

Federal Aid Road Work

By Thos. H. MacDonald, Chief, Bureau of Public Roads.

The Federal Highway Act, approved November 9, 1921, modified the policy of Federal highway aid in several respects, one of which is destined to have a most important bearing on the future development of the highways of the United States.

The requirement that future allotments of Federal funds must be expended upon the Federal-aid highway system, a connected inter-State system consisting of not more than 7 per cent of the road mileage of the country, is expected to encourage adherence to a definite program in all States and lead to the completion of a system of national and main State roads in a reasonable time.

Federal Funds and Their Apportionment

The Act carried an appropriation of \$75,000,000 for the fiscal year 1922; and the appropriation of funds for the continuance of the program established by it through the fiscal years 1923, 1924 and 1925 was authorized by the Post Office Appropriation Act for the fiscal year 1923. The authorized appropriations were as follows: For the fiscal year 1923, \$50,000,000; for the fiscal year 1924, \$65,000,000; for the fiscal year 1925, \$75,000,000. Since these expenditures were authorized portions of the amounts authorized for the fiscal years 1923 and 1924 have been appropriated, but no appropriation has yet been made for 1925. Of the \$50,000,000 authorized for 1923,

\$25,000,000 had been appropriated; and \$29,300,000 of the amount authorized for 1924 has also been appropriated. The entire amounts authorized for these years have been apportioned to the States, however, and the United States recognizes a contractual obligation to appropriate the full amount as required.

For those who are interested in the history of Federal road appropriations the amounts made available by the several acts since 1916 are presented clearly in the following table:

Appropriations for Federal Aid Road Construction

Fiscal Year :	By Act of July 11, 1916 :	By Act of Feb. 23, 1919 :	By Act of Nov. 3, 1921 :	By Post Office Appropriation Act for Fiscal Year 1923 :	Total :
1917 :	\$ 5,000,000 :	:	:	:	\$ 5,000,000
1918 :	10,000,000 :	:	:	:	10,000,000
1919 :	15,000,000 :	\$ 50,000,000 :	:	:	65,000,000
1920 :	20,000,000 :	75,000,000 :	:	:	95,000,000
1921 :	25,000,000 :	75,000,000 :	:	:	100,000,000
1922 :	:	:	\$ 75,000,000 :	:	75,000,000
1923 :	:	:	:	\$ 50,000,000 ^{a/} :	50,000,000
1924 :	:	:	:	65,000,000 ^{b/} :	65,000,000
1925 :	:	:	:	75,000,000 ^{c/} :	75,000,000
1926 :	:	:	:	:	:
Total :	75,000,000 :	200,000,000 :	75,000,000 :	190,000,000 :	540,000,000

- a/ \$50,000,000 authorized, \$25,000,000 since appropriated
- b/ 65,000,000 authorized, \$29,300,000 since appropriated
- c/ Authorized only, none yet appropriated

The total amount appropriated or authorized for expenditure from the fiscal year 1917 to the fiscal year 1923, inclusive, is \$540,000,000. The amount appropriated to date (August 1923) is \$494,300,000.

From the amounts appropriated for the fiscal years 1917 to 1921, inclusive, the Secretary of Agriculture was authorized to deduct 3 per cent for administration. Beginning with the appropriation for the fiscal year 1922 the authorized deduction was decreased to 2½ per cent to cover the cost of administration and necessary highway research. These amounts have been deducted from the several appropriations and authorizations, and the total amount apportioned among the States by certification of the Secretary of Agriculture up to and including the fiscal year 1924 is \$452,000,000.

This amount has been apportioned among the 48 States in accordance with the formula prescribed by legislation, by which each State receives its pro-rata share based upon the ratio of the area, population and mileage of rural post roads and star routes in each State to the total of these factors in the United States. The apportionments to the several States are given in the following tables:

State	Total Apportionment Up To and Including the Fiscal Year 1924
Alabama	\$ 9,710,910.44
Arizona	6,442,697.44
Arkansas	7,803,542.93
California	14,628,315.22
Colorado	3,193,393.94
Connecticut	2,905,631.09
Delaware	1,373,904.83
Florida	5,399,550.43
Georgia	12,456,374.01
Idaho	5,741,013.99
Illinois	20,232,624.01
Indiana	12,372,488.68
Iowa	13,257,386.67
Kansas	13,218,058.96
Kentucky	9,960,154.55
Louisiana	6,270,140.41
Maine	4,403,513.64
Maryland	4,013,004.99
Massachusetts	6,329,973.79
Michigan	13,652,947.27
Minnesota	13,197,512.44
Mississippi	3,236,901.35
Missouri	15,516,702.25
Montana	9,421,933.81
Nebraska	9,873,790.66
Nevada	5,942,697.75
New Hampshire	2,069,338.99
New Jersey	5,662,833.97
New Mexico	7,403,893.12
New York	23,045,042.14
North Carolina	10,597,904.94
North Dakota	7,184,947.97
Ohio	17,344,359.31
Oklahoma	10,783,513.29
Oregon	7,329,323.86
Pennsylvania	21,235,659.79
Rhode Island	1,567,416.13
South Carolina	6,633,517.83
South Dakota	7,509,535.82
Tennessee	10,395,896.03
Texas	27,314,043.24
Utah	5,268,731.10
Vermont	2,168,353.73
Virginia	9,144,390.45
Washington	6,773,369.83
West Virginia	4,955,856.53
Wisconsin	11,800,650.68
Wyoming	5,750,973.87
Total	\$ 452,000,000.00

By the original Federal Aid Road Act and its 1919 amendment the Secretary of Agriculture was authorized to grant aid to particular projects in each State up to but not exceeding 50 per cent of the cost of the labor and materials employed in the work. The Federal Highway Act of 1921 altered this provision so as to permit the Federal share to be increased in the States in which the area of unappropriated public lands amounts to more than 5 per cent of the total area. In these States the Federal participation may be increased above 50 per cent by a percentage equal to one half of the ratio which the area of unappropriated public lands bears to the total area. The States which benefit from this provision are given in the table below, together with the maximum limit of Government participation allowed by law:

State	Percentage of Cost of Projects Paid by Government
Arizona	61.11
California	67.37
Colorado	56.13
Idaho	59.02
Montana	53.04
Nevada	37.23
New Mexico	61.51
Oregon	61.14
Utah	74.85
Wyoming	64.65

Participation by the Government in the cost of individual projects has also been limited from the beginning to a certain amount per mile of road exclusive of the cost of bridges of more than 20-foot span. At first this limitation was \$10,000 per mile. In 1919, on account of the high prices of material and wages of labor then prevailing it was increased to \$20,000 per mile. This provision continued in force until the fiscal year 1923, when, the general level of construction costs having fallen, the limit of participation was reduced to \$16,250 per mile for the fiscal year 1923 and \$16,000 per mile thereafter.

The Federal Aid Highway System.

The most important departure from the previous policy brought about by the Federal Highway Act was the requirement that all future appropriations of Federal money be spent upon a connected system of inter State and inter county roads limited to 7 per cent of the mileage of highway in existence in each State at the time of the passage of the act. This system is known as the Federal aid highway system. Under previous legislation the Federal funds could be used on any road which carried, or which might at some future time carry, the mails. The new act, by altering this principle, provided for the use of Federal money in such a way as to expedite the completion of a connected system of roads and acted as an incentive to the States to concentrate their resources upon the development of their roads in accordance with an orderly and reasonably limited program.

Under the terms of the act not more than three-sevenths of the roads are to be primary highways of inter-State importance, the remainder being secondary roads or roads of inter-county importance. Taken together, however, both classes constitute the main roads of the country.

Immediately after the passage of the act the work necessary for the carrying out of this important provision was begun. The first step was a request by the Secretary of Agriculture for the State highway departments to certify to him the total mileage of roads existing at the time of the passage of the act. This done, the highway departments were asked to submit tentative maps embodying their recommendations as to the roads to be included in the system. These maps, as submitted, have been carefully reviewed by the Bureau of Public Roads, especially for the purpose of insuring the necessary inter-State connections, and conferences of officials of the bureau have been held with the highway officials of groups of neighboring States to adjust such differences as have appeared. When the Bureau of Public Roads is ready to approve a State system it submits its recommendation to the Secretary of Agriculture, who acts, according to his judgment, on the basis of the State and bureau recommendations.

In this way the systems of 38 States have been approved to date and it is anticipated that the remaining 10 systems will be approved by the end of the present summer.

Pending the final approval of the State systems the Secretary of Agriculture is approving the allotment of Federal funds for the improvement

of projects where it is clear that such projects will be included in the system as finally approved. The total mileage of the 38 approved systems is 121,262 miles. The maximum mileage that can be included in the remaining 10 systems is 57,735 miles. It is certain, therefore, that the entire system will not include more than 178,998 miles. The certified total mileage, the limiting seven-per cent mileage in each of the States and the mileage of the approved systems are given in the following table:

State	<u>Certified Total Mileage</u>	<u>Limiting 7 per cent Mileage</u>	<u>Mileage of Approved systems</u>
Alabama	66,551	3,958	....
Arizona	21,400	1,498	1498
Arkansas	71,960	5,037	....
California	70,000	4,900	4467
Colorado	48,000	3,360	3360
Connecticut	12,000	840	835
Delaware	3,900	266	294
Florida	27,548	1,930	1888
Georgia	80,392	5,662	....
Idaho	40,200	2,814	2783
Illinois	96,285	6,740	4987
Indiana	70,946	4,966	3957
Iowa	109,113	7,638	7154
Kansas	124,143	8,690	6423
Kentucky	53,000	3,710	3250
Louisiana	40,000	2,800	....
Maine	23,104	1,618	1393
Maryland	14,310	1,036	1036
Massachusetts	20,525	1,437	1308
Michigan	75,000	5,250	4582
Minnesota	103,050	7,213	6723
Mississippi	47,000*	3,290*	....
Missouri	111,510	7,806	7040
Montana	67,100	4,697	4697
Nebraska	80,272	5,619	5500
Nevada	22,000	1,540	1408
New Hampshire	14,112	988	988
New Jersey	17,120	1,198	983
New Mexico	47,607	3,332	3258
New York	81,973	5,731	4498
North Carolina	63,863	4,470	3913
North Dakota	106,202	7,434	4855
Ohio	84,497	5,916	4506
Oklahoma	112,698	7,889	....
Oregon	41,326	2,928	2814
Pennsylvania	90,000	6,300	3954
Rhode Island	2,368	166	165
South Carolina	52,318	3,662	....
South Dakota	115,390	8,077	....
Tennessee	65,204	4,564	....
Texas	182,316	12,797	....
Utah	24,057	1,684	1430
Vermont	14,900	1,043	1043
Virginia	53,338	3,733	3016
Washington	42,428	2,970	2888
West Virginia	31,629	2,214	1901
Wisconsin	78,800	5,516	3400
Wyoming	46,320	3,243	3099
	<u>2,859,575</u>	<u>200,170</u>	<u>121,262</u>

*Estimated, not certified.

Not all of this mileage remains to be improved. Large parts of it, especially in the Eastern States, have already been improved and are in good condition for travel. To a considerable degree Federal aid has already entered into their improvement, and other parts have been improved entirely at State or county expense. The systems of the three small States of Delaware, Maryland and Rhode Island are already completed or practically completed. New York and other Eastern States will complete the work projected in a few road building seasons, and other States have made considerable progress in the improvement of the designated systems. Federal aid to these States will be used to fill in the gaps and improve the type of roads already improved.

Nor does it follow that the remaining unimproved parts of the system will be improved only with Federal aid. Indeed it is hoped and anticipated that large parts will be improved with State or State and county revenues. The only requirement of the Federal Highway Act is that hereafter all Federal money must be expended on the approved system.

Interesting Facts About Federal Highway System.

An analysis of the State sections of the system approved to date indicates that practically every city in the United States of 5000 population or more will be either directly on the system or connected with it by an improved State or county road. More than 90 per cent of the population of the United States as a whole will reside within 10 miles of a road which is included in the system. In a number of States this percentage reaches practically 100. In no State, it is believed, will the percentage fall much below 70, even in such States as Arizona, where the sparse popula-

tion is widely scattered. Practically every traversable pass in the Western mountains will be occupied by a link of the system, indicating that from the standpoint of trans-continental travel the system will furnish practically complete service. Nearly the entire mileage of the popular trails, such as the Lincoln and Lee highways, the Dixie and Bankhead highways, the National Old Trail and others will be included in the system, and alternate routes will be included in place of sections of these roads omitted, which in every case will be superior, for one reason or another, to the section omitted.

Maintenance Requirements Strengthened.

One of the important amendments made by the Federal Highway Act was the strengthening of the maintenance requirements of the previous legislation. From the outset the States had been required to maintain their Federal-aid roads under penalty of the loss of future allotments. The new law strengthened this provision by requiring the States, within 60 days of notification by the Government, to place their Federal-aid roads in satisfactory condition of maintenance. If any State fails to comply, the Secretary of Agriculture is directed to withhold future allotments of aid and to repair the road or roads himself charging the cost to whatever balance of Federal funds there may be remaining to the credit of the State, and directing the State to refund such expenditures as a condition to the resumption of Federal-aid payments. When the cost is refunded it is to be reapportioned among all the States in accordance with the formula that has been described, so that the State loses all but a small portion.

Progress of Federal Aid Road Work

The mileage of Federal-aid roads completed from July 11, 1916 to June 30, 1923, inclusive, was 26,536.6 miles. This mileage includes 3,239.4 miles on which construction is completed, but on which the Federal Government has not yet made its final payment. More than 8,820 miles was completed in the fiscal year ending June 30, 1923, an annual addition which is second only to the mileage completed in the fiscal year 1922 when more than 10,000 miles was added.

In addition to this mileage completed on June 30, projects under construction on the same date totalled 14,771.7 miles. The estimated cost of these projects was \$274,080,168.53, and the Federal aid allotted to them amounted to \$134,395,548.82. On June 30 they were reported as 53 per cent complete in the aggregate.

The detailed statistics of projects completed and under construction are included in the tables on pages ___ and ___; and the manner in which the Federal aid funds have been obligated and allotted to projects which, on June 30, 1923, were under construction or completed is illustrated in the chart on page ___. The character of the Federal aid roads completed on June 30 is indicated by the table on page ___.

Status of Federal Aid Projects, June 30, 1943.

State	*Projects on which Construction is Completed		
	Total Cost	Federal Aid	Miles
Alabama	4,019,321.29	1,909,857.97	389.9
Arizona	6,597,191.49	3,244,070.15	376.6
Arkansas	9,458,362.57	3,708,072.12	628.2
California	11,163,113.42	4,898,862.75	445.3
Colorado	7,198,057.50	3,535,085.97	428.4
Connecticut	2,774,547.45	1,104,148.85	64.6
Delaware	2,596,698.72	793,779.83	57.7
Florida	1,124,051.73	543,265.42	58.5
Georgia	14,870,140.47	6,815,689.56	1013.4
Idaho	6,980,673.73	3,272,111.01	426.1
Illinois	25,245,248.11	11,431,152.90	744.8
Indiana	6,421,753.53	3,118,142.44	179.6
Iowa	16,634,047.52	6,345,301.41	1190.3
Kansas	19,342,568.14	5,505,120.04	480.5
Kentucky	7,148,568.93	3,054,130.71	303.1
Louisiana	8,080,182.44	3,446,795.38	649.9
Maine	5,127,302.22	2,465,913.67	160.0
Maryland	5,515,021.21	2,623,422.14	192.1
Massachusetts	7,928,542.48	3,269,044.83	189.9
Michigan	11,324,286.63	5,209,532.02	422.4
Minnesota	20,378,348.93	3,277,487.10	1930.6
Mississippi	5,769,171.25	2,734,870.97	610.7
Missouri	8,676,421.77	3,923,216.22	549.1
Montana	8,232,994.24	4,059,527.14	741.8
Nebraska	7,731,960.91	3,723,496.95	1381.1
Nevada	3,456,128.03	1,849,973.05	230.8
New Hampshire	2,423,610.72	1,162,733.63	141.7
New Jersey	6,009,019.13	2,162,423.52	121.4
New Mexico	5,259,031.50	2,740,566.06	700.6
New York	12,167,368.89	5,247,342.01	336.6
North Carolina	12,914,112.46	5,766,073.66	394.9
North Dakota	6,976,095.45	2,901,971.07	966.0
Ohio	24,894,338.74	8,637,903.51	717.1
Oklahoma	10,376,743.89	4,729,423.11	373.5
Oregon	10,548,043.84	4,879,526.24	543.9
Pennsylvania	33,266,896.80	12,700,058.79	657.0
Rhode Island	1,494,075.35	647,634.96	38.6
South Carolina	6,479,912.28	3,034,967.78	715.0
South Dakota	6,072,615.05	2,976,861.19	679.2
Tennessee	5,476,962.80	2,668,758.10	206.9
Texas	33,022,329.27	12,691,371.74	2520.3
Utah	2,698,236.51	1,534,326.52	177.6
Vermont	1,370,715.63	689,433.75	53.1
Virginia	8,060,877.57	3,893,259.86	456.9
Washington	10,356,980.82	4,819,105.70	419.8
West Virginia	4,535,726.58	2,912,262.83	223.8
Wisconsin	15,595,746.00	6,035,489.24	1051.0
Wyoming	4,937,115.95	2,397,699.33	546.4
	457,619,051.95	195,166,293.20	26,536.6

* Includes 3,239.4 miles of projects on which construction is completed but on which the final Federal-aid payment is pending.

Status of Federal Aid Projects, June 30, 1923.

State	Projects under Construction			
	Total Estimated Cost	Federal Aid	Mileage	Per Cent Complete
Alabama	9,407,674.00	4,703,836.90	599.2	52
Arizona	2,333,821.33	1,401,739.79	217.4	73
Arkansas	5,122,510.39	1,995,044.73	308.4	61
California	8,356,181.16	4,851,486.26	401.4	75
Colorado	2,884,581.53	1,539,967.14	134.1	85
Connecticut	913,130.34	404,031.50	21.0	58
Delaware	368,627.36	170,222.50	10.6	30
Florida	5,797,436.67	2,876,418.43	168.0	73
Georgia	6,558,427.80	3,245,319.35	602.2	57
Idaho	1,790,030.72	987,178.91	125.2	50
Illinois	5,049,484.02	2,522,277.94	176.8	41
Indiana	8,629,725.20	4,154,594.64	250.2	36
Iowa	10,137,110.18	4,842,569.96	391.2	57
Kansas	14,501,386.83	4,975,360.85	463.0	56
Kentucky	6,768,799.64	3,280,001.64	279.7	56
Louisiana	3,158,264.41	1,566,366.85	210.5	33
Maine	2,135,666.55	936,355.79	75.1	57
Maryland	1,861,271.90	839,317.90	68.3	52
Massachusetts	3,442,997.59	1,199,880.57	63.6	47
Michigan	8,213,492.16	4,057,064.34	312.0	39
Minnesota	6,658,151.31	2,850,889.13	501.4	73
Mississippi	5,877,127.03	2,922,879.28	357.5	54
Missouri	14,014,866.89	6,762,393.06	697.6	40
Montana	987,960.86	518,691.96	96.3	44
Nebraska	4,247,845.98	2,068,710.03	600.8	82
Nevada	2,364,289.40	2,012,530.41	223.7	58
New Hampshire	651,206.46	321,775.49	27.7	36
New Jersey	1,720,379.10	540,560.00	27.0	72
New Mexico	2,806,291.62	1,699,227.45	457.7	63
New York	21,448,074.56	8,606,153.89	551.0	36
North Carolina	16,169,932.20	2,242,427.66	177.2	35
North Dakota	3,366,536.49	1,623,273.10	675.2	65
Ohio	10,917,048.45	4,662,306.68	293.2	46
Oklahoma	4,950,567.18	2,169,237.13	242.4	49
Oregon	3,067,649.30	1,589,916.17	177.4	30
Pennsylvania	10,584,512.17	3,666,305.00	189.3	79
Rhode Island	712,437.22	308,245.34	16.0	33
South Carolina	5,216,889.66	2,158,428.31	453.0	77
South Dakota	4,633,527.23	2,377,941.43	559.9	43
Tennessee	11,572,521.97	5,750,831.30	472.6	49
Texas	19,559,289.07	6,941,575.48	1,321.2	50
Utah	3,229,266.15	1,903,292.08	212.0	60
Vermont	1,068,146.61	534,073.27	39.0	53
Virginia	7,035,356.93	3,429,945.16	271.4	38
Washington	1,930,166.24	873,450.00	57.2	32
West Virginia	4,796,260.96	2,065,280.11	161.9	73
Wisconsin	3,301,619.18	1,396,569.13	265.3	53
Wyoming	3,381,428.51	1,952,546.38	278.9	53
Totals	274,080,168.53	124,395,548.82	14,771.7	53

Character of Federal Aid Projects Completed on June 30, 1923.

Character of Project	Estimated Total Cost		Federal Aid		Mileage	
	Amount	Per Cent of total	Amount	Per Cent of Total	Amount	Per Cent of Total
Graded and drained	41,534,572.42	9.1	18,079,680.80	9.3	6,410.4	20.4
Sand-clay	21,551,310.23	4.7	10,104,260.43	5.2	2,839.4	10.7
Gravel	103,275,524.52	22.6	46,535,920.32	23.9	10,457.0	39.4
W. B. Macadam	13,721,369.60	3.0	5,974,223.52	3.1	796.5	3.0
Bit. Macadam	32,912,090.45	7.2	14,485,599.52	7.4	1,085.6	4.1
Bit. Concrete	25,646,752.51	5.6	10,536,703.50	5.3	777.0	2.9
Concrete	187,102,636.95	40.9	76,881,363.13	39.4	4,760.0	17.9
Brick	16,884,251.98	3.7	5,436,536.15	2.8	367.7	1.4
Bridges	14,990,543.29	3.2	7,087,492.95	3.6	43.1	0.2
Total all types	457,619,051.95	100.0	195,121,777.32	100.0	26,536.6	100.0

National Forest Roads

There are more than 156,000,000 acres of land in the national forests of the United States. By far the larger part of this vast area lies in the States west of the 103d meridian.

To develop these large areas, make available their untold resources of timber, ore and water power, to open their matchless beauties to the view of the tourist, and to provide connecting links where the State highway systems must cross the forest lands, the Congress has appropriated or authorized a total of \$47,000,000. The amounts appropriated or authorized by the various acts are given in the following table under the head of the fiscal years for which each appropriation was made.

Appropriations for National Forest Road Construction

Year	By Act of July 11, 1916	By Act of Feb. 23, 1919	By Act of Nov. 9, 1921	By Post Office Appropriation Act for fiscal Year 1925	Total
1917	\$1,000,000				1,000,000
1918	1,000,000				1,000,000
1919	1,000,000	3,000,000			4,000,000
1920	1,000,000	3,000,000			4,000,000
1921	1,000,000	3,000,000			4,000,000
1922	1,000,000		5,000,000		6,000,000
1923	1,000,000		10,000,000		11,000,000
1924	1,000,000			6,500,000 ^{a/}	7,500,000
1925	1,000,000			6,500,000 ^{a/}	7,500,000
1926	1,000,000				1,000,000
Total	\$10,000,000	9,000,000	15,000,000	13,000,000	47,000,000

^{a/} \$6,500,000 authorized. \$3,000,000 since appropriated
^{d/} Authorized only, none yet appropriated.

In addition to these appropriations Congress has provided that 10 per cent of the revenue from sale of timber, grazing privileges, etc., be used for road purposes. In the ten fiscal years preceding June 30, 1923, this 10 per cent fund has amounted to approximately \$3,500,000, and in the last ten years has ranged from approximately \$338,000 to \$472,000 yearly.

A portion of the above funds is being expended by the U. S. Forest Service for the building of trails and minor roads needed for the building of trails and minor roads needed for the control and fire protection of the forests. The balance is being expended by the Bureau of Public Roads for roads which will form parts of the Federal-aid highway system in the various States.

Forest Road Progress.

Up to June 30, 1923 the mileage of major forest roads completed amounted to 1536 miles. On the same date there were 932 miles under construction which were about 32 per cent complete.

The mileage of forest road under construction and completed in each State on June 30 is given in the table on page _____

Forest Road Projects Under Construction and Completed.

State	Projects Under Construction			Projects Completed		
	No. of Projects	Miles	Dispersed to Mile (A)	No. of Projects	Miles Built	Cost of Construction (A)
Alaska †	7	19.48	276,128.21	10	57.12	501,094.91
Idaho	10	40.49	364,053.32	6	59.13	788,552.70
Montana	13	96.30	218,458.09	23	158.59	1,082,050.33
Oregon	27	175.60	1,288,050.76	35	169.45	2,665,260.69
Washington	12	69.59	413,153.91	20	89.87	1,642,583.04
California	5	52.42	251,614.42	20	91.30	1,639,861.34
Nevada	2	20.08	31,378.10	2	25.90	112,695.64
Colorado	10	120.74	877,999.13	9	93.40	582,348.38
South Dakota	2	11.72	93,914.43	2	21.90	166,264.66
Wyoming	2	9.54	30,610.66	4	103.40	718,494.09
Minnesota				2	15.14	179,904.29
Arkansas	1	9.66	95,526.46	1	33.92	86,415.92
Florida	1	0.87	4,640.49	4	28.62	195,596.18
Tennessee				1	12.23	157,611.03
New Hampshire	2	2.24				
North Carolina				2	31.00	327,741.01
Virginia				1	6.48	92,739.13
Oahu	12	195.06	347,083.08	10	111.66	605,017.62
Hawaii	3	55.93	116,996.39	13	182.17	840,537.58
Utah	4	15.52	59,315.34	2	41.85	179,929.25
Arizona	3	36.79	116,983.41	6	58.75	625,973.86
New Mexico	3	32.52	52,302.23	9	114.63	624,135.81
Total	124	932.52	4,636,032.13	182	1536.71	13,769,212.16

† Figures for Alaska were taken from May report.

‡ Includes construction engineering but does not include cost of surveys and plans.

Distribution of Surplus War Materials.

The distribution of road-building machinery, equipment, automobiles, motor trucks, and supplies of various kinds of which the Army has a surplus, is one of the helpful services rendered by the Bureau.

Up to June 30, 1923, the various State highway departments had received a great variety of material valued at nearly \$198,000,000. The estimated cost to the Government of the material received by each of the States is shown in the following table:

Estimated Cost To Government
of Material Delivered

<u>State</u>	
Alabama	\$ 2,749,120
Arizona	3,388,212
Arkansas	2,806,318
California	6,683,126
Colorado	4,410,311
Connecticut	1,211,514
Delaware	449,166
Florida	2,925,687
Georgia	6,044,232
Idaho	2,008,320
Illinois	9,254,516
Indiana	6,337,540
Iowa	6,127,632
Kansas	5,710,378
Kentucky	2,695,590
Louisiana	2,396,643
Maine	1,754,677
Maryland	2,654,764
Massachusetts	2,276,507
Michigan	3,063,235
Minnesota	5,299,678
Mississippi	3,462,881
Missouri	5,658,976
Montana	2,590,766
Nebraska	3,636,507
Nevada	2,171,346
New Hampshire	862,568
New Jersey	2,983,675
New Mexico	3,223,126
New York	11,199,243
North Carolina	5,322,884
North Dakota	1,771,696
Ohio	7,912,253
Oklahoma	3,272,545
Oregon	3,125,457
Pennsylvania	7,593,871
Rhode Island	666,820
South Carolina	2,919,495
South Dakota	3,994,136
Tennessee	5,423,817
Texas	11,855,230
Utah	1,604,110
Vermont	1,078,465
Virginia	4,590,277
Washington	3,473,544
West Virginia	3,976,263
Wisconsin	5,485,978
Wyoming	1,678,227
Total	<u>197,585,872</u>