GLOSSARY

Introducing the Mass Timber Terminology Glossary.

Consistent with the educational focus of the International Mass Timber Report and recognizing that not all readers are mass timber experts (yet), we think that it is important to identify and define the many unusual terms that are used in this report and that can also be useful in understanding the mass timber movement. For each term included, we offer a short definition and a note as to the chapters of the report where you will find more detail. In future iterations, we are considering offering a complete index of all locations within the report where each term is referenced.

While we hope that you find this Glossary informative and helpful, it does have some limitations. First, this is our initial effort, and we anticipate it growing over time. We focused on specific terminology used in the report and are sharing our understanding of the terms as they are used here. There may very well be other, more accurate or comprehensive definitions of these terms out there, and we have no argument with that.

Second, this is not (yet) presented as a complete list of all the important terminology as it pertains to mass timber. We had to deal with limitations of time and the allocation of space and chose to address what we feel are the most important terms used in this report. Going forward, we invite your input on what additional terms should be added and how the definitions we offer might be expanded. Please share your feedback at masstimberreport.com.

Thank you for your continued support of the International Mass Timber Conference and the International Mass Timber Report. We hope you find this new tool useful and look forward to its continued development—with your help.

actual lumber size — actual sizes for lumber. For example, a 2-by-4's actual thickness is 1.5 inches and actual width is 4 inches. Refer to chapters 1 and 3 for more details.

bio-based — term describing materials primarily derived from living matter that have grown via photosynthesis. Refer to chapters 5, 9, and the essay "Urban Carbon Sinks" for more details.

biogenic carbon — nonfossil carbon that is part of the carbon cycle from the atmosphere to plants and back. Refer to chapter 9 for more details.

biophilia/biophilic — the innate human love for natural forms. Refer to chapters 7 and 8, and the essay "Urban Carbon Sinks," for more details.

biophilic design — a concept used within the building industry to increase occupant connectivity to the natural environment through the use of direct nature, indirect nature, and space and place conditions. Refer to chapters 1, 7, and 8 for more details.

board foot — common unit of measurement for lumber; 1 board foot equals 1 inch thick by 12 inches wide by 12 inches long. Refer to chapter 1 for more details.

carbon footprint — an informal term used to describe the net greenhouse gas emissions associated with an entity or event (a building, a trip, etc.) over a given time period. Refer to chapters 5, 9, and 10, and the essay "Urban Carbon Sinks," for more details.

carbon sinks or sequestration — the natural or artificial absorption and storage of carbon for a period of time. Refer to chapter 9 and the essay "Urban Carbon Sinks" for more details.

carbon storage — the carbon stored in wood as it's used in a building. Refer to chapter 9 and the essay "Urban Carbon Sinks" for more details.

carbon substitution — the carbon avoided by using a product with a lower embodied carbon content instead of a more carbon-intensive product. Refer to chapter 9 for more details.

circular economy — a system where a waste material from one process or product is a viable nutrient for another, natural or industrial. Refer to chapters 8 and 9, and the essay "Urban Carbon Sinks," for more details.

Computer Numerical Control (CNC) — a digital process that translates component designs directly into automated instructions for manufacturing equipment. Refer to chapters 4, 6, and 10 for more details.

cubic foot — common unit of measurement for mass timber product volume. Refer to chapter 1 for more details.

cubic meter — common unit of measurement for mass timber product volume. Refer to chapter 1 for more details.

cunit — a method of log measurement; 1 cunit equals 100 cubic feet of log volume. Refer to chapter 1 for more details.

decarbonization — the process of reducing net carbon dioxide emissions created by a process or product. Refer to chapters 8 and 9 for more details.

Design for Disassembly (DfD) — a method employed during the design of a building to improve the salvage potential of the building's materials at the end of the building's life. Refer to chapter 8 for more details.

Design for Manufacture and Assembly (DfMA) — a method employed during the design of a building to improve the efficiency of manufacturing the building components in a factory, and in turn, assembling those components on-site. Refer to chapter 10 for more details.

design-phase forward planning — creating a building by putting more resources (time, money, collaboration) into the planning and design process (the lowest-risk time of the project) to minimize changes during construction (the highest-risk time of the project). Refer to chapters 5, 6, and 8 for more details.

dimension lumber — the standard predimensioned wood used in wood-frame construction, including walls, floors, and roofs. One and a half inches thick and of various lengths and widths, it is the structural softwood lumber used in most wood-based housing construction in North America. Refer to chapters 1, 3, and 10 for more details.

dimensional stability — in reference to mass timber structural elements, the ability to resist dimensional changes due to changing moisture content. Refer to chapters 1, 5, and 6 for more details.

embedded carbon — the carbon stored in a product or building. Refer to chapters 5, 6, 8, and 9 for more details.

embodied energy/carbon — the greenhouse gas emissions from upstream stages of a product's life, such as extraction, production, transport, and construction. Refer to chapters 5, 6, 8, and 9 for more details.

encapsulation — a complete, undisrupted barrier between a building component and an integral threat, such as fire or water. Refer to chapters 5 and 8 for more details.

end-of-life value — the potential of an asset to retain value or become a liability at the time it is no longer useful in its current form. Refer to chapters 8 and 9 for more details.

Engineered Wood Products (EWP) — a class of wood-based composites that can be used for fabrication of structural (load-bearing) elements in buildings. Refer to chapters 1, 4, 5, and 10 for more details.

forest certification — a process that assures the public that the benefits and functions of the forest, including clean air and water, wildlife and plant habitats, soil health, and recreation, are maintained or protected during management and harvest. Forest certification identifies land that is managed with a goal of sustainability. Refer to chapters 2 and 9 for more details.

forestland — forests that are less well-stocked with trees (i.e., tree cover accounts for only 5 percent to 10 percent of the area) and where timber harvesting is prohibited (wilderness, roadless, national park, etc.). Refer to chapter 2 for more details.

growth-to-drain — a ratio of the amount of wood fiber a given area of forest can grow annually to the amount that is removed annually from the combination of natural mortality (insect, disease, fire) and timber harvesting. Refer to chapter 2 for more details.

hygroscopic — able to absorb moisture from the environment. Refer to chapters 5 and 7 for more details.

International Building Code (IBC) — the International Building Code (IBC) establishes minimum requirements for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. Refer to chapters 1 and 5 for more details.

just-in-time delivery — materials delivered to a site immediately prior to installation to reduce or eliminate on-site materials storage and handling. Refer to chapters 6, 8, and 10 for more details.

kit-of-parts construction — a precision building component system designed to be assembled quickly on-site. Refer to chapters 5, 6, and 8 for more details.

lamination — piece of sawn lumber or structural composite lumber, including stress-rated boards, remanufactured lumber, or end-joined lumber, prepared and qualified for production of glulam or mass timber panels. Refer to chapter 10 for more details.

lamstock — a special grade of lumber manufactured for use in glulam beams that has been selected for minimal defects and high strength/stiffness and that is dried to a lower moisture content.

Life Cycle Analysis (LCA) — the methodology for assessing the environmental impacts of making a product. Refer to chapters 5, 8, and 9 for more details.

light frame construction — a type of building construction that uses dimension lumber and engineered wood that is regularly spaced and fastened together with nails to create floor, wall, stair, and roof assemblies. As they are fastened together, the wood components form the structure of a building, much like a skeleton. Refer to chapters 3 and 10 for more details.

microbiome — the collective of a group of microorganisms in any given place, for example, on the surface of a material or in the air of a space. Refer to chapters 5, 7, and 8 for more details.

modular construction/design/modularity — the design and construction of large, complex, multitrade building components that maximize prefabrication techniques. Refer to chapters 5, 6, 8, and 10 for more details.

moisture content — amount of water contained in a sample of a material expressed as a mass fraction of either oven-dry mass of the material (oven-dry base) or the mass of the material with water (green-base). Refer to chapters 5 and 10 for more details.

multifamily — a classification of housing where multiple separate housing units for residential inhabitants are contained within one building. Refer to chapter 3 for more details.

multitrade components — components that arrive on-site with preassembled materials or systems that would require multiple specialized skills or subcontractors to assemble on-site. Refer to chapters 5 and 6 for more details.

nominal lumber size — lumber's size in name only. For example, a 2-by-4 is not really 2 inches thick by 4 inches wide. Refer to chapters 1 and 3 for more details.

nonresidential — any commercial, industrial, institutional, public, or other building not occupied as a dwelling, including hotels and motels. Refer to chapter 3 for more details.

off-site construction/prefabrication — the fabrication of building components at a location other than the construction site, usually with more controlled installation conditions and not contingent on the sequencing of other trades. Refer to chapters 5, 6, 8, and 10 for more details.

panelized construction — large, planar building components, sometimes multitrade. Refer to chapters 5, 6, 8, and 10 for more details.

renewable material — material made of resources that can be replenished at a pace equal to or greater than the pace of harvesting. Refer to chapters 5 and 9, and the essay "Urban Carbon Sinks" for more details.

resilience/resiliency — a building's ability to recover from a disaster such as an earthquake, fire, hurricane, or flood; uncompromised recovery, retrofit, or repair after a disaster. Refer to chapters 6, 7, 8, and 9, and the essay "Urban Carbon Sinks," for more details.

tall timber/tall wood buildings/high-rise construction — a structure over 6 stories (the top occupied floor is more than 75 feet above the fire department access point). Refer to chapters 5, 6, 8, and 10 for more details.

timberland — forests that are well-stocked with trees and capable of producing at least 20 cubic feet of wood fiber per acre per year, and where timber harvest is not restricted. Refer to chapter 2 for more details.

volumetric modular — three-dimensional building components large enough to inhabit. The size of volumetric modular building components is dictated by transportation limitations. Refer to chapters 5 and 6 for more details.

Whole Building LCA (WBLCA) — the methodology for assessing the environmental impacts of constructing a building. Refer to chapters 8 and 9 for more details.