THE THEORY OF PUBLIC WORKS CONTROL APPLIED TO THE CITY OF MILWAUKEE

by

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THE THEORY OF PUBLIC WORKS CONTROL APPLIED TO THE CITY OF MILWAUKEE

CHAPTER I.

SUMMARY

I. Nature of the Investigation

Regularization of business activity and employment by increasing governmental construction in times of depression and decreasing such construction in times of prosperity has been the subject of considerable discussion during the depression of 1930-1931. Many who advocate this remedy have stressed the desirability of long term planning, proper timing of expenditures, and the accumulation of "prosperity reserves" for use in periods of reduced business activity.

This survey was undertaken to determine the existing methods of planning and financing of public works expenditures in a fairly representative American city, the city of Milwaukee; to discover the factors influencing the amounts expended for various projects; and to suggest what projects might be shifted from prosperous periods to periods of depression.

The numerical data used in this analysis are for the ten-year period 1920 to 1929 inclusive. Unfortunately the figures for 1930 were received too late to be included.

II. The Planning of Permanent Improvements

The most comprehensive plans made by the city are those of the board of school directors and the city playground engineer. For several

years the board of school directors has planned its construction work five years in advance, revisions being made biennially. The programs are based upon estimates of growth and shifts of population, the proportion of the city's population attending the public schools, and expected financial resources. The board also cooperates with the city playground engineer in formulating a program of acquisition and development of playground sites.

Street improvements, which constituted approximately 22 per cent of the total expenditures for permanent improvements during the period studied, are planned only one year in advance. Each project must have the approval of the alderman who represents the ward in which the proposed work is to be done before it can be included in the annual budget. Since more than two thirds of the cost of paving and all of the cost of sidewalks is assessed against benefited property owners it is to be expected that expenditures for this type of improvement will be decreased rather than increased in periods of depression.

General system plans are made for sewer construction in advance, but detailed plans are made for the next ensuing year only. The amount of sewer construction is influenced by the amount of street construction, since it is very desirable to lay sewers before paving.

Plans for the development of the harbor have been made long in advance, and in recent years considerable money has been available for use. However, the board of harbor commissioners cannot plan to spend a certain amount in a given year, since for many years the principal ac-

tivity of the board has been the acquiring of land, which is a matter of making negotiation with present owners. After the land has been acquired, it may be possible to make more definite plans.

III. The Possibility of Stabilization by Public Works Control

To achieve stabilization by control of public works, larger absolute amounts should be spent in depression periods than in periods of prosperity. Only a portion of the idle men would be employed on the construction projects directly, but many more would be employed in transportation and production of materials used in construction. Still other men would be utilized in producing and distributing the goods which would be demanded by the additional wage earners. This plan of stabilization should not be confused with emergency employment relief, which is designed to employ men directly.

During the period studied a considerable portion of the expenditures for permanent improvements resulted from the expansion of the city and development of new territory. Although building activity has declined somewhat in recent years, there is still need of additional schools, sewers, pavements, parks, and other improvements.

It seems improbable that much construction which is financed chiefly by direct taxation or special assessment will be shifted from prosperity to depression because of the unpopularity of increased tax burdens during depressions. The desirability of the accumulation of "prosperity reserves" is questionable because funds so reserved are subject to misuse and mismanagement, and because people do not wish to pay for a street or a sewer or a school which is to be built during the next

depression.

It might be possible to stimulate the development of projects which are financed principally by bond issues in times of depression. During the period studied about 45 per cent of the cost of all permanent improvements was financed by bonds. However, for several years the city of Milwaukee has had a very small margin for further indebtedness. Moreover, the elimination of automobiles and motor trucks from the list of taxable property will cause a reduction in the debt limit of the city of about a million and a half dollars. Mr. Otto T. Mallery has suggested that legislation be enacted to contract the debt limit in times of prosperity and expand it in depressions. This plan might lead to difficulties that are discussed in Chapter XI.

Should administrative officials of the city desire to expand the volume of construction during depressions they could voluntarily decrease bond issues in times of prosperity and thereby create a reserve of credit, which could be utilized when needed without placing an extra burden on taxpayers. Or bonds could be authorized by the council in the regular way but construction postponed until indexes of business activity and employment indicated a decline. In actual practice bonds are often held for many months before being sold because of delays in completing plans or making negotiations, or because the city is not in immediate need of cash (see Chapter IV.). Should this proposal be adopted, the various departments could develop plans with definite knowledge that money was available.

It would seem that the building of schools, for which a fairly

definite amount of money is available, and for which plans have been made in advance, could, by following this plan, be increased when business began to slump. It might also be possible to shift a part of the construction of bridges, viaducts, grade crossings, parks, playgrounds and storm relief sewers in this manner. After the city gains possession of the harbor site, it is possible that the development of the harbor could be so timed that a stabilizing tendency would be produced.

In general, costs of construction are greater during the periods of declining activity and the early months of depressions than during later months of depressions. But to have a maximum stabilizing effect, expenditures should be made when declines first begin. The objective should be stabilization itself, and not reduced costs of construction.

Milwaukee is not a closed economy: it cannot prosper unless the communities with which it has dealings also prosper. Public works control would certainly fail to establish regularization if it were resorted to in only one community. It is true that not all communities are affected to the same extent by business depressions. But business cycles are world wide in effect and should be treated as a world problem.

CHAPTER II.

GROWTH OF THE CITY OF MILWAUKEE

I. Increase in Population

The United States Bureau of Census reports that on April 1, 1930 the population of the city of Milwaukee was 578,249, an increase of 121,102 over the January 1, 1920 Census.[1] This is an increase of 26.5 per cent for the period (10.25 years), and an average annual rate of increase of 2.319 per cent. This is somewhat greater than the annual rate of increase for the previous decade, 1910-1920, which was 2.031 per cent.

The story of the growth of Milwaukee's population from 1850 to 1930, as reported by the Fifteenth Census, may be found in the following table:

TABLE I.

POPULATION OF THE CITY OF MILWAUKEE[1]
1850-1930

Year	Number	Increase over Previous Census Year	
		Number	Per cent
1850	20,061		
1860	45,246	25,185	125.5
1870	71,440	26,194	57.9
1880	115,587	44,147	61.8
1890	204,468	88,881	76.9
1900	285,315	80,847	39.5
1910	373,857	88,542	31.0
1920	457,147	83,290	22.3
1930	578,249	121,102	26.5

1 Fifteenth Census of the United States: 1930, Population Bulletin, First Series, Wisconsin, Number and Distribution of Inhabitants.

In recent years, the Bureau of Census has made annual population estimates for the city of Milwaukee. These estimates are based upon such considerations as changes in area, and business and industrial factors. The estimates for the years 1921 to 1929 together with the enumerations of 1920 and 1921 are given below.

TABLE 2.

YEARLY ESTIMATES OF POPULATION
OF THE CITY OF MILWAUKEE

1920-1930

Data from the U. S. Bureau of Census. The figures for intersensal years are estimates.

Year	Population	Increase
1920	457,147	4,290
1921	468,386	11,239
1922	476,603	8,217
1923	484,595	7,992
1924	492,087	7,492
1925	509,192	17,105
1926	517,000	7,808
1927	536,000	19,000
1928	544,200	8,200
1929	No Est.	
1930	578,249	34,049 (2 yrs.)

From: 1931 Revision of Five Year School Building Program of the Board of School Directors, Milwaukee, Wisconsin, p. 4.

On the basis of Gompertz curve fitted for the years 1850 to 1930 it is estimated that the population of Milwaukee will be approximately 679,200 in 1940 and 781,600 in 1950. This estimate is made on the assump-

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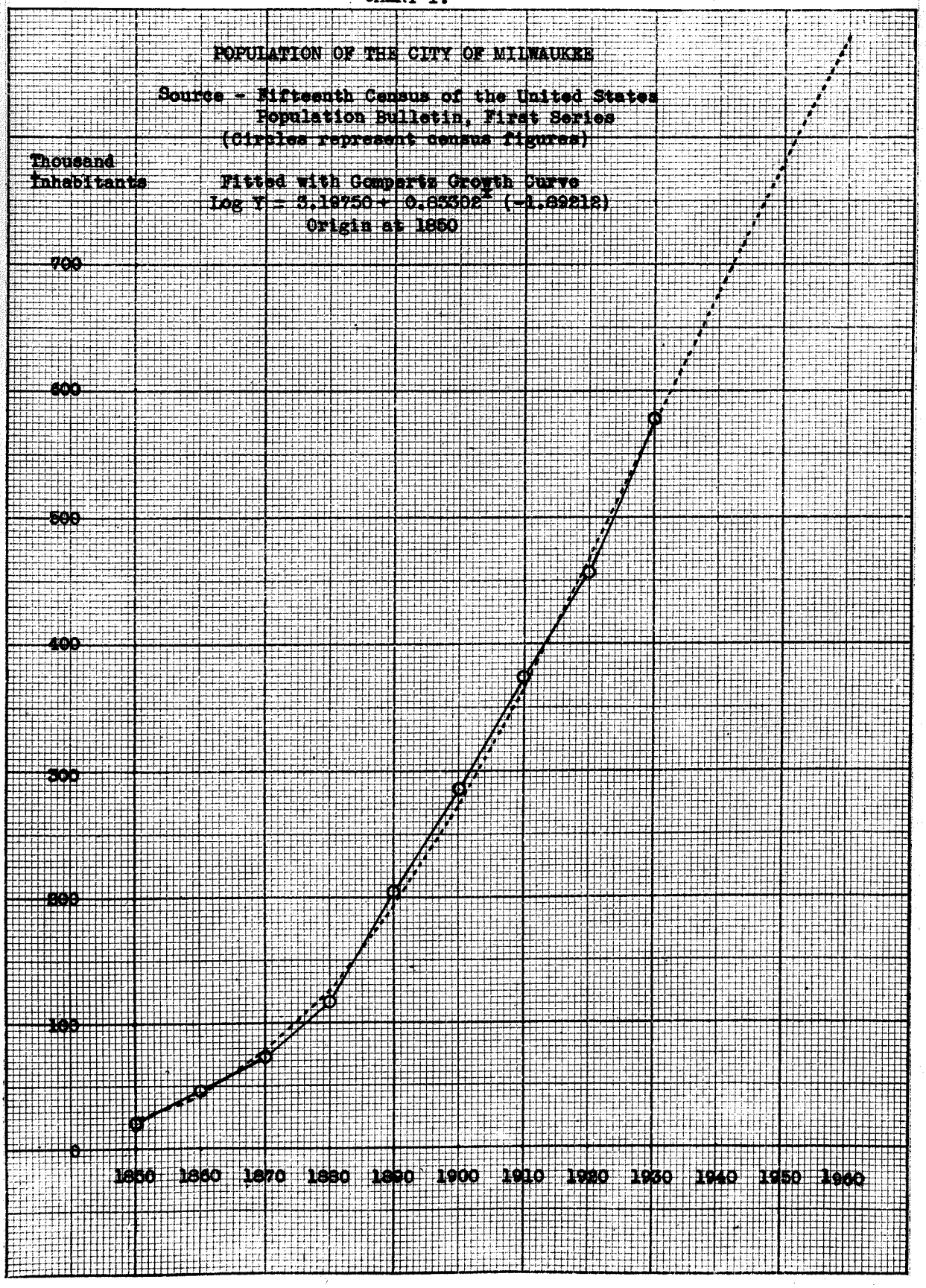
CHART I.



tion that the population of the city will follow a normal law of growth, as defined by the derived equation: $\text{Log } Y = 3.19750 + 0.83302^{X} (-1.89212)$, with the origin at 1850. A basic change in the rate of industrial development or in the rate of annexation would render these estimates unreliable. It is recognized that this type of curve is more appropriate for estimating increases in population of countries than for estimating population for cities.

II. Increase in Area

In considering the growth of the City's population during the recent decade, 1920-1930, it is somewhat illogical to assume a constant geometric rate of increase because of annexations which have taken place at irregular times during this period. Between January 1, 1920 and January 1, 1930 exactly fifty annexations have occured, which have added 15.849 square miles to the area of the city, an increase of approximately 60 per cent.[2] It is extremely difficult to compute the number of people living on this annexed territory, or the number of people living within the old limits of the city as they were defined on January 1, 1920. This factor so complicates the computation of the rate of growth of population that we have computed an annual average based on Census figures, although the accuracy of this average is impaired by changes in area.

Table 3 shows the total area of the city on January first of each year that was preceded by a year in which annexations occurred. This table extends from date of incorporation, January 31, 1846 to January 1,

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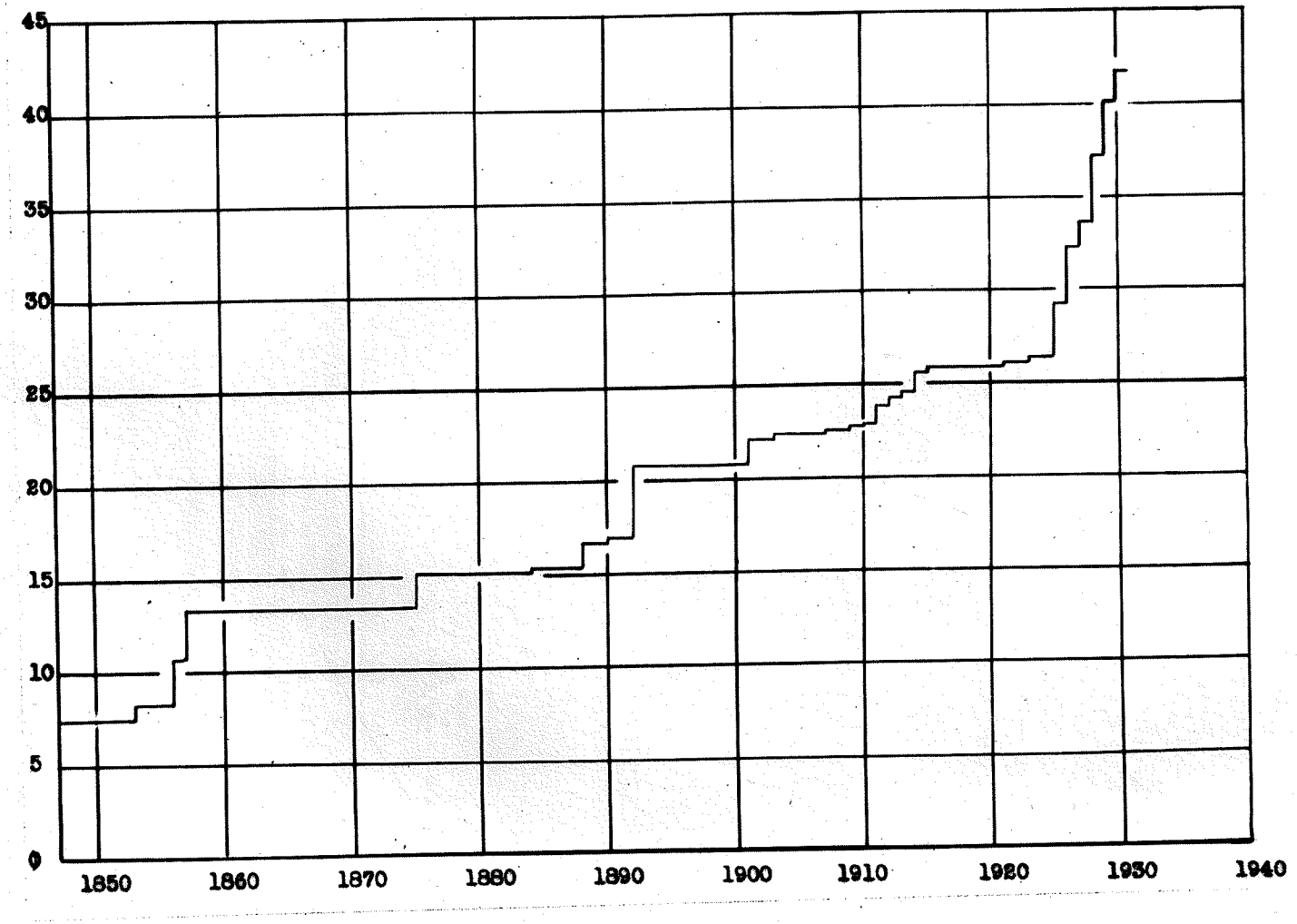
2 The Board of Public Land Commissioners, City of Milwaukee, Making Milwaukee Mightier (1929), pp. 78-79. The increase in area of the city from 1920 to 1930 was 59.916 %.

CHART 2.

TOTAL AREA OF THE CITY OF MILWAUKEE

JANUARY I OF EACH YEAR

Source of Data: Making Milwaukee Mightier, pp. 78-79.



1930. These data are plotted in Chart 2.

TABLE 3.

AREA OF THE CITY OF MILWAUKEE ON JANUARY FIRST OF EACH YEAR THAT WAS PRECEDED BY A YEAR IN WHICH ANNEXATIONS OCCURRED

1847-1930

Year	Area in Sq.Miles	Year	Area in Sq.Miles
1847	7.335	1911	23.860
1853	8.220	1912	24.409
1856	10.637	1913	24.541
1857	13.328	1914	25.591
1875	15.068	1915	25.818
1884	15.311	1916	25.851
1888	16.625	1921	26.089
1890	16.839	1923	26.383
1892	20.880	1924	26.398
1901	22.159	1925	29.361
1903	22.344	1926	32.377
1904	22.419	1927	33.658
1907	22.540	1928	37.233
1909	22.642	1929	40.116
1910	22.684	1930	41.700

Source: The Board of Public Land Commissioners, City of Milwaukee, Making Milwaukee Mightier (1929), pp. 78,79. The City of Milwaukee was incorporated January 31, 1846, with an area of 7.335 square miles.

The greater part of the territory annexed is inhabited by people who migrated from the city to the outskirts. The city of North Milwaukee is the only city that had by January 1, 1930, consolidated with the city of Milwaukee. The population of North Milwaukee in 1920 was 3,047 and the area only one and one half square miles, which accounts for a rela-

tively small portion of the 15.849 square miles annexed by Milwaukee between 1920 and 1930.[3]

During 1922 the city of Milwaukee adopted a definite annexation program.[4] The Board of Public Land Commissioners presents the following reasons for this policy of annexation and consolidation:

> 1. The primary object was to supply adequate land for future expansion by annexing first the developed districts along the edges of the city and then the more sparsely settled areas; and also by inviting the contiguous suburbs to consolidate with Milwaukee. Every city needs an adequate amount of surplus land if it is to grow unhampered.
>
> 2. Milwaukee also is vitally concerned in reducing the cost of government by eliminating the many duplicating governments and taxing units within its metropolitan area. One unified government for Milwaukee's metropolitan area can function more economically and efficiently than the five cities, four villages, five townships, metropolitan sewerage commission, and numerous school districts, contained within the area known as Greater Milwaukee.
>
> Unified Control Essential
>
> 3. Disease, fire, and crime, are no respecters of boundary lines and, therefore, the problems of police, fire, and health protection should be under unified control throughout the metropolitan area.
>
> 4. Milwaukee is interested in its former citizens, who were forced to move out to the suburbs because of inability to find desirable home sites in the city.
>
> 5. Unification of the metropolitan area through annexation and consolidation will make possible a united activity in dealing with problems that are metropolitan in scope, as planning, transportation, zoning, sanitation, drainage, etc.

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3. The Board of Public Land Commissioners, City of Milwaukee, Making Milwaukee Mightier (1929), p. 3.

4 Report of the Common Council 1929, City of Milwaukee, p. 65.

6. Milwaukee's suburbs often are the source of much costly and unfriendly legislation aimed at the mother city, whereas if they were merged into one one governmental unit this difficulty would disappear.

A Larger City Means Greater Prosperity

7. Milwaukee is interested in preventing the creation of additional municipalities. Metropolitan Milwaukee is really one city and should be given credit for the entire population, rather than merely for that part which is included within its corporate limits. Growth in population is evidence of a city's progressiveness and prosperity. The larger the population, the easier it is to attract new industrial and commercial establishments, conventions, national institutions, headquarters of national organizations, etc. Aside from these material advantages, there are also important intellectual and spiritual advantages related to art, music, education and the drama, which require large numbers of patrons for their successful maintenance in any community. 5

The arguments cited above emphasize the desirability of unified planning and control of the development of land and problems relating to health, fire, crime, etc. Moreover, annexation of the suburbs would increase the taxing and borrowing power of the city, which would aid in the financing of the streets, bridges, parks, and other city projects.

That this problem is a vital one is demonstrated by the fact that the percentage of the population of Milwaukee County living outside the city has been increasing constantly since about 1900. (See Table 4 below.)

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5 Op. cit., pp. 6,7.

TABLE 4.

PERCENTAGE OF POPULATION OF MILWAUKEE COUNTY
LIVING OUTSIDE THE CITY OF MILWAUKEE

1850-1930

Year	Population City	Population County	% of Population Outside City
1850	20,061	31,064	35.4
1860	45,246	62,517	27.6
1870	71,440	89,930	20.6
1880	115,587	138,537	16.6
1890	204,468	234,101	12.7
1900	285,315	330,017	10.8
1910	373,857	433,187	13.7
1920	457,147	539,449	15.3
1930	578,249	725,263	20.3

Source: Fifteenth Census of the United States: 1930, Population Bulletin, First Series. Wisconsin, Number and Distribution of Inhabitants.

III. Increase in Assessed Value of Property

The assessed value of all property within the city of Milwaukee increased by more than 300 million dollars during the ten years 1920-1929 inclusive. This is an increase of 45.3 per cent over the 1920 valuation. The Wisconsin Tax Commission reports the following:

TABLE 5.

ASSESSED VALUE OF ALL PROPERTY SUBJECT TO LOCAL TAXATION, CITY OF MILWAUKEE

1920-1929

Year	Assessed Valuation	Increase over Preceding Year	Percent Increase Over Preceding Year
1920	$675,611,540	$ 87,055,274	
1921	681,198,160	5,586,620	8.27
1922	677,070,755	- 4,127,405	- 6.06
1923	725,603,037	48,532,282	7.17
1924	755,229,851	29,626,814	4.08
1925	810,509,504	55,279,653	7.32
1926	864,957,161	54,447,657	6.72
1927	899,265,122	34,307,961	3.97
1928	944,157,658	44,892,536	4.99
1929	981,544,775	37,387,117	3.81
Total Increase		305,933,235	45.3 (10 years)

Source: Wisconsin Tax Commission, Municipal Statistics Department, Bulletins #1, 13, 17, 20, 22, 23, 26, 28, 31, 36, General Property Tax Levies for Cities.

An uncertain portion of the increase in valuation for every year excepting 1921 must be attributed to annexations. These figures represent the estimates of local assessors, not the equalized valuations of the Wisconsin Tax Commission.

IV. Building Activity

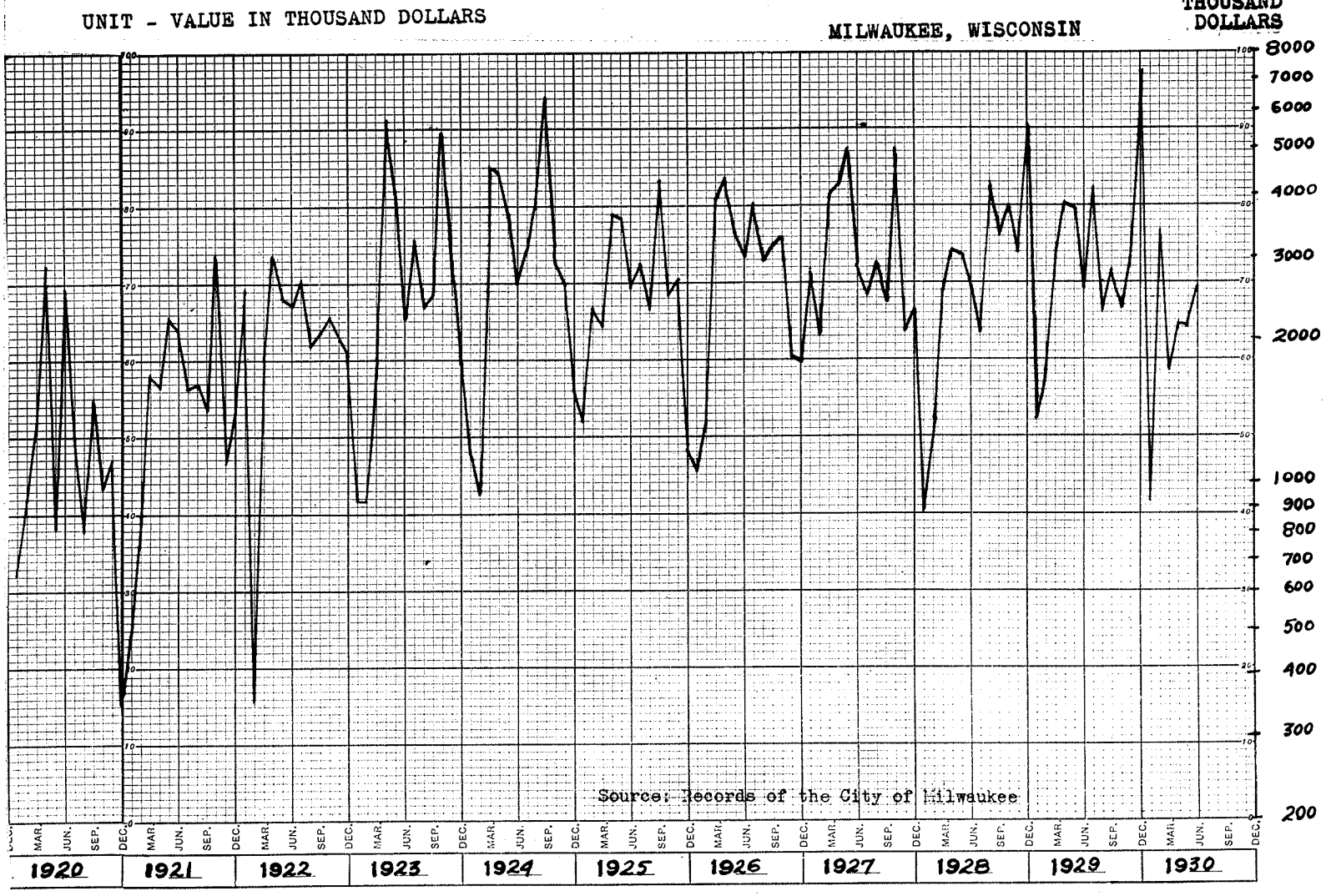
There was a considerable increase in building activity in the city of Milwaukee after the depression of 1920-21, as shown by the value

SOURCE, MILWAUKEE CITY RECORDS

UNIT - VALUE IN THOUSAND DOLLARS

CHART 3

VALUE OF BUILDING PERMITS ISSUED AT MILWAUKEE, WISCONSIN



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of permits issued which are plotted in Chart 3. In this chart the ratio scale was used with the result that vertical changes represent rates of change and not absolute amounts of change. The data were obtained from the official records of the city, and do not include permits for plastering, heating, electrical work, elevators, refrigerators, oil tanks, signs, awnings or other equipment. The seasonal variation was computed for bi-monthly averages by the 13 month-ratio-first-difference method, and eliminated together with the straight line trend which was fitted by the method of least squares. The percentage deviations from the trend are shown in Chart 4.

The value of permits issued at Milwaukee declined in 1924 which was about a year before the decline of building activity in the United States as a whole, as recorded by the Federal Reserve Bulletin.

The amount of building determines to a large extent the amounts that must be expended by the city for such improvements as streets, sewers, water mains and schools as will be seen in later chapters.

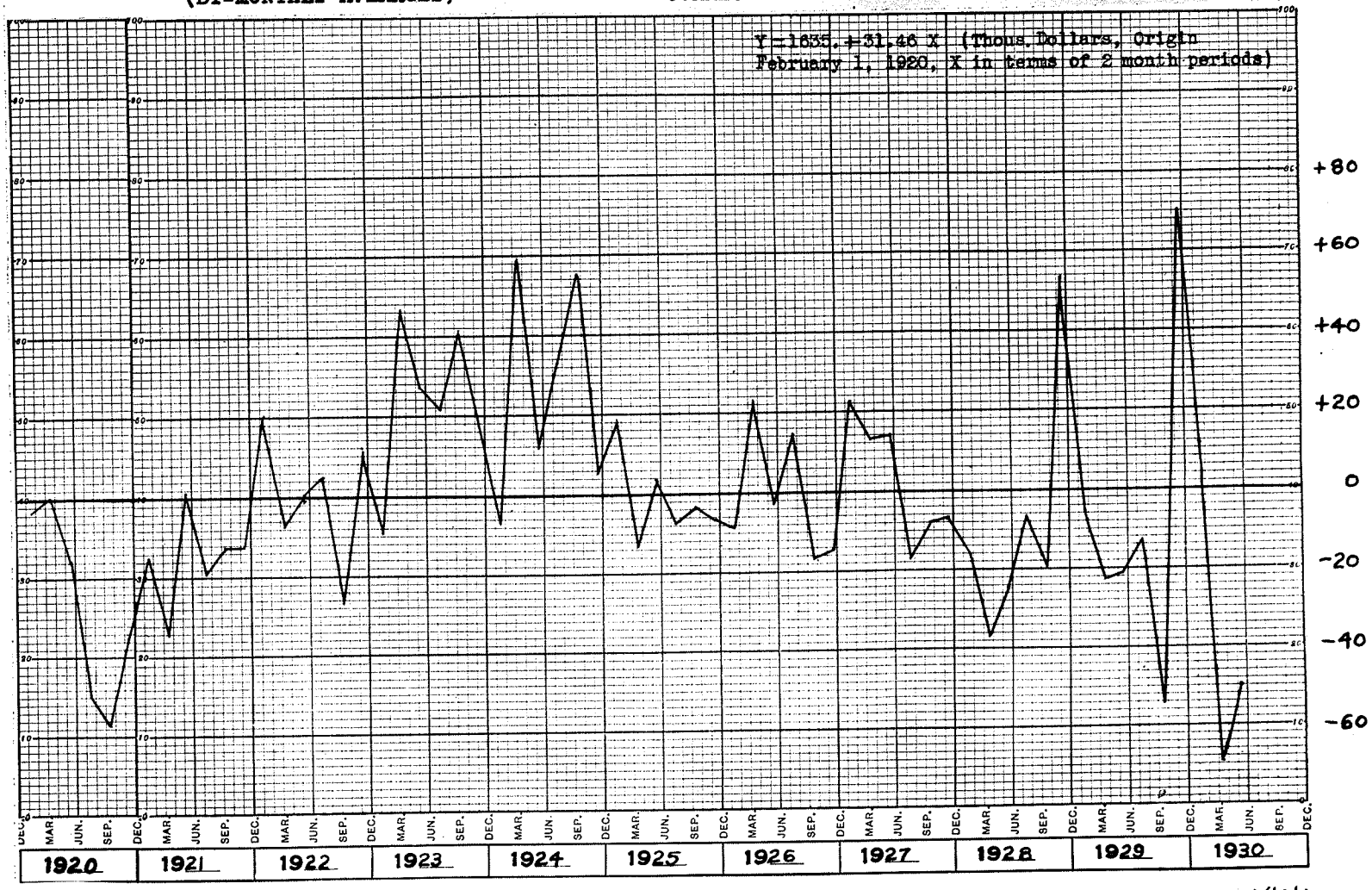
CHART 4.

SOURCE - MILWAUKEE CITY RECORDS

UNIT - PERCENTAGE DEVIATIONS FROM THE TREND
(BI-MONTHLY AVERAGES)

VALUE OF BUILDING PERMITS ISSUED AT MILWAUKEE, WISC.

CORRECTED FOR TREND AND SEASONAL VARIATION



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CHAPTER III.

EXPENDITURES OF THE CITY OF MILWAUKEE

I. Source of Data

The following analysis is based upon the records of the city of Milwaukee rather than the reports of the city to the Wisconsin Tax Commission. The city operates on an accrual basis, while all reports to the Tax Commission are made on a cash basis. Summaries of the reports to the Tax Commission may be found in Appendix A.

In July, 1930, the Citizens' Bureau of Milwaukee published the City of Milwaukee's Major Financial Transactions, which was prepared to serve as a basis of a long term program. At the suggestion of Mr. William H. Wendt, Deputy Comptroller of the city of Milwaukee, this valuable material has been utilized in this study. Mr. Wendt himself assisted the Bureau in its compilation. That the city officials are convinced of the accuracy of this publication is shown by the fact that parts of it were incorporated in the annual report of the city for 1929. For permission to use this data we are indebted to Mrs. Paula Lynaugh of the Citizens' Bureau.

II. Total Expenditures of the City of Milwaukee

In 1929 the total expenditures of the city were more than twice as great as they were in 1920.[1] This is an increase of more than 100

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1 See Table 6.

TABLE 6.

TOTAL CITY OF MILWAUKEE EXPENDITURES
COMMON COUNCIL, SCHOOL BOARD AND INDUSTRIAL EDUCATION COMMISSION

1920-1929

Year	Expenditures Operation	Interest	Water Dept. Operation	Local Services	Permanent Improvements	Grand Total
1920	$12,228,946	$ 970,118	$ 679,238	$ 165,017	$ 6,445,775	$20,489,094
1921	14,044,358	1,096,245	650,465	114,769	8,621,893	24,527,730
1922	15,060,775	1,310,179	643,234	178,528	7,775,955	24,968,671
1923	16,138,910	1,276,528	677,178	163,421	6,444,712	24,700,749
1924	17,155,864	1,261,876	677,377	231,980	7,531,040	26,858,137
1925	$18,054,939	1,329,481	703,997	210,166	8,625,404	28,923,987
1926	19,418,034	1,365,339	812,265	243,398	13,428,055	35,267,091
1927	20,860,059	1,618,814	874,577	261,556	15,101,521	38,716,527
1928	22,512,117	1,832,731	890,755	261,875	16,323,757	41,821,235
1929	23,439,040	1,969,213	924,249	334,419	14,879,239	41,546,160
10-year Total	$178,913,042	14,030,524	7,533,335	2,165,129	105,177,351	307,819,381
Per cent of Grand Total	58.1	4.6	2.4	0.7	34.2	100.0

Compiled by Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 10.

per cent, while population increased 26.5 per cent, area 60 per cent, and valuation of assessed property 45 per cent.

The total expenditures for the period 1920-29 exclusive of agency and trust payments and investment transactions total $307,819,381. The portion of this amount going for permanent improvements was 34.2 per cent to which should be added interest charges of 4.6 per cent, making a total of 38.8 per cent.[2] (See Table 6).

III. Revenue of the City of Milwaukee

Table 7 shows revenue from property taxes, special assessments and miscellaneous sources from 1920 to 1929. On the average about 65 per cent of the city's revenue was derived from general property taxes during this period. Special assessments are the next in importance, but they constituted only 8.5 per cent of the total revenue.

IV. Expenditures for Permanent Improvements of the City of Milwaukee

We have seen that a little more than one third of the expenditures of the city during the decade studied went for permanent improvements (Table 6). About six and a half millions were spent for this purpose in 1920 while more than fourteen and a half millions were expended in 1929. The total cost of permanent improvements for the ten years 1920 to 1929 was a little more than 105 million dollars. These figures are plotted in Chart 5.

A distribution of these expenditures according to purpose is given in Table 9. Paving, sewer construction and schools constitute the more

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2 Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 10.

TABLE 7

REVENUE FROM PROPERTY AND INCOME TAXES, SPECIAL ASSESSMENTS, AND MISCELLANEOUS SOURCES
CITY OF MILWAUKEE: 1920-1929 INCLUSIVE

	General Property Taxes, Int. Penalties	Income Tax	Special Assessments	State and County Aids	Earnings Public Service Enterprises	Earnings General Depts.	Miscel.	Total
1920	$15,417,302	$ 1,076,561	$ 1,145,336	$ 938,406	$ 1,247,248	$ 393,633	$ 1,281,424	$ 21,499,910
1921	15,466,843	382,683	1,893,656	1,015,648	1,745,061	484,562	1,567,185	22,555,638
1922	15,301,115	1,258,939	1,533,080	1,038,850	1,975,405	547,986	1,748,412	23,403,787
1923	16,606,312	2,115,923	1,672,643	1,054,793	2,134,800	664,023	1,954,621	26,203,115
1924	19,034,835	1,079,424	1,684,801	1,070,886	2,061,529	665,646	2,010,933	27,608,054
1925	18,662,085	2,038,288	1,835,796	1,112,853	2,119,606	713,042	1,990,206	28,471,876
1926	20,383,607	2,258,706	3,524,216	1,292,475	2,113,029	732,331	2,286,910	32,591,274
1927	21,134,551	3,264,153	3,440,342	1,414,572	2,289,946	1,075,090	2,255,312	34,873,966
1928	24,706,222	3,140,829	3,597,585	1,259,747	2,687,489	1,196,496	2,308,375	38,896,743
1929	25,677,102	3,058,066	4,905,768	1,320,439	2,754,109	790,476	2,876,126	41,382,086
Total	$192,389,974	19,673,572	25,233,223	11,518,669	21,128,222	7,263,285	20,279,504	297,486,449
1929 inc. over '20	66.8%	183.8%	257.0%	41.0%	120.8%	102.0%	124.0%	92.3%

Compiled from the City Controller's Financial Summary: Schedule 3, Ex. A; Schedule 12, Ex.D; Estimated General Revenue, and Tax Levy. $2,147,180 of interest was transferred to the Amortization Fund, and has not been included in the above.

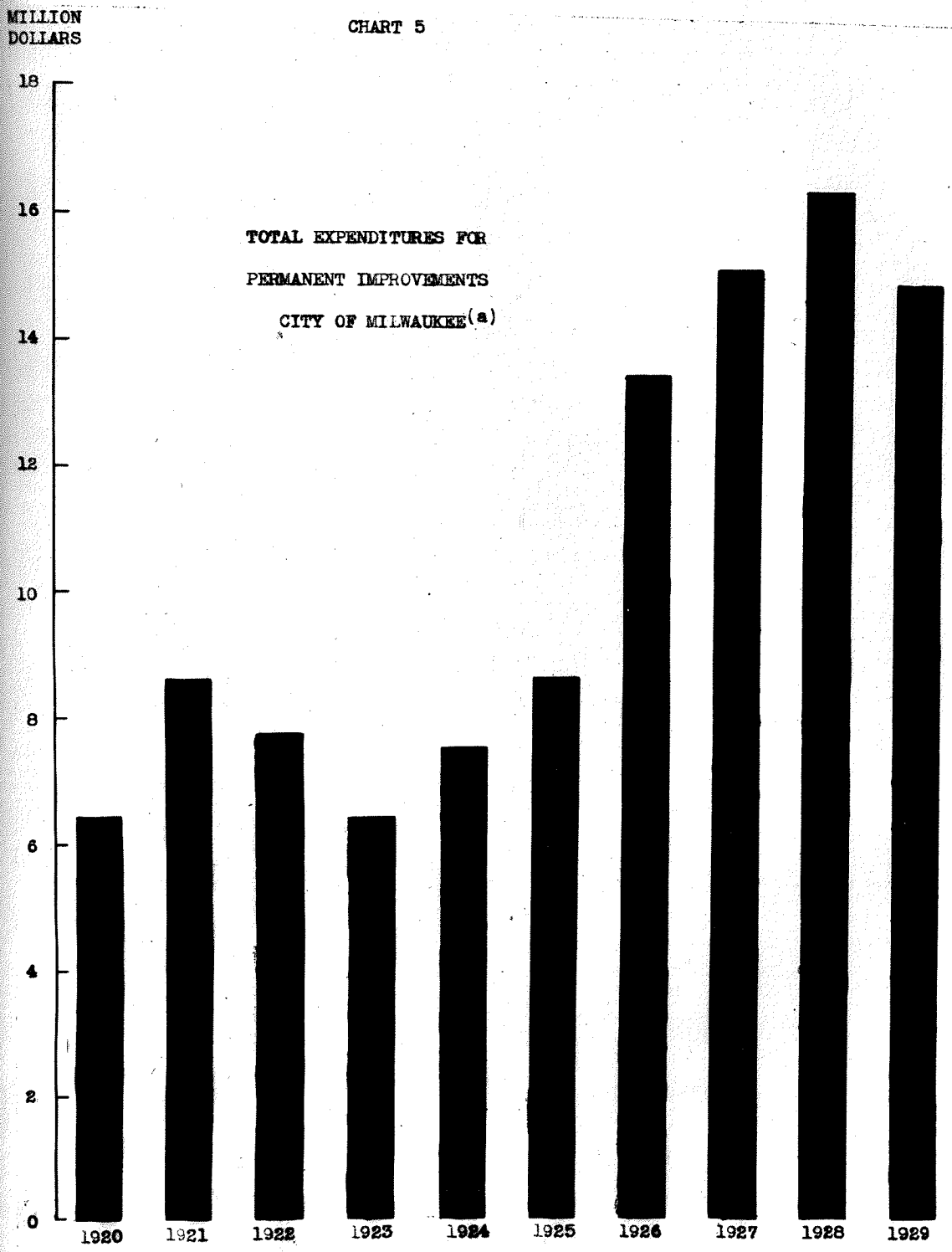
TABLE 8

CITY OF MILWAUKEE REVENUE FROM PROPERTY, INCOME TAX, SPECIAL ASSESSMENT AND MISCELLANEOUS: PER CENT DISTRIBUTION: 1920-1929
COMMON COUNCIL, SCHOOL BOARD, AND BOARD OF INDUSTRIAL EDUCATION

Source of Revenue	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1920-1929 Average
General Property Taxes, Penalties, Interest	71.8	68.7	65.4	63.4	69.0	65.5	62.5	60.6	63.5	62.0	64.8
Special Taxes, St. Railway	2.0	2.1	2.2	2.2	2.4	2.5	2.1	2.3	2.3	3.1	2.4
Income Tax	5.0	1.7	5.4	8.1	3.9	7.2	6.9	9.4	8.1	7.4	6.6
Special Assessment	5.3	8.4	6.5	6.4	6.1	6.4	10.8	9.9	9.3	11.7	8.5
Aids: Education(St. & Co.)											
Highways	4.4	4.5	4.4	4.0	3.9	3.9	4.0	4.1	3.2	3.2	3.9
Water Dept. Markets	5.8	7.8	8.4	8.1	7.5	7.4	6.5	6.6	6.9	6.7	7.1
General Licenses	1.1	.9	.7	.8	.9	.8	.7	.7	.6	.6	.8
Permits, Fees, Int., Rents	2.3	3.5	3.9	3.9	3.7	3.4	3.8	3.0	2.6	2.7	3.1
Earnings: Gen. Depts. & Miscel. Revenue	2.3	2.5	2.9	3.2	2.9	3.1	2.7	3.6	3.5	2.5	3.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Compiled by the Citizens' Bureau of Milwaukee,
City of Milwaukee's Major Financial Transactions, p.72.

CHART 5



(a) Data from Citizen's Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 14.

TABLE 9

COST OF PERMANENT IMPROVEMENTS OF THE CITY OF MILWAUKEE: 1920-1929 INCLUSIVE
Common Council, School Board, and Board of Industrial Education Jurisdictions

PROJECT	AMOUNT OF EXPENDITURES			PER CENT OF TOTAL		
	1920-1929 Incl.	1920-1924	1925-1929	1920-29	1920-24	1925-29
	10-Year Total	5 Years	5 Years	10 Years	5 Years	5 Years
PERMANENT STREET PAVING	$22,918,613	$7,895,087	$15,023,526	21.9	21.6	22.0
SEWER CONSTRUCTION	14,736,939	2,554,357	12,182,582	14.0	6.9	17.8
WATER --COST OF NEW CONSTRUCTION(a)	13,358,316	5,814,119	7,544,197	12.7	15.8	11.0
SCHOOL BOARD--CONSTRUCTION	13,288,475	4,054,188	9,234,287	12.6	11.0	13.5
BOARD OF INDUSTRIAL EDUCATION	3,204,388	1,609,716	1,594,672	3.0	4.4	2.3
PUBLIC MUSEUM	179,904	39,904	140,000	.2	.1	.2
MILWAUKEE SEWERAGE COMMISSION(b)	4,789,924	4,789,924	.....	4.5	13.0	....
PARKS AND LAKE SHORE DRIVE	9,005,611	2,161,652	6,843,959	8.6	5.9	10.0
GRADE CROSSINGS AND BRIDGES	6,384,772	2,064,109	4,320,663	6.1	5.6	6.3
STREET LIGHTING	2,393,216	1,484,391	908,825	2.3	4.1	1.3
HARBOR	1,947,289	735,670	1,211,619	1.8	2.0	1.8
FIRE AND POLICE	2,343,362	35,621	2,307,741	2.2	.1	3.4
LAND CONTRACT	1,126,929	494,592	632,337	1.1	1.3	.9
MISCELLANEOUS	948,825	280,371	668,454	.9	.8	1.0
CEDAR-BIDDLE; LAKE STREETS	2,653,594	728,030	1,925,564	2.5	1.9	2.8
OPENING OF STREETS AND ALLEYS	1,439,641	790,295	649,346	1.4	2.1	.9
BITUMINOUS PAVING	1,464,430	717,984	746,446	1.4	1.9	1.1
HOUSE DRAIN AND WATER CONNECTION	1,818,526	349,501	1,469,025	1.7	.9	2.1
SIDEWALK REPAIRS	807,051	219,864	587,187	.8	.6	.9
STREET WIDENING	252,564	.....	252,564	.2	....	.4
STATE STREET GRADE ALTERATION	114,982	.....	114,982	.1	....	.2
TOTAL PERMANENT IMPROVEMENTS	105,177,351	36,819,375	68,357,976	100.0	100.0	100.0

Compiled by the Citizens' Bureau of Milwaukee from the City Controller's "Capital Account", and "Local Improvements in Progress" account.

(a) Total compiled from the Water Department Annual Reports.

(b) Revenue received from the county in the form of bond proceeds have not been included. Total spent for the Milwaukee Sewerage Commission was $9,153,410 of which $4,363,486 was paid by the county and $4,789,924 by the city.

Local Services included in the City Controller's "Local Improvements Account" was omitted from this analysis.

important items. The amount spent in the second half of the period increased 85 per cent over the amount spent in the first half. It is interesting to note that during the first five years, 1920-1924, the area of the city increased less than six square miles, while in the second period, 1925-1929, it increased more than twelve square miles (see Table 3).

A monthly distribution of disbursements for construction items from 1922 to September 1930 is given in Table 10. Since part of the cost of permanent improvements is land and not construction, these figures are somewhat smaller than the total permanent improvement figures.

A straight line trend was fitted by the method of least squares, and the average seasonal variation computed by the method of arithmetic averages for the period 1922-1929 inclusive. (The slope of the line of least squares is greater than would be the case if figures for 1930 had been included in the calculations.) The seasonal variation was eliminated, the series expressed as percentage deviations from the trend, as shown in Chart 9.

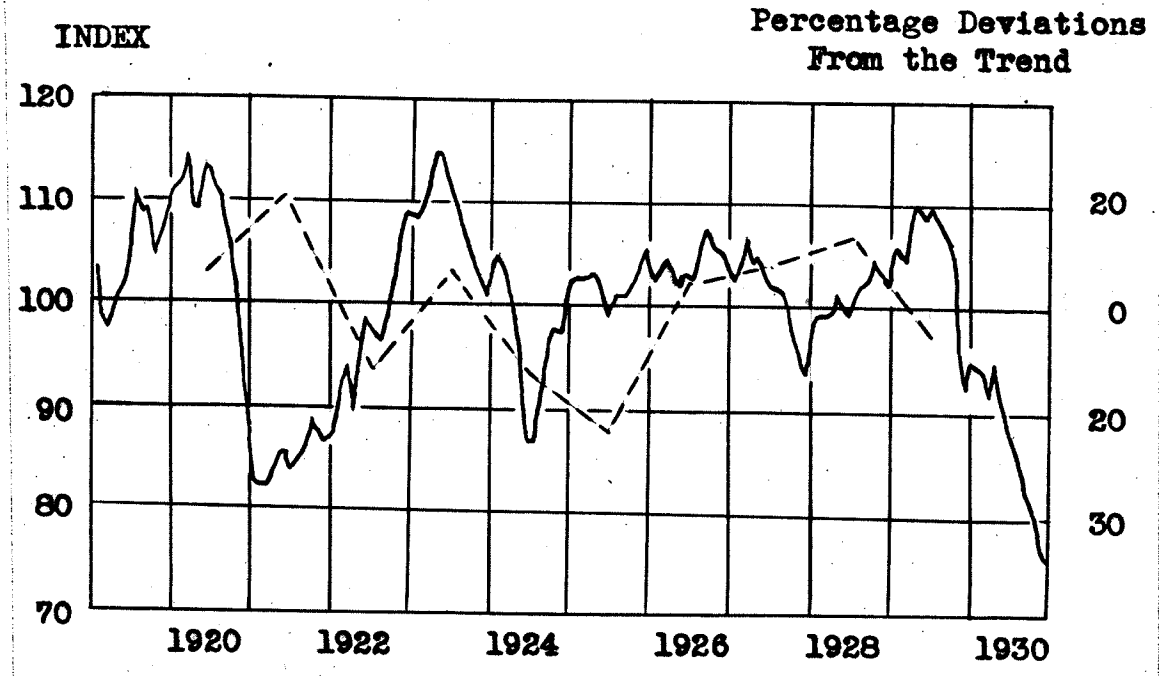
Unfortunately the index of seasonal variation of disbursements does not reflect the seasonal movement of construction of city projects accurately. It merely measures the fluctuation of city expenditures for construction. According to the terms of most contracts of the city of Milwaukee, payments do not become due until work is completed and properly approved. However, many contractors who have done acceptable work for the city in the past and are considered to be reliable are able to collect as

much as 75 per cent of the estimated value of the work done each month. In such cases balances approximating 25 per cent of the cost of the job are paid when the work has been completed and approved. The result is that the amount of payments is relatively large in the last half of the year. On the average, December is the month of greatest payments, but it seems improbable that it is the month of greatest building activity.

Because of the monthly figures lacking significance and because the city operates on an annual budget, annual figures have been utilized throughout this study.

Annual expenditures for permanent improvements expressed as percentage deviations from a straight line trend are compared with The New York Times Annalist index of business activity in Chart 6. For the most part, expenditures seem to lag about a year behind general business activity of the United States as a whole, as measured by the Annalist. Budgets for the new year are usually approved just prior to January first. It seems likely that business conditions of the old year are taken into consideration when the new budget is being prepared.

CHART 6.



ANNUAL OUTLAY EXPENDITURES OF THE CITY OF MILWAUKEE COMPARED WITH THE ANNALIST MONTHLY INDEX OF BUSINESS ACTIVITY.

TABLE 10.

CITY OF MILWAUKEE
STATEMENT OF MONTHLY DISBURSEMENTS ON CONSTRUCTION
From January, 1922 to October, 1930

Compiled by Louis M. Kotecki, City Comptroller

Month	1922	1923	1924	1925	1926	1927	1928	1929	1930
January	382,414	430,182	493,477	98,453	469,334	739,631	490,685	278,685	309,645
February	286,604	389,558	742,074	568,802	618,180	868,001	715,428	597,676	505,406
March	231,124	346,945	586,223	578,811	773,087	523,144	617,570	588,896	610,251
April	364,577	636,217	721,048	252,477	719,149	495,398	561,595	601,563	591,563
May	477,623	541,120	587,794	421,076	878,363	1,523,661	814,187	990,518	598,154
June	676,757	681,125	420,170	628,420	986,480	853,179	1,716,023	1,296,298	811,176
July	823,999	728,142	860,830	959,058	1,366,931	1,560,917	1,626,231	1,459,369	1,169,360
August	1,000,265	988,834	687,127	865,307	1,479,990	1,523,768	1,527,821	1,947,734	1,237,819
September	740,691	894,748	854,706	880,300	1,575,286	1,579,659	1,727,959	1,632,396	1,259,203
October	735,130	1,318,921	808,119	1,102,395	1,409,344	1,434,177	1,828,425	1,604,301	
November	890,178	1,209,350	943,710	851,356	1,106,519	1,683,168	2,139,445	1,760,751	
December	594,032	1,232,336	796,208	1,168,056	1,398,143	1,771,027	2,182,910	1,830,803	
Totals	7,203,394	9,397,478	8,501,486	8,374,511	12,780,806	14,555,730	15,948,279	14,588,990	7,092,577

CHART 7.

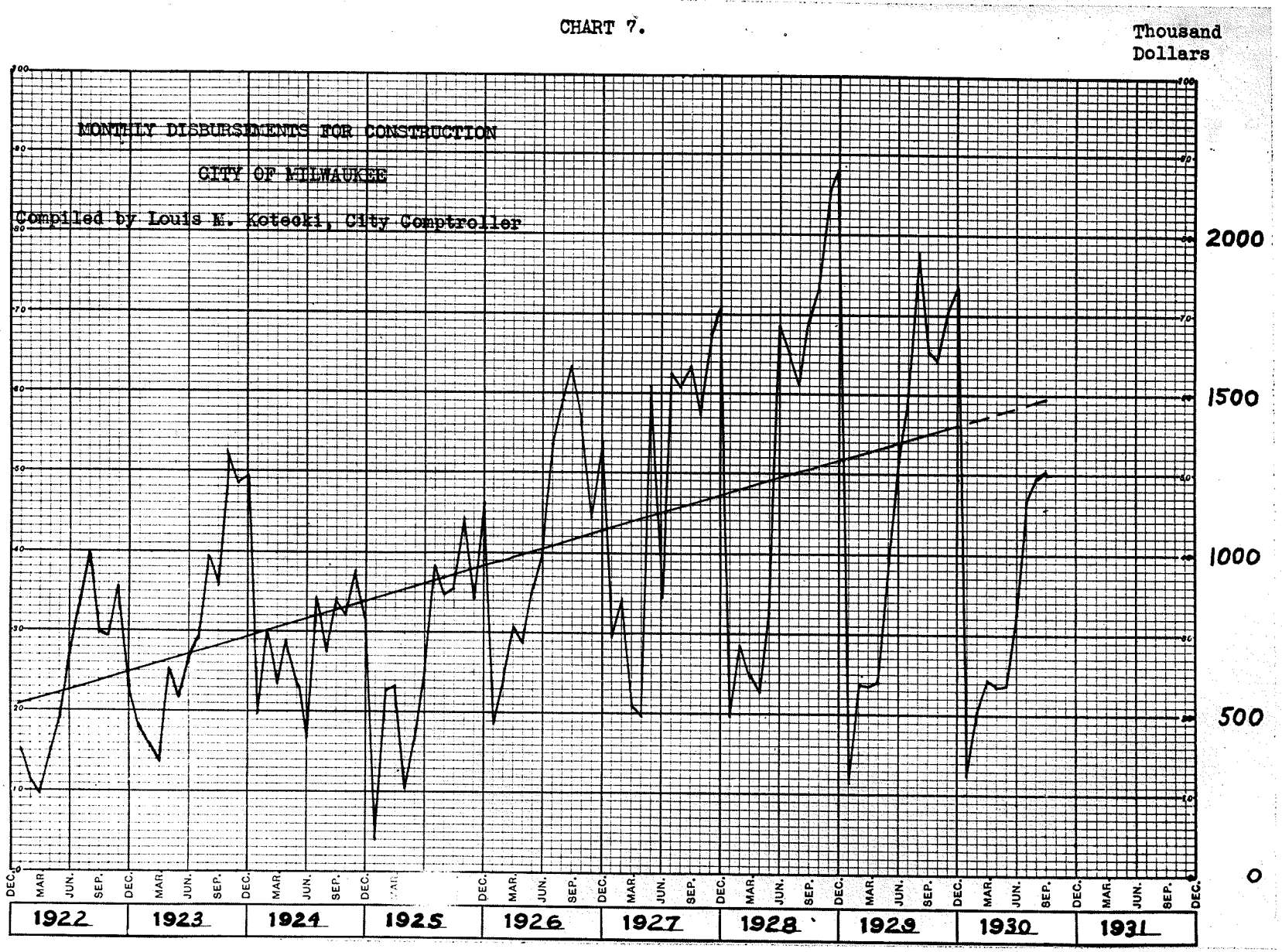

Thousand Dollars
MONTHLY DISBURSEMENTS FOR CONSTRUCTION
CITY OF MILWAUKEE
Compiled by Louis E. Koteoki, City Comptroller
2000
1500
1000
500
0
DEC.
MAR.
JUN.
SEP.
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931

CHART 6.

SEASONAL VARIATION

DISBURSEMENTS FOR CONSTRUCTION

CITY OF MILWAUKEE

Original Data Compiled by Lewis M. Kotecki, Comptroller

Expressed as percent of total disbursements

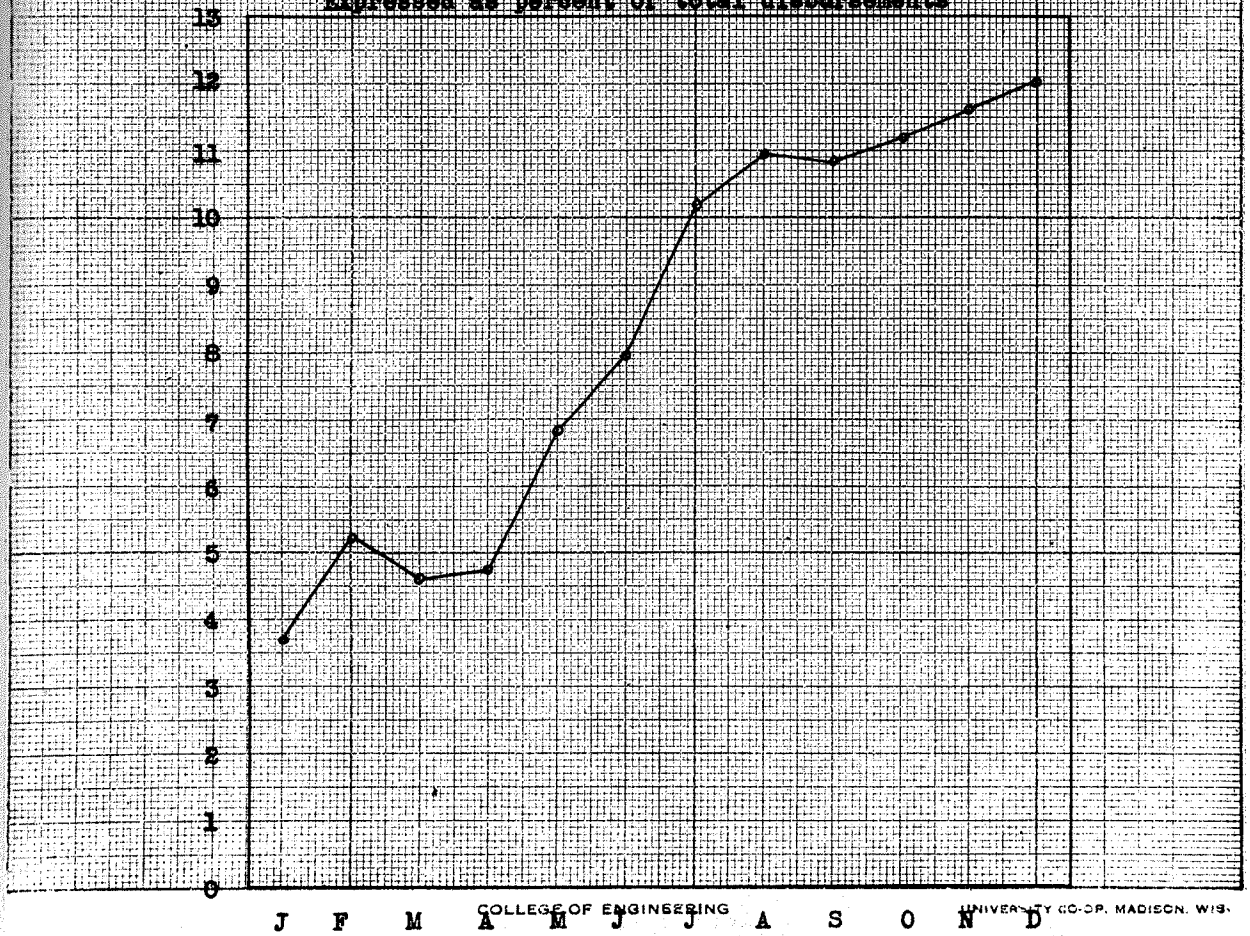
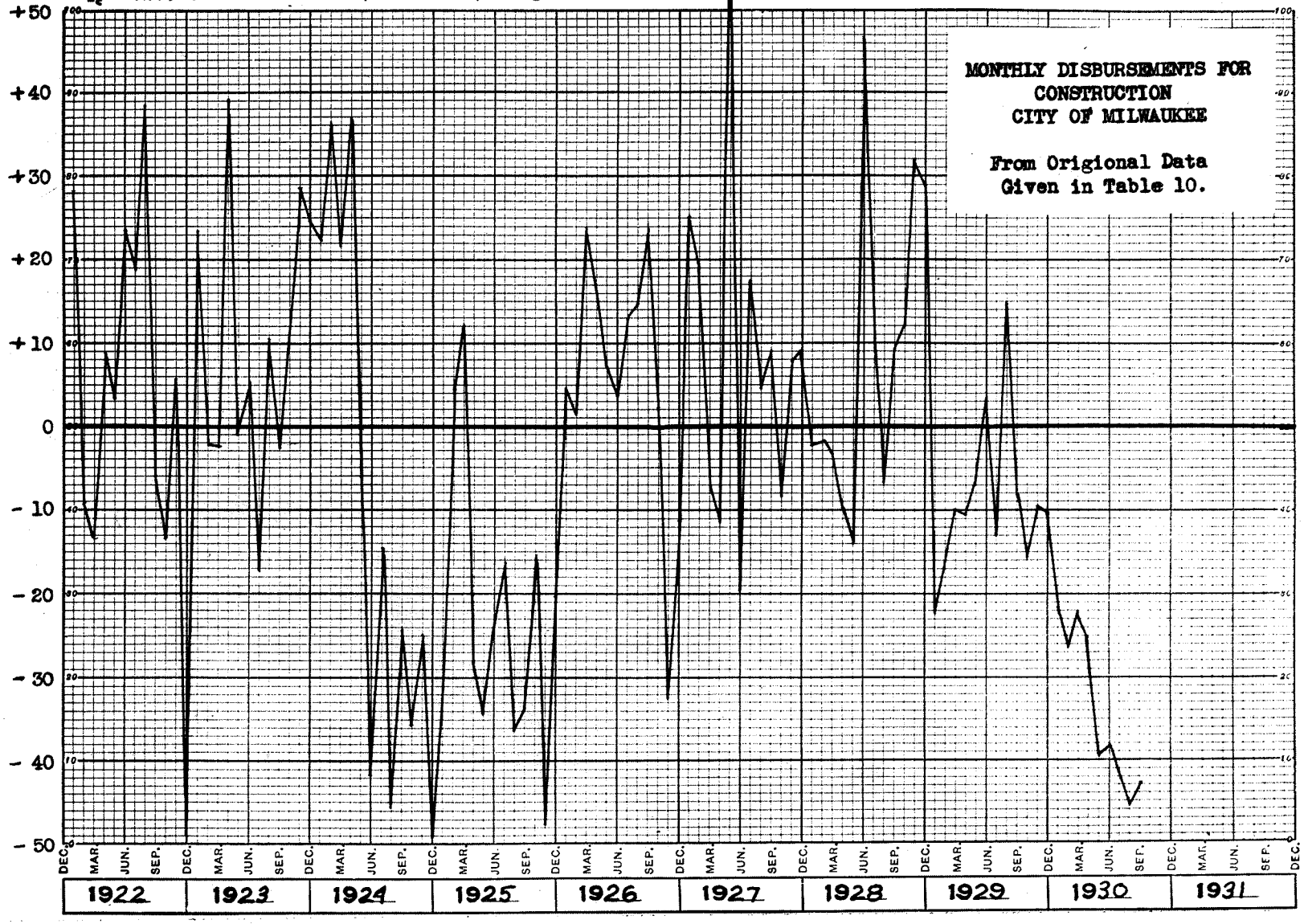


CHART 9.

Percentage Deviations from Trend Corrected for Seasonal

$Y_c = 526.946 + 8.848\ X$. (In months, origin Jan. 1922)



V. Methods of Financing Permanent Improvements in the City of Milwaukee

During the ten years, 1920 to 1929, the Citizens' Bureau of Milwaukee found that permanent improvements had been financed in the following manner:

	Percent of Total
Bond issue proceeds	44.8
General taxes and miscellaneous revenue . .	22.0
Special assessments	22.3
Water department revenue	10.9
Total	100.0

The 22.3 per cent received from special assessments for local improvements was levied as stated below:

TABLE 11.

TEN YEAR TOTAL OF SPECIAL ASSESSMENTS LEVIED FOR PERMANENT IMPROVEMENTS 1920-1929

	1920-1929 Inclusive 10-year Total		Per cent Specially Assessed
	Special Assessment	Cost	
Street Construction-Permanent	16,338,262	22,918,613	71.3
Sewer Improvements	1,584,552	14,736,939	10.7
Bituminous resurfacing	1,204,239	1,464,250	82.2
House Drain,Water and Gas Connections	1,786,734	1,818,526	98.3
Laying Water Mains	1,806,426	3,400,632	53.1
Sidewalk Repairs	622,898	807,051	77.2
Opening Streets and Alleys	268,162	1,439,641	18.6
Cedar Biddle;Lake St.Widenings	34,740	2,653,594	1.3
Street Widening	.....	252,564	....
Grade Alteration--State Street	.....	114,982	....
Total	23,646,013	49,606,792	47.6
Local Services	1,587,230	2,165,129	73.3
GRAND TOTAL	$25,233,243	$51,771,921	48.7

Compiled by Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 20.

These figures represent not actual collections but the amounts levied each year. Property owners have the choice of paying for assessments in a lump sum or making six annual payments. Six per cent interest is charged on unpaid balances. The amount of installments receivable increased rapidly during the period studied (see Table 16, Chapter V). This plan is the source of some embarrassment to the city, because contractors must be paid with money which is borrowed from other funds.

CHAPTER IV.

BONDED INDEBTEDNESS OF THE CITY OF MILWAUKEE

I. The Nature of Milwaukee's Bonded Debt

All bonds issued by the city of Milwaukee are twenty-year serial bonds, five per cent of the face value being paid each year by tax levies. Authority for levying amounts sufficient to meet these payments is given at the time that the issues themselves are authorized. There is no fixed limit to the amount that may be levied in any year for retirement of bonds.

II. Procedure of Authorizing Bond Issues

Each year the various department heads submit their requests to the board of estimates. Requests from those departments that come under the jurisdiction of the department of public works must have the approval of the commissioner of public works before being submitted to the board of estimates. The commissioner of public works frequently reduces the amounts asked for. The board of estimates places a list of proposed bond issues in the tentative budget which goes to the common council for final action. The common council must adopt a budget prior to December 31st of each year: otherwise the tentative budget submitted by the board of estimates automatically becomes effective.

Thus most bond issues are authorized at one time, just before the new fiscal year begins, but it is possible for the common council to authorize additional issues at subsequent dates. It would seem that

should the city officials desire to obtain extra money for expanding the program of permanent improvements in times of business depressions it would be possible for them to do so within a relatively short period of time providing that the city had a sufficient net margin for further bond issues.

Bond issues for some purposes must be submitted to the electors, but the more important ones may be authorized by the common council alone. The Wisconsin Statutes (1929) provide that:

> "No city shall issue any bonds for any purpose other than for waterworks, lighting works, gasworks, bridges, street improvements, street improvement funding, hospitals, harbor improvements, breakwaters and protection piers, sewerage, parks and public grounds, street railway property, or paying the city's portion of the cost of abolishing grade crossings, for the purchase of sites for engine houses, for fire engines and other equipment of the fire department, for construction of engine houses, and for pumps, water mains, reservoirs and all other reasonable facilities for fire protection, apparatus or equipment for fire protection, school purposes or vocational school purposes, or for refunding any of the bonds issued for the aforesaid purposes, until the proposition for their issue for the special purpose thereof shall have been submitted to the electors of such city and adopted by a majority voting thereon." 1

Certain classes of bond issue are subject to referendum but this measure is seldom resorted to because of the difficulty of obtaining the required number of signatures.

When new issues have been authorized they are not sold immediately, but are retained in the city vault until there is a shortage of cash in

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1 Wisconsin Statutes (1929), 67.05, (5), B.

the city treasury. Thus the city is able to save the difference between the rate of interest on the bonds and the rate that it would receive on balances in the banks. So much interest is saved in this way that conditions of the money market are a small factor in determining the time of selling bonds. However, if the market is particularly favorable, a larger amount may be sold than otherwise, and if the market is unfavorable the bonds will be held as long as possible and will be sold in smaller quantities in anticipation of more favorable rates in the future.

III. Sinking Fund

Payments for the retirement of bonds are made from the sinking fund. Bonds of the city of Milwaukee commonly bear a rate of interest that is somewhat above the market rate so that they will never be sold for less than par. Premiums arising from the sale of bonds above par value are credited to the sinking fund. Were it not for this provision it would be possible for the city to obtain money in excess of the constitutional limit of indebtedness by paying very high interest rates.

In addition to premiums from sale of bonds, the sinking fund is credited with direct tax levies for the retirement of the bonded debt. From year to year there is seldom a large balance in the fund, for levies are only large enough to provide sufficient money to meet the payments that fall due.

IV. Amortization Fund

The city has established a public debt amortization fund to which is credited all interest on deferred payments of special assessments for street improvements, and at least one third of all interest accruing to

the city from other sources, such as interest on bank balances and interest on deferred taxes.[2] The entire fund is invested in city of Milwaukee bonds. As credits are made new issues are transferred to the fund at current market rates. The income from these bonds is also credited to the principal of the fund.

It is expected that this fund will accumulate until it is as large as the total outstanding debt of the city. When this occurs, the fund will be used to retire the entire bonded debt. The fund was established in 1923. By January 1, 1930 it had reached nearly two and a half million dollars, which at that time was equivalent to approximately 5.6 per cent of the total net debt of the city, as shown by the accompanying table.

TABLE 12.

DEBT AMORTIZATION FUND AS OF JANUARY 1 OF EACH YEAR

1924 - 1930

Year	% Total Amortization Fund is to Net Debt	Total Amortization Fund	City Contribution	Net Earnings	Gifts
1924	1.42	$ 411,069.45	$ 402,664.08	$ 8,218.60	$186.70
1925	2.18	672,688.98	237,527.47	24,092.06	.....
1926	3.25	1,035,836.64	333,096.49	30,051.17	.....
1927	3.75	1,374,638.97	288,392.61	50,409.72	.....
1928	4.37	1,706,335.71	275,492.77	56,103.97	100.00
1929	4.98	2,075,773.16	287,474.02	81,963.43	.....
1930	5.61	2,494,574.66	322,533.04	96,268.46	.....
			2,147,180.48	347,107.41	286.70

Compiled by the Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 60.

2 See Reports of the Common Council of the City of Milwaukee, 1924, p. 20, and 1929, p. 23.

This fund cannot be used as an offsetting item in computing the margin for future bond issues.

In 1924 the First Civic Foundation of Milwaukee was organized to constitute a trust fund for gifts received from public spirited citizens. During the first twenty-five years one half of the income from this fund is to be paid to the treasurer of the city of Milwaukee. After this time seven-eighths of the earnings of this fund will be paid to the treasurer. This fund serves as a constantly increasing endowment for the benefit of the city.

V. Limitation on Indebtedness

Milwaukee, like other Wisconsin cities, is limited in its borrowing capacity to five per cent of the assessed valuation of property within its limits which is subject to local taxation.[3]

Prior to 1926 the city charter provided that bonds could not be issued in excess of five per cent of the average valuation of the preceding years. During Milwaukee's rapid growth, this provision resulted in a considerable restriction in the financing of needed facilities.

During the last ten years the net debt of the city has, for the most part, been very close to the debt limit. Because of this situation changes in the basis of assessment as well as changes in the type of prop-

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3 Wisconsin Statutes, 1929, 67.03 - "Grant of Power to Borrow; General Limitations of Indebtedness.

"Every municipality may borrow and issue municipal obligations therefor for purposes specified in the statutes ... But every municipality is forbidden to become indebted in any manner or for any purpose to any amount, including existing indebtedness which in aggregate exceeds five percentum of the value of the taxable property therein and the principal indebtedness of any county is further limited to not exceeding five percentum of the last equalized assessment thereof for state taxes made by the Wisconsin Tax Commission."

erty subject to taxation have a pronounced effect upon the amount of permanent improvements that the city may undertake. It is estimated that the exemption of automobiles and trucks from property taxation will reduce the assessed valuation of property in the city of Milwaukee between 28 and 30 million dollars.[4] Should the reduction be 30 million, the debt limit of the city would be reduced by one and one half million dollars.

Assessed valuation may be increased by annexation, but often the annexed territory is bonded to the extent that there is no significant change in the debt margin. The commissioners of public debt state that the annexation of the city of North Milwaukee resulted in an actual reduction in the margin for further indebtedness.

> "With the consolidation of the city of North Milwaukee on January 1, 1929, the $406,000 bonded debt of this city became a part of the city of Milwaukee's indebtedness, and through annexation the outstanding debt of joint school district No. 17, consisting principally of the city of North Milwaukee, added another $462,000 to the city's indebtedness. This has had the effect of reducing the city's bond margin for 1930 to a figure considerably below that which had been anticipated. Since the North Milwaukee school district bonded debt is chargeable against the one percent debt limit of our school board, it will only be possible to issue $680,000 of school bonds for 1930." 5

This situation resulted from the fact that a school district is considered a municipality and as such has the same borrowing privileges as other municipalities.

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4 The assessed valuation of automobiles and motor trucks in the city of Milwaukee in 1930 was $28,214,195. See Annual Report of the Assessor of Incomes of Milwaukee County, Wisconsin, 1930, p. 29.

5 Report of the Common Council, 1929, p. 22.

The indebtedness of the city of Milwaukee is so near the debt limit that the extent of the city's construction activities is largely determined by changes in the debt limit.

VI. The Extent of Milwaukee's Bonded Indebtedness.

On January 1, 1930, the net amount of bonds outstanding of the city of Milwaukee was nearly forty-four and a half million dollars. More than half of this amount ($23,885,500.) had been issued for the financing of sewerage and educational projects. A summary of the amounts outstanding on January first of each year from 1920 to 1930, classified according to purpose of issue, may be found in Table 13.

The margin for further bond issues is computed by subtracting the net debt from the debt limit. The net debt is found by subtracting the amount of bonds maturing during any given year from the gross debt, which is the total amount of bonds outstanding on January first of that year. The margins for further bond issues for the years 1910 to 1929 may be found in Table 14. Changes in the magnitude of bonded indebtedness and of the margin for further issues are shown graphically by Chart 10. The rapid increase in property valuation during the war resulted in a great expansion of the debt limit. During this period there was only a relatively slight increase in indebtedness partly because of high prices of construction and high interest rates. To catch up in its building program the city borrowed to such an extent that it absorbed the greater part of its margin. In 1931 the city was still behind in its construction program. The effect of the change in the computation of the limit of indebtedness is apparent in 1926.

TABLE 13.

CITY OF MILWAUKEE
AMOUNTS AND PURPOSES OF BONDS OUTSTANDING AS OF JANUARY 1, OF EACH YEAR:
1920 - 1930

Year	Sewers and Sewerage Commission	Education	Bridges and Grade Crossings	Street Widening & Civic Center	Harbor & Dredging	Parks and Playgrounds	Fire and Police	Miscellaneous	Total
1920	$4,770,500	$4,496,250	$1,885,250	$ 887,750	$1,092,300	$1,862,000	$476,250	$2,784,500	$18,254,800
1921	6,690,500	5,668,250	1,823,250	945,500	1,482,800	2,043,500	420,200	2,956,250	22,030,250
1922	6,828,000	7,017,750	1,931,250	1,001,250	1,379,800	2,067,500	610,650	3,129,500	23,965,700
1923	6,638,000	6,982,250	2,701,500	3,817,000	1,748,200	2,226,500	606,800	3,080,250	27,800,500
1924	7,580,500	7,163,250	3,652,750	3,542,750	1,622,700	2,037,500	507,850	2,926,000	29,033,300
1925	7,375,500	7,272,250	3,383,000	5,221,000	1,495,700	2,564,000	461,600	3,000,750	30,773,800
1926	8,714,500	7,637,250	4,068,250	4,859,250	2,872,700	2,588,500	420,100	2,814,000	33,974,550
1927	10,167,500	8,547,250	4,936,250	3,945,000	2,680,000	2,700,750	584,600	3,105,750	36,667,100
1928	11,973,000	9,296,250	4,549,000	3,641,250	2,487,700	3,171,500	2,001,100	2,735,500	39,855,300
1929	13,178,500	9,489,250	4,713,000	3,803,500	2,296,200	3,571,250	1,975,100	2,589,250	41,616,050
1930	14,089,000	9,796,500	4,830,250	3,504,500	3,058,300	3,844,000	2,040,100	3,288,250	44,450,900
				PER CENT DISTRIBUTION					
1920	26.0	24.6	10.3	4.8	6.0	10.2	2.6	15.3	100.0
1921	30.2	25.8	8.3	4.3	6.7	9.1	1.9	13.4	100.0
1922	28.4	29.2	8.6	4.2	5.7	8.6	2.5	13.0	100.0
1923	23.8	25.2	9.7	13.7	6.3	8.0	2.2	10.8	100.0
1924	26.2	24.6	12.6	12.2	5.6	7.0	1.8	10.0	100.0
1925	24.0	23.7	11.0	17.0	4.9	8.3	1.5	9.8	100.0
1926	25.6	22.4	12.0	14.3	8.5	7.6	1.2	8.3	100.0
1927	27.8	23.2	13.4	10.8	7.3	7.4	1.6	8.5	100.0
1928	30.0	23.3	11.4	9.2	6.2	8.0	5.0	6.9	100.0
1929	31.6	22.8	11.3	9.1	5.5	8.6	4.8	6.2	100.0
1930	31.7	22.0	10.8	7.9	6.9	8.7	4.6	5.5	100.0

Compiled from Annual Reports of the Common Council, City of Milwaukee, by Citizens' Bureau of Milwaukee.

CHART 10.

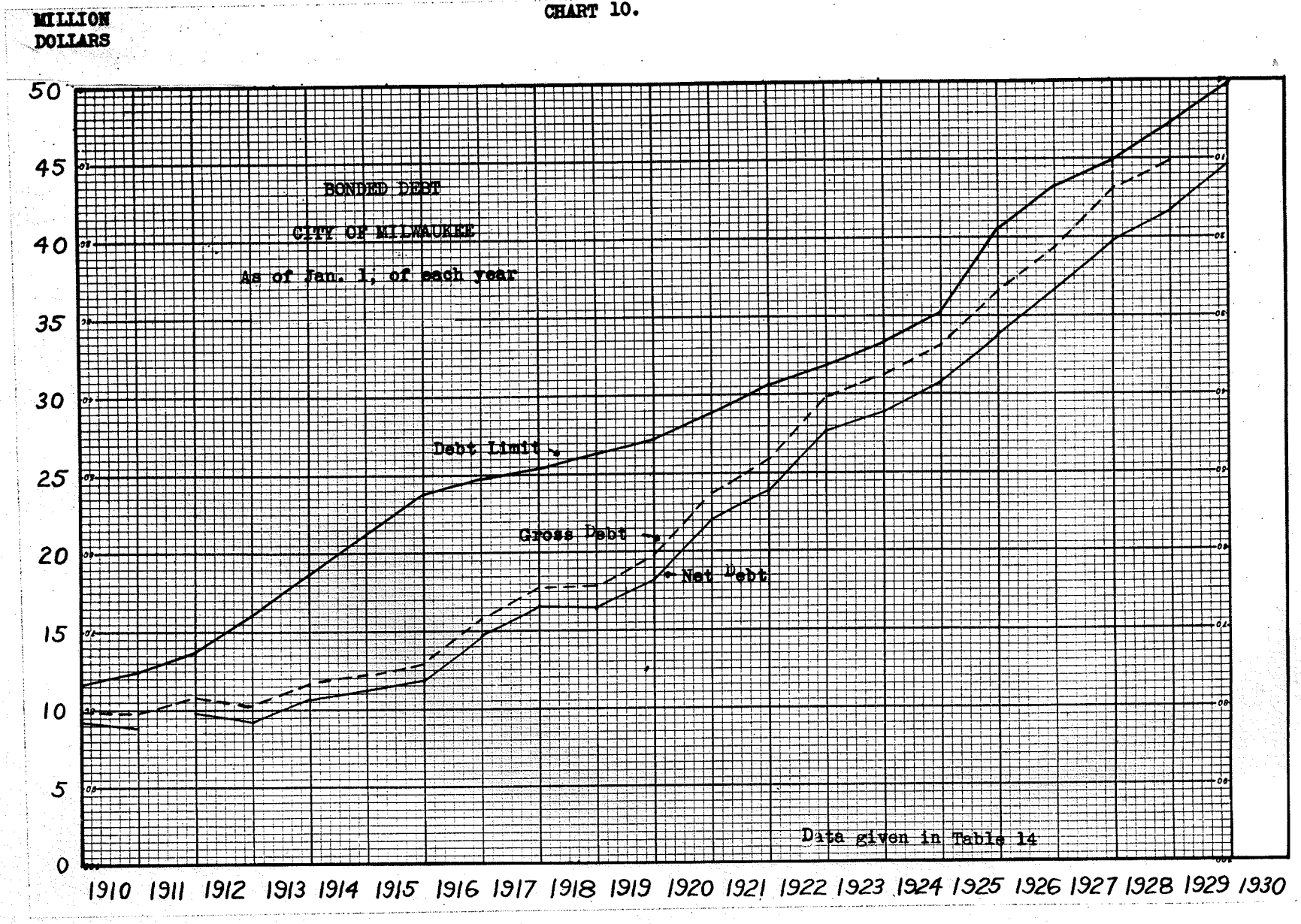

MILLION DOLLARS
50
45
40
35
30
25
20
15
10
5
0
BONDED DEBT
CITY OF MILWAUKEE
As of Jan. 1, of each year
Debt Limit
Gross Debt
Net Debt
Data given in Table 14
1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930

TABLE 14

CITY OF MILWAUKEE

OPERATION OF BONDED DEBT

As of Jan. 1, of each year:
1910-1930

	Gross Debt	Bonds Maturing	Net Debt	Issues	Debt Limit	Net Margin for further Bond Issues
1910	$ 9,967,000	$ 820,750	$9,146,250	$ 700,000	$11,611,389	$ 2,465,139
1911	9,846,250	857,750	8,988,500	1,710,000	12,378,657	3,390,157
1912	10,698,500	889,750	9,808,750	385,000	13,627,499	3,818,749
1913	10,193,750	889,000	9,304,750	2,220,000	16,063,227	6,758,477
1914	11,524,750	947,250	10,577,500	1,510,000	18,697,059	8,119,559
1915	12,087,500	986,000	11,101,500	1,860,000	21,338,203	10,236,703
1916	12,961,500	1,040,500	11,921,000	4,010,000	23,919,606	11,998,606
1917	15,931,000	1,200,250	14,730,750	3,150,000	24,702,675	9,971,925
1918	17,880,750	1,314,750	16,566,000	1,350,000	25,491,759	8,925,759
1919	17,916,000	1,381,250	16,534,750	3,260,000	26,367,724	9,832,974
1920	19,794,750	1,539,950	18,254,800	5,570,000	27,289,865	9,035,065
1921	23,824,800	1,794,600	22,030,200	3,870,000	28,988,846	6,958,646
1922	25,900,200	1,934,700	23,965,500	5,940,000	30,588,436	6,622,936
1923	29,905,500	2,218,000	27,687,500	3,530,000	31,964,572	4,277,072
1924	31,217,500	2,286,200	28,931,300	4,290,000	33,480,397	4,549,097
1925	33,221,300	2,447,500	30,773,800	5,830,000	35,147,133	4,373,333
1926	36,603,800	2,629,250	33,974,550	5,480,000	40,525,475	6,550,925
1927	39,454,550	2,787,450	36,667,100	6,500,000	43,247,858	6,580,758
1928	43,067,100	3,211,800	39,855,300	5,100,000	44,963,256	5,107,956
1929	44,955,300	3,340,250	41,616,050	6,448,000	47,207,883	5,591,832
1930		3,612,150	44,450,900		49,077,239	4,626,338

Compiled from annual reports of the Common Council, City of Milwaukee, by the Citizens' Bureau of Milwaukee

The following table shows the percentage increase of bonds issued for various purposes from January 1, 1921 to January 1, 1930:

TABLE 15.

PERCENTAGE INCREASE OF BONDS OUTSTANDING JANUARY 1, 1930 OVER THOSE OUTSTANDING JANUARY 1, 1931

Purpose	1921	1930	Present Increase 1930 over 1921
Sewers	$ 6,690,500	$14,089,000	110.0
Education	5,668,250	9,796,500	73.0
Grade Crossing Abolition and Bridges	1,823,250	4,830,250	165.
Street Widening and Civic Center	945,400	3,504,500	271.
Harbor, Docking and Dredging	1,482,800	3,058,300	106.
Parks and Playgrounds	2,043,500	3,844,000	88.
Police and Fire	420,200	2,040,100	386.
Miscellaneous	2,956,250	3,288,250	11.3
	22,030,250	44,450,900	101.0

Source: Milwaukee Citizens' Bureau, City of Milwaukee's Major Financial Transactions, p. 58.

VII. Temporary Borrowing

The city of Milwaukee may borrow money for short periods in anticipation of taxes. These loans are commonly thirty day notes. There is no authority for temporary borrowing for other purposes.

CHAPTER V.

STREET CONSTRUCTION

I. The Initiation of Street Construction

The city charter provides that property owners may petition for street improvements but the common council may take the initiative in case requests are not forthcoming from property owners.

In actual practice, the head of the department of street construction and repair, in July of each year, asks each alderman to submit a list of streets in his ward that he desires to have improved. The head of the department of street construction and repair then makes estimates of the probable costs of the various projects and recommends to the commissioner of public works that certain of them be carried forward during the coming fiscal year. The commissioner of public works studies the relative merits of these proposals, and after taking into consideration the amount of money that may be expected for public works and the needs of the other departments, he in turn recommends certain projects to the board of estimates. The board of estimates considers the projects and places most of them in the tentative budget. Occasionally some projects will be postponed when there is dissention as to the type of pavement to be installed.

Before any project may be authorized it must have the approval of five disinterested aldermen who must inspect the site of the proposed work. The project must also have the approval of the alderman who represents the ward in which it has been proposed to make the street improve-

ment. It is to be expected that the alderman will respect the wishes of the people whom he represents, with the result that the amount of paving will be decreased in times of depression.

II. Financing Street Construction

The city has its own maintenance crew which does all of the repair jobs. The expense of maintenance and repair is provided for by general taxation. Such expenditures are charged to current operation and not to permanent improvements.

New construction and resurfacing are done by contract and a part of this expense may be assessed against the property owners. The property owner must bear all the cost up to $3.00 per square yard, and one half the cost thereafter. However, assessments are made in accordance with the estimated benefits. For example, should a wide street in a residential district be resurfaced, the estimated benefit to the property would very likely be less than the cost of the improvement. The paving of the long side of a corner lot is considered to be of less benefit to the property than the paving of the short side of a corner lot. Once a property has been assessed $3.00 per square yard for paving, it cannot be assessed at a rate greater than one half of the estimated benefit no matter how many times the street may be resurfaced.

The city has recently enacted a provision whereby it may assess property for street intersections with the result that these jobs are now of little cost to the city. The cost is distributed among all properties within a half block of the intersection. The maximum that may be

assessed for this purpose is $1.50 per front foot. This provision applies to new paving only.

The street car company must pave and maintain the area within its track zone, which is seventeen feet and four inches in width.

The entire cost of paving alleys is distributed among the adjoining properties.

Paving assessments may be paid in a lump sum or in six annual installments. Deferred payments bear 6 per cent interest. On January 1, 1930, unpaid balances for permanent and bituminous pavement amounted to more than five million dollars. While these accounts are a fertile source of income for the amortization fund, they greatly reduce the amount of money that is available for construction purposes. That these unpaid balances have increased rapidly within the past ten years may be seen readily from the table given below.

TABLE 16.

Year	Installments Receivable for Permanent and Bituminous Pavement Assessments
1920	$ 1,414,600
1921	2,034,861
1922	1,993,389
1923	2,291,004
1924	2,445,045
1925	2,426,611
1926	3,336,653
1927	3,872,668
1928	4,280,186
1929	5,414,967

Source: Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 25.

III. Fluctuation in Expenditures for Permanent Paving, 1920-1929

During the ten years, 1920 to 1929, approximately 22 per cent of the entire cost of permanent improvements in the city of Milwaukee was assignable to street paving, as shown by Table 9. The total cost for the period has been nearly 23 million dollars, which is considerably more than has been expended for any other purpose. Two factors have been responsible for the predominance of the item: first, the great need of street improvements during the rapid growth and expansion of the city, and second, the fact that it has been possible to assess over 71 per cent of this cost against the benefited property. (See Table 17 below.)

TABLE 17.

COST OF PERMANENT PAVING, CITY OF MILWAUKEE
1920 - 1929

Year	Total Cost	Local Assessments	% of Cost Locally Assessed
1920	$ 986,903	$ 693,970	70.3
1921	2,057,560	1,388,395	67.5
1922	1,317,670	987,533	74.9
1923	1,837,982	1,239,587	67.4
1924	1,694,972	1,093,503	64.5
1925	1,719,974	995,464	57.9
1926	3,095,085	2,286,354	73.9
1927	3,009,936	2,090,191	69.4
1928	3,148,383	2,191,913	83.2
1929	4,050,148	3,371,352	83.2
	$ 22,918,613	$ 16,338,262	71.3

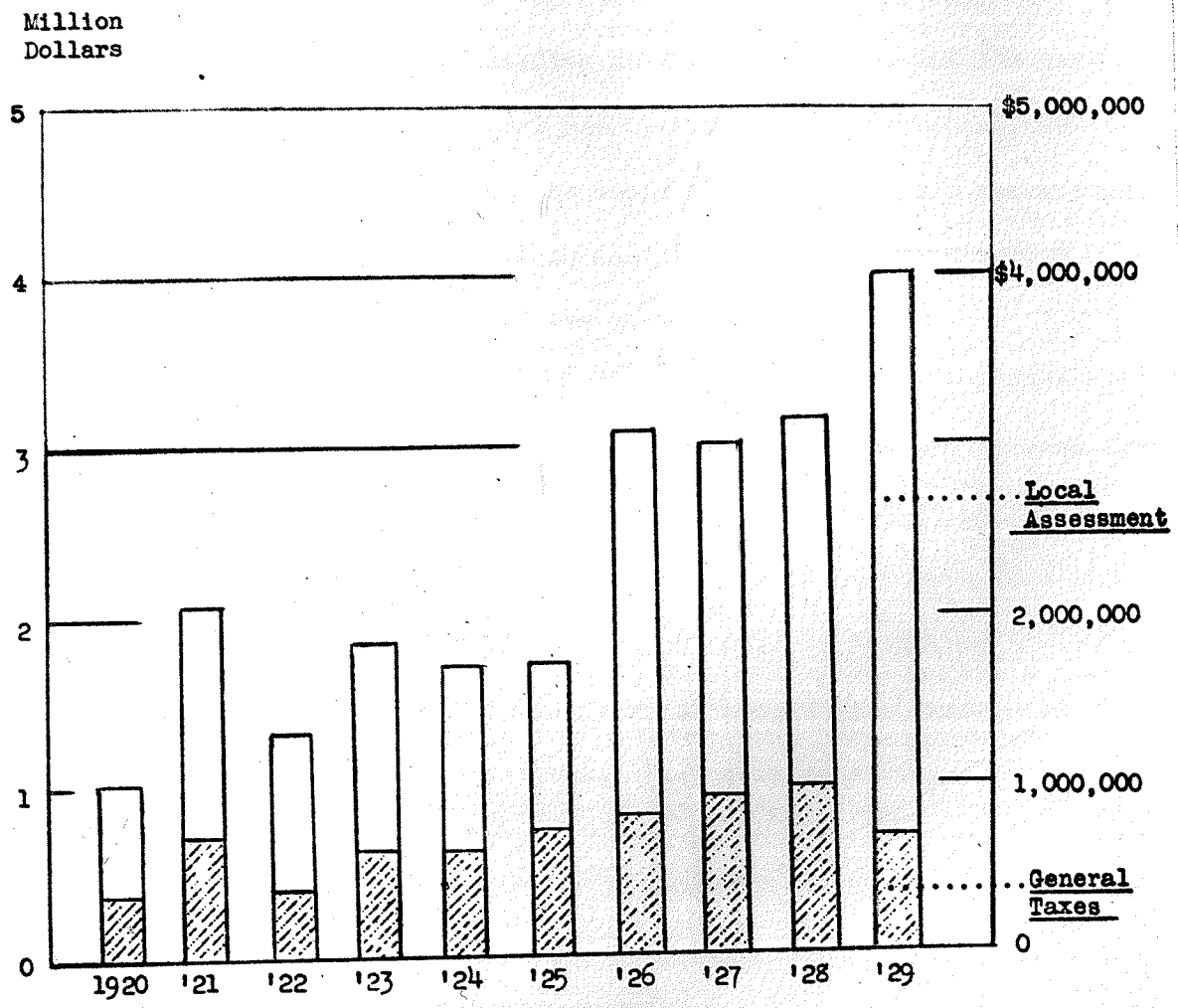
Source: Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 24.

CHART 11.

METHOD OF FINANCING COST OF PERMANENT STREET PAVING

CITY OF MILWAUKEE

1920-1929 inclusive



Source - Citizen's Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 27. Data given in Table 17.

The data given in the above table are plotted in Chart 11. The average annual expense for paving for the years 1926 to 1929 inclusive was a little more than twice the annual expense for paving during the years 1920 to 1925 inclusive. In 1926 and 1927 there was an abnormally great demand for new pavement in the newer sections of the city as a result of the rapid increase in building activity which reached its peak in 1925 (see Chart 3). Notice that nearly all of the additional cost was paid by property owners. Had the money been expended for resurfacing old streets, the city would have been obliged to pay all of the cost of intersections and at least half of the cost of other work.

While this new work was being done, the older pavements were being worn out, and in recent years a much larger portion of paving expense has been for resurfacing. Mr. Raleigh W. Gamble, Superintendent of Street Construction and Repair, stated that expenditures in 1930 were less than those in 1929, and that expenditures in 1931 would be less than in 1930. The year 1929 was accompanied by the greatest expenditure because of the large amount of paving in new sections. In recent years there has been less expansion.

IV. Sidewalks

Property owners are supposed to keep sidewalks in repair. If they fail to do so, the city may condemn dangerous portions and make the repairs itself without notification to the property owners. If notice were given or the condemned places marked, people might intentionally fall in the dangerous spots and bring suit. In these cases the city would be principal.

The cost of sidewalk repair is charged against the adjacent property.

At present the city is far behind in its sidewalk repair program. There was much complaint among the property owners about the repairing that was done in the summer of 1930. There seemed to be a general feeling that walks were being torn up in order to provide work for the unemployed at the expense of property owners.

CHAPTER VI.

SEWER CONSTRUCTION

I. Metropolitan Sewerage Commission, and Milwaukee Sewerage Commission

Most of the sewerage systems of municipalities in Milwaukee County connect with the intercepting or outlet sewers of the Metropolitan Sewerage Commission. This system connects with the Milwaukee Sewerage Commission system which operates the disposal plant on Jones Island. All sanitary sewers of the city of Milwaukee connect with the Milwaukee Sewerage Commission system. The storm sewers empty into either the river or the lake directly.

Each commission is a separate municipality with powers of taxation. Both systems are financed by county bonds. Operations of this indebtedness are shown in Table 18. The cost of these systems is distributed among the various districts. The two commissions now have the same engineering staff.

Prior to January 1, 1925 the Milwaukee Sewerage Commission was financed by the city of Milwaukee. Between 1920 and 1924 inclusive 13 per cent of the expenditures for permanent improvements of the city were on behalf of this commission (see Table 9).

II. The Initiation of Sewer Construction

The common council has power to authorize the construction of sewers. The bureau of sewers prepares a tentative program which is submitted to the commissioner of public works. Sewers in areas that are to be paved must be given preference. Then certain requests for sewers in

TABLE 18.

METROPOLITAN SEWERAGE BONDS ISSUED, PURCHASED AND OUTSTANDING: 1922-1929

Date of Issue	Interest Rate	City of Milwaukee Sewerage Commission	Metropolitan Sewerage Commission	Total Issued and Sold	Less Purchased before Maturity from Sinking Fund Reserve	Bonds Outstanding Dec. 31, 1929		
						Milwaukee Sewerage Commission	Metropolitan Sewerage Commission	Total
April 1, 1922	5 %	3,000,000	1,300,000	4,300,000	429,000	2,805,000	1,066,000	3,871,000
June 1, 1923	4¾%	3,000,000	1,200,000	4,200,000	42,000	2,963,000	1,195,000	4,158,000
June 1, 1923	4½%	....	100,000	100,000	....	....	100,000	100,000
April 1, 1924	4¾%	1,850,000	1,886,000	3,736,000	112,000	1,799,000	1,825,000	3,624,000
March 18, 1925	4½%	1,070,000	1,600,000	2,670,000	85,000	1,031,000	1,554,000	2,585,000
May 15, 1926	4½%	1,100,000	....	1,100,000	63,000	1,037,000	....	1,037,000
June 15, 1926	4½%	....	1,200,000	1,200,000	51,000	....	1,149,000	1,149,000
April 15, 1927	4¼%	1,270,000	....	1,270,000	25,000	1,245,000	....	1,245,000
June 1, 1927	4¼%	....	590,000	590,000	21,000	....	569,000	569,000
May 25, 1928	4¼%	510,000	400,000	910,000	11,000	499,000	400,000	899,000
Aug. 25, 1929	4½%	750,000	400,000	1,150,000	21,000	729,000	400,000	1,129,000
		12,550,000	8,676,000	21,226,000	860,000	12,108,000	8,258,000	20,366,000

Source: Financial Summary of Milwaukee County, 1929, p. 60.

other areas are added to the program. More sewers have been requested than could be financed, even in depression years such as 1930.

As in the case of street construction, the proposals are submitted by the commissioner of public works to the board of estimates, and then to the common council. There are usually many reductions in the original program as prepared by the bureau of sewers. Since the city is near its debt limit the amount that is available for all construction purposes is limited. A considerable share of the burden of determining how the money shall be distributed among the various departments falls upon the commissioner of public works.

Bond issues for sewer purposes are not submitted to a vote of the people.

III. Method of Financing Sewer Construction

During the years 1920-1929 only 10.7 per cent of the cost of sewer construction has been paid by property owners through special assessments. Property owners may pay for service from buildings to the street. They may have this done themselves or it may be done by the city. All other sewer improvements cost the property only $1.25 per linear foot (on each side of the street) regardless of the size of the sewer or the actual cost. This charge covers both sanitary and storm sewers. The Wisconsin Statutes allow municipalities to charge as much as $2.00 per foot on each side of the street.[1] There has been agitation to have the

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1 Wisconsin Statutes, 1929, Sec. 62.18 (9), A - "All lots, parts of lots and parcels of land fronting or abutting on the work so contracted to be done on each side of the same for its whole length shall be assessed at an even rate not exceeding two dollars nor less than twenty-five cents per linear foot on each side of the street of the whole frontage of each lot, part of lot, parcel of land fronting or abutting on each side of said sewer ..."

city assess property at this rate, because under the present provision the property in the older sections of the city must bear a large part of the cost of providing sewers in the new areas. This is true because sewer bonds are retired by general taxation. But there has been considerable opposition to the proposal of increasing the assessment, especially during the recent depression. The existing plan of assessment requires owners of corner lots to pay for sewers on each frontage, even though benefit may be derived from only one sewer.

IV. Fluctuation in Expenditures for Construction of Sewers.

Sewer construction has constituted 14 per cent of the entire cost of permanent improvements in the city of Milwaukee during the period 1920 to 1929. Total capital expenditures, together with the amounts charged against property, may be found in the table below.

TABLE 19.

COST OF PERMANENT SEWER CONSTRUCTION

CITY OF MILWAUKEE: 1920-1929

Year	Special Trust Account for Local Service		% of Cost Locally Assessed	Total Miles of Sewers Constructed Under Contract
	Total Cost of Local Service	Local Assessments		
1920	$ 361,486	$ 33,439	9.2	8.67
1921	287,650	50,223	17.5	12.60
1922	315,282	36,387	11.5	7.12
1923	588,407	45,798	7.8	9.61
1924	1,001,532	66,393	6.6	15.14
1925	1,420,029	161,231	11.3	34.72
1926	2,624,899	275,051	10.5	57.47
1927	3,161,045	284,587	9.0	83.99
1928	2,404,433	321,910	13.4	83.15
1929	2,572,176	309,533	12.0	81.15
Total	$14,736,939	$1,584,552	10.7	393.62

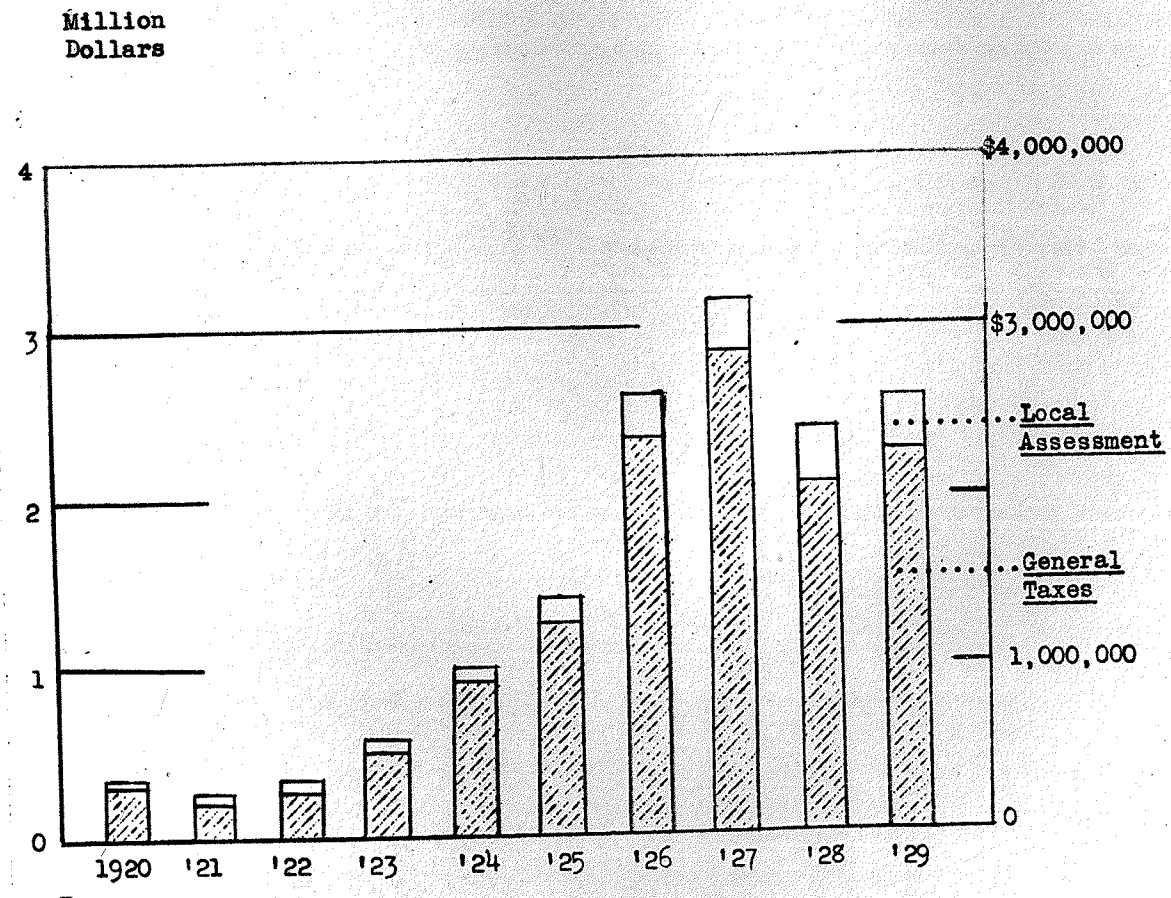
Source: Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 28.

CHART 12.

METHOD OF FINANCING COST OF SEWERS

CITY OF MILWAUKEE

1920 - 1929 inclusive



Does not include any of the expenditures of the Milwaukee Sewerage Commission.

Source - Citizen's Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 27.

The data of the above table are plotted in Chart 12. A large part of the additional construction in the years 1923 to 1925 inclusive was in new territory. The expenditure for sewers in 1925 was more than double that of 1923, while the expenditure for paving in 1925 was actually less than that of 1923. Not until 1926 did paving expenditures increase. This lag results from the fact that sewers are laid before paving is attempted.

The construction of sewers was even greater in 1926 and 1927, because in addition to work in new territory a considerable amount of storm relief sewer was constructed. Since 1927 the amount of construction of storm relief sewers has been progressively less.

The records of Mr. Holmes, of the bureau of sewers, show that while two million dollars of bond issues were authorized for 1929, one million was authorized for 1930, and at the present writing (March, 1931) only a half million has been authorized for 1931, although an addition to this amount is being considered. Although the declining rate of building activity has decreased the violence of demand for sewers, there are still requests for more sewers than can be financed. Large outlet sewer projects on the north side have been postponed because of the volume of expense involved.

CHAPTER VII.

SCHOOL BOARD BUILDING CONSTRUCTION

I. Growth of School Enrollment

Two factors have necessitated the expansion of Milwaukee's public school plant, first, growth of population of the city, and, second, the tendency for school enrollment to increase faster than the increase in population, because children tend to remain in school for the upper grades and high school. While in the school year 1922-23 less than 9 per cent of the average school membership was included in grades 10 to 12, in the year 1929-30 these grades composed over 13 per cent of the membership as shown in the table below.

TABLE 20.

DISTRIBUTION OF TOTAL PUBLIC SCHOOL MEMBERSHIP
CITY OF MILWAUKEE

	1922-23		1927-28		1929-30	
	Number	Percent	Number	Percent	Number	Percent
Grades below 7th	44991	68.9	46310	63.4	48925	61.6
Grades 7 to 9	14045	21.6	17629	24.1	19199	24.2
Grades 10 to 12	5660	8.9	8414	11.5	10447	13.2
Trade School	404	0.6	710	1.0	782	1.0
Total	65100	100.0	73063	100.0	79353	100.0

This table is published in the 1931 Revision of the Five Year School Building Program of the Board of School Directors, page 5. Since 1924 the board has published biennially a five year program. These programs are discussed in Chapter X.

The relative growth of the enrollment in higher grades is even more apparent from a study of the ratio of grades ten to twelve to grades below the seventh.

TABLE 21.

MEMBERSHIP RATIO BETWEEN GRADES TEN TO TWELVE AND GRADES BELOW THE SEVENTH FOR VARIOUS YEARS

Year	Percentage Ratio of Enrollment in Grades 10-12 to Grades Below 7	Year	Percentage Ratio of Enrollment in Grades 10-12 to Grades Below 7
1914-15	7	1923-24	13
1915-16	8	1924-25	15
1916-17	8	1925-26	16
1917-18	8	1926-27	17
1918-19	8	1927-28	18
1919-20	9	1928-29	19½
1920-21	10	1929-30	21
1921-22	11	1930-31*	23
1922-23	12		
		1935-36	27 (est.)

* November 24th Report.

From 1931 Revision of Five Year School Building Program of the Board of School Directors, Milwaukee, Wisconsin, pp. 8-9.

A difficult problem for the board has been the migration of people from the downtown districts to the newer parts of the city, for new schools must be provided in the new territory even though the schools in the older districts are not filled to capacity.

On January 1, 1931, barracks were being used to house 3934

pupils at all stages in their progress through the schools.[1]

A discussion of the growth of Milwaukee's population may be found in Chapter II.

The need for the construction of new school buildings in Milwaukee has been abnormally great during the past ten or twelve years. The amount of construction that has been done has been determined by the amount of money available for this purpose.

A summary of the expansion of the school system is given in the table below. Trade schools are included, beginning with 1921-22.

TABLE 22.

GROWTH OF MILWAUKEE SCHOOL SYSTEM: 1919-1929

Year	Teachers Employed	No. of Schools	No. Class Rooms	Average Membership
1919-20	1549	72	1364	56,009
1920-21	1628	72	1433	57,216
1921-22	1800	75	1590	62,743
1922-23	1864	76	1668	65,146
1923-24	1879	78	1716	66,269
1924-25	1959	82	1752	67,182
1925-26	2055	87	1831	70,184
1926-27	2153	92	1916	71,605
1927-28	2231	102	1971	73,271
1928-29	2298	101	2014	76,169

Source: Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 34.

1 1931 Revision of Five Year School Building Program of the Board of School Directors, Milwaukee, Wisconsin, p. 12.

II. Methods of Financing Construction of School Buildings

In April, 1928, the electors voted a tax levy of not more than one mill, for a period of five years for the purpose of constructing public school buildings. Since this date about one million dollars has been available from this levy which has paid for approximately half of the cost of construction. Income from this source will cease in 1933. A period of two years must then elapse before a new referendum may be submitted to the people.

The city charter provides that bonds may be issued for school construction up to one per cent of the assessed valuation of property in the city which is subject to local taxation.[2] Throughout the period studied, the schools were allowed to issue bonds up to this limit. Since the constitutional limit for bonds for all purposes is 5 per cent of assessed valuation, school bonds constitute approximately one fifth of the bonded debt of the city (bonds for "educational" purposes as shown in Table 13 form a somewhat larger portion of the total indebtedness because bonds for the Industrial Education Commission have been included in this item).

III. Expenditures for Construction of School Buildings

It is an extremely difficult task to measure the volume of construction of school buildings in any given year, because many of

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2 Milwaukee City Charter, Sec. 17 (Chapter 4, 1913).
"The amount of such school bonds outstanding at any given time shall not be greater than one percent of the total assessed valuation of all property, real and personal, in said city subject to taxation, and the tax levied to pay the interest on the principal of said school bonds shall be in addition to the tax levied for general purposes upon all the taxable property of said city."

the projects are in progress during more than one year. A building may be commenced in 1940 but not completed until the early months of 1941. Payment for a large part of the contract price is not made until the building is actually completed and approved. Although most of the work may have been done in 1940, a relatively large portion of the cost may be charged in 1941, and the building would be recorded as a project completed in 1941. With this criticism, the following table is submitted.

TABLE 23.

PUBLIC SCHOOL CONSTRUCTION
CITY OF MILWAUKEE: 1921-1930

Year Completed	School	No. of Class Rooms	Pupil Capacity	Payments During Year
1921	Grand Avenue Greenbush Street			$ 698,937
1922	Bay View High School			861,653
1923				843,006
1924	Benjamin Franklin Elementary	23	1035	1,022,403
1925	Boy's Technical High (Additional Shop facilities)		200	1,613,733
1926	Oklahoma Ave.Elementary Addition	12	540	
	Roosevelt Junior High School	37	1300	
	Gen. Sherman Elementary School	23	1035	1,829,008
1927	Neeskara Elementary School	20	900	
	Kosciusko Prevocational	30	1000	
	West Divisional High School Add'n. (Gym,shower and locker facilities, cafeteria)			1,852,965
1928	Fernwood Elementary School	20	900	
	Peckham Junior High School	37	1300	
	North Division High School Add'n. (Study Hall, library, gym, cafeteria and classrooms)	17	600	2,238,536

1929	Townsend Elementary School	20	900	
	Vieau Elementary School Add'n.	12	540	
	Walker Junior High School	37	1600	1,700,045
1930	Boys Technical High School Add'n. (Auditorium, shops and classrooms)			
	Humboldt Park Elementary	20	900	
	South Division High School Add'n. (Study hall, shops, gym, and classrooms)		400	
	Keefe Ave. Elementary School Add'n. (Auditorium, gym, and classrooms)		170	
	Lincoln High School (includes Deaf School)	56	1600	

From - Annual Report of the School Board, 1927-28 and 1931 Revision of Five Year Plan: Payment figures compiled by Citizens' Bureau

TABLE 24.

SCHOOLS UNDER CONSTRUCTION IN 1931

CITY OF MILWAUKEE

School	No. of Classrooms	Pupil Capacity
Johnson's Woods Elementary School	20	850
Cass St. Elementary School Add'n. (Auditorium, library, gym, classrooms)	8	320
Steuben Junior High School	30	1400
Girls' Trade and Technical High School Add'n. (Auditorium, gym, library, classrooms		300
Garden Homes Elementary School	20	850

From 1931 Revision of Five Year School Building Program of the Board of School Directors, Milwaukee, Wisconsin, p.11.

In addition to the schools that have been built, the following have been acquired by annexation. Those annexed since 1926 are listed below.

TABLE 25.

SCHOOLS BECOMING PART OF MILWAUKEE SYSTEM
BY ANNEXATION
1926-1930

Year of Annexation	School	Average Membership At Date
1926	Greenfield	651
	Johnson's Woods	193
1927	Dakota	125
	Sixty-eighth Street (McKinley)	180
1928	Twenty-ninth Street	61
	Pleasant View	266
1929	Custer Junior and Senior High (North Milwaukee)	756
	Thirty-sixth Street (North Milw.)	648
	Thirty-fifth Street (North Milw.)	539
1930	Blaine	354
	Ludington	301
	Silver Spring	297
	Tippecanoe	338

From - 1931 Revision of Five Year School Building Program of the Board of School Directors, Milwaukee, Wisconsin, p. 11.

CHAPTER VIII.

WATER DEPARTMENT CONSTRUCTION

I. Methods of Financing Water Department Construction

New distribution mains may be laid on the request of two thirds of the property owners to be benefited and consent of the common council. The larger mains are called "feeder mains." Distribution mains are 16 inch pipe or smaller. Benefited property must contribute towards the cost of distribution mains on the basis of the average cost of six inch mains during each year. In 1930 the assessment was at the rate of $1.18 per linear foot on each side of the street. During the period 1920-1929, about 40 per cent of the cost of distribution mains was paid by assessments. Had all of the cost of pipe been included in the computation, the portion would have been smaller. The remainder of the cost of distribution mains, and all of the cost of feeder mains and other construction, is financed by revenue from sale of water.

The Water Department is not only self supporting but it has contributed to the General City Fund $2,600,000 during the years 1920 to 1929 inclusive, as shown by the table below.

TABLE 26.

SUMMARY OF WATER DEPARTMENT OPERATION, CITY OF MILWAUKEE FOR THE TEN YEARS, 1920-29, INCLUSIVE

Total Revenue from the sale of Water only		$ 21,069,922
Total Revenue from Special Assessments		1,806,426
Total Income (not including quasi operating revenues and financial revenues)		$ 22,876,348
Expenditures for New Construction	$13,358,316	
Total Transferred to General City Fund	2,600,000	
Ordinary Operating Expenses, interest on bonded debt and sinking fund (quasi operating expenses and depreciation not included)	6,924,378	
Total Revenue Disbursed	$ 22,882,694	

Source: Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 38.

Bonds amounting to $300,000 were issued in 1913 for a new intake, but none have been issued since that date. On January 1, 1931, $30,000 of this amount was outstanding. However, the annexation of North Milwaukee in 1929 added $31,000 to the bonded indebtedness of the Milwaukee Water Department. Of this amount, $25,000 was unpaid on January 1, 1931. Should additional bonds be issued to finance an unusually large project of the Water Department, they would be retired from revenue of this department and not from tax levies as are other bonds of the city of Milwaukee. Nevertheless, such issues would be added to the other indebtedness of the city in computing the margin for further bond issues.

II. Fluctuation in Expenditures for Water Department Construction

More than half of the construction expenditures of the Water Department have been for mains. The cost of these mains, and the portion paid by assessments is given in the table below.

TABLE 27.

COST OF WATER MAINS LAID EACH YEAR, CITY OF MILWAUKEE

1920 TO 1929 INCLUSIVE

Year	Total	Feeder Mains	Distribution Mains	Special Assessments for Distribution Mains	Miles of Mains Laid
1920	93,648	5,310	88,338	58,943	6
1921	423,703	274,947	148,756	55,296	9
1922	820,975	450,708	370,267	45,759	15
1923	374,830	146,895	227,935	67,450	11
1924	621,992	293,580	328,412	39,255	19
1925	924,416	462,774	461,642	177,188	42
1926	1,438,376	832,441	605,935	373,112	41
1927	946,264	331,652	614,612	296,964	50.5
1928	1,132,054	346,348	785,706	411,948	54
1929	1,177,794	260,544	917,250	280,511	48.7
Total	7,954,052	3,405,199	4,548,853	1,806,426	296.2

Compiled by the Citizens' Bureau of Milwaukee from Table XLI of the Water Department Annual Report, 1929. (Cost includes water pipe, gate valves, hydrants, trenching, back filling, cartage, laying, inspection and engineering.)

As compared with 48.7 miles of mains laid in 1929, approximately 45.9 miles were laid in 1930. Annexation began in 1921 and increased rapidly after 1924 (see Table 3). Development of new territory has necessitated much of the construction of distribution mains. Moreover, many mains are laid just prior to street widening.

In addition to mains, more than five million dollars has been spent by the department for permanent equipment and other construction as shown by Table 28.

TABLE 28.

TOTAL COST OF NEW CONSTRUCTION MILWAUKEE WATERWORKS:

1920 - 1929

Year	Total	North Point Station, Riverside Station, Linwood Tunnel	Water Mains	Miscellaneous Equipment	Acquired by Annexation
1920	$ 844,861	$ 623,166	$ 93,648	$ 128,047	
1921	950,163	460,081	423,703	66,379	
1922	1,301,927	464,299	820,975	16,653	
1923	1,370,798	971,073	374,830	24,895	
1924	1,346,370	563,351	621,992	161,027	
1925	1,235,919	162,190	924,416	149,313	$ 77,514
1926	1,617,814	160,205	1,438,376	19,233	4,753
1927	1,624,325	607,888	946,264	70,173	2,680
1928	1,595,529	390,131	1,132,054	73,344	7,821
1929	1,470,610	175,306	1,177,794	117,510	290,821
Total	13,358,316	4,577,690	7,954,052	826,574	383,589

Compiled from the Water Department Annual Report, 1929, Table XXXI., by the Citizens' Bureau of Milwaukee.

The Linwood Avenue tunnel was completed in 1921. Work on the Riverside Station was commenced in 1921. During July, 1924, the station was used for the first time although it was not completed until several months after this date. Beginning with 1927, most of the expense other than mains was for the reconstruction of the North Point Station. This project was not completed until 1930.

CHAPTER IX.

OTHER EXPENDITURES FOR PERMANENT IMPROVEMENTS

During the ten year period, 1920 to 1929, the greatest expenditures were for paving, sewers, water and schools, ranking in importance in the order named. Each of these items has been discussed in previous chapters. Together they have taken more than three fourths of the entire cost of permanent improvements during the period. The remaining expenditures have been distributed among many projects, as shown by Table 9. The more important of these projects are considered in this Chapter.

I. Bridges, Viaducts and Grade Crossing Abolition

These items are financed almost entirely by bond issues, except for short spans which are financed by taxation. The common council determines which projects are most urgent. Bond issues for viaducts and grade crossing abolition are submitted to the electors for approval or rejection at regular elections which occur at intervals of one year, or occasionally six months.

In the April election of 1931, a proposed bond issue for the purpose of replacing the narrow Juneau Avenue viaduct was rejected.

Bridges, viaducts and grade crossing abolition projects often require years for the completion of negotiations. For example, it took eight years to make the negotiations for the State Street viaduct. In addition about a year and a half was required for the construction, which was completed in 1924.

II. Parks and Playgrounds

Nearly 45 per cent of the cost of parks and playgrounds has been financed by taxation, as shown by Table 29. The remainder has been financed by bond issue.

Approximately 371.4 acres of park land have been acquired by the city during the ten year period. Of this amount about 197 acres were purchased, 65 acres were donated, 58 acres were obtained by filling in for the Lake Shore Drive project, 31.5 acres were deeded to the city by the county, and 20 acres were acquired by annexation.

The designing and construction of playgrounds is in charge of the city playground engineer, who is responsible to the commissioner of public works who in turn is responsible to the common council. In 1928 a twelve year playground expansion program was designed by the city playground engineer and a representative of the board of school directors and submitted to the common council. Although the program was never adopted by the council, most of the items recommended thus far (1931) have been approved. This program was published with the 1929 Building and Sites Program of the Board of School Directors.

An attempt is being made to develop playgrounds in the immediate vicinity of school buildings. The city playground engineer merely purchases the sites and makes improvements; operation and maintenance is in charge of the board of school directors.

TABLE 29.

COST OF CONSTRUCTING PARKS AND PLAYGROUNDS
CITY OF MILWAUKEE
1920 - 1929

Year	Amount of Cost	Financed by General Taxes
1920	$ 293,880	$ 115,304
1921	406,057	179,827
1922	378,843	197,814
1923	473,994	597,538
1924	608,878	352,053
1925	1,040,979	400,773
1926	1,555,630	155,693
1927	1,777,571	718,589
1928	1,467,415	654,053
1929	1,002,364	617,760
Total	9,005,611	3,989,404

Compiled by the Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 40.

In 1930, the cost of permanent improvements for playgrounds alone was:[1]

Real Estate	$365,100
Improvements	98,500
Total	$463,600

These expenditures are typical of the relationship of the cost of improvements to the cost of land.

A considerable portion of the money spent for parks was utilized in the development of the lake front. The board of public land

1 From records of Mr. Gilbert Clegg, City Playground Engineer.

commissioners has been considering the extension of the present park area along the lake. It has been suggested that a portion of the cost might be paid by benefit assessments. Moreover, the project would increase the valuation of adjacent property and thus provide more income for the city.

III. Local Board of Industrial Education

The vocational school is under the direction of the state board of vocational education.

> "Like the board of school directors, the local board of industrial education is an independent board having a mill tax of not to exceed one and one half mills, the levying of which is mandatory upon the common council upon certification by the board. When the work was started it was supported entirely by local taxes. The state of Wisconsin is now permitted by statute to appropriate not to exceed $30,000 annually toward the cost of salaries for instruction and supervision of the vocational school in Milwaukee. The state also provided funds toward the promotion of vocational rehabilitation of persons disabled in industry or otherwise. Federal tuition is given for vocational training of disabled soldiers." 2

On January 1, 1930 the amount of vocational school bonds outstanding was $1,112,500.[3]

The sinking fund and interest upon these bonds are payable from the board's tax levy.

The central continuation and vocational school located at Seventh and Prairie streets was used for the first time in 1923.[4] A

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2 Report of the Common Council, City of Milwaukee, 1929, pp.74-75.

3 Ibid., p. 99.

4 Ibid., 1923, p. 68.

new addition costing approximately a million and a half dollars was completed in 1929.

TABLE 30.

COST OF CONSTRUCTION OF VOCATIONAL SCHOOL: 1920-1929

Year	Total Cost	Year	Total Cost
1920	$ 257,291	1925	$ 122,896
1921	372,817	1926	154,260
1922	672,697	1927	450,303
1923	212,405	1928	732,802
1924	94,507	1929	134,411
		Total cost, 10 years	$3,204,389

Milwaukee Citizens' Bureau, p. 35.

IV. Harbor

The board of harbor commissioners has the power to make all plans for the development of harbor facilities, including docks, wharves, warehouses and railway connections. But all plans must be approved by the common council before they can become effective.

In 1924 a survey of Milwaukee's lake commerce was submitted to the board by Professor F. C. Blood of the University of Wisconsin. This survey showed that the old inner harbor of Milwaukee was not adapted to modern commerce. The channels are narrow and crooked, with many drawbridges. The outer harbor is being developed to provide new port facilities which will be free from the hazards and delays of the inner harbor, and at the same time will allow the city to close the rivers to large craft and erect permanent bridges.

Much delay in the actual construction of the port has been necessitated by negotiations concerning railroad connections and the acquisition of land. The city has been negotiating with the Illinois Steel Company since 1921. In June 1927 the Supreme Court of Wisconsin approved the interchange of land between the city and this company. During 1929, the United States Steel Company, of which the Illinois Steel Company is a subsidiary, apparently decided to abandon its Milwaukee plant. Toward the end of 1929 the city entered into negotiations with a view of acquiring the property, which would necessitate voiding the existing contract.

Moreover there was difficulty in obtaining title to made land. In 1923 the state harbor law was amended whereby the State of Wisconsin cedes to the city the title and interests of the State of Wisconsin to submerged lands extending into the lake for a distance of fifteen hundred feet from the shore line for construction of harbor facilities.

However, some construction has been done. A bulkhead was built in 1921 which cost $180,503. The revetment on the inside of Jones Island was reinforced by two rows of anchorage in 1926, which cost $146,797. In 1929 an open dock terminal was built at a cost of $85,612. In addition the Federal Government has completed a breakwater project which cost approximately five million dollars. This project was authorized by an act of congress in 1922. The work was completed in October, 1929.

While negotiations are being made, money for construction is accruing. In recent years bonds amounting to about $500,000 have been

authorized annually. At the beginning of 1931 about a million and a half was available for use as soon as plans were completed.

V. Buildings

There was little construction of buildings in the early years of the period under survey. In the Report of the Common Council, of 1922, the superintendent of bridges and public buildings states that:

> "No large or spectacular construction work was begun during 1922. While a number of projects were under consideration, funds, legal tangles and proceedings and the necessity of acquiring suitable sites by the slow process of condemnation held up all large undertakings."

In 1924 the old natatorium building on Prairie Street was wrecked and a new $105,000 building begun,[5] which was completed in 1925. The South View Hospital nurses' home was also completed in that year, at a cost of approximately $90,000. The municipal service building at Sixteenth and Canal streets was begun in 1925 and completed in 1926. This building houses the construction and repairs divisions of the department of public works. It was built of steel, concrete, tile and brick, at a cost of $364,304, all of which was supplied by current taxation.

During 1927 several small structures were erected. They included three fire houses, a new branch police station at 28th Avenue and Burnham street, and four playground field houses.

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5 Report of the Common Council, 1924, p. 26.

Of the buildings completed between 1920 and the end of 1929, the Safety Building is by far the most important. After a period of negotiation that lasted 17 years, the building was begun in 1927. By the time an agreement could be reached in regard to the various plans of architects, it was decided that a larger building was needed. Later a change in location seemed desirable because of the development of the Civic Center. This necessitated the purchase of a new site.

Part of the building was constructed by the county and part by the city. The city's share of the expense amounted to $1,805,924, of which $143,091 was paid out of current taxation, the greater part of the remainder being financed by police department bonds. The county financed its portion of the building out of its general building fund. On October 9th, 1923 a tax levy of approximately $500,00 a year was authorized for the purpose of establishing a fund for the construction of the Safety Building, the county Court House, and other county buildings. This levy was discontinued in 1931.

The city uses its portion of the building to house the central police station, while the county's part contains the adult probation department headquarters, the criminal courts, the offices of the district attorney, sheriff and coroner, and the county jail .

The cost of the Safety Building was included in police department expenses in Table 9.

VI. Civic Center and Street Widenings

At the April election of 1920, the electors approved the plan of grouping the city and county buildings at Eighth and Cedar streets.

TABLE 31

CIVIC CENTER AND STREET WIDENING PROJECTS: 1920-1929

	Civic Center and Related Projects							
	Cedar-Biddle and Lake St.	Cedar St. Bridge	Juneau Park Extension	Safety Bldg. in Civic Center	Civic Center	Opening Streets and Alleys	Sixth, Eleventh and Sixteenth	Total
1920	$ 180,012					$ 250,355		$ 430,367
1921	43,222			$ 8		184,549		227,779
1922	333,645			28,700		68,053		430,398
1923	82,627			3,416		117,367		203,410
1924	88,524	$ 196	$ 1,085		$15,000	169,971		274,776
1925	37,000	2	52,072	222,169	58,090	202,026		571,359
1926	200,819	310	431,314	15,243		148,580		796,266
1927	1,256,984	74,942	344,026	111,157		201,060		1,988,169
1928	427,993	467,956	85,000	622,073	State St. Grade	88,247	$252,564	1,943,833
1929	2,768	211,173		803,158	114,982	9,433		1,141,514
Total	$2,653,594	$754,579	$913,497	$1,805,924	$188,072	$1,439,641	$252,564	$8,007,871

Source - Citizens' Bureau of Milwaukee,
City of Milwaukee's Major Financial Transactions, p.47.

The civic center site includes ten blocks of city property. Buildings are being erected only as needed, and the site may not be fully developed for many years. Related to this project is the widening of certain streets in this vicinity. These developments are financed for the most part by bonds which must be authorized by the electors. In the early months of 1931 there was still some question in regard to the assessment of benefits and damages due to street widenings. Table 31 gives the expenditures involved in these projects from the beginning in 1920 the end of 1929.

VII. Street Lighting

Only a small portion of the cost of street lighting has been financed by taxation, the remainder being financed by bonds. The expenditures have fluctuated considerably from year to year. They are recorded in Table 32.

TABLE 32.

STREET LIGHTING CONSTRUCTION COSTS
CITY OF MILWAUKEE
1920-1929

Year	Total Cost	Financed from Current Taxes
1920	$ 615,628	$ 8,254
1921	479,977	92,390
1922	253,049	39,161
1923	58,548	16,804
1924	77,189	37,611
1925	94,231	100,690
1926	141,598	34,908
1927	178,137	159,363
1928	236,717	45,476
1929	258,142	93,576
	2,393,216	628,233

Source: Citizens' Bureau of Milwaukee, City of Milwaukee's Major Financial Transactions, p. 45.

CHAPTER X.

THE PLANNING OF PUBLIC WORKS IN THE CITY OF MILWAUKEE

I. Street Improvements

We have seen from Chapter V that Milwaukee spent more money for street improvements during the decade studied than for any other single item (22 per cent of cost of all permanent improvements). A large part of this money was used for construction in new areas. In the development of new sections an attempt was made to pave alleys first in order to facilitate the delivery of building materials, and to provide an outlet for residents while sewers, water mains, and other utilities were installed in the streets themselves. It is desirable that a period of about a year elapse to allow the earth about the groundwork to settle before paving.

Although the department of construction and repair of streets makes long term system plans of a general nature, it is extremely difficult to lay out a detailed program for more than one year in advance because of the nature of the system of authorizing street construction. At present each project must be approved by the alderman who represents the ward in which the proposed work is to be done. The planning of street improvements is made only one year in advance and it is the resultant of conflicting local influences. Business interests want wide streets, while residential sections are opposed to them.

The study of the Citizens' Bureau of Milwaukee brought out the fact that on the average, about 71 per cent of the cost of paving was

assessed against benefited property.[1] As a result, there is a tendency for streets to be built when the property owners are enjoying prosperity, and not in times of depression, when property owners find it difficult to pay taxes for general purposes alone.

Under the present system there is little probability that plans for paving will be made for more than one year in advance or that expenditures for paving, which constitute about 22 per cent of all expenditures for permanent improvements, will be so timed that they will stabilize industry or employment in Milwaukee.

II. Sewers

Sewers are next in importance from the point of view of amount of expenditures for permanent improvements (14 per cent for the period 1920-29).

General system plans are made years in advance, but the detail plans are not completed until just prior to letting contracts. Occasionally, however, the detail plans are completed as much as three months before letting. Since much of the sewer work is done in streets that are to be paved, plans for sewers are not completed until the street program is known, and the city engineer has established the street grades. It is often necessary to fill trenches with slag in order to provide a suitable foundation for pavement. If street plans were made longer in advance the trenches might be filled with earth and be allowed to settle until a satisfactory foundation was secured, without the additional cost of slag.

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1 Citizens' Bureau of Milwaukee, p. 20.

III. Schools

For several years the school board has been planning their construction work five years in advance. In 1924 a special committee appointed by the superintendent of schools revised the existing building program and outlined a sites program. The recommendations of this committee were adopted by the board and published. A revision was published in 1925 and biennially since that date.

The programs are based upon detailed considerations of changes in population, development of new territory, changes in the proportion of the population attending the public schools, and expected financial resources. Proposals are made in regard to time, location, size, pupil capacity, grades to be housed, and estimated cost of building.

A summary of the estimated needs and the estimated income for the period June 1931 to June 1936 is given in Table 33.

These general plans have been followed rather closely. Detail plans are not made until the school board authorizes construction. The board has its own staff of draftsmen. The buildings are standardized to a considerable extent. That is, there are standard units of buildings, such as standard classroom sizes, lighting systems, heating systems, ventilating systems, and standard equipment. This makes it possible for detail plans to be completed within a short time after a building has been authorized by the board.

IV. Playgrounds

In 1928 a playground program was formulated which recommended projects extending as far in advance as 1950. This program was prepared

TABLE 33

TENTATIVE BUILDING PROGRAM OF THE BOARD OF SCHOOL DIRECTORS

For the period June 1931 to June 1936

		Previous Program		New Program
Estimated Needs (Construction Fund):				
Required to complete buildings under way over and above all balances on hand...		$1,134,000		$ 450,000
Requirements of Program:				
Buildings.....	$10,075,000		$7,250,000	
Equipment.....	550,000		400,000	
Land.....	700,000		400,000	
Total Program.....		11,325,000		8,050,000
Total Needs.....		$12,459,000		$8,500,000
Estimated Resources:				
Proceeds of bond issues.....	6,580,000		5,400,000	
Probable income from 1 mill tax.....	5,044,000		3,100,000	
Total Income		11,624,000		8,500,000
Remaining unpaid at close of Five-Year Period.....		835,000		0

1931 Revision of Five Year School Building Program of the Board of School Directors, p.20

by the city planning engineer and a representative of the school board. It was published in 1929 with the Building and Sites program of the Milwaukee Public Schools. The recommendation was made that playgrounds should be developed on school grounds, when possible, so as to provide economical use of land, eliminate the cost of separate shelter and toilet buildings, and to facilitate supervision which is in charge of the board of school directors.

The plan was never formally adopted by the common council, but it has been followed rather closely thus far.

V. Factors Affecting Advanced Planning

For the most part, plans are based upon estimated public demand, estimated needs and estimated financial resources. The extent to which the plans will become effective depends upon the growth of the city, the ability and willingness for citizens to meet tax levies and assessments, the constitutional limit of indebtedness (based upon the assessed value of property subject to local taxation), the attitude of legislative and administrative officials, and the degree of success in negotiating with individuals, corporations and other units of government.

Planning is highly desirable for achieving economical administration of the city's public works program. Moreover, it is essential to any scheme of stabilizing industrial activity by properly timed expenditures for public construction. There seems to be a tendency towards more advanced planning in the city of Milwaukee, which, of course, should be encouraged.

CHAPTER XI.

STABILIZATION OF INDUSTRY AND EMPLOYMENT IN MILWAUKEE BY CONTROL OF PUBLIC WORKS

I. The Theory of Stabilization by Control of Public Works

Many theories have been advanced to explain the fluctuations of business, and likewise many plans to minimize these fluctuations have been suggested. Professor Fisher advocates the stabilization of the dollar, while others emphasize stabilization of credit through the Federal Reserve System, or control of profits, or government ownership or unemployment insurance. The factors that cause business cycles are so diverse and so complex that it seems improbable that the cyclical movement of business activity can be entirely eliminated by applying any single remedy. However, any workable plan which might result in decreasing the violence of the fluctuations should be given careful consideration.

Those who endorse the public works theory state that if the various units of government would increase their building activity in times of depression, idle men would be employed thereby increasing consumer purchasing power, which would stimulate all commercial and industrial activity. That part of the money which would go for materials would also result in increased purchasing power of those engaged in transportation, distribution and production of these materials. Thus the theory does not imply that governments should attempt to employ all idle men directly, or that all workers must seek employment in the con-

struction industry, for an appreciable increase in the number employed in the construction industry, or any other major industry, would create demand for all sorts of products which would ultimately result in increased demand for men for all sorts of purposes, and increased profits for entrepreneurs. For example, soon after the State let contracts for grade crossing abolition in 1931, more men were employed at plants engaged in the manufacture of road building machinery as well as the men who were employed on the construction jobs themselves.

II. Opposition to Increased Tax Burdens

One reason for the failure of governments to apply this theory of stabilization is that taxpayers are poor when business is depressed. The list of delinquent taxpayers rises, and there is a general outcry against overtaxation. As a result, construction budgets are cut and business is even further depressed. Thus governments commonly increase the violence of business fluctuations by spending more during periods of increased activity and less in periods of decreased activity. Projects that are financed in part by assessments are especially unpopular. Street paving, which constituted approximately 22 per cent of all expenditures for permanent improvements during the year 1920-29, is a case in point. During this period more than two thirds of the cost of this type of improvement was assessed against property owners. When a new pavement is proposed in times of depression, people complain to their local alderman who has power to block the project.

Because of these facts, it is virtually impossible to increase expenditures for paving in times of depression in the city of Milwaukee.

In fact it is quite probable that the amount of such expenditures will be decreased rather than increased.

Construction of sewers and water mains are subject to similar difficulties, but to a lesser degree, because the rate of assessments for these items is smaller. About 10.7 per cent of the cost of sewers is paid by assessment and about 40 per cent of the cost of water distribution mains.

Likewise there is opposition to increasing expenditures for projects that are financed by current taxation. Theorists have suggested that reserve funds known as "prosperity reserves" be accumulated during good times to provide money for construction in times of depression. However, this plan has not been very popular because people do not wish to wait for an improvement after they have paid for it. Moreover, such funds are subject to mismanagement and misuse.

III. Borrowing

It should be possible, however, to develop those projects that are regularly financed by bond issue, providing that at the time depression becomes apparent there is sufficient margin for further indebtedness. During the period 1920-29 only 22 per cent of the cost of permanent improvements was financed by direct taxation, and 22 per cent by assessments, while approximately 45 per cent was financed by bond issue. This fact suggests that much could be done to increase the volume of construction during depressions by proper timing of only those projects that are financed by bonds.

The chief obstacle in following this plan at Milwaukee is the fact that in recent years the margin for further indebtedness has been uncomfortably small. During the war period when property valuation was rising and the city was doing little building a large margin was created (see Chart 10). In 1916 the margin was greater than the amount of the net debt. But after the war, accumulated needs and the rapid development of new territory in the outskirts of the city necessitated large additional issues for such improvements as sewers and school buildings with the result that the margin was largely absorbed.

If Milwaukee plans to stimulate business in times of depression by controlling public works, some provision must be made for the financing of the projects that are to be accelerated. Both increased taxation and cash reserves seem inadvisable. A reserve of credit in the form of margin for further bonded indebtedness seems to be the most workable scheme. In order to create a reserve of credit there must be either a reduction of bond issues in good times or an expansion of the debt limit in times of depression.

Mr. Otto T. Mallery of Philadelphia suggests[1] that states adopt constitutional amendments to increase the debt limits of local governments by $\frac{1}{2}$ per cent of the assessed valuation of property subject to local taxation at such times as the governor shall announce the existence of an unemployment emergency and industrial depression. His plan also calls for a reduction of the debt limit excepting in times of emergency and depression of $\frac{1}{2}$ per cent of assessed valuation. Should

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1 Mallery, Otto, State Program for Public Works to Stabilize Employment and Industry.

this scheme be adopted in Wisconsin the limit of indebtedness would become 4½ per cent in good times and 5½ per cent at such times that the governor considers times of unemployment emergency and business depression. Thus each municipality would have a reserve credit of 1 per cent of the assessed valuation of property subject to local taxation.

Let us consider a hypothetical situation. Suppose that 1936 is a good business year and that an amendment incorporating the ideas outlined above is adopted in that year. If the indebtedness of the city of Milwaukee was 4½ per cent of the assessed valuation of property (it was slightly more than 4½ per cent on January 1, 1930) the city could only issue amounts that were equal to the amounts maturing, plus 5 per cent of the increased valuation of property until the Governor announced the existence of a depression. Now suppose that the Governor did announce that a depression existed in 1939. Doubtless new bonds would be issued - perhaps to the extent of the additional 1 per cent of property valuation. Were the assessed valuation $1,000,000,000., the bonded debt could be as much as $55,000,000. If, in 1941 the Governor declared that the depression was ended, the limit would be reduced to 4½ per cent of assessed valuation or $45,000,000., disregarding increase in valuation during the two depression years. All Milwaukee bonds are retired at the rate of one twentieth or 5 per cent each year. At this rate, two years would be required to retire sufficient bonds to make the total amount outstanding within the debt limit. Again assuming no substantial increase in valuation, no new bonds could be issued during this period. No new bridges or viaducts could be built, there could be no grade crossing abolition or street

widenings, and the development of the harbor would be at a standstill. At the same time, the tax rate would be higher to provide for the retirement of bonds and to pay interest charges.

Mallery's plan also includes a provision that no stabilization bonds shall be sold later than three months after the Governor's announcement. This would prevent the council from authorizing bonds to the limit and selling them at such times as it chose. But even though bonds were sold during the three months, the money might be spent only at such times as the council chose. Should this be done, the plan would be ineffective and would cause great losses to the city, for the interest that the city would receive on bank balances would be small in comparison with the interest which it would be required to pay on the bonds themselves.

Another question arises in regard to the Governor's announcement of depression. If it was stipulated that a depression existed when an index fell to a certain point, much would depend on the fitting of the trend line which was used to measure "normal conditions," which is often a matter of controversy. In any case the factor of human judgment is dominant, and judgment is usually subject to error, and occasionally to political manipulation. Should the plan be adopted it is entirely possible that the question of whether or not a depression existed would become a political issue.

Further study of this plan may bring modification that will make it more practicable. This much seems clear: stabilization by control of public works programs will not be effective unless local

officials desire to make it effective. There is nothing to force cities to build if the debt limit should be expanded, in spite of the fact that an increase in the debt limit would make additional building possible.

On the other hand, should the city officials desire to accelerate building in depression, it might be possible voluntarily to retard building in good times, thus enlarging the margin for further indebtedness with the limit unchanged.

IV. Suggestions

The following suggestions assume a knowledge of business and employment conditions, and a desire to stabilize business by control of public works expenditures. They involve no modification of the existing methods of finance or forms of procedure.

A. Planning

Improve long term plans in regard to locations, specifications, materials and estimated costs.

B. Financing

1. In times of depression try to decrease as little as possible the volume of construction of those improvements that are regularly financed by taxation.

2. In times of depression, try to decrease as little as possible the volume of construction of those improvements that are ordinarily financed in part by special assessments.

3. During prosperous years, try to accumulate borrowing power by reducing bond issues to a minimum. As an alternative, bonds might be authorized in good times and sold largely in periods of depression.

Of the projects financed by bonds which could be so adjusted that they could counterbalance the swings of business activity, the building of schools is the most important. This item constituted 12.6 per cent of all expenditures for permanent improvements in Milwaukee during the period 1920-29. The board of school directors already has an unusually good long term program planned five years in advance, which is based upon estimated needs and estimated income for building. The board must choose between providing new buildings as rapidly as possible, or building at such times as will tend to stabilize business activity.

A large amount of the cost of constructing sewers is financed by bond issue, although about 11 per cent is provided by local assessment. Moreover, nearly 32 per cent of the amount of bonds outstanding on January 1, 1930 had been issued for sewers. There is a tendency for sanitary sewers to be built when business is good and when new territory is being developed. However, there is need of more storm relief sewers, and it is possible that more of this work might be done in times of depression.

Bridge bonds are subject to the vote of the electorate, and are likely to be defeated in depression years. The voters refused to approve a proposed issue for the Juneau Avenue bridge at the April election of 1931. Bond issues might be approved in good times and work postponed until business declined.

In recent years the development of the harbor has been held in check not by lack of money but by delays incident to negotiations for

land. In the future, however, it might be possible to accelerate this work in times of depression.

The cost of land absorbs more than two thirds of the expenditures for playgrounds and a large part of the expenditures for parks. The cost is especially high when there are buildings on the land. It might be advisable to purchase vacant land in the outskirts in good times, and employ men to improve it when there was an unusual amount of idleness. A $75,000 issue of park bonds was authorized in 1931, a part of which was spent for emergency employment.

It seems safe to assume that if plans were definite and there was a desire to increase construction, the city would have little difficulty in utilizing its surplus money in periods of depression.

V. Employment Relief

Many confuse unemployment relief with stabilization through control of public works. Since the sixteenth century there have been repeated attempts of governments to provide employment for idle men as a substitute for doles. Often work that was of little value to the communities was deliberately created. But it has been impossible for governments to give work to all of the unemployed, and often the results have been unsatisfactory.

In the first few months of 1931, Milwaukee spent about $350,000 to employ men directly. About $25,000 of this amount came from the proceeds of a charity football game between Marquette and Detroit Universities. Married men who were citizens of Milwaukee were hired at a

minimum rate of 60 cents an hour for a period of not more than ten days each. Work was done on playgrounds, parks, street sanitation, electrical service and construction of a lagoon. Between January first and April first 3693 men were given work on these projects. Many additional men were employed in the construction of the fire and police alarm system, which was not an emergency measure but part of the regular program of the year.

The city playground engineer stated that 68 per cent of the emergency employment appropriation which was allotted to his department went to men in the form of wages, and 32 per cent was spent for trucks, teams, bosses and supplies. Between Thanksgiving and April first 1557 men were employed in playground work. Much of the work was grading, since this is the only type of work that is well adapted to mass labor. The playground engineer stated that it was quite probable that it would have been cheaper for the city to do the work by machinery and feed the men soup during the winter, although he was in favor of this type of emergency employment because of the psychological benefits to the men and to the community.

It is beyond the scope of this paper to consider the problems and desirability of this type of relief. The Milwaukee emergency appropriation was designed to provide work during the winter and early spring months when there was little activity in the major construction projects of the city. It was hoped that as these projects got under way in the spring much of the idle labor would be absorbed. Efforts of this sort produce only temporary effects. Even though a million dollars was ex-

pended for hand labor, the net effect of the activity of the city would be to increase unemployment rather than to relieve it, if the city reduced its total expenditures for construction by as much as two million dollars. The theory of public works stabilization suggests increasing construction in the regular manner, thereby increasing employment <u>indirectly</u> in all fields of commercial and industrial activity.

CHAPTER XII.

FLUCTUATION IN CONSTRUCTION COSTS

It is extremely difficult to measure accurately variations in the costs of the different types of municipal construction. In the case of sewer work, the cost of materials used is a relatively small portion of the total cost. During the last ten or fifteen years, the use of machinery has made it possible to do work more efficiently. But not all jobs can be done by machinery, sometimes because of obstacles such as poles, trees, buildings and stone. Often it is necessary to tunnel under streets or portions of streets. There are variations in length, depth, size of pipe and soil conditions. Sometimes storm relief sewers are laid at the same time that sanitary sewers are laid and sometimes not. Some trenches are filled with slag, while others are filled with earth. It is seldom that these many variables occur in the same combination.

Likewise in street construction, there are variations in length, width, thickness, materials, and reinforcement. The Wisconsin Highway Commission has computed unit costs for all highway construction in the state in various years, but the units are not comparable for many years. Moreover, excavation is responsible for a large portion of the cost of country highways.

The cost of land is of considerable importance in such improvements as parks, playgrounds, harbor development, and sites for buildings. In recent years it has been very difficult to estimate the cost of land because there have been few sales.

I. Building Material Costs

There are several indexes of the cost of buildings for the country as a whole. There is the index of construction costs of the Association of General Contractors of America, the Aberthaw index of factory building costs, and indexes of the American Appraisal Company (of Milwaukee) for frame, brick wood frame, brick steel frame and reinforced concrete structures. Each of these indexes may be found in the Survey of Current Business. The United States Bureau of Labor Statistics publishes an index of prices of building materials. The Engineering News-Record publishes an index of construction costs, and also gives quotations of unit prices of many basic materials.

Transportation costs and differences in wage rates might be expected to create regional differences in costs with the result that none of these indexes for the country as a whole would accurately represent the building situation at Milwaukee. The American Appraisal Company has computed four indexes of industrial building costs at Milwaukee - frame, brick wood frame, brick steel frame and reinforced concrete. We are indebted to Mr. William Armstrong of the American Appraisal Company for permission to use these indexes. The figures for brick steel frame and reinforced concrete are presented with the Engineering News-Record index in Chart 13. There seems to be fairly close agreement between these indexes: the American Appraisal indexes are perhaps less sensitive, but have the advantage of being designed to measure changes in costs of special types of building. While the American Appraisal indexes refer to industrial building costs, they probably reflect rather accurately the fluctuation in costs of material and labor used in the construction of Milwaukee school buildings.

All of the curves show surprising smoothness from 1924 to 1929. However, they are based on the costs of labor and materials only. Had profits been included, it is probable that the fluctuations would have been more violent, because in depression years contractors will cut profits and occasionally do work at a loss in order to keep their organizations together and pay a part of overhead expenses.

II. Building Labor Rates

The American Appraisal Company has also compiled data of the rates of building labor for the Milwaukee district for common labor, masons, carpenters, hod carriers, painters, and steel workers. A simple arithmetic average of these rates has been expressed in the form of an index with 1913 as the base period.

The rates for masons, carpenters and common labor have been plotted in Chart 14. These rates remained unchanged for the most part during 1927, 1928 and 1929. They did not fall until some time after the decline in business activity, the first cut in common labor coming in May 1930, while the other rates were maintained until July 1930. Thus it would seem that municipal construction contracted at the beginning of a depression would tend to be more costly than that which was contracted some months later, after the rates of labor had declined. It is probable that labor costs decline before labor rates, since productivity tends to increase when unemployment increases. However, it seems likely that increased productivity would be of more benefit to contractors than to the city.

TABLE 34.

ENGINEERING NEWS-RECORD INDEX OF CONSTRUCTION COSTS

FOR THE UNITED STATES

1913 = 100

Year	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
January	206.55	230.87	168.72	191.70	217.90	210.40	207.15	211.50	203.90	209.40	208.96
February	225.10	230.67	168.72	197.40	220.30	209.70	206.55	210.15	204.65	210.40	206.46
March	240.85	224.27	162.04	205.25	224.70	210.20	207.65	208.80	204.65	207.78	206.80
April	265.20	213.07	164.72	213.50	221.60	209.55	207.05	209.00	206.40	203.40	207.12
May	268.90	210.82	164.62	216.70	222.38	207.20	207.30	206.80	207.00	205.15	205.86
June	273.80	209.82	166.62	220.70	216.85	204.60	204.80	205.55	206.15	205.65	
July	265.65	203.82	169.70	222.10	214.40	204.60	207.80	203.68	206.65	204.77	
August	252.00	193.47	173.40	221.50	213.15	204.60	208.30	205.50	207.29	205.91	
September	255.20	188.27	185.00	221.50	211.25	202.10	208.30	203.60	207.29	207.57	
October	255.20	182.57	188.60	220.30	207.55	205.35	209.80	204.40	207.71	206.32	
November	255.32	166.32	188.60	220.90	205.70	205.95	210.80	201.98	209.46	208.46	
December	251.62	167.82	192.60	217.30	208.58	205.95	210.80	203.90	210.16	209.46	
Yearly Average	251.28	201.81	174.45	214.07	215.36	206.68	208.03	206.24	206.78	207.02	

CHART 13..

BUILDING MATERIAL COSTS

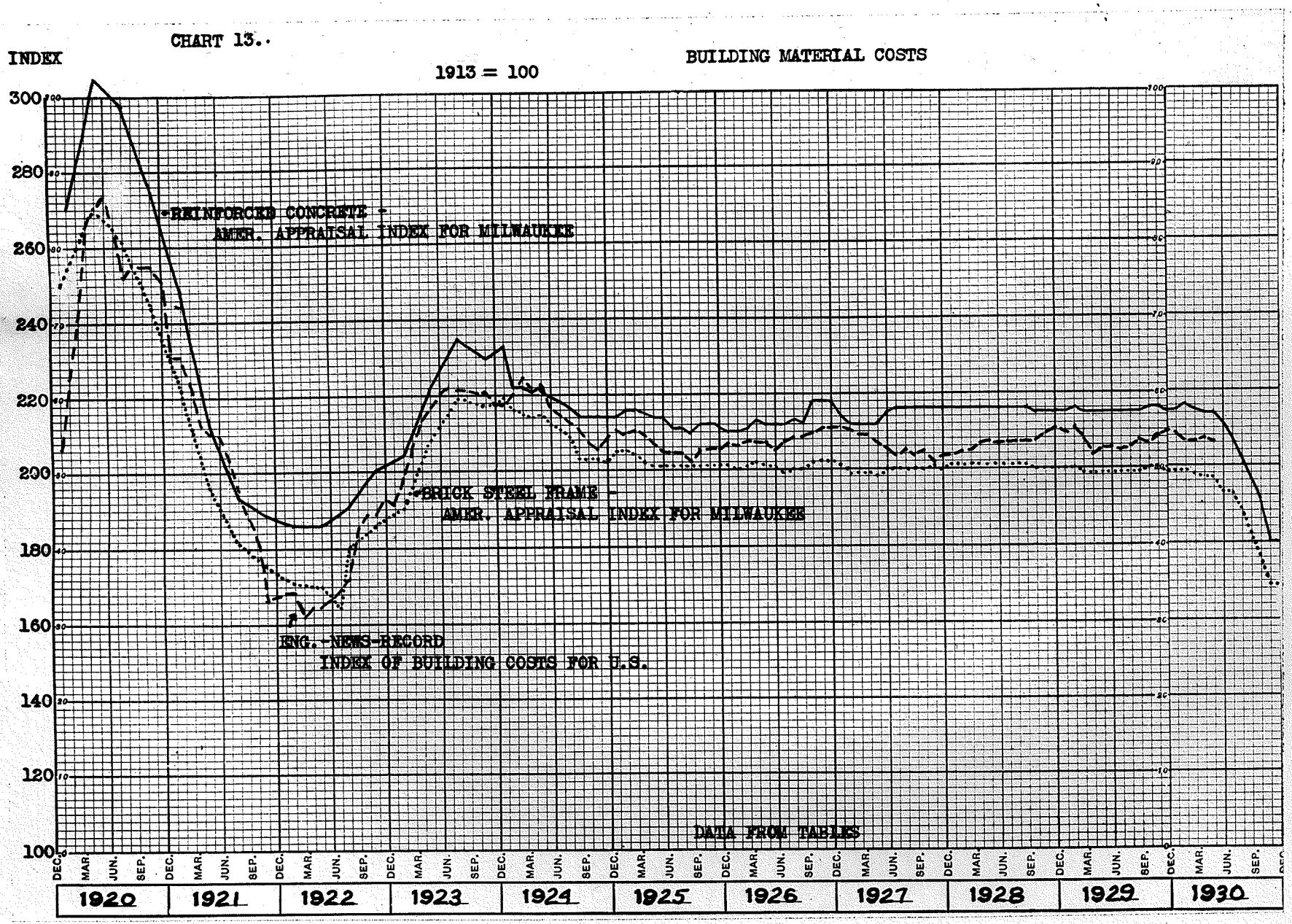


TABLE 35.

INDEX NUMBERS
INDUSTRIAL CONSTRUCTION COSTS
MILWAUKEE, WISCONSIN
COMPILED BY THE AMERICAN APPRAISAL COMPANY
RESEARCH DEPARTMENT

Respective Costs in 1913 = 100

Year	Frame	Brick Wood Frame	Brick Steel Frame	Reinforced Concrete
1920 - 1st qtr.	273	284	250	270
2nd "	293	316	271	306
3rd "	260	304	261	297
4th "	239	276	244	275
1921 - 1st "	215	252	222	248
2nd "	189	211	195	212
3rd "	181	194	181	193
4th "	183	190	175	188
1922 - 1st "	182	187	171	186
2nd "	179	186	170	186
3rd "	189	190	180	191
4th "	192	197	186	200
1923 - 1st "	200	200	190	204
2nd "	210	219	208	222
3rd "	207	229	219	235
4th "	206	225	217	229
1924 - 1	205	226	219	233
2	209	222	216	222
3	209	222	215	222
4	209	222	214	221
5	211	223	215	222
6	207	220	212	219
7	204	219	211	218
8	200	218	209	216
9	200	216	208	214
10	200	216	208	214
11	200	216	208	214
12	200	214	202	214

	Frame	Brick Wood Frame	Brick Steel Frame	Reinforced Concrete
1925 - 1	201	215	205	214
2	202	215	205	216
3	202	215	204	216
4	200	212	202	215
5	199	212	201	214
6	199	212	201	214
7	196	210	201	211
8	195	209	201	211
9	197	210	201	210
10	198	210	201	212
11	201	211	201	212
12	200	212	201	212
1926 - 1	200	212	201	210
2	200	212	200	210
3	199	212	201	211
4	203	214	202	213
5	200	213	201	212
6	200	213	201	212
7	201	213	199	212
8	199	213	200	213
9	199	213	200	212
10	203	216	202	218
11	203	216	202	218
12	203	215	202	218
1927 - 1	203	214	201	214
2	202	213	199	212
3	202	213	199	212
4	202	214	199	212
5	203	214	198	212
6	203	216	200	215
7	204	217	200	216
8	204	217	200	216
9	204	217	200	216
10	204	217	200	216
11	204	217	201	216
12	203	217	200	216
1928 - 1	203	217	201	216
2	201	217	201	216
3	201	217	201	216
4	201	217	201	216
5	201	217	201	216
6	201	217	201	216
7	201	218	201	216
8	202	218	201	216
9	202	217	201	216
10	202	217	200	215
11	202	217	200	215
12	202	217	200	215

	Frame	Brick Wood Frame	Brick Steel Frame	Reinforced Concrete
1929 - 1	201	217	200	215
2	202	217	200	216
3	201	217	199	215
4	198	218	199	215
5	198	218	199	215
6	198	218	199	215
7	198	218	199	215
8	198	218	199	215
9	198	218	199	215
10	199	219	200	216
11	199	219	200	216
12	197	218	199	215
1930 - 1	198	218	199	215
2	198	219	199	216
3	196	217	198	215
4	196	216	197	214
5	195	216	197	214
6	192	214	193	211
7	192	213	193	208
8	187	209	188	202
9	180	199	182	196
10	173	192	176	189
11	168	187	169	180
12	168	187	169	180

The American Appraisal Company makes the following comment in regard to these figures:

> "The above Index Numbers are developed in line with current trends and recognize basic fluctuations in normal overhead and profit and efficiency of labor, but do not reflect price concessions now prevailing in certain localities under temporary necessity."

TABLE 36.

RATES OF BUILDING LABOR AT THE MILWAUKEE DISTRICT

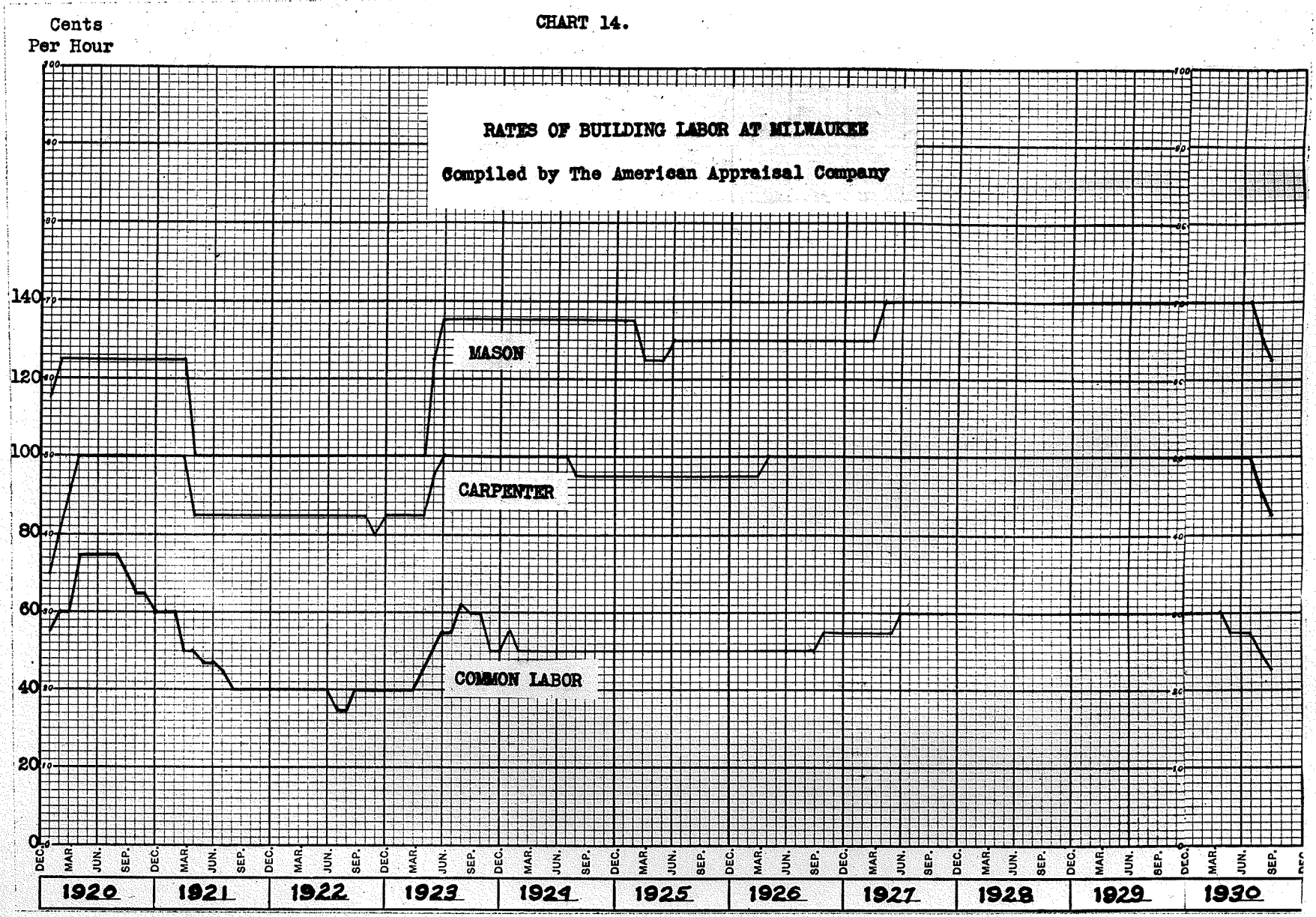
As Compiled by the American Appraisal Company

	Common Labor	Mason	Carpenter	Hod Carrier	Painter	Steel Worker	Average	Index Figure
1913	(.20)	(.65)	(.475)	(.325)	(.475)	(.625)	.458 =	100
1920 - 1	.55	1.15	.70	.70	.75	.80	.775	169
2	.60	1.25	.80	.75	.80	1.00	.867	189
3	.60		.90		.85		.892	195
4	.75		1.00		.90		.942	206
5	.75				.90		.942	206
6	.75				.85		.933	204
7	.75						.933	204
8	.75						.933	204
9	.70						.925	202
10	.65						.917	200
11	.65						.917	200
12	.60					.925	.896	196
1921 - 1	.60	1.25	1.00	.75	.85	.925	.896	196
2	.60			.75		.925	.896	196
3	.50			.65		.90	.858	187
4	.50	1.00	.85		.80		.783	171
							~~.783~~	~~171~~
5	.47						.778	170
6	.47						.778	170
7	.45			.60			.767	167
8	.40			.65			.767	167
9							.767	167
10							.767	167
11							.767	167
12					.85	1.00	.792	173
1922 - 1	.40	1.00	.85	.65	.85	1.00	.792	173
2								173
3								173
4								173
5								173
6					.80		.783	171
7	.35				.75		.767	167
8	.35			.60			.759	166
9	.40			.50		.95	.742	162
10						.90	.733	160
11			.80				.725	158
12			.85	.65	.85		.775	169

	Common Labor	Mason	Carpenter	Hod Carrier	Painter	Steel Worker	Average	Index Figure
1923 - 1	.40	1.00	.85	.65	.85	1.00	.792	173
2								173
3								173
4	.45						.800	175
5	.50	1.25	.95	.80			.892	195
6	.55	1.35	1.00		1.00	1.25	.992	217
7	.55						.992	217
8	.625						1.004	219
9	.60						1.00	218
10	.60						1.00	218
11	.50						.983	215
12	.50						.983	215
1924 - 1	.55	1.35	1.00	.80	1.00	1.25	.992	217
2	.50						.983	215
3								215
4								215
5								215
6								215
7					.95		.975	213
8			.95		.95		.967	211
9					.90	1.13	.938	205
10							.938	205
11							.938	205
12				.85			.947	207
1925 - 1	.50	1.35	.95	.85	.90	1.13	.947	207
2		1.35					.947	207
3		1.25					.93	203
4							.93	203
5							.93	203
6		1.30		.90	.95		.955	209
7								209
8								209
9					.90		.947	207
10								207
11								207
12								207
1926 - 1	.50	1.30	.95	.90	.90	1.13	.947	207
2								207
3								207
4			1.00				.955	209
5								209
6								209
7								209
8					.95	1.20	.975	213
9					1.00		.983	215
10	.55						.992	217
11								217
12								217

	Common Labor	Mason	Carpenter	Hod Carrier	Painter	Steel Worker	Average	Index Figure
1927 - 1	.55	1.30	1.00	.90	1.00	1.20	.992	217
2								217
3								217
4		1.40					1.008	220
5								220
6	.60				1.125		1.037	226
7								226
8								226
9					1.13		1.038	227
10								227
11								227
12								227
1928 - 1	.60	1.40	1.00	.90	1.13	1.20	1.038	227
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
1929 - 1	.60	1.40	1.00	.90	1.13	1.20	1.038	227
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
1930 - 1	.60	1.40	1.00	.90	1.13	1.20	1.038	227
2								
3								
4								
5	.55						1.03	225
6							1.03	225
7							1.03	225
8	.50	1.30	.90	.70	1.00	1.10	.917	200
9	.45	1.25	.85	.60	.85	1.00	.833	182
10								
11								
12								

CHART 14.


Cents
Per Hour
RATES OF BUILDING LABOR AT MILWAUKEE
Compiled by The American Appraisal Company
MASON
CARPENTER
COMMON LABOR
140
120
100
80
60
40
20
0
DEC.
MAR.
JUN.
SEP.
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930

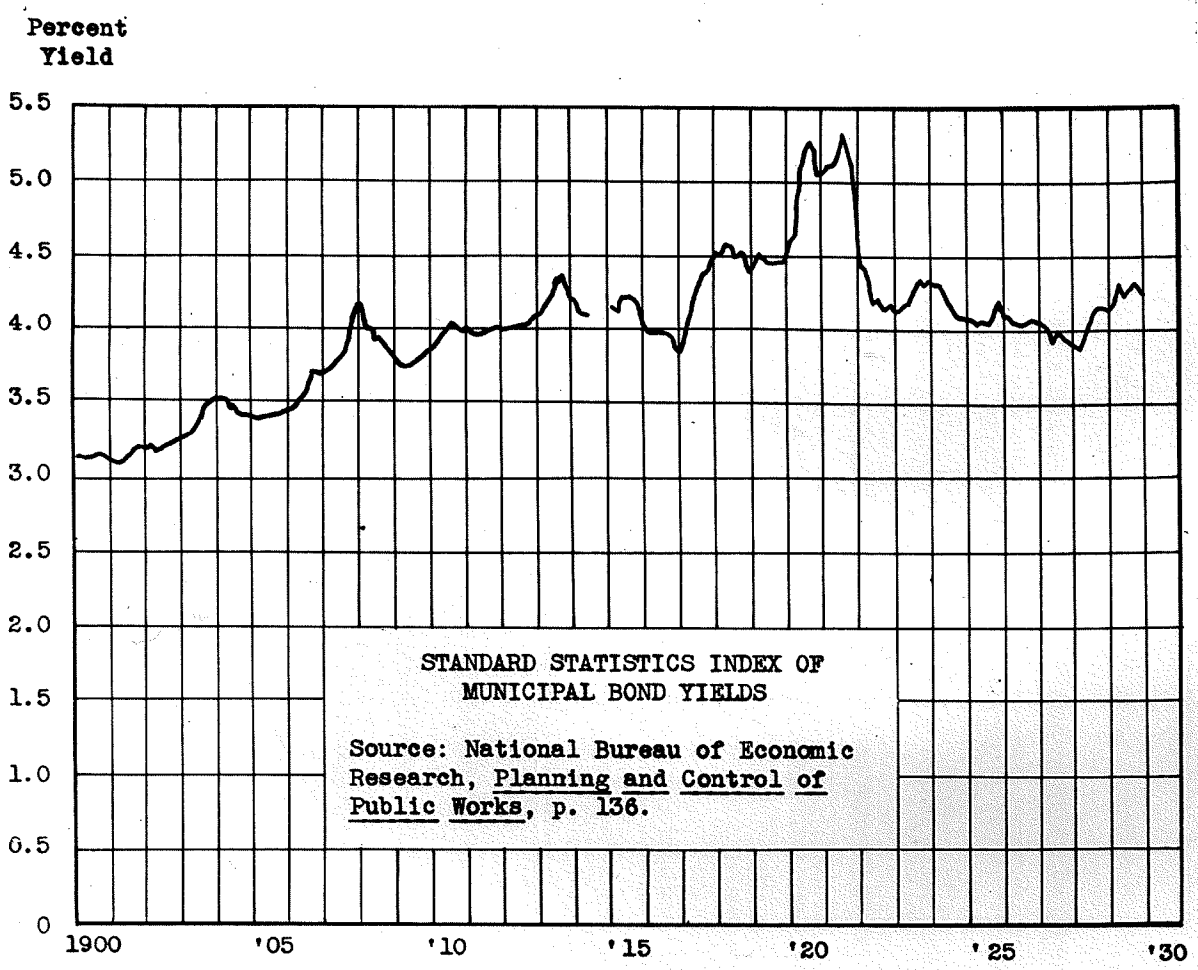
III. Municipal Bond Yields

The Standard Statistics index of municipal bond yields indicates that in general yields tend to be lower during the late months of depressions and early months of revivals than during recessions and early months of depressions. During the period 1900 to 1929 the highest yield attained was in the last half of 1920 and in 1921. These figures indicate that had cities sold bonds at this time they would have been obliged to offer high rates of interest in order to have the bonds sell at par or above. By waiting until 1922 bonds bearing a lower rate of interest could have been sold at the same price.

It is the practice of the city of Milwaukee not to sell bonds until the money is actually needed. Because of this fact the city might authorize bond issues and let contracts at the beginning of a depression and postpone sale until market conditions become more favorable.

To achieve a stabilizing influence by public works control, public construction should be commenced early in depressions. It seems probable that construction initiated at this time would be more costly than construction initiated during the later stages of depression. However, if there was sufficient spending by governmental units throughout the world declines would be checked and severe depressions averted.

CHART 15.


Percent Yield
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0
1900
'05
'10
'15
'20
'25
'30
STANDARD STATISTICS INDEX OF MUNICIPAL BOND YIELDS
Source: National Bureau of Economic Research, Planning and Control of Public Works, p. 136.

APPENDIX A

CITY OF MILWAUKEE OUTLAYS AS RECORDED BY THE WISCONSIN TAX COMMISSION

The foregoing analysis has been based on the original records of the city of Milwaukee's financial transactions. Each year, however, all municipalities in Wisconsin submit summary reports to the Wisconsin Tax Commission. These reports classify expenditures in standard form. Transfers are occasionally made by the Tax Commission between outlays and current expenses. As a result, the Tax Commission figures for the various municipalities are somewhat more comparable than are the original records of the municipalities.

All Tax Commission reports are made on a cash basis. Since the city of Milwaukee operates on an accrual basis, certain adjustments are made by the city in making up the Tax Commission reports. For these reasons the two sets of figures are not identical, although there is fairly close agreement for the totals of the ten year period, 1920-29. The reports to the Tax Commission were made available through the cooperation of Mr. Mallow and his staff.

The relative importance of the expenditures for highways, health and sanitation, and schools is shown by the Chart 16. A large portion of the total outlay expenditures of Milwaukee for the period may be assigned to these three groups of projects.

A more detailed analysis of expenditures for the two largest groups, highways and conservation of health, is presented in Tables 38 and 39.

CHART 16.

CITY OF MILWAUKEE
OUTLAYS
Source - Wisconsin Tax Commission

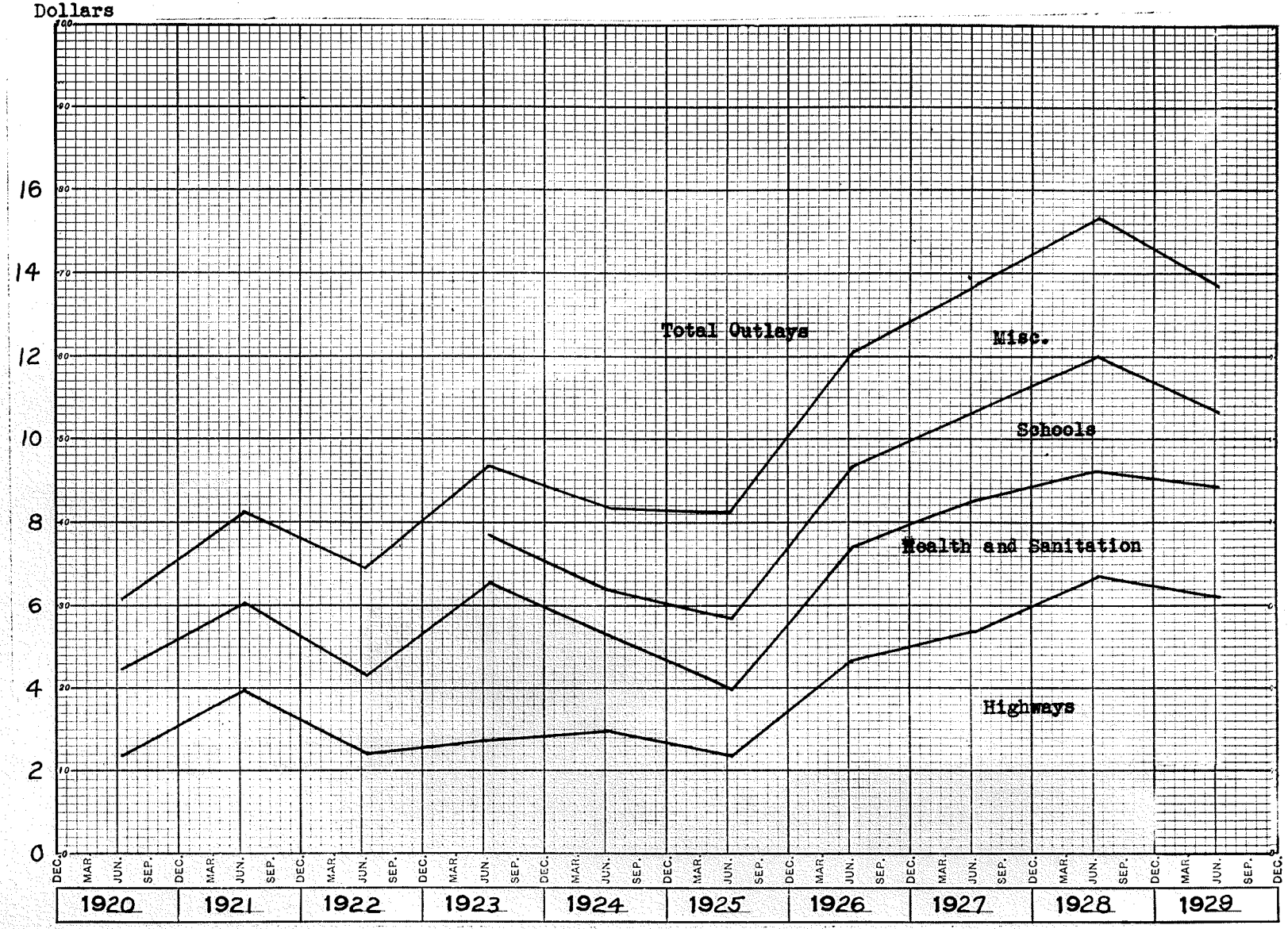


TABLE 37

OUTLAYS OF CITY OF MILWAUKEE, WISCONSIN, 1920-1929

Year	Total	General Government	Protection of Person and Property	Conservation of Health	Highways	Others
Total	85,581,689	694,798	2,862,382	24,601,382	39,809,066	17,614,061
1920	$ 5,275,230	$	$ 12,630	$ 2,022,188	$ 2,391,813	$ 848,599
1921	7,139,506		54,580	2,083,305	3,989,097	1,012,524
1922	5,315,832	8,889	134,953	1,817,002	2,403,602	951,386
1923	8,153,958		72,416	3,843,224	2,699,207	1,539,111
1924	7,271,967	156,427	3,497	2,312,355	2,981,792	1,817,896
1925	6,485,784	286,148	345,982	1,585,518	2,372,438	1,895,698
1926	10,195,772	239,850	260,168	2,774,592	4,618,590	2,302,572
1927	11,529,188		313,962	3,111,308	5,397,542	2,706,376
1928	12,423,853	3,484	794,562	2,439,529	6,753,241	2,433,037
1929	11,790,599		869,632	2,612,361	6,201,744	2,106,862

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

School outlays are not included in the above table. They may be found in Table 45.

TABLE 38.

CITY OF MILWAUKEE
HIGHWAY OUTLAYS: 1920-1929

	Highway Total	Roadways or Streets, Roads and Alleys	Rivers and Harbors	Bridges	Street Lighting	Equipment and Street Machinery	Grade Crossing Abolition	Street Cleaning and Miscellaneous
Total	39,809,066	28,944,396	1,938,707	5,430,761	2,180,594	117,130	1,014,630	182,801
1920	2,391,813	1,418,513	128,413	182,961	615,628			46,298
1921	3,989,097	2,479,901	334,719	708,093	418,700			47,684
1922	2,403,602	1,953,422	144,029	26,355	263,576			16,220
1923	2,699,207	2,197,543	71,565	178,820	58,548	2,300	190,431	
1924	2,981,792	2,147,714	61,621	569,653			132,699	70,106
1925	2,372,438	2,097,978	28,836	98,879	94,232		52,514	
1926	4,618,590	3,516,743	260,057	634,211	136,269		71,310	
1927	5,397,542	4,609,620	264,050	92,858	157,889	114,830	158,245	
1928	6,753,241	4,268,923	246,485	1,736,115	236,717		265,001	
1929	6,201,744	4,254,039	398,932	1,202,816	199,035		144,430	2,493

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

TABLE 39.

CITY OF MILWAUKEE
CONSERVATION OF HEALTH OUTLAYS: 1920-1929

Year	Health Total	Hospitals	Sewers and Sewerage Disposal	Garbage Collection and Disposal	Miscellaneous
Total	24,596,382	392,962	23,941,018	140,367	127,033
1920	2,022,188	48,276	1,962,683		11,229
1921	2,083,305	29,501	2,053,804		
1922	1,817,002	1,361	1,802,245	4,492	8,904
1923	3,843,224	7,731	3,718,566	116,926	
1924	2,312,355	73,683	2,238,671		
1925	1,585,518	58,589	1,420,029		106,900
1926	2,774,592	104,237	2,670,355		
1927	3,111,308	10,000	3,098,056	3,252	
1928	2,439,529	23,899	2,404,433	11,197	
1929	2,612,361	35,685	2,572,176	4,500	

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

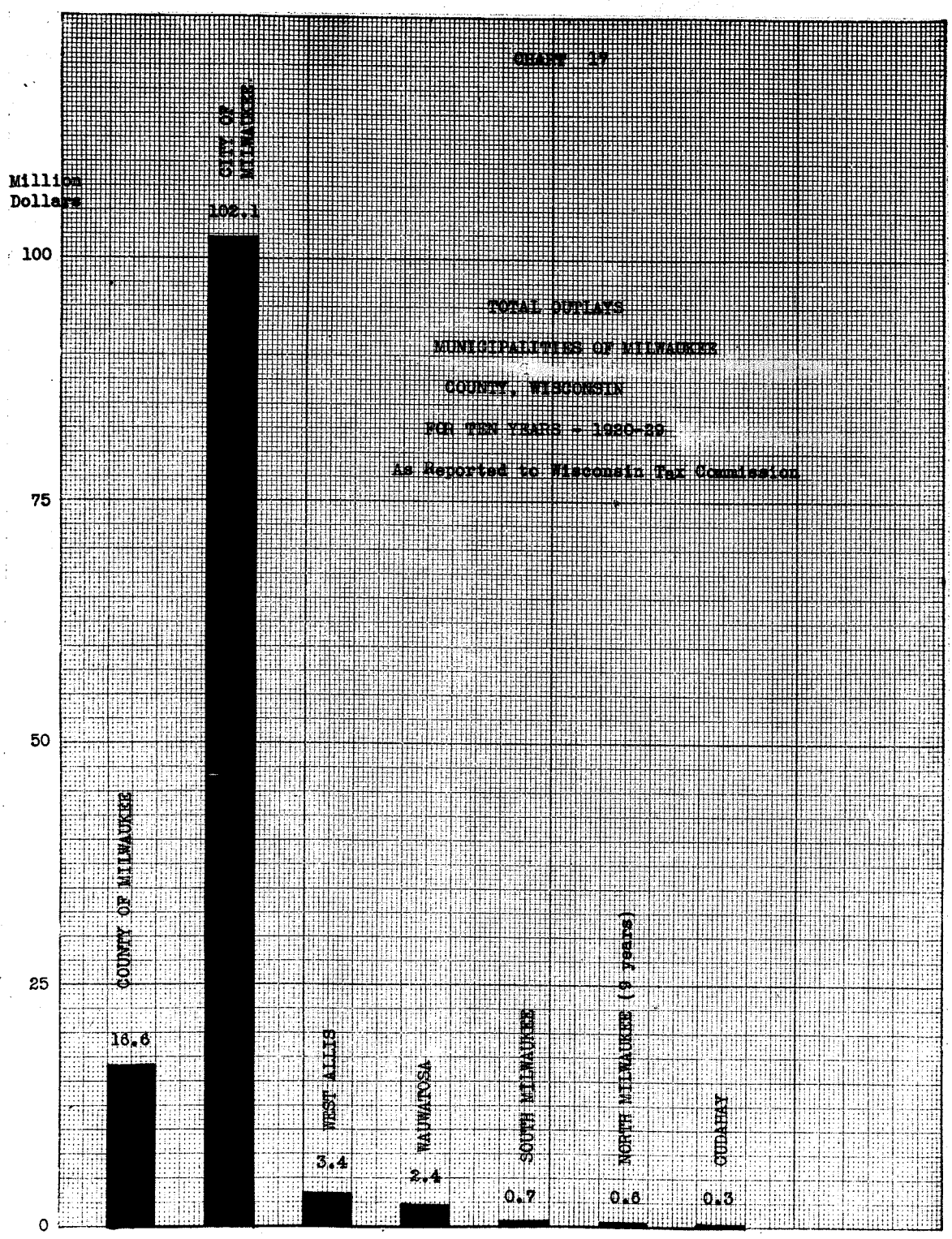
APPENDIX B

OUTLAYS OF OTHER CITIES OF MILWAUKEE COUNTY AS RECORDED BY THE WISCONSIN TAX COMMISSION

A glance at Chart 17 will show the relative importance of outlay expenditures of the city of Milwaukee, and those of the county of Milwaukee, and other cities in Milwaukee county. The figures for North Milwaukee are for nine years only, because this city was annexed by the city of Milwaukee in January, 1929.

A summary of outlays of these municipalities, as recorded by the Tax Commission, is given in Tables 40 to 46 inclusive.

CHART 17



TOTAL OUTLAYS

MUNICIPALITIES OF MILWAUKEE

COUNTY, WISCONSIN

FOR TEN YEARS - 1920-29

As Reported to Wisconsin Tax Commission

TABLE 40

OUTLAYS OF CITY OF WEST ALLIS, WISCONSIN, 1920-1929

Year	Total	General Government	Protection of Person and Property	Conservation of Health	Highways	Others
Total	$ 2,123,565	$ 356,320	$ 63,379	$ 450,708	$ 763,927	$ 489,231
1920	379,628	299,259	2,846	17,847	35,734	23,952
1921	225,582		20,467	36,862	99,282	68,971
1922	203,257	39,807	1,750	25,318	21,521	114,861
1923	238,332	4,751	9,672	60,847	86,945	76,117
1924	298,383	2,260	10,954	75,722	157,627	51,820
1925	86,146	655	5,528	2,776	61,734	15,443
1926	160,665	4,504	8,135	59,912	80,284	7,830
1927	147,750	1,758	2,077	56,951	82,061	4,903
1928	198,398			61,906	49,664	86,828
1929	185,424	3,326	1,950	52,567	89,075	38,506

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

School outlays are not included in the above table. They may be found in Table 45.

TABLE 41

OUTLAYS OF CITY OF CUDAHAY, WISCONSIN, 1920-1929

Year	Total	General Government	Protection of Person and Property	Conservation of Health	Highways	Others
Total	$ 338,114	$ 7,854	$ 13,511	$ 65,527	$ 128,895	$ 122,327
1920	$ 17,436	$	$	$	$ 200	$ 17,236
1921	16,265			937	2,251	13,077
1922	7,517				5,672	1,845
1923	9,285			1,537	5,540	2,208
1924	15,778			5,428	9,374	976
1925	108,421			16,911	26,571	64,939
1926	35,005			24,642	7,255	3,108
1927	97,158		13,511	13,228	53,351	17,068
1928	16,286	4,979		2,844	8,463	
1929	14,965	2,875			10,218	1,870

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

No schools were built during this period. Of the $122,327 miscellaneous expenditures classified as "Other", $29,680 was spent by the water department, and $88,128 was expended for parks.

TABLE 42

OUTLAYS OF CITY OF NORTH MILWAUKEE, WISCONSIN, 1920-1928

Year	Total	General Government	Protection of Person and Property	Conservation of Health	Highways	Others
Total	$ 572,952	$ 6,306	$ 20,839	$ 118,634	$ 317,473	$ 109,700
1920	$ 64,824	$	$	$ 41,034	$ 13,839	$ 9,951
1921	42,334	750		14,202	10,958	16,424
1922	25,597			2,710	20,765	2,122
1923	12,796			1,767	6,304	4,725
1924	73,535	279	180	14,088	42,798	16,190
1925	41,318	3,150	3,077	5,173	27,323	2,595
1926	71,520	2,025	12,806	8,206	40,388	8,095
1927	76,224	102	2,621	5,763	55,787	11,951
1928	164,804		2,155	25,691	99,311	37,647
1929	Consolidated with City of Milwaukee					

No new school construction was reported during this period

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

TABLE 43

OUTLAYS OF CITY OF WAUWATOSA, WISCONSIN, 1920-1929

Year	Total	General Government	Protection of Person and Property	Conservation of Health	Highways	Others
Total	$ 1,202,951	$ 14,402	$ 56,023	$ 119,821	$ 620,663	$ 392,042
1920	$ 20,724	$	$	$	$ 9,418	11,306
1921	48,959	693		3,757	33,173	11,336
1922	83,272	771	267	5,159	69,875	7,200
1923	114,101		5,585	3,709	68,527	36,280
1924	58,037	806	11,714	4,239	28,248	13,030
1925	98,961	3,000	300	12,757	66,683	16,221
1926	131,132	2,750		7,253	105,191	15,938
1927	162,467	3,738	1,242	4,361	65,650	87,476
1928	194,126		13,200	18,256	24,579	138,091
1929	291,172	2,644	23,715	60,330	149,319	55,164

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

School outlays are not included in the above table. They may be found in Table 46.

TABLE 44

OUTLAYS OF CITY OF SOUTH MILWAUKEE, WISCONSIN, 1920-1929

Year	Total	General Government	Protection of Person and Property	Conservation of Health	Highways	Others
Total	$ 664,840	$ 2,653	$ 102,201	$ 149,417	$ 255,214	$ 155,355
1920	$ 40,651	$	$ 6,474	$ 18,193	$ 148	$ 15,836
1921	65,269		6,183	32,263	6,632	20,191
1922	53,704		365	4,036	49,303	
1923	47,531	417		5,876	41,238	
1924	41,048		3,856	23,033	6,539	7,620
1925	70,896		6,080	42,526	22,290	
1926	91,801	467	671	8,544	23,179	58,940
1927	37,394	1,111		13,642	18,076	4,565
1928	60,855	473	2,807		30,965	26,610
1929	155,691	185	75,765	1,304	56,844	21,593

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

School outlays are not included in the above table. They may be found in Table 46.

TABLE 45

SCHOOL OUTLAYS and

TOTAL CITY OUTLAYS AND SCHOOL OUTLAYS, 1920-1929

	CITY OF MILWAUKEE			CITY OF WEST ALLIS		
	Total City Outlays	School Outlays	Total School and City Outlays	Total City Outlays	School Outlays	Total School and City Outlays
Total	$85,581,689	$16,552,760	$102,114,865	$2,123,565	$1,285,957	$ 3,409,522
1920	5,275,230	885,479	6,160,709	379,628	39,580	419,208
1921	7,139,506	1,071,754	8,211,260	225,582	276,231	501,813
1922	5,315,832	1,534,350	6,850,182	203,257	103,011	306,268
1923	8,153,958	1,195,410	9,349,368	238,332	96,635	334,967
1924	7,271,967	1,116,911	8,388,878	298,383	212,323	510,706
1925	6,485,784	1,736,629	8,222,413	86,146	69,754	155,900
1926	10,195,772	1,983,267	12,179,039	160,665	18,053	178,718
1927	11,529,188	2,203,267	13,732,405	147,750	215,952	363,702
1928	12,423,853	2,971,337	15,395,190	198,398	191,188	389,586
1929	11,790,599	1,834,456	13,625,055	185,424	63,230	248,654

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

TABLE 46.

SCHOOL OUTLAYS and TOTAL CITY AND SCHOOL OUTLAYS:
1920 - 1929

	CITY OF WAUWATOSA			CITY OF SOUTH MILWAUKEE		
Year	Total City Outlays	School Outlays	Total School and City Outlays	Total City Outlays	School Outlays	Total School and City Outlays
Total	$1,202,951	$1,177,753	$2,380,704	$ 644,840	$58,845	$723,685
1920	20,724	44,797	65,521	40,651		40,651
1921	48,959	86,702	135,661	65,269	39,710	104,979
1922	83,272	59,966	143,238	53,704		53,704
1923	114,101	1,050	115,151	47,531		47,531
1924	58,037	139,180	197,217	41,048	5,875	46,923
1925	98,961	153,338	252,299	70,896	6,300	77,196
1926	131,132	144,659	275,791	91,801		91,801
1927	162,467	96,812	259,279	37,394		37,394
1928	194,126	209,949	404,075	60,855	2,540	63,395
1929	291,172	241,300	532,472	155,691	4,420	160,111

Source: Records of the Accounting Department of the Wisconsin Tax Commission.

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Approved

June 10/31

Date