
Standard Specification for Wood Products

AASHTO Designation: M 168-07 (2024)

Technically Revised: 2007

Reviewed but Not Updated: 2024

Technical Subcommittee: 4e, Joints and Bearings



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
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1. SCOPE

- 1.1. This specification provides a compilation of specifications covering commercial grades and species of lumber and other wood products for highway construction as indicated below. More detailed requirements will be found in the various specifications cited for specific products:
 - 1.1.1. Lumber,
 - 1.1.2. Structural glued laminated timber,
 - 1.1.3. Piling,
 - 1.1.4. Posts, and
 - 1.1.5. Structural composite lumber.
- 1.2. The values stated in SI units are to be regarded as the standard.

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards and Publications:*
 - M 133, Preservatives and Pressure Treatment Processes for Timber
 - *AASHTO LRFD Bridge Design Specifications*
 - *Standard Specifications for Highway Bridges*, Division I
- 2.2. *ASTM Standards:*
 - D9, Standard Terminology Relating to Wood and Wood-Based Products
 - D25, Standard Specification for Round Timber Piles
 - D245, Standard Practice for Establishing Structural Grades and Related Allowable Properties for Visually Graded Lumber
 - D1165, Standard Nomenclature of Commercial Hardwoods and Softwoods
 - D1990, Standard Practice for Establishing Allowable Properties for Visually-Graded Dimension Lumber from In-Grade Tests of Full-Size Specimens
 - D2555, Standard Practice for Establishing Clear Wood Strength Values
 - D3737, Standard Practice for Establishing Allowable Properties for Structural Glued Laminated Timber (Glulam)
 - D5456, Standard Specification for Evaluation of Structural Composite Lumber Products

- D6570, Standard Practice for Assigning Allowable Properties for Mechanically Graded Lumber
- 2.3. *AASHTO, American Road and Transportation Builders Association (ARTBA), The Associated General Contractors of America (AGC) Publication:*
 - *A Guide to Standardized Highway Barrier Hardware*
- 2.4. *National Institute of Standards and Technology (NIST) Standard:*
 - Voluntary Product Standard PS 20, American Softwood Lumber Standard
- 2.5. *Joint ANSI/AITC Standard:*
 - ANSI/AITC A 190.1, Structural Glued Laminated Timber

3. TERMINOLOGY

- 3.1. *board*—lumber that is less than 38 mm standard (2 in. nominal) thickness and greater than 38 mm standard (2 in. nominal) width. Boards less than 140 mm standard (6 in. nominal) width are sometimes called strips.
- 3.2. *dimension*—lumber with a thickness from 38 mm standard (2 in. nominal) up to but not including 114 mm standard (5 in. nominal) and a width of greater than 38 mm standard (2 in. nominal).
- 3.3. *dressed lumber*—lumber that has been planed (surfaced).
- 3.4. *factory and shop lumber*—lumber intended to be cut up for use in further manufacture. It is graded on the percentage of the area that will produce a limited number of cuttings of a specified minimum size and quality.
- 3.5. *grading rules-writing agency*—organizations that write and publish grading rules for lumber based on NIST PS 20 guidelines and that are accredited by the American Lumber Standards Committee Board of Review or a nationally recognized equivalent system.
- 3.6. *hardwood*—generally, one of the commercial species groups or one of the botanical groups of trees that have vessels or pores and broad leaves, in contrast to the conifers or softwoods. The term has no reference to actual hardness of the wood.
- 3.7. *heartwood*—the wood extending from the pith to the sapwood, the cells of which no longer participate in the life process of the tree. Heartwood may contain phenolic compounds, gums, resins, and other materials that usually make it darker and more decay resistant than sapwood.
- 3.8. *lumber*—the product of the saw and planing mill for which manufacturing is limited to sawing, resawing, passing lengthwise through a standard planing machine, crosscutting to length, and matching. Lumber may be made from either softwood or hardwood.
- 3.9. *lumber grade*—quality designation of lumber established in accordance with established grading rules developed and adopted by grading rules-writing agencies, which is certified by either the American Lumber Standards Committee Board of Review or a nationally recognized equivalent system.
- 3.10. *nominal size*—as applied to timber or lumber, the size by which it is known and sold in the market (often differs from actual size).
- 3.11. *rough lumber*—lumber that has not been dressed (surfaced) but has been sawed, edged, and trimmed.