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## I V

### FEDERAL CONSTRUCTION EXPENDITURES

#### SCOPE AND TREND

THE Federal government's activities in the field of construction, as pointed out in Chapter II, are much more varied than those of either cities or states. Even the local improvements common to municipalities are carried on by it in the District of Columbia. Nevertheless, Federal construction expenditures (Table 15) constituted less than 10 per cent of all public works expenditures between 1925 and 1930, a smaller proportion than during the War period, when they had naturally much increased, while cities and states were reducing their activities. After 1919, fluctuations from year to year reflected general economic conditions quite closely. Thus in 1922-23, following the post-War depression, Federal expenditures,<sup>1</sup> for which appropriations had been made the preceding year, reached their lowest point; they thereafter showed a gradual rise until 1926, when they dropped slightly, and then increased again until 1932-33. Throughout this period, the reservation in good times of part of the Federal building program for periods of depression was urged by certain elements in the construction industry on the grounds not only that some stabilization could thus be effected, but also that government

<sup>1</sup> Unfortunately the Federal Employment Stabilization Board's figures of Federal construction expenditures, which are used in this chapter, do not include expenditures on warships and aircraft for military purposes. No satisfactory figures of the latter are available, but those published in 1931 by the Division of Public Construction are given below.

TABLE 15  
 TOTAL FEDERAL EXPENDITURES FOR NEW CONSTRUCTION, REPAIRS AND ALTERATIONS,  
 BY CONTROLLING AGENCY, 1920-1933  
 (in thousands)

FISCAL YEAR	AGRICULTURE <sup>2</sup>	COMMERCE	INTERIOR	JUSTICE	LABOR	NAVY <sup>3</sup>	POST				WAR <sup>4</sup>	INDEPENDENT OFFICES	D. C.	TOTAL
							OFFICE	STATE	TREASURY					
1920	\$25,395	\$2,736	\$14,162	\$2,852	\$179	\$57,176	\$14	\$45	\$7,997	\$84,532	\$9,282	\$3,024	\$207,394	
1921	62,920	2,727	20,206	2,665	182	29,346	11	29	10,922	95,290	9,185	5,651	239,634	
1922	94,843	2,701	15,927	2,941	163	23,960	6	50	7,042	52,850	4,997	5,483	210,963	
1923	80,745	2,621	18,392	3,356	154	16,226	10	57	4,917	54,674	3,888	5,123	190,163	
1924	92,688	2,888	17,549	3,482	425	12,012	11	53	5,370	78,748	3,665	6,864	223,755	
1925	110,815	3,881	16,532	4,316	105	10,410	14	66	15,646	88,126	11,052	9,116	270,079	
1926	102,015	3,745	15,116	5,778	125	10,456	14	118	8,489	75,922	13,803	13,185	248,766	
1927	94,747	4,240	14,322	6,415	60	10,286	11	54	10,643	79,956	16,695	11,888	249,317	
1928	93,448	5,807	19,308	5,985	59	13,934	17	109	12,502	87,069	19,371	10,442	268,051	
1929	98,381	7,422	22,306	7,870	274	16,774	20	442	17,207	106,801	17,369	11,813	306,679	
1930	92,058	7,101	21,631	9,020	50	16,276	12	867	32,145	123,342	26,668	9,547	338,717	
1931	182,613	7,991	29,349	14,157	104	22,848	10	588	37,858	153,651	26,657	13,818	489,644	
1932	215,835	7,452	45,250	3,874	400	23,799	8	786	65,888	148,386	34,589	9,837	556,104	
1933 <sup>1</sup>	196,320	4,934	38,943	3,806	30	20,865	5	1,004	100,009	139,567	35,159	7,394	553,036	

Source: Federal Employment Stabilization Board

<sup>1</sup> Estimated.

<sup>2</sup> Including Federal-aid Highways.

<sup>3</sup> Excluding warships.

<sup>4</sup> Excluding aircraft for military purposes.

bidding for labor and materials was raising costs.<sup>2</sup> However, until recent years of depression, when deliberate expansion was attempted, no important steps towards this end were taken, nor, under the circumstances, could they have been taken without great difficulty. Not only did the idea of using public works as a stabilizing factor receive attention very gradually, but such a policy would also have conflicted in certain respects with traditional fiscal and financial practices and would have encountered serious obstacles in the inflexibility of the legal requirements involved in appropriating and disbursing Federal funds. Federal financing from 1920 to 1934, in its implications for public works expenditures, is discussed in Chapter V. In the present chapter we describe briefly Federal procedure in spending money for construction, and discuss some of the causes of delay involved in its acceleration.

#### CONSTRUCTION PROCEDURE

"The conception of new construction enterprises arises from two sources: departmental and congressional. The construction agencies charged with administering functions created by Congress are continually alert to foretell these things that are necessary in the conduct of their affairs. With this knowledge they anticipate their needs and seek authorization that may later bring about the appropriation of money.

Certain bureaus are granted blanket authorization by Congress, and this entails no further action than the approval of the heads of the departments for their expenditures. Others require specific authorization, which often carries a limit of cost by Congress.

The construction agencies as well as all other bureaus of the government present their requests for money to the director

<sup>2</sup> See the letter of Mr. Hoover, then Secretary of Commerce, to the President, in 1923, advocating an elastic system of public works for the Federal government.

of the bureau of the budget after approval by their departments or independent agencies. The budget bureau examines these requests, holds hearings and finally presents its consolidated report to the President, who transmits this to Congress for such action as it may elect to take.

The appropriation committee of the House of Representatives examines requests, holds hearings and finally brings out its report. When the committee has reached a conclusion on the departmental or independent establishment measure, it is transmitted to the House for action. Following action by this body, the bill is sent to the Senate, which refers the subject to the appropriation committee. After consideration by that group, often assisted by hearings, it is sent back to the Senate for its action. Following this, if there is disagreement between the House and Senate, a joint committee is delegated to reconcile differences of opinion. Subsequent action by both the House and the Senate follow, and the complete bill is transmitted to the President for his consideration.

It will be seen from this that appropriations pass through many phases, all designed to be helpful in granting funds for logical purposes.

In some instances bureaus are given lump-sum amounts, and they in turn allocate this to definite projects."<sup>3</sup>

It will be readily seen that under the normal procedure, with its various checks and balances in the expenditure of public funds, delay may be experienced in starting work. Moreover, a most serious obstacle in the way of expediting the Federal program arose from a diffusion of responsibility among a multiplicity of agencies, between which no adequate coordination existed prior to 1931. While the spending agencies of real importance are few, public works are carried out by over seventy-five separate bureaus and offices within the Federal government, sixteen agencies are author-

<sup>3</sup> *Engineering News-Record*, July 28, 1932, The Cost of Federal Public Works.

ized to build roads, nineteen to do hydraulic construction, sixteen to work on rivers and twenty-two on engineering and research.

It is not possible to generalize concerning the details of procedure and the time involved in starting different projects since conditions are so diverse in different types of construction, but the following instances may be regarded as typical. The Quartermaster General's office has stated that

"Under the present budget procedure it requires approximately two and one-half years from the time a project is initiated in the field until the funds are made available for expenditure. This usually is the maximum interval. . . . It is not always feasible to make detailed plans in advance of the appropriation; therefore after funds do become available it usually requires from two to twelve months to prepare suitable plans and to advertise for bids. Ordinarily the average contract time for completing construction work is approximately twelve months."<sup>4</sup>

The procedure of the Office of the Supervising Architect of the Treasury Department was greatly altered and improved by the Public Buildings Act of May 1926. This act, while it fixed the total gross outlay to which the government might be obligated for public building construction throughout the country, defined only in a general way the procedure to be followed in the selection of locations, and made no attempt to specify individual projects. The time consumed in preliminary steps before construction work may begin depends upon several factors.

"If the acquisition of a site is involved, the transaction may involve a period of a few months to one of a year or more, dependent upon the submission of reasonable proposals or the

<sup>4</sup> Memorandum of the office of the Quartermaster General to the Division of Building and Housing, U. S. Department of Commerce, 1929. For further discussion see Leo Wolman, *Planning and Control of Public Works*, pp. 92-101.

necessity for condemnation. . . . With a site acquired, the procedure of obtaining survey and soil data, together with any supplementary space data, the preparation and approval of any necessary sketches, etc., may require about two months. For the preparation of working drawings the size of a project and the number of men available for it, together with possible preliminary changes in scheme for one consideration or another, all introduce variable factors, making the probable consumption of time from commencement to the point at which they are turned over for specifications from three to eight months. The specification, which is usually the work of one man, will occupy for writing, duplication and checking from four to six weeks. The period on the market for bids generally runs from four to six weeks, and after opening if no complications have arisen two weeks is generally required in the awarding of a contract.”<sup>5</sup>

During the depression, however, the time required for some of these steps was shortened by the adoption of measures designed to facilitate the acceleration of construction operations. In site selection cases involving condemnation proceedings the Government was enabled by Congressional legislation to simplify procedure and thus to start building at a considerably earlier date than had hitherto been possible. Second, a 5 per cent addition to the limit of cost was permitted; third, the employment of outside architects when necessary was authorized.

The absence of coordinated planning, however, was still recognized as a weakness. Federal agencies in charge of construction had been showing a tendency to map out long-range programs covering several years. For the construction of Federal penitentiaries and other Federal institutions, Congress authorized some years ago a seven-year program drawn up by the Department of Justice. A ten-year army

<sup>5</sup>Memorandum of the Office of the Supervising Architect of the Treasury Department to the Division of Building and Housing, U. S. Department of Commerce, 1929. For further discussion see Leo Wolman, *op. cit.*, pp. 92-101.

post housing program was initiated by the Quartermaster Corps of the Army. For the general program of public building, a systematic ten-year plan involving the ultimate expenditure of \$700,000,000 was decided upon in 1926. A Division of Public Construction was created in the Department of Commerce in the winter of 1929 to serve as a clearing house of information on building methods and plans. It was hoped that this agency might coordinate the Federal programs and also state and local activities for the purpose of supplying a guide to the control of expenditures at different phases in the business cycle. An important step towards coordination of Federal construction was taken in 1931, with the establishment of the Federal Employment Stabilization Board. Advance planning under the act that created it<sup>6</sup> took the form of annual reports to the Board, by the numerous Federal agencies cooperating, of their construction programs for six years in advance, with estimates showing projects allotted to each year. Each bureau was also required to indicate the directions in which its program could be accelerated and expanded if necessary.

This effort to seek a composite picture of Federal construction provided the first reliable figures on construction expenditures by departments in the post-War period, and proved of great assistance in determining the allocation of funds appropriated under the National Recovery Act in the summer of 1933. With the establishment under it of the Federal Emergency Administration of Public Works, together with the National Planning Board (see Ch. V and XIII), some of the functions of the Stabilization Board were assumed by the new agencies. Its other functions are being

<sup>6</sup>See Ch. I. Its purpose, as stated in the title of the act, was "to provide for the advance planning and regulated construction of public works for the stabilization of industry and for aid in the prevention of unemployment during periods of business depression."



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continued, however, through its transfer to the Department of Commerce, where it now operates as the Federal Employment Stabilization Office.<sup>7</sup>

FEDERAL CONSTRUCTION, 1920-1933

The percentage that public works constituted of total general Federal expenditures increased quite steadily in the post-War period (Table 16). It is, indeed, remarkable that

TABLE 16  
GENERAL EXPENDITURES OF THE FEDERAL GOVERNMENT  
AND OUTLAYS FOR PUBLIC WORKS, 1920-1932  
(in millions)

FISCAL YEAR	TOTAL GENERAL EXPENDITURES <sup>1</sup>	PUBLIC WORKS <sup>2</sup>	GENERAL EXPENDITURES LESS PUBLIC WORKS	PUBLIC WORKS AS PERCENTAGES OF TOTAL GENERAL EXPENDITURES
1920	\$3,226	\$207	\$3,019	6.4
1921	3,074	240	2,834	7.8
1922	2,132	211	1,921	9.9
1923	1,943	190	1,753	9.8
1924	1,817	224	1,593	12.3
1925	1,836	270	1,566	14.7
1926	1,819	249	1,570	13.7
1927	1,851	249	1,602	13.4
1928	1,947	268	1,679	13.8
1929	2,106	307	1,799	14.6 <sup>3</sup>
1930	2,178	339	1,839	15.6 <sup>3</sup>
1931	2,407	490	1,917	20.4 <sup>3</sup>
1932	2,596	556	2,040	21.4 <sup>3</sup>

Source: Based on a table, p. 793, of *The Banking Outlook*, by H. P. Willis and J. M. Chapman; corrected for public works by use of revised figures.

<sup>1</sup> Excluding postal deficiency, expenditures under Agricultural Marketing Act of 1929, World War Adjusted Compensation Act of 1924 (as amended February 1931), Reconstruction Finance Corporation Act, 1932, and Emergency Relief and Construction Act, 1932.

<sup>2</sup> Revised figures of Federal Employment Stabilization Board.

<sup>3</sup> Percentage increase in these years is influenced by the fact that if RFC and Farm Board disbursements were included, total general expenditures would be considerably higher than is indicated in the table. Moreover, emergency roadbuilding expenditures are included in public works expenditures in 1931 and 1932, but not the expenditures of two important emergency agencies, the Farm Board and the RFC. It is not possible to eliminate emergency roadbuilding expenditures from regular Federal-aid disbursements, but it is probable that the Federal construction percentage would have been much less increased without them in 1931 and 1932.

<sup>7</sup> Executive orders Nos. 6623, 6624, March 1, 1934.

in a period when efforts were being made to restrict Federal expenditures as a whole, in order to reduce the service on the public debt as rapidly as possible, public works expenditures continued to increase, from 6.4 per cent of total general expenditures in 1920 to 14.6 per cent in 1925. Although they dropped slightly, both absolutely and relatively, until 1929, they then again increased, until in 1932 they had reached 21.4 per cent of the total.

From 1920 until 1934, three departments accounted for not less than 60 per cent, and on the average 75 per cent of Federal construction expenditures: Agriculture, War and Navy.<sup>8</sup> Table 17 shows the percentage distribution of total expenditures by all departments.

Since the passage of the Federal Highway Act in 1921, the Bureau of Public Roads has taken about 80 per cent of all funds disbursed by the Department of Agriculture. In the fiscal year 1920 its expenditures were \$20,000,000; in 1922, about \$90,000,000, and they were maintained at well above \$80,000,000 yearly until 1930 (see Table 15). During the depression the growth of expenditures for this purpose has been more rapid than for any other, since special appropriations have been made since 1930 (see Ch. IX), and the striking increase of 45 per cent in Federal expenditures for 1930-31 is almost entirely attributable to the Bureau of Public Roads.

<sup>8</sup>The figures published in 1931 by the Division of Public Construction, Department of Commerce, of the amounts spent or to be spent for warships and aircraft by the Army and Navy from 1928 to 1933, if added to the figures presented above of expenditures by the two main departments concerned with national defense, lend increased importance to the construction activities of the Army and Navy. These figures, in thousands, are presented in the absence of more recent or more reliable data (fiscal years).

## FOR NATIONAL

DEFENSE	1928	1929	1930	1931	1932	1933
Vessels	\$38,564	\$55,558	\$58,050	\$47,016	\$62,987 <sup>1</sup>	\$71,011 <sup>1</sup>
Aircraft	17,399	27,989	31,197	33,701	32,566 <sup>1</sup>	24,306 <sup>1</sup>

<sup>1</sup> Estimates.

TABLE 17  
 PERCENTAGE DISTRIBUTION OF TOTAL FEDERAL EXPENDITURES  
 FOR NEW CONSTRUCTION, REPAIRS, AND ALTERATIONS,  
 BY CONTROLLING AGENCY, 1920-1933

FISCAL YEAR	AGRI- CULTURE	COM- MERCE	INTERIOR	JUSTICE	LABOR	NAVY	POST OFFICE	STATE	TREASURY	WAR	INDEPENDENT		D. C.	PERCENTAGE CHANGE IN TOTAL FROM PRECED- ING YEAR
											OFFICES			
1920	12.2	1.3	6.8	1.4	.1	27.6	1	1	3.9	40.8	4.5		1.5	...
1921	26.3	1.1	8.6	1.1	.1	12.2	1	1	4.6	39.8	3.8		2.4	+16
1922	45.0	1.3	7.5	1.4	.1	11.4	1	1	3.3	25.1	2.4		2.6	-12
1923	42.5	1.4	9.7	1.8	.1	8.5	1	1	2.6	28.8	2.0		2.7	-10
1924	41.4	1.3	7.8	1.6	.2	5.4	1	1	2.4	35.2	1.6		3.1	+18
1925	41.0	1.4	6.1	1.6	1	3.9	1	1	5.8	32.6	4.1		3.4	+21
1926	41.0	1.5	6.1	2.3	1	4.2	1	1	3.4	30.5	5.5		5.3	- 8
1927	38.0	1.7	5.7	2.6	1	4.1	1	1	4.3	32.1	6.7		4.8	0
1928	34.9	2.2	7.2	2.2	1	5.2	1	1	4.7	32.5	7.2		3.9	+ 8
1929	32.1	2.4	7.3	2.6	.2	5.5	1	.1	5.6	34.8	5.7		3.9	+14
1930	27.2	2.1	6.4	2.7	1	4.8	1	.3	9.5	36.4	7.9		2.8	+10
1931	37.3	1.6	6.0	2.9	1	4.7	1	.1	7.7	31.4	5.4		2.8	+45
1932	38.8	1.3	8.1	.7	.1	4.3	1	.1	11.8	26.7	6.2		1.8	+45
1933	35.5	.9	7.0	.7	1	3.8	1	.2	19.0	25.2	6.4		1.3	- 1

Source: Based on figures of Table 15 (Federal Employment Stabilization Board)

<sup>1</sup> Less than one-tenth of one per cent.

The important spending divisions in the Navy and War Departments included in these figures are the Department of Yards and Docks of the Navy, and the Corps of Engineers and the Quartermaster Corps of the Army. The major items of construction handled by the Bureau of Yards and Docks are, on the one hand, construction work for the Aeronautics, Marine Corps, Naval Home, Navigation and Ordnance and other divisions, and on the other, work for the Bureau itself, on roads, railways, vessels, sewers, water systems, waterfront improvements, power houses, hospitals, barracks, and a great variety of buildings. The Corps of Engineers and the Quartermaster Corps of the Army handle the construction of sea-coast defenses, river and harbor work, flood control, other work of a civil engineering nature and construction similar to that undertaken by the Bureau of Yards and Docks.

The slight decline in construction expenditures in 1932-33, which occurred in spite of the special appropriations made to stimulate the public works program (see below), was inevitable in the light of the urgent demands that the budget be balanced. The Economy Act of 1932 provided for a 10 per cent cut in expenditures, including those for construction, of all departments. By a ruling of the Comptroller General's office, the limit of cost for each project undertaken in that fiscal year was reduced 10 per cent. Estimated expenditures for 1933-34 construction were still lower. The 'lame-duck' Congress meeting in the winter of 1933-34 had passed smaller appropriation bills than in the preceding year. The further economies required to balance the budget were effected by the act which reduced salaries 15 per cent, and by the merging or elimination of certain departments.<sup>9</sup>

<sup>9</sup> The introduction of two budgets, regular and emergency, the latter providing large sums for construction by means of bond issues, made it possible for the public works program described in Ch. V to be undertaken in spite of these retrenchments.

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Construction expenditures for all departments except Labor and State were expected to decline, and no new appropriation had been made for Federal-aid roads.

Actual expenditures from July to December 1933 (the first half of the fiscal year 1934), amounted, however, to \$265,000,000, excluding public roads and the District of Columbia.<sup>10</sup> This not only represented a considerable increase of expenditures in almost all departments over those of the six preceding months; it also covered about two-thirds of the program originally contemplated for 1933-34, although the unfavorable construction months were included. In addition, emergency expenditures from PWA funds for the calendar year 1933 (August to December) were about \$170,000,000, raising the total for the first six months of the fiscal year 1933-34 to \$435,000,000. Later expenditures of the emergency funds are discussed in the next chapter.

### EMPLOYMENT

The number employed directly on Federal construction is not available prior to July 1932. Monthly figures since then are presented in Table 18. The numerical importance of public roads employment in this period is clearly indicated. Other Federal construction, exclusive of Public Roads and PWA employment, (Column 3), shows a decline in 1933-34. PWA employment, however, shows a rapid rise from the middle of 1933 to a peak in the summer of 1934.

### MEASURES ADOPTED TO EXPEDITE PUBLIC WORKS

It was claimed that, in addition to increasing the amount of Federal aid to the states for highway construction and liberalizing the terms of its use, the Federal government at an

<sup>10</sup> Monthly reports of Federal Employment Stabilization Board. These figures do not include expenditures from PWA funds.

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TABLE 18  
 DIRECT EMPLOYMENT ON FEDERAL CONSTRUCTION,  
 MONTHLY, JULY 1932-DECEMBER 1934  
*(in thousands)*

(1) MONTH <sup>1</sup>	(2) PUBLIC ROADS (EXCEPT PWA)	(3) OTHER FEDERAL CONSTRUCTION (EXCEPT PWA)	(4) PWA (EXCEPT RELIEF ROADS) <sup>2</sup>	(5) TOTAL
<i>1932</i>				
July	81	76	...	157
August	89	98	...	187
September	122	98	...	220
October	123	92	...	215
November	129	88	...	217
December	97	74	...	171
<i>1933</i>				
January	74	78	...	152
February	77	73	...	150
March	94	80	...	174
April	121	81	...	202
May	139	82	...	221
June	152	88	...	240
July	129	80	...	209
August	107	76	5 <sup>b</sup>	188
September	80	74	34 <sup>b</sup>	188
October	57	68	121 <sup>b</sup>	246
November	38	62	243	343
December	21	44	250	315
<i>1934</i>				
January	8	37	245	290
February	2	36	242	280
March	1	30	265	296
April	2	40	350	392
May	4	48	468	520
June	5	49	563	617
July	5	41	585	631
August	4	45	563	612
September	3	43	512	558
October	3	45	475	523
November	4	39	434	477
December	3	44	350	397

Sources: Column 2, Bureau of Public Roads; column 3, Federal Employment Stabilization Board; column 4, PWA

<sup>1</sup> Figures represent numbers on the payroll at a representative date in each month.

<sup>2</sup> Figures include non-Federal as well as Federal projects, but exclude T.V.A. force-account employees.

<sup>b</sup> Partly estimated.

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early stage of the depression made other contributions to the public works program because of the unemployment crisis. The river and harbor improvement work carried out by the War Department was so expanded that a deficiency appropriation of \$12,000,000 was granted by Congress in order to sustain active operations.<sup>11</sup> The ten-year building program under Treasury Department supervision was altered in two respects: in procedure, as described above, and by additional authorizations. The original act of 1926 had provided for a \$150,000,000 program, of which not more than \$25,000,000 was to be spent in any one year. In 1928 the act was amended to provide for an additional \$100,000,000 for new projects outside the District of Columbia and the annual limit of expenditures was raised to \$35,000,000. Beginning in 1928, funds not spent in one year could be used in the next in addition to the \$35,000,000. In March 1930 the limitation on annual expenditure was again raised, to \$50,000,000, by the act that provided for the use of outside architects. A third act, in February 1931, provided another increase of \$100,000,000 in the general authorization and again raised the limit of annual expenditure, to \$65,000,000. By the same act, the limit of annual expenditure in any one state was raised from \$10,000,000 to \$20,000,000 until December 31, 1933, and placed at \$15,000,000 thereafter.

Prior to May 1926, the total general authorizations had stood at about \$13,000,000. Under the 1926 act and its amendments, a program amounting to \$633,000,000 (plus \$69,000,000 from the sale of obsolete buildings) was authorized, though not all was appropriated. As of June 30, 1932, projects involving a total limit of cost of about \$500,000,000 had been specifically authorized; on June 30, 1933, about \$700,000,000 had been gen-

<sup>11</sup> Statement by the Acting Chief, Division of Public Construction, Department of Commerce, June 12, 1930.

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erally authorized. Under specific authorizations, the status of projects in the program was as follows on June 30, 1933 (in thousands of dollars).

	LIMIT OF COST
Completed, 375 projects	\$131,491
Under contract in whole or in part, 360 projects	311,189
Bids in, on market, or in specification stage, 53 projects	14,876
In stage of drawing, site selection, site purchase, delays, etc.	37,086
Specifically authorized	494,642

Actual expenditures amounted to \$330,000,000; total obligations were \$427,000,000, of which \$100,000,000 were obligated for 1932-33. All awards of contracts under this program were, however, suspended from March until June 1933, in view of the expected establishment of the Public Works Administration. The tabulation of aggregate expenditures, in thousands of dollars, on all buildings under the control of the Treasury Department indicates the rate of increase from 1928 to 1933.<sup>12</sup>

FISCAL YEAR	CONSTRUCTION	ALTERATIONS, EXTENSIONS, SPECIAL ITEMS	ANNUAL REPAIRS	COST OF SITES
1928	\$4,422	\$1,099	\$1,707	\$3,743
1929	8,197	1,664	1,716	20,665
1930	22,453	2,069	2,273	15,454
1931	23,496	5,574	2,376	38,444
1932	47,446	8,358	2,055	30,424
1933	90,726	6,622	1,148	7,389

The effects of these additional appropriations and of the attempts at acceleration are reflected in the construction figures for the Departments concerned, since 1930, in Table 15. The sharp rise from 1930 until 1933 reflects particularly the efforts made to continue Federal construction on a high level during the recession.

While the efforts to expedite and expand government

<sup>12</sup> *Annual Reports*, Secretary of the Treasury, for years quoted.



programs already established doubtless prevented some unemployment which would otherwise have occurred on Federal projects, by 1932 continued Congressional demands for expanded public works had crystallized in the form of bills providing for large bond issues whose proceeds could be used for Federal and local construction. Opposition to these proposals on fiscal, financial and monetary grounds was sufficiently strong to defeat them. In July 1932 a compromise measure was passed, the first step on the part of the Federal government towards financial assistance to localities for unemployment relief. By the terms of the Emergency Relief and Construction Act, the RFC was empowered to supply funds for a \$322,000,000 Federal program of construction. The funds were to be distributed as follows: Federal-aid highways, \$120,000,000; other road construction, \$16,000,000; rivers and harbors, \$30,000,000; flood control, \$15,500,000; Boulder Dam, \$10,000,000; aids to navigation, \$4,300,000; Coast and Geodetic Survey, \$1,200,000; Navy yards and docks, \$10,000,000; Army housing, \$15,000,000; public buildings, \$100,000,000. An additional \$7,436,000 was provided for technical construction at airfields. One billion, five hundred million was to be loaned by the RFC to states, counties, cities and private corporations for self-liquidating public works. The Federal part of the program was cut short, however, by the act that established the Emergency Conservation Corps on March 31, 1933. By that date, only \$6,000,000 of the emergency funds for the Treasury Department's program had been spent or obligated. Under the March act, all unobligated funds were to be transferred to the conservation program. Therefore, of the public buildings program of \$100,000,000 under the Emergency Relief and Construction Act of 1932, \$93,000,000 were transferred; of the remainder, only about \$2,800,000 were spent by June 30, 1933, and \$3,700,000, obligated by March 31, 1933, re-

mained to be spent in 1933-34. The last-named part of the Relief Act proposal was also, on the whole, ineffective, because of the requirement that projects be self-liquidating without recourse to special or regular taxation or assessment, and because of the high interest rates charged by the RFC. By December 1933, fourteen months later, only about \$60,000,000 of the \$1,500,000,000 provided by law had been disbursed to localities for public works.

With the passage of the National Recovery Act in June 1933 the significance of Federal activity for the promotion of construction was enormously heightened. In contrast to the relatively very small proportion of total public construction outlays that it has constituted in normal years, the program of Federal construction became almost as large as the public construction program of the entire country in the peak years, 1927-30. Actual Federal expenditures had already risen from about 2 per cent of total construction expenditures, public and private, in 1925-29 to nearly 20 per cent in 1932-33. Although the program of the Public Works Administration did not really get started until the second half of the calendar year 1933, it changed completely the relation of Federal to other types of public construction. The importance of the program, in respect of both comprehensiveness and magnitude, is such that a detailed account is given in the next chapter.