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Volume Title: Residential Real Estate, Its Economic Position as Shown by Values, Rents, Family Incomes, Financing, and Construction, Together with Estimates for All Real Estate

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as a whole was then distributed among the ten years in accordance with the distribution of the decade's construction, shown by these 82 cities. For years since 1929, construction in the nonfarm area outside the 257 cities has been estimated by other methods, too varied to detail here."

Although the estimates for unreported nonfarm areas are based on a rather small sample, 82 cities, they do not differ materially from the NBER estimates (col. 1) which are based on more cities and more detailed processes. The Brookings estimates, prepared by George Terborgh, pioneered in basing the estimates of construction upon the relation of building to the increase in the number of families.

The methods by which the Department of Commerce estimates (col. 3) were obtained are described in *Construction Activity in the United States, 1915-37* (pp. 40-41):

"The estimation of the number of new family units involved two steps. First, by using the number of family units for which permits were issued in each size group of cities, classified according to their satellite and nonsatellite character, rates showing the number of units per 10,000 persons annually were computed. These rates formed the basis for estimating the number of family units in smaller cities, for which actual reports were not available. The actual rates used were determined after a careful study of the relationships between building rates in cities of different size and relationship to metropolitan areas. In calculating the rates for satellite cities, an adjustment based upon the Real Property Inventory was used. In the case of nonsatellite communities the building rates used as the basis of estimation were substantially less than those obtained directly from the larger reporting cities. The second step involved the extension of these rates to the cities in rural nonfarm areas from which actual reports were not received. This extension was based upon the population of the smaller cities and rural nonfarm areas."

Considerable uncertainty is introduced into the estimates of building in small cities and rural nonfarm areas, when their population is taken as a basis and building rates from larger cities are projected, without adjustment for differences in population growth as between reporting and unreported areas. Analyses made in connection with the present study indicate

that per capita building rates of a town or city are closely related to population growth (see Ch. V, sec. 1 b).

Although not strictly comparable with the data on family units, the F. W. Dodge data on square feet of floor space in residential construction (col. 4) constituted the other chief series previously available that directly measured the trend of physical volume of residential building over a period of years. As mentioned in Note A it is difficult to translate the data on square feet of floor space into number of dwelling units.

Our estimates were based upon the number of families provided for, as reported in building permits in 257 cities and published by the Bureau of Labor Statistics, (col. 5).

C Fire, Flood, and Other Losses

Demolition permits are not usually issued for dwellings completely destroyed by fire, flood, windstorm, or earthquake. Fire losses in residential buildings alone are not available on a national basis, but reports from 7 states (Illinois, Indiana, Iowa, Kansas, Louisiana, Massachusetts, Oregon; *President's Conference on Housing, 1931, Part VIII, p. 5*) for 1930 indicate that 58 per cent of the total number and 32 per cent of the aggregate fire losses were in dwellings. On the basis of a ten-year average of approximately \$500 million aggregate property loss reported by the National Board of Fire Underwriters, a loss of \$160 million is indicated for dwellings. If this represented the complete destruction of dwellings averaging, say, \$5,000, it would mean a loss of some 32,000 dwellings a year. However, only a small portion of the aggregate dollar loss represents complete destruction of dwellings. (Average loss per fire in dwellings in the 7 reporting states in 1930 was only \$770.) Most of the loss is repaired and the property continued in use. Consequently 15,000 dwellings per year would probably be a generous estimate of the units completely destroyed by fire, even allowing for losses not covered by insurance and for relatively higher losses in rural than in urban areas. In the absence of specific data, it was assumed that losses due to floods, earthquakes, windstorms, and other causes would raise the total losses (other than by demolition) to 25,000 units per year, with a range of 20,000-30,000.

Note to Part Two: Supplementary material developed by the NBER, but not included in detail in this volume. The following bodies of data not reproduced in Part Three are in the form of tabulations unless otherwise designated.

I Supplementary Value and Rent Data

1) Values and rents for 139 cities from 1930 *Census of Population* (for complete list see Tables A 6

and B 5). The description of this tabulation in Part Two, Ch. II, sec. 2 indicates the character of the material.

Folder 32: Miscellaneous tables on average rent and value, 139 cities, 1930

Work-table	Sheets	Work-table	Sheets
C 3	1-5	C 36	
C 9		C 37	1-4
C 11	1-4	C 40	
C 26	1-4		18 miscellaneous

Folder 33: Owner-occupied and rented dwelling units by value and rent groups. Special Census tabulation of 1930 data (full coverage).

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1-10 Summaries of rent data	17-19 Orange, Mass.
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Section B: 10 Middle Atlantic cities, 198 sheets

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	197-198 Canton, N. Y.

Section C: 12 East North Central cities, 111 sheets

1- 26 Portsmouth, Ohio	87- 90 West Bend, Wis.
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74- 81 Valparaiso, Ind.	105-107 Crystal Falls, Mich.
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Section D: 13 West North Central cities, 87 sheets

1-36 Springfield, Mo.	70-73 Richmond, Mo.
37-55 Sioux Falls, S. D.	74-78 Alexandria, Minn.
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61-65 Abilene, Kans.	82 Forest City, Iowa
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1-22 Wilmington, N. C.	74-77 Milledgeville, Ga.
23-50 Hagerstown, Md.	78-81 Franklin, Va.
	82 Calhoun, Ga.
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51-58 Martinsburg, W. Va.	84 Chesterfield, S. C.
59-68 Tallahassee, Fla.	85 Boca Raton, Fla.
69-73 Richwood, W. Va.	86 Odessa, Del.
	87 Wilson Mills, N. C.

Section F: 7 East South Central cities, 30 sheets

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14-17 Paris, Tenn.	28 Carbon Hill, Ala.
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	30 Woodbury, Tenn.

Section G: 8 West South Central cities, 65 sheets

1-30 Austin, Texas	53-56 Hope, Ark.
31-46 Baton Rouge, La.	57-60 Conway, Ark.
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	64 Vivian, La.
	65 Lockney, Tex.

Section H: 10 Mountain cities, 39 sheets

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23-29 Salida, Colo.	36-37 Florence, Ariz.
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1- 3 Owner-occupied 1-family dwellings, average value by value groups for 139 cities
4- 7 Summary of owner-occupied dwelling units; number, aggregate, and average value by value groups for 49 cities, sample coverage.

- 8- 13 Summary of owner-occupied dwelling units; number, aggregate, and average value by value groups for 90 cities, full coverage.
- 14- 15 Owner-occupied dwelling units, number and average value by value groups of 25 cities having populations less than 2,500 in 1930, full coverage.
- 16 Summary of 1-family owner-occupied dwellings; number, aggregate, and average value for 86 cities.
- 17-104 Summaries by geographic divisions
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- Folder 34: Owner-occupied and rented dwellings by value and rent groups. Special Census tabulation of 1930 data (sample coverage)*
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- 1-144 Providence, R. I. 163-176 Portland, Me.
- 145-162 Waterbury, Conn.
- Section B: 1 Middle Atlantic city, 20 sheets
- 1-20 Erie, Pa.
- Section C: 6 East North Central cities, 286 sheets
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| 113-116 Fargo, N. D., W. N. C. | 128-133 Wichita Falls, Texas, W. S. C. |

Folder 35: Des Moines, Iowa alone, Special Census tabulation of 1930 data (part sample and part full coverage) 87 sheets

2) Dwellings and dwelling units: detailed work tables, derived from *1930 Census of Population*, showing the mechanics by which the number of units were obtained by states and geographic divisions, give the number of dwelling units by value and rent classes for the 3,165 cities with populations over 2,500 classified by states and geographic divisions and further subdivided into five population groups.

Folder 21: Work-table C 38, sheets 1-58

Folder 22: Work-table C 4, sheets 1-58

3) Dwellings and dwelling units by type, population group, state, and geographic division (*Folder 25*): Work-table C 1; C 2, sheets 1-61; C 15, sheets 1-9.

4) Dwelling units in New York City: a special tabulation to show distribution by type of structure, made by the Census Bureau for use in estimating the value of residential properties of various classes in New York City (Files on "Construction Correspondence," letters of March 9 and 24, 1937)

II Family Income Data

1) Owner-occupant and tenant families: rent, income, and rent delinquency by personal enumeration and mail returns in 33 cities in 1929 and 1933

by 39 income groups, 8 tables for each of 33 cities. This material is designed for a monograph.

Folder 39: Income data for 33 cities—special tabulation from Financial Survey of Urban Housing by 39 income groups for personal enumeration and mail returns by tenure

Table 3: Tenant families: mail returns by 39 income groups for 1929

Annual rent bill, 1929

Number reporting, total rent, average rent per unit

Total family income, 1929, 1932, and 1933

Number reporting, total and average family income

Total family income, 1933, by 11 income groups

A cross tabulation of number reporting 1929 income by 39 groups and 1933 income by 11 groups

Table 4: Tenant families: personal enumeration by 39 income groups for 1929 for same items as in Table 3

Table 5: Owner-occupant families: mail returns by 39 income groups for 1929

Total family income, 1929, 1932, and 1933

Number reporting, total and average family income

Total family income, 1933, by 11 income groups

A cross tabulation of number reporting 1929 income by 39 income groups and 1933 income by 11 groups

Table 6: Owner-occupant families: personal enumeration by 39 income groups for 1929 for same items as in Table 5

Table 7: Tenant families: mail returns by 39 income groups for 1933

Annual rent bill, 1933

A cross tabulation of number reporting 1933 income for 39 income groups and number reporting 1933 rent for 11 rent groups, total and average rent per unit

Total family income, 1929, 1932, and 1933

Number reporting, total and average family income

Rent delinquency, 1933

Number reporting on rent status, number reporting rent not fully paid, percentage with rent not fully paid, number reporting months unpaid, total months unpaid, average months unpaid, number reporting amount unpaid, total and average amount unpaid

Table 8: Tenant families: personal enumeration by 39 income groups for 1933 for same items as in Table 7

Table 9: Owner-occupant families: mail returns by 39 income groups for 1933

Total family income, 1929, 1932, and 1933

Number reporting, total and average family income

Number reporting value of all properties, January 1, 1934

A cross tabulation of number reporting 1933 income for 39 income groups and number reporting value Jan. 1, 1934 by 11 value groups

Table 10: Owner-occupant families: personal enumeration by 39 income groups for 1933 for same items as in Table 9

III Real Estate Financial Data

A Apartment Buildings: Value, Income, Operating Expenses, and Financing, by Years (Folder 28):

1) Sixteen apartment buildings in Indianapolis: gross income, vacancy and concessions, actual rentals; operating expenses, including taxes before interest, net operating income before interest; income expressed as number of times mortgage interest was earned before refunding capital invested, and interest. Annual data and trends of items, 1937-33 (5 sheets). Data obtained for this project through the cooperation of D. T. Rowlands, University of Pennsylvania.

2) Twenty-one apartment buildings in St. Paul: gross income, net income before interest; operating expenses, payrolls, commissions, fuel, gas and electricity, water, telephone, miscellaneous; repairs, plumbing and heating, painting, fixed charges, taxes, insurance. Data complete for 21 properties in 1935 and 1936; for 16 properties in 1934, 1935, and 1936; and for 10 properties in 1933, 1934, 1935, and 1936. Data obtained for this project through the cooperation of D. T. Rowlands (10 sheets)

3) Sixty-eight apartment buildings in Philadelphia: year built, number of rooms; gross income, total expense, operating expenses, net income, rental income, maintenance and repairs, management expenses, taxes, interest, net income before interest, assessment, senior, junior, and total financing, interest rate, interest charged, services included in rent, by years, 1925-35. Tabulations by gross income groups. Series not complete for all properties. Data collected by and used in project by permission of D. T. Rowlands (81 sheets)

B Apartment and other buildings: Value and Financing (Folder 29):

- 1) 1,869 properties on Lower East Side, New York City: assessed value of land and of improvements; original debt, amount of first, second, and third mortgage; total payments of interest and principal; total payments of interest first year; total payments on principal, first year; outstanding debt, 1934, interest and principal, payments on outstanding loans in 1934, ratio of outstanding debt to assessed value of property, by Census tract and block number (1 sheet)
- 2) 1,301 indebted properties among the 1,869 properties: items under (1) (2 sheets)
- 3) 568 properties free from debt among the 1,869: items under (1) except financing (1 sheet)
- 4) Commercial and industrial buildings in Harlem: items under (1) (3 sheets)
- 5) 1,303 mortgaged properties among the 1,869 properties in (1) classified by 11 sources of credit and by first, second, and third mortgage: number of loans held, original amount, interest rate, total annual payments, total interest payments, and average term (1 sheet)
- 6) Same properties as in (5): distribution by debt-value ratios, by 11 classifications for each by Census tract and block number (2 sheets)
- 7) Same properties as in (5) classified by area: number, original mortgage, interest rates, payments, term, outstanding amount of first, second, third, and fourth mortgage by agency holding the mortgage (24 sheets)
- 8) 1,564 properties, Harlem, New York, for all properties, indebted properties, and properties free from debt, by Census tract and block number. Number, total and average value, original debt; outstanding debt, 1934, and as percentage of original debt; interest and principal payments, and payments as percentage of total debt, 1934; number and percentage of properties mortgaged, and properties free from debt (5 sheets)
- 9) Lower East Side area: number and percentage distribution of properties by type, age, condition, and Census tract (1 sheet)
- 10) Harlem: number and percentage distribution of properties by type, age, condition, and Census tract (1 sheet)
- 11) Harlem: number and percentage distribution of mortgaged properties by debt-value ratios, by Census tract and block number; by source of credit and priority, covering 1,198

first mortgages, 426 second mortgages, 75 third mortgages, and 5 fourth mortgages: number of mortgages held, average original mortgage, average mortgage outstanding; interest rate, amortization required in first year of mortgage, aggregate annual payments, annual interest payments for first year; average term, total outstanding debt, 1934 (3 sheets)

12) Harlem: distribution of mortgages by Census tract and block number, items in (11) by lending agency and priority of loan (31 sheets)

C Assessed values of urban real estate and their relation to sales or market values (Folder 19):

- 1) Schedules received from the tax assessors of 522 cities: assessed value of residential, commercial, industrial, and other taxable real estate, and real estate exempt from taxation, tabulated by states and geographic divisions. Work-table R 166, sheets 1-17
- 2) Original schedules used in C 1
- 3) 789 schedules received from commercial banks, savings banks, and real estate tax specialists, with their estimates of the percentage relation between assessed and market values in their respective cities, for residential, commercial, industrial, and other real estate taxed, June 30, 1936. Tabulated by states and geographic divisions. Work-table UR 167, sheets 1-21
- 4) Original schedules used in C 3 (Folder 29)
- 5) Several thousand properties in New York City, Borough of Manhattan, assessed and market values, 1935. Real estate foreclosure sales: assessed value of land and of improvements; selling price and ratio to assessed value; debt, taxes, total amount due, ratio of debt to assessed value, and ratio of market land value to assessed value (8 sheets)
- 6) Summary of the data referred to in C 5 by class of property: dwellings, apartments, commercial, and vacant (1 sheet)
- 7) Lower East Side and Harlem, voluntary sales, 1935: total value, value of land and of improvements, mortgage, value above mortgage, selling price, ratio of assessed value to selling price for residential and nonresidential properties (2 sheets)
- 8) Lower East Side and Harlem areas by Census tract and block number: number of properties, value and financing by type of property: residential, commercial, and industrial; value of land and of improvements, original and outstanding debt, payments by priority; properties held by institutions; and for vacant properties in Harlem, free and indebted: number, total

value, value of land and of improvements, original mortgage, payments, outstanding debt by priority, ratio of outstanding debt to assessed value (3 sheets)

9) New York areas and the Bronx in 1935, distribution of number of foreclosure sales by class of property and of ownership (2 sheets)

D Real estate in relation to commercial banking and other financing agencies (Folder 31):

1) Principal provisions of state and federal laws governing lending regulations with respect to real estate loans by each main class of financial agency, digest and tabulation: insurance requirements for mortgaged property, issuance or mortgage participation certificates, construction loans, power to make and insure Federal Housing Administration loans, limitations on lending, on aggregate funds lent on real estate security (by states), location of real estate, type of lien, basis of valuation, and repayment provisions (29 sheets)

2) Real estate loans by national and state banks: amount of farm loans, loans on other real estate, total real estate loans, loans and investments, and total resources, with ratios for the United States and by states, by years, 1911-36 (50 sheets)

3) Estimate of total maximum real estate loans that are legal for banks (51 sheets)

IV Nonfarm Residential Construction: (A) Building permits, (B) Contracts awarded (Folder 3)

A Building permits

1) "Families provided for" (dwelling units, all types) as reported by the Bureau of Labor Statistics, with annual totals for each of 311 cities each year for which data were reported, 1920-36, by states and geographic divisions. Subtotals for each year by population group and geographic division, 257 cities.

Note: Until recent years, the Bureau of Labor Statistics published data for cities arranged alphabetically with subtotals for regions or population groups, and it has not yet published many data by population groups (Work-table UR 106, sheets 1-9)

2) "Cost of new residential building," including non-housekeeping dwellings: hotels, clubs, etc. Similar to material described in IV A 1, giving total cost of new residential construction as reported in building permits, by states and geographic divisions, subtotals for each year, by population group and geographic division, 257 cities (Work-table UR 51, sheets 1-13)

3) Cost of non-housekeeping dwellings only,

similar to IV A 2 for 257 cities, by population group, state, and geographic division (Work-table UR 151, sheets 1-3)

4) Number, total and average cost of one-family dwellings as reported in building permits for each of 257 cities by years, 1921-36, by population group, state, and geographic division. Tabulation from bulletins published by the Bureau of Labor Statistics during 1921-30 and from its office records for 1931-36. Average cost per dwelling computed for reporting cities in each population group and each region annually; averages compiled, computed for approximately half of the 257 cities (Work-table UR 119, sheets 1-12); see Table E 7 for summary of averages

5) Summary tabulation of number of buildings and estimated total cost of new construction, all types, as reported in Bureau of Labor Statistics building permit data, 1920-36, by type of building; annual totals for varying number of reporting cities (189 in 1920 to 1,689 in 1936) (Work-table UR 135, sheets 1-2)

<i>Residential</i>	<i>Nonresidential</i>
1-family	Amusement and recreation
2-family	tion
1- and 2-family dwellings with stores	Churches
Multi-family	Factories, shops, etc.
Multi-family dwellings with stores	Garages, public
Hotels	Garages, private
Lodging houses	Gasoline and service stations
Other	Institutions
Total new residential	Office buildings
	Public buildings
	Public works and utilities
	Schools, libraries, etc.
	Sheds
	Stables and barns
	Stores, warehouses, etc.
	All other
<i>Total, new building</i>	<i>Total new nonresidential</i>
<i>Additions, alterations, and repairs</i>	
Residential	
Nonresidential	
<i>Grand Total</i>	

6) Demolitions: number of units for which demolition permits were issued in 7 large cities during various periods from 1918 to 1936, summary of Bureau of Labor Statistics building permit survey data for 159 cities, 1929-35

(Work-table UR 155, UR 156, sheets 1-3, and UR 118, sheets 1-5)

7) Residential repairs: building permit data on repairs to housekeeping and non-housekeeping dwellings each year, 1921-36, in 257 cities by population group, state, and geographic division. Tabulation from bulletins published by Bureau of Labor Statistics for 1921-30 and from its office records (Work-table UR 195, sheets 1-10)

8) Building permits, 1908-20: tabulation of U. S. Geological Survey building permit data on number of buildings (in some cities number of permits) and total cost (including repairs) in varying number of cities (43 in 1908 to 134 in 1920) by states and geographic divisions. Sub-totals by regions for each year for identical groups of cities reporting in current and preceding year (Work-table UR 46, sheets 1-3)

9) Building permits, 1910-20, by type of construction: tabulation of U. S. Geological Survey building permit data on number and cost of new wooden buildings (96-120 cities), and new brick or hollow tile buildings (87-110 cities), by states and geographic divisions (tabulation for 1910-13 not completed) (Work-table UR 183, sheets 1-7)

B Contracts awarded (F. W. Dodge data)

1) Residential: tabulation of value of residential contracts awarded (thousands of dollars):

states and geographic divisions, 37 states, 1925-36, and 27-36 states, 1919-24 (Work-table UR 149)

2) Apartments: tabulation similar to (1) of value of apartment contracts awarded (Work-table UR 183)

3) 1-family dwellings: summary of average value by states and geographic divisions, average values for each state annually, 1919-33, computed on basic tabulation sheets furnished by F. W. Dodge Corporation. Data for 11 cities: Boston, Providence, New York, Philadelphia, Pittsburgh, Cleveland, Detroit, Chicago, Miami, Atlanta, and Houston (Work-table UR 150)

4) New York City Tenement House data: tabulation of plans filed, buildings completed, demolitions, conversions, 1918-36, by boroughs, number of buildings, apartments, and rooms completed each year, average costs per building, apartment, and room, and average number of rooms per apartment, by boroughs, 1902-36; a tabulation of 11 vacancy surveys, various dates, 1919-33, by type of tenement (old or new law), by boroughs. Data from New York City Tenement House Department annual reports and special tabulations obtained by correspondence. (Work-table UR 52, sheets 1-5, UR 53, sheets 1-2, and UR 105)

TABLE EM 10

Dwelling Units Built by Class of City, 1920-1936

	Source	1920	1921	1922	1923	1924	1925	1926	
Dwelling Units Built, Preliminary, Not Corrected for Bias in 257 City Series¹									
1	113 central cities	<u>2/</u> 93,619	188,319	314,728	387,023	389,624	412,712	384,932	
2	120 central cities	<u>2/</u> 95,427	192,414	318,504	393,212	403,868	431,002	395,536	
3	64 satellite cities	<u>2/</u> 10,382	19,510	32,713	39,953	39,637	40,912	37,928	
4	184 met. dist. cities	lines 2 + 3	105,809	211,924	351,217	433,165	443,505	471,914	433,464
5	Total environs based on 64 cities ³	5.875 x line 3	60,994	114,621	192,189	234,724	232,867	240,358	222,827
6	Total environs based on 184 cities ³	0.645 x line 4	57,666	115,499	191,413	236,075	241,710	257,193	236,238
7	Total environs, average	(lines 5+6)/2	59,330	115,060	191,801	235,400	237,289	248,776	229,533
8	Urban environs (2,500 and over) ³	0.689 x line 7	39,692	76,975	128,315	157,483	158,746	166,431	153,558
9	Rural environs (under 2,500) ³	0.331 x line 7	19,638	38,085	63,486	77,917	78,543	82,345	75,975
10	98 metropolitan districts	lines 2 + 7	154,757	307,474	510,305	628,612	641,157	679,778	625,069
11	80 BLS nonmet. dist. cities	<u>2/</u>	10,472	15,526	21,486	23,762	23,809	23,168	19,019
12	Unreported nonmet. dist. urban	lines 13 - 11	59,502	88,219	122,083	135,016	135,283	131,641	108,066
13	Total nonmet. dist. urban ³	6.682 x line 11	69,974	103,745	143,569	158,778	159,092	154,809	127,085
14	257 cities	<u>2/</u>	114,473	223,355	368,927	450,738	453,070	476,792	441,879
15	Unreported urban	lines 16 - 14	110,258	187,864	284,947	336,652	347,179	357,795	310,275
16	Total urban	lines 10 + 13	224,731	411,219	653,874	787,390	800,249	834,587	752,154
17	Rural nonfarm based on total urban ³	0.129 x line 16	28,990	53,047	84,350	101,573	103,232	107,662	97,028
18	Rural nonfarm based on 80 nonmet. dist. cities ³	4.236 x line 11	44,359	65,768	91,015	100,656	100,855	98,140	80,564
19	Rural nonfarm, average	(lines 17+18)/2	36,674	59,408	87,682	101,114	102,044	102,901	88,796
20	Total nonfarm	lines 16 + 19	281,405	470,627	741,556	888,504	902,293	937,488	840,950
21	Total nonfarm outside 120 central cities	lines 20 - 2	165,978	278,213	423,052	495,292	498,425	506,486	445,414
Dwelling Units Built, Corrected for Bias									
22	Factor "A"	<u>4/</u>	0.945	0.955	0.965	0.980	0.990	1.000	1.010
23	Total nonfarm, corrected for bias	lines 20 x 22	247,028	449,449	715,602	870,734	893,270	937,488	849,360
24	Total nonfarm outside 120 central cities	lines 23 - 2	151,601	257,035	397,098	477,522	489,402	506,486	453,824
25	Correction for areas outside 120 central cities	lines 24/21	0.913,380	0.923,878	0.938,651	0.964,122	0.981,897	1.000,000	1.018,881
Redistribution of Corrected Nonfarm									
26	120 central cities	line 2	95,427	192,414	318,504	393,212	403,868	431,002	395,536
27	Urban environs (2,500 and over)	lines 8 x 25 ⁶	36,254	71,116	120,443	151,833	155,872	166,431	156,457
28	Rural environs (under 2,500)	lines 29 - 27	17,937	35,185	59,591	75,121	77,121	82,345	77,410
29	Total environs	lines 7 x 25	54,191	106,301	180,034	226,954	232,993	248,776	233,867
30	98 metropolitan districts	lines 26 + 29	149,618	298,715	498,538	620,166	636,661	679,778	629,403
31	Nonmet. dist. urban	lines 13 x 25 ⁶	63,913	95,848	134,761	153,082	156,212	154,809	129,484
32	Total urban	lines 30 + 31	213,531	394,563	633,299	773,248	793,073	834,587	758,887
33	Rural nonfarm	lines 19 x 25 ⁷	33,497	54,886	82,303	97,486	100,197	102,901	90,473
34	Total nonfarm	lines 32 + 33	247,028	449,449	715,602	870,734	893,270	937,488	849,360

¹Unreported refers to all cities or nonfarm areas not included in the Bureau of Labor Statistics list of 257 cities reporting continuously since 1921, even though reports may be available for some years for portions of the areas designated as unreported.

²Source of basic data: Bureau of Labor Statistics, Building Permits. Corrected for 'plans filed' on apartments in New York City but not executed; also for effect of increased coverage due to annexations.

³Factors based on Table C 9. See text.

⁴Based on estimates for 1935 and 1936 (Tables C 17 and C 18) and data for 31 metropolitan districts included in federal Real Property Inventory of 64 cities, 1934. See text.

⁵Bureau of Labor Statistics.

⁶Modified correction for bias applied 1931-35. See text for method.

⁷Except 1931-35 = lines 34 - 32. Line 34 same as line 23.

TABLE EM 10 (Cont'd)

Dwelling Units Built by Class of City, 1920-1936

	1927	1928	1929	Subtotal 1920-29	1930	1931	1932	Source
Dwelling Units Built, Preliminary, Not Corrected for Bias in 257 City Series¹								
1 113 central cities	352,358	311,732	201,991	3,037,038	112,538	82,057	23,908	<u>2/</u>
2 120 central cities	355,217	313,481	203,143	3,101,804	113,159	82,535	24,150	<u>2/</u>
3 64 satellite cities	39,792	35,886	20,804	317,117	9,865	6,988	2,231	<u>2/</u>
4 184 met. dist. cities	395,009	349,187	223,747	3,418,921	123,024	89,503	28,381	lines 2 + 3
5 Total environs based on 84 cities ³	233,778	209,655	121,049	1,863,082	57,957	40,937	13,107	5.875 x line 3
6 Total environs based on 184 cities ³	215,280	190,298	121,942	1,863,312	67,048	48,779	14,378	0.545 x line 4
7 Total environs, average	224,529	199,976	121,496	1,863,190	62,503	44,858	13,743	(lines 5+6) / 2
8 Urban environs (2,500 and over) ³ ₆	150,210	133,784	81,281	1,246,475	41,815	30,010	9,194	0.669 x line 7
9 Rural environs (under 2,500) ³	74,319	66,192	40,215	618,715	20,888	14,848	4,549	0.331 x line 7
10 96 metropolitan districts	579,746	513,457	324,639	4,964,994	175,662	127,393	37,893	lines 2 + 7
11 80 ELS nonmet. dist. cities	18,784	19,238	14,350	189,614	7,116	5,089	2,342	<u>2/</u>
12 Unreported nonmet. dist. urban	106,731	109,310	81,537	1,077,388	40,433	28,916	13,307	lines 13 - 11
13 Total nonmet. dist. urban ³	125,515	128,548	95,887	1,287,002	47,549	34,005	15,649	6.682 x line 11
14 257 cities	410,934	366,656	236,945	3,543,769	129,519	94,114	28,481	<u>2/</u>
15 Unreported urban	294,327	275,349	183,581	2,688,227	93,692	67,284	25,061	lines 16 - 14
16 Total urban	705,261	642,005	420,526	6,231,996	223,211	161,398	53,542	lines 10 + 15
17 Rural nonfarm based on total urban ³	90,979	82,819	54,248	803,928	28,794	20,820	6,907	0.129 x line 16
18 Rural nonfarm based on 80 nonmet. dist. cities ³	79,569	81,492	60,787	803,205	30,143	21,557	9,921	4.238 x line 11
19 Rural nonfarm, average	85,274	82,158	57,518	803,587	29,469	21,188	8,414	(lines 17+18) / 2
20 Total nonfarm	790,535	724,161	478,044	7,035,563	252,680	182,586	61,956	lines 16 + 19
21 Total nonfarm outside 120 central cities	435,318	410,680	274,901	3,933,759	139,521	100,051	37,806	lines 20 - 2
Dwelling Units Built, Corrected for Bias								
22 Factor "A"	1.025	1.040	1.065		1.130	1.160	1.190	<u>4/</u>
23 Total nonfarm, corrected for bias	810,298	753,127	509,117	7,035,473	285,528	211,800	73,728	lines 20 x 22
24 Total nonfarm outside 120 central cities	455,081	439,646	305,974	3,933,669	172,369	129,265	49,578	lines 23 - 2
25 Correction for areas outside 120 central cities	1,045,399	1,070,532	1,113,033		1,235,434	1,291,991	1,311,379	lines 24/21
Redistribution of Corrected Nonfarm								
26 120 central cities	355,217	313,481	203,143	3,101,804	113,159	82,535	24,150	line 2
27 Urban environs (2,500 and over)	157,029	143,220	90,468	1,249,123	51,660	38,235	11,782	lines 8 x 25 ⁶
28 Rural environs (under 2,500)	77,694	70,861	44,781	618,026	25,558	19,721	6,240	lines 29 - 27
29 Total environs	234,723	214,081	135,229	1,869,149	77,218	57,956	18,022	lines 7 x 25
30 96 metropolitan districts	589,940	527,582	338,372	4,968,953	190,377	140,491	42,172	lines 26 + 29
31 Nonmet. dist. urban	131,213	137,615	106,725	1,263,682	58,744	43,017	19,641	lines 13 x 25 ⁶
32 Total urban	721,153	665,177	445,097	6,232,615	249,121	183,508	61,813	lines 30 + 31
33 Rural nonfarm	89,145	87,950	64,020	802,858	36,407	28,292	11,915	lines 19 x 25 ⁷
34 Total nonfarm	810,298	753,127	509,117	7,035,473	285,528	211,800	73,728	lines 32 + 33

¹Unreported refers to all cities or nonfarm areas not included in the Bureau of Labor Statistics list of 257 cities reporting continuously since 1921, even though reports may be available for some years for portions of the areas designated as unreported.

²Source of basic data: Bureau of Labor Statistics, Building Permits. Corrected for 'plans filed' on apartments in New York City but not executed; also for effect of increased coverage due to annexations.

³Factors based on Table C 9. See text.

⁴Based on estimates for 1935 and 1936 (Tables C 17 and C 18) and data for 31 metropolitan districts included in federal Real Property Inventory of 64 cities, 1934. See text.

⁵Bureau of Labor Statistics.

⁶Modified correction for bias applied 1931-35. See text for method.

⁷Except 1931-35 = lines 34 - 32. Line 34 same as line 23.

TABLE EM 10

Dwelling Units Built by Class of City, 1920-1936

Source	1933	1934	1935	1936	Subtotal 1930-36	Grand total 1920-36	
							Dwelling Units Built, Preliminary, Not Corrected for Bias in 257 City Series¹
<u>2/</u>	16,984	19,014	49,472	101,057	405,010	3,442,048	113 central cities 1
<u>2/</u>	17,140	19,391	50,765	103,887	411,027	3,512,831	120 central cities 2
<u>2/</u>	1,615	1,182	2,439	6,693	30,993	346,110	64 satellite cities 3
lines 2 + 3	18,755	20,573	53,204	110,580	442,020	3,860,941	184 met. dist. cities 4
5.875 x line 3	9,488	6,944	14,329	39,321	182,083	2,045,145	Total environs based on 64 cities ³ 5
0.545 x line 4	10,221	11,212	28,996	60,266	240,900	2,104,212	Total environs based on 184 cities ³ 6
(lines 5+6)/2	9,855	9,078	21,663	49,794	211,494	2,074,684	Total environs, average 7
0.669 x line 7	6,593	6,073	14,493	33,312	141,490	1,387,965	Urban environs (2,500 and over) ³ 8
0.331 x line 7	3,262	3,005	7,170	16,482	70,004	686,719	Rural environs (under 2,500) ³ 9
lines 2 + 7	26,995	28,469	72,428	153,681	622,521	5,587,515	96 metropolitan districts 10
<u>2/</u>	1,631	1,500	3,907	7,615	29,200	216,814	80 BLS nonmet. dist. cities 11
lines 13 - 11	9,267	8,523	22,200	43,268	165,914	1,243,302	Unreported nonmet. dist. urban 12
6.882 x line 11	10,898	10,023	26,107	50,883	195,114	1,462,116	Total nonmet. dist. urban ³ 13
<u>2/</u>	20,210	21,696	55,818	115,365	465,203	4,008,972	257 cities 14
lines 16 - 14	17,683	16,796	42,717	89,199	352,432	3,040,659	Unreported urban 15
lines 10 + 15	37,893	38,492	98,535	204,584	817,635	7,049,631	Total urban 16
0.129 x line 16	4,888	4,965	12,711	26,389	105,474		Rural nonfarm based on total urban ³ 17
4.236 x line 11	6,909	6,354	16,550	32,257	123,691		Rural nonfarm based on 80 nonmet. dist. cities ³ 18
(lines 17+18)/2	5,899	5,660	14,630	29,323	114,583		Rural nonfarm, average 19
lines 16 + 19	43,792	44,152	113,165	233,887	932,218		Total nonfarm 20
lines 20 - 2	26,652	24,761	62,400	130,000	521,191		Total nonfarm outside 120 central cities 21
<u>4/</u>	1,225	1,255	.....	.....	.....	.....	Dwelling Units Built, Corrected for Bias
lines 20 x 22	53,645	55,411	144,015 ⁵	.....	.....	.....	Factor "A" 22
lines 23 - 2	36,505	36,020	93,250	.....	.....	.....	Total nonfarm, corrected for bias 23
lines 24/21	1,389,691	1,454,707	1,494,391	.....	.....	.....	Total nonfarm outside 120 central cities 24
							Correction for areas outside 120 central cities 25
							Redistribution of Corrected Nonfarm
line 2	17,140	19,391	50,765	103,887 ⁵	411,027	3,512,831	120 central cities 26
lines 8 x 25 ⁶	8,671	8,368	20,258	40,305	179,279	1,428,402	Urban environs (2,500 and over) 27
lines 29 - 27	4,827	4,838	12,115	27,361	100,660	718,666	Rural environs (under 2,500) 28
lines 7 x 25	13,498	13,206	32,373	67,666	279,939	2,147,088	Total environs 29
lines 26 + 29	30,638	32,597	83,138	171,553	690,966	5,659,919	96 metropolitan districts 30
lines 13 x 25 ⁶	13,959	13,315	34,813	60,587	244,076	1,507,738	Nonmet. dist. urban 31
lines 30 + 31	44,597	45,912	117,951	232,140	935,042	7,187,657	Total urban 32
lines 19 x 25 ⁷	9,048	9,499	26,064	50,087	171,312	974,170	Rural nonfarm 33
lines 32 + 33	53,645	55,411	144,015	282,227	1,106,354	8,141,827	Total nonfarm 34

TABLE EM 11

Dwelling Units Built, Aggregate Value, 1920-1936

	Source	1920	1921	1922	1923	1924	1925	1926
Unit Costs, Basic Data.								
35	Average, all types, 257 cities	<u>1/</u>	\$ 3,947	\$ 4,005	\$ 4,127	\$ 4,352	\$ 4,464	\$ 4,422
36	Average, all types, 113 central cities	<u>2/</u>	\$ 4,216	4,008	4,055	4,147	4,378	4,376
37	Average, all types, 64 satellite cities	<u>2/</u>	4,729	4,038	3,945	4,363	4,715	5,019
38	Average, 1-fam. dwellings, 64 satellite cities	<u>3/</u>	6,773	4,771	5,183	5,273	5,399	5,972
39	Average, 1-fam. dwellings, 80 non-metropolitan district cities	<u>3/</u>	3,456	2,946	3,323	3,454	3,484	3,973
Unit Costs, as Applied⁴								
40	Central cities, assigned	1.18 x line 36	4,975	4,729	4,785	4,893	5,166	5,251
41	Urban environs, assigned	1.24 x line 37	5,864	5,007	4,892	5,410	5,847	6,224
42	Rural environs, assigned	0.76 x line 38	5,147	3,626	3,939	4,007	4,103	4,328
43	Total environs, derived	lines 52/29	5,627	4,550	4,577	4,946	5,270	5,596
44	96 metropolitan districts, derived	lines 53/30	5,211	4,665	4,710	4,912	5,204	5,377
45	Nonmetropolitan districts urban, assigned	0.97 x line 39	3,352	2,858	3,223	3,350	3,379	3,680
46	Total urban, derived	lines 55/32	4,655	4,226	4,393	4,603	4,844	5,063
47	Rural nonfarm, assigned	0.66 x line 45	2,212	1,886	2,127	2,211	2,230	2,429
48	Total nonfarm, derived	lines 57/34	4,323	3,940	4,133	4,335	4,551	4,773
Estimated Value, Housekeeping Units, (thousands of dollars)								
49	120 central cities	lines 26* x 40	474,749	909,926	1,524,042	1,923,986	2,086,382	2,263,192
50	Urban environs (2,500 and over)	lines 27* x 41	212,593	356,078	589,207	821,417	911,384	1,035,867
51	Rural environs (under 2,500)	lines 28* x 42	92,322	127,581	234,729	301,010	316,427	356,389
52	Total environs	lines 50 + 51	304,915	483,659	823,936	1,122,427	1,227,811	1,392,256
53	96 metropolitan districts	lines 49 + 52	779,664	1,393,585	2,347,978	3,046,413	3,314,193	3,655,448
54	Nonmetropolitan districts urban	lines 31* x 45	214,236	273,934	434,335	512,825	527,840	569,697
55	Total urban	lines 53 + 54	993,900	1,667,519	2,782,313	3,559,238	3,842,033	4,225,145
56	Rural nonfarm	lines 33* x 47	74,095	103,515	175,058	215,542	223,439	249,947
57	Total nonfarm	lines 55 + 56	1,067,995	1,771,034	2,957,371	3,774,780	4,065,472	4,475,092
Estimated Value, Total New Residential Building (thousands of dollars)								
58	Nonhousekeeping dwellings	<u>5/</u>	54,166	69,801	167,214	205,689	178,580	278,603
59	Total new residential building	lines 57 + 58	1,122,161	1,840,835	3,114,585	3,980,469	4,244,052	4,753,695

*Line numbering refers to Table EM 10, as Table EM 11 is a continuation of EM 10.

¹Bureau of Labor Statistics, *Building Construction* (Feb. 1937), p. 68.

²Source of basic data: Bureau of Labor Statistics, *Building Permits*.

³Bureau of Labor Statistics.

⁴See text for method of deriving factors used in lines 40, 41, 42, 45, and 47.

⁵Hotels, clubs, lodging houses. Preliminary, subject to revision of basic data for 257 cities by Bureau of Labor Statistics.

TABLE EM 11

Dwelling Units Built, Aggregate Value, 1920-1936

1927	1928	1929	1920-29	1930	1931	1932	Source	
			Arithmetic average					
\$ 4,449	\$ 4,407	\$ 4,566	\$ 4,304	\$ 4,385	\$ 4,225	\$ 3,705	1/	Unit Costs, Basic Data
4,416	4,357	4,597	4,300	4,385	4,225	3,705	2/	Average, all types, 257 cities 35
5,023	5,063	5,068	4,706	5,392	5,366	4,670	2/	Average, all types, 113 central cities 36
6,239	6,471	6,429	5,820	6,779	6,784	5,312	3/	Average, all types, 64 satellite cities 37
3,864	3,969	3,901	3,616	3,820	3,669	3,004	3/	Average, 1-fam. dwellings, 64 satellite cities 38
			Weighted average					Average, 1-fam. dwellings, 80 non-metropolitan district cities 39
5,211	5,141	5,424	5,074	5,174	4,986	4,372	1.18 x line 36	Unit Costs, as Applied ⁴
6,229	6,278	6,284	5,835	6,686	6,654	5,791	1.24 x line 37	Central cities, assigned 40
4,742	4,918	4,886	4,423	5,152	5,156	4,037	0.76 x line 38	Urban environs, assigned 41
5,737	5,828	5,821	5,391	6,178	6,144	5,184	lines 52/29	Rural environs, assigned 42
5,420	5,420	5,583	5,205	5,581	5,464	4,719	lines 53/30	Total environs, derived 43
3,748	3,850	3,784	3,508	3,705	3,559	2,914	0.97 x line 39	96 metropolitan districts, derived 44
5,116	5,095	5,151	4,865	5,139	5,017	4,145	lines 55/32	Nonmetropolitan districts urban, assigned 45
2,474	2,541	2,497	2,315	2,445	2,349	1,923	0.66 x line 45	Total urban, derived 46
4,825	4,797	4,818	4,577	4,795	4,661	3,786	lines 57/34	Rural nonfarm, assigned 47
			Subtotal 1920-29					Total nonfarm, derived 48
1,851,036	1,611,606	1,101,848	15,789,315	585,485	411,520	105,584	lines 26* x 40	Estimated Value, Housekeeping Units, (thousands of dollars)
978,134	899,135	568,501	7,361,124	345,399	254,416	68,230	lines 27* x 41	120 central cities 49
368,425	348,494	218,702	2,715,443	131,875	101,681	25,191	lines 28* x 42	Urban environs (2,500 and over) 50
1,346,559	1,247,629	787,203	10,076,567	477,074	358,097	93,421	lines 50 + 51	Rural environs (under 2,500) 51
3,197,595	2,859,235	1,889,051	25,865,882	1,062,559	787,617	199,005	lines 49 + 52	Total environs 52
491,786	529,818	403,847	4,457,349	217,847	153,098	57,234	lines 31* x 45	96 metropolitan districts 53
3,689,381	3,389,053	2,292,898	30,323,231	1,280,206	920,715	256,239	lines 53 + 54	Nonmetropolitan districts urban 54
220,545	223,481	159,858	1,875,643	89,015	66,458	22,913	lines 33* x 47	Total urban 55
3,908,926	3,612,534	2,452,756	32,198,874	1,369,221	987,173	279,152	lines 55 + 56	Rural nonfarm 56
								Total nonfarm 57
								Estimated Value, Total New Residential Building (thousands of dollars)
154,381	200,234	170,619	1,871,613	86,407	17,402	2,990	5/	Nonhousekeeping dwellings 58
4,064,307	3,812,768	2,623,375	33,870,487	1,455,628	1,004,575	282,142	lines 57 + 58	Total new residential building 59

TABLE EM 11 (Cont'd)

Dwelling Units Built, Aggregate Value, 1920-1936

	Source	1933	1934	1935	1936	1930-36	1920-36	
							Arithmetic average	
Unit Costs, Basic Data								
35	Average, all types, 257 cities	<u>1/</u>	\$ 3,494	\$ 3,381	\$ 3,759	\$ 4,073	\$ 3,860	\$ 4,082
36	Average, all types, 113 central cities	<u>2/</u>	3,494	3,381	3,759	4,073	3,860	4,080
37	Average, all types, 64 satellite cities	<u>2/</u>	5,325	5,597	5,521	5,226	5,342	5,024
38	Average, 1-fam. dwellings, 64 satellite cities	<u>3/</u>	5,625	5,840	5,754	5,765	5,983	5,902
39	Average, 1-fam. dwellings, 80 non-metropolitan district cities	<u>3/</u>	2,804	2,816	3,224	3,410	3,250	3,433
							Weighted average	
40	Central cities, assigned	1.18 x line 36	4,123	3,990	4,436	4,806	4,555	4,814
41	Urban environs, assigned	1.24 x line 37	6,603	6,940	6,846	6,480	6,624	6,230
42	Rural environs, assigned	0.76 x line 38	4,275	4,438	4,373	4,397	4,547	4,486
43	Total environs, derived	lines 52/29	5,770	6,023	5,921	5,638	5,919	5,465
44	96 metropolitan districts, derived	lines 53/30	4,849	4,814	5,014	5,134	5,256	5,212
45	Nonmetropolitan districts urban, assigned	0.97 x line 39	2,720	2,732	3,127	3,308	3,153	3,330
46	Total urban, derived	lines 55/32	4,182	4,210	4,457	4,657	4,752	4,851
47	Rural nonfarm, assigned	0.66 x line 45	1,795	1,803	2,064	2,183	2,081	2,198
48	Total nonfarm, derived	lines 57/34	3,780	3,797	4,024	4,218	4,355	4,547
Estimated Value, Housekeeping Units, (thousands of dollars)						Subtotal	Grand	
						1930-36	total	
							1920-36	
49	120 central cities	lines 26* x 40	70,668	77,370	225,194	499,281	1,975,102	17,764,417
50	Urban environs (2,500 and over)	lines 27* x 41	57,255	58,074	138,686	281,176	1,183,236	8,544,360
51	Rural environs (under 2,500)	lines 28* x 42	20,635	21,471	52,979	120,306	473,938	3,189,381
52	Total environs	lines 50 + 51	77,890	79,545	191,665	381,482	1,657,174	11,733,741
53	96 metropolitan districts	lines 49 + 52	148,558	156,915	416,859	880,763	3,632,276	29,498,158
54	Nonmetropolitan districts urban	lines 31* x 45	37,968	36,377	108,860	200,422	811,806	5,288,955
55	Total urban	lines 53 + 54	186,526	193,292	525,719	1,081,185	4,443,882	34,787,113
56	Rural nonfarm	lines 33* x 47	16,241	17,127	53,796	109,540	374,890	2,250,533
57	Total nonfarm	lines 55 + 56	202,767	210,419	579,515	1,190,525	4,818,772	37,017,646
Estimated Value, Total New Residential Building (thousands of dollars)								
58	Nonhousekeeping dwellings	<u>5/</u>	1,507	3,262	5,052	11,025	127,645	1,799,258
59	Total new residential building	lines 57 + 58	204,274	213,681	584,567	1,201,550	4,946,417	38,816,905

*Line numbering refers to Table EM 10, as Table EM 11 is a continuation of EM 10.

¹Bureau of Labor Statistics, *Building Construction* (Feb. 1937), p. 68.²Source of basic data: Bureau of Labor Statistics, *Building Permits*.³Bureau of Labor Statistics.⁴See text for method of deriving factors used in lines 40, 41, 42, 45, and 47.⁵Hotels, clubs, lodging houses. Preliminary, subject to revision of basic data for 257 cities by Bureau of Labor Statistics.

TABLE EM 12

Dwelling Units Built, Estimated Aggregate for 1920-1929

		Mean (thousands of dwelling units)	Minimum	Maximum
Occupied dwelling units,				
January 1 ¹	1930	23,097	...	...
	1920	17,556	...	...
10-year increase		5,541	...	...
Dwelling units standing,				
January 1 ²	1930	24,313	24,313	24,571
	1920	17,733	17,914	17,733
10-year increase		6,580	6,399	6,838
10-year change in vacancy		1,039	858	1,297
Losses, total		580	450	715
Demolitions ³		330	250	415
Fire, flood, wind, and other losses ⁴		250	200	300
Total units built		7,160	6,849	7,553
Units added by conversions, net ⁵		125	166	83
Total new units built		7,035	6,683	7,470

¹Based on Census of Population, 1930, VI, 11. The Census figure 23,235,982 for nonfarm families (private) April 1, 1930 was adjusted to a January 1 basis by straight line interpolation. Nonfarm families (including quasi-families) January 1, 1920 numbered 17,600,472. In estimating the number of private families in 1920, the relationship between private and quasi-families in 1930 was assumed to apply.

²Estimated vacancy, percentage:
 Mean change - from 1 per cent in 1920 to 5 per cent in 1930
 Minimum change - from 2 per cent in 1920 to 5 per cent in 1930
 Maximum change - from 1 per cent in 1920 to 6 per cent in 1930

These data are based on the following sources: weighted average of vacancies, early 1930, all types of dwellings in 15 large cities, was 6.0 per cent (Residential Vacancy Surveys in the United States, 1930-34, Federal Housing Administration, March 9, 1935). Apartment vacancies, New York City, probably 10 per cent (7.8 per cent, Nov. 1928, and 12.0 per cent, June 1932), New York City Tenement House Department reports. Vacancies in dwellings, only those fit for occupancy, in Philadelphia, 4.0 per cent (Philadelphia Housing Association). Beginning of 1920, apartment vacancies 0.4 per cent in New York City; dwelling vacancies in Philadelphia probably less than 1.0 per cent (1.65 in 1917 and 0.67 in 1921). On the other hand, some cities were temporarily overbuilt following cessation of war-time activity in principal industries, e.g., Chester, Pa., and Camden, N.J. (shipbuilding), Charleston, W.Va. (armor plate, chemicals), Gary, Hammond, and East Chicago, Ind. (steel), Peoria, Ill. (tractors), but since dwellings are predominantly of the 1-family type and vacancies in this type are generally lower than for other types, vacancies probably are relatively low in any event.

³Estimated units demolished annually per 10,000 population: mean 4, minimum 3, maximum 5 (see Table EM 8).

⁴See text accompanying Table EM 8.

⁵Estimated units added by conversions annually per 10,000 population: mean 1.4, minimum 1, maximum 2. (The maximum number of conversions was subtracted from the minimum number of total units built to estimate the minimum number of new units built. Likewise, the minimum number of conversions was subtracted from the maximum number of units built to estimate the maximum number of new units built). Based on: (a) 1921-27 data for 25-68 cities over 25,000 in population reported in building permits (BLS) indicating an annual increase of 3.5 to 6.0 units per 10,000 population; (b) 1923-35 data for Philadelphia averaging 3.7 units increase per 10,000 population (Philadelphia Housing Association); (c) conversions in apartment buildings, New York City, indicating a small net decrease (N.Y. City Tenement House Department); (d) allowance for conversion of residential buildings to non-residential use in areas not covered by permits, and for a probably lower rate of conversions, and an increasing number of units in small cities and rural areas.

TABLE EM 13

Demolitions, Selected Cities, 1918-1935

		Dwelling Units Demolished		
		Annually	per 10,000 Pop. Prior to	Since
		Entire period	1929	1929
Dwellings, all types				
Philadelphia ¹	1923-35	6.4	4.1	6.9
Minneapolis ²	1923-32	4.7	...	...
Cleveland ³	1932-35	8.3	...	8.3
Denver ⁴	1931-35	4.7	...	4.7
Manhattan, New York City ⁵	1918-32	19.3	15.8	29.0
78 central cities ⁶	1929-35	3.2	...	3.2 ⁷
44 satellite cities ⁶	1929-35	2.2	...	2.2 ⁷
37 nonmetropolitan cities ⁶	1929-35	1.3	...	1.3 ⁷
Apartments only ⁵				
Manhattan	1918-35	16.0	13.0	23.1
Bronx	1918-35	0.8	0.4	1.5
Brooklyn	1918-35	2.3	1.8	3.1
Queens	1918-35	0.7	0.3	1.2
Richmond	1918-35	0.4	0.3	0.4
Total New York City	1918-35	6.2	5.3	7.9

¹Philadelphia Housing Association, *Housing in Philadelphia, 1932-35*

²University of Minnesota, Employment Stabilization Research Institute, *The Construction Industry in Minnesota, June 1934, p.30*

³H. W. Green, *Real Property Inventory, Cleveland, 1935.*

⁴University of Denver, *Business Review, Nov. 1931, 1933, 1934, 1935.*

⁵Apartment demolitions from New York City Tenement House Department, annual reports; 1- and 2-family dwelling units demolished in Manhattan, estimated from number of buildings demolished (2-family not segregated) in annual report, Borough President, 1932-33, Borough of Manhattan.

⁶Special tabulation furnished by Bureau of Labor Statistics, Division of Construction and Public Employment. Partial list from 810 cities with populations over 10,000; does not include large cities listed separately above.

⁷Includes 1929.

TABLE EM 14

Dwelling Units Built, 1935, Based on 811 Bureau of Labor Statistics reporting Cities 10,000 and over in Population

	POP.	DWELLING UNITS BUILT,	
	1930 (000's)	1935 Number	Per 10,000 population (3)=(2)+(1)10
	(1)	(2)	(3)
257 cities, pop. 25,000 and over	44,909	55,810 ¹	12.44
554 cities, pop. 10,000-25,000	10,515	20,705 ¹	19.68
811 cities, pop. 10,000 and under	55,424	76,515 ¹	13.82
Nonfarm outside 811 cities	38,906	67,500 ³	18.30 ²
Total nonfarm	92,330	144,015	15.62

¹Source: Bureau of Labor Statistics, 'Families Provided For', 811 cities.

²Based on average of 19.68 units per 10,000 population for 554 reporting cities with populations of from 10,000 to 25,000, but modified to conform to relationships found in 1936 estimate based on 1,689 cities having populations over 2,500. Ratio of building rates for first two groups of cities for 1935: $\frac{554 \text{ cities } 19.68}{257 \text{ cities } 12.44} = 1.582$; but for 1936, ratio is: $\frac{32.21}{25.80} = 1.258$, indicating that the 1935 rate for cities with populations of from 10,000 to 25,000 is too high to use unchanged for estimating unreported nonfarm, since population and building in unreported areas were over three times as large as for sample cities with populations from 10,000 to 25,000. On the other hand, the 1936 estimate indicates that the building rate in unreported nonfarm areas under 10,000 was 1.17 times as great as the reporting group of cities with populations from 10,000 to 25,000 $(\frac{37.60}{32.21} = 1.17)$. Thus $19.68 \times 1.17 \times \frac{1.258}{1.582} = 18.30$ units per 10,000 population. This building rate may be an underestimate to a minor degree since the nonfarm population outside 811 cities was probably a slightly larger percentage of the total population in 1935 than in 1930.

³[Col. (1)+10]xcol. (2).

TABLE EM 15

Dwelling Units Built, 1936¹.

	DWELLING UNITS BUILT, 1936											
	NUMBER OF CITIES			POPULATION, 1930			PER 10,000 POPULATION			UNRE-		
	B.L.S. ²	Unre-	Total	B.L.S. ²	Unre-	Total	B.L.S. ²	Unre-	Total	B.L.S. ²	PORTED	TOTAL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) ³	(9)	(10)	(11)	(12)
							(10)x10	(12)x10		(5)x(8)		
							(4)	(6)		10		
Metropolitan districts												
Central cities ³	120	...	120	37,815	...	37,815	27.47	...	27.47	103,887	...	103,887
Urban environs, 2,500 and over ³	613	252	865	9,580	1,747	11,327	35.39	(36.62)	35.58	33,906	6,399	40,305
Rural environs, under 2,500	...	...	...	...	5,645	5,645	...	(48.47) ⁴	48.47 ⁴	...	27,361	27,361
Total environs	613	252	865	9,580	7,392	16,972	35.39	(45.67)	39.86	33,906	33,760	67,666
Total metropolitan districts	733	252	985	47,395	7,392	54,787	29.07	(45.67)	31.31	137,793	33,760	171,553
Nonmetropolitan, urban ³	956	1,224	2,180	13,185	6,628	19,813	29.61	(32.50)	30.58	39,045	21,542	60,587
Total urban	1,689	1,476	3,165	60,580	14,020	74,600	29.19	(39.45)	31.12	176,838	55,302	232,140
Rural nonfarm	...	...	...	...	17,730	17,730	...	(28.25) ⁵	28.25 ⁵	...	50,087	50,087
Total nonfarm ¹	1,689	...	...	60,580	31,750	92,330	29.19	(33.19)	30.57	176,838	105,389	282,227

¹Preliminary. Subject to revision when basic data for reporting cities are available in sufficient detail to make possible estimating totals by region and population group, and for rural environs and other rural areas on the basis of current empirical data.

²Cities reporting building permits to the Bureau of Labor Statistics.

³Derived from totals for cities by size of population groups, thus: 500,000 and over, 100,000-500,000, 50,000-100,000, 25,000-50,000, 10,000-25,000, 5,000-10,000, 2,500-5,000. Dwelling units per 10,000 population for unreported cities in each size group [col. (8)] were assigned on the basis of data for reporting cities of the same size [col. (7)], but corrected for differences in rates of growth of population in reporting and unreported cities.

⁴Estimated on basis of average for all urban environs [col. (9)], corrected for differences in rates of growth of population in urban and rural environs.

⁵Estimated on basis of average for reporting nonmetropolitan cities [col. (7)], corrected for differences in rates of growth of population.

⁶Parentheses indicate derived data.