

TEXAS DEPARTMENT OF INSURANCE

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Proposed Change to Windstorm Building Requirements or Procedures in the Texas Windstorm Insurance Association Plan of Operation

Name: Randall Shackelford
Organization/Company: Simpson Strong-Tie Co.
Address: 2221 Country Lane
City, State, Zip: McKinney, TX 75069

Date: June 12, 2006
Telephone: 972-439-3029
Fax No.: 972-542-4139

Please complete the following for each proposed change:
(A separate form must be submitted for each proposed change.)

1. Proposed change to the following building requirement or procedure:

International Building Code Limitations on the use of perforated shear walls.

2. Proposed change is to:

Document IBC
Section 2305.3.8.2.1

3. Please use the following format to present the proposed change:

~~LINE THROUGH LANGUAGE TO BE DELETED~~ UNDERLINE NEW LANGUAGE TO BE ADDED

4. Proposed Change. Please specify change. Attach additional sheets if needed.

2305.3.8.2.1 Limitations. The following limitations shall apply to the use of Section 2305.3.8.2:

1. A perforated shear wall segment shall be located at each end of a perforated shear wall. Openings shall be permitted to occur beyond the ends of the perforated shear wall, provided the width of such openings is not be included in the width of the perforated shear wall.
2. The allowable shear set forth in Table 2306.4.1 shall not exceed 490 plf (7150 N/m).
3. Where out-of-plane offsets occur, portions of the wall on each side of the offset shall be considered as separate perforated shear walls.
4. Collectors for shear transfer shall be provided through the full length of the perforated shear wall.
5. A perforated shear wall shall have uniform top of wall and bottom of wall elevations. Perforated shear walls not having uniform elevations shall be designed by other methods.
6. Perforated shear wall height, h , shall not exceed 20 feet (6096 mm).
7. Perforated shear wall sheathing shall not be designed to resist wind uplift forces except for uplift due to overturning from lateral forces.

5. Reason for Change. Please state purpose and reason for change. Attach additional sheets if needed.

Perforated shearwall segments already transfer both shear forces and uplift forces into the sill plate along their entire length (See Section 2305.3.8.2.6), so there is not additional capacity to transfer any wind uplift force without reducing the shear capacity.

For Texas Department of Insurance use only:

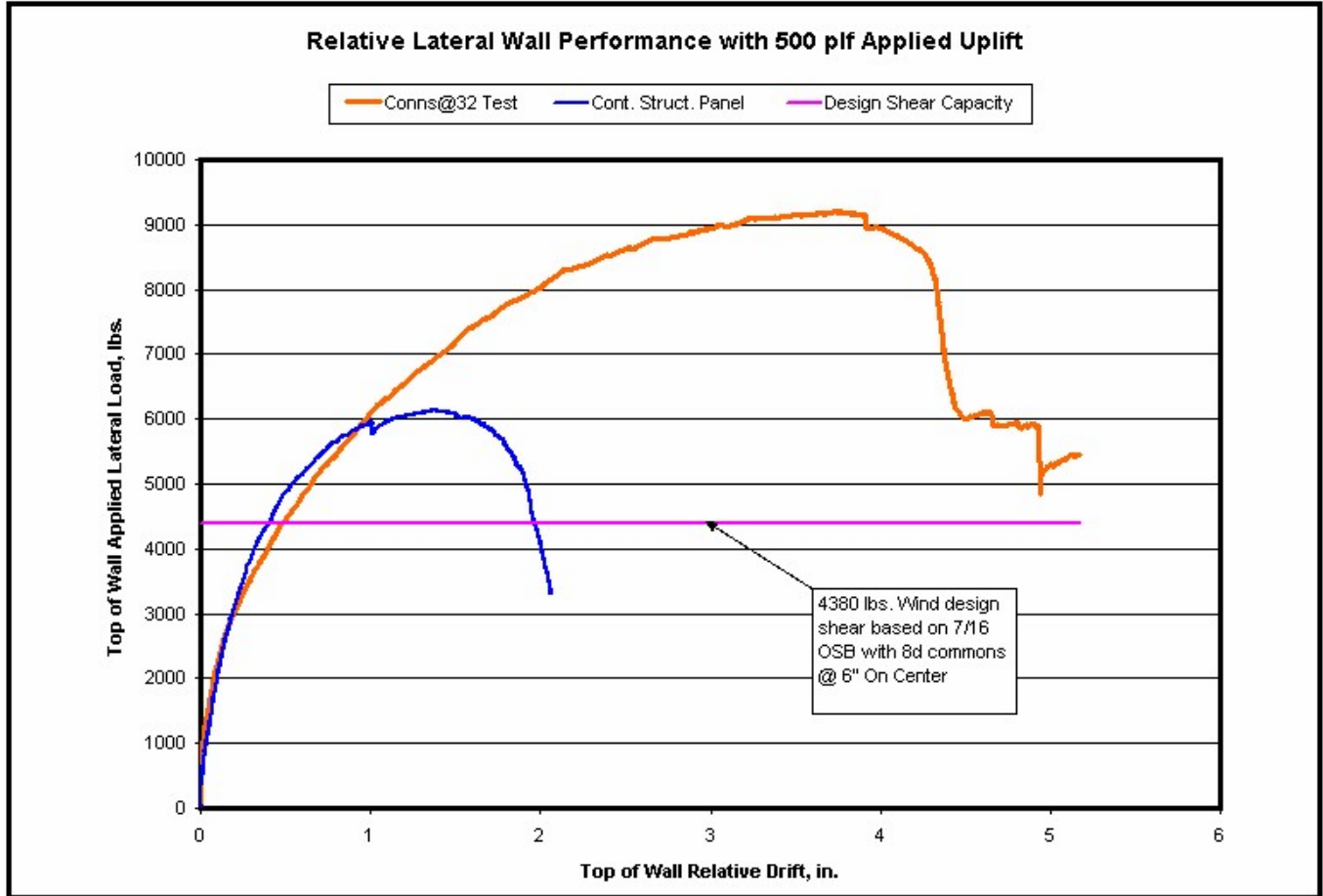
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BCAC Form 100-99 Amended January 1, 2005

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Simpson Strong-Tie has recently completed testing in our state-of-the-art full-scale test facility that conclusively shows that wood structural panel shear walls cannot be subjected to both wind uplift and shear forces and maintain the required safety factors. The failure is sudden splitting of the sill plate, even if large plate washers are installed.

The graph below shows the reduction in shear capacity of a shearwall that is designed for and subjected to combined uplift and shear simultaneously, compared to the same wall subjected to the same loads that uses connectors to resist the uplift.



6. Attach supporting written or printed information, including, but not limited to, test data, structural calculations, and/or documentation that the proposed change complies with the minimum wind load criteria and design standards specified in the building requirements adopted by the Texas Department of Insurance. Attach supporting written or printed information relating to the proposed changes to the building requirements or procedures contained in the Texas Windstorm Insurance Association Plan of Operation.

Pursuant to Article 21.49, §6C of the Insurance Code, this proposal form must be complete and submitted to the address specified above not later than the 30th day before the date of a scheduled advisory committee meeting for the proposal to be considered at that meeting.

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Item Number: _____

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