



PUBLIC CODE CHANGE PROPOSAL FORM FOR PUBLIC PROPOSALS IN THE INTERNATIONAL CODES

2007/2008 CODE DEVELOPMENT CYCLE

CLOSING DATE: All Proposals Must Be Received by August 20, 2007

The 2007/2008 Code Development Hearings are tentatively scheduled for
February 18 – March 2, 2008, location TBD.

1)

Name: Gary J. Ehrlich, P.E. **Date:** August 20, 2007
Jurisdiction/Company: National Association of Home Builders (NAHB)
Submitted on Behalf of: (Same)
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2)

***Signature:** _____ (Copyright Release on File)

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3)

Indicate appropriate International Code(s) associated with this Public Proposal – Please use Acronym: _____
If you have also submitted a separate coordination change to another I-Code, please indicate the code: _____
(See section below for list of names and acronyms for the International Codes).

CODE CHANGE PROPOSAL

Code Sections/Tables/Figures Proposed for Revision (3.3.2):

R602.10.3, R602.10.3.2, R602.10.3.2.3 (new), Figure R602.10.3.2.3 (new)

Note: If the proposal is for a new section, indicate (new).

Name/Company/Representing (3.3.1):

Gary J. Ehrlich, P.E., National Association of Home Builders

Proposal: Add new text and figure as follows:

R602.10.3 Minimum length of braced panels. For Methods 2, 3, 4, 6, 7 and 8 above, each braced wall panel shall be at least 48 inches (1219 mm) in length, covering a minimum of three stud spaces where studs are spaced 16 inches (406 mm) on center and covering a minimum of two stud spaces where studs are spaced 24 inches (610 mm) on center. For Method 5 above, each braced wall panel and shall be at least 96 inches (2438 mm) in length where applied to one face of a braced wall panel and at least 48 inches (1219 mm) where applied to both faces. For Methods 2, 3, 4, 6, 7 and 8, for purposes of computing the percentage of panel bracing required in Table R602.10.1(1), the effective length of the braced wall panel shall be equal to the actual length of the panel. When Method 5 panels are applied to only one face of a braced wall panel, bracing percentages required in Table R602.10.1(1) for Method 5 shall be doubled.

Exceptions:

1. Lengths of braced wall panels for continuous wood structural panel sheathing shall be in accordance with Section R602.10.4.
2. Lengths of alternate braced wall panels shall be in accordance with Section R602.10.3.2.1, ~~or~~ Section R602.10.3.2.2, or R602.10.3.2.3.
3. For Methods 2, 3, 4, 6, 7 and 8 in Seismic Design Categories A, B, and C: Panels between 36 inches and 48 inches in length shall be permitted to count towards the required percentage of bracing in Table R602.10.1(1), and the effective contribution shall comply with Table R602.10.3.

R602.10.3.2 Alternative bracing panels. As an alternate to the bracing methods in Section R602.10.2, wall bracing panels in accordance with Sections R602.10.3.2.1, ~~and~~ R602.10.3.2.2, and R602.10.3.2.3 shall be permitted.

R602.10.3.2.3 Alternate braced wall panel at garage door openings in Seismic Design Categories A, B, and C. Where supporting a roof or one story and a roof, alternate braced wall panels constructed in accordance with

the following provisions are permitted on either side of garage door openings. For the purpose of calculating wall bracing amounts to satisfy the minimum requirements of Table R602.10.1(1), the length of the alternate braced wall panel shall be multiplied by a factor of 1.5.

1. Braced wall panel length shall be a minimum of 24 inches and braced wall panel height shall be a maximum of 10 feet.
2. Braced wall panel shall be sheathed on one face with a single layer of 7/16-inch-minimum thickness wood structural panel sheathing attached to framing with 8d common nails at 3 inches on center in accordance with Figure R602.10.3.2.3.
3. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed to the header at 3 inch on center grid in accordance with Figure R602.10.3.2.3.
4. The header shall consist of a minimum of two solid sawn 2x12s or a 3"x11.25" glued-laminated header. The header shall extend between the inside faces of the first full-length outer studs of each panel in accordance with Figure R602.10.3.2.3. The clear span of the header between the inner studs of each panel shall be not less than 6 feet (1829 mm) and not more than 18 feet (5486 mm) in length.
5. A strap with an uplift capacity of not less than 1,000 pounds (4448 N) shall fasten the header to the side of the inner studs opposite the sheathing face. Where building is located in wind exposure categories C or D, the strap uplift capacity shall be in accordance with Table R602.10.4.6.
6. A minimum of two bolts not less than ½-inch diameter shall be installed in accordance with Section R403.1.6. A 3/16-inch by 2-1/2-inch by 2-1/2-inch steel plate washer is installed between the bottom plate and the nut of each bolt.
7. Braced wall panel shall be installed directly on a foundation.
8. Where an alternate braced wall panel is located only on one side of the garage opening, the header shall be connected to a supporting jack stud on the opposite side of the garage opening with a metal strap with an uplift capacity of not less than 1,000 lbs. Where that supporting jack stud is not part of a braced wall panel assembly, another 1,000 lbs strap shall be installed to attach the supporting jack stud to the foundation.

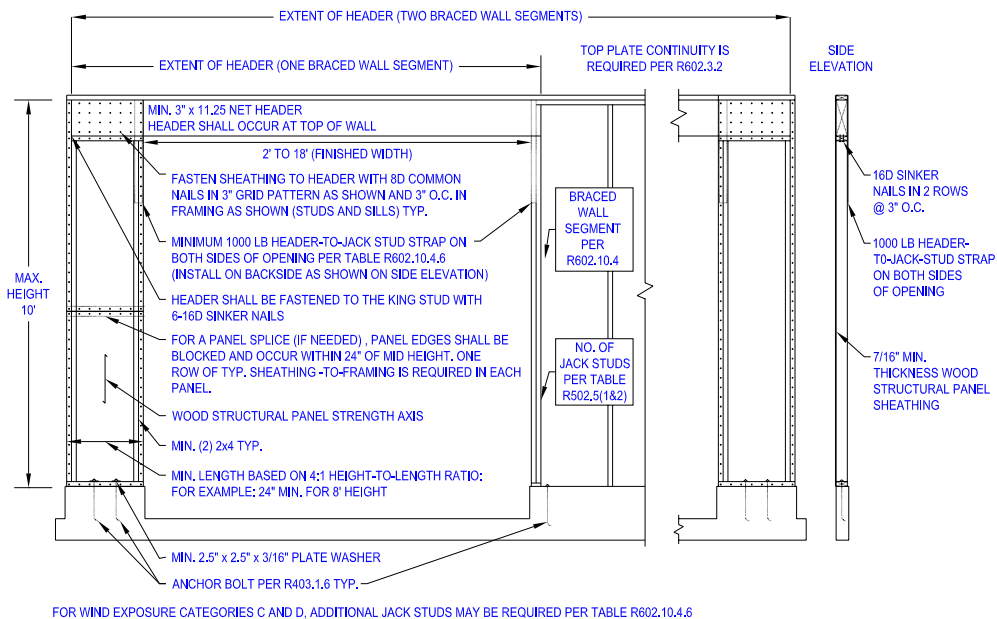


FIGURE R602.10.3.2.3
ALTERNATE BRACED WALL PANEL AT GARAGE DOOR OPENINGS
IN SEISMIC DESIGN CATEGORIES A, B, AND C

Supporting Information (3.3.4 & 3.4):

The proposed portal frame system with 24-inch piers provides an alternative solution for garage door bracing applications in braced wall lines that are not continuously sheathed with wood structural panels. The proposed portal frame was tested to demonstrate equivalency to intermittent (48-inch-long) Method 3 braced wall panels. The equivalency was established for both stiffness and capacity under cyclic loading over a range of boundary conditions. Results of the testing are summarized in a report that can be obtained from <http://www.nahbrc.org/portalframe>. The proposed portal frame will provide additional flexibility for home builders in meeting bracing provisions of the IRC at garage openings where narrow piers are often specified due to architectural considerations and/or lot size limitations. It also easier to install and inspect than the current alternate braced wall panel options. The rest of the house can be braced using other approved bracing methods. The proposed portal frame is limited to SDC A, B, and C to address the potential use of different bracing methods in the same braced wall line.

Referenced Standards (3.4 & 3.6):

Cost Impact (3.3.4.6): None