TABLE 2306.3(1)
ALLOWABLE SHEAR VALUES (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS UTILIZING STAPLES WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR WIND OR SEISMIC LOADING[b, f, g, i]

PANEL GRADE	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	PANELS APPLIED DIRECT TO FRAMING					PANELS APPLIED OVER 1/2" OR 5/8" GYPSUM SHEATHING				
			Staple length and gage[h] (inches)	Fastener spacing at panel edges (inches)				Staple length and gage[h] (inches)	Fastener spacing at panel edges (inches)			
				6	4	3	2[d]		6	4	3	2[d]
Structural I sheathing	3/8	1	1 1/2 16 Gage	155	235	315	400	2 16 Gage	155	235	310	400
	7/16			170	260	345	440		155	235	310	400
	15/32			185	280	375	475		155	235	300	400
Sheathing, plywood siding[e] except Group 5 Species, ANSI/APA PRP 210 siding[e]	5/16[c] or 1/4[c]	1	1 1/2 16 Gage	145	220	295	375	2 16 Gage	110	165	220	285
	3/8			140	210	280	360		140	210	280	360
	7/16			155	230	310	395		140	210	280	360
	15/32			170	255	335	430		140	210	280	360
	19/32		1 3/4 16 Gage	185	280	375	475	—	—	—	—	—

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

a. For framing of other species: (1) Find specific gravity for species of lumber in ANSI/AWC NDS. (2) For staples find shear value from table for Structural I panels (regardless of actual grade) and multiply value by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species.

b. Panel edges backed with 2-inch nominal or wider framing. Install panels either horizontally or vertically. Space fasteners maximum 6 inches on center along intermediate framing members for 3/8-inch and 7/16-inch panels installed on studs spaced 24 inches on center. For other conditions and panel thickness, space fasteners maximum 12 inches on center on intermediate supports.

c. 3/8-inch panel thickness or siding with a span rating of 16 inches on center is the minimum recommended where applied directly to framing as exterior siding. For grooved panel siding, the nominal panel thickness is the thickness of the panel measured at the point of fastening.

d. Framing at adjoining panel edges shall be 3 inches nominal or wider.

e. Values apply to all-veneer plywood. Thickness at point of fastening on panel edges governs shear values.

f. Where panels are applied on both faces of a wall and fastener spacing is less than 6 inches on center on either side, panel joints shall be offset to fall on different framing members, or framing shall be 3 inches nominal or thicker at adjoining panel edges.

g. In Seismic Design Category D, E or F, where shear design values exceed 350 pounds per linear foot, all framing members receiving edge fastening from abutting panels shall be not less than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joint and sill plate nailing shall be staggered at all panel edges. See AWC SDPWS for sill plate size and anchorage requirements.

h. 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.

i. For shear loads of normal or permanent load duration as defined by the ANSI/AWC NDS, the values in the table shall be multiplied by 0.63 or 0.56, respectively.

TABLE 2306.3(2)
ALLOWABLE SHEAR VALUES (plf) FOR WIND OR SEISMIC LOADING ON SHEAR WALLS OF FIBERBOARD SHEATHING BOARD CONSTRUCTION UTILIZING STAPLES FOR TYPE V CONSTRUCTION ONLY[a, b, c, d, e]

THICKNESS AND GRADE (inches)	STAPLE GAGE AND DIMENSIONS	ALLOWABLE SHEAR VALUE (pounds per linear foot) STAPLE SPACING AT PANEL EDGES (inches)[a]		
		4	3	2
1/2 or 25/32 Structural	No. 16 gage galvanized staple, 7/16″ crown 1 3/4 inch long	150	200	225
	No. 16 gage galvanized staple, 1″ crown 1 3/4 inch long	220	290	325

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

a. Fiberboard sheathing shall not be used to brace concrete or masonry walls.

b. Panel edges shall be backed with 2-inch or wider framing of Douglas Fir-larch or Southern Pine. For framing of other species: (1) Find specific gravity for species of framing lumber in ANSI/AWC NDS. (2) For staples, multiply the shear value from the table by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species.

c. Values shown are for fiberboard sheathing on one side only with long panel dimension either parallel or perpendicular to studs.

d. Fastener shall be spaced 6 inches on center along intermediate framing members.

e. Values are not permitted in Seismic Design Category D, E or F.