

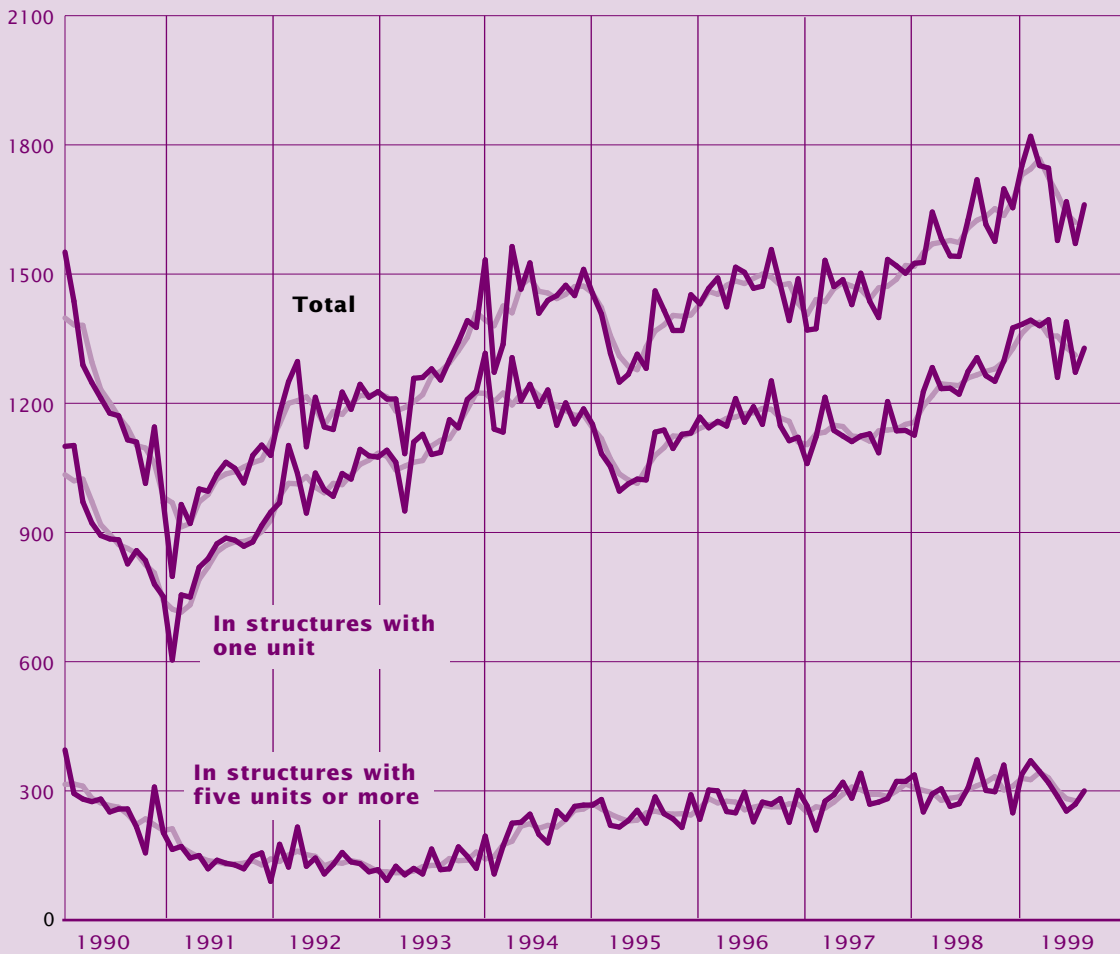
# Housing Starts

Data on manufactured homes no longer appear in this report. For further information, contact Construction Expenditures Branch, Manufacturing and Construction Division, telephone 301-457-1605.

## New Privately Owned Housing Units Started

Seasonally adjusted annual rate in thousands

— Seasonally adjusted annual rate  
— 4-month moving average



Note: Total includes units started in structures with two to four units.  
Source: U.S. Census Bureau, Housing Starts.

Questions regarding these data may be directed to Residential Construction Branch, Manufacturing and Construction Division, telephone: 301-457-1321.  
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## HOUSING STARTS AND BUILDING PERMITS

Privately owned housing starts in July 1999 were at a seasonally adjusted annual rate of 1,661,000; this is 6 ( $\pm 6$ ) percent above the revised June rate of 1,571,000, but 3 ( $\pm 7$ ) percent below the July 1998 figure of 1,719,000.

Single-family housing starts in July 1999 were at a rate of 1,328,000; this is 4 ( $\pm 6$ ) percent above the June figure of 1,272,000. The July rate for units in buildings with five units or more was 300,000. The July rate for units in buildings with two to four units was 33,000.

During the first 7 months of this year, 976,500 housing units were started compared with 928,600 units for the same period in 1998. This is an increase of 5 ( $\pm 2$ ) percent.

New privately owned housing construction was authorized in July in the 19,000 permit-issuing places at a seasonally adjusted annual rate of 1,632,000 units; this is 1 ( $\pm 1$ ) percent below the revised June rate of 1,641,000, but is virtually unchanged ( $\pm 1$  percent) from the July 1998 figure of 1,626,000.

Single-family authorizations in July 1999 were at a rate of 1,239,000; this is virtually unchanged ( $\pm 1$  percent) from the June figure of 1,241,000. Authorizations of units in buildings with five units or more were at a rate of 331,000 in July. The July rate of permit-authorized units in buildings with two to four units was 62,000.

During the first 7 months of this year, 977,500 housing units were authorized by permits in the 19,000 places compared with 925,900 units for the same period in 1998. This is an increase of 6 ( $\pm 1$ ) percent.

In interpreting changes in housing starts and building permits, note that month-to-month changes in seasonally adjusted statistics often show movements which may be irregular. It may take 5 months to establish an underlying trend for total starts and 3 months for building permit authorizations.

The statistics in this report are estimated from sample surveys and are subject to sampling variability as well as nonsampling error including bias and variance from response, nonreporting, and undercoverage. Estimated average relative standard errors of preliminary data are shown in the tables. Whenever a statement such as "2 ( $\pm 3$ ) percent above" appears in the text, this indicates the range (-1 to +5 percent) in which the actual percent change is likely to have occurred. All ranges given are 90-percent confidence intervals and account for only sampling variability. If a range contains zero, it is uncertain whether there was an increase or decrease; that is, the change is not statistically significant. For any comparison cited without a confidence interval, the change is statistically significant. Explanations of confidence intervals and sampling variability appear in the appendix to the April 1999 Current Construction Reports, C20/99-4. On average, the preliminary seasonally adjusted estimates of total housing starts and building permits are revised about  $\pm 1$  percent.

Housing starts and building permits data do not include manufactured home units. Manufactured home statistics are available through the Internet at: [www.census.gov/const/www/mhsindex.html](http://www.census.gov/const/www/mhsindex.html). For further information on these data, contact Construction Expenditures Branch, Manufacturing and Construction Division, telephone 301-457-1605.

## HISTORICAL DATA

Historical data on housing starts and residential permit authorizations are available from Residential Construction Branch, Manufacturing and Construction Division, U.S. Census Bureau, Washington, DC 20233-6900. Telephone: 301-457-1321.

A list of tables and special supplements is shown below:

Title	C20 issues				
	99-7	99-4	99-1	98-10	98-7
New privately owned housing units started, by purpose of construction (quarterly and annual data).....	99-7	99-4	99-1	98-10	98-7
Total time from start of construction to completion of private residential buildings (annual data) .....	99-3	98-3	97-3	96-3	95-3
Total time from authorization of construction to start for private residential buildings (annual data) .....	99-3	98-3	97-3	96-3	95-3
New privately owned housing units, by intended use and design at time of start (annual data) .....	99-2	98-2	97-2	96-2	95-2

**Table 1. New Privately Owned Housing Units Started**

[Thousands of units. Detail may not add to total because of rounding]

Period	Total	In structures with—				Inside MSAs <sup>1</sup>	Outside MSAs <sup>1</sup>	North-east	Midwest	South	West
		1 unit	2 units	3 and 4 units	5 units or more						
<b>ANNUAL DATA</b>											
1989	1,376.1	1,003.3	19.9	35.3	317.6	1,128.1	248.0	178.5	265.8	536.2	395.7
1990	1,192.7	894.8	16.1	21.4	260.4	946.9	245.7	131.3	253.2	479.3	328.9
1991	1,013.9	840.4	15.5	20.1	137.9	789.2	224.7	112.9	233.0	414.1	254.0
1992	1,199.7	1,029.9	12.4	18.3	139.0	931.5	268.2	126.7	287.8	496.9	288.3
1993	1,287.6	1,125.7	11.1	18.3	132.6	1,031.9	255.8	126.5	297.7	561.8	301.7
1994	1,457.0	1,198.4	14.8	20.2	223.5	1,183.1	273.9	138.2	328.9	639.1	350.8
1995	1,354.1	1,076.2	14.3	19.4	244.1	1,106.4	247.6	117.7	290.1	615.0	331.3
1996	1,476.8	1,160.9	16.4	28.8	270.8	1,211.4	265.5	132.1	321.5	661.9	361.4
1997	1,474.0	1,133.7	18.1	26.4	295.8	1,221.3	252.7	136.8	303.6	670.3	363.3
1998	1,616.9	1,271.4	15.7	26.9	302.9	1,349.9	267.0	148.5	330.5	743.0	394.9
<b>Monthly Data Not Seasonally Adjusted</b>											
1998: January	91.2	72.3	0.8	1.5	16.5	78.1	13.1	8.0	14.4	42.9	25.9
February	101.1	78.9	0.8	3.2	18.1	87.0	14.0	9.4	17.3	51.2	23.2
March	132.6	107.2	1.6	1.9	21.9	113.6	19.0	11.0	23.3	63.2	35.0
April	144.9	117.3	1.8	2.2	23.7	119.0	25.9	11.9	33.2	65.4	34.4
May	143.3	114.4	1.9	2.6	24.3	117.6	25.7	14.1	29.7	64.5	34.9
June	159.6	128.7	1.7	3.0	26.1	129.2	30.4	14.0	33.7	70.4	41.5
July	156.0	120.5	1.5	2.3	31.7	130.2	25.7	15.3	31.2	70.6	38.8
August	147.5	115.1	1.4	3.2	27.8	122.3	25.2	12.9	31.3	67.7	35.5
September	141.5	112.4	1.0	1.3	26.9	116.7	24.8	13.1	29.8	62.3	36.3
October	155.5	113.5	1.2	3.0	37.7	131.6	23.9	16.0	36.4	71.9	31.3
November	124.2	101.3	0.9	1.9	20.1	102.8	21.4	12.0	25.1	58.8	28.3
December	119.6	89.8	0.9	0.8	28.0	101.8	17.8	10.7	25.0	54.0	29.9
1999: January	108.0	82.1	0.7	2.0	23.3	95.6	12.4	7.9	13.5	57.3	29.2
February	112.2	89.1	0.7	0.8	21.6	97.4	14.8	9.6	16.5	62.1	24.1
March	149.3	122.9	1.4	1.4	23.6	124.9	24.5	12.1	29.2	73.1	34.9
April	146.5	118.8	1.8	1.2	24.8	122.0	24.5	12.1	32.6	64.9	36.9
May <sup>f</sup>	155.6	130.4	1.1	1.1	23.0	131.3	24.3	14.7	35.7	66.9	38.3
June <sup>f</sup>	152.1	127.5	1.1	1.9	21.6	124.4	27.7	15.9	38.0	64.4	33.8
July <sup>p</sup>	152.7	122.2	1.1	2.0	27.4	128.6	24.1	17.1	29.7	66.2	39.8
Year to date: 1998	928.6	739.2	10.2	16.8	162.4	774.7	153.9	83.7	182.9	428.3	233.7
1999	976.5	792.9	8.0	10.3	165.3	824.1	152.4	89.2	195.3	455.0	236.9
<b>Seasonally Adjusted Annual Rate</b>											
1998: January	1,527	1,227	49		251	(NA)	(NA)	158	330	663	376
February	1,644	1,283	68		293	(NA)	(NA)	209	367	721	347
March	1,583	1,234	44		305	(NA)	(NA)	140	320	728	395
April	1,542	1,235	43		264	(NA)	(NA)	127	345	688	382
May	1,541	1,221	50		270	(NA)	(NA)	151	299	708	383
June	1,626	1,274	45		307	(NA)	(NA)	139	315	756	416
July	1,719	1,306	41		372	(NA)	(NA)	154	314	818	433
August	1,615	1,264	50		301	(NA)	(NA)	142	316	770	387
September	1,576	1,251	27		298	(NA)	(NA)	135	316	717	408
October	1,698	1,298	40		360	(NA)	(NA)	155	350	835	358
November	1,654	1,375	30		249	(NA)	(NA)	153	324	759	418
December	1,750	1,383	29		338	(NA)	(NA)	157	416	747	430
1999: January	1,820	1,393	57		370	(NA)	(NA)	150	335	901	434
February	1,752	1,380	27		345	(NA)	(NA)	206	342	842	362
March	1,746	1,394	33		319	(NA)	(NA)	147	381	821	397
April	1,577	1,260	30		287	(NA)	(NA)	137	335	706	399
May <sup>f</sup>	1,668	1,389	26		253	(NA)	(NA)	158	361	734	415
June <sup>f</sup>	1,571	1,272	30		269	(NA)	(NA)	159	357	703	352
July <sup>p</sup>	1,661	1,328	33		300	(NA)	(NA)	169	297	763	432
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>2</sup></b>											
Annual . . . . . (percent)	3	1	7	11	3	1	3	3	2	1	1
Monthly . . . . . (percent)	3	3	11	13	9	3	9	7	6	4	4
Year to date . . . . . (percent)	1	1	7	14	4	1	4	5	3	2	1

NA Not available. <sup>p</sup>Preliminary. <sup>f</sup>Revised.

<sup>1</sup>Metropolitan statistical areas.

<sup>2</sup>Average Relative Standard Errors (Avg. RSE): Annual—Avg. RSE for the last 2 years; Year to date—Avg. RSE for the current period and the same period last year; Monthly—Avg. RSE for the latest 6-month period (January through June or July through December).

Table 2. New Privately Owned Housing Units Authorized in Permit-Issuing Places

[Thousands of units. Detail may not add to total because of rounding]

Period	United States							Northeast			Midwest			South			West		
	Total	In structures with—				Inside MSAs <sup>1</sup>	Outside MSAs <sup>1</sup>	Total	In structures with—		Total	In structures with—		Total	In structures with—		Total	In structures with—	
		1 unit	2 units	3 and 4 units	5 units or more				1 unit	2 units or more		1 unit	2 units or more		1 unit	2 units or more		1 unit	2 units or more
<b>ANNUAL DATA</b>																			
<b>19,000-Place Series</b>																			
1994 .....	1,371.6	1,068.5	31.4	30.8	241.0	1,144.1	227.5	138.5	119.1	19.4	305.2	233.6	71.6	585.5	453.0	132.5	342.4	262.8	79.7
1995 .....	1,332.5	997.3	32.2	31.5	271.5	1,116.8	215.8	124.2	104.5	19.7	296.6	220.5	76.1	583.2	430.3	152.9	328.5	241.9	86.5
1996 .....	1,425.6	1,069.5	33.6	32.2	290.3	1,200.0	225.6	136.9	108.8	28.1	317.8	236.6	81.3	623.4	468.5	155.0	347.4	255.6	91.8
1997 .....	1,441.1	1,062.4	34.9	33.6	310.3	1,220.2	220.9	141.9	111.2	30.7	299.8	220.0	79.8	635.9	464.2	171.7	363.5	267.1	96.5
1998 .....	1,612.3	1,187.6	33.2	36.0	355.5	1,377.9	234.4	159.4	124.1	35.3	327.2	247.8	79.4	724.5	521.9	202.6	401.2	293.8	107.4
<b>MONTHLY DATA</b>																			
<b>Not Seasonally Adjusted</b>																			
1997: January .....	88.1	65.8	2.4	1.5	18.5	77.5	10.6	9.1	6.5	2.6	13.2	9.2	4.0	43.3	33.6	9.8	22.5	16.4	6.1
February .....	94.1	70.3	2.3	1.8	19.7	81.6	12.5	9.1	5.8	3.3	15.7	11.4	4.3	44.6	34.3	10.4	24.6	18.8	5.9
March .....	120.1	88.7	2.9	2.5	26.0	102.5	17.6	11.8	8.7	3.0	24.3	18.0	6.3	55.4	39.7	15.7	28.7	22.3	6.4
April .....	137.2	104.4	3.5	3.1	26.2	113.1	24.2	12.6	10.4	2.2	32.0	24.3	7.7	61.5	45.0	16.5	31.2	24.8	6.4
May .....	131.6	101.3	3.0	2.8	24.6	108.3	23.3	12.8	11.0	1.9	29.4	22.9	6.5	55.8	42.3	13.5	33.5	25.1	8.4
June .....	133.6	100.9	3.2	3.4	26.2	111.9	21.7	14.0	11.0	3.0	29.2	22.3	6.9	57.1	42.4	14.8	33.3	25.2	8.1
July .....	133.7	99.8	3.3	3.3	27.2	113.0	20.7	13.5	11.1	2.4	27.8	21.6	6.2	58.7	41.8	16.9	33.7	25.3	8.5
August .....	126.0	91.8	2.5	2.9	28.7	105.9	20.1	12.9	9.8	3.1	28.3	20.0	8.3	53.4	38.9	14.4	31.4	23.1	8.4
September .....	134.4	95.6	3.0	3.2	32.7	113.8	20.6	12.4	10.1	2.3	28.8	20.7	8.2	57.4	40.0	17.5	35.7	24.8	10.9
October .....	135.5	97.5	3.7	3.9	30.4	114.5	21.0	12.5	10.7	1.8	29.5	20.7	8.8	58.0	41.4	16.6	35.5	24.8	10.7
November .....	100.4	72.5	2.3	2.2	23.3	85.8	14.6	10.6	8.1	2.5	21.3	14.8	6.5	44.0	32.0	12.1	24.5	17.7	6.8
December .....	106.4	73.9	2.8	2.9	26.8	92.3	14.1	10.7	8.0	2.7	20.3	14.1	6.2	46.5	32.9	13.6	28.9	18.9	10.0
1998: January .....	96.2	70.1	2.0	2.0	22.1	84.6	11.6	9.7	7.0	2.7	14.7	10.9	3.8	46.3	34.4	12.0	25.4	17.8	7.6
February .....	107.4	78.1	2.3	2.6	24.4	93.5	13.9	8.9	7.2	1.8	19.7	14.3	5.4	51.2	37.5	13.7	27.5	19.1	8.4
March .....	140.9	105.1	2.8	3.3	29.9	121.0	20.0	12.1	10.2	1.9	26.8	20.4	6.4	68.4	47.7	20.7	33.6	26.8	6.9
April .....	146.3	113.6	2.7	2.7	27.3	123.3	23.0	13.2	11.4	1.7	31.0	25.2	5.8	63.6	48.0	15.6	38.5	29.0	9.5
May .....	138.2	107.3	2.5	2.9	25.5	116.4	21.8	13.3	11.2	2.1	30.7	24.4	6.3	62.5	45.9	16.5	31.8	25.8	5.9
June .....	153.4	115.8	3.2	4.3	30.1	129.7	23.7	16.0	12.8	3.2	31.6	25.2	6.4	65.0	48.6	16.4	40.8	29.2	11.6
July .....	149.3	111.2	3.3	3.2	31.7	126.1	23.2	15.4	11.9	3.5	29.7	23.4	6.3	66.1	47.7	18.5	38.0	28.2	9.8
August .....	144.7	104.4	3.1	3.0	34.1	122.8	21.9	14.3	11.1	3.2	28.9	21.8	7.1	67.1	46.5	20.6	34.4	25.1	9.4
September .....	141.7	102.5	2.9	3.4	32.9	120.8	20.9	14.7	11.0	3.7	30.3	22.1	8.1	62.2	44.0	18.2	34.7	25.4	9.2
October .....	149.8	103.8	3.0	3.7	39.3	126.8	23.1	15.7	11.1	4.6	32.4	23.6	8.8	65.8	44.0	21.9	35.9	25.1	10.7
November .....	119.9	86.6	2.4	2.3	28.6	104.1	15.8	13.4	9.8	3.6	24.9	18.9	6.0	51.2	37.2	14.1	30.3	20.7	9.5
December .....	124.5	89.0	3.1	2.6	29.8	108.8	15.7	12.7	9.5	3.2	26.5	17.6	8.9	55.1	40.6	14.5	30.2	21.3	8.8
1999: January .....	105.3	73.7	2.2	2.3	27.1	93.7	11.6	9.0	6.6	2.3	13.3	10.3	3.1	55.9	37.6	18.3	27.1	19.2	7.8
February .....	113.3	85.8	2.2	2.4	22.9	99.5	13.8	9.5	7.6	1.9	18.6	14.6	4.0	58.6	43.1	15.5	26.6	20.5	6.1
March .....	152.1	117.7	2.9	3.1	28.4	130.5	21.6	14.0	10.4	3.6	31.5	23.9	7.6	69.8	53.9	15.8	36.7	29.4	7.4
April .....	149.1	118.3	2.9	3.3	24.6	125.8	23.3	15.1	12.4	2.7	33.7	27.0	6.6	65.8	50.8	15.0	34.6	28.1	6.5
May .....	141.7	114.1	2.7	2.3	22.6	120.0	21.7	14.2	12.3	2.0	32.8	25.1	7.7	59.3	48.7	10.6	35.3	28.1	7.3
June <sup>e</sup> .....	165.6	125.7	3.4	3.2	33.2	140.4	25.2	18.0	12.9	5.2	33.6	26.8	6.8	71.0	52.3	18.7	43.0	33.8	9.2
July <sup>p</sup> .....	144.7	111.7	2.6	2.6	27.8	123.6	21.1	14.3	11.8	2.5	29.0	23.9	5.1	66.0	48.3	17.7	35.3	27.7	7.6
Year to date: 1998 .....	925.9	697.6	18.3	20.7	189.3	789.6	136.3	87.8	70.8	17.0	181.7	141.3	40.4	422.5	310.6	111.9	233.9	174.9	59.0
1999 <sup>2</sup> .....	977.5	750.1	18.9	19.1	189.4	838.7	138.8	94.8	74.7	20.1	192.6	151.8	40.8	450.8	336.5	114.4	239.2	187.1	52.1

See footnotes at end of table.

**Table 2. New Privately Owned Housing Units Authorized in Permit-Issuing Places—Con.**

[Thousands of units. Detail may not add to total because of rounding]

Period	United States							Northeast			Midwest			South			West		
	Total	In structures with—				Inside MSAs <sup>1</sup>	Outside MSAs <sup>1</sup>	Total	In structures with—		Total	In structures with—		Total	In structures with—		Total	In structures with—	
		1 unit	2 units	3 and 4 units	5 units or more				1 unit	2 units or more		1 unit	2 units or more		1 unit	2 units or more		1 unit	2 units or more
<b>MONTHLY DATA—Con.</b>																			
<b>Seasonally Adjusted Annual Rate</b>																			
1997:	January	1,382	1,046	64	272	(NA)	(NA)	160	121	39	295	215	80	590	458	132	337	252	85
	February	1,445	1,070	65	310	(NA)	(NA)	173	116	57	301	216	85	609	459	150	362	279	83
	March	1,436	1,031	66	339	(NA)	(NA)	153	114	39	300	218	82	647	446	201	336	253	83
	April	1,421	1,054	70	297	(NA)	(NA)	129	105	24	312	228	84	646	466	180	334	255	79
	May	1,414	1,046	65	303	(NA)	(NA)	132	107	25	289	216	73	618	456	162	375	267	108
	June	1,402	1,057	67	278	(NA)	(NA)	141	111	30	301	222	79	624	467	157	336	257	79
	July	1,440	1,050	74	316	(NA)	(NA)	136	109	27	287	214	73	658	459	199	359	268	91
	August	1,449	1,061	65	323	(NA)	(NA)	141	107	34	309	221	88	626	462	164	373	271	102
	September	1,494	1,091	67	336	(NA)	(NA)	138	112	26	304	221	83	654	472	182	398	286	112
	October	1,499	1,098	76	325	(NA)	(NA)	134	114	20	297	218	79	677	485	192	391	281	110
	November	1,469	1,093	62	314	(NA)	(NA)	141	110	31	297	220	77	652	487	165	379	276	103
	December	1,456	1,080	77	299	(NA)	(NA)	149	117	32	307	238	69	621	461	160	379	264	115
1998:	January	1,578	1,165	68	345	(NA)	(NA)	176	134	42	341	259	82	662	486	176	399	286	113
	February	1,661	1,200	77	384	(NA)	(NA)	171	143	28	376	270	106	706	502	204	408	285	123
	March	1,606	1,162	72	372	(NA)	(NA)	151	126	25	318	234	84	750	510	240	387	292	95
	April	1,529	1,155	57	317	(NA)	(NA)	140	119	21	306	240	66	674	498	176	409	298	111
	May	1,549	1,174	64	311	(NA)	(NA)	142	114	28	318	245	73	713	525	188	376	290	86
	June	1,531	1,143	73	315	(NA)	(NA)	151	121	30	307	233	74	680	505	175	393	284	109
	July	1,626	1,191	74	361	(NA)	(NA)	160	119	41	315	237	78	744	530	214	407	305	102
	August	1,670	1,202	72	396	(NA)	(NA)	158	124	34	312	240	72	800	550	250	400	288	112
	September	1,569	1,171	70	328	(NA)	(NA)	159	119	40	320	240	80	708	521	187	382	291	91
	October	1,726	1,210	69	447	(NA)	(NA)	174	122	52	336	254	82	801	534	267	415	300	115
	November	1,688	1,254	63	371	(NA)	(NA)	178	132	46	338	271	67	723	542	181	449	309	140
	December	1,708	1,296	77	335	(NA)	(NA)	177	138	39	399	294	105	733	567	166	399	297	102
1999:	January	1,778	1,279	79	420	(NA)	(NA)	169	133	36	324	257	67	833	564	269	452	325	127
	February	1,738	1,306	72	360	(NA)	(NA)	181	151	30	352	275	77	810	575	235	395	305	90
	March	1,654	1,242	69	343	(NA)	(NA)	163	123	40	356	264	92	744	552	192	391	303	88
	April	1,572	1,214	67	291	(NA)	(NA)	162	128	34	338	256	82	692	532	160	380	298	82
	May	1,591	1,243	59	289	(NA)	(NA)	155	128	27	338	253	85	692	554	138	406	308	98
	June <sup>f</sup>	1,641	1,241	64	336	(NA)	(NA)	167	121	46	330	250	80	736	544	192	408	326	82
	July <sup>p</sup>	1,632	1,239	62	331	(NA)	(NA)	155	122	33	318	248	70	765	556	209	394	313	81
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>3</sup></b>																			
Annual	(percent)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
Monthly	(percent)	1	(Z)	3	7	1	(Z)	3	2	2	3	1	3	1	1	2	1	1	1
Year to date	(percent)	(Z)	(Z)	2	4	(Z)	(Z)	2	2	1	1	1	2	1	1	1	1	1	1

NA Not available. <sup>p</sup>Preliminary. <sup>r</sup>Revised. X Not applicable. Z Less than 0.5 percent.

<sup>1</sup>Metropolitan statistical areas.

<sup>2</sup>Reflects revisions not distributed to months.

<sup>3</sup>Average Relative Standard Errors (Avg. RSE): Annual—RSE for the latest year; Year to date—Avg. RSE for the current period and the same period last year; Monthly—Avg. RSE for the latest 6-month period (January through June or July through December).

Table 3. **New Privately Owned Housing Units Authorized, but Not Started, in Permit-Issuing Places at End of Period**

[Thousands of units. Detail may not add to total because of rounding]

Authorized, but not started at end of period	United States				Northeast				Midwest				South				West			
	Total	In structures with—			Total	In structures with—			Total	In structures with—			Total	In structures with—			Total	In structures with—		
		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more
<b>END OF YEAR</b>																				
<b>16,000-Place Series</b>																				
1979.....	184.1	77.3	14.4	92.4	32.6	12.3	1.1	19.3	19.6	7.7	2.7	9.2	85.3	32.9	5.1	47.4	46.4	24.4	5.5	16.6
1980.....	173.6	70.1	15.3	88.2	26.0	12.3	1.2	12.6	17.5	6.8	2.9	7.8	88.5	32.9	6.5	49.1	41.6	18.1	4.8	18.7
1981.....	145.5	60.1	10.7	74.7	23.3	11.5	0.9	10.8	10.0	5.0	1.7	3.2	77.5	29.8	4.9	42.8	34.7	13.8	3.1	17.9
1982.....	167.8	66.9	11.6	89.3	19.4	9.4	1.0	9.0	10.4	4.5	1.7	4.2	100.3	38.5	5.9	55.9	37.7	14.5	2.9	20.2
1983.....	178.0	68.9	13.0	96.1	21.9	12.6	1.1	8.2	12.2	5.2	1.8	5.1	104.2	33.6	6.8	63.8	39.8	17.4	3.3	19.0
1984.....	192.5	66.2	10.2	116.1	23.2	10.8	1.2	11.2	14.0	5.1	1.5	7.5	109.4	34.5	4.8	70.1	45.8	15.7	2.7	27.4
<b>17,000-Place Series</b>																				
1985.....	223.3	80.6	13.7	129.0	36.9	19.2	2.1	15.7	20.4	5.8	2.2	12.4	120.6	43.3	5.7	71.6	45.4	12.3	3.8	29.3
1986.....	205.2	92.8	12.3	100.2	34.4	21.2	2.4	10.8	21.1	6.4	2.3	12.4	91.3	43.5	3.8	43.9	58.4	21.7	3.7	33.0
1987.....	155.0	79.3	11.1	64.6	36.8	23.3	2.1	11.4	11.9	6.5	2.2	3.2	68.6	33.8	3.5	31.4	37.7	15.7	3.3	18.6
1988.....	156.4	76.4	9.9	70.1	32.9	20.0	1.9	11.0	15.5	5.9	2.3	7.3	64.0	30.4	2.9	30.7	44.0	20.1	2.7	21.1
1989.....	173.9	93.1	8.4	72.5	34.1	25.1	1.6	7.4	18.0	7.5	1.8	8.7	73.5	34.3	2.1	37.1	48.3	26.2	2.8	19.2
1990.....	131.6	75.0	8.5	48.1	25.8	20.0	1.3	4.5	14.2	5.7	2.2	6.3	55.1	27.3	2.1	25.7	36.5	22.0	2.9	11.6
1991.....	126.3	71.1	4.7	50.6	24.4	17.3	0.7	6.4	16.9	6.4	1.4	9.1	51.3	26.0	1.3	24.0	33.8	21.4	1.4	11.1
1992.....	108.7	71.9	5.1	31.7	18.6	13.5	0.7	4.5	13.4	8.8	1.7	2.9	49.8	33.3	1.3	15.2	26.9	16.3	1.5	9.1
1993.....	118.9	72.5	3.7	42.8	22.3	15.4	0.5	6.4	14.3	8.6	1.2	4.5	58.5	35.2	1.0	22.3	23.8	13.2	1.0	9.6
1994.....	115.6	66.0	3.6	46.1	17.1	12.2	0.4	4.5	13.1	8.3	1.2	3.7	58.1	31.2	1.1	25.8	27.3	14.2	1.0	12.1
<b>19,000-Place Series</b>																				
1995.....	142.2	80.1	4.5	57.6	18.3	13.5	0.5	4.3	18.7	12.8	1.4	4.5	71.6	36.7	1.3	33.6	33.5	17.1	1.2	15.2
1996.....	126.4	67.5	4.8	54.2	16.0	9.0	0.6	6.4	16.6	10.6	1.7	4.2	68.1	32.3	1.3	34.4	25.8	15.5	1.2	9.2
1997.....	111.1	63.6	3.7	43.8	11.3	7.1	0.4	3.8	14.1	9.2	1.3	3.6	58.7	32.0	1.2	25.5	26.9	15.2	0.8	10.8
1998.....	137.1	79.5	3.1	54.5	16.0	10.2	0.5	5.3	18.2	11.8	1.1	5.3	75.9	41.4	0.8	33.7	27.1	16.2	0.7	10.2
<b>END OF MONTH</b>																				
1998: January.....	114.1	65.4	5.5	43.2	12.4	7.4	0.6	4.4	15.0	8.4	1.6	5.0	63.0	35.6	2.0	25.4	23.7	13.9	1.3	8.5
February.....	120.5	68.4	4.3	47.8	11.1	7.7	0.5	2.9	16.7	9.8	1.4	5.5	65.1	36.0	1.4	27.7	27.7	14.9	0.9	11.9
March.....	128.9	73.7	4.9	50.3	11.9	8.4	0.6	3.0	18.9	12.1	1.4	5.4	71.0	38.4	1.8	30.7	27.1	14.8	1.1	11.3
April.....	135.1	78.4	4.1	52.6	11.9	7.9	0.5	3.5	19.5	13.4	1.3	4.8	72.1	40.0	1.5	30.6	31.7	17.1	0.9	13.7
May.....	134.2	77.5	4.5	52.2	10.7	7.6	0.5	2.6	21.1	12.6	1.4	7.1	73.2	38.5	1.5	33.2	29.2	18.7	1.1	9.3
June.....	135.3	78.7	4.7	51.9	12.5	9.1	0.6	2.8	22.0	14.0	1.4	6.6	72.3	39.0	1.6	31.7	28.4	16.6	1.1	10.7
July.....	130.0	77.2	5.4	47.4	12.0	7.8	0.6	3.6	22.0	13.4	1.7	7.0	70.0	40.2	1.8	28.0	25.9	15.9	1.2	8.8
August.....	128.4	78.1	3.5	46.8	12.1	7.5	0.5	4.2	20.2	14.4	1.1	4.7	71.4	41.0	1.2	29.3	24.6	15.2	0.8	8.7
September.....	131.8	78.0	3.3	50.5	13.5	8.4	0.4	4.7	21.5	15.0	1.2	5.3	74.9	41.1	1.0	32.9	21.8	13.5	0.8	7.6
October.....	129.7	76.6	3.3	49.9	13.0	8.1	0.4	4.5	19.0	12.6	1.0	5.4	72.8	41.2	1.0	30.6	24.9	14.7	0.8	9.5
November.....	127.2	70.0	3.1	54.1	13.6	6.9	0.5	6.3	17.9	11.4	1.1	5.4	69.7	36.5	1.0	32.3	26.0	15.2	0.6	10.1
December.....	137.1	79.5	3.1	54.5	16.0	10.2	0.5	5.3	18.2	11.8	1.1	5.3	75.9	41.4	0.8	33.7	27.1	16.2	0.7	10.2
1999: January.....	135.3	76.1	2.8	56.4	16.6	10.9	0.5	5.2	18.1	11.0	0.8	6.2	75.3	38.4	0.8	36.0	25.3	15.7	0.6	9.0
February.....	137.2	78.5	3.3	55.4	16.2	11.5	0.6	4.2	20.5	12.2	0.9	7.3	73.3	37.7	1.0	34.6	27.2	17.2	0.7	9.3
March.....	141.5	84.0	3.2	54.4	17.5	11.2	0.5	5.8	22.6	15.3	1.0	6.4	72.4	38.7	1.0	32.7	29.0	18.8	0.7	9.6
April.....	148.3	94.8	2.8	50.7	19.7	13.4	0.4	5.8	25.5	20.0	0.8	4.7	75.5	43.6	0.9	31.0	27.6	17.9	0.6	9.2
May <sup>f</sup> .....	139.5	86.9	3.4	49.1	18.9	12.7	0.5	5.7	24.4	17.5	1.1	5.8	71.0	40.7	1.1	29.3	25.1	16.0	0.7	8.4
June <sup>f</sup> .....	157.0	96.6	3.6	56.7	20.5	12.4	0.5	7.5	21.3	16.1	1.2	4.0	80.6	45.4	1.2	34.0	34.6	22.7	0.7	11.1
July <sup>p</sup> .....	154.4	95.9	3.2	55.3	17.5	12.5	0.5	4.4	22.2	16.7	1.0	4.4	84.0	45.8	1.0	37.2	30.9	20.9	0.6	9.3
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>1</sup></b>																				
End of period . (percent) . .	3	4	8	5	13	20	19	4	8	8	12	25	4	4	15	7	6	8	15	9

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Average Relative Standard Errors: Average for the latest 6-month period (January through June or July through December).

Note: These backlog data represent the number of housing units authorized in all months up to and including the last day of the reporting period and not started as of that date without regard to the months of original permit issuance. Cancelled, abandoned, expired, and revoked permits are excluded from the backlog.

**Table 4. New Privately Owned Housing Units Started by Location and Type of Structure**

[Thousands of units. Detail may not add to total because of rounding]

Period	United States			Inside MSAs <sup>1</sup>			Outside MSAs <sup>1</sup>			Northeast			Midwest			South			West		
	Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—	
		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more
<b>ANNUAL DATA</b>																					
1979	1,745	1,194	429	1,241	790	362	505	405	67	178	123	46	349	243	80	748	522	184	470	306	119
1980	1,292	852	331	914	563	271	379	289	59	125	87	30	218	142	56	643	428	165	306	196	80
1981	1,084	705	288	760	458	236	324	247	52	117	84	25	165	110	40	562	363	153	240	148	69
1982	1,062	663	320	785	452	274	277	211	46	117	79	31	149	99	38	591	357	189	205	127	61
1983	1,703	1,068	522	1,351	795	464	352	272	58	168	123	35	218	153	48	935	557	317	382	234	121
1984	1,750	1,084	544	1,415	830	491	335	254	53	204	158	35	243	167	60	866	528	274	436	230	175
1985	1,742	1,072	576	1,494	882	535	248	190	41	252	182	55	240	148	77	782	504	240	468	239	204
1986	1,805	1,179	542	1,546	970	508	259	209	34	294	228	50	296	188	91	733	504	201	483	261	200
1987	1,620	1,146	409	1,372	934	385	248	212	24	269	204	50	298	203	81	634	485	129	420	255	148
1988	1,488	1,081	348	1,243	874	323	245	207	25	235	181	42	274	194	66	575	443	115	404	264	125
1989	1,376	1,003	318	1,128	798	289	248	205	29	178	132	37	266	190	62	536	409	109	396	272	108
1990	1,193	895	260	947	685	233	246	210	27	131	104	21	253	193	50	479	371	99	329	226	91
1991	1,014	840	138	789	648	117	225	193	21	113	99	8	233	191	31	414	353	51	254	197	47
1992	1,200	1,030	139	932	793	117	268	237	22	127	112	11	288	236	42	497	438	50	288	244	36
1993	1,288	1,126	133	1,032	897	114	256	229	19	126	116	8	298	251	37	562	498	55	302	261	33
1994	1,457	1,198	224	1,183	958	200	274	241	23	138	123	12	329	268	50	639	522	107	351	286	54
1995	1,354	1,076	244	1,106	861	221	248	215	23	118	102	12	290	234	46	615	485	119	331	256	67
1996	1,477	1,161	271	1,211	936	242	265	225	29	132	112	15	321	254	51	662	524	125	361	271	79
1997	1,474	1,134	296	1,221	923	267	253	211	29	137	111	21	304	238	48	670	507	151	363	278	76
1998	1,617	1,271	303	1,350	1,036	280	267	235	23	148	122	21	330	273	45	743	574	155	395	303	83
<b>QUARTERLY DATA</b>																					
1995: 1st quarter	270	214	48	226	177	44	44	37	4	22	19	2	45	36	8	134	106	24	69	54	14
1995: 2nd quarter	371	297	65	298	232	59	73	65	6	36	29	5	85	70	12	160	127	30	91	70	19
1995: 3rd quarter	387	308	69	314	245	62	73	63	7	33	30	2	89	72	14	170	133	35	95	73	19
1995: 4th quarter	326	257	62	268	207	56	58	50	6	27	24	3	71	57	13	152	118	31	76	59	15
1996: 1st quarter	303	240	57	253	198	52	49	42	6	21	18	2	53	43	8	145	117	27	84	62	20
1996: 2nd quarter	428	344	69	348	275	62	80	69	7	39	33	4	96	78	13	188	154	30	105	79	22
1996: 3rd quarter	410	324	75	332	257	66	78	67	9	38	33	4	99	78	17	176	139	34	97	74	20
1996: 4th quarter	335	252	69	278	206	62	58	47	8	34	27	5	74	55	14	152	115	34	76	55	17
1997: 1st quarter	297	238	51	255	202	47	42	36	4	26	20	5	49	40	6	143	115	26	80	63	15
1997: 2nd quarter	419	325	83	342	260	74	77	65	9	36	31	5	92	74	14	190	143	43	101	77	21
1997: 3rd quarter	400	315	75	328	252	68	72	62	7	40	33	6	88	72	12	177	134	39	96	75	18
1997: 4th quarter	357	257	86	296	209	78	62	48	8	35	28	6	75	52	16	161	115	43	87	62	22
1998: 1st quarter	325	258	57	279	219	52	46	39	5	28	22	5	55	45	7	157	125	29	84	66	16
1998: 2nd quarter	448	360	74	366	287	68	82	73	6	40	34	4	97	83	9	200	158	38	111	85	23
1998: 3rd quarter	445	348	86	369	281	80	76	67	7	41	35	5	92	76	13	201	153	44	111	84	24
1998: 4th quarter	399	305	86	336	250	79	63	55	6	39	31	7	86	68	15	185	138	44	89	68	20
1999: 1st quarter	370	294	68	318	248	64	52	46	4	30	24	5	59	52	5	193	149	41	88	69	17
1999: 2nd quarter	454	377	69	378	307	64	77	70	5	43	37	4	106	90	14	196	159	34	109	90	17
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>3</sup></b>																					
Annual . . . . . (percent) . .	1	1	3	1	1	3	3	4	9	3	2	17	2	3	5	1	2	4	1	1	2
Quarterly . . . . . (percent) . .	1	1	5	1	1	5	6	6	22	3	4	8	4	4	18	2	2	6	2	1	6

<sup>1</sup>Revised.

<sup>2</sup>Metropolitan statistical areas.

<sup>3</sup>Includes units started in structures with two to four units.

<sup>3</sup>Average Relative Standard Errors (Avg. RSE): Annual—Avg. RSE for the last 2 years; Quarterly—Avg. RSE for the latest 2-quarter period (quarter 1 through quarter 2 or quarter 3 through quarter 4).



**Table 5. Seasonal Indexes Used to Adjust Housing Units Started**

Period	United States implicit index <sup>1</sup>	In structures with—						All units			
		1 unit				2 to 4 units	5 units or more	North-east	Midwest	South	West
		North-east	Midwest	South	West						
<b>1999</b>											
April.....	111.5	104.5	114.9	115.1	111.6	116.0	103.7	105.4	116.5	110.0	110.6
May <sup>r</sup> .....	111.9	114.9	121.3	110.2	108.4	106.4	108.9	111.6	119.4	109.8	111.1
June <sup>r</sup> .....	116.2	121.8	134.1	113.1	119.7	122.5	96.6	119.3	127.0	109.3	114.8
July <sup>p</sup> .....	110.3	123.0	118.1	103.3	113.6	113.2	109.6	123.6	122.4	106.0	112.4

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>The implicit seasonal index is the ratio of the unadjusted number of housing units started in the United States to the seasonally adjusted national total of housing units started. It provides an indication of the overall seasonality for the particular month.

Note: These seasonal indexes include trading-day adjustment factors.

**Table 6. Seasonal Indexes Used to Adjust Housing Units Authorized in Permit-Issuing Places**

Period	United States implicit index <sup>1</sup>	In structures with—						All units			
		1 unit				2 to 4 units	5 units or more	North-east	Midwest	South	West
		North-east	Midwest	South	West						
<b>1999</b>											
April.....	113	116	127	114	113	111	101	112	119	114	109
May.....	106	114	119	105	109	101	93	108	115	101	103
June <sup>r</sup> .....	121	128	128	115	124	122	118	128	120	114	125
July <sup>p</sup> .....	106	115	115	104	106	101	100	110	109	103	107

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits in the United States to the seasonally adjusted national total of housing units authorized. It provides an indication of the overall seasonality for the particular month.

Note: These seasonal indexes include trading-day adjustment factors.



**Table 7. New Privately Owned Housing Units Started by Purpose of Construction**  
 [Thousands of units. Detail may not add to total because of rounding]

Period	Total	In structures with—							
		1 unit					2 units or more		
		Total	For sale <sup>1</sup>	For owner occupancy on owner's land		For rent	Total	For sale	For rent
				Contractor built	Owner built				
<b>ANNUAL DATA</b>									
1979.....	1,745	1,194	742	213	222	17	551	173	378
1980.....	1,292	852	526	149	164	12	440	163	277
1981.....	1,084	705	426	122	148	10	379	158	221
1982.....	1,062	663	409	108	133	12	400	140	259
1983.....	1,703	1,068	713	151	179	24	635	210	425
1984.....	1,750	1,084	728	157	165	33	665	206	459
1985.....	1,742	1,072	713	177	157	26	669	154	515
1986.....	1,805	1,179	782	204	166	27	626	143	483
1987.....	1,620	1,146	732	208	178	28	474	130	344
1988.....	1,488	1,081	709	196	154	22	407	99	307
1989.....	1,376	1,003	648	192	144	19	373	87	286
1990.....	1,193	895	529	196	147	22	298	56	241
1991.....	1,014	840	490	198	138	14	174	41	132
1992.....	1,200	1,030	618	224	168	19	170	41	128
1993.....	1,288	1,126	716	225	162	22	162	44	118
1994.....	1,457	1,198	763	245	169	22	259	52	206
1995.....	1,354	1,076	712	199	133	33	278	51	227
1996.....	1,477	1,161	774	218	144	25	316	59	257
1997.....	1,474	1,134	784	189	131	29	341	59	282
1998 <sup>f</sup> .....	1,617	1,271	882	209	144	36	346	59	287
<b>QUARTERLY DATA</b>									
1994:									
1st quarter.....	294	253	176	46	26	5	41	12	30
2nd quarter.....	423	354	221	75	54	4	69	14	54
3rd quarter.....	398	326	199	71	50	5	72	16	56
4th quarter.....	342	266	170	52	36	7	77	12	64
1995:									
1st quarter.....	270	214	149	37	25	4	56	11	45
2nd quarter.....	371	297	195	54	37	10	74	15	59
3rd quarter.....	387	308	198	59	42	9	79	13	66
4th quarter.....	326	257	177	46	27	8	69	12	57
1996:									
1st quarter.....	303	240	175	40	21	4	63	11	52
2nd quarter.....	428	344	229	70	39	5	85	18	67
3rd quarter.....	410	324	210	63	44	7	87	18	68
4th quarter.....	335	252	171	46	30	5	83	16	67
1997:									
1st quarter.....	297	238	175	36	22	5	59	13	46
2nd quarter.....	419	325	220	56	40	7	94	18	77
3rd quarter.....	400	315	215	55	38	7	86	17	69
4th quarter.....	357	257	178	42	29	8	101	13	88
1998:									
1st quarter.....	325	258	195	36	23	5	67	13	53
2nd quarter.....	448	360	249	60	43	8	88	16	72
3rd quarter.....	445	348	229	67	43	10	97	16	81
4th quarter.....	399	305	214	49	33	8	95	16	79
1999:									
1st quarter <sup>f</sup> .....	370	294	219	42	26	8	75	16	59
2nd quarter <sup>p</sup> .....	454	377	256	65	45	10	78	16	61
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>2</sup></b>									
Annual.....(percent) . . . . .	1	1	2	7	6	13	3	13	4
Quarterly.....(percent) . . . . .	1	1	2	7	7	16	6	19	7

<sup>p</sup>Preliminary. <sup>f</sup>Revised.

<sup>1</sup>Includes houses already sold when construction started.

<sup>2</sup>Average Relative Standard Errors (Avg. RSE): Annual—Avg. RSE for the last 2 years; Quarterly—Avg. RSE for the latest 2-quarter period (quarter 1 through quarter 2 or quarter 3 through quarter 4).

Notes: Housing units for which purpose of construction was not reported have been distributed proportionally to those for which the information was reported. Quarterly estimates may not add to the annual figures as the latter include late reports and corrections.

# Appendix.

## Monthly Revisions to Estimates

Each month the Census Bureau publishes preliminary estimates of Housing Starts and Building Permits. The Bureau releases these estimates to provide government and private data users with early measures of new privately owned residential construction activity. A necessary part of the process of issuing these early data involves the issuance of subsequent revisions. The revisions to monthly housing starts and building permit estimates are primarily the result of the replacement of imputed data with data which are reported in subsequent months.

For total housing starts, the range of the difference between the last 12 preliminary and first revision estimates for the same months was from  $-0.85$  percent to  $1.05$  percent, with a median of  $0.16$  percent. The range of the difference between preliminary and final estimates was from  $-2.61$  percent to  $1.74$  percent, with a median of  $0.04$  percent. The preliminary-to-final difference for total building permits over the last 12 months ranged from  $-0.41$  percent to  $1.23$  percent, with a median of  $0.19$  percent.

### Analysis of Revisions to Monthly Seasonally Adjusted Estimates of Housing Starts and Building Permits

Series	Percent changes between estimates— last 12 months					
	First revision versus preliminary			Final versus preliminary		
	Range		Median	Range		Median
	From	To		From	To	
<b>HOUSING STARTS</b>						
U.S. total .....	<b>-0.85</b>	<b>1.05</b>	<b>0.16</b>	<b>-2.61</b>	<b>1.74</b>	<b>0.04</b>
In structures with—						
1 unit .....	-0.99	1.55	0.26	-2.34	1.92	0.35
2 to 4 units .....	-30.00	14.29	-5.77	-27.50	7.14	-8.30
5 units or more .....	-4.02	2.79	-0.38	-5.68	6.30	-2.22
Northeast .....	-1.45	2.96	0.00	-2.00	1.48	0.00
Midwest .....	-4.00	2.47	0.48	-4.75	6.01	0.32
South .....	-1.61	1.57	0.29	-3.44	3.75	0.07
West .....	-1.93	3.49	-0.66	-2.69	4.24	-0.94
<b>BUILDING PERMITS<sup>1</sup></b>						
U.S. total .....	<b>-0.41</b>	<b>1.23</b>	<b>0.19</b>	<b>-0.41</b>	<b>1.23</b>	<b>0.19</b>
In structures with—						
1 unit .....	-0.46	1.24	0.60	-0.46	1.24	0.60
2 to 4 units .....	-4.94	6.67	0.00	-4.94	6.67	0.00
5 units or more .....	-1.70	4.57	-1.17	-1.70	4.57	-1.17
Northeast .....	-1.81	1.64	-0.59	-1.81	1.64	-0.59
Midwest .....	-2.20	2.23	0.33	-2.20	2.23	0.33
South .....	-1.36	2.76	-0.13	-1.36	2.76	-0.13
West .....	-0.50	2.41	0.89	-0.50	2.41	0.89

<sup>1</sup>For the building permit series, the first revision is the final estimate.