Rebuilding Public Structures in Japan with Canadian Wood Frame Expertise

The versatility of advanced Canadian wood technology was demonstrated with the recent opening in Japan of two new public structures built with Canadian wood.

The new structures, a public library and public market, highlight some of the benefits of Canadian wood frame construction techniques, including speed of construction, versatility, and seismic performance.

Both structures had to be rebuilt as a result of the earthquake and subsequent tsunami that hit Japan's Tohoku region on March 13, 2011. Many of Tohoku's public buildings sustained irreparable damage or were completely destroyed following these natural disasters.

Joint Humanitarian Assistance

The Governments of Canada, British Columbia and Alberta, in partnership with Canada's forest sector, demonstrated their support for Japan's rebuilding efforts by announcing the Canada-Tohoku Reconstruction Project in November 2011.

This joint humanitarian assistance project showcases the use of Canadian wood through the reconstruction of community buildings in Tohoku. Not only does it complement other Canadian humanitarian efforts for the country, it also demonstrates Canada's commitment to Japan as an important trading partner.

So far, this joint reconstruction effort has supported two separate projects: a public library and a public market.

Donguri Anne Public Library

The Donguri Anne Public Library, located in the city of Natori, was officially opened on January 18, 2013. Its opening was attended by representatives of the federal and British Columbia governments, and the Canadian forest industry.

The library is a hybrid post and beam structure with a 2X4 infill wall system. It incorporates a variety of Canadian wood species in structural and appearance grade applications, including hemlock, hem fir, western red cedar, and maple. It cost \$716,000 to build.

What is the Canada-Tohoku Reconstruction Project?

The Canada-Tohoku Reconstruction Project is a \$4.8 million rebuilding initiative for Japan. It was announced by Canada in response to the 2011 Great East Japan earthquake and tsunami which destroyed many buildings in the region of Tohoku. Funding and expertise for the project is being jointly provided by Canadian governments and Canada's forest sector.

Specifically, the Government of Canada is providing \$2.2 million in funding while the Governments of British Columbia and Alberta are contributing \$2 million and \$150,000 respectively. In addition, Canadian forestry companies are contributing another \$460,000 while Canada Wood, a consortium of wood product industry associations, is providing Japanese officials with technical support and expertise in wood frame construction.

Federal funding for the project is provided under the Expanding Market Opportunities (EMO) program delivered by Natural Resources Canada. EMO seeks to expand the use of wood in offshore markets and in North America while promoting Canadian forest products as an environmentally responsible choice.



Donguri Anne Public Library. Photo courtesy of Canada Wood Japan



Yuriage Public Market

A new \$1.67 million public market in the town of Yuriage was officially opened on May 4, 2013.

Comprising of three wood frame structures, the market features Canadian softwood lumber, glulam beams, decorative cross-laminated timber, plywood, oriented strand board, and western red cedar.

The largest of the three structures includes a food court, meeting spaces and a large exterior deck. Named the Canada-Tohoku Friendship Pavilion, this 493 square meters structure supports a curved roof made from engineered lumber. Canadian western red cedar was also used in its siding and exterior deck.



Canada-Tohoku Friendship Pavilion at Yuriage Public Market. Photo courtesy of Canada Wood Japan

The new Yuriage market features two more structures. Totaling 285 square meters, these structures house fourteen commercial booths where vendors, including fishermen, sell their products.



Commercial booths at Yuriage Public Market. Photo courtesy of Canada Wood Japan

During the 2013/14 fiscal year, the Canada-Tohoku Reconstruction Project will fund the construction of additional public structures. Projects for potential funding were recently shortlisted by an evaluation committee following a call for proposals which closed in late March 2013. Negotiations on these projects are currently underway.

The Long Road Ahead

The rebuilding of public facilities in Japan's Tohoku region will likely continue for many years. Nevertheless, the region's residents can start to benefit right away from their brand new public library and market. These structures were made possible by Canada's generosity and the wood frame technical expertise of its forest sector.