A broad coalition from across Washington State is working to accelerate a market for the sustainable production and use of cross laminated timber and other mass timber products.

BUILDING FOR A SUSTAINABLE FUTURE
WASHINGTON’S URBAN COMMUNITIES ARE AMONG THE FASTEST GROWING IN THE NATION, especially in the Puget Sound region west of the Cascades. Cities and towns along the I-5 corridor constitute an international economic hub of strong industry clusters including aerospace, information technology, and health sciences. Consequently, population and economic growth are expected to continue well into the foreseeable future—more than one million additional residents are expected in the Seattle metropolitan area alone by 2040.

As a region dependent upon its surroundings for natural resources, energy, clean water, and ecosystem services like flood and erosion control, we must accommodate growth in a manner that maintains the region’s environmental resilience. Housing people and jobs within the footprint of our existing cities and towns is an essential strategy going forward if the region is to succeed in maintaining its high quality of life and healthy natural environment.

While our urban communities have grown significantly, the national economic recession hit Washington’s forest communities especially hard, exacerbating the challenges of 20-year declines in the timber industry. Several factors have contributed to the decline of this natural resources sector, including changing land management policy, technological advances and increased global competition. If rural timber communities are to flourish in the future, they need opportunities to rebuild robust local economies resilient to shifting political and economic trends.

Cross laminated timber buildings designed and built in our cities with products responsibly sourced and milled in our forest communities represents an opportunity to link the economic and environmental health of urban and rural communities to benefit both people and ecosystems in Washington.
CROSS LAMINATED TIMBER (CLT), AN ENGINEERED HEAVY PANEL WOOD PRODUCT, is a promising building material that offers a variety of benefits, including: reducing hazardous fuels and supporting restoration in our national forests, supporting rural economic development, lowering construction costs in our cities, and reducing carbon emissions associated with climate change. The technology for engineered wood product construction is already available and there is demand for it. However, seizing the opportunity it represents requires overcoming barriers in the supply and demand chains.

Washington State can align its vast tree-growing land base and nationally prominent timber industry with its vibrant economy, urban centers of technical innovation, and rapidly growing population to catalyze the development of CLT production and construction industries in the United States. A coalition facilitated by Forterra is leading efforts to bring CLT to Washington by reducing technical barriers, incentivizing producers and users of engineered wood products, and generating public and private investment. The coalition has mobilized action teams to address these issues through concerted and coordinated strategies.
THE COALITION

LEADERSHIP COMMITTEE

René Ancinas – Port Blakely Companies
Todd Beyreuther – Katerra
Tom Bugert – The Nature Conservancy
Lauren Burnes – Washington State Department of Natural Resources
Nicholas Carr – Office of Congressman Derek Kilmer - WA-06
Dr. Indroneil Ganguly – University of Washington
Bob Drewel – Washington State University Extension
Gene Duvernoy – Forterra
Brad Gaolach – Washington State University Extension
Michael Goergen – U.S. Endowment for Forestry and Communities
Bert Gregory – Mithun
Ben Greuel – The Wilderness Society
Brian Hatfield – Washington State Department of Commerce
Chuck Hersey – Washington State Department of Natural Resources
Susan Jones – atelierjones
Ethan Martin – WoodWorks
Joe Mayo – Mahlum
Dave McEntee – Simpson Lumber Company, LLC
Colin Moseley – Green Diamond Resource Company
Ryan Mullenix – NBBJ
Thomas O’Keefe – American White Water
Ron Saranich – USFS Region 6 Rural Community Assistance
Edie Sonne Hall – Weyerhaeuser Company
Dr. Michael Wolcott – Washington State University
Russ Vaagen – Vaagen Brother’s Lumber

A broad coalition is leading this effort. Thank you to the individuals and organizations making sure Washington is building for a sustainable future.
CLT and mass timber represent an opportunity to house Washington’s growing urban population and businesses in buildings constructed from sustainable, locally produced materials. It’s viability for success in the market depends on required updates to the International Building Code (IBC) and local codes to recognize that CLT can be used to build mid-rise construction, while meeting the health, safety and well-being requirements of its users.

STRATEGIES:

• Support International Building Code updates
• Demonstrate feasibility and safety and inform local building regulations through CLT/mass timber pilot projects; facilitate and/or subsidize additional technical reporting and review required for such projects
• Seek funding and support for fire/seismic testing to inform code updates
• Educate building code officials by developing and distributing CLT/mass timber educational materials addressing construction, seismic, and fire issues and organizing educational events
While CLT has been deployed in Europe for over 20 years, it remains untested or unfamiliar to many professionals in the building community in North America. Building market demand for the product relies on the knowledge, acceptance and readiness of key users: Architects, Engineers, Contractors, and Building Operators.

STRATEGIES:

• Develop an Architects, Engineers, Contractors, and Building Operators (AECO) education plan
• Plan and initiate outreach targeting AECO professional networks, leveraging existing resources and industry/professional association infrastructure to further design and construction education/training
• Create a centralized source of CLT research, synthesizing findings and identifying outstanding research needs
• Support university and college curricula focused on advanced wood construction technologies
While CLT holds potential financial benefits for construction, given the limited North American supply of materials, a workforce unfamiliar with mass timber design and construction, and costs associated with permitting CLT projects in locales without permissive codes, CLT can be cost prohibitive at this time. Opportunities to facilitate the construction of tall wood buildings and catalyze demand in the Pacific Northwest include direct government support and public-private partnerships to incentivize construction.

STRATEGIES:

- Pursue CLT/mass timber pilot projects for one or more new governmental building(s)
- Identify and advance CLT/mass timber opportunities in government buildings, programs, and initiatives
- Develop competitive grant award program for projects incorporating CLT/mass timber construction
- Explore tax credits to bridge incremental costs across the design and build process
- Incentivize adoption in cities
CLT and mass timber represent an opportunity to bolster economic development in Washington’s forest communities by producing a value-add construction material for use in our expanding cities. Production facility development requires significant capital investment, which can be challenging for unproven markets. Supporting mill development and operation in Washington would improve CLT’s cost competitiveness and position the Pacific Northwest as a supplier for this emerging market.

**STRATEGIES:**

- Fund or incentivize a prototype CLT mill to catalyze production, as well as to further testing and certification effort
- Develop a unifying CLT/mass timber benefits narrative and conduct outreach and education to supply stakeholders
Advanced manufacturing for engineered wood products requires a specialized workforce throughout the supply chain. Specific design and operational skills are required, for example, knowledge of Computerized Numerical Control (CNC) machinery is essential to fabricate CLT digitally to meet custom specifications. Ensuring that the supply and demand chain is aligned with a trained workforce is essential to ensuring jobs for Washington workers.

**STRATEGIES:**

- Develop and execute a workforce development plan informed by university and industry research
- Bolster existing or explore new university, college, and industry training by adding curriculum, certifications, and skill development
- Secure academic funding for CLT-pertinent programming with specialized certificate and degree programs
- Foster collaboration between academic institutions, industry advisors and/or business accelerators to create student training opportunities
Cross laminated timber has the potential to support forest restoration and provide a building material with lower carbon impacts. To achieve this promise, CLT incentives should encourage responsible forest management and support local Washington communities.

STRATEGIES:

- Work with stakeholders to develop principles to guide CLT incentives and policies
- Integrate CLT/mass timber into emerging WA sustainability initiatives and strategies to address resilience and forest restoration needs
HIGHLIGHTS OF COALITION PROGRESS

• A UNIFIED STRATEGY: A Forterra-led statewide CLT coalition is working together to overcome barriers to CLT market development in Washington. Forterra was honored to receive a $250,000 award from the U.S. Forest Service through the Wood Innovations Grant program to support this work.

• STATE SUPPORT: The Washington State Legislature approved the following in the 2016 Supplemental Capital Budget:

  • DEMONSTRATION PROJECTS – $5.5 million for the Department of Enterprise Services to lead K-3 modular classroom demonstration projects in five school districts across WA.

  • PRODUCTION TECHNICAL ASSISTANCE – $50,000 to the Department of Commerce to assist prospective CLT manufacturers in evaluating the potential CLT market and determine necessary investments to manufacture CLT.

  • PERFORMANCE – $75,000 to Washington State University to summarize available CLT engineering/performance test results to inform consideration of building code amendments for greater use of CLT in construction.
Forterra has successfully brought about powerful, practical and positive change by conducting land transactions, stewarding land, engaging communities, and conceiving and advancing forward-thinking policies. Forterra weighs the major challenges facing our nation and region, including growing populations and the impacts of climate change, and determines how we can best continue to care for and manage our landscapes for the benefit of both urban and rural communities.

**FEDERAL SUPPORT:** With significant local leadership, The Timber Innovation Act of 2016 (S.2892 and H.R.5628) was introduced in the 114th Congress and aims to “accelerate the use of wood in buildings, especially tall wood buildings” by providing additional resources for research, technical assistance, and another tall wood building competition.

**BUILDING CODES:** Representatives from Washington’s CLT Coalition are part of the International Code Council’s ad hoc committee exploring the building science of tall wood buildings “with the scope being to investigate the feasibility of and take action on developing code changes for tall wood buildings” for the scheduled 2018 updates.

**RESEARCH:** The University of Washington and Washington State University continue to be leaders on research related to CLT, including ongoing efforts to understand CLT demand, supply chain models, and potential connection to ecological restoration.

**ABOUT FORTERRA**

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Photo courtesy of Seagate Structures, Pollux Chung