

**Table 2306.2(3)**  
**UNBLOCKED Wood Structural Panel DIAPHRAGMS with Framing of Douglas-Fir Larch or Southern Pine**  
**Allowable (ASD) Unit Shear Capacities (pounds per foot)**

Sheathing Grade	Common Nail Size	Minimum Fastener Penetration in Framing (in.)	Minimum Nominal Panel Thickness (in.)	Minimum Nominal Width of Nailed Face at Supported Edges and Boundaries (in.)	SEISMIC		WIND	
					6 in. Nail Spacing at diaphragm boundaries and supported panel edges			
					Case 1	Cases 2,3,4,5,6	Case 1	Cases 2,3,4,5,6
Structural I	8d	1-3/8	3/8	2 3	240 265	180 200	335 370	252 280
	10d	1-1/2	15/32	2 3	285 320	215 240	400 447	300 335
Sheathing and Single-Floor (DOC PS1 and PS2)	6d	1-1/4	3/8	2 3	165 185	125 140	230 260	175 195
	8d	1-3/8	3/8	2 3	215 240	160 180	300 335	225 252
			7/16	2 3	230 255	170 190	322 357	237 265
			15/32	2 3	240 265	180 200	335 370	252 280
	10d	1-1/2	15/32	2 3	255 290	190 215	357 405	265 300
			19/32	2 3	285 320	215 240	400 447	300 335

a. See AWC SDPWS for the following: For general construction requirements see 4.2.6. For specific requirements see 4.2.7.1 for wood structural panel diaphragms. See Appendix A for common nail dimensions.

b. For species and grades of framing other than Douglas-Fir-Larch or Southern Pine, reduced nominal unit shear capacities shall be determined by multiplying the tabulated nominal unit shear capacity by the Specific Gravity Adjustment Factor =  $[1-(0.5-G)]$ , where G = Specific Gravity of the framing lumber from the NDS (Table 12.3.3A). The Specific Gravity Adjustment Factor shall not be greater than 1.

c. See AWC SDPWS Table 4.2C for Case definitions.

d. See AWC SDPWS Table 4.2C for the apparent shear stiffness values ( $G_a$ ).

**Table 2306.2(4)**  
**BLOCKED Wood Structural Panel DIAPHRAGMS with Framing of Douglas-Fir Larch or Southern Pine**  
**Allowable (ASD) Unit Shear Capacities (pounds per foot)**

Sheathing Grade	Common Nail Size	Minimum Fastener Penetration in Framing Member or Blocking (in.)	Minimum Nominal Panel Thickness (in.)	Minimum Nominal Width of Nailed Face at Adjoining Panel Edges and Boundaries (in.)	SEISMIC				WIND			
					Nail Spacing (in.) at diaphragm boundaries (all cases), at continuous panel edges parallel to load (Cases 3 & 4), and at all panel edges (Cases 5 & 6)				Nail Spacing (in.) at diaphragm boundaries (all cases), at continuous panel edges parallel to load (Cases 3 & 4), and at all panel edges (Cases 5 & 6)			
					6	4	2-1/2	2	6	4	2-1/2	2
					Nail Spacing (in.) at other panel edges (Cases 1, 2, 3, & 4)				Nail Spacing (in.) at other panel edges (Cases 1, 2, 3, & 4)			
					6	6	4	3	6	6	4	3
Structural I	8d	1-3/8	3/8	2	270	360	530	600	372	505	742	840
				3	300	400	600	675	420	560	840	945
	10d	1-1/2	15/32	2	320	425	640	730	447	595	895	1022
				3	360	480	720	820	505	672	1007	1147
Sheathing and Single-Floor (DOC PS1 and PS2)	6d	1-1/4	3/8	2	185	250	375	420	260	350	525	587
				3	210	280	420	475	295	392	587	665
	8d	1-3/8	3/8	2	240	320	480	545	335	447	672	762
				3	270	360	540	610	377	505	755	855
				2	255	340	505	575	357	475	707	805
				3	285	380	570	645	400	532	797	902
	10d	1-1/2	15/32	2	270	360	530	600	372	505	742	840
				3	300	400	600	675	420	560	840	945
				2	290	385	575	655	405	540	805	917
				3	325	430	650	735	455	602	910	1030
	19/32	1-1/2	2	320	425	640	730	497	595	895	1022	
			3	360	480	720	820	505	672	1007	1147	

a. See AWC SDPWS for the following: For general construction requirements see 4.2.6. For specific requirements see 4.2.7.1 for wood structural panel diaphragms. See Appendix A for common nail dimensions.

b. For species and grades of framing other than Douglas-Fir-Larch or Southern Pine, reduced nominal unit shear capacities shall be determined by multiplying the tabulated nominal unit shear capacity by the Specific Gravity Adjustment Factor =  $[1-(0.5-G)]$ , where G = Specific Gravity of the framing lumber from the NDS (Table 12.3.3A). The Specific Gravity Adjustment Factor shall not be greater than 1.

c. See AWC SDPWS Table 4.2A for Case definitions.

d. See AWC SDPWS Table 4.2A for the apparent shear stiffness values ( $G_a$ ).

**Table 2306.2(5)**  
**Blocked Wood Structural Panel DIAPHRAGMS with Framing of Douglas-Fir Larch or Southern Pine**  
**UTILIZING MULTIPLE ROWS OF FASTENERS (HIGH-LOAD DIAPHRAGMS)**  
**Allowable (ASD) Unit Shear Capacities (pounds per foot)**

Sheathing Grade	Common Nail Size	Minimum Fastener Penetration in Framing Member or Blocking (in.)	Minimum Nominal Panel Thickness (in.)	Minimum Nominal Width of Nailed Face at Adjoining Panel Edges and Boundaries (in.)	Lines of Fasteners	SEISMIC				WIND			
						Nail Spacing (in.) at diaphragm boundaries (all cases), at continuous panel edges parallel to load (Cases 3 & 4), and at all panel edges (Cases 5 & 6)							
						4		2-1/2		4		2-1/2	
						Nail Spacing (in.) at other panel edges (Cases 1, 2, 3, & 4)				Nail Spacing (in.) at other panel edges (Cases 1, 2, 3, & 4)			
						6	4	4	3	6	4	4	3
Structural I	10d	1-1/2	15/32	3	2	605	815	875	1150	847	1140	1225	1610
				4	2	700	915	1005	1290	980	1280	1407	1805
				4	3	875	1220	1285	1395	1225	1707	1800	1952
			19/32	3	2	670	880	965	1255	937	1232	1350	1757
				4	2	780	990	1110	1440	1092	1385	1555	2015
				4	3	965	1320	1405	1790	1350	1847	1967	2505
			23/32	3	2	730	955	1050	1365	1022	1337	1470	1910
				4	2	855	1070	1210	1565	1197	1497	1695	2190
				4	3	1050	1430	1525	1800	1470	2002	2135	2520
Sheathing and Single-Floor (DOC PS1 and PS2)	10d	1-1/2	15/32	3	2	525	725	765	1010	735	1015	1070	1415
				4	2	605	815	875	1105	847	1140	1225	1547
				4	3	765	1085	1130	1195	1070	1520	1582	1672
			19/32	3	2	650	860	935	1225	910	1205	1310	1715
				4	2	755	965	1080	1370	1057	1350	1512	1917
				4	3	935	1290	1365	1485	1310	1805	1910	2080
			23/32	3	2	710	935	1020	1335	995	1310	1427	1870
				4	2	825	1050	1175	1445	1155	1470	1645	2022
				4	3	1020	1400	1480	1565	1427	1960	2072	2190

- a. See AWC SDPWS for the following: For general construction requirements see 4.2.6. For specific requirements see 4.2.7.1 for wood structural panel diaphragms. See Figure 4C for nailing diagrams. See Appendix A for common nail dimensions.
- b. For species and grades of framing other than Douglas-Fir-Larch or Southern Pine, reduced nominal unit shear capacities shall be determined by multiplying the tabulated nominal unit shear capacity by the Specific Gravity Adjustment Factor =  $[1-(0.5-G)]$ , where G = Specific Gravity of the framing lumber from the NDS (Table 12.3.3A). The Specific Gravity Adjustment Factor shall not be greater than 1.
- c. See AWC SDPWS Table 4.2B for Case definitions.
- d. See AWC SDPWS Table 4.2B for the apparent shear stiffness values ( $G_a$ ).