

Building a wood frame construction (WFC) house with Spruce-pine-fir (SPF)



Wood Frame Construction in progress

Wood frame construction (WFC) commonly involves dimension lumber, engineered wood products, and structural wood panels to make walls, floor, and roof assemblies. These elements provide rigidity, support the interior and exterior finish, and provide a framework for installing mechanical systems and insulation. The world today is increasingly concerned about global warming and the carbon footprint. Accordingly, the world is adopting alternative materials and technologies as a measure to mitigate these environmental challenges. One such step is increased usage of sustainable materials and techniques in construction by architects, developers and builders. Canada is an acknowledged leader in these building techniques with expertise in building with wood. Spruce-pine-fir (SPF), one of the wood species from B.C.,

is preferred for constructing homes and even tall buildings. Such constructions can be found globally, particularly in North America.

Canadian Wood actively promotes building with wood in India. It collaborates with leading contractors / manufacturers, developers and architects by providing and arranging technical assistance as required. In India, Canadian Wood promotes four other distinct wood species from B.C., Canada, in addition to SPF. They are Western hemlock, Douglas-fir, Yellow cedar, and Western red cedar. All these five species are legally harvested, certified, and sourced from sustainably managed forests of British Columbia (B.C.), Canada. Each of these species is suitable for a wide range of indoor and outdoor applications.

SPF – Ideal for framing applications in all types of construction and structural applications:

Spruce-pine-fir's strength, lightweight, ease of handling, stress rating and good working properties have made it a preferred wood species for framing applications in all types of construction. Strong and stable, SPF is thus well-acknowledged world over by wooden house builders. It is a particular favourite due to its high structural performance, excellent weight to strength ratio, dimensional stability, and superior gluing properties. Manufacturers of wooden houses, trusses, and other structural components, regularly specify kiln-dried SPF as their choice of wood for its consistent quality and precise dimensions.

Canadian Wood supported projects in India:

There is an encouraging trend emerging in India of using wood in structural applications by leading architects, contractors/manufacturers, developers and even the hospitality sector. We at Canadian Wood find this development very encouraging. India is an attractive market for sustainable construction solutions with many opportunities yet to be explored. We have been engaging with contractors/manufacturers in India as knowledge partners, providing practical training and sharing best practices in building with wood, using different techniques. These include WFC, T&G, Post & Beam etc., used in our display projects.

Apart from supporting many commercial projects using T&G and Post & Beam techniques, we have worked hard over the years to create liveable display homes and resort-style cottages using the WFC technique. Such elegant display houses can be seen at Chennai, Mysuru, and Bengaluru. Soon, a magnificent wooden villa of 7,500 sq. ft. will also be completed at BTR Greens, Hyderabad. This pilot project was recently launched by Canadian Wood in collaboration with MAK Projects, Hyderabad.

Advantages of WFC style construction:

- Due to wood's high weight to strength ratio, WFC style construction is strong, durable and easy to build.
- The nail connections typically used in such constructions are effective in dissipating the energy of an earthquake.
- It is suitable in varied climates and is excellent in terms of acoustics. It provides a few hours of extra vital time in the event of a conflagration provided appropriate steps are taken during construction.
- Building with wood is quick and efficient, resulting in reduced labour costs and massive opportunity cost savings. In India, wooden structures take considerably lesser time to construct as compared to buildings with steel-reinforced concrete.
- Wood buildings are more serene and pleasant to live in and work. It has been established that wood has health benefits for its occupants - well-being, productivity, and improved learning.



Single storey WFC house - Chennai, Tamil Nadu



Multi-storey WFC house - Mysuru, Karnataka



WFC resort style studio - Bengaluru, Karnataka

Canadian Wood collaborates with MAK Projects, helping its foray into sustainable housing with wood

MAK Projects - a Hyderabad based premier infrastructure and housing development company announced its foray into building villas with wood for its customers. The Canadian Wood Villa, a premium WFC pilot project was undertaken with support from Canadian Wood, at BTR Greens, Hyderabad. It was showcased to the public and media recently in a grand launch ceremony.

A model of the Canadian Wood Villa was formally unveiled on October 8, 2021, during the launch ceremony by the Chief Guest Dr. Gaddam Ranjith Reddy, Member of Parliament, Lok Sabha, at the BTR Greens, Hyderabad. The event was also graced by the Guest of Honour Mr. Andrew Smith, Minister (Commercial), High Commission of Canada in India, New Delhi; Mr. Pranesh Chhibber, Country Director, Canadian Wood and H.E. Dr. Nawab Mir Nasir Ali Khan, The Honorary Consul of the Republic of Kazakhstan in Hyderabad for the states of Telangana & Andhra Pradesh and Promoter & Managing Director of MAK Projects Pvt. Ltd.

The BTR Greens project is spread over 250 acres in the heart of Hyderabad's Knowledge City. It is designed to offer the advantages of city life yet away from the clutter and hustle and bustle of the city, in a serene environment that stands apart in its appeal and ambience.

Canadian Wood Villa site



Launch ceremony - Canadian Wood Villa



A webinar by Canadian Wood to celebrate 'World Architecture Day'

World Architecture Day is celebrated to show appreciation for the work done by the architect's fraternity and celebrate their contribution to our society.

As a tribute to the work done by these eminent members of our society, Canadian Wood decided to host a webinar on the occasion, in collaboration with 'Architect and Interiors India' a leading trade publication. With eminent members of the architect's community as panelists, the webinar highlighted on the future of sustainable architecture. It also reinforced the need for architects as thoughtful and design leaders in mainstream projects using sustainable materials and techniques.

As part of its 'WoodInnovations' series, Canadian Wood organised this webinar on October 4, 2021 with a stellar line-up of panelists and an impressive audience, to commemorate World Architecture Day 2021. The webinar saw the panelists drawn from across the country sharing their thoughts and works in wood, reinforcing the idea of using wood as a material for sustainable buildings. The webinar also emphasized on the need to look at promoting the concept of sourcing and procuring materials from sustainable and ethical sources.

