

Bridge Features New Engineered Wood Product

Building Bridges to the Future

The Challenge

The West Virginia University (WVU) Division of Forestry Natural Resource Center is a multi-purpose meeting facility that hosts several forestry related meetings each year. The original plan at the Center called for a bridge that would add a single-lane entrance to the parking area.

With the ever-increasing demand for wood and wood products, the WVU Division of Forestry decided to use West Virginia wood for the bridge, to help highlight the importance of forestry in the State.

The Solution

The WVU Division of Forestry and the USDA Forest Service's Wood In Transportation (WIT) Program discussed a plan to utilize a wood product manufactured in West Virginia, which has not been used before in bridge applications—Parallam® PSL, which is a registered trademark of Trus Joist, a Weyerhaeuser business. The Company had been searching for projects to help field test its engineered wood product, which is a substitute for solid wood.

Since WVU is a land grant university with research as a primary goal, and since it has a major forestry program, this project seemed to be a very good fit.

Resulting Benefits

This bridge was designed to showcase wood design and use in a nontraditional construction application. The structure spans a 30-foot stream, allows for a better flow of traffic coming in and out of the Natural Resource Center, and adds aesthetic appeal with intangible value to the Center. The project has also provided an opportunity to design, build, and test a bridge using a new material.

This experimental bridge utilizes a uniquely engineered wood product, which is manufactured in West Virginia from locally grown wood products.



Parallam PSL was used in the recently constructed bridge at the entrance to the West Virginia University Division of Forestry's Natural Resource Center near Morgantown.

Parallam PSL is a value-added product, having more features and creating more value than a traditional forest product. Smaller diameter logs can be used for Parallam PSL, and longer pieces can be produced than would be possible from small diameter logs.

Parallam PSL is made up of several knot-free layers of veneer strips glued together under pressure. It is strong, durable, and has a consistency throughout its length. One can plan and design the exact dimensions needed for a project and manufacture it accordingly.

Sharing Success

Parallam PSL is manufactured from small diameter, readily available, locally grown tulip poplar trees. This pleases Dr. Joe McNeel, Director of the WVU Division of Forestry. "Using wood products from West Virginia's forests, manufacturing a unique product in-state, and creating jobs for our citizens—it's a win-win situation all the way around," said McNeel. "Partnering with the Forest Service on this project has been very exciting."

There is a high potential to build more of these bridges around the State and throughout the country.



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