsworth has developed specialized expertise in the application of Fire Science and Engineering of Building Code requirements. A member of BC's Mass Timber Advisory Council, Andrew is the Fire Engineer responsible for over a dozen mass timber buildings including the 18 storey Brock Commons TallWood House at UBC. He has successfully negotiated approval for a number of mass timber buildings with significant exposed mass timber including 2150 Keith Drive, Vancouver, 10 storeys of open office, with a timber lateral system, Terrace House, 17 storeys with 7 fully exposed, and others progressing through the approval system. Andrew maintains an active role in Fire Research, particularly related to Mass Timber. A Founding Principal of GHL Consultants Ltd in Vancouver, Andrew is a member of Codes Canada's

Standing Committee on Fire Protection. Andrew has a Master's degree in Fire Protection Engineering from UBC and is a Registered or Licensed Professional Engineer in all Western Provinces and Washington State.

Andrew is also a Certified Professional under BC's Certified Professional Program, and responsible for overall Code Compliance for projects that include the Vancouver Convention Centre and the New St. Paul's Hospital in Vancouver.

Andrew is familiar with recent developments, techniques and tools of Fire Science and Engineering which have assisted in the development and successful negotiation of numerous Alternative Solutions to Building Code compliance and the successful resolution of several legal disputes.

SPECIALIZED EXPERTISE

- Tall Wood Design for Fire
- Earthquake, Fire and Human Response
- Sprinkler and Fire Suppression Reliability
- Code Development
- Fire Science and Engineering
- Fire Modelling
- Fire Testing
- Thermodynamics and Heat Transfer

MEMBERSHIPS / COMMITTEES

2020 - Present	BC Mass Timber Advisory Council
2015 - Present	Wood Works! BC Provincial Steering Committee
2017 - Present	Member – Standing Committee on Fire Protection, Codes Canada
2011 – Present	Member - Urban Development Institute Pacific's Building Code Committee
2012 – 2016	FPIInnovations (FPI) Advance Wood Solutions Working Group
2011 – 2014	Member - BC Wood First Advisory Council for Forestry Innovation Investment (FII) BC
2010 – Present	CSA 086-14 Task Force for Annex B – Fire Resistance of Large Cross Section Wood Elements
2010 – 2015	National Research Council, FPI and CWC Consultation Group on "Wood and Wood Hybrid Mid-Rise Buildings", and NSERC Strategic Network on Innovative Wood Products and Building Systems (NEWBuildS)
2000 – 2007	Various 'Engineers and Geoscientists BC' Committees, including Certified Professional (CP), Professional Practice, Seismic Risk, and Building Codes.

PROFESSIONAL REGISTRATIONS AND AFFILIATIONS

- Registered Professional Engineer – BC, AB, SK, MB, ON, NWT/Nunavut, Washington State
- Certified Professional (Independent Program for Building Inspection) – Vancouver and Surrey



PROFESSIONAL EXPERIENCE

1992 – Present **GHL CONSULTANTS LTD**, Building Code Consultants and Fire Science Engineers
Founding Principal

EDUCATION

2003 **Introduction to Fire Dynamics Simulator and Smokeview Seminar**
Course on computer modeling of fire scenarios
Society of Fire Protection Engineers, Baltimore, Maryland

2000 **Master of Engineering (M Eng) (Fire Protection)**
University of British Columbia, Vancouver, British Columbia

1996 **Fire Science & Fire Investigation**
Course presented by Fire Protection Engineering at UBC

PRESENTATIONS / PAPERS

2014/2022 **Technical Guide for Design of Tall Wood Buildings in Canada, Revised 2022**
Lead Author on Fire Design, FP Innovations with NRC and NRCan

2017 **Alternative Solutions Fire Demonstration Workshop**
Surrey, BC

2014 **Reliability of Sprinkler Systems during and after a Seismic Event and
Application to Tall Wood Buildings; Design and Construction of Tall Wood Buildings:
A Guide for Fire-Safety Design**
World Conference on Timber Engineering, QC.

2010 - 2015 **Various Presentations – Construction of Mass Timber High Buildings**

2012 **BC Experience with 6 Storey Wood Frame Structures**
NRC / IRC Standing Committee on Fire Protection

2008 – 2015 **Various Presentations – 6 Storey Residential Wood Frame Construction**
Urban Development Institute, SFPE BC Chapter and other groups, Calgary, Edmonton

RESEARCH PROJECTS

2021 Canadian Wood Council Mass Timber Demonstration Fire Test Program