XL Construction, Aedis Architects and Daedalus Structural Engineering Partner to Develop New TimberQuest School Construction Product

Prefabricated Mass Timber Structures are Eco-Friendly and Quick to Build;

Sacred Heart Schools, Atherton, in Atherton Calif., is First to Contract for Innovative Construction Solution to be Completed in Short Timeframe Over Summer 2021

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MILPITAS, Calif., June 8, 2021 /PRNewswire/ -- Three San Francisco Bay Area construction industry companies have partnered to launch TimberQuest™, an innovative, sustainable and highly efficient solution for building cost-effective, prefabricated "mass timber" classrooms for the California K-12 and community college markets.

The partnership between XL Construction, Milpitas, with Aedis Architects, San Jose and Daedalus Structural Engineering, based in Saratoga, combines the organizations' unique expertise in 21st century learning environments with mass timber design and construction.

TimberQuest Classroom Interior

TimberQuest employs cross-laminated timber to create prefabricated wall and roof panels offsite that are erected and installed at school construction sites, enabling buildings to be constructed in significantly shorter timeframes. The structures are pre-checked and approved by California's Division of the State Architect (DSA), so they can be used for any public school or community college project in California, reducing permitting time from six months to a single day. Most buildings can be constructed in 10 weeks over a summer break.

Here is a link **to a "flythrough" video rendering of a TimberQuest classroom.**

In addition to expedited project completion, TimberQuest buildings offer a healthy and eco-friendly environment. Their beautiful interiors feature the warmth and airiness of a tall wood ceiling, extensive natural lighting and an openness that contrasts with the sterile, box-like modular buildings often seen on many school campuses. TimberQuest structures are high-quality and permanent—with life expectancies of 50 years or more—with more usable floor space than traditional modular buildings. Yet, they can be delivered quickly, thanks to the pre-approved design as well as rapid factory fabrication and onsite erection, offering public and private schools the best of all worlds.

"The partnership between XL Construction, Aedis and Daedalus enables us to think holistically to solve design, permitting, procurement, prefabrication and installation issues," said Steve Winslow, SVP, XL Construction. "TimberQuest provides a superior environment for students to learn and teachers to teach."

"There are three ancient Roman principles expressed in a true piece of architecture: strength, practicality and beauty. This collaboration epitomizes the integration of these precepts into a flexible, durable, economical and environmentally responsible solution that addresses most schools' needs," said John Diffenderfer, president, Aedis Architects.

"Daedalus is excited to be a part of this collaboration which advances mass timber construction by developing a school buildings "kit-of-parts" for over-the-counter permitting," said Doug Robertson, president, Daedalus Structural Engineering. "By integrating cross-laminated timber panels with insulation, architectural finishes and other buildings systems in shop fabrication, we are able to deliver preassembled wall and roof panels to any school site for immediate erection and completion of sustainable, attractive and durable public school classroom buildings in record time."

TimberQuest Chosen by Sacred Heart Schools, Atherton for Building for Fall 2021 Session

Sacred Heart Schools, Atherton (SHS) in Atherton, Calif. is part of the Network of Sacred Heart Schools, a worldwide operation with schools in over 44 countries and a tradition of excellence dating back to its founding in Paris in the 1800s. Situated on a 63-acre campus, the institution provides preschool – grade 12 programs that serve more than 800 families. With increased demand for space and calls for less capacity in lower grade classrooms due to social distancing requirements; the school saw an urgent need to expand its classroom space for its youngest students.

The project was awarded April 1, with completion projected by August 31 to be ready for the fall term. After reviewing TimberQuest's many benefits, SHS agreed to move forward on the new building which will serve its kindergarten students who previously shared a building with preschoolers.

"In line with the strategic growth of our campus, we were ready to expand our kindergarten space; we needed to both break ground and have construction complete during summer break," said Richard Dioli, SHS director of schools. "Another must was choosing a company that shared our commitment to sustainability. We worked with XL Construction previously, so it was natural for us to reach out to them for ideas—and the TimberQuest concept had immediate appeal."

"Two of the things we liked most about the TimberQuest classroom design is the 'daylighting' created by the structure's large windows combined with the exposed wood interior that makes the classroom very pleasant and appealing," said Michael Dwyer, SHS director of operations. "The building's overall energy efficiency supports our sustainability philosophy and stands as a shining example of these values we teach to our students."

Building a Better School Environment Panel-by-Panel

The basic building block of TimberQuest construction is precision-machined, cross-laminated timber (CLT) that is available in large format structural slabs. It is strong, yet lightweight, fire resistant and leaves these structures with rich exposed wood finishes.

"Where one may think building with wood is bad for the environment, the opposite is true," said Matt Larson, preconstruction director, XL Construction. "Mass Timber construction, including the TimberQuest approach, supports responsible forest management, including the reduction of wildfires and protection of biodiversity. It also promotes rural economic development by expanding the market for sustainable forest products."

The carbon benefit of timber construction is well documented and has a two-fold benefit. First, utilization of a wood structure in lieu of steel or concrete has a significantly lower embodied carbon footprint, reducing the carbon footprint due to construction by 40-60%. Second, wood effectively sequesters carbon within the timber structure, storing it for the life of the structure and any subsequent reuse.

TimberQuest buildings are available in three- to nine-classroom sizes, between 3,000 and 9,000 square feet. A total of nine interior layouts are included in the precheck design, including standard classroom, large classroom, breakout space, office / conference, science, kindergarten and three restroom configurations. The all-electric design is also very efficient, utilizing heat pump technology to exceed California's Title 24 energy usage standards by between 35% and 60%. In addition to not relying on gas availability, TimberQuest buildings take full advantage of renewable energy resources.

For more information about TimberQuest, visit www.timber-quest.com or contact Matt Larson, XL Construction, (408) 240-6483, mlarson@xlconstruction.com.

About XL Construction

XL Construction is a leading general contractor whose mission is to "build to improve lives." XL partners with today's leaders in life sciences, advanced technology, corporate office, civic, healthcare and education to create places that make its communities better. The company's focus and passion for team success has earned it a network of great partners and a reputation for putting people first. XL Construction is consistently ranked among the top general contractors in Northern California. In 2020, the company was named ENR California's Top General Contractor of 2020 and the #1 Best Place to Work in the Bay Area.

About Daedalus Structural Engineering

Daedalus is a structural engineering firm located in the heart of Silicon Valley with over 38 years of experience. We provide a full range of structural engineering services including seismic evaluation and retrofit design, civic, K-12 and higher education, corporate and custom residential projects with growing expertise in mass timber construction. At Daedalus, we believe that the structure provides an opportunity to expand and help shape the finished architecture and building envelope. Dedicated to the collaborative design process, we consistently strive to deliver engineering excellence, ingenuity, the best possible design aesthetics, cost control and the highest level of service on every project.

About Aedis Architects

Aedis is a Northern California based, full service architectural firm, whose mission is to create highly effective learning environments for California students and teachers. For more than six decades, the firm has helped public and private educational clients transform their schools into flexible, collaborative, healthy and sustainable environments that optimize learning and teaching. The use of Mass Timber is featured prominently in the firm's portfolio. From beautiful, natural and biophilic educational spaces that enrich student and faculty lives, to 'tall timber,' multi-family residential structures that help solve the housing crisis, each Mass Timber project addresses climate change and provides healthy environments for the occupants.

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