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RESEARCH REPORT: RR25818
(CSI #06 05 23)

BASED UPON IAPMO EVALUATION
SERVICES REPORT NO. 130

REEVALUATION DUE

DATE: August 01, 2020

Issued Date: August 01, 2018

Code: 2017 LABC

GENERAL APPROVAL – Reevaluation - Simpson Strong-Tie LTT, HTT, and DTT1 Holdown Framing Connectors

DETAILS

The above assemblies and/or products are approved when in compliance with the use, description, design, installation, conditions of approval and of Evaluation Report No. 130, originally issued 12/15/2008, revised 01/30/2018, valid through 01/31/2019, of the IAPMO Evaluation Services. The report, in its entirety, is attached and made part of this general approval subject to the following conditions:

The parts of Evaluation Report No. 130 marked with asterisk(s) have been deleted or added by the Los Angeles City Building Department from this approval.

The approval is subject to the following conditions:

1. Allowable loads shall not be increased for duration of load, except as specifically noted in the tables.
2. Approved products to be used shall be indicated on the approved set of plans.
3. All products involving welding shall be fabricated in the shop of a Los Angeles City licensed fabricator.

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4. Holdown Devices Used As Anchorage of Structural Walls: The values shown in Table-A of this report may be used in repair, retrofit and new construction of tilt-up wall or reinforced masonry wall anchorage (in tension) for the connection with the horizontal wood diaphragm.
5. Holdown Devices Used in Light Framed Shear Walls Sheathed with Wood Structural Panels: For holdown devices used in shear walls, a 25% reduction of the allowable loads specified in the IAPMO ES evaluation report shall be taken for all holdown devices in shear walls as required by 2305.5 of the 2017 City of Los Angeles Building Code.
6. Anchor bolts used to connect holdown anchors to concrete or masonry structural members must be designed. The grade of anchor bolt and anchor bolt embedment and edge distance must be specified by the engineer of record. Wood members shall be checked separately for structural capacity including the effects on the net area of the member.
7. Allowable loads in the tables are for LTT and HTT holdown anchors and do not include supporting members or anchor bolts. The supporting members and anchor bolt must be checked separately for structural adequacy.
8. Steel materials shall conform to the specification. Test data verifying the properties of the steel, by the mill or by an approved testing agency, shall be obtained for each shipment. The data shall be kept on file and submitted to the Department upon request.
9. Connections shall be fully detailed and dimensioned on approved plans showing anchor bolt embedment measured below slab/footing or bearing wall cold joint interface. The concrete or masonry footing must be checked to insure that it is capable of resisting the applied load.

Table A: Allowable Loads of Nail Holdowns Used for Connections of Horizontal Diaphragm-to-Wall Assemblies in the City of Los Angeles Per 2008 LABC Chapters 16, 91 & 96

Holdown Model No.	Fasteners			Minimum Wood Member Thickness (in.)	Allowable Tension Loads for Designs per Chapter 16		Allowable Tension Loads for Designs per Chapter 91 & 96	
	Anchor Bolt Dia (in.)	Fasteners			Load (lbs)	Governing Load Case	Load (lbs)	Governing Load Case
		QTY	Size					
LTT19	1/2, 5/8, or 3/4	8	10dx1-1/2	3	825	b	455	b
		8	10d		865	b	370	b
LTT20B	1/2, 5/8, or 3/4	10	10dx1-1/2	3	535	b	385	b
		10	10d		630	b	320	b
		2	1/2" Bolt		840	b	490	b
LTTI31	5/8	18	10dx1-1/2	3	490	b	265	b
HTT4	5/8	18	10dx1-1/2	3	3,610	a	2,665	c
		18	16dx2-1/2		3,650	a	2,645	b
HTT5	5/8	26	10dx1-1/2	3	3,685	a	2,110	b
		26	10d		3,685	a	3,095	a
		26	16dx2-1/2		3,685	a	3,085	b

1. For holdown dimensions, refer to Table 1 of IAPMO ES ER-0130
2. The wood member must be sized for the load carrying capacity.
3. Loads shall not be increased for short-term duration.
4. Anchor bolt type, length, and embedment to be specified by designer
5. Deflection of anchor bolt must be taken into consideration.
6. All other notes of Table 1 in the attached IAPMO ES ER-0130 apply.

Legend of Governing Criteria

a = ultimate load value on steel jig / (3 x 1.4) [for Chapter 16] or ultimate load value on steel jig / (5) [for Chapters 91 & 96]

b = deflection on wood assembly at 3/8" / 3 [for Chapter 16] or deflection on wood assembly at 3/8" / 5 [for Chapters 91 & 96]

c = the fastener value in accordance with 2008 LABC

Note: Lowest load of 3 tested conditions or average load of 6 tested conditions were taken for criteria "a" and "b" above

DISCUSSION

The clerical modification is to update the report to the 2017 City of Los Angeles Building Code.

This report is in compliance with the 2017 City of Los Angeles Building Code.

The approval is based on tests in accordance with ICC ES Acceptance Criteria for Holdowns (Tie-downs) Attached to Wood Members (AC 155), Approved May 2015.

Simpson Strong-Tie Company, Inc.

Re: Simpson Strong-Tie LTT, HTT, and DTT1Z Holdown Framing Connectors

This general approval will remain effective provided the Evaluation Report is maintained valid and unrevised with the issuing organization. Any revision to the report must be submitted to this Department for review with appropriate fee to continue the approval of the revised report.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this Approval have been met in the project in which it is to be used.

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Attachment: IAPMO Report No. 130 (9 Pages)