



Designation: D5055 – 24

Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists¹

This standard is issued under the fixed designation D5055; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 *General*—This specification gives procedures for establishing, monitoring, and reevaluating structural capacities of prefabricated wood I-joists. Capacities considered are shear, reaction, moment, and stiffness. Procedures for establishing common details are given and certain design considerations specific to wood I-joists are itemized.

1.2 *Contents of the Standard*—An index and brief description of the main features of this specification are given in [X2.1.1](#).

1.3 *Development of the Standard*—The development and intent of this specification is discussed in [Appendix X2](#).

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* A specific precautionary statement is given in [6.1.1.5](#).

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This specification is under the jurisdiction of ASTM Committee [D07](#) on Wood and is the direct responsibility of Subcommittee [D07.02](#) on Lumber and Engineered Wood Products.

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2. Referenced Documents

2.1 The documents referenced in this section shall be the latest version approved prior to this standard unless a particular version of the document is specified.

2.2 *ASTM Standards*:²

[D198](#) Test Methods of Static Tests of Lumber in Structural Sizes

[D245](#) Practice for Establishing Structural Grades and Related Allowable Properties for Visually Graded Lumber

[D1990](#) Practice for Establishing Allowable Properties for Visually-Graded Dimension Lumber from In-Grade Tests of Full-Size Specimens

[D2559](#) Specification for Adhesives for Bonded Structural Wood Products for Use Under Exterior Exposure Conditions

[D2915](#) Practice for Sampling and Data-Analysis for Structural Wood and Wood-Based Products

[D4761](#) Test Methods for Mechanical Properties of Lumber and Wood-Based Structural Materials

[D5456](#) Specification for Evaluation of Structural Composite Lumber Products

[D5457](#) Specification for Computing Reference Resistance of Wood-Based Materials and Structural Connections for Load and Resistance Factor Design

[D7247](#) Test Method for Evaluating the Shear Strength of Adhesive Bonds in Laminated Wood Products at Elevated Temperatures

[D7480](#) Guide for Evaluating the Attributes of a Forest Management Plan

[E4](#) Practices for Force Calibration and Verification of Testing Machines

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.