

**Table 4.3.3.5 Shear Capacity Adjustment Factor, C.**

Wall Height, h	Maximum Opening Height <sup>1</sup>				
	h/3	h/2	2h/3	5h/6	h
8' Wall	2'-8"	4'-0"	5'-4"	6'-8"	8'-0"
10' Wall	3'-4"	5'-0"	6'-8"	8'-4"	10'-0"
Percent Full-Height Sheathing <sup>2</sup>	Effective Shear Capacity Ratio				
10%	1.00	0.69	0.53	0.43	0.36
20%	1.00	0.71	0.56	0.45	0.38
30%	1.00	0.74	0.59	0.49	0.42
40%	1.00	0.77	0.63	0.53	0.45
50%	1.00	0.80	0.67	0.57	0.50
60%	1.00	0.83	0.71	0.63	0.56
70%	1.00	0.87	0.77	0.69	0.63
80%	1.00	0.91	0.83	0.77	0.71
90%	1.00	0.95	0.91	0.87	0.83
100%	1.00	1.00	1.00	1.00	1.00

1 The maximum opening height shall be taken as the maximum opening clear height in a perforated shear wall. Where areas above and/or below an opening remain unsheathed, the height of each opening shall be defined as the clear height of the opening plus the unsheathed areas.

2 The sum of the perforated shear wall segment lengths,  $\sum L_i$ , divided by the total length of the perforated shear wall,  $L_{tot}$ . Lengths of perforated shear wall segments with aspect ratios greater than 2:1 shall be adjusted in accordance with Section 4.3.4.3.

**4.3.4.4 Aspect Ratio of Force-transfer Shear Walls:** The aspect ratio limitations of Table 4.3.4 shall apply to the overall shear wall including openings and to each wall pier at the sides of openings. The height of a wall pier with an opening on one side shall be defined as the clear height of the pier at the side of the opening. The height of a wall pier with an opening on each side shall be defined as the larger of the clear heights of the pier at the sides of the openings. The length of a wall pier shall be defined as the sheathed length of the pier. Wall piers with aspect ratios exceeding 3.5:1 shall not be considered as portions of force-transfer shear walls.

**Table 4.3.4 Maximum Shear Wall Aspect Ratios**

Shear Wall Sheathing Type	Maximum h/b <sub>s</sub> Ratio
Wood structural panels, unblocked	2:1
Wood structural panels, blocked	3.5:1
Particleboard, blocked	2:1
Diagonal sheathing, conventional	2:1
Gypsum wallboard	2:1 <sup>1</sup>
Portland cement plaster	2:1 <sup>1</sup>
Structural Fiberboard	3.5:1

<sup>1</sup> Walls having aspect ratios exceeding 1.5:1 shall be blocked shear walls.

### 4.3.5 Shear Wall Types

Where individual full-height wall segments are designed as shear walls, the provisions of 4.3.5.1 shall apply. For shear walls with openings, where framing members, blocking, and connections around the openings are designed for force transfer around the openings (force-transfer shear walls) the provisions of 4.3.5.2 shall apply. For shear walls with openings, where framing members, blocking, and connections around the opening are not designed for force transfer around the openings (perforated shear walls) the provisions of 4.3.5.3 shall apply or individual full-height wall segments shall be designed per 4.3.5.1

**4.3.5.1 Individual Full-Height Wall Segments:** Where individual full-height wall segments are designed as shear walls without openings, the aspect ratio limitations of 4.3.4 shall apply to each full-height wall segment as illustrated in Figure 4D. The following limitations shall apply:

1. Openings shall be permitted to occur beyond the ends of a shear wall. The length of such openings shall not be included in the length of the shear walls.
2. Where out-of-plane offsets occur, portions of the wall on each side of the offset shall be considered as separate shear walls.
3. Collectors for shear transfer to individual full-height wall segments shall be provided.