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One of the advantages of CLT construction is assembly speed, especially important for educational projects bound to school-year timetables. For Washington Latin, the delivery goal was to use the gym for the June graduation ceremony, which was met. "CLT installation time, including plugs and panel taping, represented only four weeks of the total construction time," project leader Ann Neeriemer says. Gym construction proved to be minimally disruptive to class life, primarily due to project siting. In fact, the project became a living teaching lab as some teachers used the construction as part of their lesson plans that semester.

## WOOD: STUDENT-FRIENDLY, BUDGET-SMART

For Washington D.C. education leaders, the **Martha C. Cutts Gymnasium** is more than just the region's first cross-laminated timber building. The 11,266 square foot facility signals an exciting new construction advance that supports student well-being and school distinction within ever-tightening budgets.

The conundrum before Washington Latin Public Charter School officials and their architectural team was familiar to many designers: How could the 10-year-old charter school construct a gymnasium of enduring distinction on a budget?

As Washington Latin's first gym, the expectations were understandably high from the school's leadership, alumni, faculty, staff, and students. The architectural team of Perkins Eastman with Demian Wilbur needed to create a delicate balance between high client expectations and cost.

Project lead and senior associate of Perkins Eastman, Ann Neeriemer, AIA, LEED AP remembers the discussions well.

### Honoring The Dream

"In the original concept design, we actually proposed a two-story facility with lots of glass, brick, and a barrel-vaulted roof," Neeriemer says. "But the site's soil conditions required helical piers, an unexpected expense. After multiple rounds of scope reduction and value engineering, the design was as simple as it could be. But it wasn't their

dream. How could we deliver something they could afford and love?"

Enter cross-laminated timber (CLT).

### Winning Solution

A school parent asked '*Why not wood?*' Intrigued, the design team investigated the idea. The more they looked, the more they liked.

"This could be the aesthetic that would make this project unique and beautiful," Neeriemer explains.



The project has become a regional learning attraction for its innovative use of CLT construction. “The opportunity to do this from a school aesthetic standpoint with architectural innovation has made the gym something special. If we hadn’t used CLT, no one would bat an eye at it. It would be just another gym,” says architect Ann Neeriemer, project lead. “Wood is cost-effective, easy to use, and delivered a great result.”

The list of CLT construction attributes is impressive. It’s a proven, code-compliant construction process. The idea of sustainably harvested wood and carbon sequestering was exemplary and offered a fine teaching moment for the school’s 600 students in grades 5 through 12. Wood also supports LEED certification, mandatory for D.C. school construction. For approximately the same material cost as steel, construction that uses CLT takes a fraction of the time, helping compress an already aggressive delivery schedule.

### Code Compliant

As a first-of-its-kind project in D.C., Neeriemer and her team, which included Ziad Elias Demian, AIA, APA of demianwilburarchitects, addressed potential code concerns the old-fashioned way—they met early and often with code officials. “We qualified as Type V construction,” the architect says. “We had to prove the CLT panels would behave in a way that ensured structural integrity. They liked our post and beam system using CLT panels as lateral support and sheathing for the walls and roof.”

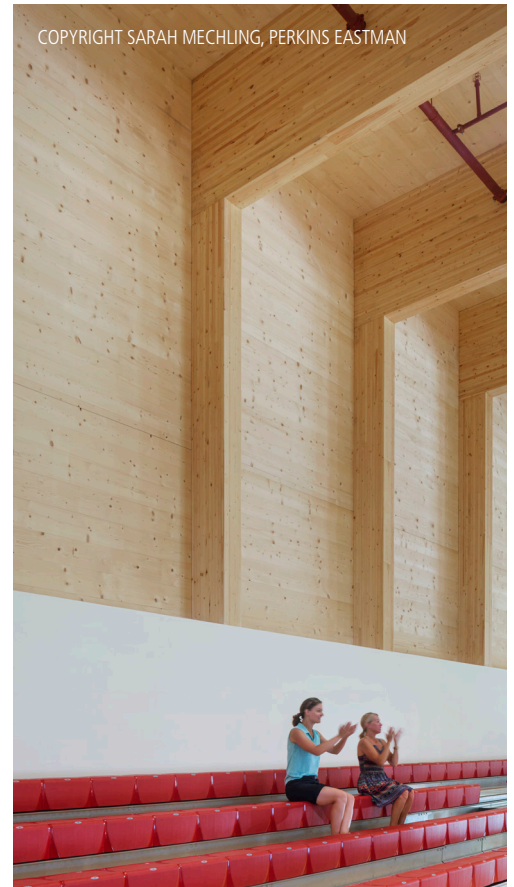
### Only Seven Months To Build

Construction began in late October 2015. After a series of minor set-backs, including a lost truck carrying glulam beams and a tough winter storm with high winds, the project was completed in late May, 2016, a mere 7 months after construction began. School officials formally opened the gym on June 8, 2016, with a naming ceremony, christening the gym after Martha C. Cutts, the founding head of Washington Latin.

### Comforting Dimension

The owner’s reaction? “They love it,” Neeriemer says.

“Wood made all the difference in the world. The gym is beautiful. It was delivered on time and within budget,” says Neeriemer. As an architect with a design focus on K through 12 education projects, Neeriemer sees another benefit. “Wood has a calming effect. Washington Latin students feel comfortable and safe within a natural environment. It’s important we think about these things. Wood adds a comforting dimension you won’t find with any other building material.”



The Martha C. Cutts Gymnasium is a one-story structure with a roof that slopes from 32 feet to 27 feet. There are 12 structural bays, including the ends, with 75-foot long glulam beams. The beams are a single continuous piece. There are 36 glulam columns. CLT is used for both wall and roof panels. All CLT is 3-ply with slightly varying thicknesses.

**Architect:** Perkins Eastman with demianwilburarchitects

**Structure:** Arup for KLH/wood structure and SK&A for all other structure

**MEP:** Setty & Associates

**Contractor:** MCN Build

**Photography:** Sarah Mechling, Perkins Eastman

**Owner’s Representative:** Brailsford & Dunlavey

**Site Design:** Lee & Associates

**Civil:** AMT