

U.S. Structural Building Components Usage and Market Share Statistics¹

Roof System Market Share Facts

Table 2-12
Market share of selected building components used in roof systems in new U.S. residential construction, by region,¹ 1997 and 2001²

Regions	Trusses		Rafters	
	1997	2001	1997	2001
United States	67.5	62.8	32.0	35.5
Northeast	51.6	52.7	47.7	44.7
Midwest	80.7	81.9	19.0	17.8
South	54.7	45.0	44.9	52.6
West	85.0	85.8	14.4	13.1

¹ Regions correspond to U.S. Census regions as shown in figure 2-3.

² Based on square feet of roof area in new residential construction (includes single family detached, single family attached, and multifamily units).

³ Difference between horizontal sum and 100 percent represents other methods and components including beams and purlins and structural insulated panels.

Source: USITC estimates based on data from National Association of Home Builders Research Center.

1. Residential roof construction is dominated by metal plate connected wood trusses and traditional site-constructed rafters.
2. Nationally, during 1997-2001, an average of 64% of residential roof area was constructed with roof trusses, while 35% was constructed with rafters.
3. Trusses are the dominant form of roof construction in the Midwest and West, but rafters still account for nearly 45% of residential roof construction in the Northeast and more than one-half of residential roof construction in the South.
4. Between 1997 and 2001, the percentage of roof area constructed of trusses in the South actually decreased. Discussions with truss manufacturers suggest that truss usage rates are related to cost, the skill level, and availability of labor. The use of trusses tends to increase as the availability of skilled roof framers decreases. In addition to these factors, some truss manufacturers attribute low usage rates in the South to resistance among smaller, low-volume builders.

Floor System Market Share Facts

Table 2-9
Market share of selected building components used in floor systems in new U.S. residential construction, by region, 1997 and 2001¹

Regions	Cast-in-place concrete		Solid lumber joists		Wood I-joists		Open-web wood floor trusses	
	1997	2001	1997	2001	1997	2001	1997	2001
United States	29.2	33.5	40.2	28.5	19.5	26.0	9.7	10.4
Northeast	4.0	5.8	66.4	49.1	18.6	39.4	8.7	4.5
Midwest	10.4	13.4	58.8	44.3	20.9	28.2	9.4	13.6
South	37.8	46.3	34.4	24.4	14.6	16.5	12.2	12.0
West	40.5	36.6	23.3	15.4	27.7	36.6	6.0	7.3

¹ Based on square feet of floor area in new residential construction (includes single family detached, single family attached, and multifamily units).

² Difference between horizontal sum and 100 percent represents other methods and components including precast concrete, steel, and structural insulated panels.

Source: USITC estimates based on data from National Association of Home Builders Research Center.

1. During 1997-2001, residential floors were primarily constructed using cast-in-place concrete (houses built on concrete slabs), solid lumber joists, or wood I-joists. Open web wood floor trusses averaged 9.5% of total floor area during 1997-2001.
2. Nationally, solid lumber joists lost market share to all other floor construction methods. The use of wood I-joists, a substitute for solid lumber joists, increased from 20% to 26%. The use of solid lumber joists decreased from about 40% to 29%.
3. Solid lumber joists remain the predominant method of floor construction in the Northeast and Midwest, but demand has shifted to wood I-joists. Between 1997 and 2001, 28% in the Midwest. I-joist use also increased from 28% to 37% in the West.
4. The use of open web wood floor trusses varies by region and has been steady at 9% to 10% of the market. The use of floor trusses ranges from less than 5% in the Northeast to nearly 14% in the Midwest. Though national and regional market shares for the use of open web wood floor trusses were generally less than 15%, industry representatives indicated that some local markets have a preference for open web wood floor trusses.

Wall System Market Share Facts

Table 2-11

Market share of selected construction methods used for wood exterior wall systems in new U.S. residential construction, by region,¹ 1997 and 2001²

Regions	Light frame construction		Panelized construction		Modular construction	
	1997	2001	1997	2001	1997	2001
United States	87.1	85.7	11.3	10.3	0.9	2.4
Northeast	82.8	74.0	14.8	22.1	1.9	2.6
Midwest	84.5	79.2	12.4	17.5	2.6	2.4
South	84.9	88.0	14.7	6.0	0.2	3.4
West	94.0	92.4	4.1	6.0	0.0	0.8

¹ Regions correspond to U.S. Census regions as shown in figure 2-3.

² Based on linear feet of exterior walls in new U.S. residential construction (includes single family detached, single family attached, and multifamily units).

³ Difference between horizontal sum and 100 percent represents other methods including structural insulated panels, post and beam, and log construction.

Source: USITC estimates based on data from National Association of Home Builders Research Center.

1. During 1997-2001, the share of walls in new U.S. residential construction built with light frame construction ranged from 86% in 2000 and 2001 to 92% in 1999.
2. Wall panel usage ranged from 5% in 1999 to 12% in 2000.
3. During 1997-2001, increased use of wall panels in the Northeast and Midwest was offset by decreased use in the South.
4. Industry representatives attributed variation in wall panel usage to builders' attempts to balance construction schedules and labor supply. When demand is high, construction schedules tight, and labor in short supply, builders will increase their usage of wall panels to save labor. When demand is slack and builders have excess labor available, they will use on-site construction to avoid layoffs.

Beam and Header Market Share Facts

Table 2-10

Market share of selected wood structural building components used for beam and header applications in new U.S. residential construction, by region,¹ 1997 and 2001²

Region	Engineered Wood Products									
	Solid wood ³		Laminated veneer lumber (LVL)		Stranded-lumber products ⁴		Glue laminated lumber (Glulam)		I-joists	
	1997	2001	1997	2001	1997	2001	1997	2001	1997	2001
United States	52.5	43.9	9.3	14.5	15.1	16.8	3.9	5.7	5.4	4.8
Northeast	56.0	42.9	6.9	15.6	14.8	15.4	1.9	5.3	5.0	5.5
Midwest	47.7	35.8	9.8	24.2	16.3	14.8	4.6	6.5	5.0	2.4
South	57.3	51.3	10.1	13.6	11.5	9.9	2.2	3.7	5.3	6.0
West	47.1	39.0	8.8	8.1	20.5	29.4	7.0	8.3	5.9	4.3

¹ Regions correspond to U.S. Census regions as shown in figure 2-3.

² Based on linear feet of beams and headers in new U.S. residential construction (includes single family detached, single family attached, and multifamily units), and includes linear feet of engineered wood products used as rim board (framing member used to tie ends of I-joists together).

³ Includes large dimension lumber and built-up dimension lumber.

⁴ Includes parallel strand lumber, laminated strand lumber, and oriented strand lumber.

⁵ Difference between horizontal sum and 100 percent represents other products including steel and open-web wood trusses.

Source: USITC estimates based on data from National Association of Home Builders Research Center.

1. In 2001, 44% of beams and headers in new U.S. residential housing were constructed of solid wood, either large dimension lumber or built-up dimension lumber, a decrease from 1997 when 53% of beams and headers were constructed of solid wood.
2. The total use of the various EWP in beam and header applications increased from a total of 34% to 42%.
3. These trends were generally evident in all regions of the country, though usage of various products did vary among regions. Midwest builders were the most likely to use EWP for beams and headers. Builders in the South were the least likely to use EWP in beam and header applications.

¹ All facts taken directly from the U.S. International Trade Commission Publication 3596 entitled "Conditions of Competition in the U.S. Market for Wood Structural Building Components" from ITC Investigation No. 332-445 April 2003. U.S. International Trade Commission, Washington, DC 20436, www.usitc.gov