

# Technical Evaluation Report™

**TER 1105-02**

FastenMaster® TimberLOK® Fasteners to Provide Uplift & Lateral Resistance to  
Trusses & Rafters Attached to the Tops of Walls

**OMG®, Inc. DBA FastenMaster®**

**Product:**

**FastenMaster®  
TimberLOK® Heavy  
Duty Wood Screw**

Issue Date:

June 20, 2011

Revision Date:

February 20, 2023

Subject to Renewal:

April 1, 2024



Use the QR code to access the most recent version or a sealed  
copy of this Technical Evaluation Report (TER) at [drjcertification.org](http://drjcertification.org).



COMPANY  
INFORMATION:

---

OMG®, Inc. DBA FastenMaster®  
153 Bowles Rd  
Agawam, MA 01001-2908  
800-518-3569  
[mguthrie@omginc.com](mailto:mguthrie@omginc.com)  
[fastenmaster.com](http://fastenmaster.com)

---

---

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES  
SECTION: 06 00 90 - Wood and Plastic Fastenings

---

## 1 Product Evaluated<sup>1,2</sup>

- 1.1 FastenMaster® TimberLOK® Heavy Duty Wood Screw

## 2 Applicable Codes and Standards<sup>3</sup>

### 2.1 Codes

- 2.1.1 *IBC—15, 18, 21: International Building Code®*  
2.1.2 *IRC—15, 18, 21: International Residential Code®*

### 2.2 Standards and Referenced Documents

- 2.2.1 *ANSI/AWC NDS: National Design Specification (NDS) for Wood Construction*  
2.2.2 *ASTM A153: Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware*  
2.2.3 *ASTM A510: Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, and Alloy Steel*  
2.2.4 *ASTM D1761: Standard Test Methods for Mechanical Fasteners in Wood*  
2.2.5 *AWC TR 12: General Dowel Equations for Calculating Lateral Connection Values*

---

<sup>1</sup> For more information, visit [drjcertification.org](http://drjcertification.org) or call us at 608-310-6748.

<sup>2</sup> This TER is a code defined [research report](#) provided by an [approved source](#) (see [IBC Section 1703.4.2](#)) and an [approved agency](#) (see [IBC Section 1703.1](#)). Given that this TER is for new materials, as defined in [IBC Section 1702](#), for which there are no approved rules or standards, [IBC Section 1707.1](#) states that, "In the absence of approved rules or other approved standards, the building official shall accept duly authenticated reports (i.e. [research reports](#)) from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in [IBC Section 104.11](#)". A professional engineer is approved as an approved source when that professional engineer is properly licensed to transact engineering commerce.

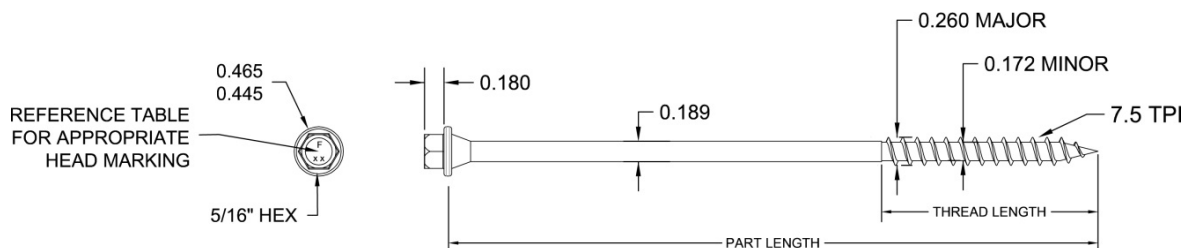
<sup>3</sup> Unless otherwise noted, all references in this TER are from the 2021 version of the codes and the standards referenced therein. This material, design, or method of construction also complies with the 2000-2018 versions of the referenced codes and the standards referenced therein.

### 3 Performance Evaluation

- 3.1 Testing and related engineering evaluations are defined as intellectual property and/or trade secrets.
- 3.2 TimberLOK® fasteners were evaluated, using their tested allowable design values, as an alternate means of attaching wood trusses and rafters to the tops of walls to provide uplift and lateral load resistance. The following conditions were evaluated:
  - 3.2.1 Withdrawal strength of TimberLOK® fasteners for use as an alternative to toe-nail connections, metal hurricane and seismic clips/straps, or nails in tension (uplift) loaded applications.
  - 3.2.2 Shear strength of TimberLOK® fasteners for use as an alternative to toe-nail connections, hurricane and seismic clips/straps, or nails in shear (lateral) loaded applications either parallel or perpendicular to wood grain.
  - 3.2.3 Head pull through strength of TimberLOK® fasteners for use as an alternative to toe-nail connections, hurricane and seismic clips/straps, or nails in tension (uplift) loaded applications.
- 3.3 Engineering evaluations are conducted with DrJ's ANAB accredited ICS code scope, which are also its areas of professional engineering competence.
- 3.4 Any regulation specific issues not addressed in this section are outside the scope of this TER.

### 4 Product Description and Materials

- 4.1 The product evaluated in this TER is shown in Figure 1.



**Figure 1. TimberLOK® Fastener**

- 4.2 TimberLOK® fasteners are manufactured from carbon steel wire conforming to ASTM A510 with a minimum ultimate tensile strength of 60 ksi.
- 4.3 TimberLOK® fasteners are manufactured using a standard cold-formed process followed by a heat-treating process.
- 4.4 Fasteners are approved for use in interior and exterior conditions and in pressure-treated wood.
  - 4.4.1 The proprietary coating has been tested and found to exceed the protection provided by code-approved hot-dipped galvanized coatings meeting ASTM A153 (IBC Section 2304.10.6<sup>4</sup> and IRC Section R317.3), which allows for its use in alkaline copper quaternary (ACQ) pressure-treated wood.
- 4.5 Fasteners are approved for use in fire-retardant-treated lumber, provided the conditions set forth by the fire retardant-treated lumber manufacturer are met, including appropriate strength reductions.
- 4.6 In-plant quality control procedures, under which the TimberLOK® fasteners are manufactured, are audited through an inspection process performed by an approved agency.

<sup>4</sup> 2018 IBC Section 2304.10.5

4.7 The fasteners evaluated in this report are designated in Table 1.

**Table 1:** Fastener Designation for Evaluated TimberLOK® Fasteners

Product Name	Fastener Designation <sup>1</sup>	Head Marking	Overall Length (in)	Thread Length (in)
TimberLOK® 4"	TLOK04	F4.0	4	2
TimberLOK® 6"	TLOK06	F6.0	6	2

SI: 1 in = 25.4 mm  
1. Fastener designations are found on the product packaging. Individual fasteners may be marked according to this table.

## 5 Applications

5.1 TimberLOK® fasteners are used to attach minimum 1½"-wide wood trusses, sawn lumber rafters, or structural composite lumber (SCL) rafters to wood walls that meet the requirements of [IBC Section 2308](#) or [IRC Section R602](#) for wood structural framing members. The fasteners provide resistance to uplift or lateral loads applied parallel and/or perpendicular to the wall or structural framing member.

5.1.1 Walls shall consist of either a single or double top plate designed in accordance with [IBC Section 2308.5.3.2](#) or [IRC Section R602.3.2](#).

5.1.2 See Table 2 for the design procedure and the TimberLOK® allowable design values.

5.1.3 See Section 6 for installation requirements.

5.1.4 TimberLOK® fasteners are used in buildings requiring wind analysis in accordance with [IRC Section R301.2.1](#) or design in accordance with [IBC Section 1609](#).

5.1.5 Use of TimberLOK® fasteners in buildings requiring seismic analysis in accordance with [IRC Section R301.2.2](#) is outside the scope of this TER.

### 5.2 Design Concepts and Allowable Design Loads

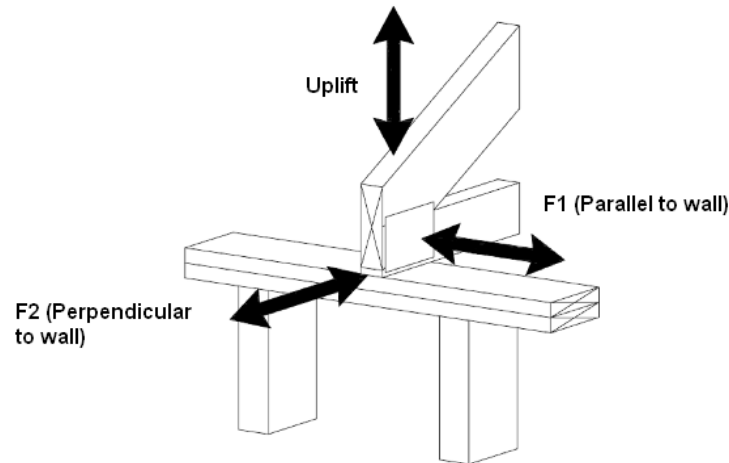
5.2.1 Allowable design loads for uplift and lateral resistance (parallel [F1] and perpendicular [F2] to the plane of the wall or structural member, see Figure 2) are provided in Table 2 for TimberLOK® fasteners. Allowable design loads are listed for selected load durations and specific gravities and are applicable to fasteners installed in accordance with the procedures described in Section 6. Table values are applicable for both single and double top plate applications, as shown in Figure 3.

**Table 2.** Allowable Loads for Uplift & Lateral Resistance for Selected Load Durations and Wood-Specific Gravities Using TimberLOK® Fasteners

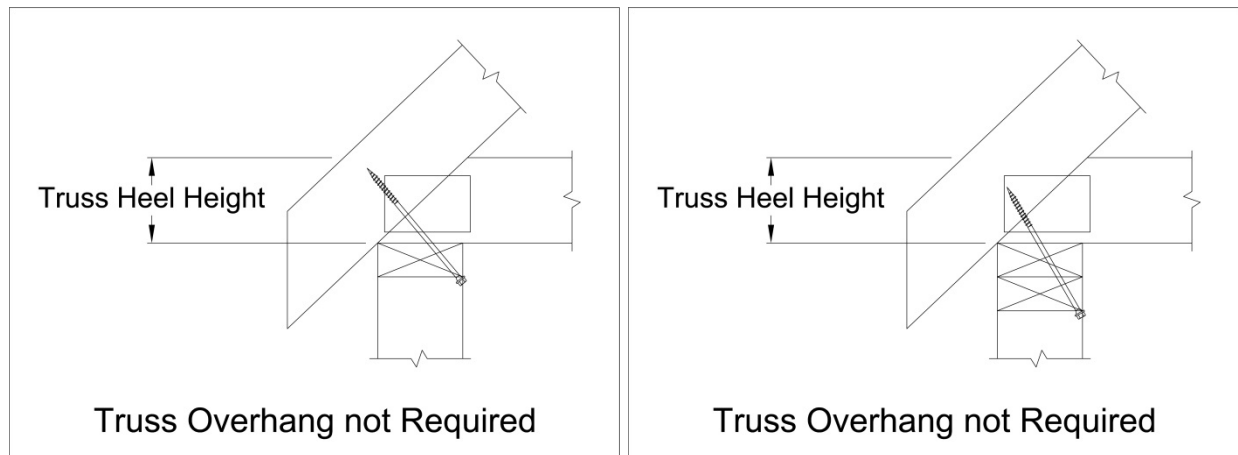
Fastener Designation	Minimum Penetration into Truss/Rafter/Wood Structural Support (in)	Species Group <sup>1,2,3</sup> (Specific Gravity)	Uplift <sup>4</sup> (lbf)			Lateral <sup>4</sup> (lbf)					
						F1 – Parallel to Wall			F2 – Perpendicular to Wall		
			1.0	1.33	1.60	1.0	1.33	1.60	1.0	1.33	1.60
TimberLOK® TLOK04 or TLOK06	2	So. Pine (0.55)	390	520	620	255	340	410	280	375	450
		Douglas Fir-Larch (0.50)	340	450	540	240	320	385	265	350	425
		Spruce-Pine-Fir/Hem-Fir (0.42)	260	350	420	210	280	340	230	305	370

SI: 1 in = 25.4 mm, 1 psi = 0.00689 MPa

- Wood truss and rafter members shall be a minimum of 2" nominal thickness. Design of truss and rafter members to be by others.
- Equivalent specific gravity of structural composite lumber (SCL) shall be equal to or greater than the specific gravities provided in this table. Refer to product information from SCL manufacturer.
- For applications involving members with different specific gravities, use the allowable load corresponding to the lowest specific gravity.
- Allowable uplift and lateral loads for applications in which the controlling load duration is two months (i.e., 115%) or seven days (i.e., 125%) may be obtained by multiplying the corresponding tabular value in the column marked "1.0" by 1.15 or 1.25, respectively.



**Figure 2:** Uplift & Lateral Load Orientations



**Figure 3.** Installation of TimberLOK® Fasteners on Walls with Single or Double Top Plates

- 5.2.2 Where it is anticipated that loads will be applied to a single fastener simultaneously in more than one direction, additional evaluation using accepted engineering practice is required to account for the combined effect of these loads.
- 5.2.3 Consult a professional engineer as needed for complex design conditions.
- 5.3 Where the application falls outside of the performance evaluation, conditions of use and/or installation requirements set forth herein, alternative techniques shall be permitted in accordance with accepted engineering practice and experience. This includes but is not limited to the following areas of engineering: mechanics or materials, structural, building science and fire science.

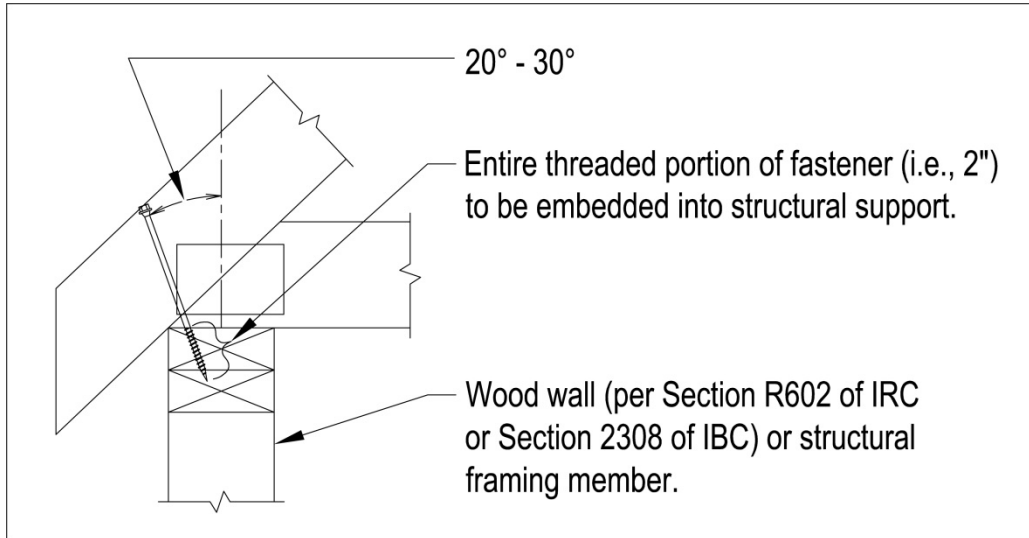
## 6 Installation

- 6.1 Installation shall comply with the approved construction documents, the manufacturer installation instructions, this TER, and the applicable building code.
- 6.2 In the event of a conflict between the manufacturer installation instructions and this TER, the more restrictive shall govern.

### 6.3 Installation Where Double Wall Top Plates are Used

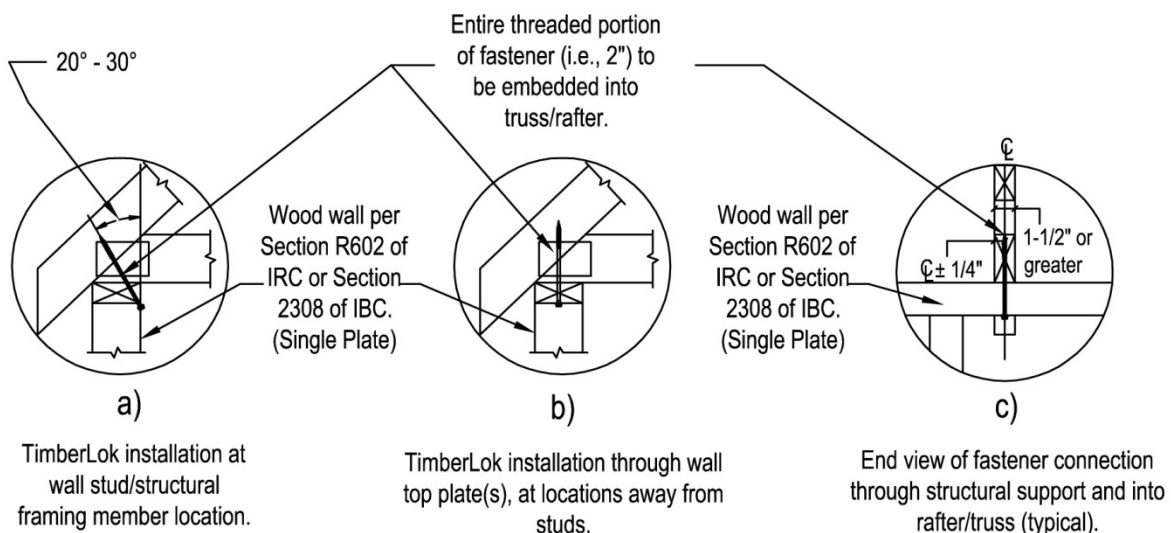
#### 6.3.1 Upward from below truss or rafter.

- 6.3.1.1 Select a TimberLOK® fastener with a length sufficient to fully embed the 2" threaded portion of the fastener into the truss or rafter. See Figure 4 for guidance.



**Figure 4.** Fastener Orientation Requirements for Attaching Wood Trusses, Rafters, or SCL from Above to the Top of a Wood Wall or Structural Framing Member

- 6.3.1.2 Install one (1) TimberLOK® fastener upward through the wall top plate(s) or wood structural framing member and into the center of the truss, rafter, or SCL, as shown in Figure 5.



**Figure 5.** Fastener Orientation Requirements for Attaching Wood Trusses, Rafters, or SCL from Below to the Top of a Wood Wall or Structural Framing Member

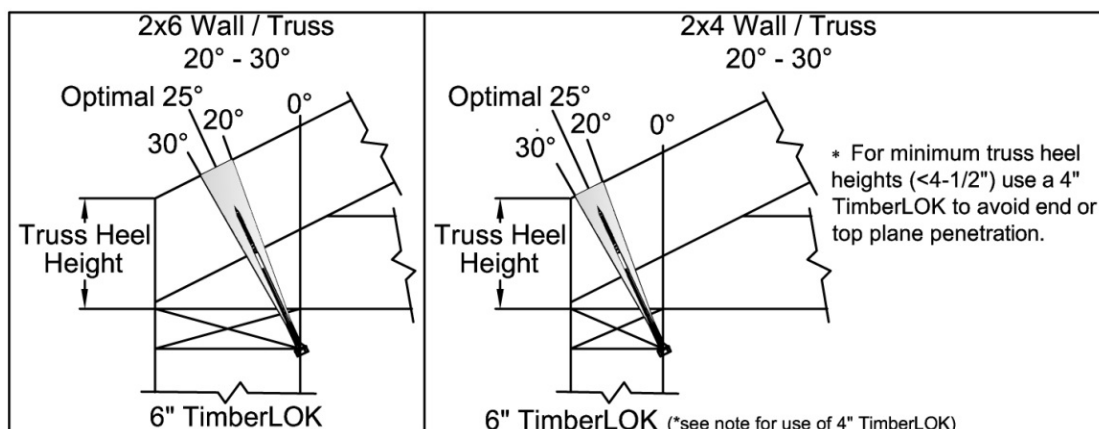
- 6.3.1.2.1 If the truss, rafter, or SCL is located directly over a wall stud, insert the fastener at the joint between the inside top edge of the stud and the inside bottom edge of the top plate at an upward angle from vertical of 20° to 30°, as shown in Figure 5.
- 6.3.1.2.2 If the truss, rafter, or SCL is located between the wall studs (double top plate application only), insert the fastener near the middle of the bottom face of the top plate(s) straight upward into the truss, rafter, or SCL, as shown in Figure 5.
- 6.3.1.2.3 If the truss, rafter, or SCL is located on top of a wood beam or header, insert the fastener approximately 3" below the top edge of the beam or header at an upward angle from vertical of 20° to 30°, as shown in Figure 5.
- 6.3.1.3 Locate the fastener in line with the truss, rafter, or SCL above so that it penetrates within  $\pm 1/4$ " of the centerline of the narrow edge of the truss, rafter, or SCL, as shown in Figure 5.
- 6.3.1.4 Use a 1/2" low RPM/high torque drill to drive the fastener head flush with the surface of the wall framing or wood structural framing member.

#### 6.3.2 Downward From on Top of the Truss, Rafter, or SCL

- 6.3.2.1 Select a TimberLOK® fastener with a length sufficient to fully embed the 2" threaded portion of the fastener into the wall top plates or wood structural framing member.
- 6.3.2.2 Install one (1) TimberLOK® fastener at a downward angle from vertical of 20° to 30° through the center of the truss, rafter, or SCL and into the wall top plate(s) or wood structural framing member, as shown in Figure 6.
- 6.3.2.3 Locate the fastener so that it penetrates within  $\pm 1/4$ " of the centerline of the narrow edge of the truss, rafter, or SCL and at or near the center of the wall top plate(s) or wood structural framing member.
- 6.3.2.4 Use a 1/2" low RPM/high torque drill to drive the fastener head flush with the surface of the wall framing or wood structural framing member.

#### 6.4 Installation Where Single Top Plates are Used

- 6.4.1 Select a TimberLOK® fastener with a length sufficient to fully embed the 2" threaded portion of the fastener into the truss, rafter, or SCL.
- 6.4.2 Where the truss, rafter, or SCL is located directly over a wall stud, insert the fastener at the joint between the inside top edge of the stud and the inside bottom edge of the top plate at an upward angle from vertical of 20° to 30°, as shown in Figure 6.



**Figure 6.** Installation of TimberLOK® Fasteners into a Single Top Plate

- 6.4.3 Ensure that the angle is sufficient to prevent the fastener from protruding out of the truss, rafter, or SCL.
- 6.4.4 Locate the fastener in line with the truss, rafter, or SCL above so that it penetrates within  $\pm 1/4$ " of the centerline of the narrow edge of the truss, rafter, or SCL.



- 6.4.5 Use a 1/2" low RPM/high torque drill to drive the fastener head flush with the surface of the wall framing or wood structural framing member.
- 6.4.6 Where the centerline of the truss, rafter, or SCL is not located directly over the stud, install the fastener vertically up through the top plate and into the truss, rafter, or SCL, as shown in Figure 5.

## 7 Substantiating Data

- 7.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:
  - 7.1.1 Edge and end distances verification testing in accordance with ASTM D1761.
- 7.2 TimberLOK® fasteners were evaluated for head pull through and withdrawal for uplift capacity.
- 7.3 TimberLOK® fasteners were evaluated for heavy duty wood screw performance when used as a truss hold-down.
- 7.4 TimberLOK® fasteners were evaluated for heavy duty wood screw performance when loaded laterally.
- 7.5 Information contained herein may include the result of testing and/or data analysis by sources that are approved agencies (i.e. ANAB accredited agencies), approved sources (i.e., registered design professionals [RDP]), and/or professional engineering regulations. Accuracy of external test data and resulting analysis is relied upon.
- 7.6 Where pertinent, DrJ's analysis is based upon provisions that have been codified into law through state or local adoption of codes and standards. The developers of these codes and standards are responsible for the reliability of published content. DrJ's engineering practice may use a code-adopted provision as the control sample. A control sample versus a test sample establishes a product as being equivalent to the code-adopted provision in terms of quality, strength, effectiveness, fire resistance, durability, and safety.
- 7.7 The accuracy of the provisions provided herein may be reliant upon the published properties of raw materials, which are defined by the grade mark, grade stamp, mill certificate, Listings, certified reports, duly authenticated reports from approved agencies, and research reports prepared by approved agencies and/or approved sources provided by the suppliers of any raw materials. These are presumed to be minimum properties and relied upon to be accurate. The reliability of DrJ's engineering practice, as contained in this TER, may be dependent upon published design properties by others.
- 7.8 Testing and engineering analysis: The strength, rigidity and/or general performance of component parts and/or the integrated structure are determined by suitable tests that simulate the actual conditions of application that occur and/or by accepted engineering practice and experience.<sup>5</sup>

## 8 Findings

- 8.1 As delineated in Section 3, the FastenMaster® TimberLOK® Heavy Duty Wood Screw has performance characteristics that were tested and/or meet pertinent standards and is suitable for use pursuant to its specified purpose.
- 8.2 When used and installed in accordance with this TER and the manufacturer installation instructions, FastenMaster® TimberLOK® Heavy Duty Wood Screw shall be approved for the following applications:
  - 8.2.1 Use as an acceptable alternative to toe-nail connections, metal hurricane and seismic clips/straps, or nails to resist the uplift and lateral loads as provided for in Table 2.
  - 8.2.2 Use as an acceptable alternative to provide resistance to uplift loads due to wind negative pressure applied from the truss above lifting up on the top plate of the wall, per Table 2.
  - 8.2.3 Use as an acceptable alternative to provide resistance to lateral loads due to wind pressure applied parallel or perpendicular to the wall, per Table 2.

<sup>5</sup> See Code of Federal Regulations (CFR) Title 24 Subtitle B Chapter XX Part 3280 for definition.



- 8.3 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from OMG®, Inc. DBA FastenMaster®.
- 8.4 IBC Section 104.11 (IRC Section R104.11 and IFC Section 104.10<sup>6</sup> are similar) in pertinent part states:

**104.11 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.

- 8.5 Approved:<sup>7</sup> Building codes require that the building official shall accept duly authenticated reports<sup>8</sup> or research reports<sup>9</sup> from approved agencies and/or approved sources (i.e., licensed RDP) with respect to the quality and manner of use of new products, materials, designs, services, assemblies or methods of construction.
- 8.5.1 Acceptability of an approved agency, by a building official, is performed by verifying that the agency is accredited by a recognized accreditation body of the International Accreditation Forum (IAF).
- 8.5.2 Acceptability of a licensed RDP, by a building official, is performed by verifying that the RDP and/or their business entity is listed by the licensing board of the relevant jurisdiction.
- 8.5.3 Federal law, Title 18 US Code Section 242, requires that where the alternative product, material, service, design, assembly and/or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved, as denial without written reason deprives a protected right to free and fair competition in the marketplace.
- 8.6 DrJ is an engineering company, employs RDPs and is an ISO/IEC 17065 ANAB-Accredited Product Certification Body – Accreditation #1131.
- 8.7 Through ANAB accreditation and the IAF Multilateral Agreements, this TER can be used to obtain product approval in any jurisdiction or country that has IAF MLA Members & Signatories to meet the Purpose of the MLA – “*certified once, accepted everywhere.*”

## 9 Conditions of Use

- 9.1 Material properties shall not fall outside the boundaries defined in Section 3.
- 9.2 As defined in Section 3, where material and/or engineering mechanics properties are created for load resisting design purposes, the resistance to the applied load shall not exceed the ability of the defined properties to resist those loads using the principles of accepted engineering practice.
- 9.3 The TimberLOK® fasteners covered in this TER shall be installed in accordance with this report and the manufacturer installation instructions.
- 9.4 For conditions not covered in this TER, connections shall be designed in accordance with accepted engineering practice.
- 9.5 Loads applied shall not exceed those recommended by the manufacturer or as defined in this TER.
- 9.6 Structural framing members (e.g., wood, masonry, concrete, steel, etc.) connected with TimberLOK® fasteners shall be designed in accordance with the requirements of their specific design standards/specifications as referenced in the building code adopted by the jurisdiction in which the project is to be constructed.

---

<sup>6</sup> 2018 IFC Section 104.9

<sup>7</sup> Approved is an adjective that modifies the noun after it. For example, Approved Agency means that the Agency is accepted officially as being suitable in a particular situation. This example conforms to IBC/IRC/IFC Section 201.4 where the building code authorizes sentences to have an ordinarily accepted meaning such as the context implies.

<sup>8</sup> <https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1707.1>

<sup>9</sup> <https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1703.4.2>



- 9.7 When required by regulation and enforced by the building official, also known as the authority having jurisdiction (AHJ) in which the project is to be constructed:
- 9.7.1 Any calculations, incorporated into the construction documents that are required to show compliance with this TER, shall conform to accepted engineering practice, and shall be approved when requirements of the pertinent regulations are met.
  - 9.7.2 This TER and the installation instructions shall be submitted at the time of permit application.
  - 9.7.3 This product has an internal quality control program and a third-party quality assurance program.
  - 9.7.4 At a minimum, this product shall be installed per Section 6 of this TER.
  - 9.7.5 The review of this TER, by the AHJ, shall be in compliance with IBC Section 104 and IBC Section 105.4.
  - 9.7.6 This product has an internal quality control program and a third party quality assurance program in accordance with IBC Section 104.4, IBC Section 110.4, IBC Section 1703, IRC Section R104.4 and IRC Section R109.2.
  - 9.7.7 The application of this product in the context of this TER is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by IBC Section 110.3, IRC Section R109.2 and any other regulatory requirements that may apply.
- 9.8 Design loads shall be determined in accordance with the building code adopted by the jurisdiction in which the project is to be constructed and/or by the building designer (e.g., owner or RDP).
- 9.9 The actual design, suitability, and use of this TER, for any particular building, is the responsibility of the owner or the owner's authorized agent.

## 10 Identification

- 10.1 The product listed in Section 1.1 is identified by a label on the board or packaging material bearing the manufacturer name, product name, TER number, and other information to confirm code compliance.
- 10.2 Additional technical information can be found at fastenmaster.com.

## 11 Review Schedule

- 11.1 This TER is subject to periodic review and revision. For the most recent version, visit drjcertification.org.
- 11.2 For information on the current status of this TER, contact DrJ Certification.

## 12 Approved for Use Pursuant to US and International Legislation Defined in Appendix A

- 12.1 FastenMaster® TimberLOK® Heavy Duty Wood Screw is included in this TER published by an approved agency that is concerned with evaluation of products or services, maintains periodic inspection of the production of listed materials or periodic evaluation of services, and whose TER Listing states either that the material, product, or service meets identified standards or has been tested and found suitable for a specified purpose. This TER meets the legislative intent and definition of being acceptable to the AHJ.

## 1 Appendix A: Legislation that Authorizes AHJ Approval

- 1.1 **Fair Competition:** State legislatures have adopted Federal regulations for the examination and approval of building code referenced and alternative products, materials, designs, services, assemblies and/or methods of construction that:
  - 1.1.1 Advance Innovation,
  - 1.1.2 Promote competition so all businesses have the opportunity to compete on price and quality in an open market on a level playing field unhampered by anticompetitive constraints, and
  - 1.1.3 Benefit consumers through lower prices, better quality, and greater choice.
- 1.2 **Adopted Legislation:** The following local, state, and federal regulations affirmatively authorize FastenMaster® TimberLOK® Heavy Duty Wood Screw to be approved by AHJs, delegates of building departments, and/or delegates of an agency of the federal government:
  - 1.2.1 Interstate commerce is governed by the Federal Department of Justice to encourage the use of innovative products, materials, designs, services, assemblies and/or methods of construction. The goal is to “protect economic freedom and opportunity by promoting free and fair competition in the marketplace.”
  - 1.2.2 Title 18 US Code Section 242 affirms and regulates the right of individuals and businesses to freely and fairly have new products, materials, designs, services, assemblies and/or methods of construction approved for use in commerce. Disapproval of alternatives shall be based upon non-conformance with respect to specific provisions of adopted legislation, and shall be provided in writing stating the reasons why the alternative was not approved, with reference to the specific legislation violated.
  - 1.2.3 The federal government and each state have a public records act. In addition, each state also has legislation that mimics the federal Defend Trade Secrets Act 2016 (DTSA).
    - 1.2.3.1 Compliance with public records and trade secret legislation requires approval through the use of listings, certified reports, Technical Evaluation Reports, duly authenticated reports and/or research reports prepared by approved agencies and/or approved sources.
  - 1.2.4 For new materials<sup>10</sup> that are not specifically provided for in any building code, the design strengths and permissible stresses shall be established by tests, where suitable load tests simulate the actual loads and conditions of application that occur.
  - 1.2.5 The design strengths and permissible stresses of any structural material shall conform to the specifications and methods of design using accepted engineering practice.<sup>11</sup>

<sup>10</sup> <https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706.2>

<sup>11</sup> [IBC 2021, Section 1706.1 Conformance to Standards](#)

- 1.3 **Approved<sup>12</sup> by Los Angeles:** The Los Angeles Municipal Code (LAMC) states in pertinent part that the provisions of LAMC are not intended to prevent the use of any material, device, or method of construction not specifically prescribed by LAMC. The Department shall use Part III, Recognized Standards in addition to Part II, Uniform Building Code Standards of Division 35, Article 1, Chapter IX of the LAMC in evaluation of products for approval where such standard exists for the product or the material and may use other approved standards, which apply. Whenever tests or certificates of any material or fabricated assembly are required by Chapter IX of the LAMC, such tests or certification shall be made by a testing agency approved by the Superintendent of Building to conduct such tests or provide such certifications. The testing agency shall publish the scope and limitation(s) of the listed material or fabricated assembly.<sup>13</sup> The Superintendent of Building roster of approved testing agencies is provided by the Los Angeles Department of Building and Safety (LADBS). The Center for Building Innovation (CBI) Certificate of Approval License is TA24945. Tests and certifications found in a CBI Listing are LAMC approved. In addition, the Superintendent of Building shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in the California Building Code (CBC) Section 1707.1.<sup>14</sup>
- 1.4 **Approved by Chicago:** The Municipal Code of Chicago (MCC) states in pertinent part that an Approved Agency is a Nationally Recognized Testing Laboratory (NRTL) acting within its recognized scope and/or a certification body accredited by the American National Standards Institute (ANSI) acting within its accredited scope. Construction materials and test procedures shall conform to the applicable standards listed in the MCC. Sufficient technical data shall be submitted to the building official to substantiate the proposed use of any product, material, service, design, assembly and/or method of construction not specifically provided for in the MCC. This technical data shall consist of research reports from approved sources (i.e., MCC defined Approved Agencies).
- 1.5 **Approved by New York City:** The NYC Building Code 2022 (NYCBC) states in pertinent part that an approved agency shall be deemed<sup>15</sup> an approved testing agency via ISO/IEC 17025 accreditation, an approved inspection agency via ISO/IEC 17020 accreditation, and an approved product evaluation agency via ISO/IEC 17065 accreditation. Accrediting agencies, other than federal agencies, must be members of an internationally recognized cooperation of laboratory and inspection accreditation bodies subject to a mutual recognition agreement<sup>16</sup> (i.e., ANAB, International Accreditation Forum (IAF), etc.).

<sup>12</sup> See section 8.3 for the distilled building code definition of Approved.

<sup>13</sup> Los Angeles Municipal Code, SEC. 98.0503. TESTING AGENCIES

<sup>14</sup> <https://up.codes/viewer/california/ca-building-code-2022/chapter/17/special-inspections-and-tests#1707.1>

<sup>15</sup> New York City, The Rules of the City of New York, § 101-07 Approved Agencies

<sup>16</sup> New York City, The Rules of the City of New York, § 101-07 Approved Agencies

- 1.6 **Approved by Florida:** Statewide approval of products, methods, or systems of construction shall be approved, without further evaluation, by 1) A certification mark or listing of an approved certification agency, 2) A test report from an approved testing laboratory, 3) A product evaluation report based upon testing or comparative or rational analysis, or a combination thereof, from an approved product evaluation entity; 4) A product evaluation report based upon testing or comparative or rational analysis, or a combination thereof, developed and signed and sealed by a professional engineer or architect, licensed in Florida. For local product approval, products or systems of construction shall demonstrate compliance with the structural wind load requirements of the Florida Building Code (FBC) through one of the following methods; 1) A certification mark, listing, or label from a commission-approved certification agency indicating that the product complies with the code; 2) A test report from a commission-approved testing laboratory indicating that the product tested complies with the code; 3) A product-evaluation report based upon testing, comparative or rational analysis, or a combination thereof, from a commission-approved product evaluation entity which indicates that the product evaluated complies with the code; 4) A product-evaluation report or certification based upon testing or comparative or rational analysis, or a combination thereof, developed and signed and sealed by a Florida professional engineer or Florida registered architect, which indicates that the product complies with the code; 5) A statewide product approval issued by the Florida Building Commission. The Florida Department of Business and Professional Regulation (DBPR) website provides a listing of companies certified as a Product Evaluation Agency (i.e., EVLMiami 13692), a Product Certification Agency (i.e., CER10642), and as a Florida Registered Engineer (i.e., ANE13741).
- 1.7 **Approved by Miami-Dade County (i.e., Notice of Acceptance [NOA]):** A Florida statewide approval is an NOA. An NOA is a Florida local product approval. By Florida law, Miami-Dade County shall accept the statewide and local Florida Product Approval as provided for in Florida legislation 553.842 and 553.8425.
- 1.8 **Approved by New Jersey:** Pursuant to Building Code 2018 of New Jersey in IBC Section 1707.1 General,<sup>17</sup> it states: "In the absence of approved rules or other approved standards, the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in the administrative provisions of the Uniform Construction Code (N.J.A.C. 5:23)".<sup>18</sup> Furthermore N.J.A.C 5:23-3.7 states: Municipal approvals of alternative materials, equipment, or methods of construction. **(a) Approvals:** Alternative materials, equipment, or methods of construction shall be approved by the appropriate subcode official provided the proposed design is satisfactory and that the materials, equipment, or methods of construction are suitable for the intended use and are at least the equivalent in quality, strength, effectiveness, fire resistance, durability and safety of those conforming with the requirements of the regulations. 1. A field evaluation label and report or letter issued by a nationally recognized testing laboratory verifying that the specific material, equipment, or method of construction meets the identified standards or has been tested and found to be suitable for the intended use, shall be accepted by the appropriate subcode official as meeting the requirements of (a) above. 2. Reports of engineering findings issued by nationally recognized evaluation service programs, such as, but not limited to, the Building Officials and Code Administrators (BOCA), the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), the International Code Council (ICC), and the National Evaluation Service, Inc., shall be accepted by the appropriate subcode official as meeting the requirements of (a) above. The New Jersey Department of Community Affairs has confirmed that technical evaluation reports, from any accredited entity listed by ANAB, meets the requirements of item 2 given that the listed entities are no longer in existence and/or do not provide "reports of engineering findings".

<sup>17</sup> [https://up.codes/viewer/new\\_jersey/ibc-2018/chapter/17/special-inspections-and-tests#1707.1](https://up.codes/viewer/new_jersey/ibc-2018/chapter/17/special-inspections-and-tests#1707.1)

<sup>18</sup> <https://www.nj.gov/dca/divisions/codes/codreg/ucc.html>

- 1.9 **Approved by the Code of Federal Regulations Manufactured Home Construction and Safety Standards:** Pursuant to Title 24, Subtitle B, Chapter XX, Part 3282.14<sup>19</sup> and Part 3280,<sup>20</sup> the Department encourages innovation and the use of new technology in manufactured homes. The design and construction of a manufactured home shall conform with the provisions of Part 3282 and Part 3280 where key approval provisions in mandatory language follow: 1) “All construction methods shall be in conformance with accepted engineering practices”; 2) “The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur.”; and 3) “The design stresses of all materials shall conform to accepted engineering practice.”
- 1.10 **Approved by US, Local, and State Jurisdictions in General:** In all other local and state jurisdictions, the regulations require approval per Section 8 above.
- 1.11 **Approved by International Jurisdictions:** The USMCA and GATT agreements provide for approval of innovative materials, products, designs, services, assemblies and/or methods of construction through the Technical Barriers to Trade agreements and the International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA), where these agreements:
- 1.11.1 Permit participation of conformity assessment bodies located in the territories of other Members (defined as GATT Countries) under conditions no less favourable than those accorded to bodies located within their territory or the territory of any other country.
  - 1.11.2 State that conformity assessment procedures (i.e., ISO/IEC 17020, 17025, 17065, etc.) are prepared, adopted, and applied so as to grant access for suppliers of like products originating in the territories of other Members under conditions no less favourable than those accorded to suppliers of like products of national origin or originating in any other country, in a comparable situation.
  - 1.11.3 State that conformity assessment procedures are not prepared, adopted, or applied with a view to or with the effect of creating unnecessary obstacles to international trade. This means that conformity assessment procedures shall not be more strict or be applied more strictly than is necessary to give the importing Member adequate confidence that products conform to the applicable technical regulations or standards.
  - 1.11.4 **Approved:** The purpose of the IAF MLA is to ensure mutual recognition of accredited certification and validation/verification statements between signatories to the MLA, and subsequently acceptance of accredited certification and validation/verification statements in many markets based on one accreditation for the timely approval of innovative materials, products, designs, services, assemblies and/or methods of construction. Accreditations granted by IAF MLA signatories are recognised worldwide based on their equivalent accreditation programs, therefore reducing costs and adding value to businesses and consumers.

<sup>19</sup> <https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14>

<sup>20</sup> <https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280>