

Build Back Better with Mass Timber BBBRC Phase 2 Grant Request: Overarching Narrative

Build Back Better with Mass Timber: Project Synopsis

Oregon sits at a crossroads in 2022. Its rural economies never fully recovered from the 1980s decline of the timber industry, and since then the rural-urban divides – cultural, economic, political – have widened. Climate change has given rise to extreme droughts, record-breaking heat waves, unhealthy forests, lower waterways, negative impacts to natural areas, and – in 2020 – devastating wildfires. The wildfires and straight line winds triggered disaster declarations in 20 of Oregon's 36 counties, caused an estimated \$1.15B in damage and response costs, and destroyed 4,300 homes, exacerbating a pre-existing housing shortage.

At the same time, Oregon has a history of inequitable outcomes for marginalized, under-resourced, and underserved communities, particularly the Indigenous and Native American Tribes in Oregon,

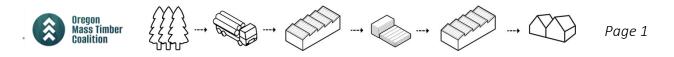
Black Americans, Latino/a/x, Asians, Pacific Islanders, farmworkers, immigrants, and rural communities who have not prospered from strategic wealth-building economic initiatives and opportunities. Both urban and rural communities are suffering the impacts of years of under-production in the housing market. Decades of under-building have resulted in housing shortages in virtually every community, such that each of Oregon's Comprehensive Economic Development Strategies (CEDS) has identified affordable or workforce housing as a top barrier to economic growth.



But Oregon is a state of innovators and change-makers. It pioneered comprehensive land use planning half a century ago, was the first state to adopt a bottle refund program, and instituted vote-by-mail long before other states did so. More recently, Oregon Governor Kate Brown introduced, and the legislative assembly codified, a Racial Justice Council that works throughout the state to change systems that perpetuate disparities and ensure equitable and inclusive policy and budgets.

In January 2021, Governor Brown's Wildfire Economic Recovery Council recommended the State "leverage public investment to rebuild the housing units that were lost...in a way that provides equity" and "reduce future wildfire and associated risks, prioritizing communities impacted by the 2020 wildfires." Access to high-quality affordable housing is a statewide priority, as articulated in Oregon Governor Brown's 10-Point Economic Recovery Plan, which provides a framework for economic recovery following the COVID-19 and wildfire emergencies, with a special emphasis on supporting communities of color. The Build Back Better with Mass Timber proposal directly addresses five of Oregon Governor Brown's 10-Point Economic Recovery Plan: Reinvesting in Innovative Housing, Supporting Resilient Rural Communities, Creating opportunities for Oregonians (workforce development), Investing in Oregon's Infrastructure, and Innovation in Manufacturing.

In this moment of change in Oregon, the Oregon Mass Timber Coalition (OMTC) has come together to equitably build rural and urban economies while piloting alternative methods for housing





construction through strategic investment into the mass timber cluster. Using mass timber to accelerate housing production, while putting people to work in good jobs and restoring forest health is a quintessentially Oregon innovation. The OMTC is committed to growing the mass timber cluster with an emphasis on addressing race-based disparities and closing the urban-rural divide. Its members and leaders within partner organizations, are ready to heed the call for racial, economic, and environmental justice. The engagement of the two leading universities in research, testing, and prototyping means that the solutions will be evidence-based and grounded in science. The level of support this effort has garnered validates that not only is the transformation proposed needed, but that it can be successfully implemented through partnerships, leverage, and deference to those who have been most impacted by Oregon's many challenges. With this holistic proposal, Oregon will directly tackle systemic challenges that have plagued residents and communities for decades. Each of the ten component projects are significant in and of themselves. Taken together, the projects introduced below will be transformative.

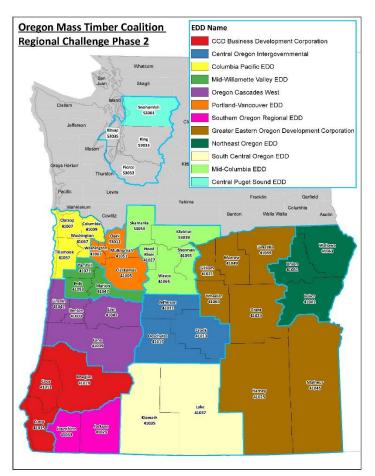
1	Mass Timber Factory*	Construct a factory for manufacture of modular homes and building components using innovative mass timber technology, automation, and trained skilled workers.
2	Workforce Training Center*	Construct a training facility serving not just the adjacent factory, but the region's broader needs for upskilling workers for advanced manufacturing and 21 st -century construction.
3	Regional Training Cluster - Workforce Development and Training Strategy	Link rural and urban communities by focusing on jobs in forestry, construction, and advanced manufacturing.
4	Advancing a Forest Restoration Supply Chain	Address environmental considerations and clear the way to permit a sizeable forest restoration project within the Willamette National Forest.
5	Oregon Fire Testing Facility (OFTF)	Construct, equip, and commission an intermediate-scale fire testing facility at Oregon State University's Corvallis campus.
6	Mass Timber Modular Housing Systems - Prototyping & Testing	Assess the technical performance of modular building designs developed by Coalition partners.
7	Smart Forestry Solutions: Paving the Way from Forest Restoration to Mass Timber	Improve the economic and technical feasibility of utilizing low-value wood species for mass timber products.
8	Oregon Acoustic Research Laboratory (OARL)*	Construct a state-of-the-art facility for conducting acoustics tests of mass timber assemblies to support the expansion of the mass timber industry.
9	Mass Timber Prefabricated Panels for Affordable Housing Prototype Development	Test design assumptions through the development of built prototypes for Affordable Housing.
10	Code-UP - Community Development Code Update Project	Modernize development codes in ten Oregon communities impacted by housing shortages exacerbated by 2020 wildfires and create a model for other communities to permit mass timber modular housing.
		other communities to permit mass timber modular housing.

* The T2 Mass Timber Innovation Hub will be the site of three of the proposed construction projects.

Geographical Regions Served

Component projects 1, 2 and 8 will be located at the Mass Timber Innovation Hub, at the Port of Portland's 53-acre Terminal 2 (T2) in Portland, Oregon. The Mass Timber Innovation Hub will also be a center of training for Component Project 3 as well as other locations in Oregon. In addition, Component projects 4, 5, 6, 7, and 9 will be in Oregon's Willamette Valley. Implementation and demonstration of the research conducted with Component Project 7 will also occur in Eastern Oregon, in rural and underserved areas that urgently need forest restoration. Component Project 10,





Code-UP, will directly benefit wildfireimpacted and regionally depressed communities, with applicability statewide. Collectively, these projects' primary service area includes 36 Oregon counties, covered by 11 Economic Development Districts (see Build Back Better Mass Timber Overarching Narrative: Primary Service Area attachment). Submitted with this grant request are letters from each of these region-based EDDs, as well as the Oregon EDD Association (OEDD), demonstrating full state support for the project.

Snohomish County (Central Puget Sound EDD) is also part of the primary service area through collaboration with Forterra, a Washington State non-profit. Forterra is developing the EDA grant-sponsored Darrington Wood Innovation Center. The curriculum for this facility has already been developed, with training programs underway, and the Port is working with Forterra to bring these programs to the Mass Timber Innovation Hub.

Communities served and target populations include timber-dependent rural areas in Oregon experiencing the intersectional impacts of economic and climate change. The steady loss of forest-related jobs (from over 80,000 in 1980 to around 29,000 by 2016) has left residents economically vulnerable, while climate change creates unprecedented risk of more frequent and dangerous wildfire events. A shortage of workforce housing and outdated housing stock impedes local economic opportunity in these counties. This constraint to growth is present – without exception – in each of Oregon's distinct Economic Development Districts and prioritized through a variety of housing-related strategies identified in regional Comprehensive Economic Development Strategies (CEDS). Although specific actions differ, many CEDS approach the challenge through themes of innovative and nontraditional housing solutions, streamlined permitting processes, and region-based housing plans. The provision of workforce housing in these communities would have an immediate impact on local economic growth by resolving a key challenge identified by rural businesses throughout the state.

Private Sector Participation

Private sector participation will be most substantial in the housing aspects of the overall project, but businesses and private-non-profits have much to gain from investment and participation in nearly every component. Developers and builders are seeking new avenues to meet the substantial demand for new housing and the associated need for faster materials sourcing and skilled construction workers. Increasing market acceptance of modular housing and excitement about the potential benefits of mass timber lend confidence to the underlying business plan for the Mass Timber Factory component



project. The intention to achieve zero net energy standards will be an important differentiator for the homes produced in this factory. While the Port has not yet solicited any private investors for the factory, the economics for future investors are favorable, given formulation of capital stacks that include the BBBRC grant and Port in-kind and land contributions, as well as access to other debt and equity instruments. The research, development, and testing aspects of the project will help to build market acceptance, and updating local building and zoning codes, supported by the Code-UP project, will help pave the way for volumetric modular homes to be sited throughout Oregon.

Six housing developers provided letters supporting the project and Network for Oregon Affordable Housing, the State's largest CDFI, has indicated its support, suggesting that private bank capital will also come to bear in the ultimate financing of multifamily developments. Energy Trust of Oregon and Portland General Electric are eager to support the energy-savings features of the new buildings at T2, as well as the new homes and retrofit solutions produced there.

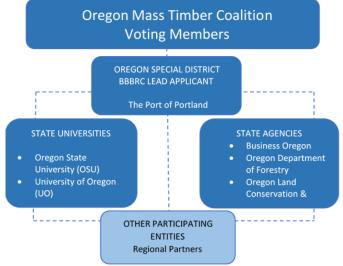
Oregon mass timber fabricators and builders continuing their commitment to this project include Freres Lumber Co. (Lyons); DR Johnson Wood Innovations (Riddle); Swinerton Builders/TimberLab (Portland); Cut My Timber (Portland); and Andersen Construction (Portland). The UO team is working with <u>HomeWork Development</u> and <u>Providence Health & Services</u>, which are planning to use the proposed MPP panelized system for new houses for a pilot project in Milwaukie, Oregon. HomeWork has obtained a grant from the Energy Trust of Oregon which is funding an energy analysis of the new house model by the UO team.

TallWood Design Institute (TDI), a collaboration between OSU and UO, has close and frequent interaction and collaboration with industry; almost 1,000 industry practitioners are members of its Critical Mass Timber professional networking group. This network, along with professional organizations active throughout the state, including the Structural Engineers Association of Oregon (SEAO), American Society of Civil Engineers (ASCE), and the American Institute of Architects (AIA) Oregon will be leveraged to support the mass timber cluster.

Additional expressions of interest have come from a diverse array of private entities, including LSW Architects, Oregon Manufacturing Innovation Center (OMIC), and City of Roses Disposal & Recycling (COR).

Sustaining the Mass Timber Cluster

The OMTC provides a decision-making framework to assist members in coordinating their efforts to grow the mass timber cluster; mitigate the impacts of climate change; and create new high-paying jobs to address economic disparities. The OMTC focuses on supporting initiatives and projects for economic recovery that will address commonly shared challenges, including housing availability and affordability, low wages, inequality, wealth and income disparities, and wildfire risk and recovery. Coalition members, represented in



the component projects and including Business Oregon, have drafted a memorandum of



understanding and strategic plan to guide the EDA grant-supported work and to grow the coalition through Regional Partner participation. These documents formalize the ongoing collaboration of this purpose-driven Coalition, highlighting members' specific strengths and expertise to accomplish OMTC strategic goals, and contain the steps to sustain future growth and support the mass timber cluster in keeping with the Coalition's values, priorities, projects, beneficiaries, and future proposals.

The OMTC currently operates informally through an MOU that speaks to the values, principles, and overall direction. This MOU will be strengthened throughout the Spring and Summer of 2022 to detail more precise roles, to add a cultural competence within its membership, and to set the framework for accountability, transparency, and action.

State Commitment to Mass Timber: Advancing Prototyping

Prior to the BBBRC Phase 1 funding, the Oregon Legislature provided \$5M to begin work on a mass timber prototype for use in small scale residential buildings. The funding, awarded to the Port of Portland and Hacienda CDC, a culturally specific affordable housing non-profit, is building prototype housing units in an existing warehouse at the Port's Terminal 2. Besides delivering badly needed housing to at least three different Oregon communities, this work will refine the long-term Mass Timber Factory business plan as it is implemented through Phase 2 grant funding.

Each component project plays a unique role in growing and sustaining the mass timber cluster. Future ongoing activities at T2 will be key to successfully advancing industrialized building techniques using mass timber. As detailed in the ten grant submittals, actions that will sustain the cluster after the buildings are operationalized and initial training programs are launched include: sustaining a pipeline of business for the factory; creating a robust quality management system and culture; utilizing and creating new technologies; and sustaining a competent and diverse workforce. Partnerships are central to these action items, including building on OMTC's consortium of manufacturing, construction, and development partners, specifically related to both affordable and market rate housing.

State university researchers have been highly successful at securing grants for research on mass timber. TDI receives an annual \$1M appropriation from the USDA's Agricultural Research Service which is allocated to researchers through a competitive call for proposals which are ranked by a group of industry professionals. OSU and UO researchers have also

secured significant research funding from USDA's Wood Innovations program (\$2.75 million since 2016). Through the University Investments in Research Fund, Business Oregon has approved \$5.925M in federal matching grants for the TDI BBBRC grant projects, acknowledging their significant economic development potential.

Through TDI, UO and OSU have established research and teaching collaborations that will be expanded with the OFTF and OARL facilities, specifically sparking innovation in mass-timber building design and product development. Graduate and doctoral students in UO Architecture, OSU Structural and Architectural Engineering, and OSU Wood Science and Engineering will engage in research and technology transfer activities on mass-timber product performance, including fire testing, and building acoustics. TDI's industry consortium, REACTS, will identify additional mass timber-related research needs and fund that work with membership dues, further enabling faculty teams to continue to channel applied R&D efforts toward economic opportunity

Engagement for Success

The OMTC and its member institutions place a high value on engaging community-based organizations. From a planned investment in culturally-specific non-profits to advise on changes to



local development codes in wildfire-affected areas, to partnerships with Tribes for forest restoration work in both Oregon and Washington, and formalized cooperative agreements with trades, labor unions, and pre-apprenticeship programs that will be deeply imbedded in the envisioned T2 campus, the many existing and planned engagements and partnerships will be essential to the success of the overall project.

Coalition members will take specific procurement steps during implementation to ensure that community-based organizations receive grant and contract funds that compensate them for their expertise and the value of the underlying relationships they hold with community members. Community-based organizations such as <u>Unite Oregon</u>, with 20 years of local organizing and capacity building success and a longstanding partner through involvement on state housing and climate advisory committees, will extend the reach of BBBRC-funded projects to low income and communities of color. Disproportionately affected by the wildfires, these community members are under-represented in formal planning and rebuilding efforts. Multicultural engagement in the formal retraining and rebuilding process will allow diverse community members increased access to training and employment in the reforestation and construction trades. When contracting with private industry, Coalition institutions will ensure work scopes include consultation with CBOs, Tribes, and potentially impacted residents and neighborhoods.

The Port has already begun to engage with the trade unions and labor organizations with which it has long-standing positive relationships, preparing for the substantial construction activity that will occur at T2. The existing strong labor standards employed by the Port will carry forward into these projects, and wages arising from the construction will exceed market. Organized labor as well as various CTE educational institutions, pre-apprenticeship providers, and community organizations will naturally also have a strong hand in shaping the Regional Training Cluster programming at the Workforce Training Center. These groups have signed a joint letter in support of the proposed projects. TDI has been engaged in regular discussions on coordinated training curricula for the last 3 years, including offering up the Emmerson Lab as a training site for union carpenters. Apprentices from the United Brotherhood of Carpenters worked with the general contractor Fortis on the construction of a three-

story experimental mass timber building inside OSU's Emmerson Lab, which is currently undergoing months-long seismic testing. TDI and OMTC will continue to coordinate with WorkSystems Inc. and Portland and Chemeketa Community Colleges on training needs to strengthen course offerings at the Workforce Training Center. Oregon government institutions enjoy positive relationships with organized labor, and each of the Coalition members are well equipped to implement local hire provisions and, as relevant, community benefit agreements connected to the expenditure of significant federal funds.

Far-reaching and Equitable Shared Benefits

Oregon's inequities are well-documented. Without question, the combined effects of the pandemic and wildfires worsened income, health, and other disparities. Wildfires in late 2020 devastated several rural Oregon counties, destroying 4,300 homes, almost half of which were manufactured homes where low-income families and seniors previously lived. In Jackson County, which suffered the worst

Over the next 20 years, Oregon will need about 584,000 total new homes, nearly one quarter of those immediately.

Housing and real estate costs are rising much faster than wages, and fully 45.5% of Oregonians are rent burdened, spending 30% or more of their gross income on shelter.

Oregon's BIPOC residents are disproportionately affected and suffer depressed rates of homeownership, prevalence of rent burden, poor housing quality, long commutes, and poor health outcomes.

<u>Building on New Ground: Meeting</u> <u>Oregon's Housing Need, February 2021</u>



devastation, those mobile home parks housed concentrations of Latino farmworker families – groups that did not seek and were largely ineligible for FEMA assistance and thus remain precariously housed.

The members of the Coalition have committed to investing in change that begins to reverse past harms and current inequities. While each organization within the Coalition has made good progress in recent years acknowledging such inequities, the institutional cultural change process is continuous. The opportunity for lasting systemic change with a BBBRC award, and the accountability mechanisms, align with OMTC's path towards advancing racial, environmental, and economic justice. The fundamental approach to equity will be accomplished on the foundation of **four equity pillars**.

1	EQUITABLE ACCESS	 Communications outreach / promoting diversity, equity, and inclusion: Share information widely to both urban and rural communities Connect with culturally specific organizations Translation of communications Contract with messengers and community leaders to be trusted ambassadors Open dialogue early and engage underserved community voices
2	SUPPORT CAPACITY Workforce & Housing	 Provide learning and information sharing opportunities for prospective pre-apprentice programming throughout project Provide well-paying jobs with benefits Support announcements and communications with culturally specific as well as community-based organizations who have a mission to reach underserved Support private businesses in their Corporate Social Responsibility and Environmental Social Governance efforts to create a culture of belonging and affect retention of underserved workforce prospects; embed equity outcomes in contracts of all participants Share knowledge with the coalition and partners of effective protocols, and practices and provide a feedback loop to continue learning and grow capacity Facilitate transport and installation of modular housing construction; reduced time for construction (locally built enables multigenerational housing possibilities and is a catalyst for homeownership and wealth mobility for families)
3	ECONOMIC OPPORTUNITY	 Provide technical assistance through culturally specific and community-based organizations and consultants Mitigate barriers to startups, particularly for rural communities and particularly those impacted by the 2020 fires and exacerbated by the pandemic Enable opportunity for direct and indirect contracts with equity goals Embed community benefits agreements or clauses to position businesses to support the local businesses through match-making possibilities with existing companies and removing barriers to business formation, capital, and development Encourage partnering and collaboration.
4	MEASURABLE OUTCOMES	 Capture data to inform qualitative and quantitative outcomes Document means and methods of outreach, share data and embed a learning cycle at different milestones with a data review Deliver a sustainable product in construction and create a leading economy with mass timber modular homes Support energy efficiency, healthy construction materials, and lower environmental impacts by reducing carbon footprint from material source to fabrication to installation Build resilience by preparing for economic threats through cooperation, collaboration, and innovation and enabling social and physical adaptations through equity-driven policy-making and investments.



Expected Outcomes and Synergistic Programs

At the core of this initiative is the goal to significantly grow the mass timber cluster to generate timber and manufacturing jobs in an industry that has been declining, and to bring affordable high-quality housing to rural and economically depressed areas. Central to this effort will be the Mass Timber Innovation Hub, dedicated to advancing the mass timber industry through public outreach, research and development, workforce training, manufacturing, and modular housing. Research and technical testing will support the increased utilization of mass timber assemblies in low-, mid-, and high-rise commercial buildings and multi-family housing stock. This research and prototyping of components for new and existing (retrofit) homes will lead to improved community resilience and provide enhanced opportunities for rural economies. The utilization rate for mass timber is expected to increase rapidly due to current market demand and well-documented commercial testing backlogs. Activities at the Workforce Training Center and programs via the Regional Training Cluster will supply skilled technicians, builders, and siting specialists for manufacturing and home building in the Pacific Northwest. Local development and building codes will be updated, clearing barriers to permitting and delivery of housing. The expected estimated cumulative impacts of the project are shown in the table.

METRIC: Increased Jobs <i>(5 yr Estimate)</i>		
Description	Modular Housing - By end of the project the modular industry and other new market entrants will have learned	
	from the Coalition's outreach, been inspired by the business opportunity now evident in modular MT affordable housing, and taken advantage of open source panelized housing designs and MT retrofit plans developed by UO.	
Outcomes	Number of jobs created at T2 Mass Timber Hub	
	• 522 (2.61 multiplier)	
	Number of jobs created at other mass timber Manufactures in OR	
	• 522 (2.61 multiplier)	
Description	Harvesting, Transportation and Primary Processing - Growth is driven by increased availability of restoration	
	fiber, economically viable harvesting/processing locations are identified by fiber mapping work, (fiber for mass timber markets, as well as for traditional lumber and other wood products); harvest and sale of up to 106 million	
	board feet of small diameter timber	
Outcomes	• 1017 (including multiplier)	
Description	Other Mass Timber Manufacturing Sector - Growth due to skilled workforce availability; modular housing creates	
	increased demand and brings increased investment capital to Oregon MT sector; increased testing capabilities	
	at universities remove permitting and product approval barriers, new product diversification possible due to approval of lesser-utilized species under PRG320	
Outcomes	• 431 <i>(2.33 multiplier)</i>	
Description	Jobs created for Component Projects (OARL, Fire testing Lab, Workforce Training Center)	
Outcomes	• 13	
TOTAL:	• 2,505 Jobs	
METRIC: Newly Entitled Residential Lots <i>(7 years)</i>		
	• 10,000	
METRIC: Cha	nge in Taxes on Production and Imports (TPI) <i>(Mass Timber Innovation Hub)</i>	
METDIC C	• \$2,851,197	
METRIC: Con	pletion of Categorical Exclusion analyses of 70-acres each	
	 6 Iementation of Good Neighbor Authority Timber sales 	
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Working Towards Success: Accomplishments and Refinements

Planning phase work is continuing apace, with Phase 1 projects anticipated to be complete by the end of 2022. Studies and planning related to the Mass Timber Innovation Hub are complete. Other work will continue throughout 2022, including the Code-UP project, with most of the work occurring in the first half of 2022. Notably, the OMTC continues to focus energies on building industry partnerships, planning laddered education and training pathways with educational institutions and workforce training organizations, and fostering community ties – in particular through organizations and entities representing underrepresented and disadvantaged populations. The following is a representational list of accomplishments to date:

- *Hired Consultant for RECO/Coalition support;*
- Completed draft OMTC agreements and governance documents;
- Conducted OMTC weekly strategy meetings, as well as multiple ad hoc meetings;
- Hired consultants to identify code barriers around Oregon for deployment of mass timber housing units;
- Identified communities to receive initial direct technical assistance on development code barriers;
- Completed the Mass Timber Factory programming and business plan;
- Developed the site plan and Preliminary Engineering Reports for the Mass Timber Innovation Hub, home to the Mass Timber Factory, Work Force Training Center, and OARL (acoustic testing lab);
- Developed facility plan and Preliminary Engineering Report for Oregon Fire Testing Facility
- Secured \$5M from the Oregon legislature, allocated for Hacienda Community Development Corporation and with a \$500K match from the Port of Portland, to develop mass timber prototypes in an existing warehouse at Port of Portland Terminal 2;
- Secured \$5.9M match commitment from Business Oregon for university R&D and facilities
- Planned and obtained wide support for comprehensive Smart Forestry initiative involving ten collaborating researchers, private sector and state and federal agencies
- Identified community partners to help monitor the impact of Smart Forestry and ensure equitable access to benefits of the project.
- In addition to the EDA proposal at T2, met with a mass timber systems company interested in locating at Terminal 2;
- Conduced a site visit to <u>Forterra</u>, a Washington State based non-profit, to learn about their Timber Innovation Center, exchange ideas on mass timber housing manufacturing and workforce training and identify opportunities for collaboration;
- Developed a survey to identify specific workforce training needs with key industry partners;
- *Hired a communications consultant to help with public outreach, including development of logo and website;*
- UO worked on energy modeling and continued workforce housing project in Milwaukie, OR with HomeWork;
- Completed acoustic data testing on the T2 site, determining it suitable for the acoustic lab;
- Strengthened the alignment of OMTC mission and project goals with Future Ready Oregon initiatives and Oregon's <u>Racial Justice Council</u> through the hired consultant team;
- Continued collaboration with Oregon's Economic Development Districts to align OMTC's work with CEDS priorities around workforce housing and job creation; and



- Outreach and engagement
 - with multiple elected officials, public agency staff, business associations and businesses, including outreach to BIPOC Chambers of Commerce and <u>Black Oregon Land Trust</u> regarding potential partnership opportunities related to mass timber;
 - to community colleges, trade unions and other workforce training providers to identify existing programs, needs, and strategies to develop new curricula, as well as secure commitment related to the Workforce Training Center and workforce training in the forests;
 - with USDA Forest Service and Willamette National Forest on state/federal partnership to implement large forest resilience/wood supply project;
 - USDA Rural Development on workforce development, businesses development and access to capital programs that align with Coalition strategies;
 - with Oregon Governor's Office regarding alignment on the state's workforce strategy, <u>Future</u> <u>Ready Oregon;</u>
 - with mass timber industry stakeholders on technical testing and applied R&D needs.

Changes to the Vision and Phase 1 Concept Proposal

To accomplish objectives for growing the mass timber cluster, the OMTC identified the need to highlight programmatic training needs as a new component project, the proposed Regional Training Cluster (Project 3). Another refinement relates to TDI Research and Development, which was described as a combined project in Phase 1. To accommodate needed detail and to clarify funding sources and needs, this work is now included in Phase 2 as Mass Timber Modular Housing Systems - Prototyping & Testing (Component Project 6) and Mass Timber Prefabricated Panels for Affordable Housing Prototype Development (Component Project 9).

Commitments to these projects has grown through Phase 1 outreach and activities, as evidenced by the many letters submitted with this grant request. Notably, OMTC's mass timber cluster initiative has a formidable partner in Forterra, with its EDA grant-supported work on the PNW Mass Timber Training Center (Center). Forterra has provided advice and expertise on factory needs, evolving the approach to equipping and planning the T2 Mass Timber Innovation Hub. Training is an important key to success; the curriculum for the Center has already been developed, with training programs already underway in temporary spaces in Washington's Snohomish County and in the future at the Darrington Wood Innovation Center (construction complete in 2023). The plan is to bring these programs to T2's Workforce Training Center, creating a seamless handoff of upskilling across the region.

The most significant lessons learned through Phase 1 outreach and activities is that the OMTC needs a culturally-specific member to achieve racial equity goals and meaningful participation from underserved communities. The project is anticipated to be a powerful catalyst to bringing equitable outcomes in workforce training, jobs, small business development, and housing for depressed communities. The OMTC acknowledges that a major milestone for the Coalition is to select a community partner that can ensure our underserved communities are represented, included in decision making as partners, and help to change policy to create an inclusive and equitable economy. Advancing equity requires that the voices of those for whom sharing prosperity and economic gains is most important have a seat at decision-making tables, are deeply imbedded in planning and implementation, and provide guidance about metrics and outcomes.