Holzbau in Kanada - gestern, heute und morgen

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Holzbau in Kanada - gestern, heute und morgen
Canada Housing: Past, Present and Future

Canadian Wood Council: Represents Over 1200 Manufacturers
Technical Information

Building Codes and Standards

086.1-94
*Engineering Design in Wood (Limit States Design)*

*Structures (Design)*

*NIC-CMC National Building Code of Canada 1995*
Wood's Heritage

Part of our heritage

- Canada’s entire land base is 921 million hectares
- Canada’s forests cover 417.9 million hectares
- Over 90% of Canada’s forest cover has been maintained
First Nation’s People

- wood poles and skins
- logs for lodges

European Settlers

- log houses
- post and beam

- Early Wood-frame
- Agricultural - barns
Transcontinental Railway

- wood for bridges and trestles
- railway ties
Wood-frame construction

- industrial Buildingsstick-built housing
- hand-crafted

Post World War II

Wood-frame construction

- housing boom
- increased demand for wood
Wholesale move to light framing

- speed
- availability to meet demand
- meets housing needs

Light framing

- stick-built
- labour intensive, but easy
- short spans - load-bearing walls
- limited flexibility

Evolution of framing
Wood-frame construction
Framing in the 1960s
The Truss Plate

Trusses
- engineered design
- faster construction
- economical, clear spans
- more room for insulation
- remove need for load-bearing walls
- more flexibility

Almost all of wood-frame construction in Canada is built with Trusses.

Introduction of sheathing
- from boards to plywood
- increase in performance
- increased efficiency
Increased wind and earthquake resistance
The 1970s - 1980s

Engineered Wood Products
- I-Joists/floor trusses
- increased spans/flexibility
- space for utilities

Introduction of OSB
- reduced cost
- use of fast-growing species not previously used
Wood in the 1980s

Energy Crisis
- increased energy efficiency
- R2000 homes
- house as a system
- wood-frame 2x6 instead of 2x4
- increased use of trusses

Wood-frame construction is easy to insulate.

Wood has very good insulating values compared with other materials

![Graph showing RSI-values of materials](image)
Wood in the 1990s

Bigger Houses

- more flexibility
- open spaces

Easy to Renovate
Environmental movement
- U.S. - stop logging National forests
- results are higher wood prices

The repercussions...
- increased use of engineered wood products
- competition from other industries
- pressure to demonstrate sustainable development

Sustainable Developments
- new forest practice codes
- certification system

The Athena™ Sustainable Materials Institute
- Life Cycle Analysis (LCA)

LCA measures air and water pollution, waste and energy use during...
Wood still the best environmental choice

- Volume of wood in Canada’s commercial forest increased by 3.8% from 1981 to 1995 (0.94 billion m³)
Future Trends
Shortage of skilled trades
- more engineered systems
- panelization
- modular

Energy efficiency and indoor air quality
- house as a system
- ventilation

Sustainable buildings
- wood is renewable
- increasing efficient systems
- engineered wood products
- certified, managed forests

Commercial Buildings
- engineered wood products
- building code changes
- other presentation...

Wood-frame - the modern material for the future
Safe, comfortable, sustainable homes.