



University of Idaho Arena Charts a Future for Mass Timber

With an undulating roofline designed to mimic the rolling hills overlooking the University of Idaho's Moscow campus, the Idaho Central Credit Union Arena is hitting new creative heights for mass timber. The 62,000-square-foot, 4,000-capacity facility is home to the University of Idaho's men's and women's basketball teams—the Vandals—and highlights Idaho's sustainable forestry and wood products sector.

Mass timber is the general classification for a group of wood products. They are made by mechanically fastening or bonding with adhesive smaller wood components to form large, prefabricated wood elements used as beams, columns, walls, floors, and roofs in buildings. These products sequester carbon and have a smaller environmental footprint than traditional building materials.

Completed Idaho Central Credit Union Arena. Courtesy photo by University of Idaho.

The \$51 million arena was made possible in part by the U.S. Department of Agriculture, (USDA) Forest Service Wood Innovations Grants program. This funding supports traditional wood utilization projects, expands wood energy markets, and promotes using wood as a construction material in commercial buildings.

“The Wood Innovations funding (from the Forest Service) enabled us to engage architectural firms early on and really nail down the proof of concept that would define how the project would proceed. Showcasing the potential of mass timber and relying on local wood supply were priorities for us,” says Dennis Becker, Dean of the University of Idaho's College of Natural Resources.

A Magnet for Students

The arena will establish an identity for Vandal basketball and benefit other student-athletes by opening more spaces on campus for practice, games, and tournaments. The arena will host a variety of events to enhance student life on University of Idaho's residential campus. Architecture students are also using it to build their understanding of carbon sequestration, life cycle analysis, and performance during extreme weather events.

A Showcase for Idaho's Forest Sector

The arena's main roof beams and purlins (that support the rafters) weigh a combined 442 tons and span 130 feet. They are made of engineered wood from Idaho's forests, including the university's experimental forest. Area loggers harvested and transported Douglas fir and larch logs to PotlatchDeltic, Bennett Lumber, and Idaho Forest Group to be milled into lamstock and plywood, which was shipped to Boise Cascade and QB Corporation for fabrication. Idaho Forest Group and Tri-Pro Cedar Products teamed up to provide the rich, dark-stained, cedar siding surrounding the arena.

During construction of the main roof beams—the largest is 10-1/4 inches wide, more than 5 feet deep and 58 feet long—contractors spanned the adjoining 80-foot-wide practice court with another set of beams. The roof is buttressed by 854 glulam beams and topped with 2 layers of PotlatchDeltic plywood. The roof includes more than 400 prefabricated plywood panels and spans 250 feet.

Mass timber's reputation for efficient construction and associated time savings was also on display during arena construction. The fact that many of the engineered wood components were prefabricated and arrived onsite ready for assembly saved construction time and translated into cost savings.

The University of Idaho Arena Will Inspire Adoption of Mass Timber Technology

This unique, beautiful, and highly visible project is a clear example of how modern technology and traditional wood use can be combined to bring benefits to emerging new markets while supporting forest health and contributing to carbon sequestration and climate change mitigation. It is a win for the local community, our shared environment, and the Forest Service.

More Information

Julie Kies, Wood Innovations Coordinator
USDA Forest Service, Northern and Intermountain Regions

Julie.kies@usda.gov, 406-370-3297

FAST FACTS

- The main roof beams and purlins weigh a combined 442 tons and span 130 feet over the main court.
- The \$51 million arena used wood sourced from Idaho.
- Idaho's \$2.4 billion forest sector came together to support the project with donated materials, expertise, and the use of their fabrication facilities.
- Wood Innovations funding enabled engaging architecture firms and State building code specialists early on to nail down the proof of concept.



Former USDA Forest Chief Vicki Christiansen (center) at the groundbreaking ceremony for the Central Credit Union Arena. Courtesy photo by University of Idaho.