

CONSTRUCTION REPORTS
HOUSING STARTS

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HOUSING STARTS IN JUNE 1964

During June 1964, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.577 million units, 5 percent higher than the revised May 1964 rate of 1.500 million and just about the same as the June 1963 rate of 1.571 million units, according to preliminary estimates of the U.S. Department of Commerce. Private nonfarm housing starts showed changes very much like those of all private starts.

The actual number of private housing units started during June 1964 was 154,900 compared with 154,700 units in May 1964 and 153,400 units in June 1963. In addition, some 3,100 publicly owned housing units

were started in June 1964, bringing the grand total for the month up to 158,000 units.

After adjustment for seasonal variation, private housing starts were up in June over May in all regions except the Northeast.

A total of 122,759 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,306,000 units, were authorized by the 12,000 permit jurisdictions in June 1964. The June seasonally adjusted annual rate was 5 percent higher than the May rate of 1,246,000 units, but 4 percent below the June 1963 rate of 1,363,000.

NEW PRIVATE NONFARM HOUSING STARTS

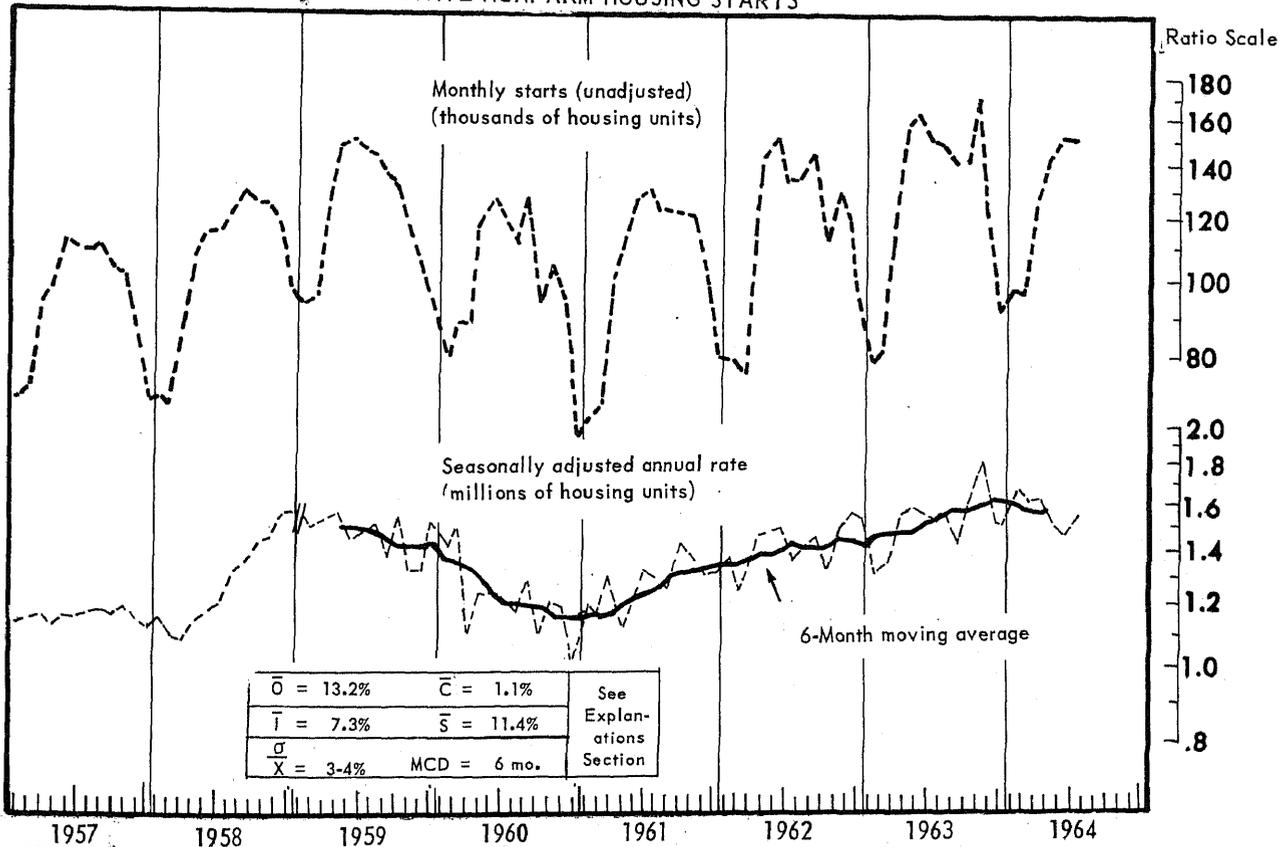


Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm)			Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only	
						Monthly	6 month moving average ¹
Annual totals:							
1959.....	1,553.5	1,516.8	xxx	1,531.3	1,494.6	xxx	xxx
1960.....	1,296.0	1,252.1	xxx	1,274.0	1,230.1	xxx	xxx
1961.....	1,365.0	1,313.0	xxx	1,336.8	1,284.8	xxx	xxx
1962.....	1,492.4	1,462.8	xxx	1,468.7	1,439.1	xxx	xxx
1963.....	1,617.7	1,587.0	xxx	1,590.3	1,559.6	xxx	xxx
First 6 months:							
1963.....	786.1	769.5	1,518	773.9	757.3	1,492	xxx
1964.....	*803.2	*788.1	*1,608	*789.5	*774.4	*1,578	xxx
Monthly:							
1963: April.....	160.3	158.2	1,618	157.5	155.4	1,590	1,492
May.....	169.5	166.4	1,618	166.3	163.2	1,590	1,535
June.....	157.3	153.4	1,571	155.5	151.6	1,554	1,548
July.....	152.3	150.2	1,588	150.7	148.6	1,573	1,573
August.....	147.9	144.4	1,455	145.5	142.0	1,434	1,609
September.....	147.3	145.3	1,732	144.1	142.1	1,697	1,600
October.....	166.1	163.1	1,847	162.8	159.8	1,807	1,594
November.....	121.2	119.4	1,564	118.8	117.0	1,533	1,613
December.....	96.8	95.1	1,564	94.5	92.8	1,518	1,643
1964: January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,633
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,582
March.....	133.3	130.1	1,663	131.5	128.3	1,638	*1,573
April.....	152.3	148.5	1,531	149.5	145.7	1,501	*1,578
May.....	*157.7	*154.7	*1,500	*155.4	*152.4	*1,478	xxx
June.....	*158.0	*154.9	*1,577	*155.1	*152.0	*1,549	xxx

NOTE: Components may not equal totals due to rounding. *Preliminary. xxx Not applicable.
¹Centered on the fourth month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public				Nonfarm							
	Total	One-family	Two-family	Three-family or more	Total, private and public				Private			
					Total	One-family	Two-family	Three-family or more	Total	One-family	Two-family	Three-family or more
Annual totals:												
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4
1963.....	1,617.7	1,005.6	60.9	551.0	1,590.3	978.2	60.9	551.0	1,559.6	977.3	53.0	528.9
First 5 months:												
1963.....	628.8	393.2	25.3	210.2	618.4	382.9	25.3	210.2	605.7	382.6	21.9	201.3
1964.....	*645.2	*391.6	*26.3	*227.1	*634.4	*381.0	*26.3	*227.1	*622.4	*380.3	*23.3	*218.9
Monthly:												
1963: April.....	160.3	105.7	5.8	48.7	157.5	102.9	5.8	48.7	155.4	102.8	5.5	47.0
May.....	169.5	107.1	6.8	55.6	166.3	103.9	6.8	55.6	163.2	103.9	5.6	53.8
June.....	157.3	100.4	5.7	51.2	155.5	98.6	5.7	51.2	151.6	98.3	4.6	48.7
July.....	152.3	98.2	5.4	48.7	150.7	96.6	5.4	48.7	148.6	96.5	4.9	47.1
August.....	147.9	95.8	5.3	46.8	145.5	93.4	5.3	46.8	142.0	93.4	4.7	43.8
September.....	147.3	92.9	4.9	49.4	144.1	89.7	4.9	49.4	142.1	89.7	4.6	47.8
October.....	166.1	102.7	5.9	57.5	162.8	99.3	5.9	57.5	159.8	99.2	5.2	55.3
November.....	121.2	71.9	4.9	44.4	118.8	69.5	4.9	44.4	117.0	69.4	4.0	43.5
December.....	96.8	50.5	3.5	42.8	94.5	48.2	3.5	42.8	92.8	48.2	3.1	41.4
1964: January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4
May.....	*157.7	*99.7	*5.5	*52.5	*155.4	*97.4	*5.5	*52.5	*152.4	*97.2	*4.7	*50.5
June.....	*158.0	(NA)	(NA)	(NA)	*155.1	(NA)	(NA)	(NA)	*152.0	*99.8	*4.8	*47.4

NOTE: Components may not equal totals due to rounding. *Preliminary. NA Not available.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN–NONMETROPOLITAN LOCATION, ANNUALLY 1959–1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public			Nonfarm							
	Total	Metro-politan ¹	Nonmetro-politan ¹	Total, private and public			Private				
				Total	Metro-politan ¹	Nonmetro-politan ¹	Total	Metro-politan ¹	Nonmetro-politan ¹		
Annual totals:											
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7		
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2		
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8		
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1		
1963.....	1,617.7	1,138.8	478.7	1,590.3	1,137.3	452.9	1,559.6	1,115.5	443.9		
First 6 months:											
1963.....	786.1	552.8	233.1	773.9	552.1	221.8	757.3	540.1	217.1		
1964.....	*803.2	*574.1	*228.9	*789.5	*574.0	*215.6	*774.4	*565.0	*209.4		
Monthly:											
1963:											
April.....	160.3	111.6	48.6	157.5	111.2	46.3	155.4	109.6	45.8		
May.....	169.5	116.4	53.2	166.3	116.3	50.1	163.2	114.0	49.2		
June.....	157.3	109.4	47.8	155.5	109.2	46.2	151.6	106.8	44.8		
July.....	152.3	105.2	47.1	150.7	105.2	45.5	148.6	103.9	44.7		
August.....	147.9	100.4	47.5	145.5	100.4	45.1	142.0	97.2	44.8		
September.....	147.3	103.7	43.6	144.1	103.7	40.4	142.1	102.3	39.8		
October.....	166.1	117.0	49.1	162.8	116.5	46.2	159.8	115.1	44.7		
November.....	121.2	84.1	37.0	118.8	83.9	34.9	117.0	83.0	34.0		
December.....	96.8	75.6	21.3	94.5	75.5	19.0	92.8	73.9	18.8		
1964:											
January.....	100.8	75.0	25.7	99.5	75.0	24.5	98.3	74.6	23.7		
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3		
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7		
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4		
May.....	*157.7	*112.6	*45.1	*155.4	*112.6	*42.8	*152.4	*111.1	*41.3		
June.....	*158.0	*113.6	*44.4	*155.1	*113.5	*41.6	*152.0	*111.0	*41.0		

NOTE: Components may not equal totals due to rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1963 definitions of metropolitan areas (Standard Metropolitan Statistical Areas, 1963, Bureau of the Budget); data for 1961-63 based on 1961 definition; data for 1959-60 on 1959 definition.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY REGION, ANNUALLY 1959–1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	North-east	North Central	South	West	Total, private and public				Private				
					North-east	North Central	South	West	North-east	North Central	South	West	
Annual totals:													
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2	
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8	
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0	
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0	
1963.....	265.4	326.2	595.9	430.5	265.0	319.4	575.8	430.4	254.9	313.4	566.1	425.4	
First 5 months:													
1963.....	97.6	110.4	236.6	184.3	97.3	107.9	229.0	184.3	92.9	106.3	224.8	181.8	
1964.....	*89.2	*133.1	*251.3	*171.6	*89.2	*131.0	*242.7	*171.6	*87.0	*128.0	*237.9	*169.8	
Monthly:													
1963:													
April.....	33.9	35.4	50.8	40.2	33.6	34.5	49.1	40.2	32.7	34.1	49.0	39.7	
May.....	30.8	40.7	55.9	42.1	30.8	39.7	53.7	42.1	29.6	39.5	52.5	41.6	
June.....	25.4	38.2	54.9	38.9	25.4	37.8	53.5	38.9	24.7	36.8	52.6	37.6	
July.....	22.8	31.4	57.7	40.4	22.8	30.6	57.0	40.3	22.4	30.1	56.0	40.0	
August.....	28.4	33.7	51.2	34.7	28.3	32.7	49.8	34.7	26.1	31.9	49.5	34.5	
September.....	24.4	31.6	57.1	34.2	24.4	31.3	54.2	34.2	24.4	31.1	52.7	33.9	
October.....	31.7	35.4	59.1	39.8	31.7	34.2	57.1	39.8	30.1	33.5	56.4	39.8	
November.....	22.4	27.4	44.3	27.1	22.4	26.9	42.4	27.1	22.3	25.9	41.8	27.0	
December.....	12.7	18.1	35.0	31.1	12.7	18.0	32.8	31.1	12.0	17.8	32.3	30.8	
1964:													
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3	
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7	
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9	
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5	
May.....	*30.0	*38.9	*57.2	*31.7	*30.0	*38.3	*55.4	*31.7	*29.2	*37.6	*54.2	*31.4	
June.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	*25.6	*38.7	*53.6	*34.1	

NOTE: Components may not equal totals due to rounding. *Preliminary. NA Not yet available.

North-east: Conn., Maine, Mass., N.H., N.J., N.Y., Pa., R.I., Vt.

North Central: Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Nebr., N. Dak., Ohio, S. Dak., Wis.

South: Ala., Ark., Del., D.C., Fla., Ga., Ky., La., Md., Miss., N.C., Okla., S.C., Tenn., Tex., Va., W. Va.

West: Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Oreg., Utah, Wash., Wyo., Alaska, Hawaii.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS, MONTHLY 1963 AND 1964

(In thousands of housing units)

Period	U.S. total	Northeast	North Central	South	West
1963: April.....	1,618	305	329	551	434
May.....	1,618	282	359	533	444
June.....	1,571	230	344	578	419
July.....	1,588	237	303	595	453
August.....	1,455	256	308	514	377
September.....	1,732	253	356	677	446
October.....	1,847	317	388	685	457
November.....	1,564	272	343	590	359
December.....	1,564	196	332	589	447
1964: January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	*1,500	*277	*338	*548	*337
June.....	*1,577	*237	*364	*594	*382

*Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	Unadjusted U.S. total (number of housing units)	Unadjusted annual totals (thousands of housing units)							
		U.S. total	North-east	North Central	South	West	Units in 1 family buildings	Units in 2-4 family buildings	Units in 5 or more family buildings
10,000 PLACES									
Annual totals:									
1959.....	1,208,328	xxx	222	286	356	344	938	76	194
1960.....	998,048	xxx	199	228	284	287	746	65	187
1961.....	1,064,189	xxx	230	226	299	309	723	67	274
1962.....	1,186,642	xxx	243	238	343	363	716	87	384
1963.....	1,285,028	xxx	231	254	387	413	705	117	463
12,000 PLACES									
Annual totals:									
1962.....	1,229,469	xxx	249	251	356	373	756	88	385
1963.....	1,334,684	xxx	239	269	403	423	750	119	466
Seasonally adjusted annual rates (thousands of housing units)									
First 6 months:									
1963.....	656,831	1,284	230	248	384	423	740	116	429
1964.....	*667,709	*1,319	*240	*295	*399	*385	*738	*107	*474
Monthly:									
1963: April.....	130,771	1,264	231	280	379	374	779	105	380
May.....	137,966	1,329	238	263	390	438	753	117	459
June.....	118,050	1,363	210	297	407	449	771	147	445
July.....	121,343	1,308	210	267	402	429	735	129	444
August.....	114,343	1,262	210	280	371	401	726	106	430
September.....	114,008	1,372	269	265	410	428	771	130	471
October.....	127,008	1,412	264	284	42	442	756	128	528
November.....	97,982	1,369	248	312	418	391	736	127	506
December.....	95,441	1,426	269	264	472	421	699	111	616
1964: January.....	85,519	1,314	182	312	409	411	710	117	487
February.....	90,012	1,405	251	316	404	434	792	117	496
March.....	119,775	1,384	290	326	420	348	772	104	508
April.....	127,683	1,256	232	269	393	362	704	99	453
May.....	121,961	1,246	225	264	377	380	721	98	427
June.....	*122,759	*1,306	*260	*283	*388	*375	*727	*105	*474

*Preliminary. xxx Not applicable.

1. HOUSING STARTS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units, it is when the contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters such as dormitories, rooming houses, etc., and transient accommodations such as transient hotels, motels, tourist courts, etc.

The standard Census regions are defined in the footnote to Table 4. The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas: beginning with January 1964, metropolitan-nonmetropolitan distributions are based on 1963 definitions; data for 1961-1963 are based on 1961 definition; data for 1959-1960 are based on 1959 definition.

Basis for Estimate

Estimates of housing starts are comprised of estimates of privately-owned starts in permit-issuing areas, estimates for areas which do not issue permits, and reports of starts of publicly owned structures. Starts in permit areas are derived from permit issuance data by the application of permit use ratios (based on continuing monthly surveys) which provide a measure of the number of housing units started in permit-issuing places in the month of permit issuance and in each month after issuance, as well as starts initiated before permits are issued. Estimates of housing starts in areas which do not issue permits are prepared on the basis of continuing monthly surveys in a sample of such areas. Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

2. BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months—or more—may pass between the issuance of a permit and the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building permit systems for which figures are currently given in this report account for a major portion of residential building in the United States; for the country as a whole, about 83 percent of the private housing units were constructed in areas in this permit-issuing universe in 1963.

The series shown in Table 6 beginning with 1962 pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. Construction Report C20-56 shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building permit data is provided in the Census Bureau's monthly C-40 and C-42 reports.

3. SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are to a considerable extent based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of a hundred that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error, about 95 out of a hundred that the difference is less than twice the standard error, and 99 out of a hundred that it is less than 2 1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent; for housing units authorized it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

4. SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts, C20-50. A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available upon request from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly-owned units.

The seasonally adjusted data are based on four years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working day adjustment for housing starts.

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from 1954 through 1962, and they are moving seasonals. For the period 1959-1962, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first four months of 1960.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM, JULY 1963-JUNE 1964

Month and year	Implicit seasonal indexes ¹		Seasonal indexes by region and area					Nonpermit starts U.S. total
	U.S. total		Starts in permit areas					
	Total	Nonfarm	Northeast	North Central	South	West		
1963: July.....	113.4	113.3	112.1	123.1	111.4	106.1	121.4	
August.....	119.3	119.0	119.4	125.4	110.6	109.8	140.5	
September...	100.6	100.5	116.3	105.6	94.6	91.2	107.2	
October.....	106.0	106.1	115.1	109.9	103.5	104.4	100.2	
November....	91.7	91.6	98.7	92.4	85.6	90.3	97.6	
December....	72.9	73.3	74.8	64.1	74.2	82.8	60.2	
1964: January....	69.6	69.9	46.5	51.2	85.0	92.5	49.6	
February....	72.7	72.7	50.9	52.5	87.3	87.1	70.5	
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0	
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2	
May.....	*123.7	*123.6	125.6	135.9	118.5	111.5	133.3	
June.....	*117.9	*117.8	130.6	132.4	108.3	107.6	120.7	

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these NP seasonals have been calculated from nonfarm nonpermit starts which account for about 90% of all nonpermit starts.

NA Not available. *Preliminary.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE, JULY 1963-JUNE 1964

Month, year	Im- plicit sea- sonal In- dexes ¹ U.S. total	Seasonal indexes by region and by type of structure ²											
		Northeast			North Central			South			West		
		1- family	2-4- family	5+ family	1- family	2-4- family	5+ family	1- family	2-4- family	5+ family	1- family	2-4- family	5+ family
1963: July.....	106.6	122.2	109.4	101.3	124.9	109.5	98.4	106.0	93.0	106.1	107.4	88.1	93.5
August...	104.0	109.3	90.8	126.4	112.1	105.0	89.9	104.1	96.1	101.6	106.1	92.4	98.3
September	105.3	112.0	99.7	97.4	116.4	112.1	117.7	102.6	104.1	111.7	100.6	96.3	94.4
October..	98.9	105.0	109.8	98.9	107.2	105.1	97.3	97.9	99.3	96.8	96.3	96.8	92.4
November.	95.5	100.1	98.3	100.7	89.3	96.6	102.0	91.5	98.1	103.2	89.7	94.0	96.0
December.	80.7	67.8	83.5	97.8	58.7	73.7	80.1	72.4	78.6	91.4	78.8	97.8	89.6
1964: January..	76.0	50.5	66.0	74.5	44.8	63.9	67.8	86.8	104.1	82.8	84.9	94.1	94.9
February.	82.3	52.1	84.8	79.8	60.8	72.5	80.8	98.5	100.1	80.5	93.9	103.6	94.9
March....	101.1	96.1	116.5	77.7	94.1	113.3	96.7	106.3	100.3	101.3	109.0	113.0	113.6
April....	118.6	123.9	123.2	128.4	134.2	119.7	110.4	113.9	104.9	111.6	114.4	117.4	116.2
May.....	119.9	131.4	116.1	119.3	128.0	116.5	152.0	112.9	114.8	117.5	112.8	108.0	112.4
June.....	*109.8	130.1	103.4	101.5	129.9	112.9	107.2	107.4	105.7	94.0	105.6	98.9	105.2

NA Not available. *Preliminary.

¹The 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 totals of housing units authorized.

²These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized.

NOTE: Seasonal indexes from July 1962 through June 1963 appear in C20-50, 51, 52, and 53.

Pending re-examination of seasonal factors about mid 1964, the 1963 seasonal factors are being used in the opening months of 1964. It is also assumed that the 12,000 permit-issuing place universe will have seasonal indexes which are very little different (if different at all) from those that apply to the 10,000 place universe, since the additional places added about 4 percent to the units reported by the 10,000 places.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
Building permits					
U.S. total (composite of 12 separately adjusted series).....	9.41	8.43	3.41	1.44	3
Northeast.....	16.01	12.75	8.24	2.39	4
North Central.....	17.94	17.17	6.28	1.90	4
South.....	7.84	6.50	3.72	1.61	3
West.....	8.10	5.92	5.24	1.64	4
1 family.....	10.28	9.19	3.25	1.56	3
2-4 family.....	9.85	7.29	6.71	1.82	4
5+ family.....	12.96	8.39	9.78	2.70	4
Private housing starts					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. private					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

5. MEASURES OF SEASONAL, CYCLICAL AND IRREGULAR COMPONENTS

Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957.

The following are brief descriptions of the measures shown in the box in the chart on front page:

- \bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.
- \bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.
- \bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.
- \bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular component and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

NOTE: More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the C20-50 report, (July 1963). A similar presentation will appear in these reports from time to time.

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BUREAU OF THE CENSUS

HOUSING STARTS

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HOUSING STARTS IN JULY 1964

During July 1964, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.517 million units, 5 percent below the revised June 1964 rate of 1.596 million and 4 percent below the July 1963 rate of 1.588 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

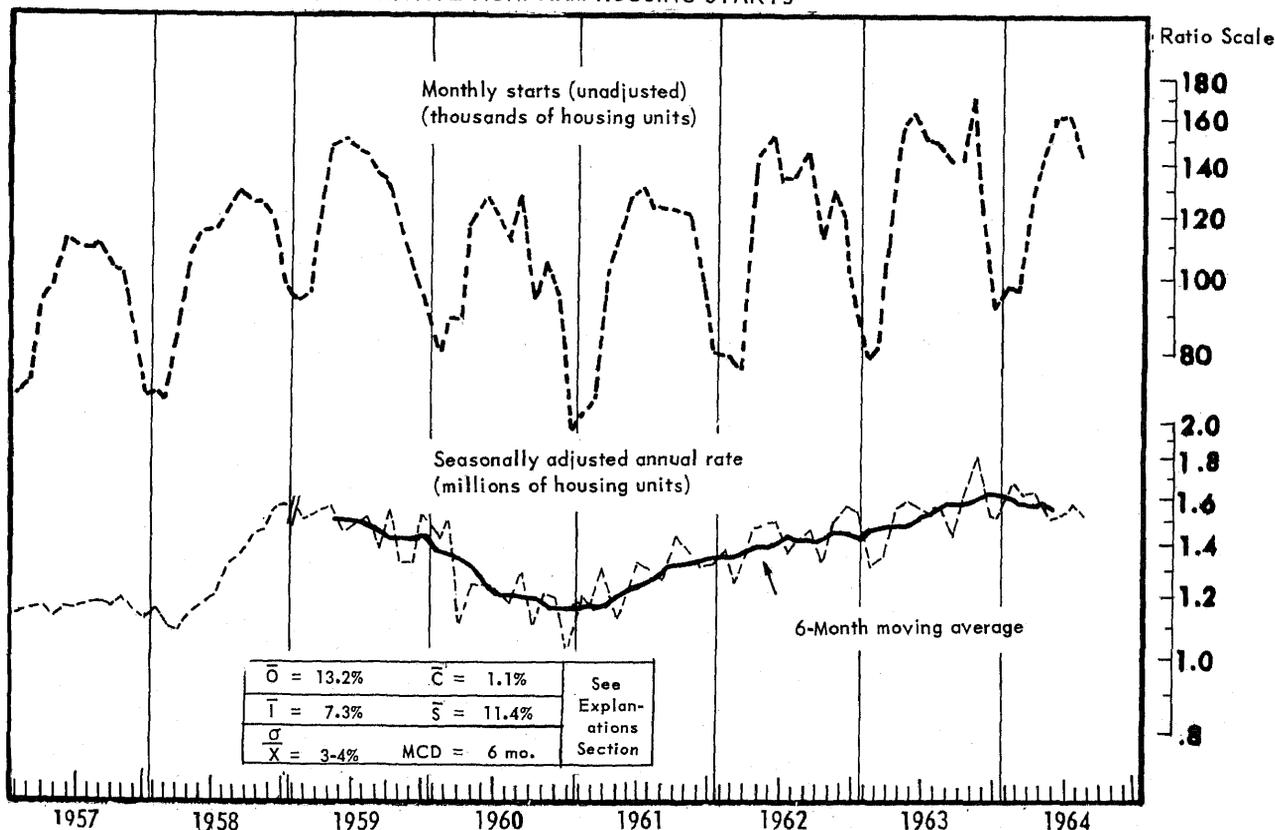
units were started in July 1964, bringing the grand total for the month up to 145,900 units.

After adjustment for seasonal variation, private housing starts changes from June to July 1964, by regions, were mixed.

The actual number of private housing units started during July 1964 was 143,900 compared with 157,000 units in June 1964 and 150,200 units in July 1963. In addition, some 2,000 publicly owned housing

A total of 118,327 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,237,000 units, were authorized by the 12,000 permit jurisdictions in July 1964. The July seasonally adjusted annual rate was 6 percent below the June rate of 1,316,000 units, and 5 percent below the July 1963 rate of 1,308,000.

NEW PRIVATE NONFARM HOUSING STARTS



THE LAST FIGURES ENTERED ARE PRELIMINARY

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Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm)			Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only	
						Monthly	6 month moving average ¹
Annual totals:							
1959.....	1,553.5	1,516.8	xxx	1,531.3	1,494.6	xxx	xxx
1960.....	1,296.0	1,252.1	xxx	1,274.0	1,230.1	xxx	xxx
1961.....	1,365.0	1,313.0	xxx	1,336.8	1,284.8	xxx	xxx
1962.....	1,492.4	1,462.8	xxx	1,468.7	1,439.1	xxx	xxx
1963.....	1,617.7	1,587.0	xxx	1,590.3	1,559.6	xxx	xxx
First 7 months:							
1963.....	938.4	919.7	1,528	924.6	905.9	1,504	xxx
1964.....	*956.3	*936.9	*1,602	*940.7	*921.3	*1,573	xxx
Monthly:							
1963: July.....	152.3	150.2	1,588	150.7	148.6	1,573	1,573
August.....	147.9	144.4	1,455	145.5	142.0	1,434	1,609
September.....	147.3	145.3	1,732	144.1	142.1	1,697	1,600
October.....	166.1	163.1	1,847	162.8	159.8	1,807	1,594
November.....	121.2	119.4	1,564	118.8	117.0	1,533	1,613
December.....	96.8	95.1	1,564	94.5	92.8	1,518	1,643
1964: January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,633
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,582
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,578
April.....	152.3	148.5	1,531	149.5	145.7	1,501	*1,586
May.....	160.5	157.5	1,529	158.2	155.2	1,507	*1,554
June.....	*162.4	*157.0	*1,596	*159.8	*154.4	*1,570	xxx
July.....	*145.9	*143.9	*1,517	*143.7	*141.7	*1,495	xxx

NOTE: Components may not equal totals due to rounding. *Preliminary. xxx Not applicable.
¹Centered on the fourth month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public				Nonfarm							
	Total	One-family	Two-family	Three-family or more	Total, private and public				Private			
					Total	One-family	Two-family	Three-family or more	Total	One-family	Two-family	Three-family or more
Annual totals:												
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4
1963.....	1,617.7	1,005.6	60.9	551.0	1,590.3	978.2	60.9	551.0	1,559.6	977.3	53.0	528.9
First 6 months:												
1963.....	786.1	493.6	31.0	261.4	773.9	481.5	31.0	261.4	757.3	480.9	26.5	250.0
1964.....	*810.4	*495.1	*32.3	*283.0	*797.0	*481.7	*32.3	*283.0	*779.6	*481.0	*28.6	*270.1
Monthly:												
1963: April.....	160.3	105.7	5.8	48.7	157.5	102.9	5.8	48.7	155.4	102.8	5.5	47.0
May.....	169.5	107.1	6.8	55.6	166.3	103.9	6.8	55.6	163.2	103.9	5.6	53.8
June.....	157.3	100.4	5.7	51.2	155.5	98.6	5.7	51.2	151.6	98.3	4.6	48.7
July.....	152.3	98.2	5.4	48.7	150.7	96.6	5.4	48.7	148.6	96.5	4.9	47.1
August.....	147.9	95.8	5.3	46.8	145.5	93.4	5.3	46.8	142.0	93.4	4.7	43.8
September.....	147.3	92.9	4.9	49.4	144.1	89.7	4.9	49.4	142.1	89.7	4.6	47.8
October.....	166.1	102.7	5.9	57.5	162.8	99.3	5.9	57.5	159.8	99.2	5.2	55.3
November.....	121.2	71.9	4.9	44.4	118.8	69.5	4.9	44.4	117.0	69.4	4.0	43.5
December.....	96.8	50.5	3.5	42.8	94.5	48.2	3.5	42.8	92.8	48.2	3.1	41.4
1964: January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5
June.....	*162.4	*101.8	*5.9	*54.8	*159.8	*99.1	*5.9	*54.8	*154.4	*99.0	*5.2	*50.2
July.....	*145.9	(NA)	(NA)	(NA)	*143.7	(NA)	(NA)	(NA)	*141.7	*93.1	*4.2	*44.4

NOTE: Components may not equal totals due to rounding. *Preliminary. NA Not available.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION, ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public			Nonfarm						
				Total, private and public			Private			
	Total	Metro- politan ¹	Nonmetro- politan ¹	Total	Metro- politan ¹	Nonmetro- politan ¹	Total	Metro- politan ¹	Nonmetro- politan ¹	
Annual totals:										
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7	
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2	
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8	
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1	
1963.....	1,617.7	1,138.8	478.7	1,590.3	1,137.3	452.9	1,559.6	1,115.5	443.9	
First 7 months:										
1963.....	938.4	658.0	280.2	924.6	657.3	267.3	905.9	644.0	261.8	
1964.....	*956.3	*683.1	*272.9	*940.7	*683.1	*257.6	*921.3	*671.2	*250.0	
Monthly:										
1963: July.....	152.3	105.2	47.1	150.7	105.2	45.5	148.6	103.9	44.7	
August.....	147.9	100.4	47.5	145.5	100.4	45.1	142.0	97.2	44.8	
September.....	147.3	103.7	43.6	144.1	103.7	40.4	142.1	102.3	39.8	
October.....	166.1	117.0	49.1	162.8	116.5	46.2	159.8	115.1	44.7	
November.....	121.2	84.1	37.0	118.8	83.9	34.9	117.0	83.0	34.0	
December.....	96.8	75.6	21.3	94.5	75.5	19.0	92.8	73.9	18.8	
1964: January.....	100.8	75.0	25.7	99.5	75.0	24.5	98.3	74.6	23.7	
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3	
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7	
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4	
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6	
June.....	*162.4	*116.4	*46.0	*159.8	*116.4	*43.4	*154.4	*112.1	*42.3	
July.....	*145.9	*103.7	*42.2	*143.7	*103.7	*40.0	*141.7	*102.6	*39.0	

NOTE: Components may not equal totals due to rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1963 definitions of metropolitan areas (Standard Metropolitan Statistical Areas, 1963, Bureau of the Budget); data for 1961-63 based on 1961 definition; data for 1959-60 on 1959 definition.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY REGION, ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public				Nonfarm							
					Total, private and public				Private			
	North- east	North Central	South	West	North- east	North Central	South	West	North- east	North Central	South	West
Annual totals:												
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0
1963.....	265.4	326.2	595.9	430.5	265.0	319.4	575.8	430.4	254.9	313.4	566.1	425.4
First 6 months:												
1963.....	123.0	148.6	291.5	223.2	122.7	145.7	282.5	223.2	117.6	143.1	277.4	219.4
1964.....	*117.5	*175.8	*311.4	*205.6	*117.5	*172.9	*301.2	*205.4	*113.7	*168.5	*295.6	*202.1
Monthly:												
1963: April.....	33.9	35.4	50.8	40.2	33.6	34.5	49.1	40.2	32.7	34.1	49.0	39.7
May.....	30.8	40.7	55.9	42.1	30.8	39.7	53.7	42.1	29.6	39.5	52.5	41.6
June.....	25.4	38.2	54.9	38.9	25.4	37.8	53.5	38.9	24.7	36.8	52.6	37.6
July.....	22.8	31.4	57.7	40.4	22.8	30.6	57.0	40.3	22.4	30.1	56.0	40.0
August.....	28.4	33.7	51.2	34.7	28.3	32.7	49.8	34.7	26.1	31.9	49.5	34.5
September.....	24.4	31.6	57.1	34.2	24.4	31.3	54.2	34.2	24.4	31.1	52.7	33.9
October.....	31.7	35.4	59.1	39.8	31.7	34.2	57.1	39.8	30.1	33.5	56.4	39.8
November.....	22.4	27.4	44.3	27.1	22.4	26.9	42.4	27.1	22.3	25.9	41.8	27.0
December.....	12.7	18.1	35.0	31.1	12.7	18.0	32.8	31.1	12.0	17.8	32.3	30.8
1964: January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4
June.....	*27.9	*42.6	*57.9	*34.0	*27.9	*41.8	*56.2	*33.8	*26.3	*40.4	*55.4	*32.3
July.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	*25.8	*31.9	*50.2	*33.7

NOTE: Components may not equal totals due to rounding. *Preliminary. NA Not yet available.
 Northeast: Conn., Maine, Mass., N.H., N.J., N.Y., Pa., R.I., Vt.
 North Central: Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Nebr., N. Dak., Ohio, S. Dak., Wis.
 South: Ala., Ark., Del., D.C., Fla., Ga., Ky., La., Md., Miss., N.C., Okla., S.C., Tenn., Tex., Va., W. Va.
 West: Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Oreg., Utah, Wash., Wyo., Alaska, Hawaii.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS, MONTHLY 1963 AND 1964

(In thousands of housing units)

Period	U.S. total	Northeast	North Central	South	West
1963: July.....	1,588	237	303	595	453
August.....	1,455	256	308	514	377
September.....	1,732	253	356	677	446
October.....	1,847	317	388	685	457
November.....	1,564	272	343	590	359
December.....	1,564	196	332	589	447
1964: January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	*1,596	*243	*378	*614	*361
July.....	*1,517	*275	*318	*543	*381

*Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	Unadjusted U.S. total (number of housing units)	Unadjusted annual totals (thousands of housing units)							Units in 5 or more family buildings
		U.S. total	North-east	North Central	South	West	Units in 1 family buildings	Units in 2-4 family buildings	
10,000 PLACES									
Annual totals:									
1959.....	1,208,328	xxx	222	286	356	344	938	76	194
1960.....	998,048	xxx	199	228	284	287	746	65	187
1961.....	1,064,189	xxx	230	226	299	309	723	67	274
1962.....	1,186,642	xxx	243	238	343	363	716	87	384
1963.....	1,285,028	xxx	231	254	387	413	705	117	463
12,000 PLACES									
Annual totals:									
1962.....	1,229,469	xxx	249	251	356	373	756	88	385
1963.....	1,334,684	xxx	239	269	403	423	750	119	466
Seasonally adjusted annual rates (thousands of housing units)									
First 7 months:									
1963.....	778,174	1,287	227	250	387	424	739	118	431
1964.....	*786,938	*1,308	*239	*289	*399	*381	*728	*105	*475
Monthly:									
1963: July.....	121,343	1,308	210	267	402	429	735	129	444
August.....	114,343	1,262	210	280	371	401	726	106	430
September.....	114,008	1,372	269	265	410	428	771	130	471
October.....	127,008	1,412	264	284	422	442	756	128	528
November.....	97,982	1,369	248	312	418	391	736	127	506
December.....	95,441	1,426	269	264	472	421	699	111	616
1964: January.....	85,519	1,314	182	312	409	411	710	117	487
February.....	90,012	1,405	251	316	404	434	792	117	496
March.....	119,775	1,384	290	326	420	348	772	104	508
April.....	127,683	1,256	232	269	393	362	704	99	453
May.....	121,961	1,246	225	264	377	380	721	98	427
June.....	123,661	1,316	266	282	407	361	723	105	488
July.....	*118,327	*1,237	*229	*255	*383	*370	*674	*98	*465

*Preliminary. xxx Not applicable.

DEFINITIONS, NOTES AND EXPLANATIONS

1. HOUSING STARTS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units, it is when the contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters such as dormitories, rooming houses, etc., and transient accommodations such as transient hotels, motels, tourist courts, etc.

The standard Census regions are defined in the footnote to Table 4. The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas: beginning with January 1964, metropolitan-nonmetropolitan distributions are based on 1963 definitions; data for 1961-1963 are based on 1961 definition; data for 1959-1960 are based on 1959 definition.

Basis for Estimate

Estimates of housing starts are comprised of estimates of privately-owned starts in permit-issuing areas, estimates for areas which do not issue permits, and reports of starts of publicly owned structures. Starts in permit areas are derived from permit issuance data by the application of permit use ratios (based on continuing monthly surveys) which provide a measure of the number of housing units started in permit-issuing places in the month of permit issuance and in each month after issuance, as well as starts initiated before permits are issued. Estimates of housing starts in areas which do not issue permits are prepared on the basis of continuing monthly surveys in a sample of such areas. Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

2. BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months—or more—may pass between the issuance of a permit and the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building permit systems for which figures are currently given in this report account for a major portion of residential building in the United States; for the country as a whole, about 83 percent of the private housing units were constructed in areas in this permit-issuing universe in 1963.

The series shown in Table 6 beginning with 1962 pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. Construction Report C20-56 shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building permit data is provided in the Census Bureau's monthly C-40 and C-42 reports.

3. SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are to a considerable extent based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of a hundred that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error, about 95 out of a hundred that the difference is less than twice the standard error, and 99 out of a hundred that it is less than 2 1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent; for housing units authorized it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

4. SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts, C20-50. A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available upon request from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly-owned units.

The seasonally adjusted data are based on four years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working day adjustment for housing starts.

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from 1954 through 1962, and they are moving seasonals. For the period 1959-1962, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first four months of 1960.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM,
AUGUST 1963-JULY 1964

Month and year	Implicit seasonal indexes ¹ U.S. total		Seasonal indexes by region and area					Nonpermit starts U.S. total
			Starts in permit areas					
	Total	Nonfarm	Northeast	North Central	South	West		
1963: August.....	119.3	119.0	119.4	125.4	110.6	109.8	140.5	
September...	100.6	100.5	116.3	105.6	94.6	91.2	107.2	
October.....	106.0	106.1	115.1	109.9	103.5	104.4	100.2	
November....	91.7	91.6	98.7	92.4	85.6	90.3	97.6	
December....	72.9	73.3	74.8	64.1	74.2	82.8	60.2	
1964: January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6	
February....	72.7	72.7	50.9	52.5	87.3	87.1	70.5	
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0	
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2	
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3	
June.....	*118.0	*117.9	130.6	132.4	108.3	107.6	120.7	
July.....	*113.8	*113.7	112.1	123.1	111.4	106.1	121.4	

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these NP seasonals have been calculated from nonfarm nonpermit starts which account for about 90% of all nonpermit starts.

NA Not available. *Preliminary.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE, AUGUST 1963-JULY 1964

Month, year	Implicit seasonal indexes ¹ U.S. total	Seasonal indexes by region and by type of structure ²											
		Northeast			North Central			South			West		
		1- family	2-4- family	5+ family	1- family	2-4- family	5+ family	1- family	2-4- family	5+ family	1- family	2-4- family	5+ family
1963: August...	104.0	109.3	90.8	126.4	112.1	105.0	89.9	104.1	96.1	101.6	106.1	92.4	98.3
September	105.3	112.0	99.7	97.4	116.4	112.1	117.7	102.6	104.1	111.7	100.6	96.3	94.4
October..	98.9	105.0	109.8	98.9	107.2	105.1	97.3	97.9	99.3	96.8	96.3	96.8	92.4
November.	95.5	100.1	98.3	100.7	89.3	96.6	102.0	91.5	98.1	103.2	89.7	94.0	96.0
December.	80.7	67.8	83.5	97.8	58.7	73.7	80.1	72.4	78.6	91.4	78.8	97.8	89.6
1964: January..	76.0	50.5	66.0	74.5	44.8	63.9	67.8	86.8	104.1	82.8	84.9	94.1	94.9
February.	82.3	52.1	84.8	79.8	60.8	72.5	80.8	98.5	100.1	80.5	93.9	103.6	94.9
March....	101.1	96.1	116.5	77.7	94.1	113.3	96.7	106.3	100.3	101.3	109.0	113.0	113.6
April....	118.6	123.9	123.2	128.4	134.2	119.7	110.4	113.9	104.9	111.6	114.4	117.4	116.2
May.....	119.9	131.4	116.1	119.3	128.0	116.5	152.0	112.9	114.8	117.5	112.8	108.0	112.4
June.....	109.6	130.1	103.4	101.5	129.9	112.9	107.2	107.4	105.7	94.0	105.6	98.9	105.2
July.....	*107.0	122.2	109.4	101.3	124.9	109.5	98.4	106.0	93.0	106.1	107.4	88.1	93.5

NA Not available. *Preliminary.

¹The 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 totals of housing units authorized.²These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized.

NOTE: Seasonal indexes from July 1962 through June 1963 appear in C20-50, 51, 52, and 53.

Pending re-examination of seasonal factors about mid 1964, the 1963 seasonal factors are being used in the opening months of 1964. It is also assumed that the 12,000 permit-issuing place universe will have seasonal indexes which are very little different (if different at all) from those that apply to the 10,000 place universe, since the additional places added about 4 percent to the units reported by the 10,000 places.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

	$\bar{0}$	\bar{S}	\bar{I}	\bar{C}	MCD
Building permits					
U.S. total (composite of 12 separately adjusted series).....	9.41	8.43	3.41	1.44	3
Northeast.....	16.01	12.75	8.24	2.39	4
North Central.....	17.94	17.17	6.28	1.90	4
South.....	7.84	6.50	3.72	1.61	3
West.....	8.10	5.92	5.24	1.64	4
1 family.....	10.28	9.19	3.25	1.56	3
2-4 family.....	9.85	7.29	6.71	1.82	4
5+ family.....	12.96	8.39	9.78	2.70	4
Private housing starts					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. private					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

5. MEASURES OF SEASONAL, CYCLICAL AND IRREGULAR COMPONENTS

Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957.

The following are brief descriptions of the measures shown in the box in the chart on front page:

- \bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.
- \bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.
- \bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.
- \bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular component and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

NOTE: More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the C20-50 report, (July 1963).. A similar presentation will appear in these reports from time to time.

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HOUSING STARTS

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Issued September 1964

HOUSING STARTS IN AUGUST 1964

(Including final housing starts figures for 1963, and revised seasonally adjusted building permit authorizations for 1962, 1963, and 1964)

THIS ISSUE INCLUDES A SPECIAL SUPPLEMENT ON STARTS OF APARTMENT BUILDINGS WITH 5 OR MORE HOUSING UNITS IN 1963.

During August 1964, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.402 million units, 6 percent below the revised July rate of 1.488 million and 5 percent below the revised August 1963 rate of 1.475 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

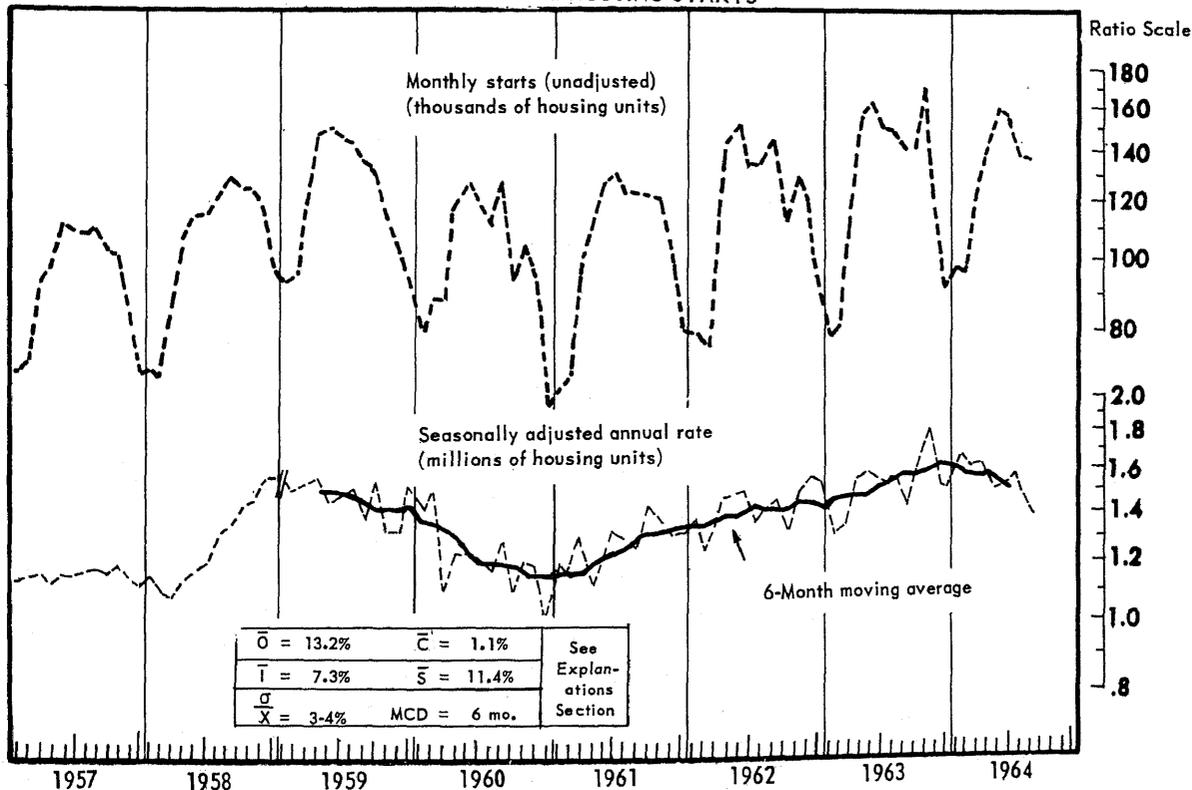
The actual number of private housing units started during August 1964 was 139,000 compared with 141,000 in July 1964 and 146,300 in August 1963. In addition, some 2,000 publicly owned housing units were

started in August 1964, bringing the grand total for the month up to 141,000 units.

By regions, private housing starts, after adjustment for seasonal variation, were generally down in August 1964 from July.

A total of 106,921 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,282,000 units, were authorized by the 12,000 permit-issuing jurisdictions in August 1964. The August seasonally adjusted annual rate was 3 percent greater than the July rate of 1,246,000 units, and virtually unchanged from the August 1963 rate of 1,286,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LAST FIGURES ENTERED ARE PRELIMINARY

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	(In thousands of units)			Nonfarm				
	Total (including farm)			Total private and public	Private	Seasonally adjusted annual rate, private only		
	Total private and public	Private	Seasonally adjusted annual rate, private only			Monthly	6 month moving average ¹	
Annual totals:								
1959.....	1,553.5	1,516.8	xxx	1,531.3	1,494.6	xxx	xxx	
1960.....	1,296.0	1,252.1	xxx	1,274.0	1,230.1	xxx	xxx	
1961.....	1,365.0	1,313.0	xxx	1,336.8	1,284.8	xxx	xxx	
1962.....	1,492.4	1,462.8	xxx	1,439.1	1,468.7	xxx	xxx	
1963 ²	1,640.9	1,609.2	xxx	1,613.4	1,581.7	xxx	xxx	
First 8 months:								
1963 ²	1,105.3	1,082.1	1,543	1,089.2	1,066.0	1,520	xxx	
1964*.....	1,096.3	1,074.5	1,575	1,078.2	1,056.2	1,547	xxx	
Monthly:								
1963: ²								
January.....	81.8	79.0	1,314	80.7	77.9	1,287	1,475	
February.....	90.8	89.6	1,445	89.2	88.0	1,418	1,503	
March.....	128.5	124.8	1,577	126.8	123.1	1,551	1,517	
April.....	166.4	164.2	1,678	163.6	161.4	1,656	1,520	
May.....	176.3	172.7	1,679	173.2	169.6	1,651	1,570	
June.....	158.1	154.2	1,575	156.3	152.4	1,558	1,576	
July.....	153.5	151.3	1,599	151.9	149.7	1,584	1,603	
August.....	149.9	146.3	1,475	147.5	143.9	1,456	1,631	
September.....	148.4	146.4	1,747	145.2	143.2	1,712	1,613	
October.....	167.5	164.5	1,864	164.2	161.2	1,824	1,607	
November.....	122.3	120.5	1,577	119.7	117.9	1,544	1,624	
December.....	97.4	95.7	1,570	95.1	93.4	1,524	1,651	
1964:								
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639	
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585	
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579	
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589	
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,552	
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,513	
July*.....	143.3	141.0	1,488	141.1	138.8	1,466	xxx	
August*.....	141.0	139.0	1,402	138.4	136.4	1,380	xxx	

Note: Components may not equal totals due to rounding. *Preliminary. xxx Not applicable. ¹Centered on the fourth month. ²Revised.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	(In thousands of units)				Nonfarm							
	Total (including farm), private and public				Total, private and public				Private			
	Total	One-family	Two-family	Three-family or more	Total	One-family	Two-family	Three-family or more	Total	One-family	Two-family	Three-family or more
Annual totals:												
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4
1963 ¹	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3
First 7 months:												
1963 ¹	955.4	602.1	37.0	316.4	941.7	588.3	37.0	316.4	922.1	587.7	31.9	302.5
1964*.....	955.3	586.9	37.6	330.8	939.6	571.3	37.6	330.8	919.8	570.4	33.0	316.5
Monthly:												
1963: ¹												
January.....	81.8	45.1	3.5	33.2	80.7	44.0	3.5	33.2	77.9	43.9	2.9	31.1
February.....	90.8	53.4	4.2	33.1	89.2	51.9	4.2	33.1	88.0	51.9	3.8	32.4
March.....	128.5	79.9	5.5	43.2	126.8	78.1	5.5	43.2	123.1	78.1	4.5	40.5
April.....	166.4	110.1	6.0	50.3	163.6	107.3	6.0	50.3	161.4	107.2	5.6	48.5
May.....	176.3	112.5	6.9	57.0	173.2	109.3	6.9	57.0	169.6	109.3	5.7	54.6
June.....	158.1	102.0	5.7	50.4	156.3	100.2	5.7	50.4	152.4	99.9	4.6	47.9
July.....	153.5	99.1	5.2	49.2	151.9	97.5	5.2	49.2	149.7	97.4	4.8	47.5
August.....	149.9	97.9	5.3	46.8	147.5	95.5	5.3	46.8	143.9	95.5	4.7	43.8
September.....	148.4	94.0	4.8	49.6	145.2	90.8	4.8	49.6	143.2	90.8	4.4	48.0
October.....	167.5	104.3	5.8	57.4	164.2	100.9	5.8	57.4	161.2	100.9	5.1	55.2
November.....	122.3	72.4	4.9	45.0	119.7	69.8	4.9	45.0	117.9	69.7	4.0	44.1
December.....	97.4	50.9	3.5	43.0	95.1	48.6	3.5	43.0	93.4	48.6	3.1	41.7
Monthly:												
1964:												
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3
July*.....	143.3	91.5	5.2	46.7	141.1	89.3	5.2	46.7	138.8	89.2	4.3	45.3
August*.....	141.0	(NA)	(NA)	(NA)	138.4	(NA)	(NA)	(NA)	136.4	88.6	4.0	43.9

Note: Components may not equal totals due to rounding.

*Preliminary.

NA Not available.

¹Revised.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION, ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public			Nonfarm						
	Total	Metropolitan ¹	Nonmetropolitan ¹	Total, private and public			Private			
				Total	Metropolitan ¹	Nonmetropolitan ¹	Total	Metropolitan ¹	Nonmetropolitan ¹	
Annual totals:										
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7	
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2	
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8	
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1	
1963 ²	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2	
First 8 months:										
1963 ²	1,105.3	766.8	338.3	1,089.2	766.2	323.1	1,066.0	749.0	316.8	
1964*.....	1,096.3	777.4	318.7	1,078.0	777.3	300.7	1,056.2	763.9	292.3	
Monthly:										
1963: ²										
January.....	81.8	61.9	19.8	80.7	61.9	18.8	77.9	59.8	18.1	
February.....	90.8	66.5	24.2	89.2	66.5	22.7	88.0	65.7	22.3	
March.....	128.5	89.3	39.2	126.8	89.3	37.5	123.1	86.5	36.6	
April.....	166.4	113.7	52.7	163.6	113.3	50.3	161.4	111.5	49.8	
May.....	176.3	119.3	57.0	173.2	119.2	53.9	169.6	116.5	53.0	
June.....	158.1	108.8	49.3	156.3	108.7	47.7	152.4	106.3	46.1	
July.....	153.5	106.2	47.3	151.9	106.2	45.7	149.7	104.8	44.9	
August.....	149.9	101.1	48.8	147.5	101.1	46.5	143.9	97.9	46.0	
September.....	148.4	104.2	44.2	145.2	104.1	41.0	143.2	102.8	40.4	
October.....	167.5	117.8	49.7	164.2	117.3	46.9	161.2	115.8	45.3	
November.....	122.3	85.0	37.3	119.7	84.6	35.1	117.9	83.7	34.2	
December.....	97.4	76.8	20.6	95.1	76.8	18.3	93.4	75.2	18.2	
1964:										
January.....	100.8	75.0	25.7	99.5	75.0	24.5	98.3	74.6	23.7	
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3	
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7	
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4	
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6	
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2	
July*.....	143.2	101.6	41.8	141.1	101.5	39.6	138.8	100.3	38.4	
August*.....	141.0	94.8	46.2	138.4	94.8	43.6	136.4	93.5	43.0	

NOTE: Components may not equal totals due to rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1963 definitions of metropolitan areas (Standard Metropolitan Statistical Areas, 1963, Bureau of the Budget); data for 1961-63 based on 1961 definition; data for 1959-60 on 1959 definition. ²Revised.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY REGION, ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	North-east	North Central	South	West	Total, private and public				Private				
					North-east	North Central	South	West	North-east	North Central	South	West	
Annual totals:													
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2	
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8	
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0	
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0	
1963 ¹	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8	
First 7 months:													
1963 ¹	152.6	186.3	350.5	265.8	152.3	182.4	341.1	255.7	146.4	178.8	335.1	261.7	
1964*.....	143.6	208.2	362.4	240.9	143.6	204.6	350.7	240.8	139.3	199.9	344.0	237.0	
Monthly:													
1963: ¹													
January.....	7.0	6.5	34.5	33.8	7.0	6.4	33.5	33.8	6.5	6.2	31.8	33.4	
February.....	9.9	9.8	37.8	33.2	9.9	9.2	36.9	33.2	9.3	9.2	36.4	33.2	
March.....	17.2	17.9	57.6	35.8	17.2	17.9	55.9	35.8	16.0	17.2	55.1	34.7	
April.....	35.9	37.1	52.9	40.6	35.6	36.2	51.2	40.6	34.5	35.7	51.1	40.0	
May.....	31.5	43.4	57.6	43.7	31.5	42.4	55.5	43.7	30.3	41.7	54.3	43.2	
June.....	27.3	39.4	51.7	39.6	27.3	39.0	50.4	39.6	26.5	38.0	49.6	38.4	
July.....	23.8	32.2	58.4	39.1	23.8	31.3	57.7	39.0	23.3	30.8	56.8	38.8	
August.....	29.1	34.1	51.4	35.4	29.0	33.1	50.1	35.4	26.7	32.3	49.7	35.2	
September.....	24.1	31.6	58.0	34.6	24.1	31.3	55.1	34.6	24.1	31.1	53.6	34.4	
October.....	29.8	37.9	59.7	40.2	29.8	36.6	57.6	40.2	28.2	35.9	57.0	40.1	
November.....	22.6	26.7	44.9	28.1	22.6	25.9	43.1	28.1	22.5	25.0	42.4	28.0	
December.....	13.1	17.2	35.5	31.7	13.1	17.1	33.2	31.7	12.5	16.8	32.8	31.4	
1964:													
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3	
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7	
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9	
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5	
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4	
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0	
July*.....	25.3	32.0	51.3	34.7	25.3	31.3	49.8	34.7	24.8	31.1	48.7	34.2	
August*.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	23.5	32.7	48.3	32.0	

NOTE: Components may not equal totals due to rounding. *Preliminary. NA Not yet available. ¹Revised.

North-east: Conn., Maine, Mass., N.H., N.J., N.Y., Pa., R.I., Vt.
North Central: Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Nebr., N. Dak., Ohio, S. Dak., Wis.
South: Ala., Ark., Del., D.C., Fla., Ga., Ky., La., Md., Miss., N.C., Okla., S.C., Tenn., Tex., Va., W. Va.
West: Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Oreg., Utah, Wash., Wyo., Alaska, Hawaii.

Table 5.--NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS, MONTHLY 1963-1964

(In thousands of units)

Period	U.S. total	Northeast	North Central	South	West
1963: ¹ January.....	1,314	168	146	564	436
February.....	1,445	218	216	553	458
March.....	1,577	246	265	676	390
April.....	1,678	322	344	574	438
May.....	1,679	288	378	551	462
June.....	1,575	247	356	545	427
July.....	1,599	247	310	603	439
August.....	1,475	262	312	516	385
September.....	1,747	250	356	689	452
October.....	1,864	297	415	691	461
November.....	1,577	274	332	598	373
December.....	1,570	202	315	597	456
1964: January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July*.....	1,488	263	311	528	386
August*.....	1,402	235	315	504	348

*Preliminary.

¹Revised.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—
UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE: ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North- east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
Unadjusted totals (in thousands of housing units)									
10,000 PLACES									
Annual totals:									
1959.....	1,208,328	xxx	222	286	356	344	938	76	194
1960.....	998,048	xxx	199	228	284	287	746	65	187
1961.....	1,064,189	xxx	230	226	299	309	723	67	274
1962.....	1,186,601	xxx	243	238	343	363	716	87	384
1963 ¹	1,285,028	xxx	231	254	387	413	705	117	463
Seasonally adjusted annual rates (in thousands of housing units)									
Monthly:									
1962: ¹									
January.....	73,189	1,133	265	211	325	332	736	83	314
February.....	74,625	1,190	270	247	344	329	744	78	368
March.....	101,421	1,135	244	218	339	334	705	86	344
April.....	120,773	1,221	289	229	329	374	748	83	390
May.....	117,512	1,133	223	230	337	343	718	100	315
June.....	106,992	1,158	236	241	330	351	702	79	377
July.....	105,849	1,186	228	244	343	271	710	96	380
August.....	110,962	1,169	219	229	348	373	709	85	375
September.....	95,204	1,190	221	246	348	375	706	88	396
October.....	107,611	1,170	240	230	341	359	678	86	406
November.....	94,469	1,233	248	234	361	390	702	96	435
December.....	77,994	1,222	247	242	332	401	698	107	417
1963: ¹									
January.....	81,415	1,217	242	201	356	418	669	101	447
February.....	76,185	1,187	222	184	373	408	674	97	416
March.....	104,538	1,229	229	241	351	408	705	118	406
April.....	125,773	1,233	218	267	371	377	730	100	403
May.....	133,759	1,309	243	253	385	428	709	116	484
June.....	113,919	1,300	208	269	391	432	724	136	440
July.....	116,681	1,266	215	245	389	417	692	128	446
August.....	110,031	1,234	204	263	366	401	690	104	440
September.....	110,819	1,322	257	249	395	421	718	128	476
October.....	123,163	1,351	244	265	404	438	707	125	519
November.....	95,046	1,309	229	287	406	387	693	124	492
December.....	93,699	1,359	247	259	443	410	677	109	573
Unadjusted totals (in thousands of housing units)									
12,000 PLACES									
Annual totals:									
1963 ¹	1,334,684	xxx	239	269	403	423	750	119	466
Seasonally adjusted annual rates (in thousands of housing units)									
First 8 months:									
1963: ¹									
1964.....	897,572	1,297	230	255	389	423	744	116	438
1964.....	894,076	1,312	239	298	403	373	729	105	479
Monthly:									
1963: ¹									
January.....	84,401	1,267	247	217	375	428	714	105	448
February.....	78,679	1,226	227	194	387	418	710	100	416
March.....	108,766	1,279	235	254	368	422	746	120	413
April.....	131,472	1,287	226	285	388	388	779	104	404
May.....	138,727	1,360	252	269	400	439	752	122	486
June.....	118,676	1,352	216	284	407	445	771	139	442
July.....	121,850	1,320	224	261	406	429	739	129	452
August.....	115,001	1,286	214	277	383	412	738	107	441
September.....	114,672	1,371	266	264	413	428	764	128	479
October.....	127,771	1,401	254	279	420	448	751	128	522
November.....	98,580	1,359	235	302	398	424	738	128	493
December.....	96,089	1,402	253	271	460	418	715	112	575
1964: ¹									
January.....	85,519	1,333	205	332	403	393	742	114	477
February.....	90,012	1,404	251	336	401	416	810	121	473
March.....	119,775	1,377	274	323	411	369	767	101	509
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	118,544	1,246	232	259	391	364	667	104	475
August*.....	106,921	1,282	205	314	429	334	709	99	474

*Preliminary.

xxx Not applicable.

¹Revised: Seasonally adjusted data revised for 1962, 1963, and 1964 for both 10,000 and 12,000 places. Unadjusted data revised for 1963, 12,000 places only.

DEFINITIONS, NOTES AND EXPLANATIONS

1. HOUSING STARTS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units, it is when the contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters such as dormitories, rooming houses, etc., and transient accommodations such as transient hotels, motels, tourist courts, etc.

The standard Census regions are defined in the footnote to Table 4. The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas: beginning with January 1964, metropolitan-nonmetropolitan distributions are based on 1963 definitions; data for 1961-1963 are based on 1961 definition; data for 1959-1960 are based on 1959 definition.

Basis for Estimate

Estimates of housing starts are comprised of estimates of privately-owned starts in permit-issuing areas, estimates for areas which do not issue permits, and reports of starts of publicly owned structures. Starts in permit areas are derived from permit issuance data by the application of permit use ratios (based on continuing monthly surveys) which provide a measure of the number of housing units started in permit-issuing places in the month of permit issuance and in each month after issuance, as well as starts initiated before permits are issued. Estimates of housing starts in areas which do not issue permits are prepared on the basis of continuing monthly surveys in a sample of such areas. Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

2. BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months—or more—may pass between the issuance of a permit and the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building permit systems for which figures are currently given in this report account for a major portion of residential building in the United States; for the country as a whole, about 83 percent of the private housing units were constructed in areas in this permit-issuing universe in 1963.

The series shown in Table 6 beginning with 1962 pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. Construction Report C20-56 shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building permit data is provided in the Census Bureau's monthly C-40 and C-42 reports.

3. SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are to a considerable extent based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of a hundred that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error, about 95 out of a hundred that the difference is less than twice the standard error, and 99 out of a hundred that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent; for housing units authorized it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

4. SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts, C20-50. A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available upon request from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly-owned units.

The seasonally adjusted data are based on four years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working day adjustment for housing starts.

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first four months of 1960.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM,
JANUARY 1963-AUGUST 1964

Month and year	Implicit seasonal indexes ¹		Seasonal indexes by region and area				Nonpermit starts U.S. total
	U.S. total		Starts in permit areas				
	Total	Nonfarm	Northeast	North Central	South	West	
1963: January.....	72.2	72.6	46.5	51.2	85.0	92.5	49.6
February.....	74.4	74.5	50.9	52.5	87.3	87.1	70.5
March.....	95.0	95.2	78.2	77.4	112.7	107.2	83.0
April.....	117.4	117.4	131.7	130.1	107.8	109.8	114.2
May.....	123.4	123.3	125.6	135.9	118.5	111.5	133.3
June.....	117.5	117.5	130.6	132.4	108.3	107.6	120.7
July.....	113.5	113.4	112.1	123.1	111.4	106.1	121.4
August.....	119.1	118.8	119.4	125.4	110.6	109.8	140.5
September...	100.6	100.4	116.3	105.6	94.6	91.2	107.2
October.....	105.9	106.0	115.1	109.9	103.5	104.4	100.2
November....	91.7	91.6	98.7	92.4	85.6	90.3	97.6
December....	73.1	73.5	74.8	64.1	74.2	82.8	60.2
1964: January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	*113.7	*113.6	112.1	123.1	111.4	106.1	121.4
August.....	*118.9	*118.6	119.4	125.4	110.6	109.8	140.5

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these NP seasonals have been calculated from nonfarm nonpermit starts which account for about 90% of all nonpermit starts.

*Preliminary.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE, MONTHLY 1963 AND 1964

Year and month	Implicit seasonal indexes ¹ U.S. total	Seasonal indexes by region and by type of structure ²											
		Northeast			North Central			South			West		
		1- family	2-4 family	5+ family	1- family	2-4 family	5+ family	1- family	2-4 family	5+ family	1- family	2-4 family	5+ family
1963: January..	76.7	47.8	62.5	62.7	41.5	60.6	68.3	83.7	103.7	90.1	87.1	99.9	100.2
February..	85.5	49.7	80.5	89.1	58.5	69.3	73.1	96.5	101.5	83.3	97.1	101.0	101.8
March....	102.5	95.3	128.5	87.4	96.1	105.0	97.4	110.5	107.9	98.4	104.5	112.8	105.4
April....	117.4	128.5	129.1	127.1	134.0	130.9	102.1	114.5	107.5	104.2	112.7	113.7	110.5
May.....	117.5	131.1	118.6	104.0	131.0	115.7	134.2	113.8	106.2	112.4	112.6	103.9	116.0
June.....	111.0	128.8	104.0	93.9	130.8	108.9	122.0	106.2	99.0	99.1	108.9	109.3	99.5
July.....	106.2	122.0	89.7	89.1	123.6	111.1	107.3	106.6	90.8	104.1	107.5	89.5	94.3
August...	102.7	109.6	94.5	116.3	110.2	108.9	94.6	104.2	91.9	94.1	102.7	88.9	99.2
September	105.8	115.4	100.0	96.7	117.1	99.7	120.9	103.1	106.7	110.6	102.5	101.6	91.7
October..	100.4	109.3	117.2	103.4	108.5	112.2	99.9	98.6	104.5	98.7	96.2	92.0	93.2
November.	96.6	98.1	96.2	117.8	92.0	100.0	105.4	90.9	109.5	101.2	89.5	88.4	95.7
December.	82.5	64.8	77.8	116.3	57.5	78.5	75.9	71.2	71.8	100.8	78.4	97.9	92.9
1964: January..	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February..	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August...	*102.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September	xxx	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October..	xxx	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.	xxx	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.	xxx	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1

*Preliminary. xxx Not applicable.

¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.²These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

	$\bar{0}$	\bar{S}	\bar{I}	\bar{C}	MCD
Building permits					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
Private housing starts					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. private					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

5. MEASURES OF SEASONAL, CYCLICAL AND IRREGULAR COMPONENTS

Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957.

The following are brief descriptions of the measures shown in the box in the chart on front page:

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular component and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

NOTE: More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the G20-50 report, (July 1963). A similar presentation will appear in these reports from time to time.

Table 10.—NEW PUBLIC HOUSING UNITS FOR WHICH CONSTRUCTION CONTRACTS WERE AWARDED BY TYPE OF PROGRAM, REGION AND TYPE OF STRUCTURE, 1959-1963

Type of program	Number of units								
	Total	Region				Type of structure			
		Northeast	North Central	South	West	1-family	2-family	3-4 family	5 or more family
U.S. totals:									
1959.....	36,690	11,314	7,323	9,902	8,151	16,577	2,864	948	16,301
1960.....	43,897	15,110	11,708	11,894	5,185	13,982	6,534	1,590	21,791
1961.....	52,001	18,583	11,585	14,643	7,190	14,526	6,184	2,117	29,174
1962.....	29,643	10,031	5,426	9,919	4,267	4,711	6,878	1,432	16,622
1963.....	31,777	10,487	6,649	9,597	5,044	900	8,007	718	22,152
Capehart Housing:									
1959.....	14,590	2,060	4,460	3,340	4,730	14,590	-	-	-
1960.....	13,182	2,503	2,288	5,222	3,169	13,182	-	-	-
1961.....	13,153	1,434	3,955	3,918	3,846	13,153	-	-	-
1962.....	2,532	650	-	1,182	700	2,532	-	-	-
1963.....	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Public Housing Adm.:¹									
1959.....	11,857	2,106	2,542	4,913	2,296	1,473	2,832	624	6,928
1960.....	22,330	6,588	8,625	5,827	1,290	219	6,394	1,346	14,371
1961.....	23,668	6,375	6,706	8,923	1,664	573	5,965	1,909	15,221
1962.....	16,200	2,272	4,936	7,627	1,365	1,115	6,173	1,276	7,636
1963.....	19,642	3,883	5,648	8,269	1,842	244	6,256	143	12,999
New York City Housing Authority:									
1959.....	5,969	5,969	-	-	-	-	-	-	5,969
1960.....	4,974	-	-	-	-	-	-	-	4,974
1961.....	9,785	9,785	-	-	-	-	-	-	9,785
1962.....	6,183	6,183	-	-	-	-	-	-	6,183
1963.....	5,391	5,391	-	-	-	-	-	-	5,391
College Housing:²									
1959.....	2,854	221	318	1,450	865	101	30	264	2,459
1960.....	1,860	120	678	704	358	12	52	192	1,604
1961.....	3,098	-	558	1,619	921	-	16	166	2,916
1962.....	2,089	231	270	362	1,226	-	78	46	1,965
1963.....	1,919	255	758	500	406	-	-	-	1,919
Other Federal:									
1959.....	409	-	3	185	221	391	2	-	16
1960.....	619	162	91	96	270	499	70	36	14
1961.....	894	1	55	166	672	757	36	42	59
1962.....	1,821	232	58	616	915	1,060	625	52	84
1963.....	3,181	132	143	700	2,206	576	1,697	347	561
Other State and Local:									
1959.....	1,011	958	-	14	39	22	-	60	929
1960.....	932	763	26	45	98	70	18	16	828
1961.....	1,403	988	311	17	87	43	167	-	1,193
1962.....	818	463	162	132	61	4	2	58	754
1963.....	1,644	826	100	128	590	80	54	228	1,282

NOTE: The public housing units for which construction contracts are awarded are incorporated in Tables 1-5 as started in the month of contract award. xxx Not applicable. ¹Public Housing Administration (excluding Federally-aided projects in New York City) - public housing owned and operated by local public housing authorities under the program of Housing and Home Finance Agency, Public Housing Administration. ²College Housing (family units only) - projects owned and operated by public institutions and financed by loans from Housing and Home Finance Agency, Community Facilities Administration.

Introduction

This supplement provides tables of statistics on selected characteristics of privately owned apartment houses started in the United States during 1963. These data apply only to structures with 5 or more housing units. More detailed information is presented in this report than in the March 1964 C20 report which presented data of this type for the first time.

Summary of Findings

Apartment house construction is limited for the most part to metropolitan areas. In 1963, 93 percent of apartment house buildings, accounting for 95 percent of the housing units in such structures, were started in metropolitan areas (Tables 1 and 3).

The greatest number of apartment houses started in 1963 were buildings of three floors or less. Approximately 96 percent of the buildings were in this category (Table 4). However, the 4 percent of the buildings with 4 or more floors accounted for 20 percent of the apartment units (Table 2). Fourteen percent of apartment buildings in the Northeast had 4 or more floors compared with 4 percent in the North Central region and 2 percent each in the South and West. In addition, buildings with 4 or more floors in the Northeast accounted for 51 percent of the apartment units compared with 20 percent in the South, 17 percent in the North Central, and 7 percent in the West.

Three-fourths of the apartment buildings started during 1963 had between 5 and 19 apartment units (Table 7). The remaining one-fourth of the buildings had 20 or more units and accounted for 57 percent of all apartment units (Table 6). Two percent of the buildings contained 100 units or more and accounted for 9 percent of all apartment units.

Although 4 percent of the apartment buildings had 3 floors or more, 8 percent of all apartment buildings started in 1963 had elevators (Table 8). However, 27 percent of apartment units were in buildings with elevators (Table 9). A higher proportion of the apartment buildings started in the Northeast had elevators though the West had more buildings with elevators.

Table 11.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED BY METROPOLITAN-NONMETROPOLITAN LOCATION AND BY REGION, 1963

Location	All re-gions ¹	North-east	North Central	South	West
By region					
Total.....	100	20	17	29	34
Metropolitan....	100	21	16	29	34
Nonmetropolitan..	100	4	32	38	26
Within region					
Total.....	100	100	100	100	100
Metropolitan....	95	99	90	93	96
Nonmetropolitan..	5	1	10	7	4

¹Northeast: Conn., Maine, Mass., N. H., N. J., N. Y., Pa., R. I., Vt.
 North Central: Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Nebr., N. Dak., Ohio, S. Dak., Wis.
 South: Ala., Ark., Del., D. C., Fla., Ga., Ky., La., Md., Miss., N. C., Okla., S. C., Tenn., Tex., Va., W. Va.
 West: Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Oreg., Utah, Wash., Wyo., Alaska, Hawaii.

Table 12.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED BY NUMBER OF FLOORS IN BUILDING AND BY REGION, 1963

Number of floors in building	All re-gions ¹	North-east	North Central	South	West
By region					
Total.....	100	20	17	29	34
1-3 floors.....	100	12	18	30	40
4-6.....	100	56	10	20	14
7-12.....	100	29	20	43	9
13-19.....	100	47	9	37	6
20 floors or more	100	76	12	5	7
Within region					
Total.....	100	100	100	100	100
1-3 floors.....	80	49	84	81	94
4-6.....	6	18	4	4	3
7-12.....	6	9	7	9	2
13-19.....	5	11	3	6	1
20 floors or more	4	13	3	1	1

Note: Components may not add to totals due to rounding.

¹See Table 11, footnote 1.

Table 13.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1963, BY METROPOLITAN—NONMETROPOLITAN LOCATION AND BY REGION

Location	All regions ¹	North-east	North Central	South	West
By region					
Total.....	100	11	19	29	41
Metropolitan....	100	11	18	29	42
Nonmetropolitan..	100	4	36	32	29
Within region					
Total.....	100	100	100	100	100
Metropolitan....	93	97	87	92	95
Nonmetropolitan..	7	3	13	8	5

¹See Table 11, footnote 1.

Table 14.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1963, BY NUMBER OF FLOORS IN BUILDING AND BY REGION

Number of floors in building	All regions ¹	North-east	North Central	South	West
By region					
Total.....	100	11	19	29	41
1-3 floors.....	100	10	19	29	42
4-6.....	100	43	14	22	21
7-12.....	100	26	21	39	15
13-19.....	100	35	32	28	5
20 floors or more	100	62	20	11	8
Within region					
Total.....	100	100	100	100	100
1-3 floors.....	96	86	96	98	98
4 floors or more ²	4	14	4	2	2
4-6 floors.....	57	62	43	49	72
7-12 floors.....	21	14	24	32	19
13-19 floors.....	15	13	25	16	5
20 floors or more	7	12	8	3	3

Note: Components may not add to totals due to rounding.

¹See Table 11, footnote 1.

²Buildings with 4 floors or more distributed on the basis of 100 percent.

Table 15.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED IN 1963, BY METROPOLITAN—NONMETROPOLITAN LOCATION AND BY NUMBER OF UNITS IN BUILDING

Location	All housing units	Number of units in building						
		5-9	10-19	20-29	30-49	50-99	100-199	200 or more
By number of units in building								
Total.....	100	17	25	16	16	10	7	8
Metropolitan.....	100	17	25	16	16	11	7	8
Nonmetropolitan.....	100	28	30	16	27	-	-	-
By location								
Total.....	100	100	100	100	100	100	100	100
Metropolitan.....	95	92	94	95	92	100	100	100
Nonmetropolitan.....	5	8	6	5	8	-	-	-

Note: Components may not add to totals due to rounding.

Table 16.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED IN 1963, BY NUMBER OF HOUSING UNITS IN BUILDING AND BY REGION

Number of housing units in building	All regions	North-east	North Central	South	West
By region					
Total.....	100	20	17	29	34
5-9.....	100	4	20	28	47
10-19.....	100	13	20	29	37
20-29.....	100	19	16	27	39
30-49.....	100	13	18	30	38
50-99.....	100	32	13	32	24
100-199.....	100	44	16	28	12
200 units or more	100	55	5	34	5
Within region					
Total.....	100	100	100	100	100
5-9.....	16	7	17	15	21
10-19.....	26	17	36	22	29
20-29.....	19	23	16	18	21
30-49.....	19	12	19	24	18
50-99.....	10	16	6	13	7
100-199.....	5	9	5	5	5
200 units or more	4	17	2	4	-

Note: Components may not add to totals due to rounding.
¹See Table 11, footnote 1.

Table 18.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1963, BY PRESENCE OF ELEVATORS, BY NUMBER OF FLOORS AND BY REGION

Number of floors	All regions ¹	North-east	North Central	South	West
Total.....	100	100	100	100	100
With elevators...	3	16	5	5	9
Without elevators	92	84	95	95	91
1-3 floors.....	100	100	100	100	100
with elevators...	5	4	2	2	8
Without elevators	95	96	98	98	91
4-6 floors.....	100	100	100	100	100
With elevators...	87	90	74	81	94
Without elevators	13	10	26	19	6
7 floors or more...	100	100	100	100	100
With elevators...	100	100	100	100	100
Without elevators	0	0	0	0	0

Note: Components may not add to totals due to rounding.
¹See Table 11, footnote 1.

Table 17.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1963, BY NUMBER OF HOUSING UNITS IN BUILDING AND BY REGION

Number of housing units in building	All regions ¹	North-east	North Central	South	West
By region					
Total.....	100	11	19	29	41
5-9 units.....	100	4	20	28	48
10-19.....	100	13	20	30	37
20-29.....	100	19	16	27	39
30-49.....	100	13	17	30	39
50-99.....	100	30	12	32	25
100-199.....	100	43	15	30	13
200 units or more	100	51	5	38	5
Within region					
Total.....	100	100	100	100	100
5-9 units.....	43	17	46	42	50
10-19.....	33	40	34	34	30
20-29.....	12	21	10	11	11
30-49.....	8	9	7	8	7
50-99.....	3	8	2	3	2
100-199.....	1	3	1	1	-
200 units or more	1	2	-	1	-

Note: Components may not add to totals due to rounding.
¹See Table 11, footnote 1.

Table 19.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED IN 1963, BY PRESENCE OF ELEVATORS, BY NUMBER OF FLOORS IN BUILDING AND BY REGION

Number of floors	All regions ¹	North-east	North Central	South	West
Total.....	100	100	100	100	100
With elevators...	27	54	20	23	20
Without elevators	63	46	80	77	80
1-3 floors.....	100	100	100	100	100
With elevators...	10	8	5	5	16
Without elevators	90	92	95	95	84
4-6 floors.....	100	100	100	100	100
With elevators...	94	98	88	86	97
Without elevators	6	2	12	14	3
7 floors or more...	100	100	100	100	100
With elevators...	100	100	100	100	100
Without elevators	0	0	0	0	0

Note: Components may not add to totals due to rounding.
¹See Table 11, footnote 1.

CONSTRUCTION REPORTS

HOUSING STARTS

Nov 5 4 38 PM '64

Issued October 1964

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HOUSING STARTS IN SEPTEMBER 1964

During September 1964, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.484 million units, up 4 percent over the revised August rate of 1.424 million but 15 percent below the revised September 1963 rate of 1.747 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

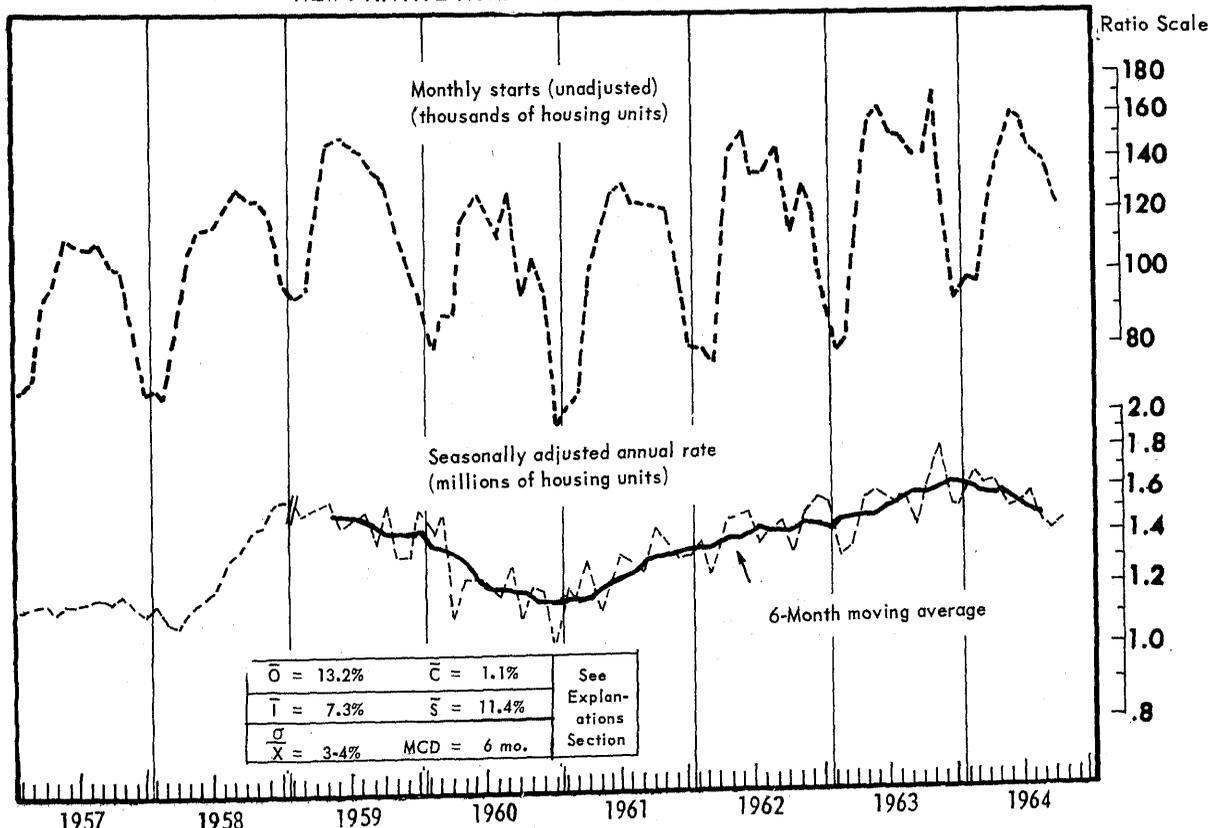
The actual number of private housing units started during September 1964 was 125,000 compared with 141,100 in August 1964 and 146,400 in September 1963. In addition, some 2,900 publicly owned housing units

were started in September 1964, bringing the grand total for the month up to 127,900 units.

After adjustment for seasonal variation, private housing starts were up in September 1964 over August in all regions except the Northeast.

A total of 107,113 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,231,000 units, were authorized by the 12,000 permit-issuing jurisdictions in September 1964. The September seasonally adjusted annual rate was 4 percent below the August rate of 1,281,000 units and 10 percent below the September 1963 rate of 1,371,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LAST FIGURES ENTERED ARE PRELIMINARY

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm)			Nonfarm				
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only		
						Monthly	6 month moving average ¹	
Annual totals:								
1959.....	1,553.5	1,516.8	xxx	1,531.3	1,494.6	xxx	xxx	
1960.....	1,296.0	1,252.1	xxx	1,274.0	1,230.1	xxx	xxx	
1961.....	1,365.0	1,313.0	xxx	1,336.8	1,284.8	xxx	xxx	
1962.....	1,492.4	1,462.8	xxx	1,468.7	1,439.1	xxx	xxx	
1963.....	1,640.9	1,609.2	xxx	1,613.4	1,581.7	xxx	xxx	
First 9 months:								
1963.....	1,253.7	1,228.5	1,565	1,234.4	1,209.2	1,541	xxx	
1964*.....	1,228.7	1,203.3	1,569	1,207.9	1,182.5	1,542	xxx	
Monthly:								
1963: July.....	153.5	151.3	1,599	151.9	149.7	1,584	1,603	
August.....	149.9	146.3	1,475	147.5	143.9	1,454	1,631	
September.....	148.4	146.4	1,747	145.2	143.2	1,712	1,613	
October.....	167.5	164.5	1,864	164.2	161.2	1,824	1,607	
November.....	122.3	120.5	1,577	119.7	117.9	1,544	1,624	
December.....	97.4	95.7	1,570	95.1	93.4	1,524	1,651	
1964: January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639	
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585	
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579	
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589	
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,555	
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,519	
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,489	
August*.....	143.7	141.1	1,424	141.0	138.4	1,402	xxx	
September*.....	127.9	125.0	1,484	125.6	122.7	1,458	xxx	

Note: Components may not equal totals due to rounding. *Preliminary. xxx Not applicable. ¹Centered on the fourth month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE; ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

(In thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	Total	One-family	Two-family	Three-family or more	Total, private and public				Private				
					Total	One-family	Two-family	Three-family or more	Total	One-family	Two-family	Three-family or more	
Annual totals:													
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0	
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6	
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6	
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4	
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3	
First 8 months:													
1963.....	1,105.3	700.0	42.3	363.2	1,089.2	683.8	42.3	363.2	1,066.0	683.2	36.6	346.3	
1964*.....	1,100.8	677.9	42.7	380.1	1,082.3	659.7	42.7	380.1	1,059.8	658.7	37.1	364.1	
Monthly:													
1963: July.....	153.5	99.1	5.2	49.2	151.9	97.5	5.2	49.2	149.7	97.4	4.8	47.5	
August.....	149.9	97.9	5.3	46.8	147.5	95.5	5.3	46.8	143.9	95.5	4.7	43.8	
September.....	148.4	94.0	4.8	49.6	145.2	90.8	4.8	49.6	143.2	90.8	4.4	48.0	
October.....	167.5	104.3	5.8	57.4	164.2	100.9	5.8	57.4	161.2	100.9	5.1	55.2	
November.....	122.3	72.4	4.9	45.0	119.7	69.8	4.9	45.0	117.9	69.7	4.0	44.1	
December.....	97.4	50.9	3.5	43.0	95.1	48.6	3.5	43.0	93.4	48.6	3.1	41.7	
1964: January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0	
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9	
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1	
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4	
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5	
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3	
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6	
August*.....	143.7	90.8	5.0	47.9	141.0	88.2	5.0	47.9	138.4	88.1	4.0	46.3	
September*.....	127.9	(NA)	(NA)	(NA)	125.6	(NA)	(NA)	(NA)	122.7	79.9	3.5	39.3	

Note: Components may not equal totals due to rounding.

*Preliminary

NA Not available.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION, ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	(In thousands of units)								
	Total (including farm), private and public			Nonfarm					
	Total	Metropolitan ¹	Nonmetropolitan ¹	Total, private and public			Private		
Total				Metropolitan ¹	Nonmetropolitan ¹	Total	Metropolitan ¹	Nonmetropolitan ¹	
Annual totals:									
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2
First 9 months:									
1963.....	1,253.7	871.0	382.5	1,234.4	870.3	364.1	1,209.2	851.8	357.2
1964*.....	1,228.7	872.0	356.4	1,207.9	871.9	336.1	1,182.5	856.1	326.4
Monthly:									
1963:									
July.....	153.5	106.2	47.3	151.9	106.2	45.7	149.7	104.8	44.9
August.....	149.9	101.1	48.8	147.5	101.1	46.5	143.9	97.9	46.0
September.....	148.4	104.2	44.2	145.2	104.1	41.0	143.2	102.8	40.4
October.....	167.5	117.8	49.7	164.2	117.3	46.9	161.2	115.8	45.3
November.....	122.3	85.0	37.3	119.7	84.6	35.1	117.9	83.7	34.2
December.....	97.4	76.8	20.6	95.1	76.8	18.3	93.4	75.2	18.2
1964:									
January.....	100.8	75.0	25.7	99.5	75.0	24.5	98.3	74.6	23.7
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7
August*.....	143.7	96.7	47.0	141.0	96.7	44.4	138.4	94.8	43.6
September*.....	127.9	91.4	36.5	125.6	91.3	34.3	122.7	89.5	33.2

NOTE: Components may not equal totals due to rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1963 definitions of metropolitan areas (Standard Metropolitan Statistical Areas, 1963, Bureau of the Budget); data for 1961-63 based on 1961 definition; data for 1959-60 on 1959 definition.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY REGION, ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	(In thousands of units)											
	Total (including farm), private and public				Nonfarm							
	North-east	North Central	South	West	Total, private and public				Private			
North-east					North Central	South	West	North-east	North Central	South	West	
Annual totals:												
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8
First 8 months:												
1963.....	181.7	220.4	401.9	301.2	181.3	215.5	391.2	301.1	173.1	211.1	384.8	296.9
1964*.....	170.9	242.4	415.0	272.3	170.8	237.9	401.6	272.2	165.4	232.9	393.6	268.3
Monthly:												
1963:												
July.....	23.8	32.2	58.4	39.1	23.8	31.3	57.7	39.0	23.3	30.8	56.8	38.8
August.....	29.1	34.1	51.4	35.4	29.0	33.1	50.1	35.4	26.7	32.3	49.7	35.2
September.....	24.1	31.6	58.0	34.6	24.1	31.3	55.1	34.6	24.1	31.1	53.6	34.4
October.....	29.8	37.9	59.7	40.2	29.8	36.6	57.6	40.2	28.2	35.9	57.0	40.1
November.....	22.6	26.7	44.9	28.1	22.6	25.9	43.1	28.1	22.5	25.0	42.4	28.0
December.....	13.1	17.2	35.5	31.7	13.1	17.1	33.2	31.7	12.5	16.8	32.8	31.4
1964:												
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3
August*.....	26.9	33.6	51.9	31.2	26.9	32.7	50.3	31.2	25.8	32.4	49.0	31.2
September*.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	21.6	29.4	44.5	27.2

NOTE: Components may not equal totals due to rounding. *Preliminary. NA Not yet available.
 Northeast: Conn., Maine, Mass., N.H., N.J., N.Y., Pa., R.I., Vt.
 North Central: Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Nebr., N. Dak., Ohio, S. Dak., Wis.
 South: Ala., Ark., Del., D.C., Fla., Ga., Ky., La., Md., Miss., N.C., Okla., S.C., Tenn., Tex., Va., W. Va.
 West: Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Oreg., Utah, Wash., Wyo., Alaska, Hawaii.

Table 5.--NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS, MONTHLY 1963-1964

(In thousands of units)

Period		U.S. total	Northeast	North Central	South	West	
1963:	July.....	1,599	247	310	603	439	
	August.....	1,475	262	312	516	385	
	September.....	1,747	250	356	689	452	
	October.....	1,864	297	415	691	461	
	November.....	1,577	274	332	598	373	
	December.....	1,570	202	315	597	456	
	1964:	January.....	1,718	231	307	697	483
		February.....	1,657	164	432	623	438
		March.....	1,663	260	388	658	357
		April.....	1,531	228	317	576	410
		May.....	1,529	282	339	571	337
		June.....	1,611	251	382	610	368
July.....		1,505	266	317	535	387	
August*.....		1,424	257	313	513	341	
September*.....		1,484	224	338	565	357	

*Preliminary.

Table 6.--NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES-- UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE: ANNUALLY 1959-1963 AND MONTHLY 1963 AND 1964

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North-east	North Central	South	West	Housing units in--				
							1 family buildings	2-4 family buildings	5 or more family buildings		
Unadjusted totals (in thousands of housing units)											
10,000 PLACES											
Annual totals:											
1959.....	1,208,328	xxx	222	286	356	344	938	76	194		
1960.....	998,048	xxx	199	228	284	287	746	65	187		
1961.....	1,064,189	xxx	230	226	299	309	723	67	274		
1962.....	1,186,601	xxx	243	238	343	363	716	87	384		
1963.....	1,285,028	xxx	231	254	387	413	705	117	463		
12,000 PLACES											
Annual totals:											
1963.....	1,334,684	xxx	239	269	403	423	750	119	466		
Seasonally adjusted annual rates (in thousands of housing units)											
First 9 months:											
1963.....	1,012,244	1,305	234	256	392	423	746	117	442		
1964*.....	1,001,254	1,303	243	295	399	366	723	103	476		
Monthly:											
1963:	July.....	121,850	1,320	224	261	406	429	739	129	452	
	August.....	115,001	1,286	214	277	383	412	738	107	441	
	September.....	114,672	1,371	266	264	413	428	764	128	479	
	October.....	127,771	1,401	254	279	420	448	751	128	522	
	November.....	98,580	1,359	235	302	424	398	738	128	493	
	December.....	96,089	1,402	253	271	460	418	715	112	575	
	1964:	January.....	85,519	1,333	205	332	403	393	742	114	477
		February.....	90,012	1,404	251	336	401	416	810	121	473
		March.....	119,775	1,377	274	323	411	369	767	101	509
		April.....	127,683	1,280	226	277	402	375	700	99	481
		May.....	121,961	1,271	241	272	383	375	714	101	456
		June.....	123,661	1,306	276	268	403	359	720	102	484
July.....		118,121	1,242	228	259	391	364	663	104	475	
August.....		107,409	1,281	236	304	418	323	701	95	485	
September*.....		107,113	1,231	251	282	377	321	693	93	445	

*Preliminary.

xxx Not applicable.

DEFINITIONS, NOTES AND EXPLANATIONS

1. HOUSING STARTS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units, it is when the contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters such as dormitories, rooming houses, etc., and transient accommodations such as transient hotels, motels, tourist courts, etc.

The standard Census regions are defined in the footnote to Table 4. The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas: beginning with January 1964, metropolitan-nonmetropolitan distributions are based on 1963 definitions; data for 1961-1963 are based on 1961 definition; data for 1959-1960 are based on 1959 definition.

Basis for Estimate

Estimates of housing starts are comprised of estimates of privately-owned starts in permit-issuing areas, estimates for areas which do not issue permits, and reports of starts of publicly owned structures. Starts in permit areas are derived from permit issuance data by the application of permit use ratios (based on continuing monthly surveys) which provide a measure of the number of housing units started in permit-issuing places in the month of permit issuance and in each month after issuance, as well as starts initiated before permits are issued. Estimates of housing starts in areas which do not issue permits are prepared on the basis of continuing monthly surveys in a sample of such areas. Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

2. BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months—or more—may pass between the issuance of a permit and the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building permit systems for which figures are currently given in this report account for a major portion of residential building in the United States; for the country as a whole, about 83 percent of the private housing units were constructed in areas in this permit-issuing universe in 1963.

The series shown in Table 6 beginning with 1962 pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. Construction Report C20-56 shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building permit data is provided in the Census Bureau's monthly C-40 and C-42 reports.

3. SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are to a considerable extent based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of a hundred that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error, about 95 out of a hundred that the difference is less than twice the standard error, and 99 out of a hundred that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent; for housing units authorized it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

4. SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts, C20-50. A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available upon request from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly-owned units.

The seasonally adjusted data are based on four years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working day adjustment for housing starts.

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first four months of 1960.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM, JANUARY 1963-AUGUST 1964

Month and year	Implicit seasonal indexes ¹ U.S. total		Seasonal indexes by region and area				Nonpermit starts U.S. total
	Total	Nonfarm	Starts in permit areas				
			Northeast	North Central	South	West	
1963: July.....	113.5	113.4	112.1	123.1	111.4	106.1	121.4
August.....	119.1	118.8	119.4	125.4	110.6	109.8	140.5
September...	100.6	100.4	116.3	105.6	94.6	91.2	107.2
October.....	105.9	106.0	115.1	109.9	103.5	104.4	100.2
November....	91.7	91.6	98.7	92.4	85.6	90.3	97.6
December....	73.1	73.5	74.8	64.1	74.2	82.8	60.2
1964: January....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	*118.9	*118.6	119.4	125.4	110.6	109.8	140.5
September...	*101.0	*100.9	116.3	105.6	94.6	91.2	107.2
October.....	xxx	xxx	115.1	109.9	103.5	104.4	100.2
November....	xxx	xxx	98.7	92.4	85.6	90.3	97.6
December....	xxx	xxx	74.8	64.1	74.2	82.8	60.2

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these NP seasonals have been calculated from nonfarm nonpermit starts which account for about 90% of all nonpermit starts.

*Preliminary.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE, MONTHLY 1963 AND 1964

Year and month	Implicit seasonal indexes ¹ U.S. total	Seasonal indexes by region and by type of structure ²											
		Northeast			North Central			South			West		
		1-family	2-4 family	5+ family	1-family	2-4 family	5+ family	1-family	2-4 family	5+ family	1-family	2-4 family	5+ family
1963: July.....	106.2	122.0	89.7	89.1	123.6	111.1	107.3	106.6	90.8	104.1	107.5	89.5	94.3
August...	102.7	109.6	94.5	116.3	110.2	108.9	94.6	104.2	91.9	94.1	102.7	88.9	99.2
September	105.8	115.4	100.0	96.7	117.1	99.7	120.9	103.1	106.7	110.6	102.5	101.6	91.7
October..	100.4	109.3	117.2	103.4	108.5	112.2	99.9	98.6	104.5	98.7	96.2	92.0	93.2
November.	96.6	98.1	96.2	117.8	92.0	100.0	105.4	90.9	109.5	101.2	89.5	88.4	95.7
December.	82.5	64.8	77.8	116.3	57.5	78.5	75.9	71.2	71.8	100.8	78.4	97.9	92.9
1964: January..	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August...	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September	*106.5	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October..	xxx	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.	xxx	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.	xxx	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1

*Preliminary. xxx Not applicable.

¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.²These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
Building permits					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
Private housing starts					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. private					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

5. MEASURES OF SEASONAL, CYCLICAL AND IRREGULAR COMPONENTS

Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957.

The following are brief descriptions of the measures shown in the box in the chart on front page:

- \bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.
- \bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.
- \bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.
- \bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular component and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

NOTE: More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the C20-50 report, (July 1963). A similar presentation will appear in these reports from time to time.

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HOUSING STARTS

Issued November 1964

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HOUSING STARTS IN OCTOBER 1964

THIS ISSUE INCLUDES A SPECIAL SUPPLEMENT ON STARTS OF APARTMENT BUILDINGS WITH 5 OR MORE HOUSING UNITS

During October 1964, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.600 million units, up 9 percent over the revised September rate of 1.465 million but 14 percent below the October 1963 rate of 1.864 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

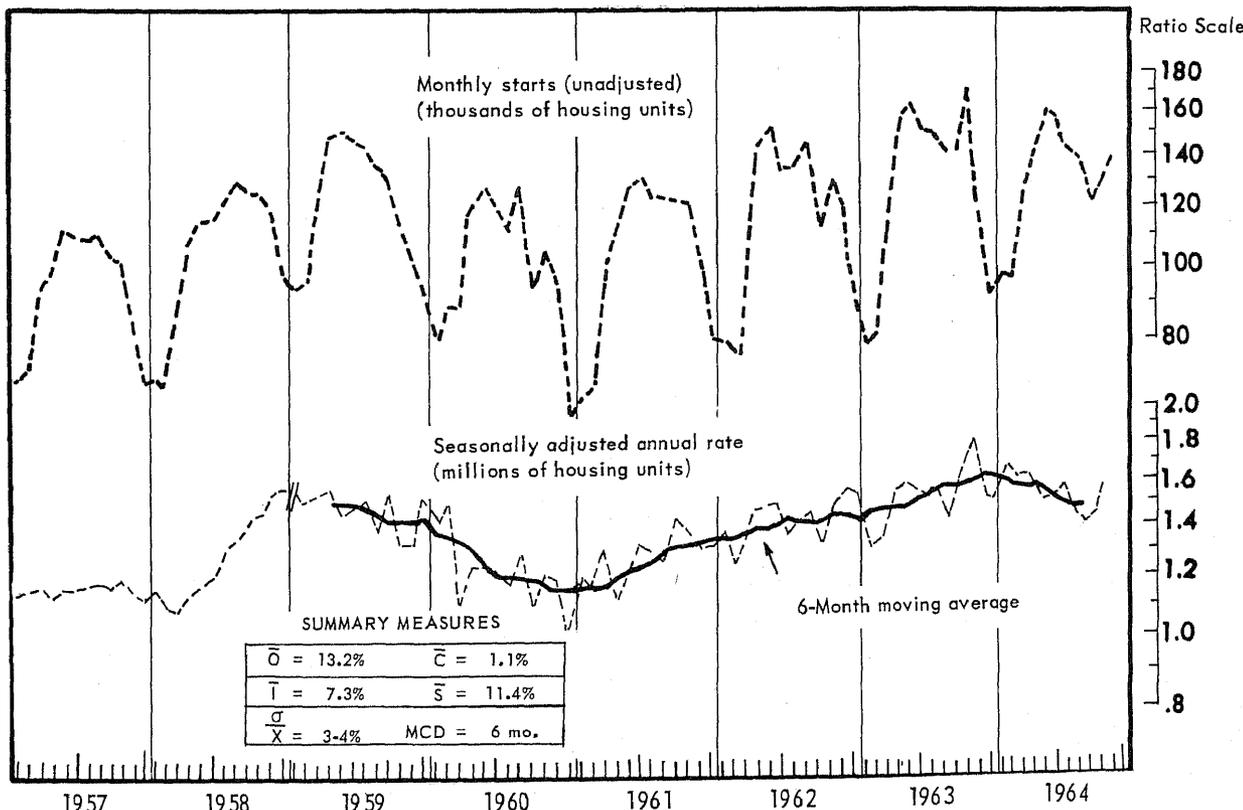
The actual number of private housing units started during October 1964 was 142,000 compared with 123,100 in September 1964 and 164,500 in October 1963. In addition, some 1,800 publicly owned housing units were started in October 1964,

bringing the grand total for the month up to 143,800 units.

After adjustment for seasonal variation, private housing starts were up in October 1964 over September in all regions except the West.

A total of 106,969 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,235,000 units, were authorized by the 12,000 permit-issuing jurisdictions in October 1964. The October seasonally adjusted annual rate was virtually unchanged from the September rate of 1,222,000 units, but 12 percent below the October 1963 rate of 1,401,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LATEST FIGURES ENTERED ARE PRELIMINARY. FOR EXPLANATION OF THE SUMMARY MEASURES, SEE SECTION ON SAMPLING VARIABILITY AND TABLE 9.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
Price 10 cents. Annual subscription \$1.00.

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS
(Thousands of units)

Period	Total (including farm)			Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only	
						Monthly	6-month moving average ¹
Annual totals:			(X)			(X)	(X)
1959.....	1,553.5	1,516.8	(X)	1,531.3	1,494.6	(X)	(X)
1960.....	1,296.0	1,252.1	(X)	1,274.0	1,230.1	(X)	(X)
1961.....	1,365.0	1,313.0	(X)	1,336.8	1,284.8	(X)	(X)
1962.....	1,492.4	1,462.8	(X)	1,468.7	1,439.1	(X)	(X)
1963.....	1,640.9	1,609.2	(X)	1,613.4	1,581.7	(X)	(X)
First 10 months:							
1963.....	1,421.2	1,393.0	1,595	1,398.6	1,370.4	1,570	(X)
1964*.....	1,371.9	1,343.9	1,571	1,348.8	1,320.8	1,543	(X)
1963							
July.....	153.5	151.3	1,599	151.9	149.7	1,584	1,603
August.....	149.9	146.3	1,475	147.5	143.9	1,454	1,631
September.....	148.4	146.4	1,747	145.2	143.2	1,712	1,613
October.....	167.5	164.5	1,864	164.2	161.2	1,824	1,607
November.....	122.3	120.5	1,577	119.7	117.9	1,544	1,624
December.....	97.4	95.7	1,570	95.1	93.4	1,524	1,651
1964							
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,555
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,520
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,488
August.....	144.8	141.6	1,430	142.2	139.0	1,408	1,499
September*.....	126.2	123.1	1,465	124.1	121.0	1,441	(X)
October*.....	143.8	142.0	1,600	141.2	139.4	1,569	(X)

NOTE: Components may not add to totals because of rounding. *Preliminary. (X) Not applicable. ¹Centered on the 4th month.Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE
(Thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	Total	1-family	2-family	3-family or more	Total, private and public				Private				
					Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more	
Annual totals:													
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0	
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6	
1961.....	1,365.0	989.3	50.0	325.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6	
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4	
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3	
First 9 months:													
1963.....	1,253.7	794.0	47.1	412.8	1,234.4	774.6	47.1	412.8	1,209.2	774.0	41.0	394.3	
1964*.....	1,228.1	758.2	47.2	422.6	1,207.6	737.9	47.2	422.6	1,181.4	736.9	40.7	403.9	
1963													
July.....	153.5	99.1	5.2	49.2	151.9	97.5	5.2	49.2	149.7	97.4	4.8	47.5	
August.....	149.9	97.9	5.3	46.8	147.5	95.5	5.3	46.8	143.9	95.5	4.7	43.8	
September.....	148.4	94.0	4.8	49.6	145.2	90.8	4.8	49.6	143.2	90.8	4.4	48.0	
October.....	167.5	104.3	5.8	57.4	164.2	100.9	5.8	57.4	161.2	100.9	5.1	55.2	
November.....	122.3	72.4	4.9	45.0	119.7	69.8	4.9	45.0	117.9	69.7	4.0	44.1	
December.....	97.4	50.9	3.5	43.0	95.1	48.6	3.5	43.0	93.4	48.6	3.1	41.7	
1964													
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0	
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9	
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1	
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4	
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	152.2	98.9	4.8	51.5	
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3	
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6	
August.....	144.8	90.2	5.1	49.5	142.2	87.6	5.1	49.5	139.0	87.6	4.1	47.3	
September*.....	126.2	80.9	4.4	40.9	124.1	78.8	4.4	40.9	121.0	78.7	3.5	38.8	
October*.....	143.8	(NA)	(NA)	(NA)	141.2	(NA)	(NA)	(NA)	139.4	90.3	4.4	44.7	

NOTE: Components may not add to totals because of rounding.
NA Not available.
*Preliminary.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION

(Thousands of units)

Period	Total (including farm), private and public			Nonfarm							
	Total	Metropolitan ¹	Nonmetro- politan ¹	Total, private and public			Private				
				Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹		
Annual totals:											
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,033.9	440.7		
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2		
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8		
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1		
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2		
First 10 months:											
1963.....	1,421.2	988.8	432.2	1,398.6	987.6	411.0	1,370.4	967.6	402.5		
1964*.....	1,371.9	970.0	401.6	1,348.8	969.6	379.3	1,320.8	952.7	368.1		
1963											
July.....	153.5	106.2	47.3	151.9	106.2	45.7	149.7	104.8	44.9		
August.....	149.9	101.1	48.8	147.5	101.1	46.5	143.9	97.9	46.0		
September.....	148.4	104.2	44.2	145.2	104.1	41.0	143.2	102.8	40.4		
October.....	167.5	117.8	49.7	164.2	117.3	46.9	161.2	115.8	45.3		
November.....	122.3	85.0	37.3	119.7	84.6	35.1	117.9	87.7	34.2		
December.....	97.4	76.8	20.6	95.1	76.8	18.3	93.4	75.2	18.2		
1964											
January.....	100.8	75.0	25.7	99.5	75.0	24.5	98.3	74.6	23.7		
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3		
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7		
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4		
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6		
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2		
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7		
August.....	144.8	97.1	47.7	142.2	97.1	45.1	139.0	94.9	44.1		
September*.....	126.2	90.1	36.1	124.1	90.0	34.1	121.0	88.1	32.9		
October*.....	143.8	98.9	44.9	141.2	98.6	42.7	139.4	97.9	41.5		

NOTE: Components may not add to totals because of rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1963 definitions of standard metropolitan statistical areas (Standard Metropolitan Statistical Areas, 1964, Bureau of Budget); data for 1961-63 based on 1961 definitions, data for 1959-60 on 1959 definitions.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY GEOGRAPHIC REGIONS

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	North- east	North Central	South	West	Total, private and public				Private				
					North- east	North Central	South	West	North- east	North Central	South	West	
Annual totals:													
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2	
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8	
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0	
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0	
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8	
First 9 months:													
1963.....	205.8	252.0	459.9	335.8	205.4	246.8	446.3	335.7	197.2	242.2	438.4	331.3	
1964*.....	192.2	273.5	462.1	300.2	192.1	268.5	447.1	300.1	185.6	262.6	437.6	296.0	
1963													
July.....	23.8	32.2	58.4	39.1	23.8	31.3	57.7	39.0	23.3	30.8	56.8	38.8	
August.....	29.1	34.1	51.4	35.4	29.0	33.1	50.1	35.4	26.7	32.3	49.7	35.2	
September.....	24.1	31.6	58.0	34.6	24.1	31.3	55.1	34.6	24.1	31.1	53.6	34.4	
October.....	29.8	37.9	59.7	40.2	29.8	36.6	57.6	40.2	28.2	35.9	57.0	40.1	
November.....	22.6	26.7	44.9	28.1	22.6	25.9	43.1	28.1	22.5	25.0	42.4	28.0	
December.....	13.1	17.2	35.5	31.7	13.1	17.1	33.2	31.7	12.5	16.8	32.8	31.4	
1964													
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3	
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7	
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9	
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5	
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4	
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0	
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3	
August.....	26.9	33.9	52.3	31.7	26.9	33.0	50.7	31.7	25.6	32.3	49.3	31.7	
September*.....	21.3	30.8	46.7	27.4	21.3	30.3	45.1	27.4	20.4	29.8	43.7	27.2	
October*.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	27.1	36.4	50.8	25.1	

NOTE: Components may not add to totals because of rounding. For the States contained in each region, see "Definitions" on page 7. *Preliminary. NA Not available.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS

(Thousands of units)					
Period	U.S. total	Northeast	North Central	South	West
1963					
July.....	1,599	247	310	603	439
August.....	1,475	262	312	516	385
September.....	1,747	250	356	689	452
October.....	1,864	297	415	691	461
November.....	1,577	274	332	598	373
December.....	1,570	202	315	597	456
1964					
January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July.....	1,505	266	317	535	387
August.....	1,430	255	312	517	346
September*.....	1,465	212	344	552	357
October*.....	1,600	285	414	612	289

NOTE: For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North-east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
10,000-PLACES SERIES									
Annual totals:									
1959.....	1,208,328	(X)	222	286	356	344	938	76	194
1960.....	998,048	(X)	199	228	284	287	746	65	187
1961.....	1,064,189	(X)	230	226	299	309	723	67	274
1962.....	1,186,601	(X)	243	238	343	363	716	87	384
1963 ¹	1,285,028	(X)	231	254	387	413	705	117	463
12,000-PLACES SERIES									
Annual totals:									
1963.....	1,334,684	(X)	239	269	403	423	750	119	466
Seasonally adjusted annual rates (thousands of units)									
First 10 months:									
1963.....	1,140,015	1,315	236	258	395	426	746	118	450
1964*.....	1,107,814	1,295	241	297	398	360	721	102	473
1963									
July.....	121,850	1,320	224	261	406	429	739	129	452
August.....	115,001	1,286	214	277	383	412	738	107	441
September.....	114,672	1,371	266	264	413	428	764	128	479
October.....	127,771	1,401	254	279	420	448	751	128	522
November.....	98,580	1,359	235	302	424	398	738	128	493
December.....	96,089	1,402	253	271	460	418	715	112	575
1964									
January.....	85,519	1,333	205	332	403	393	742	114	477
February.....	90,012	1,404	251	336	401	416	810	121	473
March.....	119,775	1,377	274	323	411	369	767	101	509
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	118,121	1,242	228	259	391	364	663	104	475
August.....	107,409	1,281	236	304	418	323	701	95	485
September*.....	106,704	1,222	240	289	378	315	694	88	440
October*.....	106,969	1,235	228	309	387	311	697	91	447

NOTE: For States contained in each region, see "Definitions" on page 7. *Preliminary. (X) Not applicable.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM

Month and year	Implicit seasonal indexes ¹ , U.S. total		Seasonal indexes by region and area				Nonpermit starts, U.S. total
	Total	Nonfarm	Starts in permit areas				
			Northeast	North Central	South	West	
1963							
July.....	113.5	113.4	112.1	123.1	111.4	106.1	121.4
August.....	119.1	118.8	119.4	125.4	110.6	109.8	140.5
September.....	100.6	100.4	116.3	105.6	94.6	91.2	107.2
October.....	105.9	106.0	115.1	109.9	103.5	104.4	100.2
November.....	91.7	91.6	98.7	92.4	85.6	90.3	97.6
December.....	73.1	73.5	74.8	64.1	74.2	82.8	60.2
1964							
January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	118.9	118.5	119.4	125.4	110.6	109.8	140.5
September.....	*100.9	*100.8	116.3	105.6	94.6	91.2	107.2
October.....	*106.5	*106.6	115.1	109.9	103.5	104.4	100.2
November.....	(X)	(X)	98.7	92.4	85.6	90.3	97.6
December.....	(X)	(X)	74.8	64.1	74.2	82.8	60.2

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these nonpermit seasonal indexes have been calculated from nonfarm nonpermit starts which account for about 90 percent of all nonpermit starts. *Preliminary. (X) Not applicable.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE

Year and month	Implicit seasonal indexes ¹ , U.S. total	Northeast			North Central			South			West		
		1- family	2-4 family	5 or more family	1- family	2-4 family	5 or more family	1- family	2-4 family	5 or more family	1- family	2-4 family	5 or more family
		1963											
July.....	106.2	122.0	89.7	89.1	123.6	111.1	107.3	106.6	90.8	104.1	107.5	89.5	94.3
August.....	102.7	109.6	94.5	116.3	110.2	108.9	94.6	104.2	91.9	94.1	102.7	88.9	99.2
September.....	105.8	115.4	100.0	96.7	117.1	99.7	120.9	103.1	106.7	110.6	102.5	101.6	91.7
October.....	100.4	109.3	117.2	103.4	108.5	112.2	99.9	98.6	104.5	98.7	96.2	92.0	93.2
November.....	96.6	98.1	96.2	117.8	92.0	100.0	105.4	90.9	109.5	101.2	89.5	88.4	95.7
December.....	82.5	64.8	77.8	116.3	57.5	78.5	75.9	71.2	71.8	100.8	78.4	97.9	92.9
1964													
January.....	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.....	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March.....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April.....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August.....	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September.....	106.8	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October.....	*101.3	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.....	(X)	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.....	(X)	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1

NOTE: These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized. *Preliminary. (X) Not applicable. ¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
BUILDING PERMITS					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
PRIVATE HOUSING STARTS					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. PRIVATE					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

NOTE: Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957. More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the July 1963 report (C20-50). A similar presentation will appear in these reports from time to time.

The following are brief descriptions of the measures used in this report.

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

DEFINITIONS AND DESCRIPTIONS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units it is defined as when the construction contract is awarded. All housing units in a multifamily building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters (such as dormitories and rooming houses) and transient accommodations (such as transient hotels, motels, and tourist courts) and mobile homes (trailers).

The standard Census geographic regions are used in the tables of this report. States contained in each region are as follows: Northeast—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; West—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas. Data for the period beginning with January 1964, on metropolitan-nonmetropolitan distributions, are based on 1963 definitions; data for 1961-1963 are based on 1961 definitions; and data for 1959-1960 are based on 1959 definitions.

Descriptions and Procedures

HOUSING STARTS COMPILATION

Compilation of the housing starts series depends on 4 steps. First, an estimate is prepared of the number of housing units for which building permits

have been issued in all 12,000 permit-issuing places each month. Second, a sample field survey is made of the use of permits. In this survey, a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the permit have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units covered by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. Third, having produced an estimate of the number of units started in each month with permit authorization, an adjustment is next made to take care of units started within permit-issuing areas but without permit authorization.

The final step in the estimates of housing starts is to add an estimate of units started in areas where building permit systems do not exist. This estimate is based upon current monthly surveys in 101 broad areas (counties or groups of counties). In these areas, visits are made to a select group of informed people and a list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Information provided by these sources is next checked by field visit. As a final step, a sample of 315 small land areas is selected, and these small areas are canvassed intensively by the enumerators to find by observation, all units started since the enumerators' last visit a month earlier. On the basis of these findings, estimates are made of the number of units not reported by the informed sources, and these are added to the information from the sources to provide an estimate of total construction in the nonpermit areas.

Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual

DEFINITIONS AND DESCRIPTIONS

construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months or more may pass from the time a permit is issued to the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building-permit systems for which figures are currently given in this report account for a major portion of residential building in the United States. For the country as a whole, about 83 percent of the private housing units were constructed in areas of this permit-issuing universe in 1963.

The series shown in table 6, beginning with 1962, pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building-permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. The report for January 1964 (C20-56) shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building-permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year along with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building-permit data is provided in the Census Bureau's monthly reports on Building Permits (C40 and C42).

SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are, to a considerable extent, based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of 100 that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error; about 95 out of 100 that the difference is less than twice the standard error; and 99 out of 100 that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent. For housing units authorized, it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number

of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II program. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts (C20-50). A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available, upon request, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly owned units.

The seasonally adjusted data are based on 4 years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working-day adjustment for housing starts.

DEFINITIONS AND DESCRIPTIONS

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building-permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment

indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first 4 months of 1960.

SPECIAL SUPPLEMENT

Starts of Apartment Buildings With 5 Or More Housing Units, 1963 And First Half 1964

INTRODUCTION

This supplement provides charts of quarterly statistics on selected privately owned apartment houses started in the United States during 1963 and the first and second quarters of 1964. These data which apply only to structures with 5 or more housing units will be provided as a quarterly adjunct to the regular monthly reports on housing starts.

Summary of Findings

About 97 percent of the buildings with 5 or more housing units started in the second quarter 1964 had 1 to 3 floors. (Chart 1). However, the 3 percent of the buildings with 4 floors or more accounted for 14 percent of all housing units in the 5 or more housing unit buildings (Chart 2).

Although buildings with 50 housing units or more accounted for only 4 percent of the number of buildings started during the second quarter 1964 (Chart 3), 21 percent of the housing units were in these buildings (Chart 4). It is noteworthy that buildings with 100 units or more accounted for 12 percent of all apartment units. Buildings with 20 to 49 units comprised 28 percent of the buildings started but contained 43 percent of the housing units. However, the remaining 68 percent of the buildings, containing 5 to 19 units, accounted for only 36 percent of the housing units.

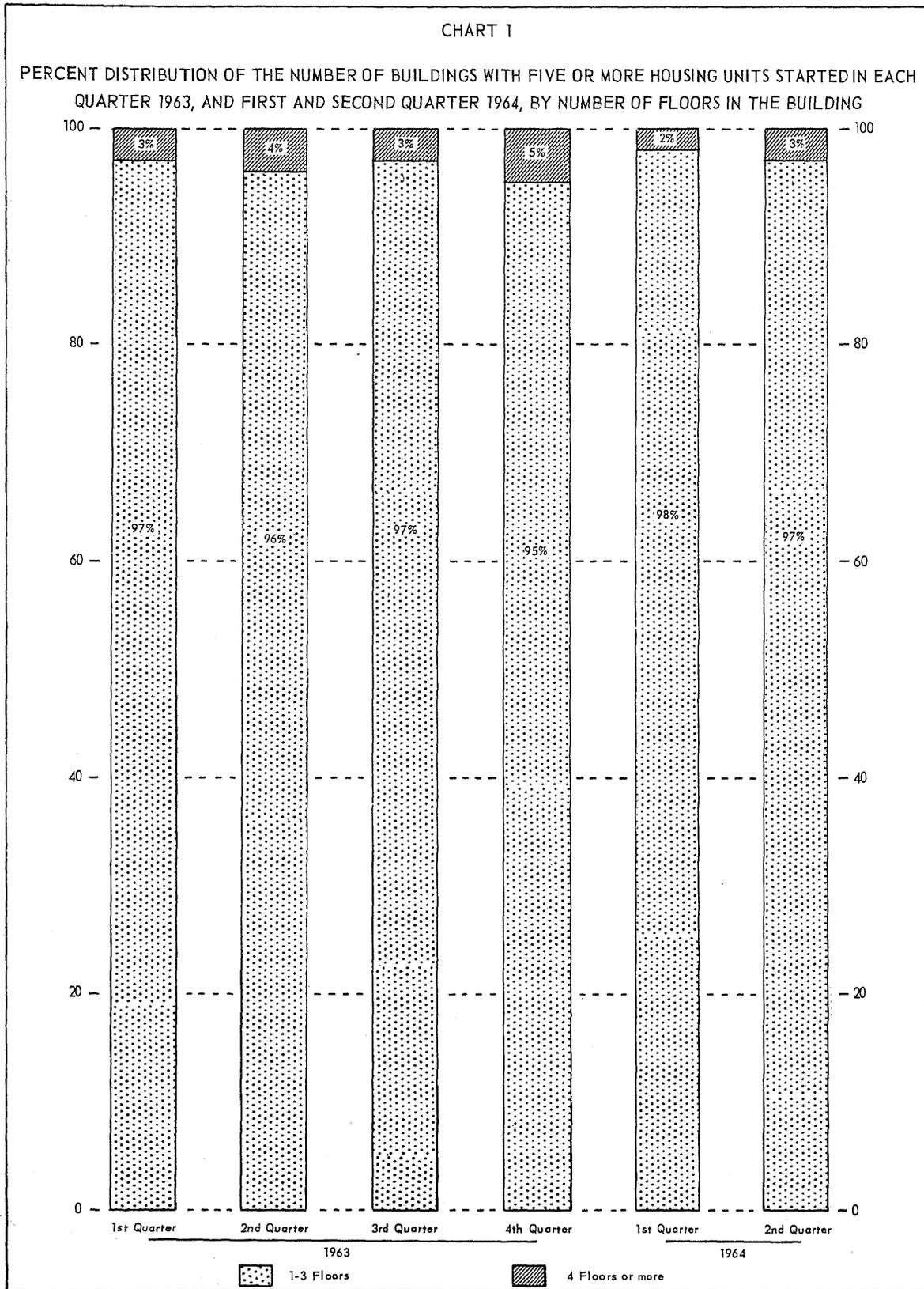
During the first half of 1964, all buildings with 7 floors or more and a preponderance of the buildings with 4 to 6 floors had elevators (Chart 5). About 5 percent of the buildings with 3 floors or less, containing 8 percent of the housing units, had elevators. Of apartments in all buildings with 5 or more housing units, 20 percent were in buildings providing elevator service (Chart 6).

Description of Survey

The data relating to housing starts are based on sample surveys conducted each month. The information is obtained from a national probability sample of all housing units on which construction is started. The size of the sample varies from month to month. However, in the first half of 1964, approximately 3,300 buildings with 5 or more apartments came into the starts survey sample. This sample represents more than 25 percent of all apartment buildings started during the first six months of 1964.

Because of the method of calculating the data, figures on the actual number of buildings with 5 or more housing units and the number of housing units in those buildings are not now available. Published figures show 271,000 units in buildings with 3 or more housing units which were started in the first half of 1964. The great majority of these were in buildings with 5 or more units.

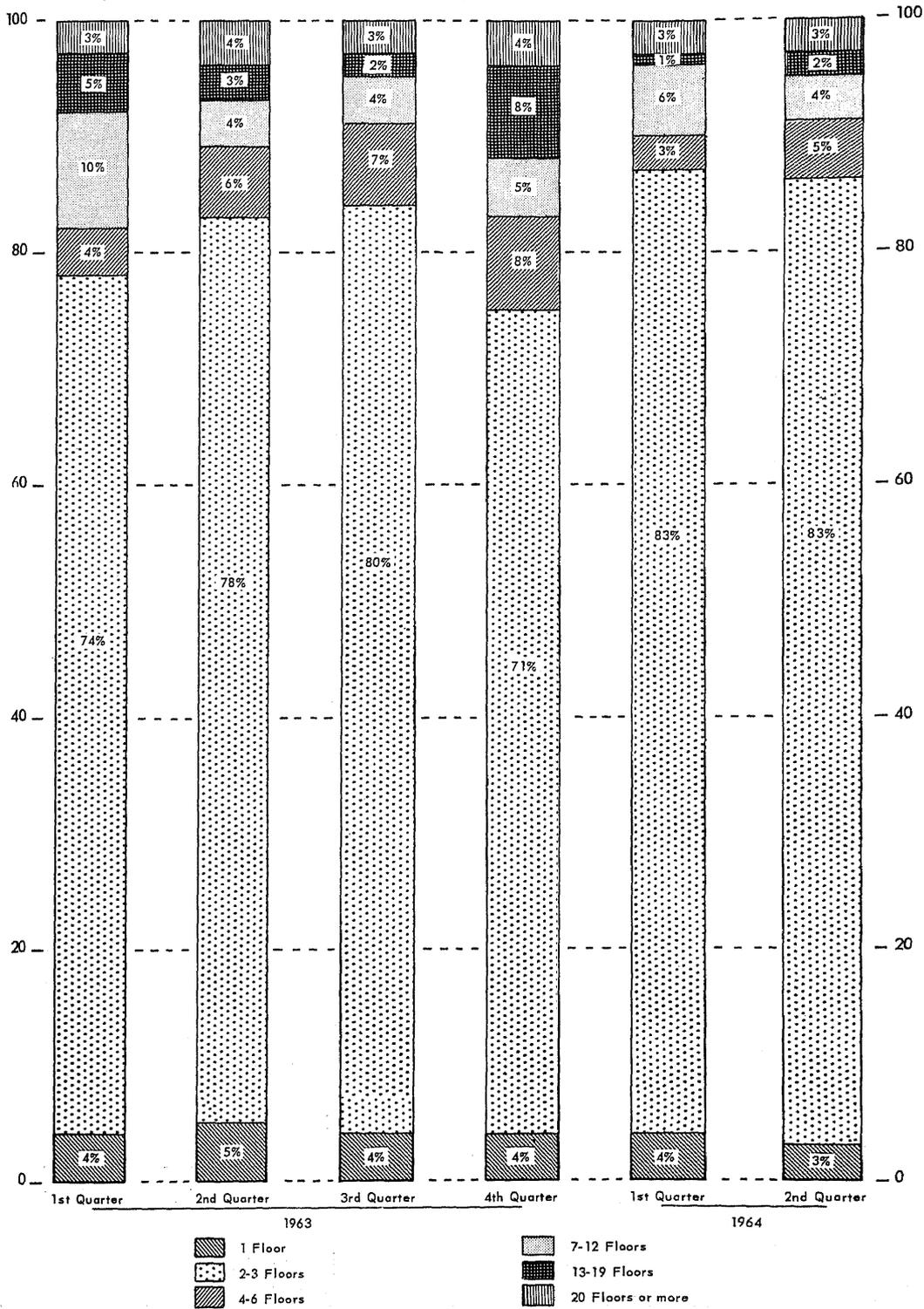
For a more detailed description of the housing starts survey and its limitations, see pages 7-9.



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 2

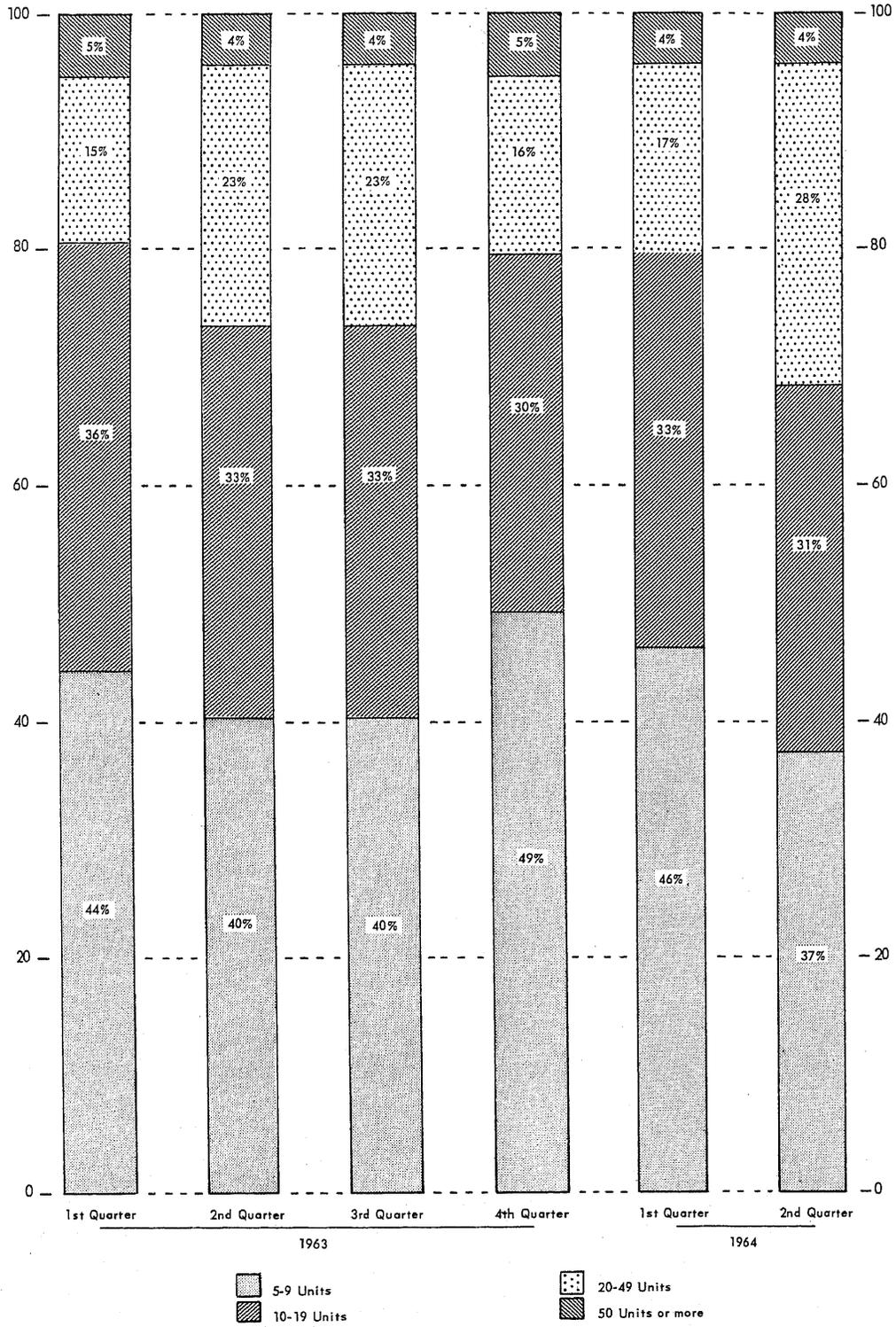
PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH FIVE OR MORE UNITS STARTED EACH QUARTER 1963, AND FIRST AND SECOND QUARTER 1964, BY NUMBER OF FLOORS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 3

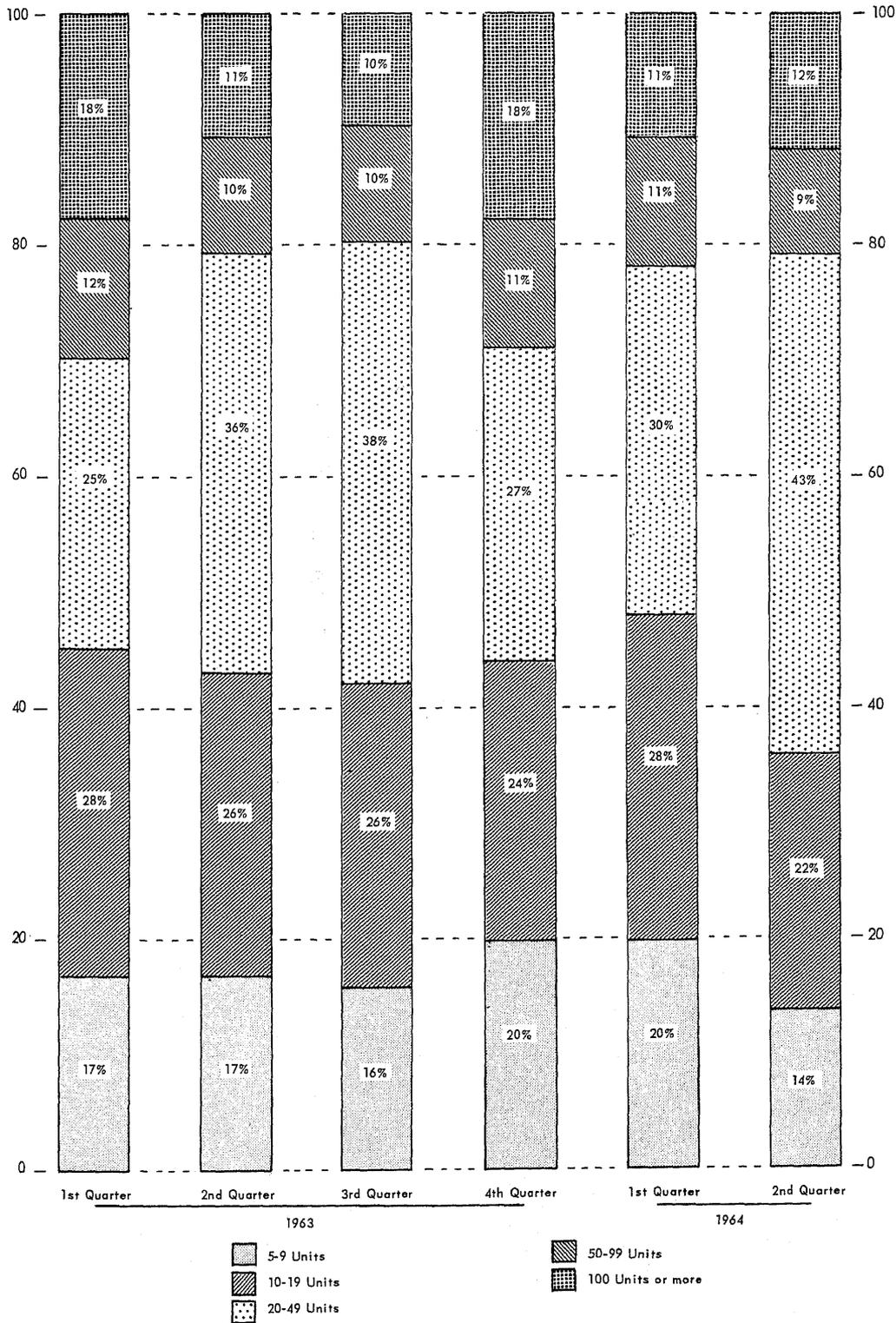
PERCENT DISTRIBUTION OF THE NUMBER OF BUILDINGS WITH FIVE OR MORE HOUSING UNITS STARTED EACH QUARTER 1963, AND FIRST AND SECOND QUARTER 1964, BY NUMBER OF HOUSING UNITS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 4

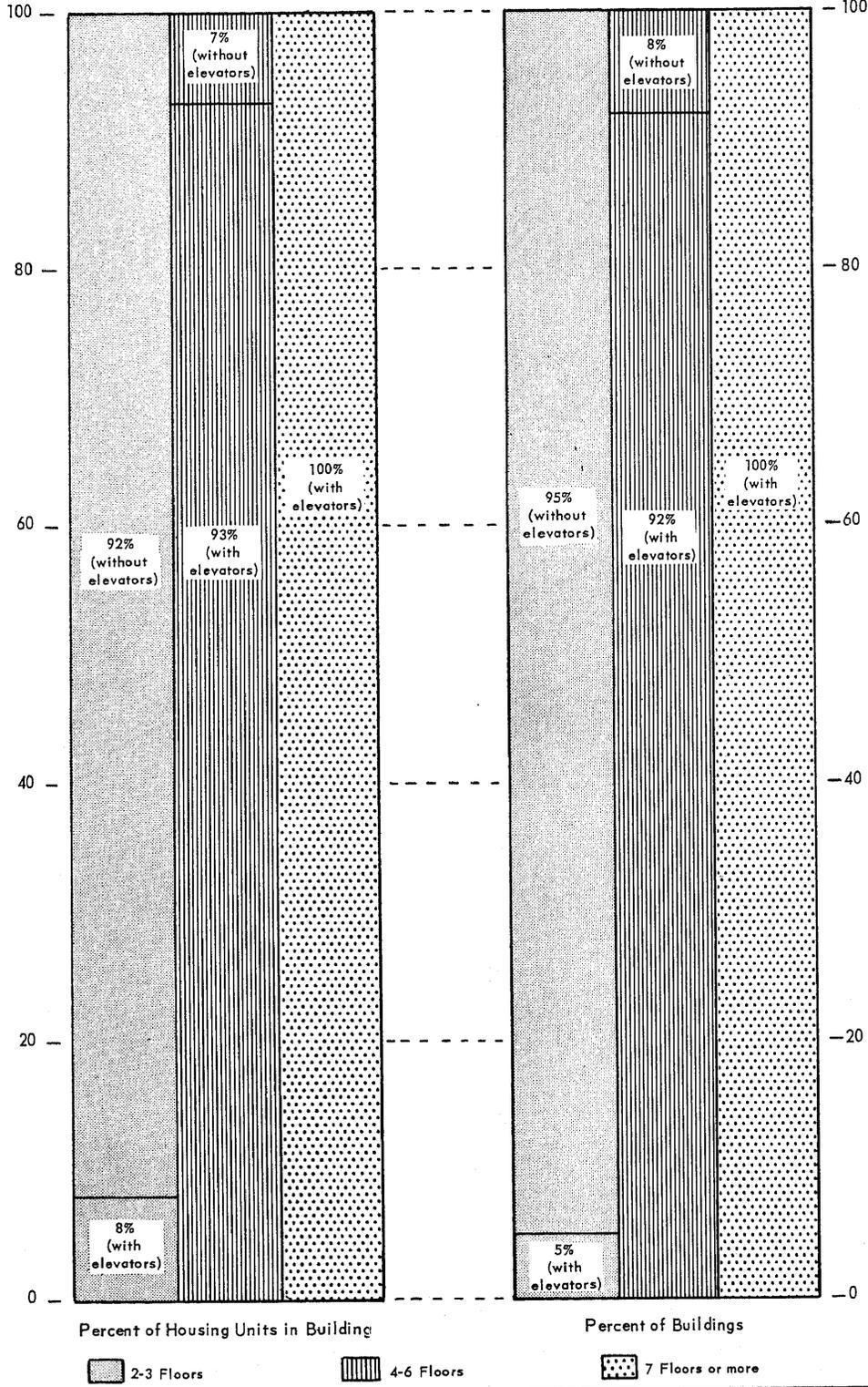
PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH FIVE OR MORE UNITS STARTED EACH QUARTER 1963, AND FIRST AND SECOND QUARTER 1964, BY NUMBER OF HOUSING UNITS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 5

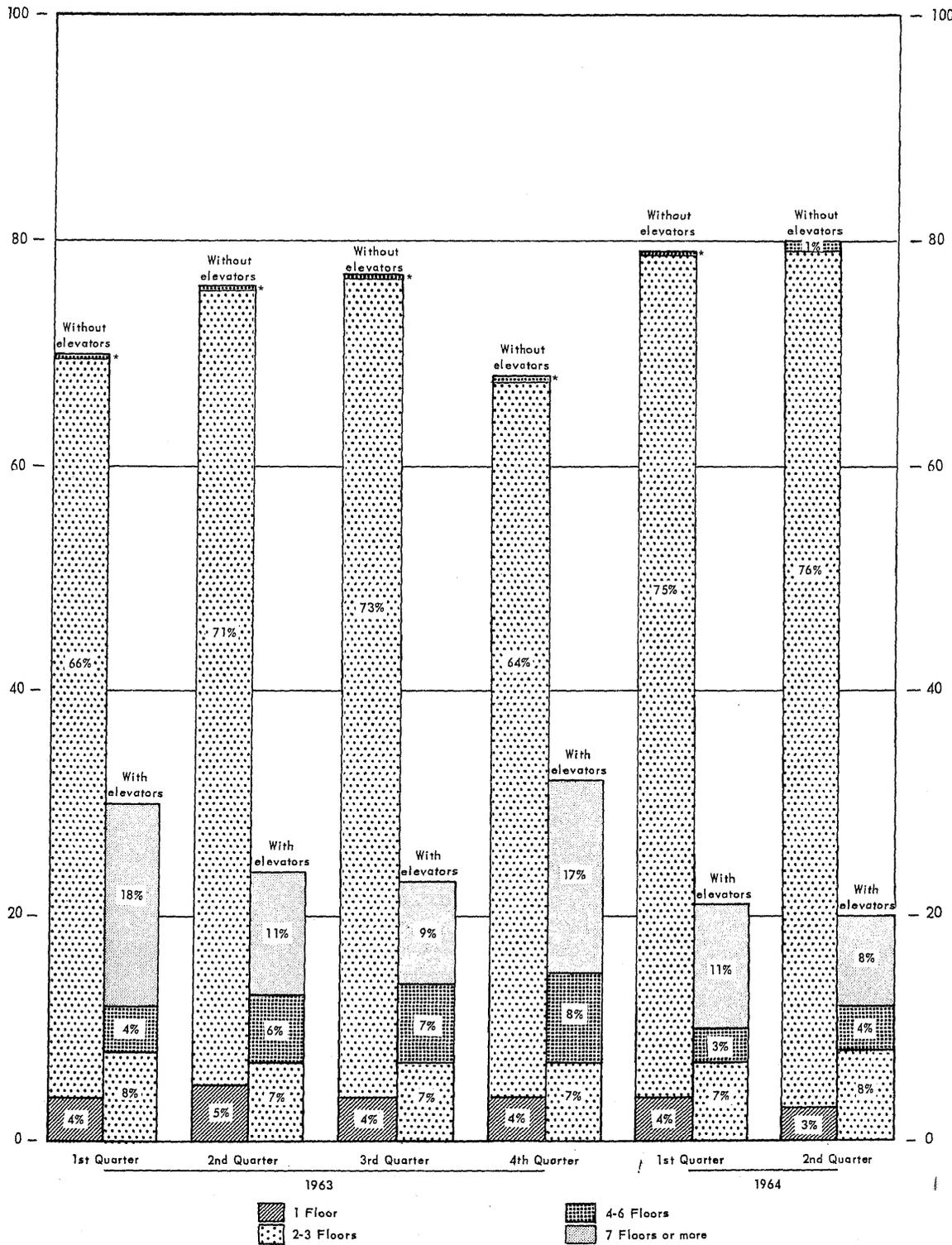
PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH FIVE OR MORE HOUSING UNITS, AND PERCENT DISTRIBUTION OF BUILDINGS WITH FIVE OR MORE HOUSING UNITS, WITH AND WITHOUT ELEVATORS, STARTED FIRST HALF 1964, BY NUMBER OF FLOORS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 6

PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH FIVE OR MORE HOUSING UNITS STARTED EACH QUARTER 1963, AND FIRST AND SECOND QUARTERS 1964, BY NUMBER OF FLOORS IN THE BUILDING AND WITH OR WITHOUT ELEVATORS IN THE BUILDING



*Less than 0.5%

Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

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BUREAU OF THE CONSTRUCTION REPORTS

JAN 14 4 40 PM '65 HOUSING STARTS

Issued December 1964

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HOUSING STARTS IN NOVEMBER 1964

THIS ISSUE INCLUDES A SPECIAL SUPPLEMENT ON STARTS OF APARTMENT BUILDINGS WITH 5 OR MORE HOUSING UNITS

During November 1964, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.420 million units, 11 percent below the revised October rate of 1.599 million and 10 percent below the November 1963 rate of 1,577 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

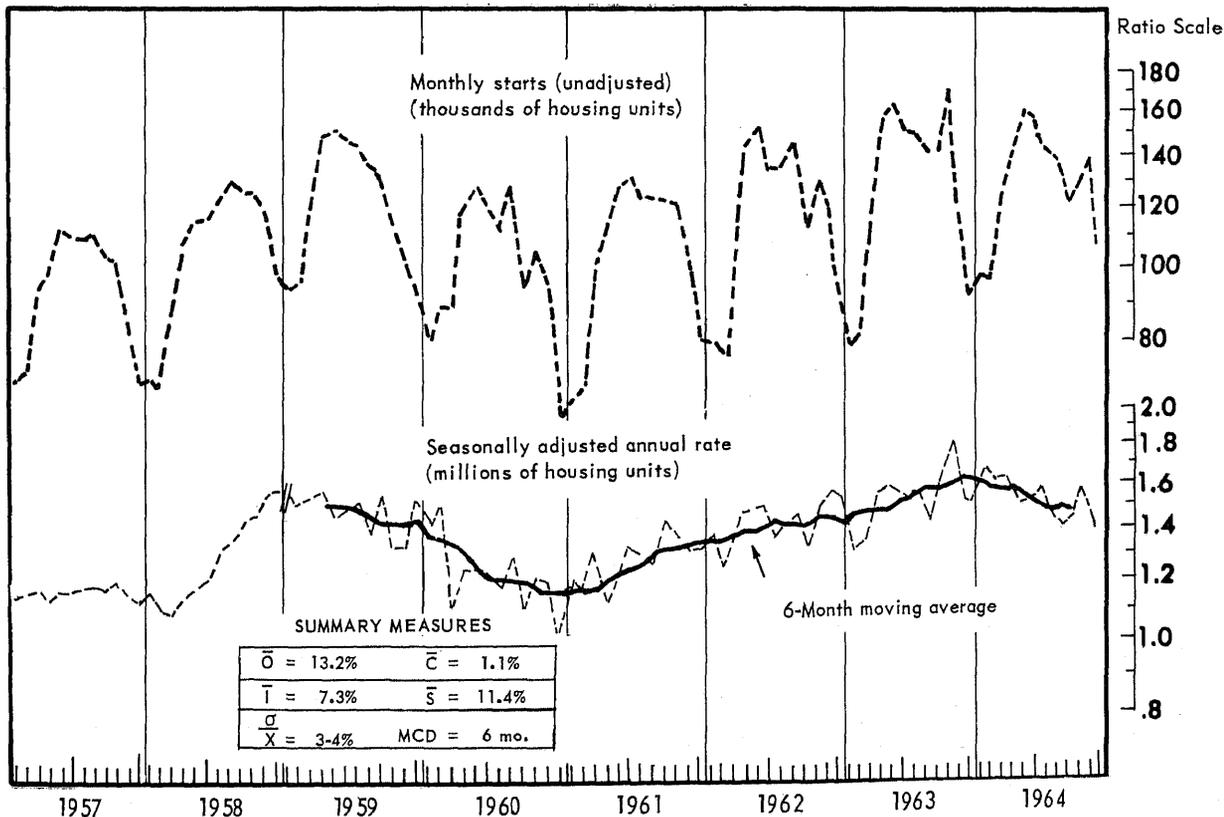
The actual number of private housing units started during November 1964 was 108,900 compared with 141,800 in October 1964 and 120,500 in November 1963. In addition, some 1,900 publicly owned housing units were started in November 1964,

bringing the grand total for the month up to 110,800 units.

After adjustment for seasonal variation, private housing starts were down from October 1964 to November in all regions except the West.

A total of 89,804 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,257,000 units, were authorized by the 12,000 permit-issuing jurisdictions in November 1964. The November seasonally adjusted annual rate was 3 percent higher than the revised October rate of 1,220,000 units, but 8 percent below the November 1963 rate of 1,359,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LATEST FIGURES ENTERED ARE PRELIMINARY. FOR EXPLANATION OF THE SUMMARY MEASURES, SEE SECTION ON SAMPLING VARIABILITY AND TABLE 9.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402
 Price 10 cents. Annual subscription \$1.00.

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS

Period	Total (including farm)			Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only	
						Monthly	6-month moving average ¹
Annual totals:							
1959.....	1,553.5	1,516.8	(X)	1,531.3	1,494.6	(X)	(X)
1960.....	1,296.0	1,252.1	(X)	1,274.0	1,230.1	(X)	(X)
1961.....	1,365.0	1,313.0	(X)	1,336.8	1,284.8	(X)	(X)
1962.....	1,492.4	1,462.8	(X)	1,468.7	1,439.1	(X)	(X)
1963.....	1,640.9	1,609.2	(X)	1,613.4	1,581.7	(X)	(X)
First 11 months:							
1963.....	1,543.5	1,513.5	1,594	1,518.3	1,488.3	1,567	(X)
1964*.....	1,482.5	1,452.1	1,556	1,457.2	1,426.8	1,529	(X)
1963							
July.....	153.5	151.3	1,599	151.9	149.7	1,584	1,603
August.....	149.9	146.3	1,475	147.5	143.9	1,454	1,631
September.....	148.4	146.4	1,747	145.2	143.2	1,712	1,613
October.....	167.5	164.5	1,864	164.2	161.2	1,824	1,607
November.....	122.3	120.5	1,577	119.7	117.9	1,544	1,624
December.....	97.4	95.7	1,570	95.1	93.4	1,524	1,651
1964							
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,595
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,520
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,486
August.....	144.8	141.6	1,430	142.2	139.0	1,408	1,497
September.....	126.0	122.6	1,457	123.9	120.5	1,433	1,478
October*.....	143.8	141.8	1,599	141.2	139.2	1,567	(X)
November*.....	110.8	108.9	1,420	108.6	106.7	1,391	(X)

NOTE: Components may not add to totals because of rounding. *Preliminary. (X) Not applicable. ¹Centered on the 4th month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE

Period	Total (including farm), private and public											
	Nonfarm											
	Total, private and public				Private				Private			
	Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more
Annual totals:												
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3
First 10 months:												
1963.....	1,421.2	898.3	52.9	470.2	1,398.6	875.5	52.9	470.2	1,370.4	874.9	46.1	449.5
1964*.....	1,371.7	848.4	52.5	470.7	1,348.6	825.4	52.5	470.7	1,320.1	824.4	45.4	450.4
1963												
July.....	153.5	99.1	5.2	49.2	151.9	97.5	5.2	49.2	149.7	97.4	4.8	47.5
August.....	149.9	97.9	5.3	46.8	147.5	95.5	5.3	46.8	143.9	95.5	4.7	43.8
September.....	148.4	94.0	4.8	49.6	145.2	90.8	4.8	49.6	143.2	90.8	4.4	48.0
October.....	167.5	104.3	5.8	57.4	164.2	100.9	5.8	57.4	161.2	100.9	5.1	55.2
November.....	122.3	72.4	4.9	45.0	119.7	69.8	4.9	45.0	117.9	69.7	4.0	44.1
December.....	97.4	50.9	3.5	43.0	95.1	48.6	3.5	43.0	93.4	48.6	3.1	41.7
1964												
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6
August.....	144.8	90.2	5.1	49.5	142.2	87.6	5.1	49.5	139.0	87.6	4.1	47.3
September.....	126.0	79.6	4.5	41.9	123.9	77.4	4.5	41.9	120.5	77.4	3.6	39.5
October*.....	143.8	91.5	5.2	47.1	141.2	88.9	5.2	47.1	139.2	88.8	4.6	45.8
November*.....	110.8	(NA)	(NA)	(NA)	108.6	(NA)	(NA)	(NA)	106.7	68.2	3.8	34.7

NOTE: Components may not add to totals because of rounding.
NA Not available.
*Preliminary.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION

(Thousands of units)

Period	Total (including farm), private and public			Nonfarm						
	Total	Metropolitan ¹	Nonmetropolitan ¹	Total, private and public			Private			
				Total	Metropolitan ¹	Nonmetropolitan ¹	Total	Metropolitan ¹	Nonmetropolitan ¹	
Annual totals:										
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7	
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2	
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8	
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1	
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2	
First 11 months:										
1963.....	1,543.5	1,073.8	469.5	1,518.3	1,072.2	446.1	1,488.3	1,051.3	436.7	
1964*.....	1,482.5	1,046.3	436.0	1,457.2	1,045.8	411.4	1,426.8	1,027.7	399.1	
1963										
July.....	153.5	106.2	47.3	151.9	106.2	45.7	149.7	104.8	44.9	
August.....	149.9	101.1	48.8	147.5	101.1	46.5	143.9	97.9	46.0	
September.....	148.4	104.2	44.2	145.2	104.1	41.0	143.2	102.8	40.4	
October.....	167.5	117.8	49.7	164.2	117.3	46.9	161.2	115.8	45.3	
November.....	122.3	85.0	37.3	119.7	84.6	35.1	117.9	83.7	34.2	
December.....	97.4	76.8	20.6	95.1	76.8	18.3	93.4	75.2	18.2	
1964										
January.....	100.8	75.0	25.7	99.5	75.0	24.5	98.3	74.6	23.7	
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.2	
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7	
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4	
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6	
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2	
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7	
August.....	144.8	97.1	47.7	142.2	97.1	45.1	139.0	94.9	44.1	
September.....	126.0	90.0	36.0	123.9	89.9	33.9	120.5	87.8	32.7	
October*.....	143.8	99.3	44.5	141.2	99.0	42.3	139.2	98.1	41.2	
November*.....	110.8	76.0	34.9	108.6	75.9	32.7	106.7	75.1	31.5	

NOTE: Components may not add to totals because of rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1964 definitions of standard metropolitan statistical areas (Standard Metropolitan Statistical Areas, 1964, Bureau of Budget); data for 1961-63 based on 1961 definitions, data for 1959-60 on 1959 definitions.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY GEOGRAPHIC REGIONS

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	North-east	North Central	South	West	Total, private and public				Private				
					North-east	North Central	South	West	North-east	North Central	South	West	
Annual totals:													
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2	
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8	
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0	
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0	
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8	
First 10 months:													
1963.....	235.6	289.9	519.6	376.0	235.2	283.4	503.9	375.9	225.4	278.1	495.4	371.4	
1964*.....	220.5	312.1	515.1	324.0	220.4	305.9	498.8	323.8	213.3	299.4	488.2	319.4	
1963													
July.....	23.8	32.2	58.4	39.1	23.8	31.3	57.7	39.0	23.3	30.8	56.8	38.8	
August.....	29.1	34.1	51.4	35.4	29.0	33.1	50.1	35.4	26.7	32.3	49.7	35.2	
September.....	24.1	31.6	58.0	34.6	24.1	31.3	55.1	34.6	24.1	31.1	53.6	34.4	
October.....	29.8	37.9	59.7	40.2	29.8	36.6	57.6	40.2	28.2	35.9	57.0	40.1	
November.....	22.6	26.7	44.9	28.1	22.6	25.9	43.1	28.1	22.5	25.0	42.4	28.0	
December.....	13.1	17.2	35.5	31.7	13.1	17.1	33.2	31.7	12.5	16.8	32.8	31.4	
1964													
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3	
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7	
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9	
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5	
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4	
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0	
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3	
August.....	26.9	33.9	52.3	31.7	26.9	33.0	50.7	31.7	25.6	32.3	49.3	31.7	
September.....	21.9	31.0	46.7	26.5	21.9	30.5	45.0	26.5	20.9	29.9	43.4	26.3	
October*.....	27.7	38.4	53.0	24.7	27.7	37.2	51.8	24.6	27.2	36.7	51.0	24.3	
November*.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	22.0	23.9	38.2	22.6	

NOTE: Components may not add to totals because of rounding. For the States contained in each region, see "Definitions" on page 7. *Preliminary. NA Not available.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS

(Thousands of units)					
Period	U.S. total	Northeast	North Central	South	West
1963					
July.....	1,599	247	310	603	439
August.....	1,475	262	312	516	385
September.....	1,747	250	356	689	452
October.....	1,864	297	415	691	461
November.....	1,577	274	332	598	373
December.....	1,570	202	315	597	456
1964					
January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July.....	1,505	266	317	535	387
September.....	1,457	217	345	549	346
October*	1,599	287	419	613	280
November*	1,420	267	313	539	301

NOTE: For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North-east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
10,000-PLACES SERIES									
Annual totals:									
1959.....	1,208,328	(X)	222	286	356	344	938	76	194
1960.....	998,048	(X)	199	228	284	287	746	65	187
1961.....	1,064,189	(X)	230	226	299	309	723	67	274
1962.....	1,186,601	(X)	243	238	343	363	716	87	384
1963 ¹	1,285,028	(X)	231	254	387	413	705	117	463
12,000-PLACES SERIES									
Annual totals:									
1963.....	1,334,684	(X)	239	269	403	423	750	119	466
Seasonally adjusted annual rates (thousands of units)									
First 11 months:									
1963.....	1,238,595	1,319	236	262	397	423	746	119	454
1964*.....	1,196,441	1,290	241	296	398	355	722	102	466
1963									
July.....	121,850	1,320	224	261	406	429	739	129	452
August.....	115,001	1,286	214	277	383	412	738	107	441
September.....	114,672	1,371	266	264	413	428	764	128	479
October.....	127,771	1,401	254	279	420	448	751	128	522
November.....	98,580	1,359	235	302	424	398	738	128	493
December.....	96,089	1,402	253	271	460	418	715	112	575
1964									
January.....	85,519	1,333	205	332	403	393	742	114	477
February.....	90,012	1,404	251	336	401	416	810	121	473
March.....	119,775	1,377	274	323	411	369	767	101	509
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	118,121	1,242	228	259	391	364	663	104	475
August.....	107,409	1,281	236	304	418	323	701	95	485
September.....	106,704	1,222	240	289	378	315	694	88	440
October*	105,792	1,220	217	305	384	314	689	93	438
November*	89,804	1,257	258	288	408	303	744	106	407

NOTE: For States contained in each region, see "Definitions" on page 7. *Preliminary. (X) Not applicable.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM

Month and year	Implicit seasonal indexes ¹ , U.S. total		Seasonal indexes by region and area				Nonpermit starts, U.S. total
			Starts in permit areas				
	Total	Nonfarm	Northeast	North Central	South	West	
1963							
July.....	113.5	113.4	112.1	123.1	111.4	106.1	121.4
August.....	119.1	118.8	119.4	125.4	110.6	109.8	140.5
September.....	100.6	100.4	116.3	105.6	94.6	91.2	107.2
October.....	105.9	106.0	115.1	109.9	103.5	104.4	100.2
November.....	91.7	91.6	98.7	92.4	85.6	90.3	97.6
December.....	73.1	73.5	74.8	64.1	74.2	82.8	60.2
1964							
January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	118.9	118.5	119.4	125.4	110.6	109.8	140.5
September.....	101.1	101.0	116.3	105.6	94.6	91.2	107.2
October.....	*106.5	*106.6	115.1	109.9	103.5	104.4	100.2
November.....	*92.0	*91.9	98.7	92.4	85.6	90.3	97.6
December.....	(X)	(X)	74.8	64.1	74.2	82.8	60.2

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these nonpermit seasonal indexes have been calculated from nonfarm nonpermit starts which account for about 90 percent of all nonpermit starts. *Preliminary. (X) Not applicable.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE

Year and month	Implicit seasonal indexes ¹ , U.S. total	Northeast			North Central			South			West		
		1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family
1963													
July.....	106.2	122.0	89.7	89.1	123.6	111.1	107.3	106.6	90.8	104.1	107.5	89.5	94.3
August.....	102.7	109.6	94.5	116.3	110.2	108.9	94.6	104.2	91.9	94.1	102.7	88.9	99.2
September.....	105.8	115.4	100.0	96.7	117.1	99.7	120.9	103.1	106.7	110.6	102.5	101.6	91.7
October.....	100.4	109.3	117.2	103.4	108.5	112.2	99.9	98.6	104.5	98.7	96.2	92.0	93.2
November.....	96.6	98.1	96.2	117.8	92.0	100.0	105.4	90.9	109.5	101.2	89.5	88.4	95.7
December.....	82.5	64.8	77.8	116.3	57.5	78.5	75.9	71.2	71.8	100.8	78.4	97.9	92.9
1964													
January.....	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.....	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March.....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April.....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August.....	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September.....	106.8	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October.....	101.3	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.....	*96.6	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.....	(X)	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1

NOTE: These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized. *Preliminary. (X) Not applicable. ¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
BUILDING PERMITS					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
PRIVATE HOUSING STARTS					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. PRIVATE					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

NOTE: Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957. More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the July 1963 report (C20-50). A similar presentation will appear in these reports from time to time.

The following are brief descriptions of the measures used in this report.

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

DEFINITIONS AND DESCRIPTIONS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units it is defined as when the construction contract is awarded. All housing units in a multifamily building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters (such as dormitories and rooming houses) and transient accommodations (such as transient hotels, motels, and tourist courts) and mobile homes (trailers).

The standard Census geographic regions are used in the tables of this report. States contained in each region are as follows: Northeast—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; West—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas. Data for the period beginning with January 1964, on metropolitan-nonmetropolitan distributions, are based on 1963 definitions; data for 1961-1963 are based on 1961 definitions; and data for 1959-1960 are based on 1959 definitions.

Descriptions and Procedures

HOUSING STARTS COMPILATION

Compilation of the housing starts series depends on 4 steps. First, an estimate is prepared of the number of housing units for which building permits

have been issued in all 12,000 permit-issuing places each month. Second, a sample field survey is made of the use of permits. In this survey, a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the permit have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units covered by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. Third, having produced an estimate of the number of units started in each month with permit authorization, an adjustment is next made to take care of units started within permit-issuing areas but without permit authorization.

The final step in the estimates of housing starts is to add an estimate of units started in areas where building permit systems do not exist. This estimate is based upon current monthly surveys in 101 broad areas (counties or groups of counties). In these areas, visits are made to a select group of informed people and a list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Information provided by these sources is next checked by field visit. As a final step, a sample of 315 small land areas is selected, and these small areas are canvassed intensively by the enumerators to find by observation, all units started since the enumerators' last visit a month earlier. On the basis of these findings, estimates are made of the number of units not reported by the informed sources, and these are added to the information from the sources to provide an estimate of total construction in the nonpermit areas.

Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual

DEFINITIONS AND DESCRIPTIONS

construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months or more may pass from the time a permit is issued to the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building-permit systems for which figures are currently given in this report account for a major portion of residential building in the United States. For the country as a whole, about 83 percent of the private housing units were constructed in areas of this permit-issuing universe in 1963.

The series shown in table 6, beginning with 1962, pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building-permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. The report for January 1964 (C20-56) shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building-permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year along with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building-permit data is provided in the Census Bureau's monthly reports on Building Permits (C40 and C42).

SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are, to a considerable extent, based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of 100 that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error; about 95 out of 100 that the difference is less than twice the standard error; and 99 out of 100 that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent. For housing units authorized, it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number

of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II program. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts (C20-50). A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available, upon request, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly owned units.

The seasonally adjusted data are based on 4 years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working-day adjustment for housing starts.

DEFINITIONS AND DESCRIPTIONS

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building-permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment

indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first 4 months of 1960.

SPECIAL SUPPLEMENT

Starts of Apartment Buildings With 5 Or More Housing Units, THIRD QUARTER 1963-THIRD QUARTER 1964

INTRODUCTION

This supplement provides charts of quarterly statistics on selected privately owned apartment houses started in the United States, third quarter 1963-third quarter of 1964. These data which apply only to structures with 5 or more housing units are provided as a quarterly adjunct to the regular monthly reports on housing starts.

During the third quarter of 1964, all buildings with 7 floors or more and practically all of the buildings with 4 to 6 floors had elevators. About 5 percent of the buildings with 3 floors or less, containing 8 percent of the housing units, had elevators. Of apartments in all buildings with 5 or more housing units started during the third quarter 1964, 31 percent were in buildings providing elevator service (Chart 5).

Summary of Findings

About 95 percent of the buildings with 5 or more housing units started in the third quarter 1964 had 1 to 3 floors (Chart 1). However, the 5 percent of the buildings with 4 floors or more accounted for 20 percent of all housing units in the 5 or more housing unit buildings (Chart 2).

Although buildings with 50 housing units or more accounted for only 6 percent of the number of buildings started during the second quarter 1964 (Chart 3), almost 30 percent of the housing units were in these buildings (Chart 4). It is noteworthy that buildings with 100 units or more accounted for 13 percent of all apartment units. Buildings with 20 to 49 units comprised 20 percent of the buildings started but contained 32 percent of the housing units. However, the remaining 74 percent of the buildings, containing 5 to 19 units, accounted for only 39 percent of the housing units.

Description of Survey

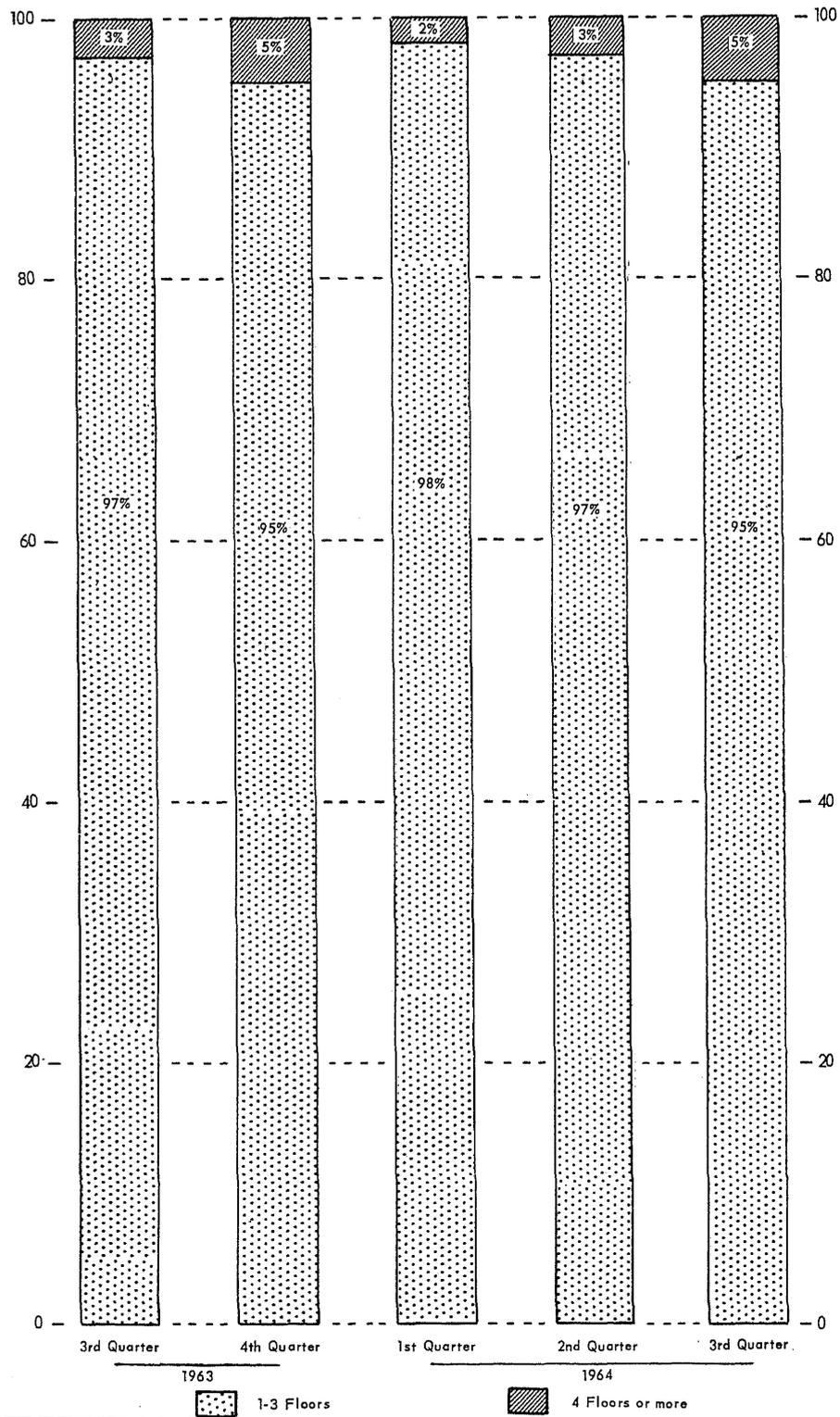
The data relating to housing starts are based on sample surveys conducted each month. The information is obtained from a national probability sample of all housing units on which construction is started. The size of the sample varies from month to month. However, in the third quarter 1964, approximately 1,800 buildings with 5 or more apartments came into the starts survey sample. This sample represents more than 25 percent of all apartment buildings started during the third quarter of 1964.

Because of the method of calculating the data, figures on the actual number of buildings with 5 or more housing units and the number of housing units in those buildings are not now available. Published figures show 133,000 units in buildings with 3 or more housing units which were started in the third quarter of 1964. The great majority of these were in buildings with 5 or more units.

For a more detailed description of the housing starts survey and its limitations, see pages 7-9.

CHART 1

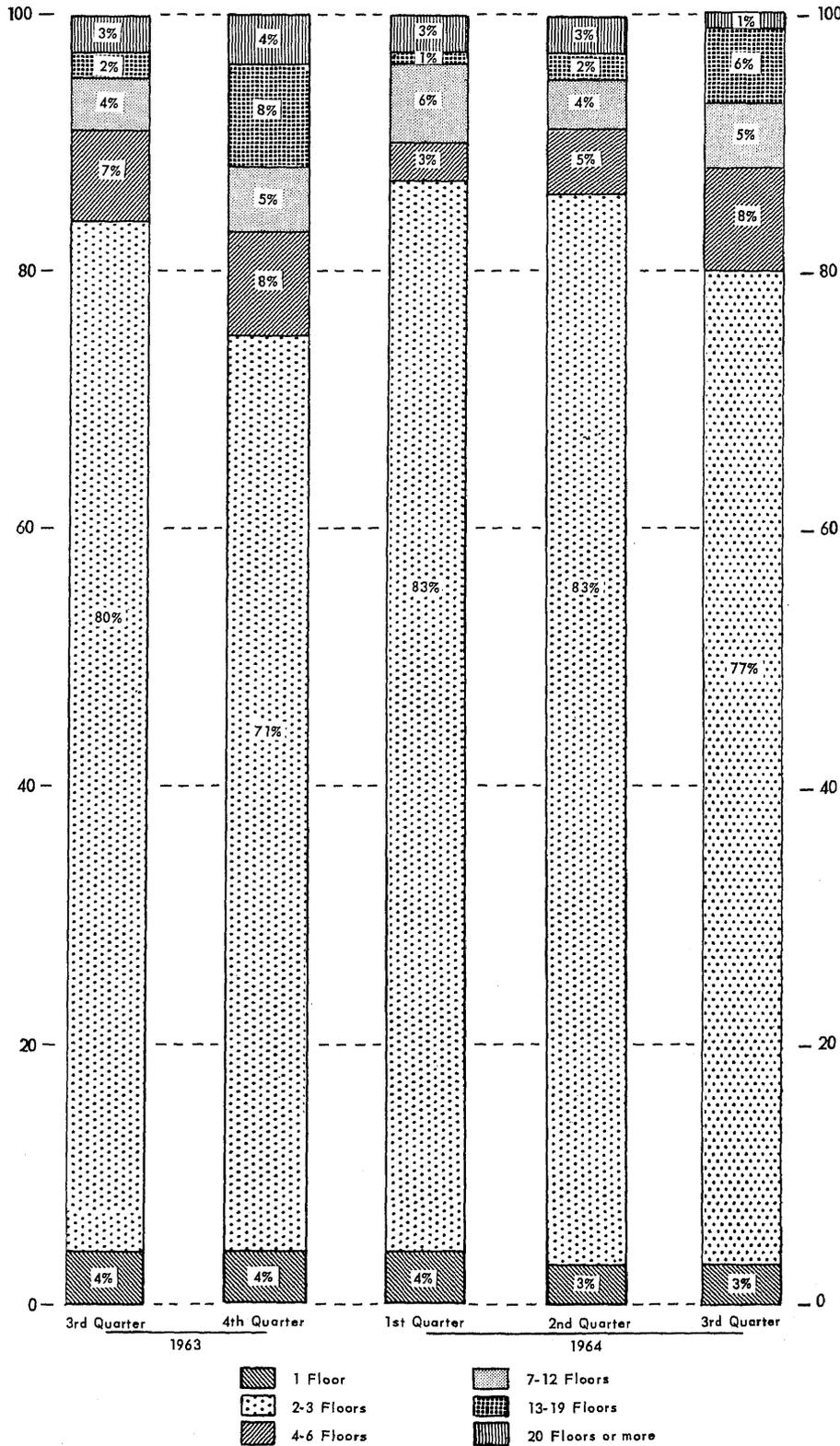
PERCENT DISTRIBUTION OF THE NUMBER OF BUILDINGS WITH FIVE OR MORE HOUSING UNITS STARTED, THIRD QUARTER 1963 - THIRD QUARTER 1964, BY NUMBER OF FLOORS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 2

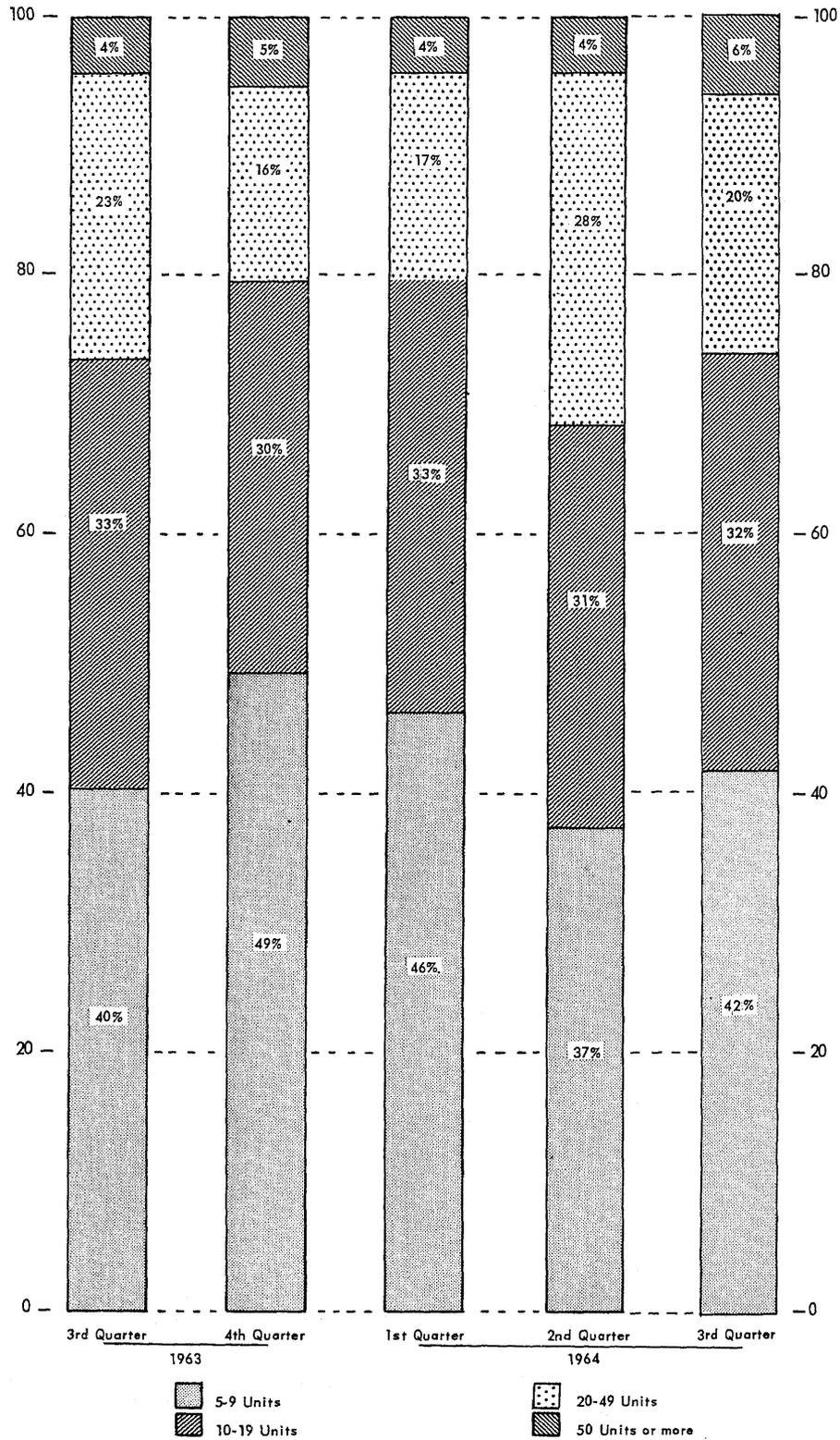
PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH FIVE OR MORE UNITS STARTED
THIRD QUARTER 1963 - THIRD QUARTER 1964, BY NUMBER OF FLOORS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 3

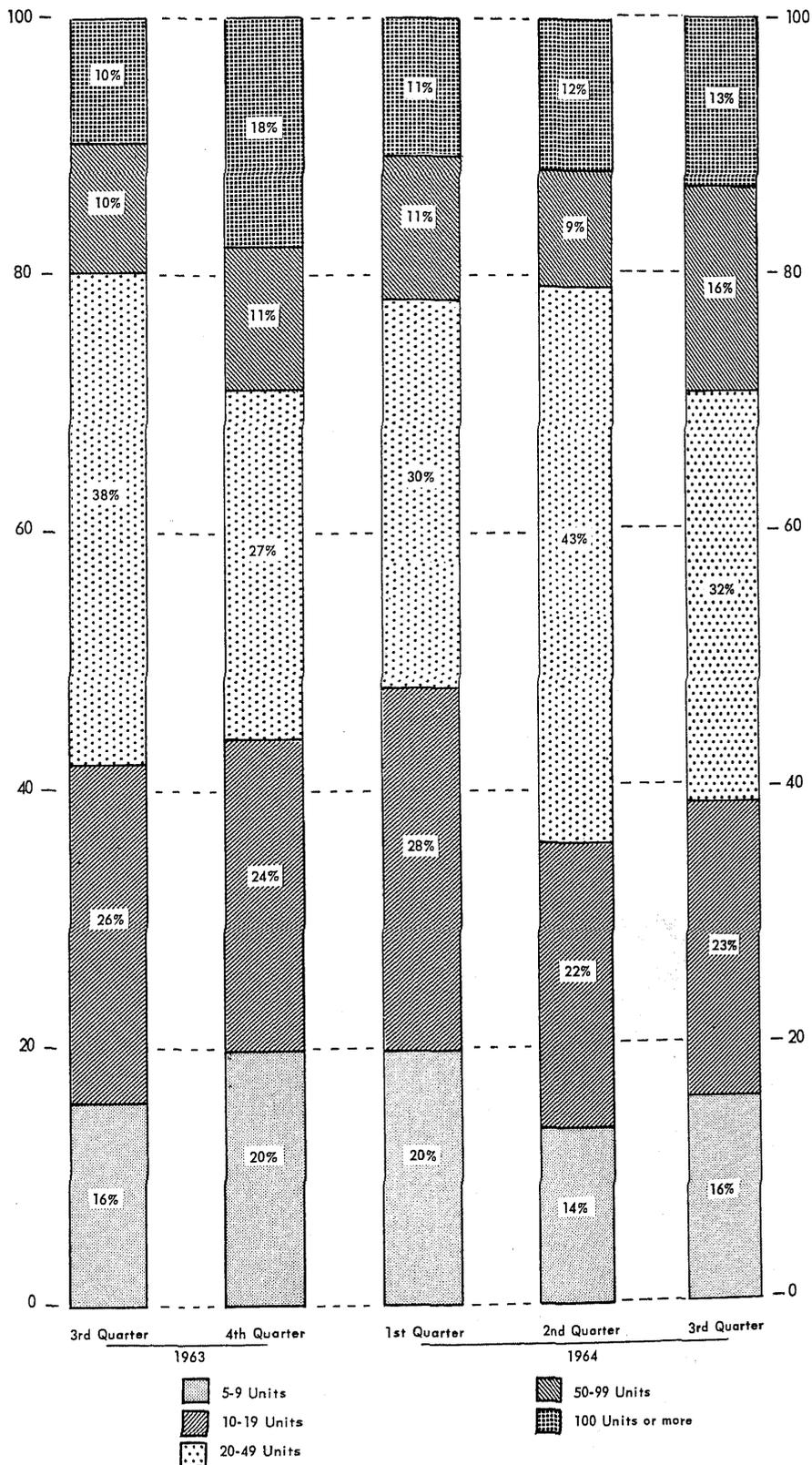
PERCENT DISTRIBUTION OF THE NUMBER OF BUILDINGS WITH FIVE OR MORE HOUSING UNITS STARTED
 THIRD QUARTER 1963 - THIRD QUARTER 1964, BY NUMBER OF HOUSING UNITS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 4

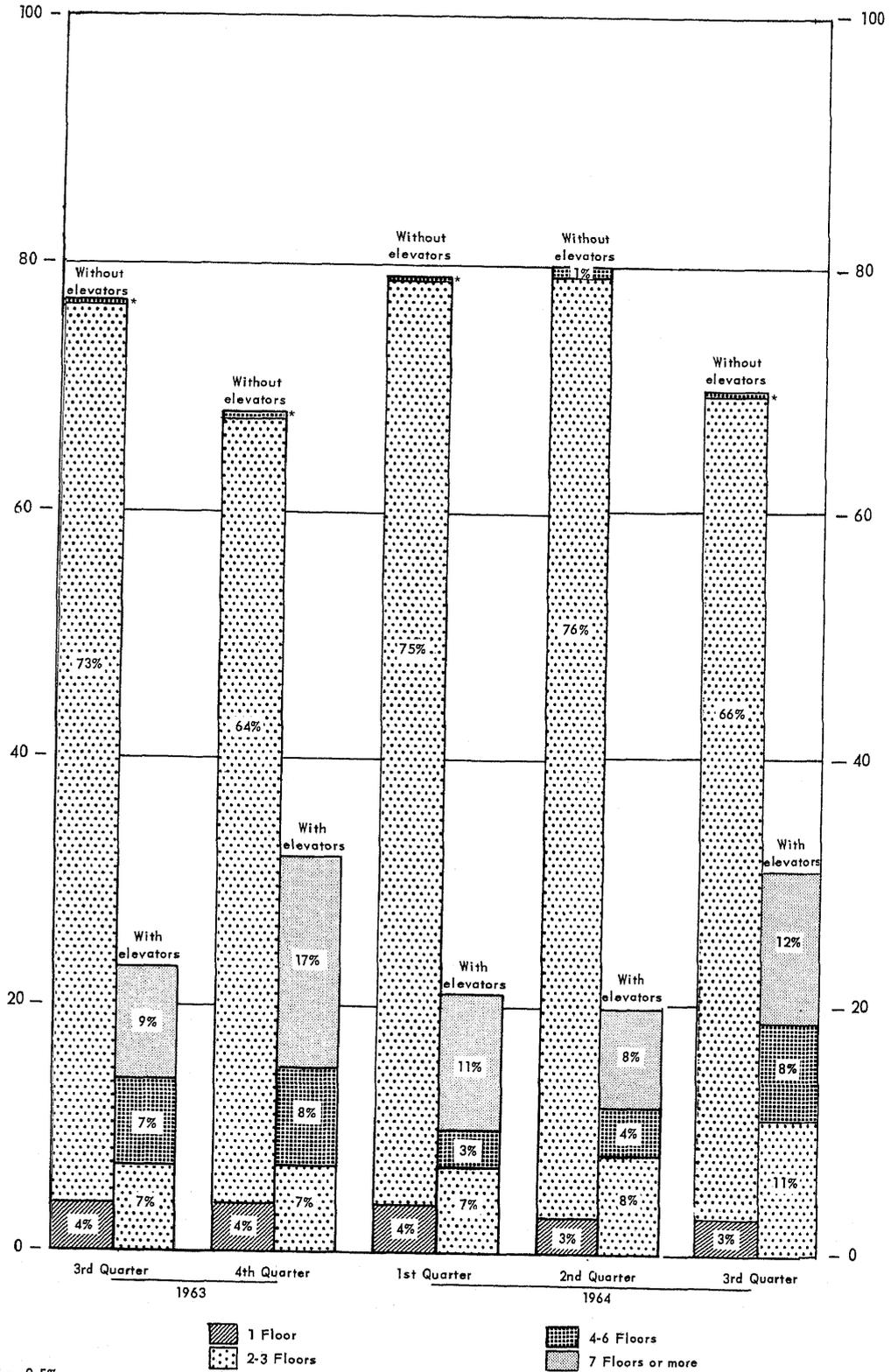
PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH FIVE OR MORE UNITS STARTED THIRD QUARTER 1963 - THIRD QUARTER 1964, BY NUMBER OF HOUSING UNITS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CHART 5

PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDING WITH FIVE OR MORE HOUSING UNITS STARTED THIRD QUARTER 1963 - THIRD QUARTER 1964, BY NUMBER OF FLOORS IN THE BUILDING AND WITH OR WITHOUT ELEVATORS IN THE BUILDING



Source: Bureau of the Census, Department of Commerce, Washington, D.C. 20233.

CONSTRUCTION REPORTS

HOUSING STARTS

ISSUED JANUARY 1965

C20-67

HOUSING STARTS IN DECEMBER 1964 AND SUMMARY FOR YEAR 1964

A total of 1,543,900 new privately owned housing units (nonfarm and farm) were started in 1964. This total was 4 percent below the 1,609,200 new private units started in 1963. The 31,800 publicly owned housing units started in 1964 brought the annual total for all private and public housing starts to 1,575,700 units, compared to the 1963 grand total of 1,640,900 units.

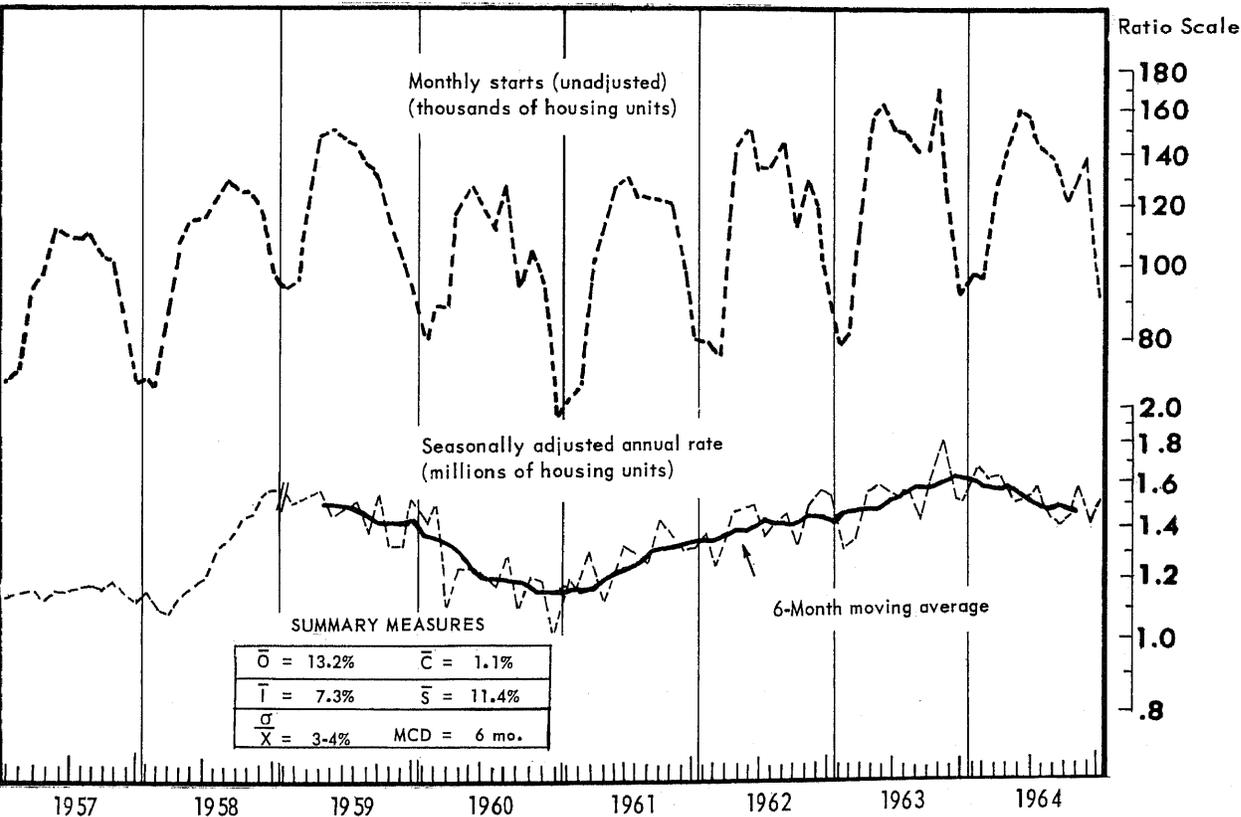
The actual number of private housing units started during December 1964 was 92,100 compared with 95,700 units in December 1963. In addition, some 1,200 publicly owned housing units were started in December 1964, bringing the grand total for the month to 93,300 units.

After adjustment for seasonal variation, total private housing starts rose from November to December 1964 in all regions except the North Central States.

During December 1964, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.541 million units, up 8 percent over the revised November rate of 1.430 million units, but 2 percent below the December 1963 rate of 1.570 million units. Private nonfarm housing starts showed slightly smaller changes than did all private starts.

A total of 1,273,787 new privately owned housing units were authorized in 1964 in the 12,000 places with local building permit systems, a drop of 5 percent from the 1,334,684 units authorized in 1963. In December 1964, these places authorized the construction of 77,342 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,154,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LATEST FIGURES ENTERED ARE PRELIMINARY. FOR EXPLANATION OF THE SUMMARY MEASURES, SEE SECTION ON SAMPLING VARIABILITY AND TABLE 9.

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS

(Thousands of units)

Period	Total (including farm)				Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only		
						Monthly	6-month moving average ¹	
Annual totals:								
1959.....	1,553.5	1,516.8	(X)	1,531.3	1,494.6	(X)	(X)	
1960.....	1,296.0	1,252.1	(X)	1,274.0	1,230.1	(X)	(X)	
1961.....	1,365.0	1,313.0	(X)	1,336.8	1,284.8	(X)	(X)	
1962.....	1,492.4	1,462.8	(X)	1,468.7	1,439.1	(X)	(X)	
1963.....	1,640.9	1,609.2	(X)	1,613.4	1,581.7	(X)	(X)	
1964*.....	1,575.7	1,543.9	(X)	1,548.7	1,516.9	(X)	(X)	
1963								
October.....	167.5	164.5	1,864	164.2	161.2	1,824	1,607	
November.....	122.3	120.5	1,577	119.7	117.9	1,544	1,624	
December.....	97.4	95.7	1,570	95.1	93.4	1,524	1,651	
1964								
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639	
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585	
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579	
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589	
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,555	
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,520	
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,486	
August.....	144.8	141.6	1,430	142.2	139.0	1,408	1,496	
September.....	126.0	122.6	1,457	123.9	120.5	1,433	1,479	
October.....	143.1	141.0	1,591	140.6	138.5	1,559	1,465	
November*.....	111.4	109.4	1,430	109.3	107.3	1,404	(X)	
December*.....	93.3	92.1	1,541	91.4	90.2	1,502	(X)	

NOTE: Components may not add to totals because of rounding. *Preliminary. (X) Not applicable. ¹Centered on the 4th month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm							
					Total, private and public				Private			
	Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more
Annual totals:												
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3
1964*.....	1,575.7	974.2	60.7	540.9	1,548.7	947.2	60.7	540.9	1,516.9	945.9	52.5	518.6
1963												
October.....	167.5	104.3	5.8	57.4	164.2	100.9	5.8	57.4	161.2	100.9	5.1	55.2
November.....	122.3	72.4	4.9	45.0	119.7	69.8	4.9	45.0	117.9	69.7	4.0	44.1
December.....	97.4	50.9	3.5	43.0	95.1	48.6	3.5	43.0	93.4	48.6	3.1	41.7
1964												
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6
August.....	144.8	90.2	5.1	49.5	142.2	87.6	5.1	49.5	139.0	87.6	4.1	47.3
September.....	126.0	79.6	4.5	41.9	123.9	77.4	4.5	41.9	120.5	77.4	3.6	39.5
October.....	143.1	90.6	5.2	47.4	140.6	88.1	5.2	47.4	138.5	87.9	4.6	45.9
November*.....	111.4	69.0	4.7	37.7	109.3	66.9	4.7	37.7	107.3	66.8	3.9	36.6
December*.....	93.3	57.7	3.5	32.2	91.4	55.7	3.5	32.2	90.2	55.6	3.2	31.5

NOTE: Components may not add to totals because of rounding. *Preliminary.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION

Period	(Thousands of units)								
	Total (including farm), private and public			Nonfarm					
				Total, private and public			Private		
Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	
Annual totals:									
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,033.9	440.7
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2
1964*.....	1,575.7	1,113.0	462.7	1,548.7	1,112.5	436.1	1,516.9	1,093.9	423.0
1963									
October.....	167.5	117.8	49.7	164.2	117.3	46.9	161.2	115.8	45.3
November.....	122.3	85.0	37.3	119.7	84.6	35.1	117.9	83.7	34.2
December.....	97.4	76.8	20.6	95.1	76.8	18.3	93.4	75.2	18.2
1964									
January.....	100.8	75.1	25.9	99.5	75.0	24.5	98.3	74.6	23.7
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7
August.....	144.8	97.1	47.7	142.2	97.1	45.1	139.0	94.9	44.1
September.....	126.0	90.0	36.0	123.9	89.9	33.9	120.5	87.8	32.7
October.....	143.1	99.3	43.8	140.6	99.0	41.6	138.5	98.0	40.5
November*.....	111.4	76.1	35.3	109.3	76.1	33.2	107.3	75.3	32.0
December*.....	93.3	66.5	26.8	91.4	66.5	24.9	90.2	66.1	24.1

NOTE: Components may not add to totals because of rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1964 definitions of standard metropolitan statistical areas (Standard Metropolitan Statistical Areas, 1964, Bureau of Budget); data for 1961-63 based on 1961 definitions, data for 1959-60 on 1959 definitions.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY GEOGRAPHIC REGIONS

Period	(Thousands of units)											
	Total (including farm), private and public				Nonfarm							
					Total, private and public				Private			
North- east	North Central	South	West	North- east	North Central	South	West	North- east	North Central	South	West	
Annual totals:												
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8
1964*.....	261.1	352.0	594.6	368.2	260.9	344.6	575.4	368.0	253.0	337.3	563.5	363.2
1963												
October.....	29.8	37.9	59.7	40.2	29.8	36.6	57.6	40.2	28.2	35.9	57.0	40.1
November.....	22.6	26.7	44.9	28.1	22.6	25.9	43.1	28.1	22.5	25.0	42.4	28.0
December.....	13.1	17.2	35.5	31.7	13.1	17.1	33.2	31.7	12.5	16.8	32.8	31.4
1964												
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3
August.....	26.9	33.9	52.3	31.7	26.9	33.0	50.7	31.7	25.6	32.3	49.3	31.9
September.....	21.9	31.0	46.7	26.5	21.9	30.5	45.0	26.5	20.9	29.9	43.4	26.3
October.....	27.5	37.5	53.2	25.0	27.4	36.3	52.0	24.9	26.8	35.8	51.2	34.6
November*.....	20.9	25.8	42.3	22.5	20.9	25.4	40.6	22.5	20.4	24.8	39.7	22.3
December*.....	19.9	15.0	37.0	21.4	19.9	14.2	35.8	21.4	19.7	14.0	35.3	21.2

NOTE: Components may not add to totals because of rounding. For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS

(Thousands of units)					
Period	U.S. total	Northeast	North Central	South	West
1963					
October.....	1,864	297	415	691	461
November.....	1,577	274	332	598	373
December.....	1,570	202	315	597	456
1964					
January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July.....	1,505	266	317	535	387
August.....	1,430	255	312	517	346
September.....	1,457	217	345	549	346
October.....	1,591	283	410	615	283
November*.....	1,430	248	325	560	297
December*.....	1,541	319	279	635	308

NOTE: For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North-east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
10,000-PLACES SERIES									
Annual totals:									
1959.....	1,208,328	(X)	222	286	356	344	938	76	194
1960.....	998,048	(X)	199	228	284	287	746	65	187
1961.....	1,064,189	(X)	230	226	299	309	723	67	274
1962.....	1,186,601	(X)	243	238	343	363	716	87	384
1963.....	1,285,028	(X)	231	254	387	413	705	117	463
12,000-PLACES SERIES									
Annual totals:									
1963.....	1,334,684	(X)	239	269	403	423	750	119	466
1964*.....	1,273,787	(X)	239	288	394	352	716	99	458
Seasonally adjusted annual rates (thousands of units)									
1963									
October.....	127,771	1,401	254	279	420	448	751	128	522
November.....	98,580	1,359	235	302	424	398	738	128	493
December.....	96,089	1,402	253	271	460	418	715	112	575
1964									
January.....	85,519	1,333	205	332	403	393	742	114	477
February.....	90,012	1,404	251	336	401	416	810	121	473
March.....	119,775	1,377	274	323	411	369	767	101	509
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	118,121	1,242	228	259	391	364	663	104	475
August.....	107,409	1,281	236	304	418	323	701	95	485
September.....	106,704	1,222	240	289	378	315	694	88	440
October.....	105,792	1,220	217	305	384	314	689	93	438
November.....	89,808	1,258	241	302	410	305	741	97	420
December*.....	77,342	1,154	249	252	359	294	720	74	360

NOTE: For States contained in each region, see "Definitions" on page 7. *Preliminary. (X) Not applicable.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM

Month and year	Implicit seasonal indexes ¹ , U.S. total		Seasonal indexes by region and area				Nonpermit starts, U.S. total
	Total	Nonfarm	Starts in permit areas				
			Northeast	North Central	South	West	
1963							
July.....	113.5	113.4	112.1	123.1	111.4	106.1	121.4
August.....	119.1	118.8	119.4	125.4	110.6	109.8	140.5
September.....	100.6	100.4	116.3	105.6	94.6	91.2	107.2
October.....	105.9	106.0	115.1	109.9	103.5	104.4	100.2
November.....	91.7	91.6	98.7	92.4	85.6	90.3	97.6
December.....	73.1	73.5	74.8	64.1	74.2	82.8	60.2
1964							
January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	118.9	118.5	119.4	125.4	110.6	109.8	140.5
September.....	101.1	101.0	116.3	105.6	94.6	91.2	107.2
October.....	106.4	106.6	115.1	109.9	103.5	104.4	100.2
November.....	*91.8	*91.7	98.7	92.4	85.6	90.3	97.6
December.....	*71.8	*72.1	74.8	64.1	74.2	82.8	60.2

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these nonpermit seasonal indexes have been calculated from nonfarm non-permit starts which account for about 90 percent of all nonpermit starts. *Preliminary.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE

Year and month	Implicit seasonal indexes ¹ , U.S. total	Northeast			North Central			South			West		
		1- family	2-4 family	5 or more family	1- family	2-4 family	5 or more family	1- family	2-4 family	5 or more family	1- family	2-4 family	5 or more family
		1963											
July.....	106.2	122.0	89.7	89.1	123.6	111.1	107.3	106.6	90.8	104.1	107.5	89.5	94.3
August.....	102.7	109.6	94.5	116.3	110.2	108.9	94.6	104.2	91.9	94.1	102.7	88.9	99.2
September.....	105.8	115.4	100.0	96.7	117.1	99.7	120.9	103.1	106.7	110.6	102.5	101.6	91.7
October.....	100.4	109.3	117.2	103.4	108.5	112.2	99.9	98.6	104.5	98.7	96.2	92.0	93.2
November.....	96.6	98.1	96.2	117.8	92.0	100.0	105.4	90.9	109.5	101.2	89.5	88.4	95.7
December.....	82.5	64.8	77.8	116.3	57.5	78.5	75.9	71.2	71.8	100.8	78.4	97.9	92.9
1964													
January.....	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.....	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March.....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April.....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August.....	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September.....	106.8	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October.....	101.3	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.....	96.5	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.....	*78.3	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1

NOTE: These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized. *Preliminary. ¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
BUILDING PERMITS					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
PRIVATE HOUSING STARTS					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. PRIVATE					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

NOTE: Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957. More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the July 1963 report (C20-50). A similar presentation will appear in these reports from time to time.

The following are brief descriptions of the measures used in this report.

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

DEFINITIONS AND DESCRIPTIONS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units it is defined as when the construction contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters (such as dormitories and rooming houses) and transient accommodations (such as transient hotels, motels, and tourist courts) and mobile homes (trailers).

The standard Census geographic regions are used in the tables of this report. States contained in each region are as follows: Northeast—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; West—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas. Data for the period beginning with January 1964, on metropolitan-nonmetropolitan distributions, are based on 1963 definitions; data for 1961-1963 are based on 1961 definitions; and data for 1959-1960 are based on 1959 definitions.

Descriptions and Procedures

HOUSING STARTS COMPILATION

Compilation of the housing starts series depends on 4 steps. First, an estimate is prepared of the number of housing units for which building permits

have been issued in all 12,000 permit-issuing places each month. Second, a sample field survey is made of the use of permits. In this survey, a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the permit have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units covered by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. Third, having produced an estimate of the number of units started in each month with permit authorization, an adjustment is next made to take care of units started within permit-issuing areas but without permit authorization.

The final step in the estimates of housing starts is to add an estimate of units started in areas where building permit systems do not exist. This estimate is based upon current monthly surveys in 101 broad areas (counties or groups of counties). In these areas, visits are made to a select group of informed people and a list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Information provided by these sources is next checked by field visit. As a final step, a sample of 315 small land areas is selected, and these small areas are canvassed intensively by the enumerators to find by observation, all units started since the enumerators' last visit a month earlier. On the basis of these findings, estimates are made of the number of units not reported by the informed sources, and these are added to the information from the sources to provide an estimate of total construction in the nonpermit areas.

Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual

DEFINITIONS AND DESCRIPTIONS

construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months or more may pass from the time a permit is issued to the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building-permit systems for which figures are currently given in this report account for a major portion of residential building in the United States. For the country as a whole, about 83 percent of the private housing units were constructed in areas of this permit-issuing universe in 1963.

The series shown in table 6, beginning with 1962, pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building-permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. The report for January 1964 (C20-56) shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building-permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year along with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building-permit data is provided in the Census Bureau's monthly reports on Building Permits (C40 and C42).

SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are, to a considerable extent, based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of 100 that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error; about 95 out of 100 that the difference is less than twice the standard error; and 99 out of 100 that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{s}{x}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent. For housing units authorized, it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{s}{x}$ is the relative standard error of the total number

of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II program. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts (C20-50). A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available, upon request, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly owned units.

The seasonally adjusted data are based on 4 years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working-day adjustment for housing starts.

DEFINITIONS AND DESCRIPTIONS

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building-permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment

indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first 4 months of 1960.

CONSTRUCTION REPORTS

HOUSING STARTS

ISSUED FEBRUARY 1965

C20-68

HOUSING STARTS IN JANUARY 1965

During January 1965, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.487 million units, down 7 percent from the revised December 1964 rate of 1.596 million and 13 percent below the January 1964 rate of 1.718 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

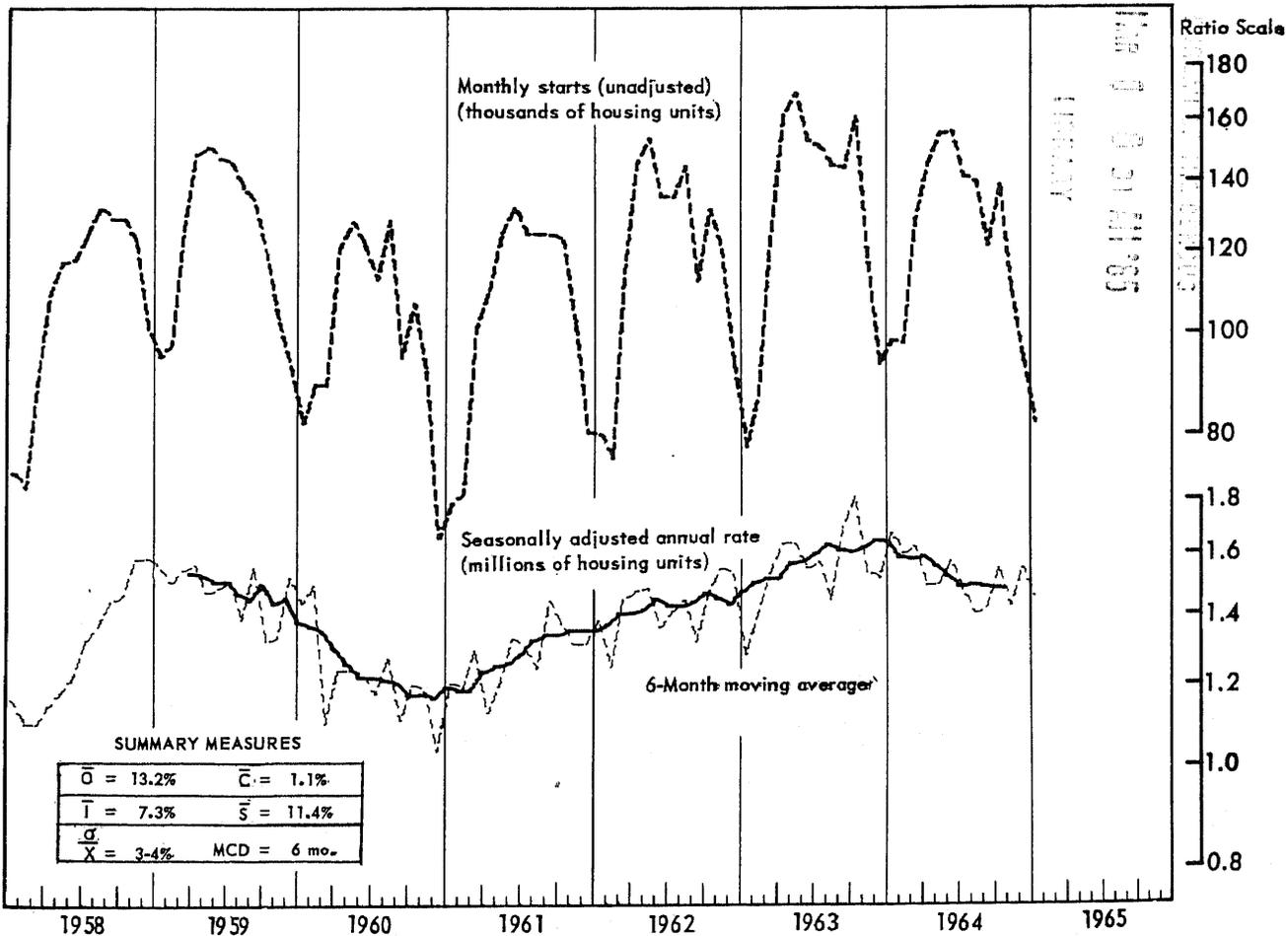
The actual number of private housing units started during January 1965 was 82,400 compared with 95,400 in December 1964 and 99,600 units in January 1964. In addition, some 4,000 publicly owned housing units were

started in January 1965, bringing the grand total for the month up to 86,400 units.

After adjustment for seasonal variation, regional changes in private housing starts from December 1964 to January 1965 were mixed.

A total of 74,031 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,317,000 units, were authorized by the 12,000 permit-issuing jurisdictions in January 1965. This rate was 12 percent higher than the revised December 1964 rate of 1,173,000 units and only slightly below the January 1964 rate of 1,333,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LATEST FIGURES ENTERED ARE PRELIMINARY. FOR EXPLANATION OF THE SUMMARY MEASURES, SEE SECTION ON SAMPLING VARIABILITY AND TABLE 9.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402
Price 10 cents. Annual subscription \$1.00.

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS

(Thousands of units)

Period	Total (including farm)			Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only	
						Monthly	6-month moving average ¹
Annual totals:							
1959.....	1,553.5	1,516.8	(X)	1,531.3	1,494.6	(X)	(X)
1960.....	1,296.0	1,252.1	(X)	1,274.0	1,230.1	(X)	(X)
1961.....	1,365.0	1,313.0	(X)	1,336.8	1,284.8	(X)	(X)
1962.....	1,492.4	1,462.8	(X)	1,468.7	1,439.1	(X)	(X)
1963.....	1,640.9	1,609.2	(X)	1,613.4	1,581.7	(X)	(X)
1964*.....	1,581.8	1,549.2	(X)	1,554.8	1,522.2	(X)	(X)
1964							
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,555
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,520
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,486
August.....	144.8	141.6	1,430	142.2	139.0	1,408	1,496
September.....	126.0	122.6	1,457	123.9	120.5	1,433	1,483
October.....	143.1	141.0	1,591	140.6	138.5	1,559	1,479
November.....	113.8	111.4	1,455	111.6	109.2	1,429	1,474
December*.....	97.0	95.4	1,596	95.2	93.6	1,559	(X)
1965							
January*.....	86.4	82.4	1,487	85.2	81.2	1,457	(X)

NOTE: Components may not add to totals because of rounding. *Preliminary. (X) Not applicable. ¹Centered on the 4th month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	Total	1-family	2-family	3-family or more	Total, private and public				Private				
					Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more	
Annual totals:													
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0	
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6	
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	90.0	326.1	1,284.8	946.4	44.0	294.6	
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4	
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3	
1964*.....	1,581.8	975.8	61.0	545.0	1,554.8	948.9	61.0	544.9	1,522.2	947.5	52.7	522.0	
1964													
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0	
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9	
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1	
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4	
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5	
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3	
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6	
August.....	144.8	90.2	5.1	49.5	142.2	87.6	5.1	49.5	139.0	87.6	4.1	47.3	
September.....	126.0	79.6	4.5	41.9	123.9	77.4	4.5	41.9	120.5	77.4	3.6	39.5	
October.....	143.1	90.6	5.2	47.4	140.6	88.1	5.2	47.4	138.5	87.9	4.6	45.9	
November.....	113.8	69.7	4.8	39.3	111.6	67.5	4.8	39.2	109.2	67.4	4.0	37.8	
December*.....	97.0	58.6	3.7	34.7	95.2	56.8	3.7	34.7	93.6	56.6	3.3	33.7	
1965													
January*.....	86.4	54.0	3.0	29.5	85.2	52.8	3.0	29.5	81.2	52.7	2.6	25.9	

NOTE: Components may not add to totals because of rounding. *Preliminary.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION

(Thousands of units)

Period	Total (including farm), private and public			Nonfarm						
				Total, private and public			Private			
	Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	
Annual totals:										
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7	
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2	
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8	
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1	
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2	
1964*.....	1,581.8	1,116.5	465.3	1,554.8	1,116.0	438.7	1,522.2	1,096.8	425.3	
1964										
January.....	100.8	75.1	25.9	99.5	75.0	24.5	98.3	74.6	23.7	
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3	
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7	
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4	
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6	
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2	
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7	
August.....	144.8	97.1	47.7	142.2	97.1	45.1	139.0	94.9	44.1	
September.....	126.0	90.0	36.0	123.9	89.9	33.9	120.5	87.8	32.7	
October.....	143.1	99.3	43.8	140.6	99.0	41.6	138.5	98.0	40.5	
November.....	113.8	77.1	36.7	111.6	77.1	34.5	109.2	75.9	33.3	
December*.....	97.0	69.0	28.0	95.2	69.0	26.2	93.6	68.4	25.1	
1965										
January*.....	86.4	59.7	26.8	85.2	59.7	25.6	81.2	56.2	25.1	

NOTE: Components may not add to totals because of rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1964 definitions of standard metropolitan statistical areas (Standard Metropolitan Statistical Areas, 1964, Bureau of Budget); data for 1961-63 based on 1961 definitions, data for 1959-60 on 1959 definitions.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY GEOGRAPHIC REGIONS

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm							
					Total, private and public				Private			
	North- east	North Central	South	West	North- east	North Central	South	West	North- east	North Central	South	West
Annual totals:												
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8
1964*.....	263.1	354.0	596.2	368.5	262.9	346.8	577.1	368.3	254.9	339.4	565.1	363.1
1964												
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3
August.....	26.9	33.9	52.3	31.7	26.9	33.0	50.7	31.7	25.6	32.3	49.3	31.7
September.....	21.9	31.0	46.7	26.5	21.9	30.5	45.0	26.5	20.9	29.9	43.4	26.3
October.....	27.5	37.5	53.2	25.0	27.4	36.3	52.0	24.9	26.8	35.8	51.2	24.6
November.....	21.8	26.9	42.3	22.7	21.8	26.6	40.6	22.7	21.1	26.0	39.7	22.4
December*.....	21.0	15.9	38.6	21.5	21.0	15.2	37.5	21.5	20.9	14.9	36.9	21.0
1965												
January*.....	8.7	12.7	44.2	20.8	8.7	12.7	43.0	20.8	6.5	12.5	41.7	20.5

NOTE: Components may not add to totals because of rounding. For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS

(Thousands of units)

Period	U.S. total	Northeast	North Central	South	West
1964					
January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July.....	1,505	266	317	535	387
August.....	1,430	255	312	517	346
September.....	1,457	217	345	549	346
October.....	1,591	283	410	615	283
November.....	1,455	257	340	560	298
December*.....	1,596	337	294	659	306
1965					
January*.....	1,487	169	295	756	267

NOTE: For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North-east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
Unadjusted totals (thousands of units)									
10,000-PLACES SERIES									
Annual totals:									
1959.....	1,208,328	(X)	222	286	356	344	938	76	194
1960.....	998,048	(X)	199	228	284	287	746	65	187
1961.....	1,064,189	(X)	230	226	299	309	723	67	274
1962.....	1,186,601	(X)	243	238	343	363	716	87	384
1963.....	1,285,028	(X)	231	254	387	413	705	117	463
12,000-PLACES SERIES									
Annual totals:									
1963.....	1,334,684	(X)	239	269	403	423	750	119	466
1964*.....	1,275,540	(X)	241	294	396	350	722	99	460
Seasonally adjusted annual rates (thousands of units)									
1964									
January.....	85,519	1,333	205	332	403	393	742	114	477
February.....	90,012	1,404	251	336	401	416	810	121	473
March.....	119,775	1,377	274	323	411	369	767	101	509
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	118,121	1,242	228	259	391	364	663	104	475
August.....	107,409	1,281	236	304	418	323	701	95	485
September.....	106,704	1,222	240	289	378	315	694	88	440
October.....	105,792	1,220	217	305	384	314	689	93	438
November.....	89,808	1,258	241	302	410	305	741	97	420
December.....	79,095	1,173	257	258	365	293	718	76	379
1965									
January*.....	74,031	1,317	247	388	408	274	768	94	455

NOTE: For States contained in each region, see "Definitions" on page 7. *Preliminary. (X) Not applicable.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM

Month and year	Implicit seasonal indexes ¹ , U.S. total		Seasonal indexes by region and area				Nonpermit starts, U.S. total
			Starts in permit areas				
	Total	Nonfarm	Northeast	North Central	South	West	
1964							
January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	118.9	118.5	119.4	125.4	110.6	109.8	140.5
September.....	101.1	101.0	116.3	105.6	94.6	91.2	107.2
October.....	106.4	106.6	115.1	109.9	103.5	104.4	100.2
November.....	91.8	91.7	98.7	92.4	85.6	90.3	97.6
December.....	*71.8	*72.0	74.8	64.1	74.2	82.8	60.2
1965							
January.....	*66.5	*66.9	46.5	51.2	85.0	92.5	49.6
February.....	(NA)	(NA)	50.9	52.5	87.3	87.1	70.5
March.....	(NA)	(NA)	78.2	77.4	112.7	107.2	83.0
April.....	(NA)	(NA)	131.7	130.1	107.8	109.8	114.2
May.....	(NA)	(NA)	125.6	135.9	118.5	111.5	133.3
June.....	(NA)	(NA)	130.6	132.4	108.3	107.6	120.7

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these nonpermit seasonal indexes have been calculated from nonfarm nonpermit starts which account for about 90 percent of all nonpermit starts. *Preliminary. (NA) Not available.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE

Year and month	Implicit seasonal indexes ¹ U.S. total	Northeast			North Central			South			West		
		1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family
		1964											
January.....	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.....	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March.....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April.....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August.....	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September.....	106.8	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October.....	101.3	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.....	96.5	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.....	78.8	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1
1965													
January.....	*71.4	47.5	61.9	57.9	40.2	59.9	68.6	82.5	102.8	93.3	87.9	102.2	100.8
February.....	(NA)	48.7	81.3	92.9	57.8	68.6	73.6	96.8	100.6	85.1	97.9	99.4	102.4
March.....	(NA)	95.0	131.5	90.0	96.6	103.1	96.2	111.7	109.3	99.3	103.2	113.9	102.9
April.....	(NA)	129.6	131.2	126.7	133.9	131.7	100.5	114.7	107.1	103.3	112.6	114.2	110.4
May.....	(NA)	131.6	116.5	96.1	131.5	116.9	126.1	113.8	105.8	109.1	112.5	103.0	117.8
June.....	(NA)	128.5	102.4	95.1	131.0	107.9	129.2	105.9	96.9	99.4	109.8	109.8	97.7

NOTE: These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized. *Preliminary. (NA) Not available. ¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

Item	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
BUILDING PERMITS					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
PRIVATE HOUSING STARTS					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. PRIVATE					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

NOTE: Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957. More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the July 1963 report (C20-50). A similar presentation will appear in these reports from time to time.

The following are brief descriptions of the measures used in this report.

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

DEFINITIONS AND DESCRIPTIONS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units it is defined as when the construction contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters (such as dormitories and rooming houses) and transient accommodations (such as transient hotels, motels, and tourist courts) and mobile homes (trailers).

The standard Census geographic regions are used in the tables of this report. States contained in each region are as follows: Northeast—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; West—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas. Data for the period beginning with January 1964, on metropolitan-nonmetropolitan distributions, are based on 1964 definitions; data for 1961-1963 are based on 1961 definitions; and data for 1959-1960 are based on 1959 definitions.

Descriptions and Procedures

HOUSING STARTS COMPILATION

Compilation of the housing starts series depends on 4 steps. First, an estimate is prepared of the number of housing units for which building permits

have been issued in all 12,000 permit-issuing places each month. Second, a sample field survey is made of the use of permits. In this survey, a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the permit have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units covered by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. Third, having produced an estimate of the number of units started in each month with permit authorization, an adjustment is next made to take care of units started within permit-issuing areas but without permit authorization.

The final step in the estimates of housing starts is to add an estimate of units started in areas where building permit systems do not exist. This estimate is based upon current monthly surveys in 95 broad areas (counties or groups of counties). In these areas, visits are made to a select group of informed people and a list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Information provided by these sources is next checked by field visit. As a final step, a sample of 315 small land areas is selected, and these small areas are canvassed intensively by the enumerators to find by observation, all units started since the enumerators' last visit a month earlier. On the basis of these findings, estimates are made of the number of units not reported by the informed sources, and these are added to the information from the sources to provide an estimate of total construction in the nonpermit areas.

Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual

DEFINITIONS AND DESCRIPTIONS

construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months or more may pass from the time a permit is issued to the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building-permit systems for which figures are currently given in this report account for a major portion of residential building in the United States. For the country as a whole, about 83 percent of the private housing units were constructed in areas of this permit-issuing universe in 1963.

The series shown in table 6, beginning with 1962, pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building-permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. The report for January 1964 (C20-56) shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building-permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year along with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building-permit data is provided in the Census Bureau's monthly reports on Building Permits (C40 and C42).

SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are, to a considerable extent, based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of 100 that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error; about 95 out of 100 that the difference is less than twice the standard error; and 99 out of 100 that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent. For housing units authorized, it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number

of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II program. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts (C20-50). A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available, upon request, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly owned units.

The seasonally adjusted data are based on 4 years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be reviewed if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working-day adjustment for housing starts.

DEFINITIONS AND DESCRIPTIONS

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building-permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment

indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first 4 months of 1960.

CONSTRUCTION REPORTS
HOUSING STARTS

BUREAU OF THE CENSUS

ISSUED MARCH 1965

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C20-65-2

HOUSING STARTS IN FEBRUARY 1965

During February 1965, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.422 million units, down 3 percent from the revised January 1965 rate of 1.466 million and 14 percent below the February 1964 rate of 1.657 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

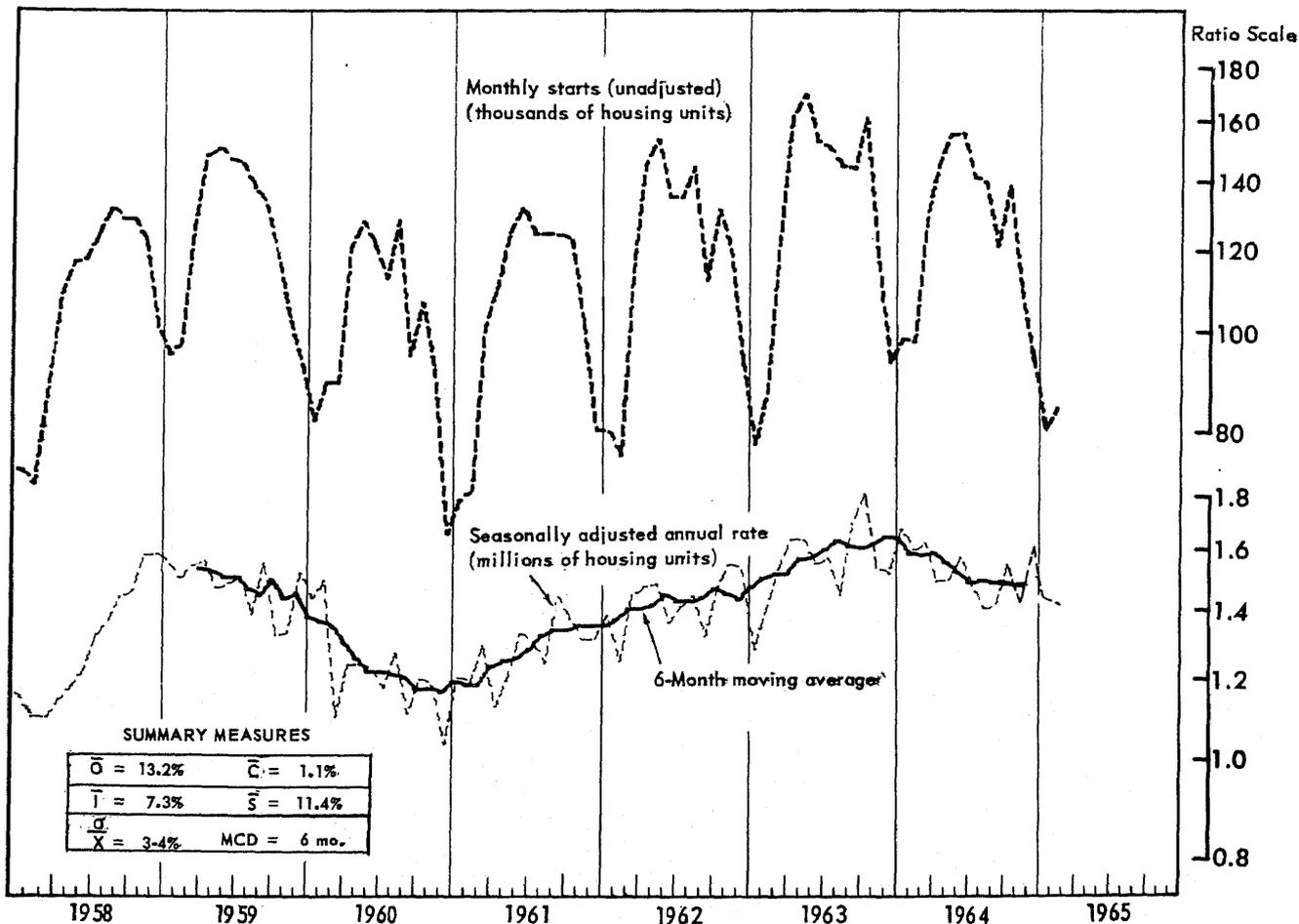
The actual number of private housing units started during February 1965 was 85,300 compared with 81,800 in January 1965, and 100,300 units in February 1964. In addition, some 2,200 publicly owned housing units were

started in February 1965, bringing the grand total for the month up to 87,500 units.

After adjustment for seasonal variation, regional changes in private housing starts from January to February 1965 were mixed.

A total of 77,109 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,272,000 units, were authorized by the 12,000 permit-issuing jurisdictions in February 1965. This annual rate was 3 percent below the revised January 1965 rate of 1,312,000 units and 9 percent below the February 1964 rate of 1,404,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LATEST FIGURES ENTERED ARE PRELIMINARY. FOR EXPLANATION OF THE SUMMARY MEASURES, SEE SECTION ON SAMPLING VARIABILITY AND TABLE 9.

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS

(Thousands of units)

Period	Total (including farm)			Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only	
						Monthly	6-month moving average ¹
Annual totals:							
1959.....	1,553.5	1,516.8	(X)	1,531.3	1,494.6	(X)	(X)
1960.....	1,296.0	1,252.1	(X)	1,274.0	1,230.1	(X)	(X)
1961.....	1,365.0	1,313.0	(X)	1,336.8	1,284.8	(X)	(X)
1962.....	1,492.4	1,462.8	(X)	1,468.7	1,439.1	(X)	(X)
1963.....	1,640.9	1,609.2	(X)	1,613.4	1,581.7	(X)	(X)
1964*.....	1,584.9	1,552.3	(X)	1,557.8	1,525.2	(X)	(X)
First 2 months:							
1964.....	201.9	199.9	1,688	198.0	196.0	1,651	(X)
1965*.....	173.4	167.1	1,444	171.4	165.1	1,422	(X)
1964							
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,555
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,520
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,486
August.....	144.8	141.6	1,430	142.2	139.0	1,408	1,496
September.....	126.0	122.6	1,457	123.9	120.5	1,433	1,483
October.....	143.1	141.0	1,591	140.6	138.5	1,559	1,487
November.....	113.8	111.4	1,455	111.6	109.2	1,429	1,479
December.....	100.1	98.5	1,646	98.2	96.6	1,609	1,479
1965							
January*.....	85.9	81.8	1,466	84.6	80.5	1,434	(X)
February*.....	87.5	85.3	1,422	86.8	84.6	1,409	(X)

NOTE: Components may not add to totals because of rounding. *Preliminary. (X) Not applicable. ¹Centered on the 4th month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm							
					Total, private and public				Private			
	Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more
Annual totals:												
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3
1964*.....	1,584.9	976.9	61.2	546.9	1,557.8	949.9	61.2	546.8	1,525.2	948.6	52.8	523.8
First 2 months:												
1964.....	201.9	119.0	9.0	73.8	198.0	115.2	9.0	73.8	196.0	114.9	8.3	72.9
1965*.....	173.4	106.3	6.6	60.5	171.4	104.2	6.6	60.5	165.1	104.0	5.5	55.6
1964												
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6
August.....	144.8	90.2	5.1	49.5	142.2	87.6	5.1	49.5	139.0	87.6	4.1	47.3
September.....	126.0	79.6	4.5	41.9	123.9	77.4	4.5	41.9	120.5	77.4	3.6	39.5
October.....	143.1	90.6	5.2	47.4	140.6	88.1	5.2	47.4	138.5	87.9	4.6	45.9
November.....	113.8	69.7	4.8	39.3	111.6	67.5	4.8	39.2	109.2	67.4	4.0	37.8
December.....	100.1	59.7	3.9	36.6	98.2	57.8	3.9	36.6	96.6	57.7	3.4	35.5
1965												
January*.....	85.9	53.0	3.1	29.8	84.6	51.6	3.1	29.8	80.5	51.5	2.8	26.2
February*.....	87.5	53.3	3.5	30.7	86.8	52.6	3.5	30.7	84.6	52.5	2.7	29.4

NOTE: Components may not add to totals because of rounding. *Preliminary.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION

(Thousands of units)

Period	Total (including farm), private and public			Nonfarm						
	Total	Metropolitan ¹	Nonmetropolitan ¹	Total, private and public			Private			
				Total	Metropolitan ¹	Nonmetropolitan ¹	Total	Metropolitan ¹	Nonmetropolitan ¹	
Annual totals:										
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7	
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2	
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8	
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1	
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2	
1964*.....	1,584.9	1,119.9	465.0	1,557.8	1,119.4	438.4	1,525.2	1,100.1	425.1	
First 2 months:										
1964.....	201.9	148.9	53.2	198.0	148.8	49.2	196.0	148.0	48.0	
1965*.....	173.4	124.9	48.5	171.4	124.9	46.5	165.1	120.1	45.0	
1964										
January.....	100.8	75.1	25.9	99.5	75.0	24.5	98.3	74.6	23.7	
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3	
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7	
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4	
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6	
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2	
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7	
August.....	144.8	97.1	47.7	142.2	97.1	45.1	139.0	94.9	44.1	
September.....	126.0	90.0	36.0	123.9	89.9	33.9	120.5	87.8	32.7	
October.....	143.1	99.3	43.8	140.6	99.0	41.6	138.5	98.0	40.5	
November.....	113.8	77.1	36.7	111.6	77.1	34.5	109.2	75.9	33.3	
December.....	100.1	72.4	27.7	98.2	72.4	25.9	96.6	71.7	24.9	
1965										
January*.....	85.9	59.8	26.1	84.6	59.8	24.8	80.5	56.2	24.3	
February*.....	87.5	65.1	22.4	86.8	65.1	21.7	84.6	63.9	20.7	

NOTE: Components may not add to totals because of rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1964 definitions of standard metropolitan statistical areas (Standard Metropolitan Statistical Areas, 1964, Bureau of Budget); data for 1961-63 based on 1961 definitions, data for 1959-60 on 1959 definitions.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY GEOGRAPHIC REGIONS

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	North-east	North Central	South	West	Total, private and public				Private				
					North-east	North Central	South	West	North-east	North Central	South	West	
Annual totals:													
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2	
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8	
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0	
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0	
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8	
1964*.....	263.5	354.4	597.7	369.3	263.3	347.2	578.5	369.1	255.3	339.8	566.5	363.8	
First 2 months:													
1964.....	16.7	33.3	82.5	69.4	16.7	32.8	79.2	69.4	16.0	32.5	78.6	69.0	
1965*.....	20.3	22.6	85.3	45.1	20.3	22.4	83.5	45.1	17.8	22.1	81.3	43.8	
1964													
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3	
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7	
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9	
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5	
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4	
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0	
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3	
August.....	26.9	33.9	52.3	31.7	26.9	33.0	50.7	31.7	25.6	32.3	49.3	31.7	
September.....	21.9	31.0	46.7	26.5	21.9	30.5	45.0	26.5	20.9	29.9	43.4	26.3	
October.....	27.5	37.5	53.2	25.0	27.4	36.3	52.0	24.9	26.8	35.8	51.2	24.6	
November.....	21.8	26.9	42.3	22.7	21.8	26.6	40.6	22.7	21.1	26.0	39.7	22.4	
December.....	21.4	16.3	40.1	22.3	21.4	15.6	38.9	22.3	21.3	15.3	38.3	21.7	
1965													
January*.....	8.2	11.6	45.0	21.1	8.2	11.6	43.7	21.1	6.0	11.4	42.4	20.6	
February*.....	12.1	11.0	40.3	24.0	12.1	10.8	39.8	24.0	11.8	10.7	38.9	23.2	

NOTE: Components may not add to totals because of rounding. For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS
(Thousands of units)

Period	U.S. total	Northeast	North Central	South	West
1964					
January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July.....	1,505	266	317	535	387
August.....	1,430	255	312	517	346
September.....	1,457	217	345	549	346
October.....	1,591	283	410	615	283
November.....	1,455	257	340	560	298
December.....	1,646	343	303	683	317
1965					
January*.....	1,466	156	269	772	269
February*.....	1,422	278	245	578	321

NOTE: For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—
UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North- east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
Unadjusted totals (thousands of units)									
10,000-PLACES SERIES									
Annual totals:									
1959.....	1,208,328	(X)	222	286	356	344	938	76	194
1960.....	998,048	(X)	199	228	284	287	746	65	187
1961.....	1,064,189	(X)	230	226	299	309	723	67	274
1962.....	1,186,601	(X)	243	238	343	363	716	87	384
1963.....	1,285,028	(X)	231	254	387	413	705	117	463
12,000-PLACES SERIES									
Annual totals:									
1963.....	1,334,684	(X)	239	269	403	423	750	119	466
1964*.....	1,274,210	(X)	240	288	394	352	716	99	459
First 2 months:									
1964.....	175,532	1,369	228	334	402	405	776	118	475
1965*.....	151,190	1,292	236	346	427	284	754	87	452
Seasonally adjusted annual rates (thousands of units)									
1964									
January.....	85,520	1,333	205	332	403	393	742	114	477
February.....	90,012	1,404	251	336	401	416	810	121	473
March.....	118,106	1,357	273	310	406	368	767	100	490
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	118,544	1,242	228	259	391	364	663	104	475
August.....	107,409	1,281	236	304	418	323	701	95	485
September.....	106,704	1,222	240	289	378	315	694	88	440
October.....	105,792	1,220	217	305	384	314	689	93	438
November.....	89,818	1,258	241	302	410	305	741	97	420
December.....	79,000	1,173	257	258	365	293	718	76	379
1965									
January.....	74,081	1,312	238	385	419	270	764	94	454
February*.....	77,109	1,272	234	306	434	298	744	79	449

NOTE: For States contained in each region, see "Definitions" on page 7. *Preliminary. (X) Not applicable. ^rRevised.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM

Month and year	Implicit seasonal indexes ¹ , U.S. total		Seasonal indexes by region and area				Nonpermit starts, U.S. total
			Starts in permit areas				
	Total	Nonfarm	Northeast	North Central	South	West	
1964							
January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	118.9	118.5	119.4	125.4	110.6	109.8	140.5
September.....	101.1	101.0	116.3	105.6	94.6	91.2	107.2
October.....	106.4	106.6	115.1	109.9	103.5	104.4	100.2
November.....	91.8	91.7	98.7	92.4	85.6	90.3	97.6
December.....	71.9	72.1	74.8	64.1	74.2	82.8	60.2
1965							
January.....	*67.0	*67.4	46.5	51.2	85.0	92.5	49.6
February.....	*72.1	*72.1	50.9	52.5	87.3	87.1	70.5
March.....	(NA)	(NA)	78.2	77.4	112.7	107.2	83.0
April.....	(NA)	(NA)	131.7	130.1	107.8	109.8	114.2
May.....	(NA)	(NA)	125.6	135.9	118.5	111.5	133.3
June.....	(NA)	(NA)	130.6	132.4	108.3	107.6	120.7

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these nonpermit seasonal indexes have been calculated from nonfarm nonpermit starts which account for about 90 percent of all nonpermit starts. *Preliminary. (NA) Not available.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE

Year and month	Implicit seasonal indexes ¹ , U.S. total	Northeast			North Central			South			West		
		1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family
		1964											
January.....	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.....	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March.....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April.....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August.....	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September.....	106.8	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October.....	101.3	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.....	96.5	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.....	78.8	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1
1965													
January.....	71.8	47.5	61.9	57.9	40.2	59.9	68.6	82.5	102.8	93.3	87.9	102.2	100.8
February.....	*81.1	48.7	81.3	92.9	57.8	68.6	73.6	96.8	100.6	85.1	97.9	99.4	102.4
March.....	(NA)	95.0	131.5	90.0	96.6	103.1	96.2	111.7	109.3	99.3	103.2	113.9	102.9
April.....	(NA)	129.6	131.2	126.7	133.9	131.7	100.5	114.7	107.1	103.3	112.6	114.2	110.4
May.....	(NA)	131.6	116.5	96.1	131.5	116.9	126.1	113.8	105.8	109.1	112.5	103.0	117.8
June.....	(NA)	128.5	102.4	95.1	131.0	107.9	129.2	105.9	96.9	99.4	109.8	109.8	97.7

NOTE: These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized. *Preliminary. (NA) Not available. ¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

Item	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
BUILDING PERMITS					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
PRIVATE HOUSING STARTS					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6
U.S. PRIVATE					
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6

NOTE: Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of *Business Cycle Developments*, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in *Electronic Computers and Business Indicators*, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957. More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the July 1963 report (C20-50). A similar presentation will appear in these reports from time to time.

The following are brief descriptions of the measures used in this report.

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

DEFINITIONS AND DESCRIPTIONS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a house-keeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units it is defined as when the construction contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters (such as dormitories and rooming houses) and transient accommodations (such as transient hotels, motels, and tourist courts) and mobile homes (trailers).

The standard Census geographic regions are used in the tables of this report. States contained in each region are as follows: Northeast—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; West—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas. Data for the period beginning with January 1964, on metropolitan-nonmetropolitan distributions, are based on 1964 definitions; data for 1961-1963 are based on 1961 definitions; and data for 1959-1960 are based on 1959 definitions.

Descriptions and Procedures

HOUSING STARTS COMPILATION

Compilation of the housing starts series depends on 4 steps. First, an estimate is prepared of the number of housing units for which building permits

have been issued in all 12,000 permit-issuing places each month. Second, a sample field survey is made of the use of permits. In this survey, a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the permit have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units covered by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. Third, having produced an estimate of the number of units started in each month with permit authorization, an adjustment is next made to take care of units started within permit-issuing areas but without permit authorization.

The final step in the estimates of housing starts is to add an estimate of units started in areas where building permit systems do not exist. This estimate is based upon current monthly surveys in 95 broad areas (counties or groups of counties). In these areas, visits are made to a select group of informed people and a list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Information provided by these sources is next checked by field visit. As a final step, a sample of 315 small land areas is selected, and these small areas are canvassed intensively by the enumerators to find by observation, all units started since the enumerators' last visit a month earlier. On the basis of these findings, estimates are made of the number of units not reported by the informed sources, and these are added to the information from the sources to provide an estimate of total construction in the nonpermit areas.

Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual

DEFINITIONS AND DESCRIPTIONS

construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months or more may pass from the time a permit is issued to the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building-permit systems for which figures are currently given in this report account for a major portion of residential building in the United States. For the country as a whole, about 83 percent of the private housing units were constructed in areas of this permit-issuing universe in 1963.

The series shown in table 6, beginning with 1963, pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building-permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. The report for January 1964 (C20-56) shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building-permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year along with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building-permit data is provided in the Census Bureau's monthly reports on Building Permits (C40 and C42).

SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are, to a considerable extent, based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of 100 that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error; about 95 out of 100 that the difference is less than twice the standard error; and 99 out of 100 that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{\sigma}{x}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent. For housing units authorized, it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{x}$ is the relative standard error of the total number

of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II program. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts (C20-50). A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available, upon request, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly owned units.

The seasonally adjusted data are based on 4 years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be revised if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working-day adjustment for housing starts.

DEFINITIONS AND DESCRIPTIONS

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building-permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment

indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first 4 months of 1960.

REFERENCE COPY

CONSTRUCTION REPORTS

BUREAU OF THE CENSUS
HOUSING STARTS

MAY 11 4 01 PM '65

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HOUSING STARTS IN MARCH 1965

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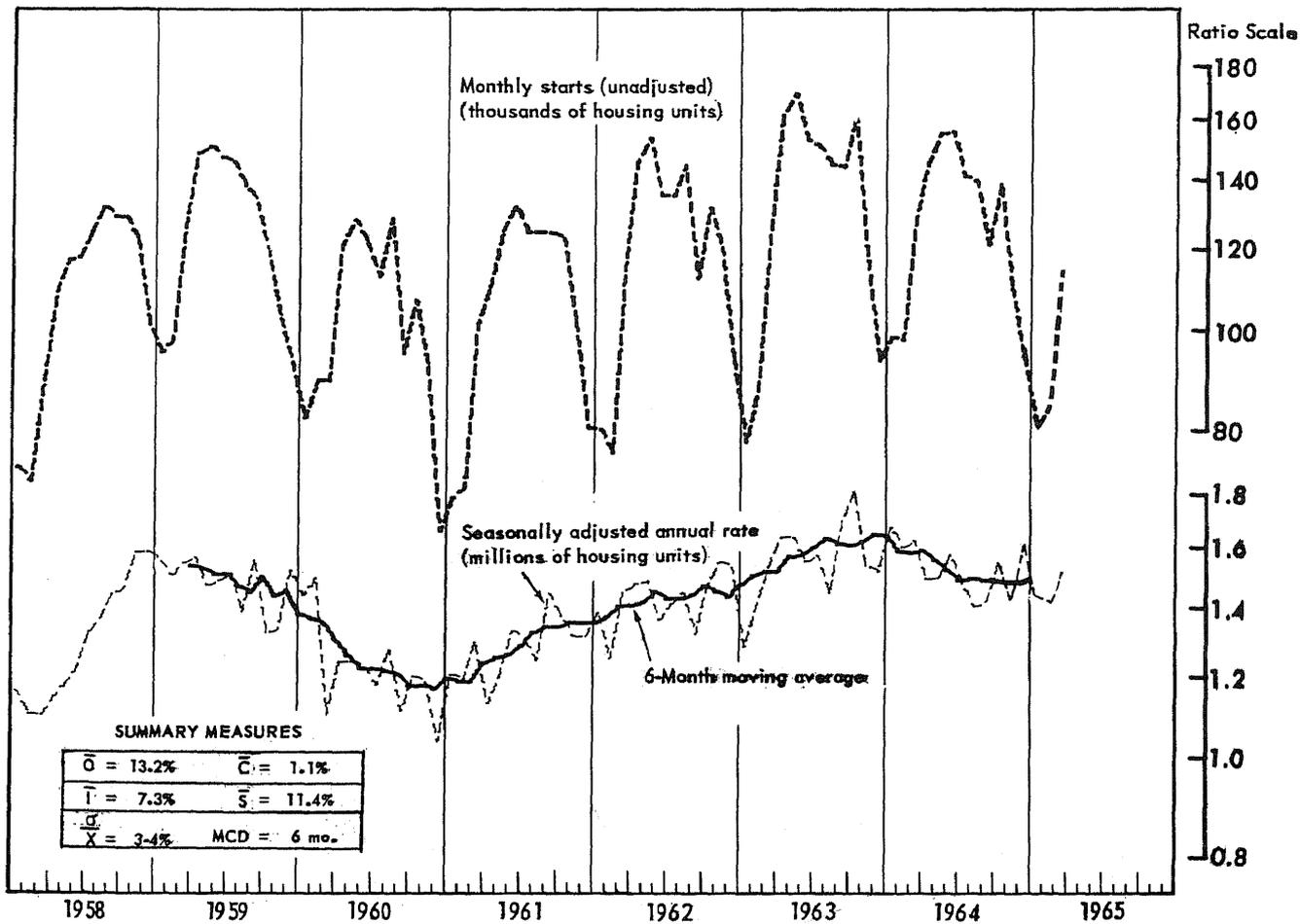
During March 1965, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.549 million units, 9 percent above the revised February 1965 rate of 1.420 million, but 7 percent below the March 1964 rate of 1.663 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

In addition, some 3,900 publicly owned housing units were started in March 1965, bringing the grand total for the month up to 123,400 units.

A total of 118,539 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,293,000 units, were authorized by the 12,000 permitting jurisdictions in March 1965. This rate was 5 percent above the revised February 1965 rate of 1,231,000 units but 5 percent below the March 1964 rate of 1,357,000 units.

The actual number of private housing units started during March 1965 was 119,500 compared with 85,400 in February 1965, and 130,100 units in March 1964.

NEW PRIVATE NONFARM HOUSING STARTS



THE LATEST FIGURES ENTERED ARE PRELIMINARY. FOR EXPLANATION OF THE SUMMARY MEASURES, SEE SECTION ON SAMPLING VARIABILITY AND TABLES.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402
Price 10 cents. Annual subscription \$1.00.

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS

(Thousands of units)

Period	Total (including farm)			Nonfarm			
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only	
						Monthly	6-month moving average ¹
Annual totals:							
1959.....	1,553.5	1,516.8	(X)	1,531.3	1,494.6	(X)	(X)
1960.....	1,296.0	1,252.1	(X)	1,274.0	1,230.1	(X)	(X)
1961.....	1,365.0	1,313.0	(X)	1,336.8	1,284.8	(X)	(X)
1962.....	1,492.4	1,462.8	(X)	1,468.7	1,439.1	(X)	(X)
1963.....	1,640.9	1,609.2	(X)	1,613.4	1,581.7	(X)	(X)
1964*.....	1,584.9	1,552.3	(X)	1,557.8	1,525.2	(X)	(X)
First 3 months:							
1964.....	335.2	330.0	1,679	329.5	324.3	1,646	(X)
1965*.....	296.8	286.4	1,477	292.8	282.4	1,453	(X)
1964							
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,555
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,520
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,486
August.....	144.8	141.6	1,430	142.2	139.0	1,408	1,496
September.....	126.0	122.6	1,457	123.9	120.5	1,433	1,483
October.....	143.1	141.0	1,591	140.6	138.5	1,559	1,487
November.....	113.8	111.4	1,455	111.6	109.2	1,429	1,478
December.....	100.1	98.5	1,646	98.2	96.6	1,609	1,478
1965							
January.....	85.6	81.5	1,462	84.2	80.1	1,430	1,493
February*.....	87.8	85.4	1,420	87.1	84.7	1,407	(X)
March*.....	123.4	119.5	1,549	121.5	117.6	1,522	(X)

NOTE: Components may not add to totals because of rounding. *Preliminary. (X) Not applicable. ¹Centered on the 4th month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	Total	1-family	2-family	3-family or more	Total, private and public				Private				
					Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more	
Annual totals:													
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0	
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6	
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6	
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4	
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3	
1964*.....	1,584.9	976.9	61.2	546.9	1,557.8	949.9	61.2	546.8	1,525.2	948.6	52.8	523.8	
First 3 months:													
1964.....	335.2	201.2	14.4	119.5	329.5	195.6	14.4	119.5	324.3	195.3	13.1	116.0	
1965*.....	296.8	181.2	11.1	104.3	292.8	177.3	11.1	104.3	282.4	177.0	9.4	96.0	
1964													
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0	
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9	
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1	
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4	
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5	
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3	
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6	
August.....	144.8	90.2	5.1	49.5	142.2	87.6	5.1	49.5	139.0	87.6	4.1	47.3	
September.....	126.0	79.6	4.5	41.9	123.9	77.4	4.5	41.9	120.5	77.4	3.6	39.5	
October.....	143.1	90.6	5.2	47.4	140.6	88.1	5.2	47.4	138.5	87.9	4.6	45.9	
November.....	113.8	69.7	4.8	39.3	111.6	67.5	4.8	39.2	109.2	67.4	4.0	37.8	
December.....	100.1	59.7	3.9	36.6	98.2	57.8	3.9	36.6	96.6	57.7	3.4	35.5	
1965													
January.....	85.6	51.8	3.2	30.5	84.2	50.5	3.2	30.5	80.1	50.4	2.8	26.9	
February*.....	87.8	51.9	3.7	32.2	87.1	51.2	3.7	32.2	84.7	51.2	2.9	30.6	
March*.....	123.4	77.5	4.2	41.6	121.5	75.6	4.2	41.6	117.6	75.4	3.7	38.5	

NOTE: Components may not add to totals because of rounding. *Preliminary.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION

(Thousands of units)

Period	Total (including farm), private and public			Nonfarm						
				Total, private and public			Private			
	Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	
Annual totals:										
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7	
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2	
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8	
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1	
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2	
1964*.....	1,584.9	1,119.9	465.0	1,557.8	1,119.4	438.4	1,525.2	1,100.1	425.1	
First 3 months:										
1964.....	335.2	245.5	89.9	329.5	245.4	84.2	324.3	242.6	81.7	
1965*.....	296.8	212.7	84.1	292.8	212.6	80.2	282.4	204.5	77.8	
1964										
January.....	100.8	75.1	25.9	99.5	75.0	24.5	98.3	74.6	23.7	
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3	
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7	
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4	
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6	
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2	
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7	
August.....	144.8	97.1	47.7	142.2	97.1	45.1	139.0	94.9	44.1	
September.....	126.0	90.0	36.0	123.9	89.9	33.9	120.5	87.8	32.7	
October.....	143.1	99.3	43.8	140.6	99.0	41.6	138.5	98.0	40.5	
November.....	113.8	77.1	36.7	111.6	77.1	34.5	109.2	75.9	33.3	
December.....	100.1	72.4	27.7	98.2	72.4	25.9	96.6	71.7	24.9	
1965										
January.....	85.6	58.9	26.7	84.2	58.9	25.4	80.1	55.2	24.9	
February*.....	87.8	63.5	24.3	87.1	63.5	23.6	84.7	62.0	22.7	
March*.....	123.4	90.3	33.1	121.5	90.2	31.2	117.6	87.3	30.2	

NOTE: Components may not add to totals because of rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1964 definitions of standard metropolitan statistical areas (Standard Metropolitan Statistical Areas, 1964, Bureau of Budget); data for 1961-63 based on 1961 definitions, data for 1959-60 on 1959 definitions.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY GEOGRAPHIC REGIONS

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm							
					Total, private and public				Private			
	North- east	North Central	South	West	North- east	North Central	South	West	North- east	North Central	South	West
Annual totals:												
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.5	430.8
1964*.....	263.5	354.4	597.7	369.3	263.3	347.2	578.5	369.1	255.3	339.8	566.5	363.8
First 3 months:												
1964.....	34.1	60.0	139.4	101.7	34.1	59.3	134.5	101.7	33.0	57.6	132.9	100.9
1965*.....	37.5	49.6	134.0	75.7	37.4	49.2	130.5	75.7	34.2	47.2	127.0	73.8
1964												
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3
August.....	26.9	33.9	52.3	31.7	26.9	33.0	50.7	31.7	25.6	32.3	49.3	31.7
September.....	21.9	31.0	46.7	26.5	21.9	30.5	45.0	26.5	20.9	29.9	43.4	26.3
October.....	27.5	37.5	53.2	25.0	27.4	36.3	52.0	24.9	26.8	35.8	51.2	24.6
November.....	21.8	26.9	42.3	22.7	21.8	26.6	40.6	22.7	21.1	26.0	39.7	22.4
December.....	21.4	16.3	40.1	22.3	21.4	15.6	38.9	22.3	21.3	15.3	38.3	21.7
1965												
January.....	7.8	12.1	44.5	21.2	7.8	12.1	43.2	21.2	5.6	11.9	41.8	20.8
February*.....	11.4	11.6	40.7	24.1	11.4	11.4	40.2	24.1	11.1	11.2	39.1	23.2
March*.....	18.3	25.9	48.8	30.4	18.2	25.7	47.1	30.4	17.5	24.1	46.1	29.8

NOTE: Components may not add to totals because of rounding. For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS

(Thousands of units)

Period	U.S. total	Northeast	North Central	South	West
1964					
January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July.....	1,505	266	317	535	387
August.....	1,430	255	312	517	346
September.....	1,457	217	345	549	346
October.....	1,591	283	410	615	283
November.....	1,455	257	340	560	298
December.....	1,646	343	303	683	317
1965					
January.....	1,462	144	281	766	271
February*.....	1,420	261	258	581	320
March*.....	1,549	268	377	569	335

NOTE: For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North-east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
Unadjusted totals (thousands of units)									
10,000-PLACES SERIES									
Annual totals:									
1959.....	1,208,328	(X)	222	286	356	344	938	76	194
1960.....	998,048	(X)	199	228	284	287	746	65	187
1961.....	1,064,189	(X)	230	226	299	309	723	67	274
1962.....	1,186,601	(X)	243	238	343	363	716	87	384
1963.....	1,285,028	(X)	231	254	387	413	705	117	463
12,000-PLACES SERIES									
Annual totals:									
1963.....	1,334,684	(X)	239	269	403	423	750	119	466
1964*.....	1,274,210	(X)	240	288	394	352	716	99	459
First 3 months:									
1964.....	293,638	1,365	243	326	403	392	773	112	480
1965*.....	267,875	1,279	247	319	412	301	730	85	463
Seasonally adjusted annual rates (thousands of units)									
1964									
January.....	^r 85,520	1,333	205	332	403	393	742	114	477
February.....	90,012	1,404	251	336	401	416	810	121	473
March.....	^r 118,106	1,357	273	310	406	368	767	100	490
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	^r 118,544	1,242	228	259	391	364	663	104	475
August.....	107,409	1,281	236	304	418	323	701	95	485
September.....	106,704	1,222	240	289	378	315	694	88	440
October.....	105,792	1,220	217	305	384	314	689	93	438
November.....	^r 89,818	1,258	241	302	410	305	741	97	420
December.....	^r 79,000	1,173	257	258	365	293	718	76	379
1965									
January.....	74,081	1,312	238	385	419	270	764	94	454
February.....	75,255	1,231	220	287	427	297	715	78	438
March*.....	118,539	1,293	283	284	391	335	712	84	497

NOTE: For States contained in each region, see "Definitions" on page 7. *Preliminary. (X) Not applicable. ^rRevised.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM

Month and year	Implicit seasonal indexes ¹ , U.S. total		Seasonal indexes by region and area				Nonpermit starts, U.S. total
			Starts in permit areas				
	Total	Nonfarm	Northeast	North Central	South	West	
1964							
January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	118.9	118.5	119.4	125.4	110.6	109.8	140.5
September.....	101.1	101.0	116.3	105.6	94.6	91.2	107.2
October.....	106.4	106.6	115.1	109.9	103.5	104.4	100.2
November.....	91.8	91.7	98.7	92.4	85.6	90.3	97.6
December.....	71.9	72.1	74.8	64.1	74.2	82.8	60.2
1965							
January.....	66.9	67.3	46.5	51.2	85.0	92.5	49.6
February.....	*72.2	*72.2	50.9	52.5	87.3	87.1	70.5
March.....	*92.5	*92.7	78.2	77.4	112.7	107.2	83.0
April.....	(NA)	(NA)	131.7	130.1	107.8	109.8	114.2
May.....	(NA)	(NA)	125.6	135.9	118.5	111.5	133.3
June.....	(NA)	(NA)	130.6	132.4	108.3	107.6	120.7

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these nonpermit seasonal indexes have been calculated from nonfarm nonpermit starts which account for about 90 percent of all nonpermit starts. *Preliminary. (NA) Not available.
¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE

Year and month	Implicit seasonal indexes ¹ U.S. total	Northeast			North Central			South			West		
		1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family
1964													
January.....	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.....	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March.....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April.....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August.....	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September.....	106.8	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October.....	101.3	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.....	96.5	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.....	78.8	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1
1965													
January.....	71.8	47.5	61.9	57.9	40.2	59.9	68.6	82.5	102.8	93.3	87.9	102.2	100.8
February.....	81.8	48.7	81.3	92.9	57.8	68.6	73.6	96.8	100.6	85.1	97.9	99.4	102.4
March.....	*101.3	95.0	131.5	90.0	96.6	103.1	96.2	111.7	109.3	99.3	103.2	113.9	102.9
April.....	(NA)	129.6	131.2	126.7	133.9	131.7	100.5	114.7	107.1	103.3	112.6	114.2	110.4
May.....	(NA)	131.6	116.5	96.1	131.5	116.9	126.1	113.8	105.8	109.1	112.5	103.0	117.8
June.....	(NA)	128.5	102.4	95.1	131.0	107.9	129.2	105.9	96.9	99.4	109.8	109.8	97.7

NOTE: These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized. *Preliminary. (NA) Not available. ¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

Item	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
BUILDING PERMITS					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
PRIVATE HOUSING STARTS					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6

NOTE: Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957. More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the July 1963 report (C20-50). A similar presentation will appear in these reports from time to time.

The following are brief descriptions of the measures used in this report.

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

DEFINITIONS AND DESCRIPTIONS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a house-keeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units it is defined as when the construction contract is awarded. All housing units in a multi-family building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters (such as dormitories and rooming houses) and transient accommodations (such as transient hotels, motels, and tourist courts) and mobile homes (trailers).

The standard Census geographic regions are used in the tables of this report. States contained in each region are as follows: Northeast—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; West—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas. Data for the period beginning with January 1964, on metropolitan-nonmetropolitan distributions, are based on 1964 definitions; data for 1961-1963 are based on 1961 definitions; and data for 1959-1960 are based on 1959 definitions.

Descriptions and Procedures

HOUSING STARTS COMPILATION

Compilation of the housing starts series depends on 4 steps. First, an estimate is prepared of the number of housing units for which building permits

have been issued in all 12,000 permit-issuing places each month. Second, a sample field survey is made of the use of permits. In this survey, a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the permit have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units covered by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. Third, having produced an estimate of the number of units started in each month with permit authorization, an adjustment is next made to take care of units started within permit-issuing areas but without permit authorization.

The final step in the estimates of housing starts is to add an estimate of units started in areas where building permit systems do not exist. This estimate is based upon current monthly surveys in 95 broad areas (counties or groups of counties). In these areas, visits are made to a select group of informed people and a list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Information provided by these sources is next checked by field visit. As a final step, a sample of 315 small land areas is selected, and these small areas are canvassed intensively by the enumerators to find by observation, all units started since the enumerators' last visit a month earlier. On the basis of these findings, estimates are made of the number of units not reported by the informed sources, and these are added to the information from the sources to provide an estimate of total construction in the nonpermit areas.

Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual

DEFINITIONS AND DESCRIPTIONS

construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months or more may pass from the time a permit is issued to the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building-permit systems for which figures are currently given in this report account for a major portion of residential building in the United States. For the country as a whole, about 83 percent of the private housing units were constructed in areas of this permit-issuing universe in 1963.

The series shown in table 6, beginning with 1963, pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building-permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. The report for January 1964 (C20-56) shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building-permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year along with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building-permit data is provided in the Census Bureau's monthly reports on Building Permits (C40 and C42).

SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are, to a considerable extent, based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of 100 that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error; about 95 out of 100 that the difference is less than twice the standard error; and 99 out of 100 that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{\sigma}{\bar{x}}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent. For housing units authorized, it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{\sigma}{\bar{x}}$ is the relative standard error of the total number

of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II program. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts (C20-50). A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available, upon request, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly owned units.

The seasonally adjusted data are based on 4 years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be revised if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working-day adjustment for housing starts.

DEFINITIONS AND DESCRIPTIONS

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building-permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment

indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first 4 months of 1960.

CONSTRUCTION REPORTS

HOUSING STARTS

Jun 16 9 20 AM '65

ISSUED MAY 1965

C20-65-4

HOUSING STARTS IN APRIL 1965

THIS ISSUE INCLUDES A SPECIAL SUPPLEMENT ON STARTS OF APARTMENT BUILDINGS WITH 5 OR MORE HOUSING UNITS IN 1963 AND 1964.

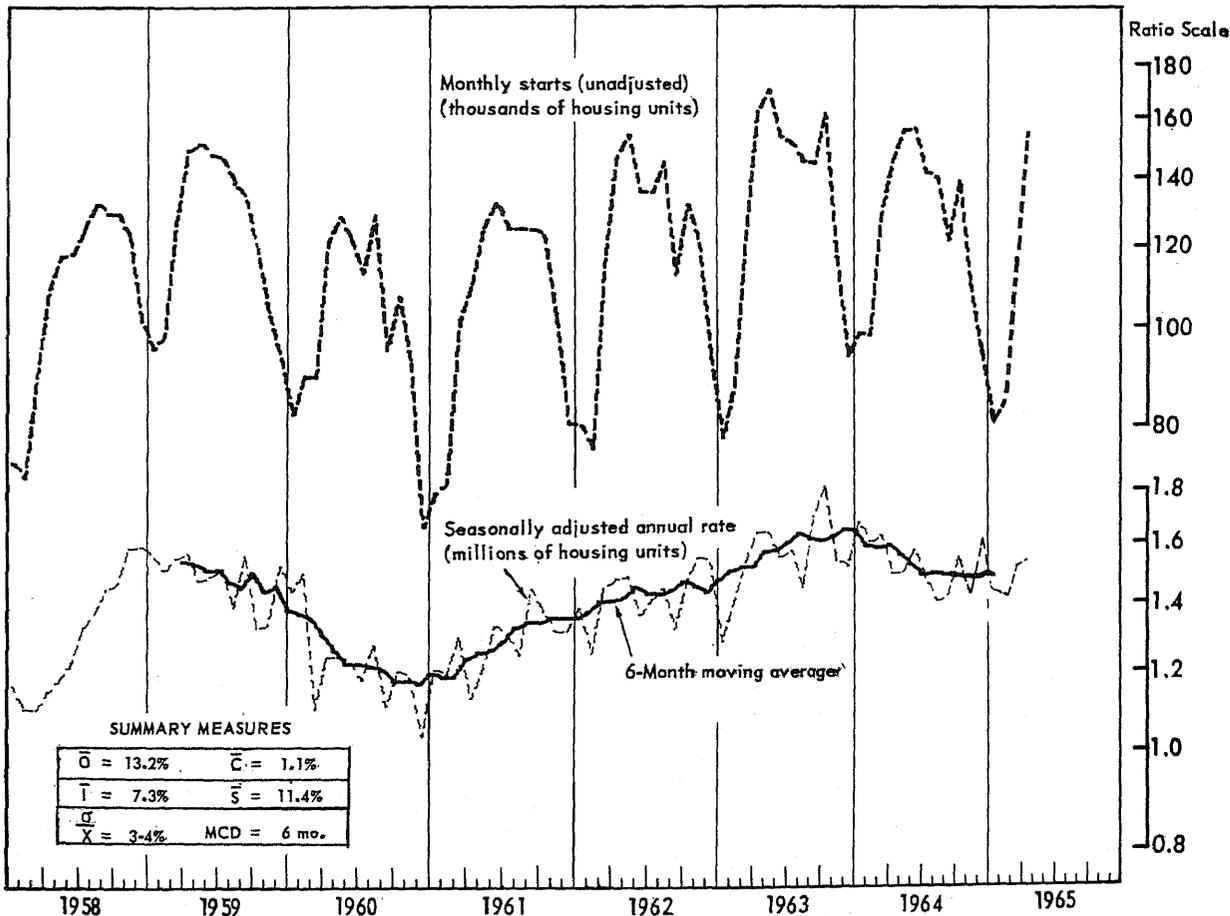
During April 1965, the number of privately owned housing units started (nonfarm and farm) was at a seasonally adjusted annual rate of 1.548 million units, about the same as the revised March 1965 rate and 1 percent above the April 1964 rate of 1.531 million units. Private nonfarm housing starts showed changes very much like those of all private starts.

The actual number of private housing units started during April 1965 was 152,600 compared with 119,100 in March 1965, and 148,500 units in April 1964. In

addition, some 2,700 publicly owned housing units were started in April 1965, bringing the grand total for the month up to 155,300 units.

A total of 122,373 new privately owned housing units, equivalent to a seasonally adjusted annual rate of 1,204,000 units, were authorized by the 12,000 permit-issuing jurisdictions in April 1965. This rate was 4 percent below the revised March 1965 rate of 1,256,000 units and 6 percent below the April 1964 rate of 1,280,000 units.

NEW PRIVATE NONFARM HOUSING STARTS



THE LATEST FIGURES ENTERED ARE PRELIMINARY. FOR EXPLANATION OF THE SUMMARY MEASURES, SEE SECTION ON SAMPLING VARIABILITY AND TABLES.

Table 1.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND SEASONALLY ADJUSTED ANNUAL RATE OF PRIVATE STARTS

(Thousands of units)

Period	Total (including farm)			Nonfarm				
	Total private and public	Private	Seasonally adjusted annual rate, private only	Total private and public	Private	Seasonally adjusted annual rate, private only		
						Monthly	6-month moving average ¹	
Annual totals:								
1959.....	1,553.5	1,516.3	(X)	1,531.3	1,494.6	(X)	(X)	
1960.....	1,296.0	1,252.1	(X)	1,274.0	1,230.1	(X)	(X)	
1961.....	1,365.0	1,313.0	(X)	1,336.8	1,284.8	(X)	(X)	
1962.....	1,492.4	1,462.3	(X)	1,468.7	1,439.1	(X)	(X)	
1963.....	1,640.9	1,609.2	(X)	1,613.4	1,581.7	(X)	(X)	
1964*.....	1,584.9	1,552.3	(X)	1,557.8	1,525.2	(X)	(X)	
First 4 months:								
1964.....	487.5	478.5	1,642	479.0	470.0	1,610	(X)	
1965*.....	452.1	438.6	1,494	445.9	432.5	1,470	(X)	
1964								
January.....	100.8	99.6	1,718	99.5	98.3	1,688	1,639	
February.....	101.1	100.3	1,657	98.5	97.7	1,613	1,585	
March.....	133.3	130.1	1,663	131.5	128.3	1,638	1,579	
April.....	152.3	148.5	1,531	149.5	145.7	1,501	1,589	
May.....	160.5	157.5	1,529	158.2	155.2	1,507	1,555	
June.....	164.0	158.5	1,611	161.3	155.8	1,585	1,520	
July.....	145.1	142.7	1,505	142.8	140.4	1,483	1,486	
August.....	144.8	141.6	1,430	142.2	139.0	1,408	1,496	
September.....	126.0	122.6	1,457	123.9	120.5	1,433	1,483	
October.....	143.1	141.0	1,591	140.6	138.5	1,559	1,487	
November.....	113.8	111.4	1,455	111.6	109.2	1,429	1,478	
December.....	100.1	98.5	1,646	98.2	96.6	1,609	1,478	
1965								
January.....	85.6	81.5	1,462	84.2	80.1	1,430	1,492	
February.....	87.9	85.4	1,418	87.1	84.7	1,405	1,486	
March*.....	123.3	119.1	1,546	121.5	117.3	1,519	(X)	
April*.....	155.3	152.6	1,548	153.1	150.4	1,524	(X)	

NOTE: Components may not add to totals because of rounding. *Preliminary. (X) Not applicable. ¹Centered on the 4th month.

Table 2.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND TYPE OF STRUCTURE

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm								
	Total	1-family	2-family	3-family or more	Total, private and public				Private				
					Total	1-family	2-family	3-family or more	Total	1-family	2-family	3-family or more	
Annual totals:													
1959.....	1,553.5	1,250.7	58.5	244.3	1,531.3	1,228.7	58.5	244.1	1,494.6	1,211.9	55.7	227.0	
1960.....	1,296.0	1,008.8	50.5	236.8	1,274.0	986.6	50.5	236.8	1,230.1	972.3	43.8	213.6	
1961.....	1,365.0	989.3	50.0	326.1	1,336.8	961.1	50.0	326.1	1,284.8	946.4	44.0	294.6	
1962.....	1,492.4	996.3	56.1	440.2	1,468.7	972.5	56.0	440.2	1,439.1	967.8	48.9	422.4	
1963.....	1,640.9	1,021.7	61.1	558.2	1,613.4	994.1	61.1	558.2	1,581.7	993.2	53.2	535.3	
1964*.....	1,584.9	976.9	61.2	546.9	1,557.8	949.9	61.2	546.8	1,525.2	948.6	52.8	523.8	
First 4 months:													
1964.....	487.5	291.9	20.8	174.6	479.0	283.6	20.8	174.6	470.0	283.1	18.6	168.4	
1965*.....	452.1	283.4	16.7	151.9	445.9	277.4	16.7	151.9	432.5	276.7	14.2	141.6	
1964													
January.....	100.8	55.3	4.0	41.4	99.5	54.1	4.0	41.4	98.3	53.8	3.5	41.0	
February.....	101.1	63.7	5.0	32.4	98.5	61.1	5.0	32.4	97.7	61.1	4.8	31.9	
March.....	133.3	82.2	5.4	45.7	131.5	80.4	5.4	45.7	128.3	80.4	4.8	43.1	
April.....	152.3	90.7	6.4	55.1	149.5	88.0	6.4	55.1	145.7	87.8	5.5	52.4	
May.....	160.5	101.4	5.6	53.6	158.2	99.0	5.6	53.6	155.2	98.9	4.8	51.5	
June.....	164.0	102.1	6.0	55.9	161.3	99.4	6.0	55.9	155.8	99.2	5.3	51.3	
July.....	145.1	91.7	5.3	48.1	142.8	89.5	5.3	48.1	140.4	89.4	4.4	46.6	
August.....	144.8	90.2	5.1	49.5	142.2	87.6	5.1	49.5	139.0	87.6	4.1	47.3	
September.....	126.0	79.6	4.5	41.9	123.9	77.4	4.5	41.9	120.5	77.4	3.6	39.5	
October.....	143.1	90.6	5.2	47.4	140.6	88.1	5.2	47.4	138.5	87.9	4.6	45.9	
November.....	113.8	69.7	4.8	39.3	111.6	67.5	4.8	39.2	109.2	67.4	4.0	37.8	
December.....	100.1	59.7	3.9	36.6	98.2	57.8	3.9	36.6	96.6	57.7	3.4	35.5	
1965													
January.....	85.6	51.8	3.2	30.5	84.2	50.5	3.2	30.5	80.1	50.4	2.8	26.9	
February.....	87.9	51.5	3.8	32.6	87.1	50.8	3.8	32.6	84.7	50.7	3.0	31.1	
March*.....	123.3	76.3	4.3	42.7	121.5	74.5	4.3	42.7	117.3	74.4	3.7	39.1	
April*.....	155.3	103.8	5.4	46.1	153.1	101.6	5.4	46.1	150.4	101.2	4.7	44.5	

NOTE: Components may not add to totals because of rounding. *Preliminary.

Table 3.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY OWNERSHIP AND METROPOLITAN-NONMETROPOLITAN LOCATION

(Thousands of units)

Period	Total (including farm), private and public			Nonfarm						
				Total, private and public			Private			
	Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	Total	Metropolitan ¹	Nonmetro- politan ¹	
Annual totals:										
1959.....	1,553.5	1,076.9	476.6	1,531.3	1,076.1	455.2	1,494.6	1,053.9	440.7	
1960.....	1,296.0	889.0	407.0	1,274.0	887.6	386.4	1,230.1	862.9	367.2	
1961.....	1,365.0	947.9	417.1	1,336.8	946.2	390.6	1,284.8	912.0	372.8	
1962.....	1,492.4	1,053.5	438.9	1,468.7	1,052.7	416.0	1,439.1	1,033.0	406.1	
1963.....	1,640.9	1,150.6	490.3	1,613.4	1,149.0	464.4	1,581.7	1,126.5	455.2	
1964*.....	1,584.9	1,119.9	465.0	1,557.8	1,119.4	438.4	1,525.2	1,100.1	425.1	
First 4 months:										
1964.....	487.5	348.0	139.6	479.0	347.9	131.2	470.0	342.9	127.1	
1965*.....	452.1	314.7	137.5	445.9	314.7	131.4	432.5	305.4	127.0	
1964										
January.....	100.8	75.1	25.9	99.5	75.0	24.5	98.3	74.6	23.7	
February.....	101.1	73.8	27.3	98.5	73.8	24.7	97.7	73.4	24.3	
March.....	133.3	96.6	36.7	131.5	96.6	35.0	128.3	94.6	33.7	
April.....	152.3	102.5	49.7	149.5	102.5	47.0	145.7	100.3	45.4	
May.....	160.5	115.1	45.3	158.2	115.1	43.0	155.2	113.6	41.6	
June.....	164.0	118.0	46.0	161.3	118.0	43.3	155.8	113.6	42.2	
July.....	145.1	102.9	42.2	142.8	102.9	39.9	140.4	101.7	38.7	
August.....	144.8	97.1	47.7	142.2	97.1	45.1	139.0	94.9	44.1	
September.....	126.0	90.0	36.0	123.9	89.9	33.9	120.5	87.8	32.7	
October.....	143.1	99.3	43.8	140.6	99.0	41.6	138.5	98.0	40.5	
November.....	113.8	77.1	36.7	111.6	77.1	34.5	109.2	75.9	33.3	
December.....	100.1	72.4	27.7	98.2	72.4	25.9	96.6	71.7	24.9	
1965										
January.....	85.6	58.9	26.7	84.2	58.9	25.4	80.1	55.2	24.9	
February.....	87.9	63.4	24.5	87.1	63.4	23.8	84.7	61.9	22.8	
March*.....	123.3	89.5	33.9	121.5	89.5	32.0	117.3	86.2	31.0	
April*.....	153.3	102.9	52.4	153.1	102.9	50.2	150.4	102.1	48.3	

NOTE: Components may not add to totals because of rounding. *Preliminary. ¹Data for 1964 not directly comparable with data for preceding years. Beginning January 1964, metropolitan-nonmetropolitan distribution based on 1964 definitions of standard metropolitan statistical areas (Standard Metropolitan Statistical Areas, 1964, Bureau of Budget); data for 1961-63 based on 1961 definitions, data for 1959-60 on 1959 definitions.

Table 4.—NEW HOUSING UNITS STARTED, TOTAL AND NONFARM, BY GEOGRAPHIC REGIONS

(Thousands of units)

Period	Total (including farm), private and public				Nonfarm							
					Total, private and public				Private			
	North- east	North Central	South	West	North- east	North Central	South	West	North- east	North Central	South	West
Annual totals:												
1959.....	279.9	374.8	521.3	377.2	279.4	367.7	506.6	377.2	268.2	360.5	496.6	369.2
1960.....	236.5	303.7	441.3	314.5	235.7	299.2	425.1	314.0	220.6	287.5	413.2	308.8
1961.....	265.1	289.0	487.4	323.3	264.7	281.4	466.4	323.1	246.1	270.2	452.4	316.0
1962.....	273.7	295.0	541.2	382.5	273.7	288.6	523.9	382.4	263.7	283.3	514.0	378.0
1963.....	271.3	333.8	600.0	435.8	270.9	326.4	580.2	435.7	260.4	319.9	570.6	430.8
1964*.....	263.5	354.4	597.7	369.3	263.3	347.2	578.5	369.1	255.3	339.8	566.5	363.8
First 4 months:												
1964.....	59.2	94.2	194.1	139.9	59.2	92.7	187.3	139.9	57.8	90.4	183.7	138.4
1965*.....	71.2	89.2	190.8	100.9	71.1	88.0	186.1	100.9	67.1	85.4	181.6	98.3
1964												
January.....	9.3	13.2	40.7	37.6	9.3	13.0	39.6	37.6	9.0	12.9	39.2	37.3
February.....	7.4	20.1	41.8	31.8	7.4	19.8	39.6	31.8	7.0	19.6	39.4	31.7
March.....	17.4	26.7	56.9	32.3	17.4	26.5	55.3	32.3	17.0	25.1	54.3	31.9
April.....	25.1	34.2	54.7	38.2	25.1	33.4	52.8	38.2	24.8	32.8	50.8	37.5
May.....	30.4	39.0	59.4	31.7	30.4	38.4	57.7	31.7	29.6	37.7	56.5	31.4
June.....	28.7	43.0	57.6	34.6	28.7	42.2	55.9	34.5	27.1	40.7	55.1	33.0
July.....	25.7	32.6	52.0	34.9	25.6	31.9	50.4	34.9	25.1	31.7	49.3	34.3
August.....	26.9	33.9	52.3	31.7	26.9	33.0	50.7	31.7	25.6	32.3	49.3	31.7
September.....	21.9	31.0	46.7	26.5	21.9	30.5	45.0	26.5	20.9	29.9	43.4	26.3
October.....	27.5	37.5	53.2	25.0	27.4	36.3	52.0	24.9	26.8	35.8	51.2	24.6
November.....	21.8	26.9	42.3	22.7	21.8	26.6	40.6	22.7	21.1	26.0	39.7	22.4
December.....	21.4	16.3	40.1	22.3	21.4	15.6	38.9	22.3	21.3	15.3	38.3	21.7
1965												
January.....	7.8	12.1	44.5	21.2	7.8	12.1	43.2	21.2	5.6	11.9	41.8	20.8
February.....	11.1	11.6	40.9	24.3	11.1	11.4	40.4	24.3	10.8	11.2	39.3	23.4
March*.....	18.6	25.7	49.6	29.4	18.6	25.5	48.0	29.4	17.6	23.9	46.9	28.8
April*.....	33.7	39.8	55.8	26.0	33.6	39.0	54.5	26.0	33.1	38.4	53.6	25.3

NOTE: Components may not add to totals because of rounding. For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 5.—NEW PRIVATE HOUSING UNITS STARTED (INCLUDING FARM), SEASONALLY ADJUSTED ANNUAL RATES, BY REGIONS

(Thousands of units)					
Period	U.S. total	Northeast	North Central	South	West
1964					
January.....	1,718	231	307	697	483
February.....	1,657	164	432	623	438
March.....	1,663	260	388	658	357
April.....	1,531	228	317	576	410
May.....	1,529	282	339	571	337
June.....	1,611	251	382	610	368
July.....	1,505	266	317	535	387
August.....	1,430	255	312	517	346
September.....	1,457	217	345	549	346
October.....	1,591	283	410	615	283
November.....	1,455	257	340	560	298
December.....	1,646	343	303	683	317
1965					
January.....	1,462	144	281	766	271
February.....	1,418	254	258	584	322
March*.....	1,546	270	373	579	324
April*.....	1,548	305	367	599	277

NOTE: For the States contained in each region, see "Definitions" on page 7. *Preliminary.

Table 6.—NUMBER OF NEW PRIVATE HOUSING UNITS AUTHORIZED BY LOCAL BUILDING PERMITS IN 10,000 AND 12,000 PERMIT-ISSUING PLACES—UNADJUSTED AND SEASONALLY ADJUSTED ANNUAL RATE

Period	Unadjusted U.S. total (number of housing units)	U.S. total	North-east	North Central	South	West	Housing units in—		
							1 family building	2-4 family buildings	5 or more family buildings
Unadjusted totals (thousands of units)									
10,000-PLACES SERIES									
Annual totals:									
1959.....	1,208,328	(X)	222	286	356	344	938	76	194
1960.....	998,048	(X)	199	228	284	287	746	65	187
1961.....	1,064,189	(X)	230	226	299	309	723	67	274
1962.....	1,186,601	(X)	243	238	343	363	716	87	384
1963.....	1,285,028	(X)	231	254	387	413	705	117	463
12,000-PLACES SERIES									
Annual totals:									
1963.....	1,334,684	(X)	239	269	403	423	750	119	466
1964*.....	1,274,210	(X)	240	288	394	352	716	99	459
First 4 months:									
1964.....	421,321	1,344	239	314	403	388	755	109	480
1965*.....	387,251	1,251	237	320	403	291	727	84	440
Seasonally adjusted annual rates (thousands of units)									
1964									
January.....	^r 85,520	1,333	205	332	403	393	742	114	477
February.....	^r 90,012	1,404	251	336	401	416	810	121	473
March.....	^r 118,106	1,357	273	310	406	368	767	100	490
April.....	127,683	1,280	226	277	402	375	700	99	481
May.....	121,961	1,271	241	272	383	375	714	101	456
June.....	123,661	1,306	276	268	403	359	720	102	484
July.....	^r 118,544	1,242	228	259	391	364	663	104	475
August.....	107,409	1,281	236	304	418	323	701	95	485
September.....	106,704	1,222	240	289	378	315	694	88	440
October.....	105,792	1,220	217	305	384	314	689	93	438
November.....	^r 89,818	1,258	241	302	410	305	741	97	420
December.....	^r 79,000	1,173	257	258	365	293	718	76	379
1965									
January.....	74,081	1,312	238	385	419	270	764	94	454
February.....	75,255	1,231	220	287	427	297	715	78	438
March.....	115,542	1,256	264	272	395	325	705	80	471
April*.....	122,373	1,204	225	335	372	272	724	82	398

NOTE: For States contained in each region, see "Definitions" on page 7. *Preliminary. (X) Not applicable. ^rRevised.

Table 7.—SEASONAL INDEXES USED TO ADJUST PRIVATE HOUSING STARTS, INCLUDING FARM

Month and year	Implicit seasonal indexes ¹ , U.S. total		Seasonal indexes by region and area				Nonpermit starts, U.S. total
	Total	Nonfarm	Starts in permit areas				
			Northeast	North Central	South	West	
1964							
January.....	69.6	69.9	46.5	51.2	85.0	92.5	49.6
February.....	72.7	72.7	50.9	52.5	87.3	87.1	70.5
March.....	93.8	93.9	78.2	77.4	112.7	107.2	83.0
April.....	116.5	116.5	131.7	130.1	107.8	109.8	114.2
May.....	123.6	123.5	125.6	135.9	118.5	111.5	133.3
June.....	118.0	118.0	130.6	132.4	108.3	107.6	120.7
July.....	113.7	113.6	112.1	123.1	111.4	106.1	121.4
August.....	118.9	118.5	119.4	125.4	110.6	109.8	140.5
September.....	101.1	101.0	116.3	105.6	94.6	91.2	107.2
October.....	106.4	106.6	115.1	109.9	103.5	104.4	100.2
November.....	91.8	91.7	98.7	92.4	85.6	90.3	97.6
December.....	71.9	72.1	74.8	64.1	74.2	82.8	60.2
1965							
January.....	66.9	67.3	46.5	51.2	85.0	92.5	49.6
February.....	72.3	72.3	50.9	52.5	87.3	87.1	70.5
March.....	*92.5	*92.7	78.2	77.4	112.7	107.2	83.0
April.....	*118.3	*118.4	131.7	130.1	107.8	109.8	114.2
May.....	(NA)	(NA)	125.6	135.9	118.5	111.5	133.3
June.....	(NA)	(NA)	130.6	132.4	108.3	107.6	120.7

NOTE: Permit starts are treated, in whole, as nonfarm starts. The same nonpermit seasonals are used to adjust total nonpermit starts and nonpermit nonfarm starts; these nonpermit seasonal indexes have been calculated from nonfarm nonpermit starts which account for about 90 percent of all nonpermit starts. *Preliminary. (NA) Not available.

¹The implicit seasonal index is the ratio of the unadjusted number of housing unit starts for the United States to the seasonally adjusted national totals of housing unit starts.

Table 8.—SEASONAL INDEXES USED TO ADJUST HOUSING UNITS AUTHORIZED BY BUILDING PERMITS, BY TYPE OF STRUCTURE

Year and month	Implicit seasonal indexes ¹ , U.S. total	Northeast			North Central			South			West		
		1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family	1-family	2-4 family	5 or more family
1964													
January.....	74.9	47.6	62.1	59.5	40.6	60.1	68.5	82.9	103.1	92.2	87.6	101.4	100.6
February.....	82.4	49.0	81.0	91.6	58.0	68.8	73.4	96.7	100.9	84.5	97.6	99.9	102.2
March.....	101.6	95.1	130.5	89.1	96.4	103.7	96.6	111.3	108.8	99.0	103.6	113.5	103.7
April.....	116.5	129.2	130.5	126.8	133.9	131.4	101.0	114.6	107.2	103.6	112.6	114.0	110.4
May.....	117.3	131.4	117.2	98.7	131.3	116.5	128.8	113.8	105.9	110.2	112.5	103.3	117.2
June.....	110.7	128.6	102.9	94.7	130.9	108.2	126.8	106.0	97.6	99.3	109.5	109.6	98.3
July.....	106.3	122.3	89.3	88.0	123.5	111.2	108.7	106.6	90.9	103.7	107.9	89.5	94.7
August.....	103.2	109.6	94.7	117.2	110.0	109.7	94.3	104.2	91.5	93.5	102.2	88.7	99.3
September.....	106.8	115.8	100.0	95.1	117.1	98.9	122.4	103.0	107.6	110.6	102.7	102.1	91.6
October.....	101.3	109.4	117.3	103.5	108.7	113.2	100.5	98.7	105.4	99.3	96.2	91.2	93.3
November.....	96.5	98.0	96.1	119.6	92.5	99.7	105.2	90.8	111.1	100.5	89.5	87.7	96.0
December.....	78.8	64.8	77.7	118.4	57.5	78.9	75.8	71.0	70.7	100.3	78.2	98.5	93.1
1965													
January.....	71.8	47.5	61.9	57.9	40.2	59.9	68.6	82.5	102.8	93.3	87.9	102.2	100.8
February.....	81.8	48.7	81.3	92.9	57.8	68.6	73.6	96.8	100.6	85.1	97.9	99.4	102.4
March.....	101.6	95.0	131.5	90.0	96.6	103.1	96.2	111.7	109.3	99.3	103.2	113.9	102.9
April.....	*117.3	129.6	131.2	126.7	133.9	131.7	100.5	114.7	107.1	103.3	112.6	114.2	110.4
May.....	(NA)	131.6	116.5	96.1	131.5	116.9	126.1	113.8	105.8	109.1	112.5	103.0	117.8
June.....	(NA)	128.5	102.4	95.1	131.0	107.9	129.2	105.9	96.9	99.4	109.8	109.8	97.7

NOTE: These seasonal adjustment indexes are calculated on the basis of averages per working day of the number of housing units authorized. *Preliminary. (NA) Not available. ¹The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits to the United States to the seasonally adjusted national totals of housing units authorized.

Table 9.—AVERAGE PERCENTAGE CHANGES AND RELATED MEASURES FOR MONTHLY HOUSING STARTS AND BUILDING PERMIT AUTHORIZATIONS

Item	\bar{O}	\bar{S}	\bar{I}	\bar{C}	MCD
BUILDING PERMITS					
U.S. total (composite of 12 separately adjusted series).....	9.44	8.49	3.38	1.45	3
Northeast.....	16.77	13.57	8.50	2.23	4
North Central.....	18.29	17.39	6.33	1.82	4
South.....	7.91	6.75	4.17	1.62	3
West.....	7.79	5.79	4.82	1.63	4
1 family.....	10.51	9.50	3.08	1.43	3
2-4 family.....	10.20	7.36	6.33	1.87	4
5+ family.....	12.42	7.65	9.69	2.70	4
PRIVATE HOUSING STARTS					
U.S. total-private.....	13.18	11.23	7.54	1.03	6
Northeast.....	27.67	21.12	16.52	2.41	6
North Central.....	25.83	20.58	13.51	2.35	6
South.....	12.61	9.74	8.69	2.09	5
West.....	11.92	8.83	9.66	1.43	6
Private nonfarm.....	13.18	11.40	7.31	1.14	6

NOTE: Summary measures of the seasonal, cyclical, and irregular components of housing starts provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Some discussion of these measures appears in each issue of Business Cycle Developments, published monthly by the Bureau of the Census, along with similar data for a number of other series. More detailed explanations of the basic method and definitions of the measures used, appear in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, N.Y., 1957. More detailed measures and descriptions of average percentage changes and related measures for monthly housing starts and building permit authorizations appear in the July 1963 report (C20-50). A similar presentation will appear in these reports from time to time.

The following are brief descriptions of the measures used in this report.

\bar{O} is the average month-to-month percentage change, without regard to sign, in the original series before seasonal adjustment.

\bar{S} is the average month-to-month percentage change, without regard to sign, in the seasonal component. It is a measure of the average monthly seasonal change in the unadjusted series.

\bar{I} is the average month-to-month percentage change, without regard to sign, for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.

\bar{C} is the average month-to-month percentage change, without regard to sign, for the cyclical component, which is a smooth, flexible moving average.

MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD the average (without regard to sign) percentage changes in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 5-month spans. MCD is the shortest span for which the average change (without regard to sign) in the cyclical component is larger than the average change (without regard to sign) in the irregular component; thus it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements. Since changes are not computed for spans greater than 5 months, all series with an MCD greater than "5" are shown as "6." MCD is small for smooth series and large for erratic series.

DEFINITIONS AND DESCRIPTIONS

Definitions

A housing start consists of the start of construction on a new housing unit, when located within a new building which is intended primarily as a housekeeping residential building designed for nontransient occupancy. Start of construction for private housing units is defined as the beginning of excavation for the foundation of a building; for public housing units it is defined as when the construction contract is awarded. All housing units in a multifamily building are counted as being started when excavation for the building is started. A housing unit is a single room or group of rooms intended for occupancy as separate living quarters by a family, by a group of unrelated persons living together, or by a person living alone. A housekeeping residential building is one consisting primarily of housing units. Housing starts exclude group quarters (such as dormitories and rooming houses) and transient accommodations (such as transient hotels, motels, and tourist courts) and mobile homes (trailers).

The standard Census geographic regions are used in the tables of this report. States contained in each region are as follows: Northeast—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; West—Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii.

The distribution of housing starts between metropolitan and nonmetropolitan areas is based on the definitions published by the Bureau of the Budget in Standard Metropolitan Statistical Areas. Data for the period beginning with January 1964, on metropolitan-nonmetropolitan distributions, are based on 1964 definitions; data for 1961-1963 are based on 1961 definitions; and data for 1959-1960 are based on 1959 definitions.

Descriptions and Procedures

HOUSING STARTS COMPILATION

Compilation of the housing starts series depends on 4 steps. First, an estimate is prepared of the number of housing units for which building permits

have been issued in all 12,000 permit-issuing places each month. Second, a sample field survey is made of the use of permits. In this survey, a sample of building permits is selected each month and then an inquiry is made of the owner or the builder to find out whether and when the units covered by the permit have been started. In case the units authorized by permits in a particular month are not started by the end of that month, follow-up calls are made in successive months to find out when the units were actually started. From this sample of permits, ratios are calculated of the number of units started to the number of units covered by permits, with separate ratios for units started each month from permits of that month and of each preceding month. These ratios are then applied to the total number of units authorized by permits in the same months to provide estimates of the total number of units started each month with permit authorization. Third, having produced an estimate of the number of units started in each month with permit authorization, an adjustment is next made to take care of units started within permit-issuing areas but without permit authorization.

The final step in the estimates of housing starts is to add an estimate of units started in areas where building permit systems do not exist. This estimate is based upon current monthly surveys in 95 broad areas (counties or groups of counties). In these areas, visits are made to a select group of informed people and a list is obtained from them of all residential buildings they know to have been started within the nonpermit portions of these areas during the preceding month. Information provided by these sources is next checked by field visit. As a final step, a sample of 315 small land areas is selected, and these small areas are canvassed intensively by the enumerators to find by observation, all units started since the enumerators' last visit a month earlier. On the basis of these findings, estimates are made of the number of units not reported by the informed sources, and these are added to the information from the sources to provide an estimate of total construction in the nonpermit areas.

Information on public housing is obtained, for the most part, from the agencies involved, e.g., Public Housing Administration, Department of Defense, New York City Housing Authority, and others.

BUILDING PERMITS

Housing units authorized by local building permits relate to the issuance of permits rather than to the actual start of construction. They do, however, provide some indication of activity in residential building in advance of the start of actual

DEFINITIONS AND DESCRIPTIONS

construction. Although construction is started on most residential buildings in the same month in which the permit is issued, several months or more may pass from the time a permit is issued to the start of construction. In a small number of cases, permits issued are not used at all and are permitted to lapse. The 12,000 areas with local building-permit systems for which figures are currently given in this report account for a major portion of residential building in the United States. For the country as a whole, about 83 percent of the private housing units were constructed in areas of this permit-issuing universe in 1963.

The series shown in table 6, beginning with 1963, pertains to all of the approximately 12,000 places in the United States which were identified in 1962 as having local building-permit systems. For earlier years, back to 1959, the series relates to the 10,000 places identified as permit-issuing in 1959. In 1963, the number of housing units authorized in the 12,000 places was 3.6 percent greater than the number in the 10,000 places. The report for January 1964 (C20-56) shows the relationship between the two series in each month of 1963. Basically, the procedure followed in arriving at the monthly building-permit authorization totals involves the cumulating of monthly data from all permit-issuing places that authorized 50 or more housing units (20 or more in some states) in a recent year along with estimates for the less active places based on a stratified probability sample of these places.

A more detailed discussion of the uses and limitations of building-permit data is provided in the Census Bureau's monthly reports on Building Permits (C40 and C42).

SAMPLING VARIABILITY

Since the estimates of housing starts and private housing units authorized by local building permits are, to a considerable extent, based on samples, they are subject to sampling variability and may be expected to differ from what would be obtained from a complete count in which identical measurement techniques were employed. The standard error is primarily a measure of such sampling variability. The chances are about 68 out of 100 that the difference due to sampling variability between an estimate and the figure that could be obtained from a complete enumeration is less than the standard error; about 95 out of 100 that the difference is less than twice the standard error; and 99 out of 100 that it is less than 2-1/2 times the standard error. The relative standard error ($\frac{s}{x}$) for the monthly estimate of total housing starts as computed for this report is between 3 and 4 percent. For housing units authorized, it is approximately 1 percent for the final figure and 2 percent for the preliminary figure. $\frac{s}{x}$ is the relative standard error of the total number

of housing starts or housing units authorized; that is to say, the sampling error expressed as a percentage of the total number of housing starts or authorizations.

SEASONAL ADJUSTMENT

The seasonal factors for both housing starts and building permits have been developed using the X-9 version of the Census Method II program. These factors were introduced beginning with the July 1963 issue of Construction Reports: Housing Starts (C20-50). A detailed description of the Basic Method II has been published in Electronic Computers and Business Indicators, Occasional Paper 57, National Bureau of Economic Research, New York, 1957. A summary description of the differences between the X-9 version and that described in Electronic Computers and Business Indicators appears in Appendix E of the July 1963 issue of Business Cycle Developments, published by the Bureau of the Census. Detailed specifications for the X-9 version and additional information are available, upon request, from the Chief Economic Statistician, Bureau of the Census, Washington, D.C., 20233.

Housing Starts

Seasonal adjustments for the housing starts series have been computed for private housing starts only. No seasonally adjusted series are available for total housing starts, including publicly owned units.

The seasonally adjusted data are based on 4 years of unadjusted data for starts in permit-issuing places (May 1959-April 1963), and 6 years of data (1957-1962) for starts in nonpermit areas. Satisfactory seasonal indexes require a minimum of about 6 years of data. For this reason, since the indexes for the major part of the total are based on a shorter period, the seasonal adjustment now applied to the housing starts series is still not to be considered final. The seasonal factors will be re-examined each year as more data become available, and the seasonally adjusted data will be revised if significant changes in seasonality appear.

The seasonal adjustment of housing starts does not include any special modification for the number of working days, beyond such allowance for the average number of working days in a month as is provided by the regular seasonal adjustment. Experimental work carried on by the Bureau of the Census has not yielded a consistent and satisfactory working-day adjustment for housing starts.

DEFINITIONS AND DESCRIPTIONS

Building Permits

The seasonal adjustments for the number of housing units authorized by local building permits have been developed in detail by region and by type of structure.

Building-permit seasonal adjustments take account of the varying number of working days per month. Working days are defined as the days from Monday through Friday, excluding eight major holidays (New Years, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, and Christmas). Each reported monthly permit total is divided by the number of working days in the month, to arrive at a daily average for that month. The seasonal adjustment

indexes are then applied to the daily average and the result multiplied by the number of working days in the year.

The seasonal factors have been based on data from January 1954 through June 1964, and they are moving seasonals. For the period 1959-1964, monthly figures were available for the present series on permit authorizations in about 10,000 permit-issuing places. For 1954-1959, available data related to only some 6,600 places. Before calculation of the seasonal factors, these data for 1954-1959 were adjusted upward (by type of structure and region) on the basis of the overlap of the two series in the first 4 months of 1960.

SPECIAL SUPPLEMENT

Starts of Apartment Buildings with 5 or More Housing Units, 1964

Introduction

This supplement provides statistics on selected characteristics of privately owned apartment houses started in the United States during 1963 and 1964. These data apply only to structures with 5 or more housing units—apartment houses.

Summary of Findings

Most apartment house construction continues to occur in metropolitan areas. In 1964, 92 percent of apartment house buildings, accounting for 93 percent of the housing units in such structures, were started in metropolitan areas (tables 1 and 3). This distribution was not much different from that of 1963. There was a significant decline between 1963 and 1964 in the proportion of both apartment buildings and apartment units started in the West in relation to the rest of the country.

The greatest number of apartment houses started during 1964 were buildings with three floors or less. Approximately 96 percent of the buildings were in this category (table 4). However, the remaining 4 percent of the apartment buildings with 4 floors or more accounted for 17 percent of the apartment units (table 2). This distribution was not much different from 1963. However, there were some regional shifts between the two years. The most noticeable change was in the Northeast. In this region, buildings with 4 floors or more accounted for 30 percent of the apartment units started in 1964 compared with 51 percent started in 1963. Furthermore, the number of housing units in buildings with 3 floors or less increased from 49 percent to 70 percent between these 2 years.

Three-fourths of the apartment buildings started during 1964 had between 5 and 19 apartment units, the same as in 1963 (table 7). The remaining one-fourth of the buildings started in 1964 had 20 units or more and accounted for 58 percent of all apartment

units, not much different from 1963 (table 6). The proportion of buildings with 100 units or more started in 1964 was the same as in 1963—2 percent. However, the average number of units in these buildings started in 1964 was considerably greater than those started the previous year. In 1964, these buildings with 100 or more units accounted for 13 percent of all apartment units whereas in 1963 they accounted for only 9 percent.

In 1964, as in 1963, 4 percent of the apartment buildings had 3 floors or more while 8 percent of all apartment buildings started had elevators (table 8). One-fourth of the apartment units were in buildings with elevators—a slight decline from 1963 (table 9). The Northeast led the rest of the country in the proportion of apartment units in buildings with elevators.

Description of Survey

The data relating to housing starts are based on sample surveys conducted each month. The information is obtained from a national probability sample of all housing units on which construction is started. The size of the sample varies from month to month. However, during 1964 approximately 6,300 buildings with 5 or more apartments came into the starts survey sample. This sample represents more than 25 percent of all apartment buildings started during 1964.

Because of the method of calculating the data, figures on the actual number of buildings with 5 or more housing units and the number of housing units in those buildings are not now available. Published figures show 524,000 units in buildings with 3 or more housing units which were started in 1964. The great majority of these were in buildings with 5 or more units.

For a more detailed description of the housing starts survey and its limitations see pages 7-9.

Table S-1.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS
STARTED BY METROPOLITAN-NONMETROPOLITAN LOCATION AND BY REGION, 1964 AND 1963

Location	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
By region										
Total.....	100	100	21	20	18	17	33	29	28	34
1964..	100	100	21	20	18	17	33	29	28	34
1963..	100	100	21	20	17	16	34	29	28	34
Metropolitan.....	100	100	21	21	17	16	34	29	28	34
1964..	100	100	21	21	17	16	34	29	28	34
1963..	100	100	21	21	16	16	29	29	34	34
Nonmetropolitan.....	100	100	31	4	25	32	24	38	19	26
1964..	100	100	31	4	25	32	24	38	19	26
1963..	100	100	31	4	25	32	24	38	19	26
Within region										
Total.....	100	100	100	100	100	100	100	100	100	100
1964..	100	100	100	100	100	100	100	100	100	100
1963..	100	100	100	100	100	100	100	100	100	100
Metropolitan.....	93	95	90	99	90	90	95	93	95	96
1964..	93	95	90	99	90	90	95	93	95	96
1963..	93	95	90	99	90	90	95	93	95	96
Nonmetropolitan.....	7	5	10	1	10	10	5	7	5	4
1964..	7	5	10	1	10	10	5	7	5	4
1963..	7	5	10	1	10	10	5	7	5	4

Note: Components may not add to totals due to rounding.

¹Northeast: Conn., Maine, Mass., N.H., N.J., N.Y., Pa., R.I., Vt.

North Central: Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Nebr., N. Dak., Ohio, S. Dak., Wis.

South: Ala., Ark., Del., D.C., Fla., Ga., Ky., La., Md., Miss., N.C., Okla., S.C., Tenn., Tex., Va., W. Va.

West: Ariz., Calif., Colo., Idaho, Mont., Nev., N. Mex., Oreg., Utah, Wash., Wyo., Alaska, Hawaii.

Table S-2.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED BY NUMBER OF FLOORS IN BUILDING AND BY REGION, 1964 AND 1963

Number of floors in building	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
By region										
Total.....	100	100	21	20	18	17	33	29	28	34
1-3 floors.....	100	100	18	12	17	18	34	30	31	40
4-6 floors.....	100	100	36	56	27	10	15	20	22	14
7-12 floors.....	100	100	36	29	24	20	34	43	6	9
13-19 floors.....	100	100	31	47	8	9	44	37	17	6
20 floors or more.....	100	100	46	76	15	12	25	5	14	7
Within region										
Total.....	100	100	100	100	100	100	100	100	100	100
1-3 floors.....	83	80	70	49	81	84	85	81	91	94
4-6 floors.....	6	6	10	18	8	4	3	4	4	3
7-12 floors.....	5	6	9	9	7	7	5	9	1	2
13-19 floors.....	3	5	5	11	1	3	4	6	2	1
20 floors or more.....	3	4	6	13	2	3	2	1	1	1

Note: Components may not add to totals due to rounding.

¹See table 1, footnote 1.

Table S-3.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1964 AND 1963, BY METROPOLITAN-NONMETROPOLITAN LOCATION AND BY REGION

Location	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
By region										
Total.....	100	100	15	11	19	19	31	29	34	41
Metropolitan.....	100	100	14	11	18	18	32	29	36	42
Nonmetropolitan.....	100	100	24	4	36	36	22	32	18	29
Within region										
Total.....	100	100	100	100	100	100	100	100	100	100
Metropolitan.....	92	93	87	97	85	87	94	92	96	95
Nonmetropolitan.....	8	7	13	3	15	13	6	8	4	5

Note: Components may not add to totals due to rounding.

¹See table 1, footnote 1.

Table S-4.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1964 AND 1963, BY NUMBER OF FLOORS IN BUILDING AND BY REGION

Number of floors in building	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
	By region									
Total.....	100	100	15	11	19	19	31	29	34	41
1-3 floors.....	100	100	15	10	19	19	31	29	35	42
4-6 floors.....	100	100	31	43	22	14	19	22	29	21
7-12 floors.....	100	100	29	26	21	21	41	39	10	15
13-19 floors.....	100	100	28	35	8	32	43	28	22	5
20 floors or more.....	100	100	49	62	15	20	22	11	15	8
Within region										
Total.....	100	100	100	100	100	100	100	100	100	100
1-3 floors.....	96	96	93	86	96	96	97	98	97	98
4 floors or more ²	4	4	8	14	3	4	3	2	3	2
4-6 floors.....	58	57	57	62	64	43	40	49	74	72
7-12 floors.....	26	21	24	14	28	24	39	32	12	19
13-19 floors.....	9	15	8	13	4	25	15	16	9	5
20 floors or more.....	7	7	11	12	5	8	5	3	4	3

Note: Components may not add to totals due to rounding.

¹See table 1, footnote 1.²Buildings with 4 floors or more distributed on the basis of 100 percent.

Table S-5.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1964 AND 1963, BY METROPOLITAN-NONMETROPOLITAN LOCATION AND BY NUMBER OF UNITS IN BUILDING

Location	All housing units	Number of units in building						
		5-9	10-19	20-29	30-49	50-99	100-199	200 or more
By number of units in building								
Total.....1964.....	100	17	25	15	18	12	7	6
.....1963.....	100	17	25	16	16	10	7	8
Metropolitan.....1964.....	100	17	25	15	17	12	7	6
.....1963.....	100	17	25	16	16	11	7	8
Nonmetropolitan.....1964.....	100	19	31	16	30	5	-	-
.....1963.....	100	28	30	16	27	-	-	-
By location								
Total.....1964.....	100	100	100	100	100	100	100	100
.....1963.....	100	100	100	100	100	100	100	100
Metropolitan.....1964.....	93	92	92	94	89	97	100	100
.....1963.....	95	92	94	95	92	100	100	100
Nonmetropolitan.....1964.....	7	8	8	6	11	3	-	-
.....1963.....	5	8	6	5	8	-	-	-

Note: Components may not add to totals due to rounding.
- Represents zero.

Table S-6.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED IN 1964 AND 1963, BY NUMBER OF HOUSING UNITS IN BUILDING AND BY REGION

Number of housing units in building	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
By region										
Total.....	100	100	22	20	18	17	33	29	28	34
5-9 units.....	100	100	6	4	21	20	30	28	43	47
10-19 units.....	100	100	19	13	21	20	29	29	31	37
20-29 units.....	100	100	28	19	13	16	35	27	24	39
30-49 units.....	100	100	21	13	14	18	39	30	26	38
50-99 units.....	100	100	24	32	19	13	34	32	23	24
100-199 units.....	100	100	36	44	17	16	32	28	16	12
200 units or more.....	100	100	37	55	16	5	37	34	9	5
Within region										
Total.....	100	100	100	100	100	100	100	100	100	100
5-9 units.....	17	16	5	7	20	17	15	15	26	21
10-19 units.....	25	26	22	17	29	36	22	22	28	29
20-29 units.....	15	19	21	23	11	16	16	18	13	21
30-49 units.....	18	19	17	12	14	19	21	24	17	18
50-99 units.....	12	10	13	16	13	6	12	13	10	7
100-199 units.....	7	5	12	9	7	5	7	5	4	5
200 units or more.....	6	4	10	17	5	2	7	4	2	-

Note: Components may not add to totals due to rounding.
- Represents zero.

See table 1, footnote 1.

Table S-7.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1964 AND 1963, BY NUMBER OF HOUSING UNITS IN BUILDINGS AND BY REGION

Number of housing units in building	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
	By region									
Total.....	100	100	15	11	19	19	31	29	34	41
5-9 units.....	100	100	6	4	21	20	29	28	43	48
10-19 units.....	100	100	19	13	21	20	30	30	31	37
20-29 units.....	100	100	31	19	12	16	34	27	23	39
30-49 units.....	100	100	21	13	14	17	39	30	26	39
50-99 units.....	100	100	23	30	19	12	36	32	22	25
100-199 units.....	100	100	35	43	17	15	31	30	16	13
200 units or more.....	100	100	36	51	18	5	37	38	8	5
	Within region									
Total.....	100	100	100	100	100	100	100	100	100	100
5-9 units.....	42	43	17	17	46	46	40	42	53	50
10-19 units.....	33	33	40	40	36	34	32	34	30	30
20-29 units.....	12	12	24	21	8	10	13	11	8	11
30-49 units.....	8	8	12	9	6	7	11	8	6	7
50-99 units.....	3	3	5	8	3	2	4	3	2	2
100-199 units.....	1	1	2	3	1	1	1	1	-	-
200 units or more.....	1	1	1	2	-	-	-	1	-	-

Note: Components may not add to totals due to rounding.

- Represents zero.

¹See table 1, footnote 1.

Table S-8.—PERCENT DISTRIBUTION OF BUILDINGS WITH 5 OR MORE HOUSING UNITS STARTED IN 1964 AND 1963, BY PRESENCE OF ELEVATORS, BY NUMBER OF FLOORS AND BY REGION

Number of floors	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
Total.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	8	8	9	16	7	5	6	5	10	9
Without elevators.....	92	92	91	84	93	95	94	95	90	91
1-3 floors.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	5	5	2	4	4	2	3	2	8	8
Without elevators.....	95	95	98	96	96	98	97	98	92	91
4-6 floors.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	95	87	100	90	94	74	82	81	99	94
Without elevators.....	5	13	-	10	6	26	18	19	1	6
7 floors or more.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	100	100	100	100	100	100	100	100	100	100
Without elevators.....	-	-	-	-	-	-	-	-	-	-

Note: Components may not add to totals due to rounding.

- Represents zero.

¹See table 1, footnote 1.

Table S-9.—PERCENT DISTRIBUTION OF HOUSING UNITS IN BUILDINGS WITH 5 OR MORE UNITS STARTED IN 1964 AND 1963,
BY PRESENCE OF ELEVATORS, BY NUMBER OF FLOORS IN BUILDING AND BY REGION

Number of floors	All regions ¹		Northeast		North Central		South		West	
	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963
Total.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	25	27	34	54	25	20	21	23	25	20
Without elevators.....	75	73	66	46	75	80	79	77	75	80
1-3 floors.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	10	10	6	8	7	5	8	5	18	16
Without elevators.....	90	90	94	92	93	95	92	95	82	84
4-6 floors.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	96	94	100	98	97	88	83	86	98	97
Without elevators.....	4	6	-	2	3	12	17	14	2	3
7 floors or more.....	100	100	100	100	100	100	100	100	100	100
With elevators.....	100	100	100	100	100	100	100	100	100	100
Without elevators.....	-	-	-	-	-	-	-	-	-	-

- Represents zero.

¹See table 1, footnote 1.