ITC 332 Report Summary

New U.S. Residential Construction Market Share[i]

Table D-2-4
Market share of wood structural building components and their substitutes in new residential construction in the United States, by end use, 1997-2001

Components and substitutes	1997	1998	1999	2000	2001
			Percent		
Beams and headers[1]:					
Built-up dimension lumber	45.4	41.8	41.4	36.0	35.3
LVL	9.3	10.8	10.5	14.2	14.5
Timberstrand	11.1	12.0	12.2	15.3	14.0
Other	9.0	9.9	10.1	9.3	9.3
Solid wood	7.1	8.2	8.3	6.7	8.6
Glulam	3.9	5.7	5.8	5.4	5.7
I-joists	5.4	3.3	3.3	4.6	4.8
Steel (all types)	4.3	4.3	4.4	4.9	3.2
Parallam	4.0	3.3	3.4	3.0	2.8
Open web wood truss	0.5	0.5	0.5	0.6	1.8
Total	100.0	100.0	100.0	100.0	100.0
Wood exterior walls[2]:					
Light frame construction	87.1	88.9	92.4	86.1	85.7
Panelized construction	11.3	9.3	5.2	12.4	10.3
Modular construction	0.9	1.2	1.4	0.6	2.4
Post & beam	0.5	0.3	0.7	0.6	0.8
Logs	0.1	0.1	0.1	0.1	0.6
Structural insulated panels	0.1	0.1	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0
Floor area[3]:					
Cast-in-place concrete	29.2	29.2	31.3	34.5	33.5
Lumber joists	40.2	38.5	35.0	31.0	28.5
Wood I-joists	19.5	22.0	22.6	23.4	26.0
Open web wood truss	9.7	8.7	9.6	9.2	10.4
Precast concrete	0.3	0.9	0.5	0.2	1.2
Steel (all types)	0.5	0.4	0.7	1.3	0.3
Other wood	0.5	0.2	0.3	0.2	0.1
Structural insulated panels	-	-	0.1	0.1	-
Total	100.0	100.0	100.0	100.0	100.0
Roof area[4]:					
Trusses	67.5	62.0	63.4	62.9	62.8
Rafters	32.0	36.8	35.4	34.9	35.5
Beam and purlin	0.3	0.7	0.7	0.7	1.3
Structural insulated panels	-	0.1	0.2	0.2	0.3
Other	0.1	0.4	0.3	1.4	0.2
Total	100.0	100.0	100.0	100.0	100.0

[1] Based on linear feet of beams and headers, including rim board.
[2] Based on linear feet of exterior walls.
[3] Based on square feet of floor area.
[4] Based on square feet of roof area.

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

1. **Beams and Headers --** Built-up dimension lumber has seen a slight decline as the dominant source, from 45.4% in 1997 to 35.3% in 2001. LVL has increased from 9.3% in 1997 to 14.5% in 2001 as well as Timberstrand, 11.1% in 1997 to 14.0% in 2001.

2. **Wood Exterior Walls --** Light frame construction is the significant choice for wood exterior walls. It has not seen any major increase or decline.

3. **Floor Area --** Cast-in-place concrete, lumber joists and wood I-joists are preferred in floors. In 1997, Lumber joists shared 40.2%, but in 2001 Cast-in-place concrete was 33.5% and Lumber joists held 28.5%.

4. **Roof Area –** Trusses were the main focus for roofs in 2001 at 62.8% and rafters holding 35.5% of the market share.

New U.S. Residential Construction Market Share by Region

Midwest Region Facts

Table D-2-6
Market share of wood structural building components and their substitutes in new residential construction, Midwest Region,[1] by end use, 1997-2001

Components and substitutes	1997	1998	1999	2000	2001
	Percent				
Beams and headers[2]:					
Built-up dimension lumber	46.7	41.2	41.5	40.3	32.9
LVL	9.8	12.3	12.2	19.4	24.2
Timberstrand	13.6	13.5	13.2	12.3	12.5
Other	7.7	9.3	9.2	7.3	8.8
Steel (all types)	8.5	8.8	8.8	8.5	6.6
Glulam	4.6	4.6	4.7	4.3	6.5
Solid wood	1.0	1.1	1.1	2.1	2.9
I-joists	5.0	6.1	6.1	2.9	2.4
Parallam	2.7	2.4	2.4	2.5	2.3
Open web wood truss	0.4	0.8	0.9	0.5	0.9
Total	100.0	100.0	100.0	100.0	100.0
Wood exterior walls[3]:					
Light frame construction	84.5	87.9	85.8	84.0	79.2
Panelized construction	12.4	10.2	9.8	13.7	17.5
Modular construction	2.6	1.7	4.1	1.8	2.4
Logs	0.2	0.1	0.1	0.1	0.1
Structural insulated panels	0.1	0.1	0.1	0.3	0.1
Post & beam	0.1	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0
Floor area[4]:					
Lumber joists	58.8	58.0	51.0	54.4	44.3
Wood I-joists	20.9	24.5	23.7	25.1	28.2
Open web wood truss	9.4	8.4	13.8	10.7	13.6
Cast-in-place concrete	10.4	8.7	10.8	8.6	13.4
Steel (all types)	0.5	0.2	0.3	0.6	0.3
Other wood	0.2	0.1	0.2	0.3	0.2
Precast concrete	0.1	0.0	0.0	0.4	0.0
Structural insulated panels	0.0	0.1	0.2	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0
Roof area[5]:					
Trusses	80.7	75.7	79.9	80.6	81.9
Rafters	19.0	24.2	19.5	19.0	17.8
Structural insulated panels	0.1	0.1	0.1	0.1	0.3
Beam and purlin	0.2	0.1	0.1	0.2	0.1
Other	0.0	0.0	0.3	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0

[1] Regions correspond to U.S. Census Regions as shown in figure 2-3.
[2] Based on linear feet of beams and headers including rim board.
[3] Based on linear feet of exterior walls.
[4] Based on square feet of floor area.
[5] Based on square feet of roof area.

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

1. **Beams and Headers --** Built-up dimension lumber has seen a decrease from 46.7% in 1997 to 32.9% in 2001. LVL has seen an increase from 9.8% in 1997 to 24.2% in 2001.
2. **Wood Exterior Walls --** Light frame construction has seen a slight decrease from 84.5% in 1997 to 79.2% in 2001. Panelized construction has increased from 12.4% in 1997 to 17.5% in 2001.
3. **Floor Area --** Lumber joists has decreased slightly in the Midwest, while wood I-joists and open web floor trusses have both seen an increase.
4. **Roof Area --** Roof trusses are the dominant choice in roof construction in the Midwest, with over 81% in 2001.

West Region Facts

Table D-2-8
Market share of wood structural building components and their substitutes in new residential construction, West Region,[1] by end use, 1997-2001

Components and substitutes	1997	1998	1999	2000	2001
	Percent				
Beams and headers[2]:					
Timberstrand	15.6	16.9	17.	23.3	25.9
Solid wood	22.5	27.6	27.5	17.0	20.6
Built-up dimension lumber	24.6	18.7	18.7	13.6	18.4
Glulam	7.0	12.6	12.5	9.7	8.3
LVL	8.8	6.0	6.0	10.9	8.1
Other	8.2	6.6	6.6	10.5	5.6
I-joists	5.9	3.4	3.4	6.0	4.3
Steel (all types)	2.0	2.9	2.7	5.3	4.1
Parallam	4.9	4.6	4.9	3.2	3.5
Open web wood truss	0.6	0.6	0.8	0.4	1.2
Total	100.0	100.0	100.0	100.0	100.0
Wood exterior walls[3]:					
Light frame construction	94.0	93.1	98.7	89.8	92.4
Panelized construction	4.1	5.6	0.8	8.8	6.0
Modular construction	0.0	0.1	0.0	0.0	0.8
Post & beam	1.8	0.9	0.5	1.0	0.4
Logs	0.0	0.2	0.0	0.2	0.2
Structural insulated panels	0.1	0.0	0.0	0.1	0.2
Total	100.0	100.0	100.0	100.0	100.0
Floor area[4]:					
Wood I-joists	27.7	27.1	34.1	34.5	36.6
Cast-in-place concrete	40.5	39.5	37.8	40.6	36.6
Lumber joists	23.3	22.6	19.0	12.8	15.4
Open web wood truss	6.0	9.3	6.4	7.7	7.3
Precast concrete	0.2	0.4	1.0	0.0	3.4
Steel (all types)	0.9	0.9	1.1	3.6	0.7
Other wood	1.3	0.2	0.7	0.6	0.1
Structural insulated panels	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0
Roof area[5]:					
Trusses	85.0	82.0	79.7	80.1	85.8
Rafters	14.4	17.3	18.3	14.6	13.1
Beam and purlin	0.4	0.5	0.9	0.5	0.9
Structural insulated panels	0.0	0.0	0.3	0.1	0.3
Other	0.2	0.1	0.6	4.7	0.0
Total	100.0	100.0	100.0	100.0	100.0

[1] Regions correspond to U.S. Census Regions as shown in figure 2-3.
[2] Based on linear feet of beams and headers including rim board.
[3] Based on linear feet of exterior walls.
[4] Based on square feet of floor area.
[5] Based on square feet of roof area.

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

1. **Beams and Headers --** Timberstrand has shown a 10% increase in the West, from 15.6% in 1997 to 25.9% in 2001.
2. **Wood Exterior Walls --** Light frame construction holds almost the entire exterior wall construction with 92.4% in 2001.
3. **Floor Area --** Wood I-joists and cast-in-place concrete held 36.6% of the floor area construction in 2001.
4. **Roof Area -- T**russes shared 85.8% of the market in 2001, with rafters holding 13.1%.

Northeast Region Facts

Table D-2-5
Market share of wood structural building components and their substitutes in new residential construction, Northeast Region,[1] by end use, 1997-2001

Components and substitutes	1997	1998	1999	2000	2001
			Percent		
Beams and headers[2]:					
Built-up dimension lumber	53.8	50.6	47.7	42.6	36.8
LVL	6.9	9.2	10.5	13.0	15.6
Other	10.2	10.3	10.4	5.6	12.5
Timberstrand	7.9	14.6	15.2	16.6	10.1
Solid wood	2.2	1.5	1.4	2.5	6.1
I-joists	5.0	1.9	1.9	2.0	5.5
Parallam	6.9	4.7	5.0	7.6	5.3
Glulam	1.9	3.5	3.7	4.2	5.3
Steel (all types)	5.0	3.6	4.1	4.9	2.5
Open web wood truss	0.4	0.1	0.1	0.9	0.2
Total	100.0	100.0	100.0	100.0	100.0
Wood exterior walls[3]:					
Light frame construction	82.8	88.3	96.9	85.8	74.0
Panelized construction	14.8	10.0	1.5	12.3	22.1
Modular construction	1.9	1.2	1.0	0.8	2.6
Post & beam	0.3	0.2	0.3	0.6	0.9
Structural insulated panels	0.1	0.1	0.0	0.3	0.3
Logs	0.1	0.1	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0
Floor area[4]:					
Lumber joists	66.4	62.7	57.9	55.3	49.1
Wood I-joists	18.6	26.3	28.2	29.9	39.4
Cast-in-place concrete	4.0	5.3	7.1	5.0	5.8
Open web wood truss	8.7	5.5	3.2	8.7	4.5
Precast concrete	0.0	0.0	2.2	0.1	0.7
Steel (all types)	1.9	0.2	1.4	1.0	0.4
Structural insulated panels	0.0	0.0	0.0	0.0	0.1
Other wood	0.3	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0
Roof area[5]:					
Trusses	51.6	40.3	38.7	44.6	52.7
Rafters	47.7	59.3	58.8	53.3	44.7
Beam and purlin	0.1	0.4	1.4	2.0	1.6
Structural insulated panels	0.1	0.0	0.4	0.1	0.8
Other	0.5	0.0	0.7	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0

[1] Regions correspond to U.S. Census Regions as shown in figure 2-3.
[2] Based on linear feet of beams and headers including rim board.
[3] Based on linear feet of exterior walls.
[4] Based on square feet of floor area.
[5] Based on square feet of roof area.

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

1. **Beams and Headers --** Built-up dimension lumber has seen a significant decrease in beams and headers – 53.8% in 1997 to 36.8% in 2001. LVL has increased to 15.6% in 2001.
2. **Wood Exterior Walls --** Light frame construction held 74% of the market in 2001 and panelized construction showed a significant increase from 1.5% in 1999 to 22.1% in 2001.
3. **Floor Area --** Lumber joists have decreased - 66.4% in 1997 to 49.1% in 2001. Wood I-joists have seen an increase of 18.6% in 1997 to 39.4% in 2001.
4. **Roof Area --** Trusses and rafters both hold the majority of the roof market share, as seen in the South. Trusses were 52.7% of the market share in 2001 and rafters were 44.7%.

South Region Facts

Table D-2-7
Market share of wood structural building components and their substitutes in new residential construction, South Region,[1] by end use, 1997-2001

Components and substitutes	1997	1998	1999	2000	2001
			Percent		
Beams and headers[2]:					
Built-up dimension lumber	54.6	52.0	51.9	46.1	47.1
LVL	10.1	13.1	12.1	13.7	13.6
Other	9.8	12.0	12.5	10.9	11.1
Timberstrand	8.1	7.8	8.1	11.3	8.2
I-joists	5.3	2.1	2.1	5.6	6.0
Solid wood	2.7	4.0	4.0	4.0	4.2
Glulam	2.2	3.4	3.5	3.6	3.7
Open web wood truss	0.6	0.4	0.4	0.6	3.1
Parallam	3.4	2.7	2.7	1.5	1.7
Steel (all types)	3.2	2.7	2.8	2.7	1.3
Total	100.0	100.0	100.0	100.0	100.0
Wood exterior walls[3]:					
Light frame construction	84.9	86.9	91.7	85.1	88.0
Panelized construction	14.7	11.0	6.1	13.9	6.0
Modular construction	0.2	1.7	0.6	0.2	3.4
Post & beam	0.0	0.1	1.3	0.6	1.4
Logs	0.0	0.1	0.1	0.1	1.1
Structural insulated panels	0.1	0.2	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0
Floor area[4]:					
Cast-in-place concrete	37.8	38.3	43.5	49.3	46.3
Lumber joists	34.4	32.7	29.8	24.6	24.4
Wood I-joists	14.6	17.4	15.3	15.8	16.5
Open web wood truss	12.2	9.3	10.5	9.4	12.0
Precast concrete	0.6	1.8	0.2	0.2	0.7
Other wood	0.3	0.2	0.1	0.1	0.1
Steel (all types)	0.1	0.3	0.5	0.5	0.1
Structural insulated panels	0.0	0.0	0.0	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0
Roof area[5]:					
Rafters	44.9	48.8	46.9	48.7	52.6
Trusses	54.7	49.0	52.2	49.8	45.0
Beam and purlin	0.3	1.2	0.8	0.8	1.9
Other	0.1	0.8	0.0	0.5	0.3
Structural insulated panels	0.0	0.1	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0

[1] Regions correspond to U.S. Census Regions as shown in figure 2-3.
[2] Based on linear feet of beams and headers including rim board.
[3] Based on linear feet of exterior walls.
[4] Based on square feet of floor area.
[5] Based on square feet of roof area.

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

1. **Beams and Headers --** Built-up dimension lumber is the prominent choice in beams and headers, but decreasing slightly from 54.6% in 1997 to 47.1% in 2001.
2. **Wood Exterior Walls --** Light frame construction holds the majority for wood exterior walls with 88% in 2001.
3. **Floor Area --** Cast-in-place concrete has increased in the South region from 37.8% in 1997 to 46.3% in 2001. Also showing an increase is wood I-joists and open web wood trusses.
4. **Roof Area --** Rafters and trusses share the majority of roof construction in the South. Rafters held 52.6% in 2001 and trusses were 45%.

[i] 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