

Appendix B

Thermal Characteristics of Single-Family
Detached, Single-Family Attached, Low-Rise
Multifamily, and Mobile Homes—1975-76

by the National Association of Home Builders
Research Foundation, Inc., October 1977

INTRODUCTION

This report contains information on thermal characteristics of single-family detached, attached, and multifamily homes built in the last half of 1975 and the first half of 1976 and of mobile home units built July 1976 through June 1977.

Scope and Method

In the last half of 1976, the National Association of Home Builders (NAHB) Research Foundation conducted a survey of the builder members of NAHB to determine construction practices for homes and apartments built in 1975 and 1976. Included in **the survey were** questions on general characteristics, thermal characteristics, and specific material use practices. Data were summarized by nine (9) census regions. Responses by building type was as follows:

Building Type	Number of Units
Single-family detached	112,942
Single-family attached	12,990
Low-rise multifamily	44,960

In addition, a **survey of mobile** home thermal and general characteristics was conducted in the summer of 1977. Response was received for almost 175,000 **units, two-thirds of which were “single-wide” units and one-third “double-wide” units. This represented about 60 percent of all mobile home units built during that period.**

1975-76 SINGLE-FAMILY DETACHED UNITS

This section contains characteristics of almost 113,000 single-family detached homes built in 1975-76, summarized by nine census **regions.**

included are tables which show national use of insulation by house price and size.

		Single-Family Detached Housing Units								U.S. Total
		New England	Mid- Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain Pacific	
1.	Number of Stories (% by region)									
	One story	35	34	41	46	70	66	87	59	59.4
	Two story	31	37	29	12	16	13	11	11	19.6
	Bi-level	30	21	14	28	7	13	1	16	12.2
	Split level	4	8	16	14	7	8	1	14	8.8
2.	Foundation Type (% by region)									
	Basement	67	68	53	81	21	31	1	37	33.0
	Partial basement	29	16	21	15	9	9	1	16	11.0
	Crawl space	2	8	11	2	26	18	4	7	15.0
	Slab	2	8	15	2	44	42	94	40	41.0
3.	Floor Area By Type (averages by region)									
	One story	1,280	1,420	1,500	1,490	1,515	1,510	1,510	1,510	1,499
	Two story	2,010	2,100	2,110	2,110	2,120	2,130	2,115	2,110	2,105
	Bi-level	1,710	1,685	1,660	1,680	1,690	1,710	1,695	1,708	1,691
	Split level	1,860	1,820	1,860	1,850	1,840	1,860	1,840	1,840	1,850
	Overall average	1,658	1,760	1,757	1,667	1,647	1,645	1,582	1,654	1,672
4.	Average Selling Price (averages by region) (Including lot)									
	One story	39,800	41,500	41,200	41,300	40,600	40,900	40,900	40,600	40,803
	Two story	58,300	60,100	61,300	60,500	60,800	61,200	61,100	61,000	60,637
	Bi-level	44,000	44,900	45,100	45,500	45,800	45,700	45,400	45,300	45,139
	Split level	49,400	48,700	52,700	52,200	51,900	52,600	51,700	51,200	51,615
	Overall average	47,179	49,672	49,415	46,306	44,987	45,099	43,275	45,080	46,171
5.	Price Per Square Foot (averages by region)									
	One story	31.1	29.2	27.5	27.7	26.8	27.1	27.1	26.9	27.2
	Two story	29.0	28.6	29.1	28.7	28.7	28.7	28.9	28.9	28.8
	Bi-level	25.7	26.6	27.2	27.1	27.1	26.7	26.8	26.5	26.7
	Split level	26.6	26.8	28.3	28.2	28.2	28.3	28.1	27.8	27.9
	All houses	28.5	28.2	28.1	27.8	27.3	27.4	27.4	27.3	27.6

1975-76 HOUSING CHARACTERISTICS										
Single-Family Detached Housing Units										
	New England	Mid- Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	U.S. Total
6. Size In Increments of 200 SF-% By Region										
Less than 800	0.1	0	0.1	0	0	0	0.1	0	0	0.1
800 - 999	8.4	3.4	0.8	8.9	0.7	0	0.1	2.5	0.4	1.6
1000 - 1199	21.4	10.7	10.3	17.6	10.9	13.8	2.0	13.9	10.0	9.7
1200 - 1399	12.7	17.6	15.9	15.4	25.9	20.7	13.4	21.0	12.3	17.3
1400 - 1599	3.8	10.4	15.0	20.2	20.5	18.5	12.6	11.8	22.6	15.9
1600 - 1799	11.5	13.2	19.5	8.7	11.7	15.5	44.8	11.8	13.9	21.2
1800 - 1999	8.7	15.3	14.7	8.9	12.1	12.3	10.3	9.2	15.0	12.1
2000 - 2199	11.7	12.9	9.3	6.6	6.3	6.4	4.2	7.8	10.9	7.7
2200 - 2399	9.2	5.9	5.3	6.5	4.3	4.0	5.3	11.2	9.0	6.3
2400 - 2599	5.8	4.8	4.0	4.3	3.8	3.7	3.4	5.1	4.0	4.0
2600 - 2799	1.6	1.9	2.5	0.8	1.5	1.1	1.1	2.6	0.7	1.5
2800 and more	5.1	3.9	2.6	2.1	2.3	4.0	2.7	3.1	1.2	2.6
7. Insulation (% by region)										
Exterior Wall										
None	0	0	0	0	0.6	0	0	0.2	0.2	0.2
Less than R - 7	0	0	0	0	8.0	0	0	2.0	0	1.4
R-7	0.4	0.5	0	0	0.9	0.3	0.2	8.7	0.4	1.1
R-n	58.2	73.0	61.1	63.8	69.3	64.5	77.8	62.8	87.5	71.0
R-13	35.6	21.7	33.7	32.5	18.6	30.0	15.5	22.1	8.9	21.8
R-19	4.5	4.0	3.4	3.4	2.1	4.6	5.9	2.6	3.0	3.5
Other	1.3	0.8	1.8	0.3	0.5	0.6	0.6	0	0	1.0

1975-76 HOUSING CHARACTERISTICS										
Single-Family Detached Housing Units										
	New England	Mid- Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	Us. Total
7. (continued)										
Ceiling										
None	0.7	0	0.6	0.6	1.4	1.5	0	5.6	0.7	1.0
R-7	0	0.7	0.4	0.4	3.8	0.6	0.3	0.4	0.3	1.0
R-11	7.0	11.6	4.1	2.6	6.0	3.6	2.7	0.3	2.5	4.4
R-13	24.1	7.8	30.6	25.7	23.6	25.6	20.7	13.4	12.6	20.4
R-19	52.7	46.7	28.4	25.5	51.1	42.6	59.5	42.8	80.9	50.0
R-22	8.1	14.2	25.3	22.8	5.3	17.0	6.8	22.9	0.9	12.3
R-25	0	1.3	2.5	8.6	1.6	4.5	1.3	1.0	0	2.0
R-26	2.5	0	0.3	0	1.6	0.4	0.3	0.2	0	0.5
R-30	0.1	5.6	2.0	3.6	3.0	0.4	3.8	20.3	0.8	4.0
R-31	0.2	1.1	0.9	2.3	0	1.3	0	1.1	0.3	0.6
More than R-31	4.4	4.4	3.5	4.2	0.7	1.5	2.4	1.9	0.4	2.2
Other	0.2	6.6	1.4	3.7	1.9	1.1	1.2	0.1	0.4	1.8
Between Floor Joists (% of all houses)										
None	63.0	51.0	63.1	65.7	75.0	75.7	99.1	88.3	88.9	80.1
2-1/4" batts R-7	0.9	1.7	1.9	1.1	1.8	4.4	0.1	0.4	1.1	1.4
3-1/2" " R-11	16.5	32.9	18.5	14.3	16.8	11.5	0.4	4.1	7.3	11.2
3-5/8" " R-13	9.3	5.8	6.5	7.7	2.5	4.3	0.1	0.9	0.3	2.6
6" " R-19	10.3	6.7	8.9	11.2	3.6	4.1	0.3	6.2	1.3	4.2
Other	0	1.9	1.3	.0	0.3	0	0	0.1	1.1	0.5

1975-76 HOUSING CHARACTERISTICS
Single-Family Detached Housing Units

		<u>New</u> <u>England</u>	<u>Mid-</u> <u>Atlantic</u>	<u>East</u> <u>North</u> <u>Central</u>	<u>West</u> <u>North</u> <u>Central</u>	<u>South</u> <u>Atlantic</u>	<u>East</u> <u>South</u> <u>Central</u>	<u>West</u> <u>South</u> <u>Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S.</u> <u>Total</u>
7. (continued)											
Crawl Space Walls (% of all houses)											
None		99.6	98.7	98.7	99.7	97.1	97.5	99.8	98.2	93.6	98.2
2-1/4" batts R-7		0	0	0.1	0	0.2	0.1	0	0	2.2	0.1
3-1/2" " R-11		0.2	0.8	0.4	0.1	1.9	1.1	0.1	0.7	2.5	0.9
3-5/8" " R-13		0.1	0.1	0.2	0.1	0.2	0.6	0	0.1	0.1	0.2
6" " R-19		0	0.1	0.1	0	0.5	0.7	0.1	0.2	0.8	0.3
Other		0.1	0.3	0.5	0.1	0.1	0	0	0.2	0.8	0.3
Basement Walls (% of all houses)											
None		87.0	93.5	93.0	81.8	97.4	95.1	99.8	93.9	97.7	96.0
2-1/4" batts R-7		0.1	1.7	0.7	4.4	0.2	1.7	0	0.8	0.1	0.6
3-1/2" " R-11		7.3	3.1	1.5	6.4	1.4	1.2	0.1	3.3	1.9	2.0
3-5/8" " R-13		4.7	0.6	0.6	1.3	0.2	1.2	0	0	0	0.4
6" " R-19		0.1	0.2	0	1.2	0.2	0.3	0.1	0.1	0.1	0.2
Other		0.8	0.9	1.8	4.9	0.6	0.5	0	1.9	0.2	0.8
Change From 1975 (% of all houses)											
No change		58.5	52.8	48.6	46.1	53.5	47.3	62.1	39.5	62.0	53.8
Increased		40.8	47.1	51.4	53.9	46.4	52.7	37.6	60.5	38.0	46.0
Decreased		0.7	0.1	0	0	0.1	0	0.3	0	0	0.2
Slab-on-grade Perimeter (% of all houses)											
None		99.3	96.7	92.6	99.3	86.3	88.8	89.0	93.3	91.9	89.3
1" rigid		0.4	2.6	5.1	0.6	11.0	9.3	9.1	6.1	2.6	8.3
2" rigid		0.2	0.7	2.2	0.1	2.3	1.3	0.9	0.1	0.8	2.1
Other		0.1	0	0.1	0	0.4	0.6	1.0	0.5	0	0.3

1975-76 HOUSING CHARACTERISTICS										
Single-Family Detached Housing Units										
	New England	Mid- Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	U.S. Total
8. Heating/Cooling %by Type by Region										
Heating Equipment										
Gas warm air	7	13	48	71	16	29	38	59	64	41
Electric warm air	3	12	19	12	43	34	57	15	21	29
Oil warm air	19	22	3	2	7	0	0	0	0	5
Gas hot water	12	5	1	1	0	0	0	2	1	2
Oil hot water	30	9	0	0	0	0	0	0	0	2
Heat pump	2	7	21	6	25	29	5	15	2	13
Elec.baseboard or radiant ceiling	27	32	8	8	8	8	0	9	12	8
Solar	0	0	0	0	1	0	0	0	0	0
Heating Fuel										
Gas	19	18	49	72	16	29	38	61	65	43
Electric	32	51	48	26	76	71	62	39	35	50
Oil	49	31	3	2	7	0	0	0	0	7
Solar	0	0	0	0	1	0	0	0	0	0
Cooling Equipment										
None	89.2	69.4	49.4	23.3	13.4	15.6	2.5	47.2	65.5	36.7
Central	5.3	20.9	29.0	70.0	61.1	54.4	89.2	24.4	28.9	46.9
Heat pump	2.0	7.0	21.0	6.0	25.0	29.0	5.0	15.0	2.0	13.5
Evaporative cooler	0	0	0	0.6	0.3	0	3.3	13.4	3.3	2.3
Window or wall	3.5	2.7	0.6	0.1	0.2	1.0	0	0	0.3	0.6

1975-76 HOUSING CHARACTERISTICS
Single-Family Detached Housing Units

	<u>New</u> <u>England</u>	<u>Mid-</u> <u>Atlantic</u>	<u>East</u> <u>North</u> <u>Central</u>	<u>West</u> <u>North</u> <u>Central</u>	<u>South</u> <u>Atlantic</u>	<u>East</u> <u>South</u> <u>Central</u>	<u>West</u> <u>South</u> <u>Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S.</u> <u>Total</u>
9. Window Glazing % by Region										
Single glaze	37.6	26.6	5.8	14.3	58.8	49.6	80.2	22.6	76.0	44.0
Single w/storm	25.3	21.6	27.2	40.6	15.5	22.7	12.1	22.7	4.9	20.0
Insulating glass	36.9	50.0	62.3	42.2	25.6	26.7	7.7	53.9	18.6	35.0
Insul. w/storm	0.2	1.7	4.8	2.9	0.1	0	0	0.8	0.5	1.0
10. Window Square Feet by Region										
Single glaze	81.7	47.8	7.5	23.4	105.4	84.1	123.4	49.7	152.8	82.0
Single w/storm	55.0	38.7	42.0	66.9	25.8	35.1	16.4	55.1	9.2	32.6
Insulating glass	80.3	89.8	104.9	71.0	44.8	41.7	11.1	92.7	35.8	56.9
Insul. w/storm	0.5	3.1	8.2	4.9	0	0	0	1.2	0.9	2.1
										175.6
Totals	217.5	179.4	162.6	166.2	176.0	160.9	150.9	198.7	198.7	
11. Sliding Glass Doors										
Sliding glass doors										
Number per unit	0.88	1.02	0.88	0.93	0.89	0.68	0.84	1.00	1.26	0.95
Square feet per unit	35.2	40.8	35.2	37.2	35.6	27.2	33.6	40.0	50.4	38.0
12. Exterior Doors (% by region) (Entrance)										
Not insulated	41.0	16.1	23.1	46.1	69.6	69.2	78.8	56.5	89.4	57.9
Insulated	59.0	83.9	76.9	53.9	30.4	30.8	21.2	43.5	10.6	42.1

Single-Family Detached Housing Units

13. Insulation By Price and By Size

Exterior Wall Insulation

Price Range	No. of Units	None	Insulation Percent					
			Less Than R 7	R7	R11	R13	R19	Other
Less than \$30,000	7,252	0.8	0.9	1.0	71.8	22.6	2.3	0.6
\$30,000- 34,999	17,126	0.1	0.9	3.6	76.2	15.4	3.2	0.6
35,000 - 39,999	20,722	0	3.3	0.2	67.0	24.0	3.1	2.4
40,000 - 44,999	18,837	0.1	1.3	0.2	69.7	25.0	4.2	0.9
45,000 - 49,999	14,265	0	1.0	0.3	70.0	23.5	3.7	0.7
50,000 - 54,999	11,512	0	1.3	2.9	73.3	18.7	2.8	1.0
55,000 - 59,999	7,072	0.4	0.6	0.9	67.4	28.1	2.1	0.5
60,000 - 64,999	5,063	0.2	0.9	0.6	72.4	21.0	4.2	0.7
\$65,000 and over	9,282	0.2	0.6	0.5	65.8	27.0	5.4	0.5

Ceiling Insulation

Price Range	None	R7	R11	R13	R19	R22	R25	R26	R30	R31	More Than R31	Other
Less than \$30,000	0.5	0.7	2.5	21.1	52.5	14.1	1.5	1.7	3.4	0	1.5	0.5
\$30,000- 34,999	1.1	0.3	6.0	18.8	52.3	13.5	0.6	0.2	1.2	0.2	2.9	2.9
35,000 - 39,999	0.7	0.7	6.9	14.7	47.9	17.1	1.9	0.3	5.5	0.5	1.9	1.9
40,000 - 44,999	1.6	0.5	4.3	20.1	55.8	8.8	1.7	0.8	2.0	0.3	3.9	0.2
45,000 - 49,999	1.0	1.4	2.3	16.1	54.7	11.8	1.7	0.1	4.5	0.2	3.1	3.1
50,000 - 54,999	1.1	3.4	2.2	25.9	38.4	14.5	3.1	0	5.2	1.4	2.8	2.0
55,000 - 59,999	1.0	0.2	2.8	25.2	37.6	10.2	3.6	0.3	14.4	0.7	2.4	1.6
60,000 - 64,999	1.0	0.3	3.6	22.9	53.2	8.9	3.1	0.9	0.7	0.6	4.7	0.1
\$65,000 and over	1.4	1.2	2.2	19.9	51.4	9.8	2.8	0.9	1.6	0.9	6.3	1.6

Single-Family Detached Housing Units

13. (continued)

Exterior Wall Insulation

Size Range (SF)	No. of Units	Insulation Percent						
		None	Less than R-7	R-7	R-11	R-13	R-19	Other
Less than 1000	1782	0	0.5	0.4	71.3	25.1	2.2	0.5
1000 - 1199	11071	0.7	1.0	0.8	71.6	22.8	2.2	0.9
1200 - 1399	19082	0.1	2.2	3.8	67.2	22.0	3.0	1.7
1400 - 1599	17955	0.2	1.3	0.2	68.3	25.0	4.0	1.0
1600 - 1799	23559	0	0.4	0.1	80.6	15.1	3.5	0.3
1800 - 1999	13463	0	1.9	0.6	69.4	21.8	4.7	1.6
2000 - 2199	8490	0.4	1.1	4.8	66.0	24.1	2.7	0.9
2200 - 2399	6976	0	0.9	0.1	76.3	20.0	2.0	0.7
2400 - 2599	4478	0.1	1.3	0.1	68.5	24.9	4.0	1.1
2600 - 2799	1680	0	3.7	2.1	64.9	22.3	4.0	3.0
2800 and over	2986	0.2	0.9	1.7	59.6	31.7	5.1	0.8

Ceiling insulation

Size Range (SF)	None	R7	R11	R13	R19	R22	R25	R26	R30	R31	More Than R31	Other
Less than 1000	0.3	0	3.1	22.1	45.5	23.1	0.2	0.2	2.4	0.7	0.7	1.7
1000 - 1199	0.9	1.4	4.2	18.3	47.0	17.0	1.3	0.8	3.8	0.8	2.6	1.9
1200 - 1399	0.7	1.2	4.5	21.4	44.9	13.9	2.6	0.4	6.0	0.5	2.0	1.9
1400 - 1599	1.5	0.5	7.6	18.9	47.5	12.9	1.9	0.6	2.3	0.6	3.6	2.1
1600 - 1799	1.0	0.9	2.3	14.1	63.2	9.8	1.2	0.5	2.6	0.1	3.1	1.2
1800 - 1999	0.8	0.6	3.5	20.4	50.8	13.5	2.8	0.1	2.9	0.7	2.9	1.9
2000 - 2199	0.7	1.5	6.5	22.7	42.3	13.1	1.8	0.2	5.7	1.2	1.8	2.5
2200 - 2399	1.3	0.4	1.5	22.1	50.5	6.8	2.2	0.3	8.8	1.1	3.1	1.9
2400 - 2599	0.9	1.4	5.0	32.9	37.3	10.0	3.1	0.9	2.7	0.9	4.0	0.9
2600 - 2799	0.4	2.6	0.6	12.0	52.1	10.7	1.6	0.2	15.8	1.7	1.9	0.4
2800 and over	1.5	0.9	1.0	16.0	43.2	12.3	2.3	2.4	13.8	0.1	6.4	0.1

1975-76 SINGLE-FAMILY ATTACHED UNITS

This section contains data on almost 13,000 single-family attached housing units.

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
1. Type of Unit - Percent by Region										
Town Houses	58.2	86.5	61.2	48.7	94.1	68.8	76.6	46.1	77.7	73.7
Two Family Units	15.1	11.4	19.1	24.3	2.2	14.2	20.8	24.7	14.4	14.5
Three Family Units	6.4	-	4.5	10.3	0.5	-	0.9	1.3	1.2	2.2
Four Family Units	20.3	2.1	15.2	16.7	3.2	17.0	1.7	27.9	6.7	9.6
2. Foundation Types - % by Type by Region										
Town Houses										
Full Basement	29.7	57.0	61.4	95.2	32.6	12.0	0.9	34.5	6.7	29.9
Partial Basement	0	0.7	2.4	2.3	1.1	0	4.4	4.3	0.7	1.6
Crawl Space	52.4	9.5	23.1	2.5	4.2	0.2	13.1	28.5	14.2	13.1
Slab	17.9	31.8	13.1	0	62.1	87.8	81.6	32.7	78.4	55.4
Two Family Units										
Full Basement	100.0	30.2	42.8	88.6	0	0	0	26.4	20.6	33.9
Partial Basement	0	1.3	6.7	2.2	0	0	0	6.4	0	2.2
Crawl Space	0	36.9	15.2	6.7	11.1	13.6	0	6.8	20.1	12.0
Slab	0	31.6	35.3	2.5	88.9	86.4	100.0	60.4	59.3	51.9
Three Family Units										
Full Basement	11.1	0	22.4	0	0	0	0	0	0	6.2
Partial Basement	0	0	24.5	0	0	0	0	0	0	4.3
Crawl Space		0	42.9	3.0	0	0	0	76.;	100.0	24.3
Slab	88.;	0	10.2	97.0	100.0	0	100.0	23.1	0	65.2
Four Family Units										
Basement	7.0	85.7	1.8	95.1	0	36.2	0	23.0	0	24.5
Partial Basement	0	0	7.2	0	0	0	0	0	0.5	1.1
Crawl Space	2.3	0		0	39.2	0	0	71.7	13.7	21.7
Slab	90.7	14.3	91.;	4.9	60.8	63.8	100.0	5.3	85.8	52.6

3. Number of Stories
% by Type by Region

Town Houses

	New England	Mid- Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	U.S. Total
One Story	10.8	15.6	11.5	32.5	6.0	21.4	17.3	44.5	25.0	17.6
Two Story	59.5	83.2	86.1	38.6	84.8	69.2	72.9	55.5	72.8	74.6
Three Story	29.7	1.2	2.4	26.8	8.7	9.4	9.8	0	2.2	7.6
More than 3	0	0	0	2.1	0.5	0	0	0	0	0.2

Two Family Units

One Story	4.7	6.0	41.0	51.5	18.5	36.1	75.7	38.8	72.5	48.0
Two Story	80.5	71.2	59.0	22.4	81.5	10.7	24.3	57.2	23.4	39.5
Three Story	14.8	22.8	0	26.1	0	53.2	0	4.0	1.2	11.9
More than 3	0	0	0	0	0	0	0	0	2.9	0.6

Three Family Units

One Story	29.6	0	49.0	47.5	100.0	0	85.7	76.9	27.3	47.5
Two Story	70.4	0	51.0	52.5	0	0	14.3	23.1	72.7	52.5
Three Story	0	0	0	0	0	0	0	0	0	0
More than 3	0	0	0	0	0	0	0	0	0	0

Four Family Units

One Story	25.6	14.3	4.8	92.7	77.2	13.3	61.5	36.0	34.2	38.4
Two Story	72.1	85.7	95.2	7.3	22.8	59.1	38.5	59.0	65.8	57.7
Three Story	2.3	0	0	0	0	27.6	0	5.0	0	3.9
Four Story	0	0	0	0	0	0	0	0	0	0

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	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
6. Window Square Feet by Region										
Single glaze	29.6	26.5	0	18.9	51.8	14.1	89.5	37.8	129.8	52.4
Single with storm	25.9	30.2	54.2	26.5	64.1	68.8	0	3.9	2.3	31.4
Insulated glass	70.6	73.2	52.9	56.8	18.4	3.1	42.9	98.6	19.0	43.4
Insul. with storm	0	0	0.4	1.4	0	0	0	0	0	0.1
Totals	126.1	129.9	107.5	103.6	134.3	86.0	132.4	140.3	151.1	127.3
7. Sliding Glass Doors										
S.G.D. per unit	0.42	0.65	0.81	0.97	1.20	1.04	1.19	1.04	1.22	0.98
Square feet per unit	16.8	26.0	32.4	38.8	48.0	41.6	47.6	41.6	48.8	39.2
8. Exterior Doors - Percent by Type by Region										
Not insulated	13.2	21.0	10.8	37.8	33.1	98.4	75.3	47.3	91.5	48.6
insulated	86.8	79.0	89.2	62.2	66.9	1.6	24.7	52.7	8.5	51.4
Storm doors	8.1	12.7	10.1	26.8	24.1	0	2.4	33.6	1.8	13.2
9. Exterior Wall Structure % by Region										
First Floor										
2x4, 16"o.c.	93.4	70.0	90.4	90.8	80.2	97.1	86.1	84.8	93.0	86.4
2x4, 24"o.c.	0	3.8	3.0	9.2	5.9	2.9	0	2.6	0	2.9
2x6, 24"o.c.	0	0	1.1	0	0.6	0	13.4	0.4	6.1	3.2
Steel stud	0	0	0	0	1.1	0	0	0	0	0.2
Concrete block	6.6	9.2	4.6	0	11.8	0	0	12.2	0	5.1
Load-bearing brick	0	4.2	0.7	0	0.4	0	0.5	0	0	0.6
Other	0	12.8	0.2	0	0	0	0	0	0.9	1.6

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
9. (Continued)										
Upper Floors										
2x4,16''o.c.	89.6	62.3	90.5	77.5	74.5	76.3	65.7	80.7	92.1	79.3
2x4,24''o.c.	0	3.8	1.1	9.2	12.2	17.6	12.1	2.6	5.9	7.4
2x6,24''o.c.	0	0	1.1	0	0.6	0	13.4	0	0	1.8
Steel stud	0	0	0	0	1.5	0	0	0	0	0.3
Concrete block	6.6	7.8	5.3	0	7.0	0	0	0	0	3.1
Load bearing										
brick	0	4.2	0	0	0	0	0	0	0	0.4
Other	0	12.9	0	0	1.6	0	0	0	0	1.7
Not applicable	3.8	9.0	2.0	13.3	2.6	6.1	8.8	16.7	2.0	6.0
10. Exterior Wall										
Sheathing										
None	8.3	21.8	10.1	27.0	5.2	5.2	8.8	9.8	54.6	21.1
1/2" fiberboard	3.3	18.7	64.3	60.6	70.3	81.2	65.2	57.8	0.3	42.5
25/32 "	0	9.6	13.0	1.4	4.8	2.4	3.8	3.8	0	4.0
1/2" plywood	72.5	20.2	2.9	0	5.4	1.0	3.6	16.2	14.6	13.3
3/8" "	13.0	4.9	0	3.2	5.9	0	0	2.5	14.8	6.3
Alum. foil faced	0	0	1.4	0	5.5	0	1.6	0	0	1.4
1/2" gypsumboard	0	8.8	0.4	6.4	1.3	4.7	17.0	9.9	8.5	6.6
3/4" polystyrene	0	3.8	0	0	0	1.6	0	0	0	0.5
1" "	0	11.9	0	0.2	0	3.9	0	0	0	1.5
1" urethane	0	0.3	0	1.2	0	0	0	0	0	0.1
1 x boards	0	0	0	0	1.6	0	0	0	0	0.3
Other	2.9	0	7.9	0	0	0	0	0	7.2	2.5

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11. (Continued)

		<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
Basement Walls											
None		94.3	83.5	91.0	92.2	83.2	97.6	86.6	86.1	97.2	89.8
2-1/4" batts	R-7	5.7	4.4	3.4	0	7.1	0	0	2.8	2.3	3.2
3-1/2" "	R-11	0	2.9	0.2	5.2	9.7	0	0	3.8	0.2	3.0
3-5/8" "	R-13	0	0.5	0	2.4	0	0	0	5.8	0	0.7
6" "	R-19	0	0.7	0	0	0	0	13.4	0	0.3	1.7
Other		0	8.0	5.4	0.2	0	2.4	0	1.5	0	1.6
Crawl Space Walls											
None		82.0	81.6	76.8	94.4	94.5	97.6	88.9	63.8	87.7	85.7
2-1/4" batts	R-7	5.7	0	11.5	0	2.4	0	0	0	5.4	3.2
3-1/2" "	R-11	0	5.3	4.9	4.1	1.5	0	9.7	28.5	1.7	6.1
3-5/8" "	R-13	7.6	4.8	1.1	0	0	2.4	1.4	5.9	0	1.8
6" "	R-19	4.7	8.3	0	1.3	1.1	0	0	0	0	1.3
Other		0	0	5.7	0.2	0.5	0	0	1.8	5.2	1.9
Slab Perimeter											
None		65.7	46.7	53.1	66.7	14.3	96.9	82.9	62.5	94.4	62.4
One-inch		31.5	43.8	25.0	14.7	76.2	3.1	16.8	37.5	2.9	30.6
Two-inch		0	2.7	21.9	18.4	0.6	0	0.3	0	2.7	4.3
Other		2.8	6.8	0	0.2	8.9	0	0	0	0	2.7
Change From 1975											
No change		84.9	80.2	32.8	59.4	38.7	89.8	70.2	40.7	63.8	59.2
Increased		15.1	19.8	67.2	31.4	61.3	10.2	29.8	59.3	36.2	40.1
Decreased		0	0	0	9.2	0	0	0	0	0	0.7

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
12. Heating/Cooling										
% by Type										
by Region										
Heating Equipment										
None	0	0	1.2	0	0.1	0.6	0	0.2	0	0.1
Warm air furnace	24.1	57.1	74.5	94.8	64.5	82.7	84.6	67.3	94.6	74.4
Hot water system	27.5	2.8	0.1	0	0	0	0	0.8	1.1	2.4
Heat pump	5.2	10.2	22.0	0.8	31.8	11.5	15.4	15.5	1.2	13.4
Elec. baseboard or radiant ceiling	43.2	29.9	2.2	4.4	3.6	5.2	0	16.2	3.1	9.5
Heating Fuel										
Gas	2.6	35.9	43.0	78.6	10.4	37.5	25.0	67.4	89.1	45.8
Electric	69.7	46.4	56.7	21.4	88.1	62.5	75.0	32.6	10.9	50.2
oil	27.7	17.7	0.3	0	1.5	0	0	0	0	4.0
Cooling Equipment										
None	59.0	26.6	10.4	23.9	2.9	1.0	0	37.8	56.9	25.8
Port of heating equipment	26.0	50.5	66.7	55.1	55.0	78.1	65.8	14.9	36.4	48.7
Separate from heating	9.8	12.7	0.9	20.2	10.3	9.4	10.9	30.1	5.5	11.0
Heat pump	5.2	10.2	22.0	0.8	31.8	11.5	15.4	15.5	1.2	13.4
Evaporative cooler	0	0	0	0	0	0	7.9	1.7	0	1.1
Cooling Fuel										
Gas		3.6	8.7	0	0	0	9.1	0.6	4.5	2.8
Electric	41.1	69.8	80.9	76.1	97.1	99.0	90.9	61.6	38.6	71.4
None	59.0	26.6	10.4	23.9	2.9	1.0	0	37.8	56.9	25.8

1975-76 LOW-RISE MULTIFAMILY UNITS

This section contains data on almost 45,000 low-rise multifamily dwelling units.

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>pacific</u>	<u>U s . Total</u>
1. Type Units - Percent by Region										
Efficiencies	21.2	3.7	4.6	5.4	2.9	2.9	8.3	2.2	11.5	6.0
One Bedroom	35.4	54.1	38.2	24.7	38.3	25.0	44.0	37.2	33.8	38.1
Two Bedroom	37.5	33.5	50.5	64.7	45.4	61.0	39.0	50.1	48.9	47.0
Three or more Bdrm.	5.9	8.7	6.7	5.2	13.4	11.1	8.7	10.5	5.8	8.9
2. Foundation Types - Percent by Region										
No Basement	73.1	77.6	75.9	52.7	89.6	95.0	98.2	61.5	92.6	82.8
Live-in Basement	12.2	5.1	6.4	30.2	2.3	3.7		29.5	2.5	7.7
Live-in/Utility Bsmt	4.3	1.0	1.0	0.4	6.1	1.1		0.8	1.7	2.1
Utility Basement	10.4	16.3	16.7	16.7	2.0	0.2	1.8	8.2	3.2	7.4
3. Finished Floor Area - Percent by Region										
Square Footage										
Less than 400	0.9	0	0	2.5	1.0	0	0	1.6	1.7	0.8
400 - 599	21.9	15.5	7.6	4.6	1.8	3.3	9.9	13.2	18.3	10.0
600 - 799	23.1	26.8	39.2	48.1	25.5	31.2	40.6	33.2	47.8	33.7
800 - 999	32.7	30.4	34.4	33.2	34.8	29.1	32.9	27.3	25.2	31.1
1000 -1199	14.9	19.6	16.9	7.1	20.2	29.7	13.1	16.6	9.5	16.8
1200 and more	6.5	7.7	1.9	4.5	16.7	6.7	3.5	8.1	7.5	7.6

	<u>New</u> <u>England</u>	<u>Mid-</u> <u>Atlantic</u>	<u>East</u> <u>North</u> <u>Central</u>	<u>West</u> <u>North</u> <u>Central</u>	<u>South</u> <u>Atlantic</u>	<u>East</u> <u>South</u> <u>Central</u>	<u>West</u> <u>South</u> <u>Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S.</u> <u>Total</u>
4. Window Glazing - Percent by Region										
Single Glaze	6.3	4.2	0.3	19.5	43.6	86.5	98.9	79.3	91.2	51.6
Single w/Storm	33.4	50.6	13.9	35.0	48.2	0.6	0.6	0	1.9	20.6
Insulated Glass	60.3	45.2	85.6	33.4	8.2	12.9	0.5	20.7	6.9	26.9
Insul. w/Storms	0	0	0.2	12.1	0	0	0	0	0	0.9
5. Window Square Feet by Region										
Single Glaze	4.3	4.9	0.3	15.0	27.0	51.2	81.3	90.0	98.4	45.2
Single w/Storm	29.4	51.1	12.5	34.0	32.3	0.3	0.3	23.7	1.9	19.2
Insulated Glass	44.9	44.0	66.7	27.3	5.4	7.7	0.2	0	6.8	20.3
Insul. with Storms	0	0	0.2	9.0	0	0	0	0	0	0.7
6. Entrance Doors - Percent by Region										
Unit Entrance										
Not Insulated	50.1	34.1	52.0	53.7	30.8	89.4	97.2	50.8	68.6	57.4
Insulated	49.9	65.9	48.0	46.3	69.2	10.6	2.8	48.2	31.4	42.6
Totals	78.6	100.0	79.7	85.3	64.7	59.2	81.8	113.7	107.1	85.4

	New England	Mid- Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	U.S. Total
7. Exterior Wall Sheathing										
% by Type by Region										
None	3.6	18.4	11.7	7.2	25.5	29.1	0.6	14.8	39.2	18.9
1/2" fiberboard	3.5	19.6	54.4	35.2	48.8	58.4	15.4	69.7	10.9	35.1
25/32" fiberboard	3.3	0	8.1	15.2	8.9	0.7	0.3	0	0	3.8
1/2" plywood	35.3	0.9	2.6	4.0	4.4	4.9	5.0	7.5	9.4	6.9
3/8" plywood	4.4	0.6	0	0.3	0	0	9.1	0	30.6	6.3
Alum. foil-faced board	0	0	4.8	0	3.2	0	0	0	0	1.1
1/2" gypsumboard	41.8	46.3	10.7	28.4	9.0	6.4	66.9	8.0	9.4	24.0
3/4" polystyrene	8.1	0	0	3.5	0	0.2	0	0	0	0.7
1" polystyrene	0	3.1	5.3	0	0	0.1	0	0	0	0.9
3/4" urethane	0	9.4	0.7	0	0	0	0	0	0	1.0
1" urethane	0	0	0.6	6.2	0	0	0	0	0	0.5
Other	0	1.7	1.1	0	0.2	0.2	2.7	0	2.3	0.8
8. Insulation - Percent by										
Location by Region										
Ceiling Insulation										
2-1/4" batts R-7	0	0	0	0	10.8	3.4	0	0	0	2.3
3-1/2" batts R-11	7.0	0	0	10.3	1.3	15.7	0.7	16.1	0.6	4.5
3-5/8" batts R-13	0	1.4	0	0	0	0	0	0	2.0	0.4
6" batts R-19	41.9	62.9	7.7	7.7	39.0	14.5	20.2	38.4	61.5	33.9
6-1/2" batts R-22	12.4	0.5	0	0	0.2	0.7	0.9	0.5	2.2	1.4
8-1/2" batts R-26	0	0.5	0	0	0.8	0	0	0	0	0.2
9-1/2" batts R-30	0	0	1.3	1.2	0	0	0	0	0	0.2
4" loosefill R-9	0	1.7	0	0	0.9	0	0	2.9	0	0.5
5" loosefill R-11	0	0	0	3.6	0	0	0	0	0	0.2
6" loosefill R-13	1.1	20.4	31.1	18.2	28.1	35.3	46.9	11.0	20.1	26.4
8-3/4" loosefill R-19	3.3	4.2	29.7	0.5	11.4	5.6	24.6	8.1	12.1	12.9
10" loosefill R-22	7.2	1.4	13.4	14.5	0	4.5	2.7	13.5	0	5.0
12" loosefill R-25	27.1	0	8.0	2.2	0	0	0	0	0.2	2.8
13-3/4" loosefill R-30	0	1.6	1.2	0	5.8	0.4	0	0.2	0	1.4
14" loosefill R-31	0	0	3.6	3.8	0	0	0	4.4	0	1.0
Other	0	5.4	4.0	38.0	1.7	19.9	4.0	4.9	1.3	7.1

	<u>New</u> <u>England</u>	<u>Mid-</u> <u>Atlantic</u>	<u>East</u> <u>North</u> <u>Central</u>	<u>West</u> <u>North</u> <u>Central</u>	<u>South</u> <u>Atlantic</u>	<u>East</u> <u>South</u> <u>Central</u>	<u>West</u> <u>South</u> <u>Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S.</u> <u>Total</u>
8. Exterior Wall Insulation (continued)										
None	0	0	0	0	21.1	0	0	0	0	3.7
2-1/4" batts, R-7	3.4	1.4	0	3.6	15.2	4.7	2.7	0	0.5	4.2
3-1/2" batts, R-11	41.3	89.8	40.9	62.5	32.3	85.7	93.3	95.0	82.6	68.6
3-5/8" batts, R-13	48.5	8.0	58.4	32.1	9.2	4.3	1.2	1.8	16.2	17.4
6" batts, R-19	5.9	0	0	0.8	8.9	0.2	2.4	3.2	0.7	2.4
Pleated aluminum	0	0	0	0	0	4.2	0	0	0	0.7
Other	0.9	0.8	0.7	1.0	13.3	0.9	0.4	0	0	2.8
Insulation Between Joists										
None	37.1	78.0	70.7	57.4	66.5	63.4	59.6	69.7	64.5	64.3
2-1/4" batts R-7	2.0	1.3	1.4	3.6	2.6	3.5	0	6.3	2.3	2.3
3-1/2" batts R-11	33.0	16.7	14.6	32.4	30.7	19.8	29.5	8.9	15.2	22.2
3-5/8" batts R-13	2.8	2.5	9.6	0	0.2	1.9	1.4	0.9	2.5	2.4
6" batts R-19	23.6	1.5	3.7	6.6	0	11.4	9.5	0.3	15.4	7.5
Other	1.5	0	0	0	0	0	0	13.9	0.1	1.2
Crawl Space Walls										
None	96.4	82.7	55.8	87.1	94.5	95.2	96.6	83.7	89.2	87.2
2-1/4" batts R-7	0	0	10.0	0	0.9	0	0	0	1.8	1.6
3-1/2" batts R-11	0.4	16.0	19.4	7.9	4.4	1.2	2.5	5.1	7.8	7.2
3-5/8" R-13	1.7	0	1.1	0	0.2	1.9	0.9	0	0.7	0.7
6" batts R-19	0	1.3	10.1	2.9	0	0	0	0	0	1.5
Other	1.5	0	3.6	2.1	0	1.7	0	11.2	0.5	1.8
Insulation Basement Walls										
None	93.2	80.3	96.5	76.3	87.9	94.5	94.2	88.6	88.9	89.6
2-1/4" batts R-7	0	0	0.5	0	1.2	1.9	0	0	5.9	1.4
3-1/2" batts R-11	3.6	18.2	1.8	10.3	10.2	1.2	5.8	6.0	2.9	6.5
3-5/8" batts R-13	1.7	0	0.9	3.2	0	0	0	0	2.2	0.7
6" batts R-19	0	0.2	0.3	0	0	0	0	0	0	0.1
Other	1.5	1.3	0	10.2	0.7	2.4	0	5.4	0.1	1.7

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
8. (continued)										
Practice Change from '75										
No change	89.8	80.7	35.2	73.0	60.3	95.2	79.0	67.5	64.8	69.9
Increased	10.2	19.3	64.8	27.0	39.7	4.8	21.0	32.5	35.2	30.1
Perimeter Slab-on- grade										
None	18.6	25.2	21.9	30.3	56.8	64.9	91.4	69.6	80.5	56.0
One Inch	13.9	57.2	35.3	32.8	43.2	35.1	8.6	24.8	14.9	29.7
Two Inch	67.5	17.6	34.2	33.1	0	0	0	5.6	3.0	12.8
Other	0	0	8.6	3.8	0	0	0	0	1.6	1.5
9. Heating/Cooling % by Type by Region										
Heating By Equipment										
Central boiler w/air handler	0	10.8	0	8.3	11.0	0.2	0.8	7.4	13.2	6.2
Central boiler w/fan coils	0	0	0	0	0.7	0	0	13.9	1.8	1.5
Central boiler w/hot water baseboard	46.5	4.7	12.4	5.1	0	2.6	0	19.1	1.4	7.1
Ind. warm air furnace	7.3	52.3	64.3	45.5	54.7	78.8	93.5	42.0	40.4	57.2
Ind. hot water system	0	0	0.3	0	0	0	0	0	0	
Ind. heat pump	1.1	3.2	9.1	1.8	11.6	2.9	3.5	4.0	4.5	5.4
Ind. elec. base- board or radiant ceiling	45.1	18.9	14.2	39.3	0.9	15.5	3.2	13.6	38.4	18.0
Other	0	10.1	0	0	21.1	0	0	0	0.3	4.6

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
9. (continued)										
Heating Fuel										
Gas	16.1	22.4	41.5	43.7	11.2	15.0	13.5	78.2	38.5	28.2
Electric	49.8	58.5	58.5	54.6	88.1	85.0	86.5	21.8	61.5	67.6
Oil	34.1	19.1	0	1.7	0.7	0	0	0	0	4.2
Cooling Equipment										
None	5.0	4.0	4.4	0.8	1.8	15.5	0	16.9	52.1	12.6
Central systems chiller/air handler	3.4	19.1	0	1.0	0.3	0	0	7.4	1.8	3.1
chiller/fan coils	0	0.3	0	0	1.0	0	0	13.9	0	1.2
Ind.unit systems										
Part of heating equip.	5.3	18.2	46.4	37.1	49.7	76.1	81.2	32.8	21.1	44.5
Separate from heat equip.	16.4	6.6	4.0	2.0	7.8	3.0	12.8	0.7	6.9	7.2
Heat pump	1.1	3.2	9.1	1.8	11.6	2.9	3.5	4.0	4.5	5.4
Evaporative cooler	0	5.9	0	0	21.0	0	0	6.3	0	4.5
Room units	68.8	42.7	36.1	57.3	6.8	2.5	2.5	18.0	13.6	21.5
Cooling Fuel										
None	5.0	4.0	4.4	0.8	1.8	15.5	0	16.9	52.0	12.6
Gas	0	0.9	9.3	0.3	0	0	9.1	0.8	5.0	3.3
Electric	95.0	95.1	86.3	98.9	98.2	84.2	90.9	82.3	43.0	84.1

1976-77 MOBILE HOME UNITS

This section contains data on about 175,000 mobile home units.

MOBILE HOME UNITS

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
1. Average Size (SF)										
Single wide	935	922	914	930	833	870	891	886	901	888
Double wide	1249	1248	1299	1326	1266	1265	1322	1320	1357	1311
2. Insulation (Percent of units)										
Single wide Ceilings										
R11 to R12	0	0	9.0	0	8.1	23.0	12.2	6.9	0	7.8
R13 to R18	39.5	81.5	64.8	86.2	78.5	63.7	76.6	76.2	54.3	72.5
R19 to R21	7.1	18.5	26.2	4.5	11.9	13.3	11.1	10.2	44.1	17.3
R22 or more	53.4	0	0	9.3	1.5	0	0	6.7	1.6	2.4
Single wide Walls										
R7	7.1	15.5	0	0	12.8	13.2	46.6	2.6	1.1	13.4
R11	92.9	84.5	100.0	92.9	85.7	81.7	51.8	90.7	98.2	84.3
R12	0	0	0	0	0	0	1.6	0	0	0.3
R13	0	0	0	0	1.5	5.2	0	0	0.7	0.8
R19	0	0	0	7.1	0	0	0	6.7	0	1.2
Single wide Floors										
R7	0	2.5	0	0	8.0	9.2	5.9	12.6	4.5	5.1
R9	0	0	0	0	8.9	0	23.7	0.5	0	6.0
R11	100.0	86.6	82.7	92.9	79.3	81.8	68.8	86.9	90.5	82.1
R13	0	4.4	17.3	0	3.8	0	0	0	0	4.1
R14	0	6.6	0	0	0	9.0	0	0	4.3	1.7
R15	0	0	0	0	0	0	1.6	0	0	0.3
R19	0	0	0	7.1	0	0	0	0	0.7	0.7

1976-77 HOUSING CHARACTERISTICS

MOBILE HOME UNITS

	<u>New England</u>	<u>Mid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>U.S. Total</u>
Double Wide Ceilings										
R11 to R12	0	0	8.3	0	1.7	31.5	3.7	9.5	0	5.9
R13 to R18	93.2	51.3	64.8	55.5	67.8	39.5	65.6	77.0	26.5	52.5
R19 to R21	0	34.8	10.5	21.2	19.1	16.6	22.0	4.7	47.0	27.0
R22 or more	6.8	13.9	16.4	23.3	11.4	12.4	8.7	8.8	26.5	16.6
Double Wide Walls										
R7	0	9.6	0	0	27.9	10.0	21.3	0	5.4	11.3
R11	93.2	82.1	100.0	86.0	70.4	89.1	78.0	100.0	87.1	84.3
R12	0	0	0	0	0	0	0.7	0	0	0.1
R13	0	0	0	0	1.7	0.9	0	0	7.5	2.8
R19	6.8	8.3	0	14.0	0	0	0	0	0	1.5
Double Wide Floors										
R7	0	0	2.2	0	29.7	0	21.6	11.6	11.5	13.7
R9	0	0	0	0	0.2	3.3	0.8	8.5	0	0.9
R11	100.0	78.2	94.2	86.0	66.1	93.3	77.0	79.9	85.8	81.7
R13	0	10.2	3.6	0	4.0	0	0	0	0	1.8
R14	0	3.0	0	0	0	3.4	0	0	2.7	1.2
R15	0	0	0	0	0	0	0.6	0	0	0.1
R19	0	8.3	0	14.0	0	0	0	0	0	0.6

MOBILE HOME UNITS										
	<u>New England</u>	<u>Hid- Atlantic</u>	<u>East North Central</u>	<u>West North Central</u>	<u>South Atlantic</u>	<u>East South Central</u>	<u>West South Central</u>	<u>Mountain</u>	<u>Pacific</u>	<u>US. Total</u>
3. Windows & Doors										
Single Wide										
Average number	11.7	11.3	12.4	11.3	11.5	10.3	11.0	11.8	10.4	11.4
Average size (SF)	102.0	115.8	118.7	115.9	113.5	109.0	107.1	119.7	111.1	113.4
Double Wide										
Average number	11.8	12.1	12.4	12.2	12.3	11.5	12.3	11.8	11.3	11.9
Average size (SF)	131.0	132.8	140.0	157.7	137.1	145.9	137.1	148.4	155.4	145.6
Glazing (percent)										
Single no storms	14.8	9.8	30.8	21.3	41.5	38.5	60.6	25.5	44.0	37.8
Single with storms	59.2	85.3	69.2	76.2	58.5	61.1	28.9	61.6	51.2	58.1
Insul. no storms	0	0	0	2.5	0	0.2	10.2	0	3.4	2.3
Insul. with storms	26.0	4.9	0	0	0	0.2	0.3	5.9	1.4	1.8
Doors (percent of units)										
Insulated	50.5	59.9	50.5	47.3	48.0	37.9	37.9	25.6	53.3	46.1
Not insulated	49.5	40.1	49.5	52.7	52.0	62.1	62.1	74.4	46.7	53.9

1976-77 HOUSING CHARACTERISTICS										
	MOBILE HOME UNITS									Us. Total
	New England	Mid- Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	
4. Heating/Cooling										
Heating fuel source (percent)										
Gas	27.4	31.7	52.3	57.3	41.0	41.9	64.8	41.1	57.8	49.7
oil	53.9	35.6	10.4	9.3	11.4	2.7	2.2	5.5	2.4	9.0
Electric	18.7	32.7	37.3	33.4	47.6	55.4	33.0	53.4	39.8	41.3
Cooling equipment plant install- ed (percent)										
yes	2.9	3.2	9.6	5.2	7.4	2.8	16.7	4.9	23.4	10.9
no	97.1	96.8	90.4	94.8	92.6	97.2	83.3	95.1	76.6	89.1