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VI

CONSTRUCTION EXPENDITURES OF STATE GOVERNMENTS

Financing State Construction

Public works undertaken by state governments are much less diverse than those of either cities or the Federal government. They consist largely of administrative and institutional buildings, roads, and parks. Even California, with state-wide irrigation and water supply problems, relies largely on local initiative for such public improvements.

The relative proportion in which public works are financed from current revenue and through borrowing varies from state to state: New York pays for the greater portion of its public works from current revenues, but also borrows heavily for this purpose; Michigan, on the other hand, made no use of long-term borrowing (except for refunding) between 1924 and 1933.

For several years before the World War, the states engaged in relatively little long-term borrowing, either for public works or other purposes. They began, however, in the immediate post-War period, to borrow rather largely for bonus payments and public works, although the amount was noticeably influenced by the cost of such borrowing during the entire post-War period. The relative volume of public works financed by borrowing and from current revenue throughout the country cannot be estimated, but the tabulation below shows the total net long-term borrowings of states from 1923 to 1933. These borrowings were incurred entirely

LONG-TERM BORROWINGS BY STATE GOVERNMENTS, 1923–1933 [1]

YEAR	AMOUNT (*in thousands*)	PERCENTAGE OF TOTAL 'MUNICIPAL' BORROWINGS [2]	YEAR	AMOUNT (*in thousands*)	PERCENTAGE OF TOTAL 'MUNICIPAL' BORROWINGS [2]
1923	$232,725	21.88	*1929*	$159,744	11.17
1924	249,517	17.83	*1930*	237,288	15.95
1925	161,919	11.56	*1931*	247,632	19.69
1926	130,574	9.57	*1932*	196,207	23.09
1927	131,289	8.70	*1933*	192,685	37.02
1928	162,492	11.49			

Source: State and Municipal Compendium and *Commercial and Financial Chronicle*

[1] Emergency borrowings from RFC and PWA omitted. Returns limited as a rule to civil divisions having indebtedness of $25,000 or more.
[2] Term municipal covers both states and local subdivisions, following common usage; see Ch. XI.

or primarily for construction purposes. In 1928 they were accounted for by a wide variety of public improvements; since 1929 road and bridge financing and relief issues in many states have markedly increased the volume of state bonds floated.[1]

The low interest rates prevalent in 1930 are reflected in large borrowings. Towards the middle of 1931 conditions for local borrowing became unfavorable, owing to decreased tax receipts and the gradual revelation of the irregularities and precarious position of local finances. Yet during that year and the next, when the general municipal market had almost collapsed, state borrowings continued on a large scale, constituting an increasing proportion of the total. State issues remained, on the whole, among municipal offerings, a high-grade investment. The figures for 1933 indicate even a larger proportion of state borrowing, but it is generally recognized that that year represented the low point

[1] Borrowings for bonus payments dropped steadily from $94,125,000 in 1921 to $3,850,000 in 1930. In 1930 they rose to $14,250,000, of which $13,750,000 were issued by California, and in 1932 they were $9,660,000, of which $6,350,000 were issued by California.

in both state and city credit. Straitened circumstances had developed, except for a few states such as New York (which borrowed about $56,000,000), Pennsylvania and Massachusetts, and budgetary deficits were almost universal. For the first time in many years state bonds were defaulted—in Arkansas, South Carolina and Louisiana—and several issues failed of sale. At various periods during the year, such as the spring and autumn, the decline in issues could, of course, be attributed to national financial conditions. Probably most of the borrowing for construction purposes during 1933 was from the Federal government, in the form of RFC or PWA loans. Not until the spring of 1934 did the municipal bond market as a whole begin to improve. By that time several states, notably Michigan, had had to resort to the so-called 'insurrection' clauses pertaining to borrowing[2] in order to launch issues for construction purposes, since, combined with the unfavorable conditions of sale, there was a marked disinclination on the part of taxpayers to increase state debt burdens except on the plea of a serious emergency.[3]

The types of construction activity open to state initiative and the common methods of finance can be best illustrated by a detailed account of the experience of certain selected states. For this purpose an analysis of public works during prosperity and depression in New York, Michigan and California follows.

[2] Many states have exemptions from constitutional restrictions on state indebtedness on grounds that borrowing is necessary in order to "repel invasion or suppress insurrection".

[3] See Ch. XI for detailed discussion of state financing.

New York State

PURPOSES AND VARIATION

Expenditures on construction by New York state since the World War are notable for the increasing amounts that have been allocated to buildings and park projects. Expenditures in 1932 for these purposes were over ten times those of 1919, while expenditures on roads, despite large Federal-aid grants, were only about six times as great. This was due largely to the introduction in 1923 of a program for financing building and park construction by means of successive bond issues. An issue of $50,000,000 for institutional buildings was authorized by the voters in November 1923, $100,000,000 for general improvements in 1925, and $50,000,000 for institutional buildings in November 1930. These issues, together with authorizations of $15,000,000 for state parks, $45,000,000 for bonus payments and $300,000,000 for grade crossing elimination, resulted in a hundred per cent increase between 1922 to 1931 in the debt service charges borne by the state. Highways and bridges, on the other hand, have drawn their main support increasingly from current revenues and Federal aid; there has been no highway bond issue since 1921. The reliance on current revenues for all types of construction until 1925, and for roads until the present, indicates the strong financial position of the state no less than does the successful launching of a borrowing program lasting well into the fourth year of depression.

Total expenditures on permanent improvements increased more than fourfold between 1919 and 1932. The increase in recent years, and particularly in 1930 and 1931, was still more rapid, and even in 1932 total expenditures remained well above the 1929 figure. Table 28 shows that

TABLE 28

NEW YORK STATE GOVERNMENT EXPENDITURES ON PUBLIC CONSTRUCTION, 1919–1932 [1]

(in thousands)

CLASS	*(year ending June 30)* 1919	1920	1921	1922	1923	1924	1925
Buildings, total	$3,476	$4,387	$6,107	$5,731	$4,318	$6,497	$6,351
From							
Tax receipts [2]	3,476	4,387	6,107	5,731	4,318	6,494	5,979
Bond issues	...	...	...	...	...	3	372
Highways and bridges, total	11,059	14,363	17,320	25,771	25,022	9,000	35,866
From							
Tax receipts [3]	8,945	10,385	12,203	19,085	21,083	6,341	34,524
Bond issues	2,114	3,978	5,117	6,686	3,939	2,659	1,342
Canals and waterways, total	9,777	6,595	6,448	6,625	5,955	5,770	6,075
Maintenance and repairs	2,144	2,879	3,670	3,093	3,794	4,129	3,405
Barge canal construction	7,633	3,716	2,778	3,532	2,161	1,641	2,670
Public Works Department miscellaneous outlays from general fund	79	56	68	59	25	54	1,742
Parks and reservations, etc., total	175	122	462	230	136	569	273
From							
Tax receipts	175	122	462	230	136	569	273
Bond issues	...	...	...	...	...	...	...
Holland Tunnel							
From tax receipts	2	107	299	468	4,030	5,923	4,774
Grade crossing elimination, total	68	135	99	134	56	315	70
From							
Tax receipts	68	135	99	134	56	315	70
Bond issues	...	...	...	...	...	...	...
Grand total							
a. excluding canal maintenance and repairs	22,492	22,886	27,133	35,925	35,748	3,999	51,746
b. including canal maintenance and repairs	24,636	25,765	30,803	39,018	39,542	8,128	55,151

CLASS	1926	1927	1928	1929	1930	1931	1932
Buildings, total	$9,603	$14,995	$19,325	$23,689	$33,362	$56,622	$36,328
From							
Tax receipts [2]	6,081	5,535	6,136	5,554	8,822	27,274	19,857
Bond issues	3,522	9,460	13,189	18,135	24,540	29,348	16,471
Highways and bridges, total	37,279	31,864	45,926	48,311	55,097	59,473	65,278
From							
Tax receipts [3]	36,563	31,436	45,478	47,884	54,932	59,338	65,261
Bond issues	716	428	448	427	165	135	17
Canals and waterways, total	3,997	3,696	2,470	3,071	3,468	2,599	1,707
Maintenance and repairs	3,092	3,204	2,291	2,920	3,160	2,596	1,707
Barge canal construction	905	492	179	151	308	3	...
Public Works Department miscellaneous outlays from general fund	2,515	33	707	687	1,028	1,193	373
Parks and reservations, etc., total	228	1,386	2,063	2,635	3,501	5,387	2,427
From							
Tax receipts	151	283	495	1,288	2,609	4,498	2,354
Bond issues	77	1,103	1,568	1,347	892	889	73
Holland Tunnel							
From tax receipts	3,942	3,844	1,496	435	334	32	...
Grade crossing elimination, total	302	38	385	1,452	5,450	6,239	10,869
From							
Tax receipts	302	...	...	...	...	...	...
Bond issues	...	38	385	1,452	5,450	6,239	10,869
Grand total							
a. excluding canal maintenance and repairs	54,774	52,652	70,081	77,360	99,080	128,949	115,275
b. including canal maintenance and repairs	57,866	55,856	72,372	80,280	102,240	131,545	116,982

Source: New York State, Comptroller's *Annual Reports*

[1] All figures omit expenditures for land.
[2] Including prisons, hospitals, educational buildings, offices, etc.
[3] Including Federal aid to state and state aid to counties and towns.

public works expenditures of the state government in 1930 were no less than 25 per cent higher than in 1929, while in 1931 they had increased by 30 per cent over the preceding year, and in 1932 dropped relatively little.

Expenditures for public works in 1931 from current revenues reached $93,955,000, and those from Special Funds, $37,590,000. On June 30, 1930, the cash balance of the General Fund was announced to be at an unprecedented high level, owing to unexpected increases in inheritance, corporation and stock transfer taxes during the fiscal year 1929–30. This prosperous condition of the state's revenues made possible an expansion of public works activity in 1930–31, which was especially notable in the institutional building program. In addition, the 1930 legislature had appropriated from authorized bond issues $10,000,000 for permanent improvements, and $30,000,000 for grade crossing elimination, as well as $18,800,000 for state hospitals. The effect of these appropriations was to increase sharply the payments for these projects in the following year.

At the end of the fiscal year 1931, however, the cash balance of the state had dropped almost 60 per cent below that of 1930; consequently, prompt retrenchment of construction expenditures from current revenues is noted in 1932. When the 1931–32 budget was prepared, many economies were effected, among which was a cut in the state's construction bill. Expenditures on construction and maintenance of buildings and parks show a sharp drop. New construction on highways and maintenance of state and county highways also declined sharply, but total highway expenditures for the state were higher in 1932 than in any preceding year. This was in part due to increased Federal aid, which rose from $5,185,389 in 1931 to $12,666,710 in 1932. It was attributable also in part to additional assistance to town and county highways after 1930, when the financial condition of the localities became such that the laws relative to state contributions to local work had to be liberalized. In view of these two factors, increased Federal assistance and additional payments to localities, it must be concluded that in 1932 little effort

could be made to increase expenditures on the state or local projects from regular funds, since the proportions in which contributions were made by the Federal and state governments merely took up the slack in the case of state and local expenditures respectively. The localities turned to the state, and the state to the Federal government, to continue the programs. Grade crossing elimination work, on the other hand, steadily increased, payments in 1932 being twice as large as in 1930.

APPROPRIATIONS FOR PUBLIC WORKS

Unfortunately comprehensive statistics of contracts awarded, such as are used below in discussing city construction activities to indicate the volume of new public works initiated during a given period, in contrast to work executed, are not available for state governments.

A serviceable substitute may be found in figures of appropriations for permanent improvements (see Table 29), which indicate prospective expenditures and thus are likely to reflect deliberate attempts to accelerate public construction. Attempts of this sort during the depression could make their effects felt only in the figures for the fiscal years after 1929–30, since appropriations for all earlier years were made prior to the recession. It can be seen that amounts appropriated for permanent improvements out of current revenue constituted a fairly constant percentage of total appropriations from 1920 to 1929, while construction appropriations from bond funds have fluctuated somewhat violently from year to year. For 1929–30 appropriations for public works financed out of current revenue not only increased greatly in absolute amount but also constituted a much higher percentage of total tax budget appropriations than ever before. For the fiscal year 1930–31 this record percentage was slightly surpassed, while appropriations for public works out of bond funds were simultaneously very greatly enlarged. Indications

TABLE 29

NEW YORK STATE GOVERNMENT
TOTAL APPROPRIATIONS FOR PERMANENT IMPROVEMENTS
1919–1933 [1]
(in thousands)

FISCAL YEAR	TOTAL APPROPRIATIONS FROM CURRENT REVENUE[2]	APPROPRIATIONS FOR PERMANENT IMPROVEMENTS FROM CURRENT REVENUE[2]		TOTAL DEBT SERVICE		APPROPRIATIONS FOR PERMANENT IMPROVEMENTS FROM BOND FUNDS
		AMOUNT	PERCENTAGE OF COL. 2	AMOUNT	PERCENTAGE OF COL. 2	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1919	$81,525	$3,164	3.9	$13,330	16.3	. . .
1920	95,841	11,049	11.5	13,592	14.2	$11,800
1921	144,920	18,481	12.8	15,585	10.8	12,500
1922	137,833	17,783	12.9	11,477	8.3	. . .
1923	143,160	19,695	13.8	12,182	8.5	2,500
1924	156,394	25,446	16.3	11,536	7.4	. . .
1925	154,871	18,975	12.3	15,154	9.8	12,500
1926	169,720	20,859	12.3	15,762	9.3	12,500
1927	185,897	19,906	10.7	14,900	8.0	107,500
1928	215,705	24,392	11.3	17,728	8.2	22,500
1929	232,644	29,421	12.6	18,849	8.1	50,000
1930	264,834	48,151	18.2	18,559	7.0	12,500
1931	315,921	63,855	20.2	24,178	7.7	81,000
1932	308,141	54,271	17.6	23,574	7.7	30,000
1933	271,392	16,447	6.1	24,356	9.0	30,000

Source: New York State, Legislative Documents, 1926, No. 70, *The Debt of the State of New York,* p. 79, for years up to 1925. Figures for 1926–33 calculated directly from Comptroller's *Annual Reports.*

[1] Including appropriations for the acquisition of land.
[2] Excluding appropriations for Federal government's share of rural post roads, but including state aid for county highway construction.

of an effort to expand public construction would here appear to be undoubtedly present. For 1932 and 1933, however, appropriations from both sources dropped sharply. At the same time, the percentage that debt service constituted of total appropriations from current revenue rose somewhat. In January 1932 the Governor's message indicated a growing sentiment in favor of cutting public works together with other expenditures. The 1932 appropriation for the Public Works Department was reduced to $37,000,000, as compared

with $63,000,000 in 1931. This Department, and particularly the Highways Division, bore the brunt of the drives for tax reduction, since its work was largely financed from current revenues. The Governor's 1934 message again advised retrenchment, and assigned only $12,949,350 to be expended from bond issues (including direct relief), as compared with $31,400,000 for 1933–34. It is evident that by the end of the calendar year 1933 the state had decided that borrowing for an accelerated construction program would have to be replaced in large measure by Federal funds under the national recovery program.

MEASURES TO EXPEDITE PUBLIC WORKS DURING THE DEPRESSION

Despite the conflicting character, with respect to the deliberate acceleration of public works, of the evidence drawn from the figures presented above, the government of New York state did in various ways exert serious efforts to expand, and still more to hasten, its public works program during the early part of the depression with the object of increasing employment.

In November 1930 the State Architect supported with figures his claim that in the rapidity with which construction had been planned and contracted for during the year the state was doing everything within its power to provide work for the unemployed. Six months later, in May 1931, the Lieutenant Governor asserted that the state had "helped the situation so far as lay in its power by embarking in and carrying on the largest construction program of necessary and important undertakings in its history".

These statements find confirmation in the increased expenditures in the face of declining revenues in the fiscal year 1930–31, although only with the onset of the second winter of unemployment were the measures described below taken.

In November 1930 Acting Governor Lehman announced plans to make it possible to start state construction work in anticipation of the appropriations that the Legislature would subsequently make for this purpose, and to make appropriations available in January instead of in March. Agreement was reached with legislative leaders which ensured their cooperation. Furthermore, the State Architect was authorized to begin immediately to draw up plans and specifications and to prepare contracts for bids, and, in anticipation of an initial appropriation by the Legislature, was directed to increase his force of draftsmen. Thus it was hoped that the lengthy preliminary labor of planning would be completed so that construction could actually be started in the early spring, probably two or three months earlier than would have been possible otherwise. On January 12, 1931, in advance of action on the annual executive budget, building and highway appropriations of sums aggregating more than $48,000,000 for public works, largely to relieve unemployment, were requested by the Governor in a special message to the Legislature. These bills were passed within ten days by both houses. In 1931 a five-day working week was established on all local and state public works contracts, in an effort to spread employment in the face of the necessary budgetary restrictions foreseen for the future.

HIGHWAY CONSTRUCTION AND EMPLOYMENT

As a result of lifting highway appropriations from the Executive budget as described above and passing them as soon as possible, the Division of Highways was able in 1931 to advertise its highway work much earlier than usual. At the same time counties were requested to secure rights of way for new construction as speedily as possible, so that there might be no delay in initiating the 1931 program. Thanks to these efforts, a record volume of highway work was in progress in the early spring. By the middle of April highway contracts to an estimated total cost of $27,400,000 had been advertised, whereas a year previous contracts advertised by the same date had amounted to only $4,800,000. This acceleration of highway construction had been

made possible by the action of the State Highway Division in proceeding in 1930 with plans for the largest highway building program in the history of the state, though funds to carry it out had not then been assured.

Table 30 shows annual expenditures for highway construction by the New York state government for fiscal years

TABLE 30

NEW YORK STATE GOVERNMENT
EXPENDITURES FOR HIGHWAY CONSTRUCTION, 1918–1932 [1]
(in thousands)

FISCAL YEAR ENDING JUNE 30	TOTAL EXPENDITURES (COLS. 3 AND 4)	EXPENDITURES FROM BONDS FOR STATE HIGHWAYS	TOTAL EXPENDITURES FROM GENERAL REVENUES (COLS. 5 AND 6)	EXPENDITURES FROM REVENUES FOR STATE HIGHWAYS	STATE AID TO COUNTIES FROM GENERAL REVENUES	PERCENTAGE OF TOTAL HIGHWAY EXPENDITURES PROVIDED FROM GENERAL REVENUES [2]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1918	$3,784	$3,758	$26	$26	. . .	0.7
1919	2,267	2,114	153	153	. . .	6.7
1920	5,710	3,978	1,732	1,732	. . .	30.3
1921	10,500	5,132	5,368	3,917	$1,451	51.1
1922	15,318	6,710	8,608	5,903	2,705	56.2
1923	11,192	3,939	7,253	4,953	2,300	64.8
1924	10,563	2,659	7,904	5,509	2,395	74.8
1925	12,590	1,343	11,247	8,862	2,385	89.3
1926	12,389	716	11,673	9,298	2,375	94.2
1927	14,342	428	13,914	11,534	2,380	97.0
1928	18,976	448	18,528	16,152	2,376	97.6
1929	20,815	427	20,388	17,995	2,393	97.9
1930	24,813	165	24,648	22,544	2,104	99.3
1931	25,213	135	25,078	22,972	2,106	99.5
1932	32,341	17	32,324	30,336	1,988	99.9

Source: New York State, Legislative Documents 1926, No. 70, *The Debt of the State of New York,* pp. 70–1, for years through 1925; years 1926–30 calculated directly from Comptroller's *Annual Reports.*

[1] These figures are for new construction only. They do not include expenditures for maintenance, repairs or administration; or for state aid to towns for repairs, or Federal aid to the state for rural post roads. The composition of these figures up to 1925 is not exactly the same as that of figures in Table 28. The difference, however, is on the whole so slight as to be negligible.

[2] The percentage represented by expenditures for state highways alone (col. 5) was 37.3 in 1921; 38.5 in 1922; 44.5 in 1923; 52.2 in 1924; 70.4 in 1925; 75.1 in 1926; 80.4 in 1927; 85.1 in 1928; 86.5 in 1929; 90.9 in 1930; 91.1 in 1931; and 93.8 in 1932.

ending June 30, 1918 to 1932, and indicates the relative amounts derived from current revenue and from borrowing. Since the War there has been a striking shift; current revenues have contributed an increasingly important share of total roadbuilding expenditures until, during the last few years, they have furnished practically all the state funds needed. The attempts to expedite highway construction described above made their effects felt after the spring of 1931 and are reflected in the continuing increase in expenditures in 1931 and 1932. Roadbuilding in 1931 was especially stimulated by excellent weather conditions. In 1932 the mileage was about twice the average of normal times, indicating the effect of emergency activity and lower bid prices on the part of contractors.

The record of employment in the construction and maintenance of state highways, given in Table 31, clearly indicates that the number of men engaged on this work increased markedly in 1931. During 1932 and 1933, however, the volume of highway employment dropped back to levels com-

TABLE 31

NEW YORK STATE
COURSE OF EMPLOYMENT ON STATE HIGHWAYS
1924–1933 [1]

YEAR	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER
1924	8,821	11,956	12,924	13,172	12,421	11,170	8,964
1925	11,677	13,103	13,259	13,570	12,420	9,687	6,218
1926	10,402	12,427	13,776	13,747	13,590	11,266	8,247
1927	12,168	15,016	15,965	16,167	14,667	12,674	9,301
1928	12,543	13,865	15,366	16,881	15,428	12,692	8,950
1929	12,715	14,556	15,330	16,159	14,621	12,539	8,545
1930	12,609	13,983	15,289	15,306	15,048	12,332	8,594
1931	15,809	19,580	20,111	20,127	17,970	14,975	10,910
1932	10,631	11,738	12,323	14,187	15,387	15,001	9,837
1933	10,742	13,235	12,235	11,130	11,983	12,452	8,065

Source: New York State, Department of Public Works, Division of Highways

[1] Figures are for last week of month indicated. No data ordinarily available December through April. Figures are of total number of men employed, both by contractors and in state maintenance force.

parable with that of 1926, new construction showing an especially sharp decline owing to bankruptcy among contractors.

FINANCING PUBLIC WORKS

Unlike New York City, which pays for its public works almost entirely by means of long-term obligations, New York state finances its permanent improvements both from the General Fund, that is from tax receipts, and from Special Funds, which are mainly replenished by bond sales. Table 32 shows that recourse to these two sources has shifted con-

TABLE 32

NEW YORK STATE GOVERNMENT
TOTAL EXPENDITURES ON PERMANENT IMPROVEMENTS, 1919–1932 [1]
(in thousands)

	TOTAL EXPENDITURES FROM THE GENERAL FUND[2]	EXPENDITURES FOR PERMANENT IMPROVEMENTS FINANCED FROM					TOTAL DEBT SERVICE	PERCENTAGE OF TOTAL EXPENDITURES (COL. 2)
		CURRENT REVENUE		BORROWING				
FISCAL YEAR		AMOUNT	PERCENTAGE OF COL. 2	AMOUNT	PERCENTAGE OF COL. 7	TOTAL	AMOUNT	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1919	$78,341	$3,865	4.9	$13,212	77.4	$17,077	$13,330	17.0
1920	93,924	7,717	8.2	8,732	53.1	16,449	13,592	14.5
1921	134,608	16,196	11.9	8,671	34.9	24,866	15,585	11.5
1922	126,669	19,450	15.4	8,488	30.4	27,939	10,441	8.2
1923	131,869	18,036	13.7	5,549	23.5	23,585	12,079	9.2
1924	146,457	23,066	15.8	4,396	16.0	27,462	11,679	8.0
1925	161,587	27,663	17.1	2,422	8.1	30,084	15,150	9.4
1926	173,192	23,312	13.5	6,144	20.9	29,456	15,759	9.1
1927	184,184	24,130	13.1	14,310	37.2	38,440	15,243	8.3
1928	212,626	26,915	12.7	18,302	40.5	45,217	17,379	8.2
1929	227,123	27,690	12.2	23,116	45.5	50,806	18,777	8.3
1930	256,398	37,345	14.6	32,733	46.7	70,078	19,486	7.6
1931	305,485	61,603	20.2	23,975	28.0	85,578	21,168	6.9
1932	320,079	58,415	18.2	28,659	32.9	87,074	23,754	7.4

Source: New York State, Legislative Documents, 1926, No. 70, *The Debt of the State of New York*, p. 80, for years up to 1925; figures for 1926–32 calculated directly from Comptroller's *Annual Reports*

[1] Expenditures on the acquisition of land have been included throughout. The figures for total expenditures on permanent improvements in this table do not agree with the

siderably since the War. After 1925 a larger percentage of public works each year was financed from bonds. In 1931 and 1932, however, the percentage declined, and the improvements financed from current revenue reached their highest point, both absolutely and relatively. The sources of expenditures for highway construction since the War have been shown above. The financing of buildings, canals, parks and forest preserves is shown in Table 33.

Long-term obligations contracted by the state government

TABLE 33

NEW YORK STATE GOVERNMENT
PERCENTAGE OF TOTAL CONSTRUCTION EXPENDITURES FOR BUILDINGS, CANALS, PARKS AND FOREST PRESERVES, DERIVED FROM CURRENT REVENUE, 1919–1932 [1]

YEAR	BUILDINGS	CANALS [2]	PARKS AND FOREST PRESERVES
1919	100.0	3.6	3.1
1920	100.0	25.7	0.5
1921	100.0	65.3	23.6
1922	100.0	88.2	9.8
1923	100.0	84.6	8.9
1924	99.95	96.6	28.4
1925	92.3	98.9	68.0
1926	63.3	100.0	35.8
1927	36.9	100.0	10.7
1928	31.8	100.0	13.0
1929	23.4	100.0	32.0
1930	26.4	100.0	66.4
1931	48.2	100.0	83.6
1932	54.6	100.0	79.9

Source: New York State, Legislative Documents, 1926, No. 70, *The Debt of New York State,* through 1925. Figures for 1926–32 calculated directly from Comptroller's *Annual Reports.*

[1] Expenditures for the acquisition of land included.
[2] Figures are for canal construction alone and do not include cost of administration, operation, maintenance or repairs.

totals in the detailed tables for expenditures on public construction. The figures here are for new construction alone, and do not include expenditures for maintenance, repairs or reconstruction; or for operation or administration; or state aid to localities and Federal aid to state. The composition of these figures, however, is consistent throughout the table, thus making the relative percentage amounts financed by tax receipts and borrowing from year to year strictly comparable.
[2] Figures in this column are for total expenditures of all kinds except capital expenditures financed from borrowing.

are subject to no constitutional debt limitations, but each long-term debt must be authorized by law for a specified purpose, and the law does not become effective until it has been submitted to and approved by the voters at a general election. An alternative and in recent times more usual method of procedure, however, is the authorization of new debts by means of constitutional amendment.[4] It was in this manner that the bond funds created by the state in November 1925 for general state improvements and for grade crossing elimination were authorized. Short-term debts may, however, be contracted whenever deemed advisable by the Comptroller in anticipation of the receipt of taxes for the purpose and within budget appropriations.

Table 34 shows the total annual volume of long- and short-term borrowing respectively by the state government for permanent improvements, 1919–33. Table 35 describes in

TABLE 34

NEW YORK STATE GOVERNMENT
BORROWINGS FOR PERMANENT IMPROVEMENTS, 1919–1933
(in thousands)

YEAR	LONG-TERM BONDS	TEMPORARY LOANS	TOTAL
1919	. . .	$600	$600
1920	. . .	2,200	2,200
1921	$31,800	6,500	38,300
1922	. . .	. . .	. . .
1923	. . .	. . .	. . .
1924	. . .	25	25
1925	12,500	35	12,535
1926	. . .	1,305	1,305
1927	28,475	833	29,308
1928	22,500	3,450	25,950
1929	. . .	4,600	4,600
1930	31,550	35,995	67,545
1931	34,975	27,290	62,265
1932	40,000	190,900	230,900
1933	55,595	170,000	225,595

Source: New York State, Comptroller's *Annual Reports,* and *Commercial and Financial Chronicle,* 1933

[4] Constitution of New York State, Art. VII, sections 14 and 15, and Art. XIV.

TABLE 35

NEW YORK STATE GOVERNMENT
LONG-TERM BONDS ISSUED, WITH INTEREST RATES AND BASIC YIELDS, 1921–1934

DATE AND PURPOSE	INTEREST RATE (*per cent*)	TERM OF YEARS	AMOUNT (*in thousands*)	PRICE	BASIS (*per cent*)
June 9, 1921					
Public improvements	5	25¼, 26 1/6 av.	$31,800	$101.212	4.89
April 8, 1924					
Soldiers' bonus	4½	1–25 Ser.	45,000	101.4657	4.09
September 24, 1924					
Public improvements	4	1–25 Ser.	12,500	103.41	3.65
September 1, 1926					
Public improvements	4	1–25, 1–50 Ser.	28,475	101.9289	3.85
March 6, 1928					
Public improvements	3½, 3¾, 4	1–25, 1–50 Ser.	22,500	100.0799	3.6921
April 15, 1930					
Public improvements	4	1–25 Ser.	31,550	102.077	3.79
April 7, 1931					
Public improvements and emergency construction	3¼, 3½	1–25, 1–50 Ser.	34,975	100.082	3.4645
September 15, 1931					
Public improvements and emergency construction	3, 4	1–25, 1–50 Ser.	40,000	100.111	3.2289
December 14, 1932					
Unemployment relief and public improvements	3, 3¼	1–7, 1–25, 1–50 Ser.	30,400	100.2199	3.0273
June 28, 1933					
Unemployment relief and public improvements	2¾, 3	1–7, 1–25, 1–50 Ser.	26,595	100.143	2.936
October 24, 1933					
Public improvements and emergency construction	3¼, 3½, 3¾	1–25, 1–50 Ser.	29,500	100.109	3.437
April 3, 1934					
Unemployment relief and public improvements	2¾, 3	1–10, 1–25, 1–50 Ser.	50,000	100.1699	2.887

Source: New York State, *Comptroller's Reports*, and *Commercial and Financial Chronicle*

detail the purposes for which the long-term issues were made, their dates and amount, and the terms of borrowing.

The large volume of bonds floated by New York state in 1930 is in marked contrast to the absence of issues during the latter part of 1928 and throughout 1929, when borrowing rates were high. Until the capital market eased with the collapse of the Stock Exchange, New York state, like many other local governments, postponed its long-term borrowing. It is noteworthy, however, that the sale effected on April 15, 1930 was on a less favorable basis than the sale made two years previous in March 1928. But a year later, in April 1931, state bonds totaling $34,975,000 were sold on a bid equivalent to a basis of approximately 3.47 per cent, the lowest rate at which the state had ever done any long-term financing. The cost of borrowing continued to decline until October 1933, owing to the extremely favorable conditions that prevailed for high-grade municipal issues such as those of New York state. A somewhat higher rate was established for the issues of October 1933, owing to the unsettled monetary policy of the Federal government at that time, but in the spring of 1934, $50,000,000 of bonds were sold at the lowest rate in the history of the state. As will be observed from Tables 34 and 35, the state took full advantage of its excellent credit rating and has borrowed in increasing amounts since 1930. With the exception of the unemployment relief issues, which amounted to a total of nearly $60,000,000 from December 1932 to April 1934, this accelerated borrowing was undertaken very largely for construction purposes.

Thus throughout the early part of the depression, New York state was not seriously hampered in its efforts to expand the volume of its public construction by a shortage of borrowed funds. The difficulties encountered arose from the impossibility of expanding construction programs at short notice in the absence of adequate preparations made

in advance with this end in view. The difficulty encountered at a later stage, on the other hand, was in making large tax budget appropriations in the face of declining revenues. The fact that for a period in the interval the state government did succeed in increasing the volume of its construction activities suggests how much more could have been accomplished with the aid of careful advance planning and flexible legal and financial preparation for such emergencies, and shows the insuperable obstacles likely to arise in their absence.

MICHIGAN

RELATIVE IMPORTANCE OF PUBLIC CONSTRUCTION EXPENDITURES OF MICHIGAN AND NEW YORK

Total annual expenditures for all governmental purposes by Michigan ranged between 32 and 48 per cent of the corresponding annual disbursements of New York during 1925–32 (Table 36). Of these respective totals, however, Michigan spent a relatively larger proportion for public construction purposes than did New York, expenditures varying from 36 to 55 per cent of the corresponding public works expenditures of New York during this eight-year period, the lowest relative amount, 36 per cent, being spent in 1931. This proportionately larger outlay for public construction in Michigan assumes added significance when the percentage ratio of expenditures on public construction to total expenditures in each state is contrasted, for Michigan has been spending in recent years around 35 per cent of its total disbursements for public works purposes while New York reached 30 per cent only in 1926, and exceeded it only in 1931. However, while the actual amounts spent for public construction in Michigan have risen steadily since 1926, the percentage ratio of these expenditures to total disbursements shows no corre-

TABLE 36

MICHIGAN AND NEW YORK STATE GOVERNMENTS
TOTAL DISBURSEMENTS AND PUBLIC WORKS EXPENDITURES, 1925–1932
(in thousands)

YEAR ENDING JUNE 30	TOTAL RECEIPTS FROM ALL SOURCES		TOTAL DISBURSEMENTS FOR ALL PURPOSES		EXPENDITURES ON PUBLIC CONSTRUCTION [1]		PERCENTAGE EXPENDITURES ON PUBLIC CONSTRUCTION ARE OF TOTAL DISBURSEMENTS	
	MICHIGAN	NEW YORK	MICHIGAN	NEW YORK	MICHIGAN	NEW YORK	MICHIGAN	NEW YORK
1925	$90,068	$233,741	$96,267	$231,484	$30,186	$55,151	31.4	23.8
1926	94,519	188,179	92,197	192,093	23,215	57,866	25.2	30.1
1927	94,294	241,816	97,533	218,967	26,070	55,856	26.7	25.6
1928	115,341	272,270	106,257	263,125	27,347	72,372	25.7	27.6
1929	117,527	278,757	121,528	275,820	44,445	80,280	36.6	29.1
1930	132,363	375,818	124,726	358,762	44,379	102,240	35.6	28.5
1931	131,150	360,257	135,307	379,022	47,205	131,545	34.8	34.7
1932	131,671	396,135	130,349	398,121	44,320	116,982	34.8	29.3

Source: Michigan State, Auditor General's *Annual Reports;* New York State, Comptroller's *Annual Reports*

[1] Exclusive of expenditures for acquisition of land.

TABLE 37

MICHIGAN STATE GOVERNMENT
EXPENDITURES ON PUBLIC CONSTRUCTION, 1925–1932 [1]
(in thousands)

CLASS	*(year ending June 30)* 1925	1926	1927	1928	1929	1930	1931	1932
New buildings [2] and improvements	$3,359	$3,514	$4,029	$2,111	$2,424	$3,437	$5,576	$2,384
Building repairs and materials	110	185	192	163	156	501	422	259
Total for buildings	3,469	3,699	4,221	2,274	2,580	3,938	5,998	2,643
Parks, forests, etc.	153	107	152	275	276	114	102	88
Highways and bridges								
Maintenance	4,122	5,733	8,438	9,053	11,001	9,377	8,639	8,963
Construction	22,442	13,676	13,259	15,745	30,588	30,950	32,466	32,626
Total	26,564	19,409	21,697	24,798	41,589	40,327	41,105	41,589
Grand total								
(excluding highway maintenance)	26,064	17,482	17,632	18,294	33,444	35,002	38,566	35,357
(including highway maintenance)	30,186	23,215	26,070	27,347	44,445	44,379	47,205	44,320
Total disbursements by state government—all purposes	$96,267	$92,197	$97,533	$106,257	$121,528	$124,726	$135,307	$130,349
Percentage public works expenditures are of total disbursements	31.4	25.2	26.7	25.7	36.6	35.6	34.8	34.8

Source: Michigan State, Auditor General's *Annual Reports*

[1] All figures exclude expenditures for acquisition of land and rights-of-way which cost (in thousands): $1,528, 1925; $1,041, 1926; $1,158, 1927; $3,754, 1928; $4,014, 1929; $2,480, 1930; $2,831, 1931; $3,542, 1932.

[2] Hospitals, schools, prisons, reformatories, charitable institutions, office buildings, park structures, etc.

spondingly steady increase from year to year, and a rather marked drop occurred in 1931 and 1932.

Of the total spent for public construction purposes during each of the last four years (Table 37), about 90 per cent was for highways and bridges, including both construction and maintenance. The great importance of the highway work in Michigan renders all other public construction projects in comparison of only minor significance.

RECENT TREND—CONSTRUCTION EXPENDITURES AND REVENUES

On the whole, construction expenditures have been increasing during the last six years. 'New buildings and Improvements' rose steadily from 1925 to 1927, when they were at the highest point in the pre-depression period, but during 1928 dropped practically one-half. With the larger outlays made for this purpose in 1930 and 1931, the four million dollar level of 1927 was exceeded; in 1932 another drop occurred, this time of over one-half.

Highway and bridge expenditures mounted rapidly in 1927, 1928 and 1929. In 1930, however, they declined again. The explanation of their contraction is not, however, found in the expenditures for construction but in those for maintenance. In 1931 and 1932 increases are again shown for construction, bringing the total back to the 1929 level. This was made possible largely by emergency Federal-aid grants and the stability of gasoline tax revenue.

Michigan's most important sources of revenue for highway purposes are the gasoline tax and the motor vehicle license funds, the former contributing practically 50 per cent and the latter about 40 per cent of total receipts. The increasing dependence upon tax revenue for highway purposes is strikingly illustrated in Table 38. The increase in receipts from this source from about $10,000,000 in 1925 to

TABLE 38

MICHIGAN STATE GOVERNMENT
RECEIPTS FOR HIGHWAY PURPOSES, 1925–1932
(in thousands)

	(year ending June 30)							
	1925	*1926*	*1927*	*1928*	*1929*	*1930*	*1931*	*1932*
Highway maintenance fund [1]	$20	$43	$28	$31	$22	$30	$26	$26
Highway construction fund, total	18,271	6,382	4,132	3,606	3,984	3,624	4,226	7,571
Federal aid	3,608	2,800	2,692	2,356	3,068	2,303	3,167	6,564[9]
Receipts from counties [2]	4,409	2,954	895	731	569	847	415	612
Other receipts [3]	10,254[4]	628	545	519	347	474	644	395
Revolving funds, total	1,358	1,755	2,312	2,005	2,454	2,313	2,034	1,065
Assessment district roads	112	64	76	73	102	123	172	134
Automotive repair and supply depot [5]	525	432	375	313	340	327	340	273
Cement industry [6]	598	1,073	1,650	1,331	1,291	1,430	952	78
Grand trunk right of way	. . .	. . .	. . .	. . .	377	45	146	187
Mackinac ferry [7]	123	186	211	288	344	388	424	393
Gasoline tax fund [8]	1,703	10,466	10,444	18,551	19,710	24,295	23,301	25,110
Motor vehicle license fund [8]	8,623	10,251	10,545	12,519	22,015	21,016	20,348	18,198
Grand total	$29,975	$28,897	$27,461	$36,712	$48,185	$51,278	$49,909	$51,944

Source: Michigan State, Auditor General's *Annual Reports*

[1] Comprising refunds, reimbursements, rentals, sale of materials and supplies, etc.

[2] For trunk line and Federal maintenance, and bridges.

[3] Refunds, reimbursements, rentals, sale of materials and supplies, services, etc.

[4] Of this sum $9,950,000 were derived from the sale of bonds.

[5] Mainly from sale of automotive supplies.

[6] Almost entirely from sale of cement and other materials.

[7] Receipts from transportation on steamers.

[8] Amounts transferred to various highway funds.

[9] Includes $2,352,000 received of a $2,500,000 loan, under Federal aid to trunk line roads provided by Emergency Relief and Construction Act of 1932.

$45,000,000 in 1930 was steady from year to year, even in 1929–30.

Next in importance is the revenue accruing to the highway construction, maintenance and administration funds from Federal aid. The administration fund received over $5,000,000 during the two years 1928–29 and 1929–30, and in 1931 and 1932, $2,521,382 and $3,779,706 of additional emergency appropriations. About $2,500,000 of the latter sum were scheduled for expenditure in 1933. This amount will be increased by the share of PWA road funds allotted to Michigan.

Receipts from counties have noticeably declined during recent years as a result of the growing burden of county indebtedness. 'Other receipts' in Table 38 is an item which has steadily declined since 1926. The outstanding drop from $10,254,000 in 1925 to only $628,000 in 1926 marks the cessation of the financing of highway construction by long-term bonds. In Table 39 the long-term bonds issued since 1920–21 are listed in detail; in Table 40 they are summarized by purpose. Both tables show clearly the cessation of all bond financing for public works purposes since 1925.

A legislative measure that altered materially the financing of road construction was the Township Road Tax Relief Act, which became effective April 1, 1932. Under this act, the county road commissions were required to take over for maintenance and improvement one-fifth of the township road mileage in their counties during 1932, and another fifth the following year. The counties were financed in this instance by the state, $2,000,000 being allotted in 1932 and $2,500,000 in 1933 from the gasoline tax. In addition, the counties were to receive the entire proceeds of the motor vehicle tax in 1933, instead of one-half, as formerly. This large increase in funds was expected to make new construction possible where counties were not already carrying a heavy bond indebtedness for road construction. Not only has this act markedly relieved the tax burden for roads in small towns, but

TABLE 39

MICHIGAN STATE GOVERNMENT
LONG-TERM BONDS ISSUED, BY PURPOSE, 1921–1932

DATE	PURPOSE	AMOUNT (*in thousands*)	INTEREST RATE (*per cent*)	TERM OF YEARS	PRICE	BASIS (*per cent*)
Aug. 1, 1920	HI	$500	5	5	par	....
Oct. 1, 1920	HI	500	5	5	....	....
Dec. 1, 1920	HI	1,000	5	20	$101.076	4.91
Feb. 1, 1921	HI	50	5	20	....	....
June 1, 1921	HI	3,000	5½	20	100.71	5.44
July 15, 1921	SB	15,000	5¾	20	100.46	5.71
Sept. 15, 1921	HI	3,000	5½	20	102.502	5.29
Oct. 15, 1921	SB	10,000	5½	20	103.03	5.25
Nov. 15, 1921	HI	4,000	5	20	101.269	4.90
July 1, 1922	SB[1] & HI[2]	13,000	4, 4½	10 20	100.329	4.27
Oct. 1, 1922	HI	3,000	4, 4¼	20 15	100.012	4.07
Apr. 15, 1923	HI	2,000	4¼	20	101.69	4.125
Aug. 1, 1923	HI	2,000	4½	20	101.17	4.41
Nov. 1, 1923	SF	1,000	6	11½ 19½	....	....
Dec. 1, 1923	HI	3,000	4, 4½	20	par	....
Feb. 15, 1924	HI	3,000	4, 4½	20	par	....
May 15, 1924	HI	2,000	4¼, 4½	20	100.005	4.36
Aug. 1, 1924	HI	3,000	4, 4¼	20	100.001	4.1059
Sept. 15, 1924	HI	3,000	4, 4¼	20	100.007	4.09
Nov. 15, 1924	HI	1,950	4, 4¼	20	100.007	4.15
May 1, 1925	HI[3]	3,000	4	15	100.009	4.05
June 30, 1925	HI[4]	419	4	15	100.21	3.98
Aug. 1, 1925	HI[5]	500	4	15	100.21	3.98
Oct. 1, 1925	HI[6]	500	4	15	100.21	3.98
Nov. 1, 1927	WLF[7]	2,250	4	10	....	....
1928–1932		....	..	..	....	....

Source: Michigan State, Auditor General's Annual Reports

HI: Highway Improvement; SB: Soldiers' Bonus; SF: State Fair; WLF: War Loan Fund.

[1] This bond issue authorized to take up note issue of $5,000,000 of July 15, 1921.
[2] This bond issue authorized in part to take up note issue of $3,000,000 of July 15, 1921.
[3] These issues refunded bonds of $3,000,000 due May 1, 1925.
[4] This issue refunded bonds to that amount due June 30, 1925.
[5] This issue refunded the bonds to that amount issued August 1, 1920 (see above).
[6] This issue refunded the bonds to that amount issued October 1, 1920 (see above).
[7] This issue refunded bonds issued on November 1, 1917, to the amount of $3,500,000.

TABLE 40

MICHIGAN STATE GOVERNMENT
LONG-TERM BONDS ISSUED, 1921–1928
(in thousands)

YEAR [1]	PUBLIC WORKS [2]	OTHER PURPOSES	REFUNDING	TOTAL	TOTAL EXCLUDING REFUNDING
1921	$5,050	. . .	. . .	$5,050	$5,050
1922	7,000	$25,000	. . .	32,000	32,000
1923	13,000	5,000	. . .	18,000	18,000
1924	10,000	1,000	. . .	11,000	11,000
1925	9,950	. . .	$3,419	13,369	9,950
1926	. . .	. . .	1,000	1,000	. . .
1927	. . .	. . .	. . .	. . .	. . .
1928	. . .	. . .	2,250[3]	2,250	. . .

Source: Michigan State, Auditor General's *Annual Reports*

[1] Year ending June 30. No issues in 1929–32.
[2] All these issues were for highway improvements.
[3] War Loan Fund refunding issue.

also the quality and efficiency of roadbuilding has been improved under county supervision, owing to the use of a larger trained personnel and better machinery.

In 1933, however, the financial affairs of the state were in a serious condition. The main source of revenue, the property tax, had dropped nearly 60 per cent from the level of normal times, mainly between 1931 and 1933, largely as a result of tax delinquencies. To meet general expenses, it was necessary to borrow from the highway fund, which defaulted on its payments to localities, although such grants-in-aid for relief to localities as had to be made went in part for highway purposes.

On the whole, the increasing participation of the state and counties in roadbuilding in Michigan indicates a centralization of planning which was inevitable as the road- and bridgebuilding program developed and the burden of financing fell more and more heavily on the larger administrative units. The need of more orderly procedure and advance planning of all construction activities in the state has received

increasing recognition. A 'Five-Year Program' was proposed in the 1930 *Biennial Report,* comprising the state's two most important undertakings, roads and bridges.

Estimated expenditures for 1930–35 amounted to $133,575,000. Averaging this total cost on an annual basis, the state contemplated in 1930 spending $24,318,000 for roads and $2,397,000 for bridges and grade separations, or a total of $26,715,000 during each of the succeeding five years. This average was about $5,000,000 below the actual expenditure for highway and bridge construction during 1931 and 1932, and was about $6,000,000 in excess of the actual annual average expenditure for the five-year period 1925–30. The new organization for making plans and surveys was found very useful in stimulating employment on roads for relief purposes.

ROADBUILDING AND THE RELIEF OF UNEMPLOYMENT

In the autumn of 1931, unemployment became serious in the state, in both urban and rural districts. The Highway Commission, with the cooperation of the Governor and the State Administration Board, inaugurated a special program of roadbuilding work for relief purposes, securing at least 75 per cent of the labor from the county unemployment committees.

Projects costing about $12,000,000, exclusive of land purchases, were started on road and bridge construction and road betterment which could be accomplished with reasonable economy during the winter months. By the first two weeks of December 1931 more than 24,000 men were given employment throughout the state, and the work was so planned that the number employed each week from November 1931 to July 1932 fluctuated very slightly around 17,000. Bridge construction proved especially helpful as a means of absorbing unemployed workers, and the majority of the bridge awards for the winter of 1931–32 were for this purpose. Betterment projects under the direction of the

Maintenance Division for the relief of unemployment covered 959 miles of road at a cost of $1,769,760. The maximum amount of hand labor possible was used and the program was regarded as an outstandingly practical welfare scheme. A further aid to employment was found in an extensive roadside planting program.

In the winter of 1932–33 the reduction of funds available in the general construction account made a continuance of the work relief program impossible, and it was estimated that the number employed on construction would be less than 30 per cent of the number employed in the preceding year. The increase in Federal aid in the winter of 1933–34 somewhat changed the situation with respect to employment. It is noteworthy that in spite of the increased expenditures in an unfavorable season, the costs of labor and material were lower than ever before, with an average unit price two-thirds of the average price in 1928. In addition to the highway program, Michigan has established an institutional building program covering hospitals, homes and colleges, as proposed by the Governor in 1929. The Hartman Building Bill, adopted in 1931, spread the appropriations made by the 1929 legislature for the next biennium over four years instead of two. The total provisions for the four years ending June 30, 1935, as embodied in the bill, aggregated nearly $12,000,000.[5] This bill, together with the Five-Year Highway Construction Program, constitutes an appreciable step forward in the direction of an orderly long-range planning of state activities on public works. But these two programs took shape only after the business recession and, in view of the fiscal crisis which occurred in 1933, can prove of benefit, with respect to the possibilities of hastening progress when necessary on state projects, only as models for the future.

[5] Michigan, 56th Leg., Sess. of 1931, House Enrolled Act No. 50.

CALIFORNIA

COST OF GOVERNMENT AND EXPENDITURES ON PUBLIC WORKS

The growth of the cost of state government in California is clearly pictured in the comparison of receipts and payments, in thousands of dollars, during the last six fiscal years.

(fiscal years ending June 30) [1]

	1927	*1928*	*1929*	*1930*	*1931*	*1932*
RECEIPTS						
Cash	$120,142	$141,467	$156,609	$155,611	$172,306	$166,786
Transfers	45,825	55,896	61,573	83,639	82,625	72,028
Total	165,967	197,363	218,182	239,250	254,930	238,814
PAYMENTS						
Cash	113,083	129,938	144,989	157,697	166,211	190,982
Transfers	45,822	55,044	61,509	81,904	76,677	69,805
Total	158,905	184,982	206,498	239,601	242,888	260,787

[1] *Biennial Reports* of State Controller of California, 1926–28, 1928–30, 1930–32. ('Transfers', in this tabulation, mean as between general and special funds.)

The percentage increase (+) or decrease (—) in total receipts each year as compared with the preceding year was as follows: 1928, +18; 1929, +10; 1930, +9; 1931, +6; 1932, —6. The corresponding figures for total payments are: 1928, +16; 1929, +12; 1930, +16; 1931, +1; 1932, +7. The falling off of revenue relative to expenditures during the depression finds its reflection in the heavily increased amounts of transfers from resources in special funds to the General Fund in order to balance the annual cost of government. Cash payments exceeded receipts in 1930 and in 1932. By the latter year the General Fund was described as "in a desperate condition", with fixed charges equaling revenues, leaving nothing for the running expenses of the state government itself.[6]

[6] *Biennial Report* of State Controller, 1930–32.

The tax system of California accounts in part for the serious condition of the state budget in the first three years of the depression. Large inheritance tax receipts and large revenues from bank franchise and public utility taxation (especially of the railroads) created a temporary surplus in prosperous years. These two sources of revenue were adversely affected by the depression: the first, because 47 per cent of all estates consisted of common stocks in 1929–30, and the second, because of the decrease in gross earnings of the banks and utilities. Thus the state started the biennial period 1932–34 with a deficit of $12,659,000 which could be reduced only by legislative repeal of certain appropriations. Few reductions in appropriations were made, and tax rate increases were slight, so that the continuance of the deficit in the budget for 1933–35 seemed unavoidable. An income tax bill was vetoed by the Governor in August 1933, but a retail sales tax of 2½ per cent was accepted. A drastic revision of the entire state tax system was effected by the Riley-Stewart Plan, transferring the collection of taxes on the property of public utilities to the counties in 1935, and laying on the state the share of school costs formerly borne by the counties, in order to remove the burden on local property taxes, which showed a 13 per cent delinquency average in 1933. This amendment also temporarily restricted the annual increase in expenditures to 5 per cent for local administrative units and to 2½ per cent for the state, except in special circumstances. In contrast to the new measures adopted in New York and Michigan, by which local expenditure burdens were assumed by the state governments in various ways during the depression, California attempted to maintain its practice of decentralized control over construction expenditures and to meet the resulting burden by decentralizing also the progressive taxes formerly laid by the state. In view of this situation, the heavy reliance on Federal funds for the two

TABLE 41

CALIFORNIA STATE GOVERNMENT
ANNUAL BALANCES AND CASH PAYMENTS OF MAJOR CONSTRUCTION AND IMPROVEMENT FUNDS, 1926–1932
(in thousands)

PURPOSE OF FUND	TOTAL RECEIPTS AND BALANCES						CASH PAYMENTS					
	1926–27	*1927–28*	*1928–29*	*1929–30*	*1930–31*	*1931–32*	*1926–27*	*1927–28*	*1928–29*	*1929–30*	*1930–31*	*1931–32*
California state buildings, 1925	$1,270	$2,281	$4,944	$2,812	$2,235	$1,062	...	$1,386	$3,083	$1,856	$1,173	$1,004
San Diego Teachers College Building and Improvement Fund	...	...	...	325	175	...	...	...	...	146	175	...
Total, buildings	1,270	2,281	4,944	3,137	2,410	1,062	...	1,386	3,083	2,002	1,348	1,004
Highway Construction Fund	...	6,106	15,409	19,071	18,384	16,601	...	764	7,685	12,842	12,409	11,454
Highway Maintenance Fund	17,789	18,169	20,676	23,141	21,961	20,981	$14,394	13,300	14,902	17,801	16,133	19,474
Highway Fund No. 3	3,882	2,972	4,617	6,090	4,378	1,262	3,651	1,856	2,546	3,279	3,346	1,146
Total highways, construction and maintenance	21,671	27,247	40,702	48,302	44,723	38,864	18,045	15,920	25,133	33,922	31,888	32,074
Joint Navigation and Flood Control Project Fund	...	...	...	6,074	3,938	2,794	...	...	...	2,135	2,945	1,995
Pajaro River Flood Control Fund	...	...	...	4	5	8	...	...	...	3	5	7
Total, flood control	...	...	...	6,078	3,943	2,802	...	...	...	2,138	2,950	2,002
San Francisco Seawall Fund No. 3	724	295	1,727	1,443	1,468	731	679	68	587	752	747	559
San Diego Harbor Improvement Fund	15	22	18	24	27	26	2	1	1	1	1	1
San Francisco Harbor Improvement Fund	4,945	5,265	5,245	4,802	4,960	5,102	2,218	2,822	3,182	2,223	2,051	2,607
San Jose Harbor Improvement Fund	2	2	...	...	...	...	...	...	...	...	...	...
Total, harbor improvement	5,686	5,584	6,990	6,269	6,455	5,859	2,899	2,891	3,770	2,976	2,799	3,157
Sacramento and San Joaquin Drainage District Funds	1,539	518	392	1,086	444	125	983	461	367	967	377	69
Sacramento and San Joaquin Drainage District Maintenance Fund	...	150	77	18	...	...	...	74	60	18	...	...
Total, drainage districts	1,539	668	469	1,104	444	125	983	535	427	985	377	69

Source: Biennial Reports of the State Treasurer and State Controller of California, 1926–28, 1928–30, 1930–32

most important public works projects in the state—roads and water development—is not surprising.

The state's expenditures for public works can be measured by the sale of bonds, or by the totals of cash receipts and disbursements for public works and closely related purposes. The value of bonds sold by the state government partly or wholly for construction purposes during the last six years is given herewith (in thousands of dollars). The de-

PURPOSE	*1926–27*	*1927–28*	*1928–29*	*1929–30*	*1930–31*	*1931–32*
California state buildings	$1,270	$1,011	$4,033	$1,000	$1,250	.....
Veterans' farm and home building fund	5,669	10,575	4,015	.....	8,000	$12,000
San Francisco seawall No. 3 and 4	.....	250	1,000	800	750	.....
California X Olympiad	.....	.....	.....	1,056	.....	.....
California state park	.....	.....	.....	251	1,553	2,386
Total	$6,939	$11,836	$9,048	$3,107	$11,553	$14,386

Source: Biennial Reports of State Controller

cline in the annual amount of borrowing until 1929–30 and the sharp increases during the succeeding two years are noticeable. The importance of the projects mentioned, namely, state buildings, harbor improvements and state parks, is, however, small in comparison with California's highway construction. This is revealed in Table 41, which gives the annual receipts and payments of the major construction and improvement funds for the last six years.

HIGHWAY CONSTRUCTION AND FINANCING

Both receipts and payments of the various highway funds have increased steadily since 1926, except for a slight drop in 1930–31. While expenditures for maintenance of highways exceed those for construction, the fact that since the fiscal year 1929–30 annual payments from the highway con-

struction fund have been almost $5,000,000 above the 1929–30 level affords sufficient evidence of a substantial enlargement of state highway work. Table 42 gives the source and purposes of highway expenditures since 1925 in greater detail. The major portion is for contracts on construction and improvement work, constituting half or more of the total.

Table 42 shows that during the last seven or eight years highway construction has been financed exclusively from the revenues of the motor vehicle license and gasoline taxes, from budget appropriations, and from Federal contributions.

The last bond financing for this purpose was done in 1924 when a sale of $6,000,000 concluded the last highway issue (No. 3), authorized in 1919 for a total of $40,000,000. The two preceding issues, No. 1 and No. 2, were authorized in 1909 and 1915 in the amount of $18,000,000 and $15,000,000 respectively. The total volume of outstanding highway bonds was $57,625,000 on June 30, 1932. On this date, expenditures from this fund totaled $65,245,248, of which bond proceeds contributed $41,110,089 and Federal aid $24,135,158. The Fund was to be closed in 1932, as Federal aid in the future was to go into the Highway General Fund, and the Third Highway funds were fully expended.

The main sources of income to the Highway Commission from 1909 to 1932 were, in descending order of magnitude of the totals in thousands of dollars, as follows.

Gasoline fees	$128,337
Bond issues	74,112
Motor vehicle fees	49,492
Federal aid	40,608
Legislative appropriations	2,083
Total	$301,998

For the 1930–32 biennium, gasoline tax receipts held up to estimates fairly well, but were expected to drop from 10

TABLE 42

CALIFORNIA DIVISION OF HIGHWAYS
EXPENDITURES CLASSIFIED BY PURPOSE AND FUND, 1925–1932
(in thousands)

ITEMS	1925–1927 (July 1 to June 30) AMOUNT	PER CENT	1927–1928 AMOUNT	PER CENT	1928–1929 AMOUNT	PER CENT	1929–1930 AMOUNT	PER CENT	1930–1931 AMOUNT	PER CENT	1931–1932 AMOUNT	PER CENT
Construction and improvement work, total	$21,699	67.61	$10,150	63.89	$19,434	76.29	$25,529	77.02	$25,701	79.57	$26,805	75.36
a. Contract	15,593	48.65	6,437	40.52	13,023	51.12	17,876	53.93	16,980	52.57	17,652	49.62
b. Day labor	4,115	12.84	2,387	15.03	3,518	13.81	3,864	11.66	5,041	15.61	5,126	14.41
c. Engineering and inspection	899	2.81	445	2.80	836	3.29	1,126	3.40	1,180	3.65	1,440	4.05
d. Preliminary surveys and plans	499	1.55	429	2.70	701	2.75	786	2.37	884	2.74	810	2.28
e. Right of way	563	1.76	452	2.84	1,356	5.32	1,877	5.66	1,616	5.00	1,777	5.00
Maintenance work and maintenance engineering, special investigations, equipment, plants, suspense	8,852	27.63	4,886	30.76	5,049	19.82	6,575	19.84	5,556	17.20	7,707	21.66
Administration expense, district and central office	1,527	4.76	850	5.35	991	3.89	1,040	3.14	1,044	3.23	1,060	2.98
Grand total	$32,048	100.00	$15,886	100.00	$25,474	100.00	$33,144	100.00	$32,301	100.00	$35,572	100.00
Funds from which expenditures were made:												
Bond issues	$2,109		...		...		...		...		...	
Federal aid	6,129		$1,475		$2,527		$3,215		$4,732		$5,468	
Contributions	814		528		322		419		369		173	
State Highway Construction Fund (1 cent gasoline tax)	...		1,086		8,184		13,019		11,853		10,945	
Motor vehicle and state highways maintenance fund (license fees, 2 cent gasoline tax, etc.)	22,724		12,547		13,874		16,386		15,347		18,539	
State general fund (appropriations)	272		250		567		105		...		447	
Grand total	$32,048		$15,886		$25,474		$33,144		$32,301		$35,572	

Source: Biennial Report, Division of Highways, Department of Public Works, State of California, November 1932

to 15 per cent in 1933–35. They were estimated at $72,200,000 for 1931–33. Motor vehicle fees, on the other hand, dropped markedly and were estimated at only $18,500,000 for 1931–33. Increases in Federal aid, however, offset the decline in regular revenues as a result of the increased roadbuilding appropriations voted by Congress since 1930 (see Ch. IX). Of the $80,000,000 voted by Congress, California received $3,000,000, of which $2,281,312 were spent in the year ending August 31, 1931. In addition, $230,000 were spent in the same year for the construction of forest roads under a Congressional appropriation of $5,000,000 for that purpose in all states. Of the $120,000,000 appropriated by Congress for state roadbuilding under the Emergency Relief and Construction Act of 1932, California received $4,667,000. The effect of these special allotments is evident in the steady increase in Federal aid as a source of funds (Table 42).

The 1929–32 figures for expenditures on contract work and day labor on new highway construction do not accurately reflect the actual increase in this class of work. During the last four years a marked decrease in contract unit prices has occurred. This has been due not only to the general decline of construction costs since the depression began, but also to a very large extent to improvements and enlargement of equipment and to improved methods of highway construction.

UNEMPLOYMENT RELIEF THROUGH ROADBUILDING

Unquestionably California's sustained expenditures on roadbuilding, particularly since 1930, to some extent mitigated unemployment. The importance of highway construction as a means of relieving unemployment was fully realized. The Division of Highways described the situation as follows (*Biennial Report,* November 1, 1930).

"Federal aid highway construction in California during the past two years has advanced so rapidly that available Federal aid is insufficient to match state funds, and during the period from July to December in 1929 projects on Federal aid roads were placed under contract costing approximately $5,000,000 without any Federal aid. It is estimated that the $4,170,000 apportioned to California for the fiscal year ending June 30, 1931, will be under contracts by December 1st of this year. Larger authorization on the part of the Federal government will be required, if Federal aid is to keep pace and bear its share of highway construction in California. At the present time when every effort is being bent toward the alleviation of unemployment, increased Federal aid would enable the state to proceed at once with a corresponding amount of additional work, which would otherwise have to be postponed until such time as state funds become available."

In the autumn of 1930, the Highway Commission voted a total of $1,000,000 for emergency relief; in addition $260,000 were appropriated from budgeted highway funds for the relief of unemployment.

Additional secondary roads were included in the State Highway System by the 1931 legislature. The maintenance organization of the Highway Division expended, in 1930–31, $400,000 on relief work, employing 1,850 men three days a week from November to March; in 1931–32, $1,500,000, employing from 3,300 to 4,400 men, October-April. Most of this work was of the kind which normally would have been deferred or not carried out at all, and as much as possible was done by hand labor. The use of hand labor on new road construction was attempted from December 1930 to April 1931, and 1,425 men were employed continuously. But the erection of special camps for the men was found to be unduly expensive, the workers receiving only 55 cents of each dollar expended instead of the 80 cents they received on the maintenance forces. In the winter of 1931–32 a large part of the burden of road relief work was thrown

on the maintenance organization, and for the two remaining camps of men employed on new construction (1,069 in number) housing, food, clothing and tobacco were supplied in lieu of wages.

A long-time building program, based on a careful study and survey of current requirements and conditions and future growth and development, supplemented the improved California budget of 1929 as a guide for an orderly prosecution of all improvement work in the state, and assisted in maintaining road operations at their relatively stable level in the first three years of depression.

Under a ten-year program [7] for the improvement of the state's highway system, a total of $313,565,000 was planned to be expended during the period 1931–40 on primary and secondary roads. This amounts to an average annual outlay of $31,356,000, a figure which has already been exceeded in 1929–30, 1930–31, and 1931–32 (see Table 42). An additional $51,000,000 were suggested for proposed new roads during the ten-year period.

WATER DEVELOPMENT

Another large project which may provide new opportunities for employment is the development of water resources. Northern California possesses the water supplies so much needed in the southern parts. The engineering problems have not been found insurmountable and the most difficult question involved is that of financing.

The Division of Water Resources of the State Department of Public Works drew up a plan for the conservation and utilization of the Santa Ana and Mojave Rivers and their tributaries in the southern part of the state, in accordance with a legislative statute of 1929. In addition, the Hoover-Young Commission

[7] *Biennial Report,* Division of Highways, California, November 1, 1930.

presented a preliminary report, the State Water Plan, involving the use of the Sacramento, San Joaquin and Colorado Rivers for irrigation, flood control, and power development in the south. Work on the projects was delayed until some plan of Federal-aid financing could be developed, since defaulting of irrigation district bonds by the localities was heavy by 1933, and a legislative proposal for state aid to the irrigation districts was defeated. The public utilities also opposed the plan, objecting to the potential competition in the distribution of power. In August 1933, however, the Governor signed a bill authorizing the issue of revenue bonds to the amount of $170,000,000 for the Central Valley Water Project, as the State Water Plan is now known. On December 19, 1933 the voters approved the issuance of the bonds, and it was hoped that the PWA would purchase about $123,000,000 of bonds and give a grant of $43,000,000 to cover the cost of the project, but no allotments have yet been made.

In the latter part of 1933 the PWA had advanced almost $12,000,000 in loans and grants to the cities and counties of California for water conservation, flood control and power development, from which it was estimated that about 9,000,000 man-hours of employment would be provided. The decline in receipts and balances for flood control projects from over $6,078,000 in 1929–30 to $2,802,000 in 1931–32 (see Table 41) has thus been offset by Federal financing, with the prospect of increased expenditures in the future.

The Boulder Dam project is also alleviating unemployment in California to some extent.[8] Flood control, irrigation, power development and water supply in southern California offer opportunities to increase employment on the construction and maintenance of public works. On the All-American Canal, carrying water from the Colorado River to the Im-

[8] U. S. Department of Interior, Bureau of Reclamation, *The Boulder Canyon Project: Questions and Answers,* January 3, 1933.

perial and Coachella Valleys, $38,500,000 is to be expended by the Federal government by 1938, exclusive of interest charges. To power development, mainly in the hands of the City of Los Angeles and the Southern California Edison Company, $38,200,000 were allotted by the Federal government for construction of a power plant between November 1932 and November 1934. Finally, the Colorado River Aqueduct, which will transport water from Boulder Dam to the Metropolitan Water District of Southern California, has been financed by a bond issue of $220,000,000 authorized by the District in September 1931, $40,000,000 of which the Reconstruction Finance Corporation agreed to bid upon at 5 per cent interest.