

Fast + Epp

STUDIO SPOTLIGHT BY THINK WOOD



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With over 90 national and international awards, Canadian structural design studio Fast + Epp has established a reputation for fresh thinking. Founded by Paul Fast in 1985, Gerald Epp joined the firm in 1987 and in 1989, the partnership Fast + Epp was formed. Since then, the firm has been involved in a variety of public and private projects that, despite diverse market sectors, all attest to the company's commitment to clever, practical design and meticulous attention to detail.

With over 125 employees, Fast + Epp is fluent working across all major structural materials. In particular, the firm is adept at combining materials to form architecturally expressive structures that do more than simply support loads – doubling as acoustic elements, concealing mechanical/electrical components, serving as thermal mass, and enhancing aesthetics.

Fast + Epp is also known for their actionable commitment to reducing the carbon footprint of the built environment, which includes pioneering mass timber research. In 2018, Fast + Epp worked with DLR Group, Martha Schwartz Partners, WoodWorks, Swinerton, and Heartland LLC to develop a feasibility study for a conceptual 12-story mixed-use mass timber tower. A holistic review of the proposed timber tower - including design, cost considerations, construction impacts, and climate change impacts - provides key insights on tall wood construction that serve as an important guide/benchmark for the AEC community. Learn more in [Tall With Timber: A Seattle Mass Timber Tower Case Study](#) and Fast + Epp's [Mass Timber Developer's Guide](#).



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More recently, the firm completed construction of their new home office, designating the project as a “living laboratory” for testing new mass timber construction techniques throughout the lifecycle of the building.

From the studio:

“Mass timber presents a number of opportunities for developers who are willing to venture outside of current North American “standard” construction methods. For the right project, and with the right team in place, a mass timber building can be a commercial success that stands out from the crowd, particularly in today’s market dominated by steel and concrete. As mass timber continues to gain recognition throughout North America as a viable construction typology with positive environmental and schedule benefits, Fast + Epp is thrilled to be at the forefront.”



Walmart Home Office

The world's largest retailer is building what is poised to be the world's largest mass timber corporate campus. Fast + Epp is the lead structural engineer for Walmart's new Home Office in Bentonville, Arkansas. Utilizing their expertise in mass timber design and research, Fast + Epp is assisting in the building of this large-scale mass timber campus with ambitious sustainability goals. Campus buildings are striving to incorporate natural wood materials in select areas of their designs to foster wellness across the campus. In addition, the firm is also coordinating structural engineering for the remainder of the amenity buildings.

The sprawling 350-acre site will host more than 2.4 million square feet of office space. The buildings' open floor plans will expose their underlying timber structure to provide a warm, natural aesthetic for building occupants. Employee amenity buildings will include a fitness center, dining areas, daycare facility, auditorium, and visitor center. The site will also include 15+ acres of surrounding lakes.

To provide locally sourced materials for this project and throughout the region, Structurlam opened a new mass timber fabrication facility in Conway, Arkansas, that has created over 100 new jobs to date. This new plant will help further a new timber industry in the southern and eastern United States. Walmart expects the full campus to be completed in 2025.



RENDERINGS | Fast + Epp

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Fast + Epp Headquarters

After almost three decades in a two-story, custom-built office block in Vancouver, Fast + Epp will complete construction in May 2021 of its new four-story, 16,000 ft² headquarters – the largest mass timber office building in Vancouver. The building will serve as a ‘living lab’ for ongoing thermal, moisture and vibration monitoring. It will also house Fast + Epp’s Concept Lab for physical testing of mass timber components and software development.

The hybrid mass timber structure was erected in just four weeks using prefabricated CLT (cross-laminated timber) floor and wall panels, glulam beams, and steel posts. It will feature an exposed hybrid mass timber structure and leading-edge seismic design technology. Exterior wall panels including the firewall were pre-clad with membrane and insulation. The design also features a unique CLT firewall prefabricated with exterior finishes, electro-chromatic glass, and an earthquake-resistance technology, Tectonus. The project received funding support under Natural Resources Canada’s Green Construction through Wood (GC Wood) Program and has been recognized by the Canadian Wood Council and the BC forest industry for its innovation and ingenuity in wood design.

“The entire Fast + Epp team is really proud of this new office design. It’s allowing us to experiment with features and structure that are at the forefront of what we do as a firm, and gives us the freedom to be practical and thoughtful, yet also adventurous.”

PAUL FAST
PARTNER & FOUNDER AT FAST + EPP

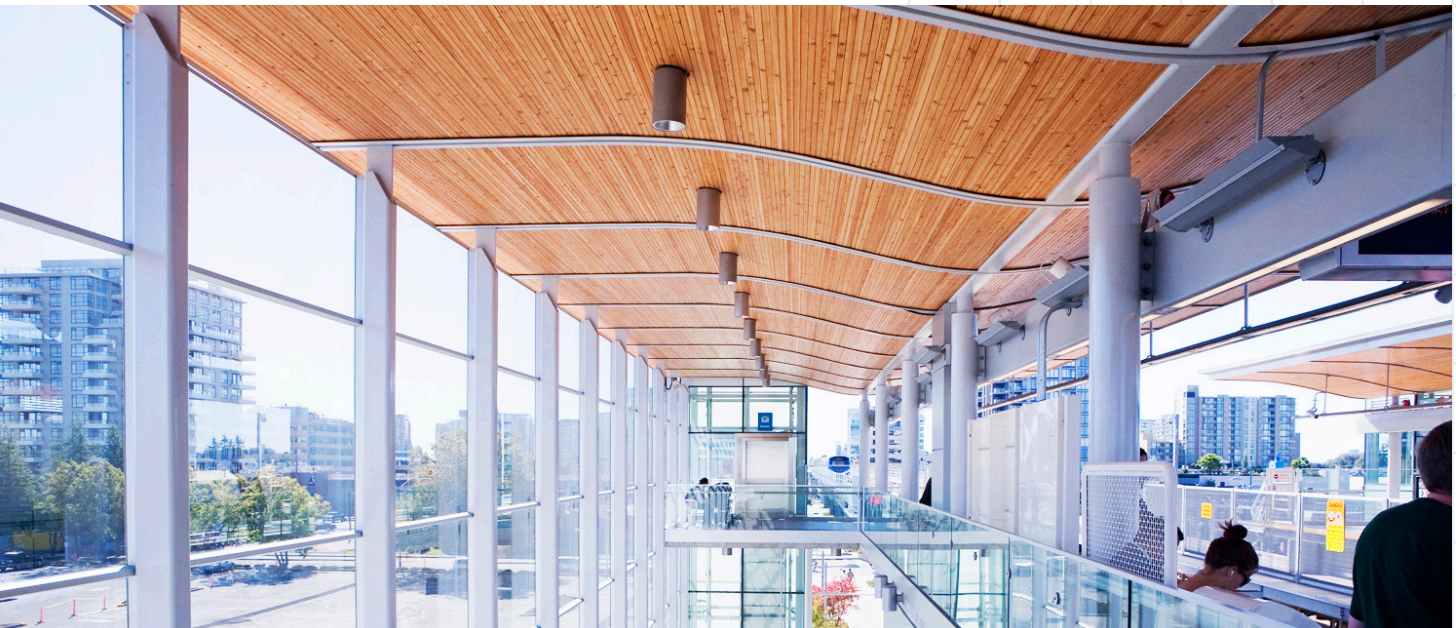


PHOTO | Michael Elkan Photography

Canada Line Skytrain Stations

Introduced shortly before the Vancouver Winter Olympic and Paralympic Games in 2010, the Canada Line Skytrain Stations now serve as a key connective artery for the cities of Vancouver and Richmond with the Vancouver International Airport.

Fast + Epp collaborated with three architectural firms to design two at-grade and four elevated stations skytrain stations along the rail line. The elevated stations feature custom modular timber/steel roof panels comprised of Douglas fir nail-laminated 2x4 members, fitted into a frame of steel channel sections. These hybrid panels were prefabricated in a controlled shop environment, shipped to site and dropped into place using a mobile crane. Prefabrication ensured a high quality, economical, and efficient structure, and also allowed for the full integration of electrical and communication systems to be housed discreetly within the panels. The project was completed 110 days ahead of schedule – thanks in part to this approach. The move to mass timber was a departure from the industrial aesthetic of Vancouver's original Expo Line, and was first introduced on many of the Millennium Line stations. The Canada Line represents the next stage in the evolution of mass timber as the signature element of these stations.



PHOTOS | Fast + Epp

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Bow River Pedestrian Bridge

As the first new crossing of Banff (Alberta's Bow River) since a 1920s-era vehicle overpass, this unique project addressed the pressing need to increase emergency vehicle access and pedestrian traffic to Canada's oldest national park. The client's goal was to create a minimal and unimposing design while using sustainable materials. Fast + Epp and Structure Craft's experience on similar projects allowed the design team to develop a durable timber solution with a 75-year design life.

The resulting award-winning 113 meter-long timber bridge features an 80 meter clear span – one of the longest of its kind. It comprises three distinct segments: two haunch glulam girders on either side and a removable, modular timber deck. At just 4 meters wide, a key consideration was controlling vibrations from walking and jogging; two uniquely-tuned mass dampers were suspended beneath the bridge to reduce dynamic forces. Extensive prefabrication allowed pieces to be shipped to site and assembled on the shoreline of the remote site and the entire structure was erected in two days.



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PHOTOS | SCB

Sheerwater Residence

With breathtaking views overlooking Lake Okanagan in British Columbia, this luxurious three-story custom home features a custom exposed glulam coffered wood roof. The client desired a finely-detailed exposed wood roof at the main level, chosen for its contextual connection to the surrounding landscape. The expressive timber floats above both the interior and exterior spaces – extending the living spaces onto the veranda and beyond. The coffered roof is held aloft by a series of finely milled glulam and steel supports, with the entire assembly highlighting the visual lightness of the design.

Fast + Epp developed a two-way grid of glue-laminated beams with hidden connectors, supported on a series of milled glulam columns. The rectangular grid structure allowed for an expansive open space with a minimum of columns, while the structural rhythm of the building's timber elements gives the residence scale and measure, heightening the design's intention.



PHOTOS | Colin Jewell

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