



DSA Structural Amendments under review are highlighted in Marginal Markings

Template 23-12

2001 CBC - Chapter 23A
WOOD

Section - TABLES
Subsection(s) - TABLE 23A-II-H

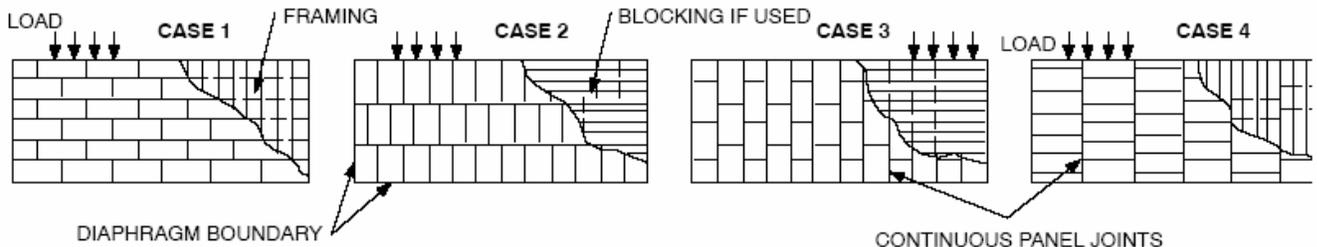
TABLE 23A-II-H—ALLOWABLE SHEAR IN POUNDS PER FOOT FOR HORIZONTAL WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE¹

PANEL GRADE	COMMON NAIL SIZE	MINIMUM NAIL PENETRATION IN FRAMING (inches)	MINIMUM NOMINAL PANEL THICKNESS (inches)	MINIMUM NOMINAL WIDTH OF FRAMING MEMBER (inches)	BLOCKED DIAPHRAGMS				UNBLOCKED DIAPHRAGMS			
					Nail spacing (in.) at diaphragm boundaries (all cases), at continuous panel edges parallel to load (Cases 3 and 4) and at all panel edges (Cases 5 and 6)				Nails spaced 6" (152 mm) max. at supported edges			
					× 25.4 for mm				Case 1 (No unblocked edges or continuous joints parallel to load)		All other configurations (Cases 2, 3, 4, 5 and 6)	
					6	4	2 ^{1/2}	2 ²	Nail spacing (in.) at other panel edges			
					× 25.4 for mm				× 0.0146 for N/mm			
Structural 1	6d	1 ^{1/4}	5/16	2 3	185 210	250 280	375 420	420 475	165 185	125 140		
	8d	1 ^{1/2}	3/8	2 3	270 300	360 400	530 600	600 675	240 265	180 200		
	10d ³	1 ^{3/8}	15/32	2 3	320 360	425 480	640 720	730 820	285 320	215 240		
C-D, C-C, Sheathing, and other grades covered in UBC Standard 23-2 or 23-3	6d	1 ^{1/4}	5/16	2 3	170 190	225 250	335 380	380 430	150 170	110 125		
			3/8	2 3	185 210	250 280	375 420	420 475	165 185	125 140		
	8d	1 ^{1/2}	3/8	2 3	240 270	320 360	480 540	545 610	215 240	160 180		
			7/16	2 3	255 285	340 380	505 570	575 645	230 255	170 190		
			15/32	2 3	270 300	360 400	530 600	600 675	240 265	180 200		
			15/32	2 3	290 325	385 430	575 650	655 735	255 290	190 215		
	10d ³	1 ^{5/8}	15/32	2 3	320 360	425 480	640 720	730 820	285 320	215 240		

¹These values are for short-duration loads due to wind or earthquake and must be reduced 25 percent for normal loading such as for folded plate or boxed girder design. Space nails 12 inches (305 mm) maximum on center for floors and 12 inches (305 mm) maximum on center for floors along intermediate framing members. Allowable shear values for common nails in framing members of other species set forth in Table 12A, ANSI/NFPA NDS-01 * * * shall be calculated for all other grades by multiplying the above tabulated shear capacities for common nails and the panel grade by the following factors: 0.82 for species with specific gravity greater than or equal to 0.42 but less than 0.49, and 0.65 for species with a specific gravity less than 0.42.

²Framing and blocking at adjoining panel edges shall be 3-inch (76 mm) nominal or wider and nails shall be staggered where nails are spaced 3 inches (76 mm) or less.

³Plywood joints shall occur at the center of framing members or blocking. The minimum edge distance for nails in the receiving members and the plywood shall be 3/8 inch (9.5 mm) for 2-inch (51 mm) nominal receiving members and 1/2-inch (13 mm) for 3-inch (76 mm) nominal receiving members. Flat blocking receiving 10d nails shall be 3-inch by 4-inch nominal (76 by 102 mm) or larger.



(Cases 5 and 6 are not adopted by the State of California.)

NOTE: Framing may be oriented in either direction for diaphragms, provided sheathing is properly designed for vertical loading.