methods of termite protection.

Section 2304.11.7 Change to read as shown: (S51-03/04)

2304.11.7 Wood used in retaining walls and cribs. Wood installed in retaining or crib walls shall be preservative-treated in accordance with AWPA U1 (Commodity Specifications A or F) for soil and fresh water use.

Section 2304.12 Delete and substitute as shown: (S66-03/04)

2304.12 Long-term loading. Wood members supporting concrete, masonry, or similar materials, shall be checked for the effects of long-term loading using the provisions of the NDS. The total deflection, including the effects of long-term loading, shall be limited in accordance with Section 1604.3.1 for these supported materials.

Exception: Horizontal wood members supporting masonry or concrete nonstructural floor or roof surfacing not more than 4 inches (102mm) thick need not be checked for long-term loading.

Section 2305.1.5 Change to read as shown: (S67-03/04)

2305.1.5 Wood members resisting horizontal seismic forces contributed by masonry and concrete walls. Wood shear walls, diaphragms, horizontal trusses and other members shall not be used to resist horizontal seismic forces contributed by masonry or concrete walls in structures over one story in height.

Exceptions:

1. Wood floor and roof members are permitted to be used in horizontal trusses and diaphragms to resist horizontal seismic forces contributed by masonry or concrete walls provided such forces do not result in torsional force distribution through the truss or diaphragm.

2. Wood structural-panel-sheathed shear walls are permitted to be used to provide resistance to seismic forces contributed by masonry or concrete construction in two-story structures of masonry or concrete walls, provided the following requirements are met:

   2.1. Story-to-story wall heights shall not exceed 12 feet (3658 mm).

   2.2. Diaphragms shall not be designed to transmit lateral forces by rotation. Diaphragms shall not cantilever past the outermost supporting shear wall.

   2.3. Combined deflections of diaphragms and shear walls shall not permit story drift of supported masonry or concrete walls to exceed the limit of Section 1617.3.

   2.4. Wood structural panel sheathing in diaphragms shall have unsupported edges blocked. Wood structural panel sheathing for both stories of shear walls shall have unsupported edges blocked and, for the lower story, shall have a minimum thickness of $^{15}/_{32}$ inch (11.9 mm).

   2.5. There shall be no out-of-plane horizontal offsets between the first and second stories of wood structural panel shear walls.

Section 2305.1.6 Add new section to read as shown: (S68-03/04)

2305.1.6 Wood members resisting seismic forces from non-structural concrete or masonry. Wood members shall be permitted to resist horizontal seismic forces from non-structural concrete, masonry veneer or concrete floors.

Section 2305.2.2 Change to read as shown: (S71-03/04)

2305.2.2 Deflection. Permissible deflection shall be that deflection up to which the diaphragm and any attached distributing or resisting element will maintain its structural integrity under design load conditions, such that the resisting element will continue to support design loads without danger to occupants of the structure. Calculations for diaphragm deflection shall account for the usual bending and shear components as well as any other factors, such as nail deformation, which will contribute to deflection.

The deflection (Δ) of a blocked wood structural panel diaphragm uniformly nailed throughout is permitted to be calculated by using the following formula. If not uniformly nailed, the constant 0.188 (For SI: 1/1627) in the third term must be modified accordingly.

$$\Delta = \frac{5vL^3}{8EAb} + \frac{vL}{4Gt} + 0.188Le_n + \frac{\Sigma(\Delta_c X)}{2b}$$

(Equation 23-1)

$$\text{For SI: } \Delta = \frac{0.052L^3}{EAb} + \frac{vL}{4Gt} + \frac{Le_n}{1627} + \frac{\Sigma(\Delta_c X)}{2b}$$

where:

A = Area of chord cross section, in square inches (mm^2).

b = Diaphragm width, in feet (mm).

E = Elastic modulus of chords, in pounds per square

inch (N/mm^2).

e_n = Nail or staple deformation, in inches (mm). [See Table2305.2.2(1)]

Gt = Panel rigidity through the thickness, in pounds per inch (N/mm) of panel width or depth. [See Table 2305.2.2(2)]

L = Diaphragm length, in feet (mm).

v = Maximum shear due to design loads in the direction under consideration, in pounds per linear foot (plf) (N/mm).

Δ = The calculated deflection, in inches (mm).

$\Sigma (\Delta_c X)$ = Sum of individual chord-splice values on both sides of the diaphragm, each multiplied by its distance to the nearest support.

Table 2305.2.2(1) Add new table to read as shown: (S71-03/04)

TABLE 2305.2.2(1)
"e_n VALUES (INCHES) FOR USE IN CALCULATING DIAPHRAGM DEFLECTION DUE TO FASTENER SLIP (STRUCTURAL I)[ad]

LOAD PER FASTENER[c] (pounds)	FASTENER DESIGNATIONS[b]			
	6d	8d	10d	14-Ga staple x 2 inches long
60	0.012	0.008	0.006	0.011
80	0.020	0.012	0.010	0.018
100	0.030	0.018	0.013	0.028
120	0.045	0.023	0.018	0.04
140	0.068	0.031	0.023	0.053
160	0.102	0.041	0.029	0.068
180	---	0.056	0.037	---
200	---	0.074	0.470	---
220	---	0.096	0.060	---
240	---	---	0.077	---

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 pound = 4.448 N.

a. Increase "e_n" values 20 percent for plywood grades other than Structural I.
b. Nail values apply to common wire nails or staples identified.
c. Load per fastener = maximum shear per foot divided by the number of fasteners per foot at interior panel edges.
d. Decrease e_n values 50 percent for seasoned lumber (moisture content < 19%).

Table 2305.2.2(2) Add new table to read as shown: (S71-03/04)

TABLE 2305.2.2(2)
VALUES OF *Gt* FOR USE IN CALCULATING DEFLECTION OF WOOD STRUCTURAL PANEL SHEAR WALLS AND DIAPHRAGMS

PANEL TYPE	SPAN RATING	VALUES OF *Gt* (lb/in. panel depth or width)							
		OTHER				STRUCTURAL I			
		3-ply Plywood	4-ply Plywood	5-ply Plywood[a]	OSB	3-ply Plywood	4-ply Plywood	5-ply Plywood[a]	OSB
Sheathing	24/0	25000	32500	37500	77500	32500	42500	41500	77500
	24/16	27000	35000	40500	83500	35000	45500	44500	83500
	32/16	27000	35000	40500	83500	35000	45500	44500	83500
	40/20	28500	37000	43000	88500	37000	48000	47500	88500
	48/24	31000	40500	46500	96000	40500	52500	51000	96000
Single Floor	16 o.c.	27000	35000	40500	83500	35000	45500	44500	83500
	20 o.c.	28000	36500	42000	87000	36500	47500	46000	87000
	24 o.c.	30000	39000	45000	93000	39000	50500	49500	93000
	32 o.c.	36000	47000	54000	110000	47000	61000	59500	110000
	48 o.c.	50500	65500	76000	155000	65500	85000	83500	155000

		Other			Structural I		
	Thickness (in.)	A-A, A-C	Marine	All Other Grades	A-A, A-C	Marine	All Other Grades
Sanded Plywood	¼	24000	31000	24000	31000	31000	31000
	11/32	25500	33000	25500	33000	33000	33000
	38054	26000	34000	26000	34000	34000	34000
	15/32	38000	49500	38000	49500	49500	49500
	½	38500	50000	38500	50000	50000	50000
	19/32	49000	63500	49000	63500	63500	63500
	⅝	49500	64500	49500	64500	64500	64500
	23/32	50500	65500	50500	65500	65500	65500
	¾	51000	66500	51000	66500	66500	66500
	⅞	52500	68500	52500	68500	68500	68500
	1	73500	95500	73500	95500	95500	95500
	1⅛	75000	97500	75000	97500	97500	97500

For SI: 1 inch = 25.4 mm, 1 pound/inch = 0.1751 N/mm.

a. Applies to plywood with 5 or more layers; for 5 ply/3 layer plywood, use values for 4 ply.

Section 2305.3.2 Change to read as shown: (S70-03/04; S71-03/04)

2305.3.2 Deflection. Permissible deflection shall be that deflection up to which the shear wall and any attached distributing or resisting element will maintain its structural integrity under design load conditions, i.e., continue to support design loads without danger to occupants of the structure.

The deflection (Δ) of a blocked wood structural panel shear wall uniformly fastened throughout is permitted to be calculated by the use of the following formula:

$$\Delta = \frac{8vh^3}{Eab} + \frac{vh}{Gt} + 0.75he_n + d_a\frac{h}{b} \qquad \textbf{(Equation 23-2)}$$

For SI: $$\Delta = \frac{vh^3}{3EAb} + \frac{vh}{Gt} + \frac{he_n}{407.6} + d_a\frac{h}{b}$$

where:

A = Area of boundary element cross section in square inches (mm^2) (vertical member at shear wall boundary).
b = Wall width, in feet (mm).
d_a = Vertical elongation of overturning anchorage (including fastener slip, device elongation, anchor rod elongation, etc.) at the design shear load (v).
E = Elastic modulus of boundary element (vertical member at shear wall boundary), in pounds per square inch (N/mm^2).
e_n = Nail or staple deformation, in inches (mm). [See Table2305.2.2(2)].

Gt = Panel rigidity through the thickness, in pounds per inch (N/mm) of panel width or depth. [See Table 2305.2.2(2)]
h = Wall height, in feet (mm).
v = Maximum shear due to design loads at the top of the wall, in pounds per linear foot (N/mm).
Δ = The calculated deflection, in inches (mm).

Section 2305.3.3 Change to read as shown: (S59-03/04)

2305.3.3 Shear wall aspect ratios. Size and shape of shear walls, perforated shear wall segments within perforated shear walls and wall piers within shear walls with openings designed for force transfer around openings shall be limited as set forth in Table 2305.3.3. The height, *h*, and the width, *w*, shall be determined in accordance with Sections 2305.3.4 through 2305.3.4.2 and 2305.3.5 through 2305.3.5.2, respectively.

Table 2305.3.3 Change footnote to read as shown: (S69-03/04)

Table 2305.3.3
MAXIMUM SHEAR WALL DIMENSION RATIOS

(No change to table entries)

a. (No change to current text)
b. Ratio shown is for unblocked construction. Height-to-width ratio is permitted to be 2:1 where the wall is installed as blocked construction in accordance with Section 2306.4.5.1.2.

Section 2305.3.4 Change to read as shown: (S59-03/04)

2305.3.4 Shear wall height definition. The height of a shear wall, *h*, shall be defined as:

1. The maximum clear height from top of foundation to bottom of diaphragm framing above; or

2. The maximum clear height from top of diaphragm to bottom of diaphragm framing above [see Figure 2305.3.4(a)].

Figure 2305.3.4 Change figure titles to read as shown: (S59-03/04)

No change to illustration.

(a) Height-to-Width Ratio for Shear Walls and Perforated Shear Walls
(b) Height-to-Width Ratio with Design for Force Transfer Around Openings

Sections 2305.3.4.1 and 2305.3.4.2 Add new sections to read as shown: (S59-03/04)
2305.3.4.1 Perforated shear wall segment height definition. The height of a perforated shear wall segment, *h*, shall be defined as specified in Section 2305.3.4 for shear walls.

2305.3.4.2 Force transfer shear wall pier height definition. The height, *h*, of a wall pier in a shear wall with openings designed for force transfer around openings shall be defined as the clear height of the pier at the side of an opening [see Figure 2305.3.4(b)].

Section 2305.3.5, 2305.3.5.1 Change to read as shown: (S59-03/04)

2305.3.5 Shear wall width definition. The width of a shear wall, *w*, shall be defined as the sheathed dimension of the shear wall in the direction of application of force [see Figure 2305.3.4(a)].

2305.3.5.1 Perforated shear wall segment width definition. The width of a perforated shear wall segment, *w*, shall be defined as the width of full-height sheathing adjacent to openings in the perforated shear wall [see Figure 2305.3.4(a)].

Section 2305.3.5.2 Add new section to read as shown: (S59-03/04)

2305.3.5.2 Force transfer shear wall pier width definition. The width, *w*, of a wall pier in a shear wall with openings designed for force transfer around openings shall be defined as the sheathed width of the pier at the side of an opening [see Figure 2305.3.4(b)].

Section 2305.3.7.1 Change to read as shown: (S59-03/04)

2305.3.7.1 Force transfer around openings. Where shear walls with openings are designed for force transfer around the openings, the limitations of Table 2305.3.3 shall apply to the overall shear wall including openings and to each wall pier at the side of an opening. Design for force transfer shall be based on a rational analysis. Detailing of boundary elements around the opening shall be provided in accordance with the provisions of this section [see Figure 2305.3.4(b)].

Section 2305.3.7.2 Change to read as shown: (S59-03/04)

2305.3.7.2 Perforated shear walls. The provisions of Section 2305.3.7.2 shall be permitted to be used for the design of perforated shear walls. For the determination of the height and width of perforated shear wall segments, see Sections 2305.3.4.1 and 2305.3.5.1, respectively.

Section 2305.3.7.2.2 Change to read as shown: (S59-03/04)

2305.3.7.2.2 Perforated shear wall resistance. The resistance of a perforated shear wall shall be calculated in accordance with the following:

1. The percent of full-height sheathing shall be calculated as the sum of the widths of perforated shear wall segments divided by the total width of the

perforated shear wall including openings.

2. The maximum opening height shall be taken as the maximum opening clear height. Where areas above and below an opening remain unsheathed, the height of opening shall be defined as the height of the wall.

3. The unadjusted shear resistance shall be the allowable shear set forth in Table 2306.4.1 for height-to-width ratios of perforated shear wall segments that do not exceed 2:1 for seismic forces and 3½:1 for other than seismic forces. For seismic forces, where the height-to-width ratio of any perforated shear wall segment used in the calculation of the sum of the widths of perforated shear wall segments, $\sum L_i$, is greater than 2:1 but not exceeding 3½:1, the unadjusted shear resistance shall be multiplied by 2 *w/h*.

4. The adjusted shear resistance shall be calculated by multiplying the unadjusted shear resistance by the shear resistance adjustment factors of Table 2305.3.7.2. For intermediate percentages of full-height sheathing, the values in Table 2305.3.7.2 are permitted to be interpolated.

5. The perforated shear wall resistance shall be equal to the adjusted shear resistance times the sum of the widths of the perforated shear wall segments.

Section 2305.3.7.2.4 Change to read as shown: (S59-03/04)

2305.3.7.2.4 Uplift anchorage at perforated shear wall ends. Anchorage for uplift forces due to overturning shall be provided at each end of the perforated shear wall. The uplift anchorage shall conform to the requirements of Section 2305.3.6, except that for each story the minimum tension chord uplift force, *T*, shall be calculated in accordance with the following:

$$T = \frac{Vh}{C_o \sum L_i} \qquad \textbf{(Equation 23-3)}$$

where:
T = Tension chord uplift force, pounds (N)
V = Shear force in perforated shear wall, pounds (N)
h = Perforated shear wall height, feet (mm)
C_o = Shear resistance adjustment factor from Table 2305.3.7.2
$\sum L_i$ = Sum of widths of perforated shear wall segments, feet (mm).

Section 2305.3.7.2.5 Change to read as shown: (S59-03/04)

2305.3.7.2.5 Anchorage for in-plane shear. The unit shear force, *v*, transmitted into the top of a perforated shear wall, out of the base of the perforated shear wall at full height sheathing, and into collectors connecting shear wall segments, shall be calculated in accordance with the following:

$$v = \frac{V}{C_o \sum L_i} \qquad \textbf{(Equation 23-4)}$$

where:
v = Unit shear force, pounds per lineal feet (N/m)
V = Shear force in perforated shear wall, pounds (N)
C_o = Shear resistance adjustment factor from Table 2305.3.7.2
$\sum L_i$ = Sum of widths of perforated shear wall segments, feet (mm).

Section 2305.3.10 Change to read as shown: (S83-03/04)

2305.3.10 Sill plate size and anchorage in Seismic Design Category D, E or F. Anchor bolts for shear walls shall include steel plate washers, a minimum of ¼ inch by 3 inches by 3 inches(6.4 mm by 76 mm by 76 mm) in size, between the sill plate and nut. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16 inch (4.76 mm) larger than the bolt diameter and a slot length not to exceed 1¾ inches (44 mm), provided a standard cut washer is placed between the plate washer and the nut. Sill plates resisting a design load greater than 490 plf(LRFD)(7154N/m) or 350 plf (ASD)(5110N/m) shall not be less than a 3- inch(76 mm) nominal member. Where a single 3- inch(76 mm) nominal sill plate is used, 2- 20d box end nails shall be substituted for 2- 16d common end nails found in Line 8 of Table 2304.9.1.

Exception: In shear walls where the design load is less than 840 plf (LRFD) (12 264 N/m) or 600 plf (ASD) (8760 N/m), the sill plate is permitted to be a 2-inch (51 mm) nominal member if the sill plate is anchored by two times the number of bolts required by design and $^3/_{16}$ inch by 2 inch by 2 inch (4.76 mm by 51 mm by 51 mm) plate washers are used.

Section 2306.3.1 Change to read as shown: (S74-03/04)

2306.3.1 Shear capacities modifications. The allowable shear capacities in Table 2306.3.1 and Table 2306.3.2 for horizontal wood structural panel diaphragms shall be increased 40 percent for wind design.

Table 2306.3.1 Change table to read as shown: (S62-03/04; S75-03/04; S76-03/04)

Table 2306.3.1
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS-FIR-LARCH, OR SOUTHERN PINE[a] FOR WIND OR SEISMIC LOADING

PANEL GRADE	COMMON NAIL SIZE OR STAPLE [f] LENGTH AND GAGE	MINIMUM FASTENER PENETRATION IN FRAMING (INCHES)	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM NOMINAL WIDTH OF FRAMING MEMBERS AT ADJOINING PANEL EDGES AND BOUNDARIES[g] (INCHES)
Structural 1 Grades	6d [e] (2" x 0.113")	1 ¼	No changes to this column	No changes to this column
	1½ 16 Gage	1		
	8d (2-½" x 0.131")	1⅜		
	1½ 16 Gage	1		
	10d [d] (3" x 0.148")	1 ½		
	1½ 16 Gage	1		
Sheathing, single floor and other grades covered in DOC PS 1 and PS 2	6d [e] (2" x 0.113")	1¼		
	1½ 16 Gage	1		
	6d [e] (2" x 0.113")	1¼		
	8d (2-1/2" x 0.131")	1⅜		
Sheathing, single floor and other grades covered in DOC PS 1 and PS2 (continued)	1½ 16 Gage	1		
	8d (2-1/2" x 0.131")	1⅜		
	1½ 16 Gage	1		
	8d (2-1/2" x 0.131")	1⅜		
	10d [d] (3" x 0.148")	1½		
	1½ 16 Gage	1		
	10d [d] (3" x 0.148")	1½		
	1¾ 16 Gage	1		

(Portions of table and headings not shown do not change)

a. through e. (No change to current text)

f. Staples shall have a minimum crown width of 7/16 inch, and shall be installed with their crowns parallel to the long dimension of the framing members.

g. The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.

Table 2306.3.2 Change table heading and add footnote f to read as shown: (S75-03/04; S76-03/04)

TABLE 2306.3.2
ALLOWABLE SHEAR IN POUNDS PER FOOT FOR HORIZONTAL BLOCKED DIAPHRAGMS UTILIZING MULTIPLE ROWS OF FASTENERS (HIGH LOAD DIAPHRAGMS) WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR WIND OR SEISMIC LOADING[b]

PANEL GRADE[c]	COMMON NAIL SIZE OR STAPLE[f] GAGE	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM NOMINAL WIDTH OF FRAMING MEMBER AT ADJOINING PANEL EDGES AND BOUNDARIES[a]

(Column headings and table contents not shown do not change)

a. through e. (No change to current text)

f. Staples shall have a minimum crown width of 7/16 inch, and shall be installed with their crowns parallel to the long dimension of the framing members.

Table 2306.4.1 Change to read as shown: (S62-03/04; S75-03/04; S77-03/04)

TABLE 2306.4.1
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS-FIR-LARCH, OR SOUTHERN PINE [a] FOR WIND OR SEISMIC LOADING [b, h, i, j]

PANEL GRADE	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	PANELS APPLIED DIRECT TO FRAMING					PANELS APPLIED OVER ½ or 5/8 GYPSUM SHEATHING				
			NAIL (common or galvanized box) or staple size[k]	Fastener spacing at panel edges (inches)				NAIL (common or galvanized box) or staple size[k]	Fastener spacing at panel edges (inches)			
				6	4	3	2[e]		6	4	3	2[e]
Structural I Sheathing	5/16	1 1/4	6d (2" x 0.113" common, 2" x 0.099" galvanized box)	200	300	390	510	8d (2½" x 0.131" common, 2-½" x 0.113" galvanized box)	200	300	390	510
		1	1 ½ 16 Gage	165	245	325	415	2 16 Gage	125	185	245	315
	3/8	1 3/8	8d (2-1/2" x 0.131" common, 2-1/2" x 0.113" galvanized box)	230	360	460	610	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	280	430	550[f]	730
		1	1 ½ 16 Gage	155	235	315	400	2 16 Gage	155	235	310	400
	7/16	1 3/8	8d (2-1/2" x 0.131" common, 2-1/2" x 0.113" galvanized box)	255	395	505	670	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	280	430	550[f]	730
		1	1 ½ 16 Gage	170	260	345	440	2 16 Gage	155	235	310	400
	15/32	1 3/8	8d (2-1/2" x 0.131" common, 2-1/2" x 0.113" galvanized box)	280	430	550	730	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	280	430	550[f]	730
		1	1 ½ 16 Gage	185	280	375	475	2 16 Gage	155	235	300	400
		1 1/2	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	340	510	665[f]	870	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	—	—	—	—
Sheathing, plywood siding[g] except Group 5 species	15/16 or 1/4[c]	1 1/4	6d (2" x 0.113" common, 2" x 0.099" galvanized box)	180	270	350	450	8d (2-1/2" x 0.131" common, 2-1/2" x 0.113" galvanized box)	180	270	350	450
		1	1 ½ 16 Gage	145	220	295	375	2 16 Gage	110	165	220	285
	3/8	1 1/4	6d (2" x 0.113" common, 2" x 0.099" galvanized box)	200	300	390	510	8d (2-1/2" x 0.131" common, 2-1/2" x 0.113" galvanized box)	200	300	390	510
		1 3/8	8d (2½" x 0.131" common, 2½" x 0.113" galvanized box)	220	320	410	530	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	260	380	490[f]	640
		1	1 ½ 16 Gage	140	210	280	360	2 16 Gage	140	210	280	360

TABLE 2306.4.1 (continued)
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS-FIR-LARCH, OR SOUTHERN PINE [a] FOR WIND OR SEISMIC LOADING [b, h, i, j]

PANEL GRADE	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	PANELS APPLIED DIRECT TO FRAMING					PANELS APPLIED OVER ½ or 5/8 GYPSUM SHEATHING				
			NAIL (common or galvanized box) or staple size[k]	Fastener spacing at panel edges (inches)				NAIL (common or galvanized box) or staple size[k]	Fastener spacing at panel edges (inches)			
				6	4	3	2[e]		6	4	3	2[e]
	7/16	1 3/8	8d (2½" x 0.131" common, 2½" x 0.113" galvanized box)	240	350	450	585	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	260	380	490[f]	640
		1	1 ½ 16 Gage	155	230	310	395	2 16 Gage	140	210	280	360
	15/32	1 3/8	8d (2½" x 0.131" common, 2½" x 0.113" galvanized box)	260	380	490	640	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	260	380	490[f]	640
		1 ½	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	310	460	600[f]	770	—	—	—	—	—
		1	1 ½ 16 Gage	170	255	335	430	2 16 Gage	140	210	280	360
	19/32	1 1/2	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	340	510	665[f]	870	—	—	—	—	—
		1	1 3/4 16 Gage	185	280	375	475	—	—	—	—	—
			Nail size (galvanized casing)					Nail Size (galvanized casing				
	5/16[c]	1 1/4	6d (2" x 0.099")	140	210	275	360	8d (2 1/2" x 0.113")	140	210	275	360
	3/8	1 3/8	8d (2½" x 0.113")	160	240	310	410	10d (3" x 0.128")	160	240	310[f]	410

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. through c. (No change to current text)

d. Allowable shear values are permitted to be increased to values shown for 15/32-inch sheathing with same nailing provided (a) studs are spaced a maximum of 16 inches on center, or (b) if panels are applied with long dimension across studs.

e. (No change to current text)

f. Framing at adjoining panel edges shall be 3 inches nominal or wider, and nails shall be staggered where both of the following conditions are met: (1) 10d (3" x 0.148") nails having penetration into framing of more than 1 1/2 inches and (2) nails are spaced 3 inches on center.

g. (No change to current text)

h. Where panels are applied on both faces of a wall and nail spacing is less than 6 inches o.c. on either side, panel joints shall be offset to fall on different framing members. Or framing shall be 3-inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.

i. In Seismic Design Category D, E or F, where shear design values exceed 490 pounds per lineal foot (LRFD) or 350 pounds per lineal foot (ASD) all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with Section 2307.1 (LFRD) or Section 2306.1 (ASD) to transfer the design shear value between framing members. Plywood joint and sill plate nailing shall be staggered in all cases. See Section 2305.3.10 for sill plate size and anchorage requirements.

j. (No change to current text)

k. Staples shall have a minimum crown width of 7/16 inch, and shall be installed with their crowns parallel to the long dimension of the framing members.

Table 2306.4.3 Add new footnote b to read as shown: (S75-03/04)

TABLE 2306.4.3
ALLOWABLE SHEAR FOR PARTICLEBOARD SHEAR WALL SHEATHING [b]

(No change to table entries)

a. (No change to current text)
b. Galvanized nails shall be hot-dipped or tumbled.

Table 2306.4.5 Change table to read as shown: (S62-03/04; S75-03/04)

TABLE 2306.4.5
ALLOWABLE SHEAR FOR WIND OR SEISMIC FORCES FOR SHEAR WALLS OF LATH AND PLASTER OR GYPSUM BOARD WOOD FRAMED WALL ASSEMBLIES

Type of Material	Thickness of Material	Wall Construction	Fastener Spacing Maximum (inches)	Shear Value[a,e] (plf)	Minimum Fastener Size [c,d,j,k]
4. Gypsum board, gypsum veneer base, or water-resistant gypsum backing board	½"	Unblocked [f]	(No changes)	(No changes)	5d cooler (1⅝" x 0.086") or wallboard 0.120" Nail, min. ⅜" head, 1 ½" long 16 Gage Staple, 1½" long
		Unblocked [f]			
		Unblocked			
		Unblocked			
		Blocked [g]			
		Blocked [g]			
		Unblocked			No. 6-1 ¼"screws [i]
		Blocked [g]			
		Blocked [g]			
		Blocked [f,g]			
		Blocked [g]			
	⅝"	Unblocked [f]			6d cooler (1⅞" x 0.092") or wallboard
		Blocked [g]			0.120" Nail, min. ⅜" head, 1¾ long 16 Gage Staple, 1½" legs, 1⅝" long
		Blocked [g] Two-ply			Base ply-6d cooler (1⅞" x 0.092") or wallboard 1¾"' x 0.120" Nail, min. ⅜" head 1⅝" 16 Gage Galv. Staple Face ply-8d cooler (2⅜" x 0.113") or wallboard 0.120" Nail, min. ⅜" head, 2⅜" long 15 Gage Galv. Staple, 2¼" long
		Unblocked			No. 6-11/4" screws [i]
		Blocked [g]			

(Portions of table not shown do not change)

a. (No change to current text)
b. Applies to fastening at studs, top and bottom plates and blocking.
c. Alternate fasteners are permitted to be used if their dimensions are not less than the specified dimensions. Drywall screws are permitted to substitute for the 5d (1⅝" x 0.086"), and 6d (1⅞" x 0.092")(cooler) nails listed above, and No. 6-1¼ inch Type S or W screws for 6d (1⅞" x 0.092) (cooler) nails.
d. through f. (No change to current text)
g. All edges are blocked, and edge fastening is provided at all supports and all panel edges.
h. First number denotes fastener spacing at the edges; second number denotes fastener spacing at intermediate framing members.
i. (No change to current text)
j. Staples shall have a minimum crown width of 7/16 inch, measured outside the legs, and shall be installed with their crowns parallel to the long dimension of the framing members.
k. (No change to current text)

Section 2306.4.5.1.3 Change to read as shown: (S75-03/04)

2306.4.5.1.3 Fastening. Studs, top and bottom plates and blocking shall be fastened in accordance with Table 2304.9.1.

Section 2306.4.5.1.4 Change to read as shown: (S75-03/04)

2306.4.5.1.4 Fasteners. The size and spacing of fasteners shall be set forth in Table 2306.4.5. Fasteners shall be spaced not less than ⅜ inch (9.5 mm) from edges and ends of gypsum boards or sides of studs, blocking and top and bottom plates.

Table 2308.9.3(1) Change footnote c to read as shown: (S80-03/04)

TABLE 2308.9.3(1)
BRACED WALL PANELS[a]

(No change to table entries.)

a. and b. (No change to current text)
c. See Sections 2308.9.3.1 and 2308.9.3.2 for alternative braced panel requirement.
d. through f. (No change to current text)

Section 2308.9.3.2 Add new section to read as shown: (S80-03/04)

2308.9.3.2 Alternate bracing wall panel adjacent to a door or window opening. Any bracing required by Section 2308.9.3 is permitted to be replaced by the following when used adjacent to a door or window opening with a full-length header:

1. In one-story buildings, each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of ⅜-inch-minimum-thickness (9.5 mm) wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure 2308.9.3.2. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 2308.9.3.2. A built-up header consisting of at least two 2 x 12s and fastened in accordance with item 24 of Table 2304.9.1 shall be permitted to be used. A spacer, if used, shall be placed on the side of the built-up beam opposite the wood structural panel 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 (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1,000 pounds (4,400 N) shall fasten the header to the inner studs opposite the sheathing. One anchor bolt not less than ⅝-inch (15.9 mm) diameter and installed in accordance with Section 2308.6 shall be provided 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 (18,480 N).

   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 (4,400 N) 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 1,000 pounds (4,400N).

   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. This foundation shall be reinforced with not less than one No. 4 bar top and bottom.

   Where the continuous foundation is required to have a depth greater than 12 inches (305 mm), a minimum 12-inch-by-12-inch (305 mm by 305 mm) continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar