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Markets for Miscellaneous Types of Land and Improvements

IT is impossible in this study to cover all the additional real estate markets in which the rights in land and improvements of special types are bought, sold, and exchanged. Some are so infrequently encountered as to be hardly markets at all but rather individual cases of negotiation, such as the purchase and sale of churches and clubs. Theaters and sports arenas are in the same category, though they are more frequently the subject of transactions.

Three kinds of markets are so common and of such economic significance as to justify further exploration, namely, the markets for subdivision lots and acreage, office and commercial space, and industrial land and improvements. Significant as the markets for these types of land and improvements are, the data essential for their study are very inadequate. Some of their aspects may be mentioned, however, and some generalizations hazarded.

SUBDIVISION LOTS AND ACREAGE

There are two results from an increased demand for urban land and improvements: one, a greater use of urban sites through the construction of improvements on vacant land and by replacement of existing improvements with better ones and, the other, an extension of the urban land area by "subdivision" or "development."¹ Being an accompaniment of economic expansion, the process of subdividing is spasmodic rather than continuous. It begins with the acquisition of

¹ While, technically, "subdivision" might refer only to the process of dividing large parcels into smaller parcels, this process is usually accompanied by mapping the boundaries of the smaller parcels and public ways and meeting the legal requirements for placing the map on record. In many jurisdictions the subdivider is required by law to provide for the installation of essential public utilities. This increase in his functions is fairly recent, however; the term "development" previously distinguished the process of mere platting from that of both platting and installation of public utilities and other improvements.

title, or the right to title, in an appropriately situated tract of land. The land is then mapped, cleared to the extent necessary, and marked off; streets are established, utilities and public improvements may be installed, and permanent structures erected. At any point in this procedure lots may be offered for sale, with or without improvements. When offered without utilities and other facilities, it is usually expected that these will be provided by the local governing body and that the cost will be charged, at least in part, to the lot owners through special assessments. In most instances, lots are not actually available for urban use until these facilities have been provided; hence, it has been argued that subdivision maps should not be admitted to record until conversion is complete or until a bond has been posted guaranteeing installation. Also, cases are increasing in which the subdivider installs public facilities, builds structures on all or most lots, and offers only completed land and buildings for sale.

These changes present a striking contrast to the earlier situation when much subdividing was essentially speculative, being stimulated by a belief on the part of both subdividers and the public that the rising demand for land would continue and greatly expand the area used for urban purposes.² So successful were these operations that subdividing generally ran far ahead of lot utilization, with the result that when business contraction set in many lots were unused and became tax delinquent.³

In the late 1880's, it became customary in many parts of the coun-

² Subdivision practices were part of the larger phenomenon of land speculation. For an indication of the character and scope of the change in subdivision procedures, see *The Community Builders Handbook* (Urban Land Institute, Washington, 1947) p. 85 and "Land Planning," *NAHB Correlator*, Vol. 1, No. 5 (National Association of Home Builders, December 1947) pp. 49 ff. For a description of some of the methods employed in the twenties, see H. Morton Bodfish, "The Free Lot Subdivider: His Method of Operation and the Available Methods of Control," *Journal of Land and Public Utility Economics*, Vol. 5, No. 2 (May 1929) p. 187. Detroit subdividers estimated that in the twenties 50 to 85 percent of all subdivision property was sold to speculative investors. See Louis G. Palmer, "What is the Best Sales Appeal Today?" *Annals of Real Estate Practice* (National Association of Real Estate Boards, 1928) pp. 566 and 580.

³ Ernest M. Fisher, "Speculation in Suburban Lands," *The American Economic Review*, Vol. 23, No. 1, Supplement (March 1933) pp. 152 ff.; Homer Hoyt, *The Structure and Growth of Residential Neighborhoods in American Cities*, Federal Housing Administration (1939); Philip H. Cornick, *On the Problems Created by Premature Subdivision of Urban Lands in Selected Metropolitan Districts of New York State*, Division of State Planning (Albany, 1938); Ernest M. Fisher and Raymond F. Smith, "Land Subdividing and the Rate of Utilization," *Michigan Business Studies*, Vol. 4, No. 5 (University of Michigan, Bureau of Business Research, 1932); Herbert D. Simpson and John E. Burton, "The Valuation of Vacant Land in Suburban Areas," *Studies in Public Finance*, Monograph No. 2 (Institute for Economic Research, Chicago, 1931).

try for subdivision lots to be sold on "land contracts" with small down payments.⁴ This speculative practice reached a peak in 1926 with the spectacular Florida boom.⁵ The relation between local subdivision activity and residential construction may be seen by comparing the data on subdivision activity in six metropolitan areas and in Chicago with Long's series on residential building in twenty-nine cities (Chart 2).⁶

The process of adding to the services of urban land and improvements is a long drawn out one and involves large amounts of capital. Acreage or accommodation land is one of the necessary elements in the process, but so much capital is needed after the acreage is acquired that the cost of acreage is only a small proportion of the total investment. Even when no buildings are constructed, the expense of subdividing and of installing utilities will in most cases be larger than the cost of the acreage. In the northeastern states in 1947, the cost of installing utilities, including street paving, averaged \$10.26 per front foot of residential lots. Therefore, for lots 60 x 125 feet, of which there are 4.3 per acre, the average cost per acre was about \$2,647. If a home were to be erected on each of these lots at an average cost of \$8,000, the utilities-installation expense would amount to about 7 percent of the total cost per acre of subdivision, conversion to urban land use, and construction.⁷

Since a differential in acreage prices is a relatively small element in the selling price of houses and lots, the speculative subdivider-builder is generally in a better position to sell improved parcels if high-value acreage is utilized, even though at a higher original cost. As a consequence, high-value acreage frequently serves as a vehicle

⁴ William E. Harmon, "Suburban Real Estate—Financing, Developing and Selling," *Home Building and Subdividing*, Proceedings, National Association of Real Estate Boards, Home Builders and Subdividers Division (1924) pp. 30 ff.

⁵ For descriptions of the Florida boom, see Homer B. Vanderblue, "The Florida Land Boom," *Journal of Land and Public Utility Economics*, Vol. 3, Nos. 2 and 3 (May and August 1927) pp. 113 and 252, respectively. Also Kenneth Ballinger, *Miami Millions* (Miami, 1936) p. 6, and A. M. Sakolski, *The Great American Land Bubble* (New York, 1932) Chapter 16.

⁶ On the relation between subdivision activity and business cycles, see Wesley C. Mitchell, *What Happens During Business Cycles: A Progress Report* (National Bureau of Economic Research, 1950) Chapter 7, Section D1. Mitchell concludes: "I think the demand for land as building sites must conform tolerably well on the average to business cycles, and must undergo the large reference cycle fluctuations characteristic of durable goods."

⁷ *The Community Builders Handbook* (Urban Land Institute, Washington, 1947) pp. 41, 70, and 71.

for speculation. The prices paid for it for subdivision and development may be reflected in large increases in the value, per acre, of improved parcels. While the subdivider-builder tries to minimize the risk of acreage investment by postponing acquisition until he is ready to use it, his plan may be thwarted by owners of available tracts or speculators who anticipate his need and secure title, or the right to title, to the land. Speculation of this type is not uncommon in periods of high building activity; acreage tracts are sometimes sold and re-sold several times in a short period.

In order to be profitable, however, speculation in acreage has to be timed carefully, and the land must be priced so as to avoid missing the market. Although the cost of acreage may be only one, and a relatively small, element in the final cost of land and improvements, the subdivider-builder must not overpay for acreage; sometimes an inferior tract will be taken at a favorable price rather than a superior but overpriced tract. Since subdividing-building is not frequently undertaken in a neighborhood, or by a large number of individuals or organizations, the possibility of a given tract being by-passed is very real.

COMMERCIAL AND OFFICE SPACE

Most commercial and office space is occupied on leasehold with the occupiers in the relationship of tenants or landlords who hold the premises in fee or as tenants who sublet a portion of their estates, but there are many cases of owner-occupants. Among the latter are large department stores, insurance companies, banks, and even manufacturers, whose need for commercial or office space is so great that they can utilize whole structures. Ownership in fee of "home offices" is sometimes traceable to a desire for prestige,⁸ and, in other cases, to a need for specially designed quarters. Small commercial premises, however, are sometimes owned in fee by the occupants as protection against rent increases or because of a desire to engage in real estate investment or speculation simultaneously with the conduct of a commercial enterprise. These exceptions notwithstanding, the markets for commercial and office space are primarily markets for leasehold

⁸ This consideration appears to be on the decline as evidenced by the frequent sale of fees by commercial and manufacturing concerns to life insurance companies and other institutional investors, and the retention of a long-term lease providing for continued use and occupancy. These so-called "sale and lease-back" arrangements are discussed in Chapter 6.

CHART 2 — LONG'S INDEX OF RESIDENTIAL BUILDING IN TWENTY-NINE CITIES, AND SUBDIVISION ACTIVITY IN SIX METROPOLITAN AREAS AND IN CHICAGO, 1830-1934 ^a

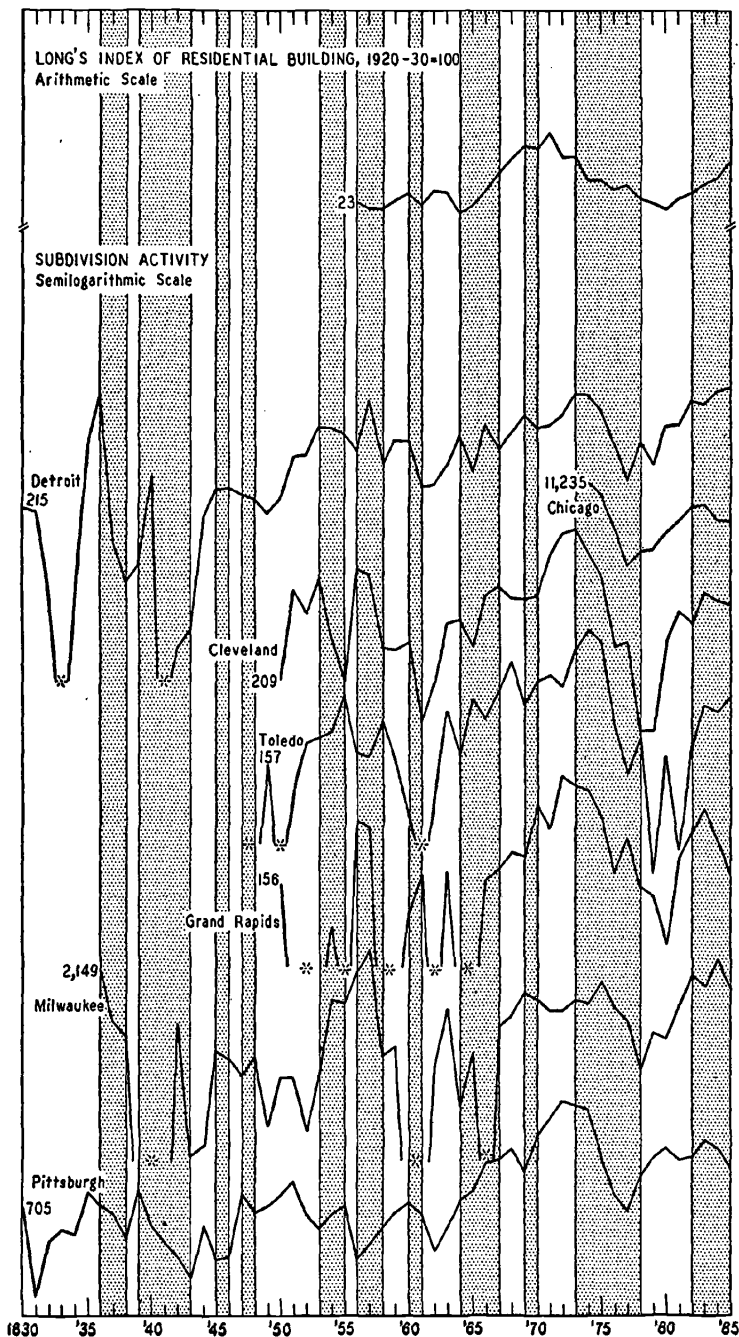
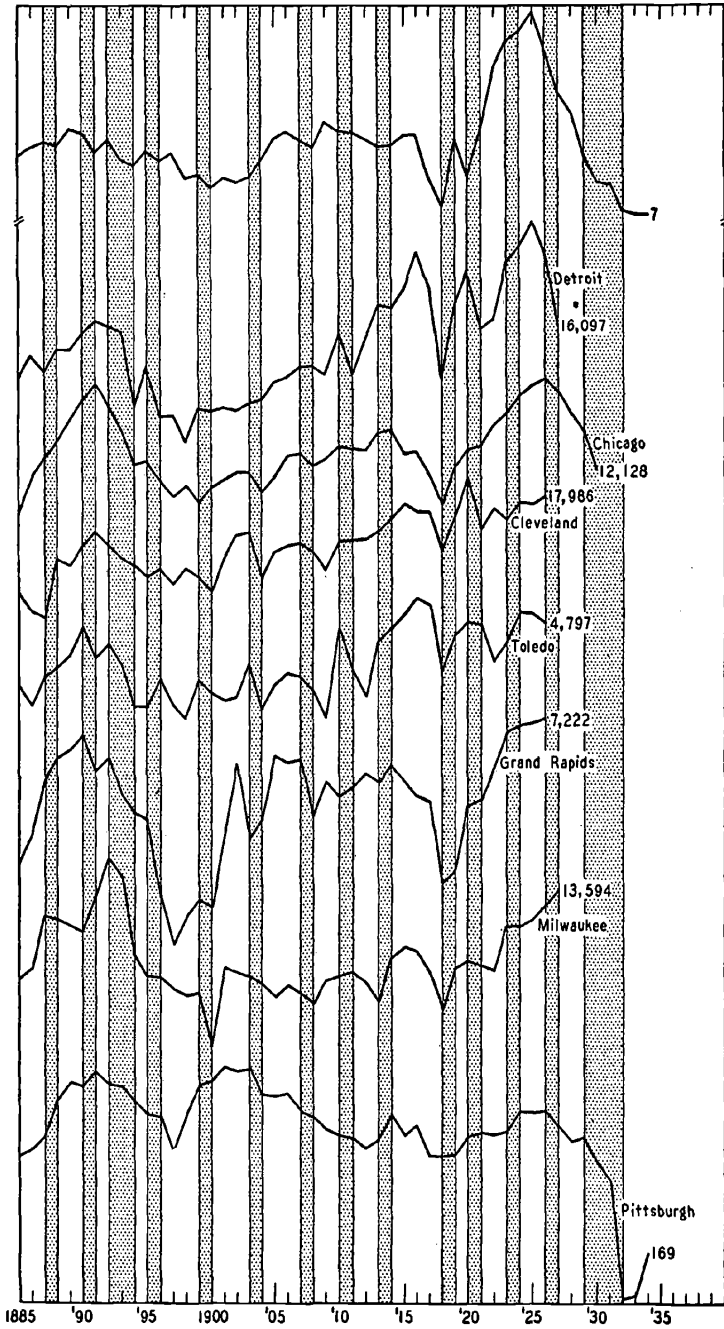


CHART 2 — (concluded)



(footnote on following page)

estates that convey the rights of use and occupancy for a determinable number of years at specified or ascertainable rents, with provision for reversion to the landlord or lessor at the end of the term.

TERMS OF COMMERCIAL LEASES

There are no comprehensive data on the volume or terms of leaseholds of commercial and office space. They vary in length of term, some being essentially tenancies at will and others extending for fifty years or more. General business conditions and the amount of structural changes and special equipment required by a particular tenant are important factors affecting length of term. During periods of business contraction, for example, when rents are relatively low, tenants generally bargain for a lengthening of the lease term, hoping thus to preserve the economy of low rent. The landlord, however, generally wishes a shorter term, leaving an opportunity to raise rents as prosperity returns. During periods of expansion, the interests of the two are, of course, reversed. Finally, the term of the lease must be sufficient to allow the cost of structural alterations and special equipment, especially if it is not readily removable, to be written off.

Rents reserved in commercial leases may be a constant amount for the term of the lease, may be set on a graduated scale, or may be determined as a percentage of the net volume of business transacted on the premises. The first of these provisions is probably the older form, and still survives in a great many cases. The rent is fixed by negotiation and generally without elaborate calculations by either party, especially where tenants operate small enterprises. On the other hand, the growth of large enterprises, notably chain stores, has

FOOTNOTE TO CHART 2

^a Long's Index of Residential Building (1920-30 = 100): Clarence D. Long, Jr., *Building Cycles and the Theory of Investment* (Princeton University Press, 1940) Appendix B, Section 3. The index is based on a varying number of cities, ranging from one city in 1856-62 to twenty-nine cities after 1911.

Subdivision Activity: Data for Detroit, Cleveland, Toledo, Grand Rapids, and Milwaukee: Ernest M. Fisher, "Real Estate Subdividing Activity and Population Growth in Nine Urban Areas," *Michigan Business Studies*, Vol. 1, No. 9 (University of Michigan, Bureau of Business Research, 1928); data for Chicago metropolitan area: Homer Hoyt, *One Hundred Years of Land Values in Chicago* (Chicago, 1933) pp. 477-78; data for Pittsburgh: Scott Keyes, "Fluctuations in Land Development in Allegheny County," *Pittsburgh Business Review*, Vol. 5, No. 3 (University of Pittsburgh, Bureau of Business Research, March 1935) p. 18.

Reference Cycles: Shaded areas indicate periods of business contraction; reference dates are from Arthur F. Burns and Wesley C. Mitchell, *Measuring Business Cycles* (National Bureau of Economic Research, 1946) p. 78.

* No subdivision activity.

been accompanied by a considerable refinement and elaboration of techniques in selecting sites and in determining the level of rents. Calculations are based principally on analyses of traffic and merchandising activities in the area in which location is contemplated. The small independent entrepreneur, without such scientific guides, often follows the lead of the larger organizations in selecting a location.

The graduated rental appears to have developed in the renting of commercial space in developing areas where the potential volume of business is not easily estimated. Also, it is sometimes used in the early phases of a business expansion. In both these situations the landlord may be hesitant to give a long-term lease in which the rental terms are based on the current volume of business, and the tenant may be unwilling to pay currently the high rent that the premises may command if the volume of business increases. Graduated rental is a compromise that provides for increases in rental at stated intervals during the term of the lease.

The inability of either landlord or tenant to estimate accurately the volume of the location's potential business has brought about an increasing use of the so-called "percentage lease." Under the provisions of such a lease a minimum rent is ordinarily fixed, based largely on the current situation and on the estimate of the near-future, and the tenant agrees to pay an additional amount which is a percentage of the net sales realized in the location. Under these provisions both parties enjoy a portion, at least, of the benefits that flow from business improvement. With a lease of this type, the landlord's fortunes are tied to those of the tenant; this relationship accounts for the fact that landlords are hesitant to enter into an agreement with someone whose ability as a merchandiser has not been established. The landlord is usually more easily persuaded to enter into such a lease with a chain store organization.

The market for commercial leases primarily reflects general economic conditions, the demand increasing as business expands, as new businesses are formed, and as existing concerns enlarge their space requirements. Favorable sites always being limited because of the concentration of pedestrian and vehicular traffic at points of convergence and transfer, those nearest such points become known as

100 percent locations and are usually confined to a very small area, from which the desirability of locations rapidly declines. At the height of prosperity, competition is keen for almost all locations. Rents rise and landlords insist on leases of as long a term as they can obtain. As long as prosperity continues, rents are likely to remain high, notwithstanding the appearance of vacancies in the fringe, or even in the core, areas. During contraction, it naturally becomes more difficult to fill vacancies, and rents decline as these spread from the fringe to the heart of the 100 percent locations.

The broker plays an important part in marketing space in established commercial areas, but in fringe areas, in string street developments, and in smaller neighborhood areas his role is less important and the market is less well organized. This lack of organization partially accounts for the apparently greater volatility of values in this portion of the market for commercial space.⁹

SPECIAL CHARACTERISTICS OF OFFICE SPACE

Office space has a number of characteristics which are important to an understanding of the market's behavior. The greatest portion of it is in large centrally located structures; small buildings in outlying areas provide space mainly for local services. As a consequence, the provision of office space usually involves the investment of large amounts of long-term, and relatively high-risk, capital. Sources of such capital being narrowly restricted, the market response to increased demand is likely to be less prompt than for residential facilities. New construction begins in significant volume only after the virtually complete absorption of existing space and after there is abundant evidence that additional space will be marketable at profitable rents.

Another characteristic of office space is its greater flexibility as compared with residential facilities. Residential accommodations are rented in units, each of which contains special facilities; units are designed to provide an area in which family life can be satisfactorily carried on. Unlike residential space, office space is marketed by

⁹ For the influence of developments in outlying areas on the central locations, see John D. Bushnell, "Experience in Los Angeles County," *Journal of the American Institute of Planners*, Vol. 14, No. 4 (Fall 1948) pp. 10-13. On the design of these areas, see *The Community Builders Handbook* (Urban Land Institute, Washington, 1947) pp. 97-164.

the square foot in units which are multiples of "bays"; most of this space is not equipped with special facilities and can therefore be adjusted in size without large expenditures.

Like demand for commercial space, demand for office space arises from the establishment of new businesses and from the expansion of established concerns. The amount of space used by an individual business unit reflects its volume of business. Business enterprises, therefore, will contract or expand their office space more promptly in response to changes than will families whose residential quarters directly affect their standard of living.

Moreover, business enterprises respond more rapidly to business conditions than do households or families. Therefore, one would expect the occupancy of office space to react more sensitively to changes in business conditions than the occupancy of residential facilities. Finally, there are fewer shifts in the tenure status of office space occupants. Although the percentage of dwellings owner-occupied changes from time to time by a shift of the occupants' tenure status, the office space market is little affected by this factor.

Since the supply of office space is somewhat more inelastic for the short period than the supply of residential accommodations, vacancies are absorbed, and rents rise more rapidly in periods of business expansion for the former than for the latter. Office rents, however, rise only after occupancy has increased since, as in the residential market, owners and managers of office space prefer occupancy at prevailing rents to the vacancies that might prevail if rents were increased. During a transition period, leases are likely to be written for shorter terms than will be incorporated in contracts after all, or nearly all, vacancies have been absorbed and rents have risen.¹⁰

After a prolonged period of high occupancy and high rents, con-

¹⁰ The report of the National Association of Building Owners and Managers indicates that, at the beginning of 1949, 45 percent of the leases reported were for a term of one year, 11 percent for two years, 19 percent for three years, and 26 percent for longer terms. "Of the 250 association members who responded, 235 expressed opinions on length of lease as follows: 114 believed leases should be short; 38 believed leases should be long; 83 believed leases should be diversified (some long, some short). . . . Many operators said that they were keeping old, high-class tenants, occupying large areas, on long-term leases and small space users on a month-to-month or short-term lease basis. Long-term leases for large 'key' tenants were favored because they: (1) insure stability of tenancy; (2) provide a hedge against possible recession; (3) enable tenants to amortize remodeling expense; and (4) make it easier to raise rents on other leases." See "What Length Leases?" *Real Estate Forum*, Vol. 4, No. 1 (February 1949) p. 71.

struction of new office space on which still higher rents can be charged increases. New facilities are readily absorbed, since higher rents are not the deterrent to occupancy which they would be in periods of business contraction, and considerable prestige attaches to the occupancy of new and modern office facilities.

The time involved in the projection, planning, and construction of new office facilities is so long and it is so difficult to anticipate the changes that may occur in the demand for space from the time a project is initiated until it is completed that construction activity usually continues well past the point at which demand has been met. In the last phase of business expansion, therefore, the volume of office construction is usually at or near its peak, and the structures finished late in the period, or after expansion has turned into a phase of contraction, are difficult or impossible to fill. Vacancies multiply in existing structures, and new structures maintain their high rent schedules and their high occupancy only by granting concessions.

At the peak of construction activity vacancies, rent reductions, and concessions are first apparent in older structures. As business volume shrinks, vacancies increase and rentals are reduced in all structures, new and old. As in the case of large apartment houses, the minimum rents that can be scheduled are those necessary to meet costs of operation, taxes, and debt service. When income falls below this level, foreclosures increase. It should be observed, however, that such rental schedules for offices do not seem to approach minimum levels as closely as apartment rental schedules do.

According to data compiled by the National Association of Building Owners and Managers, the percentage of rental area occupied in reported office buildings declined gradually from 92 percent in 1925 to 87 percent in 1930, and then fell off more rapidly, with the contraction of general business, to 73 percent in 1933 (Table 45). The gradual decline in the occupancy ratio through 1930 must be accounted for by the provision of additional space at a rate more rapid than was necessary to meet the demands of expanding business, since the number of business enterprises was increasing until 1929.¹¹

¹¹ Bureau of the Census, *Statistical Abstract of the United States, 1947*, Table 498, p. 460.

TABLE 45 -- OPERATING EXPERIENCE OF OFFICE AND COMMERCIAL BUILDINGS, 1924-47 ^a

Year	Coverage ^b			Ratio of Operating Expense to			Occupancy Ratio	Estimated Rental ^e (per sq. ft. occupied space)	Actual Rent
	No. of Bldgs.	No. of Cities	Total Rentable Area ^c	Operating Expense ^d (per sq. ft. rentable area)	Total Income	Rental Income			
1924	170	43	18.0	\$1.08	\$2.27	49%	90%	\$2.48	g
1925	175	49	19.3	1.07	2.28	48	92	2.43	g
1926	207	58	22.9	1.08	2.21	50	91	2.37	g
1927	207	55	21.9	1.11	2.24	50	89	2.51	g
1928	240	56	26.3	1.09	2.17	50	88	2.47	g
1929	291	59	35.5	1.10	2.24	49	88	2.54	g
1930	314	64	41.0	1.08	2.26	48	87	2.60	g
1931	319	54	42.4	1.02	2.17	48	82	2.61	g
1932	316	55	43.1	.94	1.86	51	77	2.39	g
1933	333	62	49.6	.78	1.61	49	73	2.18	g
1934	319	63	46.5	.79	1.42	56	73	1.94	g
1935	364	64	52.7	.78	1.42	55	74	1.92	g
1936	401	68	55.5	.82	1.42	58	77	1.84	g
1937	439	84	61.5	.86	1.53	57	82	1.85	g
1938	486	83	63.8	.85	1.45	58	82	1.77	g
1939	477	87	62.3	.86	1.47	60	82	1.76	g
1940	482	87	63.1	.92	1.48	62	83	1.78	g
1941	464	79	61.3	.93	1.47	63	85	1.72	g
1942	458	80	61.9	.97	1.58	62	87	1.79	g
1943	451	77	61.2	.99	1.66	61	89	1.83	g
1944	484	80	64.9	1.05	1.74	61	93	1.87	g
1945	471	78	65.9	1.13	1.91	60	96	1.96	g
1946	512	79	68.8	1.28	2.13	61	99	2.12	g
1947	524	85	68.1	1.42	2.35	61	g	2.36	g
								\$2.15	g
								1.81	g
								2.22	g
								1.82	g
								2.46	g
								1.85	g
								2.86	g
								2.09	g
								3.30	g
								2.36	g
								3.60	g

^a Data are from the Office Building Experience Exchange Reports (National Association of Building Owners and Managers, Chicago), except the occupancy ratios which are from a graph in E. Walker's article, "Industry Studies 1946 Experience Exchange," Skyscraper Management (September 1947) p. 3.

^b Figures refer to the composition of the yearly samples and do not necessarily reflect the coverage upon which the data on operating experience are based.

^c In millions of square feet.

^d Plus taxes but before any allowance for depreciation.

^e Total rental income divided by occupancy ratio.

^f Rental income per square foot of rentable area. Assuming almost 100 percent occupancy in the period for which data are available, figures approximate actual rental income per square foot of occupied space.

^g Data not available.

During this period, construction contracted for in thirty-seven eastern states was somewhere near 50 million square feet each year (Table 46).¹² The volume of contracts let was largest in 1925, when in both office buildings and lofts contracts for new construction and alterations came to 59 million square feet. The decline in contracts after 1929 was precipitous, but the two years 1930 and 1931 together totaled about 49 million square feet. The major portion of construction during these two years probably represented projects which had progressed to a point at which it was not feasible to abandon them. The low point was reached in 1933, when the total was only 1.4 million square feet.

Business failures rose throughout the period 1929 to 1932 in both numbers and liabilities involved. Both the continued construction of new space and the rising wave of business failures contributed to the decline in occupancy, the ratio in 1933 and 1934 being about 20 percent below that at the peak of occupancy in 1925 (Table 45).

Notwithstanding the decline in the occupancy ratio, estimated rent per square foot of occupied space increased until 1931, reaching \$2.61 per square foot of occupied space.¹³ Rent fell in 1932 to \$2.39 and continued to decline until 1941, with the exception of one year, reaching \$1.72, a decline of 34 percent from the 1931 peak. In the meantime, the occupancy ratio rose from 73 percent in 1934 to 85 percent in 1941, a rise of 16 percent from the bottom, and increased rapidly to virtually 100 percent in 1946. Rents rose slightly in 1942, a little more rapidly in 1943 and 1944, but, even with an occupancy ratio of 99 percent in 1946, had not reached the level of the previous peak in 1931. In fact, in 1946 they were not quite at the 1924 level. During the entire period from 1932 to 1945, contracts awarded for construction of office space were below 20 million square feet per year, and exceeded 10 million square feet only in 1941 and 1942. A steep rise began in 1945 and continued through 1946 (Table 46).

¹² These figures include "office and loft buildings, new and alterations combined." Figures for all commercial buildings combined follow a similar course. (See Bureau of the Census, *Statistical Abstract of the United States, 1944-45*, Table 969, p. 893; *ibid.*, 1949, Table 908, p. 805.) Separate figures for new office space are not available.

¹³ The increase may be a reflection of either or both of two developments: vacancies may have been in cheaper space, and may have been caused by business failures, or the higher average rent may reflect new space completed in later years and being filled at concessions which drew tenants from lower cost space in older structures.

TABLE 46 — CONTRACTS AWARDED FOR THE CONSTRUCTION OF OFFICE AND LOFT BUILDINGS IN THIRTY-SEVEN EASTERN STATES, 1924-46 ^a

<i>Year</i>	<i>Floor Area (thousands of sq. ft.)</i>	<i>Valuation (thousands of dollars)</i>
1924 ^b	35,557	\$260,014
1925	59,466	458,121
1926	57,612	481,470
1927	52,109	484,889
1928	50,970	394,645
1929	53,793	435,289
1930	34,928	306,710
1931	13,842	124,359
1932	3,375	27,526
1933	1,421	11,684
1934	4,151	32,642
1935	3,478	23,117
1936	8,616	52,575
1937	7,340	52,811
1938	7,179	52,925
1939	7,532	58,538
1940	9,449	64,247
1941	15,078	98,385
1942	13,731	74,665
1943	3,256	21,637
1944	1,908	19,455
1945	10,565	84,634
1946	22,330	207,102

^a Data made available by the F. W. Dodge Corporation include contracts for new and alteration construction combined.

^b Data for thirty-six states only.

LAND AND IMPROVEMENTS USED FOR INDUSTRIAL PURPOSES

Land and improvements used for industrial purposes vary widely as to types, size, and other characteristics. They may consist of a large plot and a one-story building in which a single product is made, or of land and a multi-story structure where a variety of products are manufactured; they may be temporary structures in the rear of lots used principally for commercial or even residential purposes, or permanent structures specially planned for a particular enterprise and located on a selected site; finally, industrial plants may be found in isolated locations or clustered in districts.

Probably in no other kind of use are land and improvements employed for a greater variety of purposes, or under more varied condi-

tions. In consequence, the market in which rights in land and improvements for industrial use are bought, sold, and exchanged is complex and varied and difficult to characterize generally. Certain observations can be made, however, concerning the main types of industrial land use and the nature of the market for them.

The single purpose plant, especially that utilized by heavy industry, is usually designed for a particular occupant, and is commonly fitted with special machinery and equipment, the arrangement and space requirements of which are quite rigidly determined by the character of the processes and products involved. Examples are automobile manufacturing and assembly plants, oil refineries, agricultural implement manufacturing plants, machine tool and aircraft manufacturing and assembly plants, and the like. Since the development of mass production methods, this type of plant has become typically a one-story structure widely spread over a large area. In recent years, new plants have been constructed principally in outlying areas where big plots, including large parking areas, could be assembled at low cost. This decentralization is, in fact, an important force in changing the pattern of land uses in the outlying areas of urban communities.

Characteristics considered essential to sites of this kind are size, direct access to adequate highways and spur railroad sidings, and location within "commuting" distance of an adequate labor supply.¹⁴

Plants of this type are seldom bought, sold, or exchanged separately. Designed and equipped for a specific operation, they are usually transferred from one ownership to another only as a part of the assets of a going concern which is being transferred as a whole.¹⁵ Also, the financing of this kind of plant usually is completed as a part of the financing of the undertaking as a whole; even though a mort-

¹⁴ On the general considerations affecting the location of industrial establishments, see *inter alia*: Edgar M. Hoover, *The Location of Economic Activity* (New York, 1948); P. Sargant Florence, *Investment, Location, and Size of Plant* (Cambridge University, 1948); Laurent Dechesne, *La Localization des Diverses Productions* (Paris, 1945). On factors influencing the arrangement of industrial activities within a metropolitan area, see Laurent Dechesne, *op. cit.*, and Robert Murray Haig, *Major Economic Factors in Metropolitan Growth and Arrangement* (New York, 1927).

¹⁵ Some exception should probably be noted for industrial plants constructed by agencies of the federal government as part of the defense and war programs. The difficulty of disposing of them when they were declared surplus, however, and the heavy losses sustained, illustrate the narrow market for this kind of industrial land and improvements.

There are cases in which a large plant has been converted into a number of small units suitable for other uses, but these are not numerous.

gage on land and improvements may be given as specific security, the purpose is generally not to obtain funds for a specific purpose, but rather to give a preferential position to one or more creditors.

The second type of industrial improvement is the multi-story building in which space is rented by a number of light industries, commonly called a "loft" building. Loft space is more nearly standardized than space in the specialized industrial structure, and it generally provides for a minimum of special equipment or machinery. Much loft space, in fact, has a flexibility in arrangement and use similar to that which characterizes office space. As a consequence, the market for loft space is wider and better organized than the market for large plants. Since the demand for this kind of space arises from individual firms whose needs depend upon the volume of their business, it tends to expand and contract with industrial activity.

In large cities there is a noticeable tendency for light manufacturing to become concentrated in certain areas and in certain buildings, depending mainly on the type of product and the relative importance of nearness to market. Most products of light manufacturing are such that proximity to railroads or waterways is less important than the availability of skilled workmen and nearness of market. The lightness, small bulk, and high value of products enable delivery by truck (or even by hand) to distributors or terminals.

Finally, the most highly organized market for industrial real estate is found where industrial areas have been established, developed, and managed as such.¹⁶ Typical cases are the Central Manufacturing District and the Clearing Industrial District in Chicago, both of which began in the late nineteenth century and were initiated by railroad managements as a means of utilizing land and acquiring freight traffic. Streets and spur tracks were laid out so as to provide maximum convenience in shipment of goods for the projected factory buildings, and a campaign was initiated to locate enterprises in the area.

These districts are so organized and financed that they are able to offer great flexibility to prospective occupiers of factory sites; sites can be purchased in fee and improved with buildings erected by the

¹⁶ Robert L. Wrigley, Jr., "Organized Industrial Districts," *Journal of Land and Public Utility Economics*, Vol. 23, No. 2 (May 1947) p. 180 and *Annals of Real Estate Practice*, Vol. 6 (National Association of Real Estate Boards, 1925 and 1926) and Vol. 4 (1927).

enterprise, provided they comply with the general rules of the districts regarding height, land coverage, and the like, or the districts will agree to provide on lease to the enterprise both site and, within reasonable limits, a specially designed structure, or space within an existing structure. The services of architects and engineers are made available through the district for designing and building structures and certain maintenance services are supplied. Assistance is also given the industry in financing the purchase of land and the construction of improvements.