

Single and Double Portal Frames

(Alternate Braced Wall Panels Adjacent to a Door or Window Opening)

ONE AND TWO STORY BUILDINGS

Alternate braced wall panels constructed in accordance with one of the following provisions are also permitted to replace each 4 feet of braced wall panel as required by Section R602.10.4 for use adjacent to a window or door opening with a full-length header:

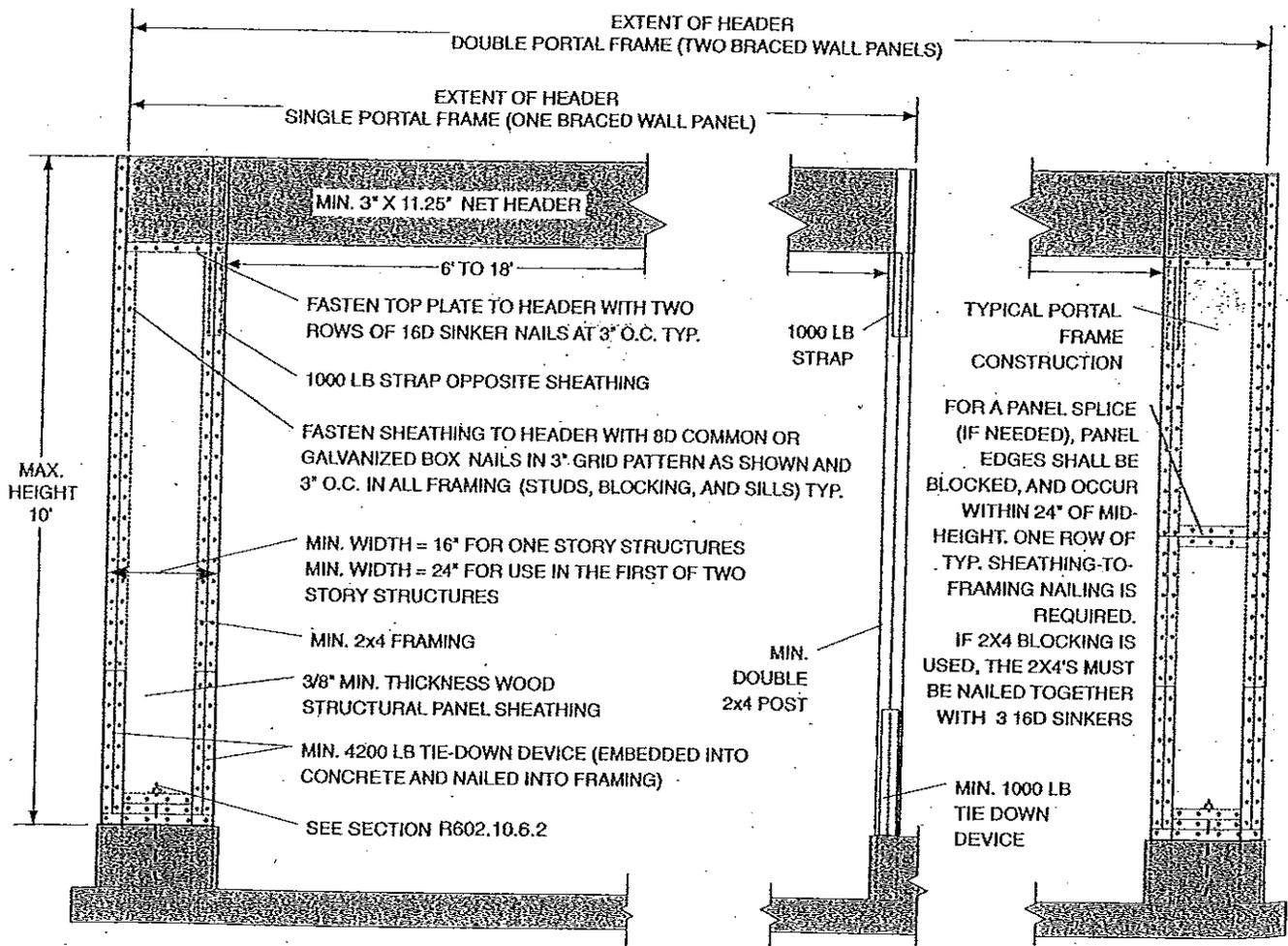
Item 1. In one-story buildings, each panel shall have a length of not less than 16 inches and a height of not more than 10 feet. Each panel shall be sheathed on one face with a layer of 3/8-inch-minimum-thickness (10mm) wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure R602.10.6.2. The wood structural panel shall extend up over the the solid sawn or glue-laminated header. Use of a built up header consisting of at least two 2 x 12s shall be permitted. A spacer if used shall be placed on the opposite side of the sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than 6 feet or more than 18 feet in length. A strap with an uplift capacity of not less than 1000 pounds shall fasten the header to the side of the inner studs opposite the sheathing. One anchor bolt not less than 5/8-inch diameter shall be installed in the center of each sill plate. The studs at each end of the panel shall have a tie-down device fastened to the foundation with an uplift capacity of not less than 4,200 pounds.

Where a panel is located on one side of the opening, the header shall extend between the inside face of the first full-length stud of the panel and the bearing studs at the other end of the opening. A strap with an uplift capacity of not less than 1000 pounds shall fasten the header to the bearing studs. The bearing studs shall also have a tie-down device fastened to the foundation with an uplift capacity of not less than 1000 pounds.

The tie-down devices shall be an embedded-strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation which is continuous across the entire length of the braced wall line. The foundation shall be reinforced with one #4 bar top and bottom.

Item 2. In the first story of two-story buildings, each wall panel shall be braced in accordance with Item 1 above, except that each panel shall have a length of not less than 24 inches.

Please contact the Latah County Department of Planning and Building if you have any questions.



MINIMUM LENGTH OF BRACED WALL PANEL (Inches)			MAXIMUM OPENING HEIGHT NEXT TO THE BRACED WALL PANEL (% of wall height)
8-foot wall	9-foot wall	10-foot wall	
48	54	60	100
32	36	40	85
24	27	30	65

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 pound per square foot = 0.0479 kPa.

- Linear interpolation shall be permitted.
- Full-height sheathed wall segments to either side of garage openings that support light frame roofs only, with roof covering dead loads of 3 psf or less shall be permitted to have a 4:1 aspect ratio.
- Walls on either or both sides of openings in garages attached to fully sheathed dwellings shall be permitted to be built in accordance with Section R602.10.6.2 and Figure R602.10.6.2 except that a single bottom plate shall be permitted and two anchor bolts shall be placed at 1/3 points. In addition, tie-down devices shall not be required and the vertical wall segment shall have a maximum 6:1 height-to-width ratio (with height being measured from top of header to the bottom of the sill plate). This option shall be permitted for the first story of two-story applications in Seismic Design Categories A through C.