

21845

Dhananjayrao Gadgil Library



GIPE-PUNE-021845

# Highway Finance

SERVANTS OF INDIA SOCIETY'S LIBRARY,  
POONA 4

Cl. No.

Date of release for loan

Ac. No.

This book should be returned on or before the date last mentioned below.

*An overdue charge of 5 paise will be levied for each day the book is kept beyond this date.*

27 MAY 1968

X-11-75.

F9

21845

## **APPENDICES**

- A Rural highway income by sources 1904-1927**
- B Survey Connecticut highway financing**
- C Survey Maryland highway financing**
- D Survey Illinois highway financing**
- E Survey Nevada highway financing**
- F Motor vehicle registration fee and gasoline tax receipts  
by years**
- G Sources state highway income 1927**
- H Sources county and local highway income 1927**

## APPENDIX A

### Rural Highway Income by Sources

Year	Bonds	% of Total	Federa Aid	% of Total	Motor Vehicles Fees	Gasoline Taxes	All Motor Taxes % of Total	Genera Property Taxes	% of Total	Miscellaneous	% of Total	Total
1904..	\$3,530,470.93 <sup>1</sup>	.....	.....	.....	.....	.....	.....	\$56,422,710.64 <sup>3</sup>	.....	.....	.....	\$59,953,000.00
1909..	.....	.....	.....	.....	\$938,860.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	.....
1913..	.....	.....	.....	.....	8,192,253.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	187,524,193.00
1914..	.....	.....	.....	.....	12,332,031.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	240,263,784.00
1915..	40,000,000.00 <sup>1</sup>	.....	.....	.....	18,000,000.00 <sup>2</sup>	.....	.....	208,976,399.00	.....	.....	.....	266,976,399.00
1916..	.....	.....	.....	.....	25,865,369.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	.....
1917..	.....	.....	.....	.....	37,501,233.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	.....
1918..	.....	.....	.....	.....	51,447,419.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	.....
1919..	.....	.....	.....	.....	64,697,255.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	64,697,255.00
1920..	.....	.....	.....	.....	102,546,212.00 <sup>2</sup>	.....	.....	.....	.....	.....	.....	500,000,000.00
1921..	438,109,273.00	38.1	\$79,333,226	6.0	118,940,706.00 <sup>2a</sup>	\$3,635,460.00 <sup>2a</sup>	.....	415,680,010.00	36.2	93,689,221	8.2	1,149,437,896.00
1922..	.....	.....	.....	.....	117,028,824.75 <sup>2a</sup>	11,923,442.61 <sup>2a</sup>	.....	.....	.....	.....	.....	898,352,302.00 <sup>4</sup>
1923..	216,969,157.00	20.9	72,343,401	6.9	182,793,998.00 <sup>1a</sup>	20,010,285.00 <sup>2a</sup>	19.5	482,790,793.00	46.5	63,782,852	6.2	1,038,690,396.00
1924..	259,190,271.00	22.4	91,400,832	8.0	201,673,149.00 <sup>2a</sup>	64,782,017.00 <sup>2a</sup>	23.0	503,153,549.00	.....	37,564,169	3.2	1,157,763,987.00
1925..	285,815,138.00	21.2	92,180,406	6.8	246,390,601.00 <sup>2a</sup>	114,162,319.00 <sup>2a</sup>	26.7	569,875,742.00	42.3	39,018,000	3.0	1,347,442,213.00
1926..	259,554,653.00	17.0	80,459,671	5.3	297,715,804.00 <sup>2a</sup>	209,551,700.00 <sup>2a</sup>	33.5	599,214,726.00	39.8	68,712,386	4.6	1,515,208,940.00
1927..	272,260,720.00	17.3	80,459,671	5.1	299,513,810.00 <sup>2a</sup>	216,678,981.00 <sup>2a</sup>	32.6	641,756,704.00	40.6	69,040,192	4.4	1,579,710,078.00

<sup>1</sup>Local bond issues.

<sup>2</sup> Total gross receipts.

<sup>2a</sup> Amount available for highway work.

<sup>3</sup> Includes state funds on state aid roads.

<sup>4</sup> Does not include bond interest and principal payments.

## APPENDIX B

### Connecticut

Area (sq. miles—46th in rank).....	4,965
Population (1925 est.).....	1,531,255
Population per square mile.....	306
Total highway mileage.....	14,000
State highway system mileage.....	1,970
Total motor vehicle registration.....	310,000
Average motor vehicle license fee.....	\$23.80
Average gasoline tax payment.....	\$11.20
Average investment per mile state surfacing.....	\$36,000 <sup>1</sup>
Average cost per mile for maintenance.....	\$2,200
Date establishment state highway department.....	1895
Date establishment state highway system.....	1913

Connecticut is a state of dense population, predominantly urban and industrial (more than 80 per cent of the population in cities). Highway improvement began early in the period of motor vehicle development and has progressed gradually and concurrently with the growth of traffic, financed entirely with current revenue. It is probably the most representative of the "pay-as-you-go" states.

While the state early began road improvement as a unit it was providing for a light, slow moving traffic. As a result the state in latter years has faced a very heavy program of reconstruction coincident with a very large demand for expansion of its main road system.

The location of the state between New York, Massachusetts and Rhode Island has at the same time resulted in a heavy movement of interstate traffic on Connecticut highways.

#### Created One of First State Highway Departments

Connecticut first created a State Highway Department in 1895 which undertook the improvement of the main roads, known as state-aid roads, in cooperation with towns and counties until 1913, when a trunk line system of roads was established.

Road improvement was largely in the hands of the counties and local units and financed from local property taxation until about 1913.

Private toll roads were rather extensive but as the state

<sup>1</sup> Converted to low type.

assumed more and more responsibility these were absorbed in the state system.

### **State-Aid Principle Adopted**

State participation in road financing began with the paying of one-third of the cost of roads approved by the state for construction under such assistance; the towns paid one-third and the counties one-third. The towns maintained the roads.

In 1897 the counties were eliminated and the towns and the state shared equally in the cost of improvement. In the same year there was recommended the creation of a definite system of highways.

In 1899 the town share for construction was further reduced.

In 1907 the movement toward a trunk-line system began with agitation for the joining together of the state-aid roads.

In 1911 the state took over the cost of repairs to trunk-line roads, but the trunk-line *system* was not established until 1913.

### **Trunk-line System Constructed and Maintained by State**

While the state undertook the responsibility for the construction and maintenance of a trunk-line system of roads in 1913 the policy of state-aid roads was also kept in force. In 1923 the state agreed to maintain and reconstruct state-aid roads on an equal basis with the trunk-line roads.

### **Motor Taxation**

(Table 1)

Motor vehicle registration did not begin until 1903 and then was not considered as a revenue measure.

Since then, however, the registration fees have been consistently raised in an effort to produce more revenue for highway purposes. This was particularly true of the trucks which were steadily increased by every session of the general assembly from 1911 to 1917.

The gasoline tax was added in 1921, but used for the General Fund until 1923.

The average payment is considerably above the U. S. average, amounting to about \$35.00 per vehicle to the U. S. average of \$25.00.

Motor tax receipts were turned into the general fund of the state until 1908, and did not apply specifically to road work.

### **1913 Turning Point in State Obligation**

The establishment of the trunk-line system in 1913 meant the immediate expenditure of more funds.

At that time less than 6 miles of state roads were improved with the more modern types of surfacing. The total length of improved roads was 924 miles of which 272 miles were merely graded and the balance surfaced with macadam or gravel.

The total state expenditures for state-aid roads and trunk-line roads from 1895 to 1913 had been \$7,302,000. Nearly half as much as this was spent in the one year 1913, largely derived from the taxation of real property.

### **General Tax Funds Used for Highways**

While the state expenditures for road construction were limited to very small amounts annually during the years before 1913, the funds were entirely derived from general taxes. Total expenditures did not reach \$1,000,000 annually until 1910. Motor taxes in that year amounted to \$160,000.

### **Three Sources of Revenue**

The state has drawn on general taxation for a considerable portion of the highway funds, supplemented after 1916 by Federal Aid, and from 1913 on by an increasing amount of motor vehicle taxes.

### **State Shifted Burden to Road User**

The state policy has been one of shifting more and more of the burden to the road user. This is borne out by the fact that since 1913 the maintenance and reconstruction of

trunk-line highways has been financed from motor vehicle receipts. From 1907 to 1923 the maintenance of state-aid roads was financed from general appropriations, but since the latter date has been provided for from motor vehicle tax receipts.

The taxes on the motor vehicle have been consistently increased as noted above.

A comparison of the annual state highway department expenditures with the motor vehicle tax receipts indicates how close these receipts come to the total of highway expenditures.

### **Limited Funds Increased Costs**

It is apparent that high road maintenance costs are a direct charge upon the road user in that his taxes are required to meet such charges. In addition high vehicle operating costs resulting from inadequate facilities constitute another direct cost.

A transport survey conducted jointly by the U. S. Bureau of Public Roads and the Connecticut State Highway Department in 1922-23 sets out these two points rather sharply:

"The old roads have been widened and strengthened, maintained to the limit of their serviceable life, and replaced as rapidly as possible with more adequate surfaces. The earlier investment has been salvaged to the fullest degree possible, and there are few, if any, instances in which it appears that the type of road constructed has been superior to the need. On the contrary, it may be said that an effort has been made to prolong the service of the old roads beyond their economic life with consequent heavy expense. Yet the limited funds at the disposal of the department at all times have doubtless permitted no other course. The same limitation is responsible for the fact that there remain on some of the most important roads sections of considerable length in the aggregate which are entirely inadequate for the present traffic . . ."

Later on in the same report:

"As a result of the imposition of the gasoline tax in 1921 and the increase in license fees in the same year, the revenues obtained from those sources now constitute a fund sufficient to cover more than 70 per cent of the current gross highway expenditures of the state and over 90 per cent of the net expenditure after deduction of the refunds paid by the towns. There are few states in which the tax payment per vehicle is as great and few, therefore, in which the motor vehicle owners may more justly lay claim to adequate highway service.

"To supply such service the highway commissioner estimates that it will be necessary to rebuild nearly 1,300 miles of the state



system by 1930. As only 563 miles have been reconstructed during the entire period since 1913, it is evident that the state highway budget must be greatly increased to do the work planned.

"The state is now confronted with a situation in which it is necessary to augment the funds at its disposal in order to provide for essential reconstruction of existing roads, and it is a question whether they can be further increased without encountering serious resistance. Certainly the motorists can not be counted upon to raise more than a small portion of the additional funds required. Yet, unless funds are made available from some source to complete the program outlined by the highway commissioner, the maintenance of the existing roads will quickly become an even greater burden."

### **System Constantly Expanded**

In 1913 there was a net mileage of 924 miles of state highways, of which 605 miles were trunk-line highways and 319 miles state-aid roads.

This mileage has now grown to a total of 1,966 miles, both trunk-line and state-aid which have now almost entirely lost their identity.

These additions have also been a factor in the added burden upon the resources available to the state for its construction and maintenance program.

### **Reconstruction and High Maintenance**

In 1928 the total highway mileage of the state was 13,987 of which 1,966 miles were trunk-line and state-aid. Of this latter total, 1,851 miles was surfaced, but only 723 miles or 36% was of the modern types.

While the state spent about \$13,000,000 in 1927 (motor taxes were \$10,500,000) 34% of these funds went for maintenance, or an average of \$2,200 per mile.

### **New Traffic Requires Reconstruction**

The heavy increase in motor vehicle traffic from 1913 on has brought with it the need for change in highway surfacing types. This has necessitated a heavy reconstruction program at the same time that additional mileage was greatly needed.

Thus, from 1913 on, the state has been obliged to devote as much effort to reconstruction as to new construction, with the former work assuming a dominating position from 1925 on.

For the period from 1913 to 1923 approximately one-third of the work was reconstruction, while from 1923 on, it has been more than 65% of the total of all construction. (See Table 3.)

This has been taking place while the state system high type surfaced mileage is less than 40% of the total state system.

### Funds Too Limited for Adequate Work

The pay-as-you-go plan in Connecticut has resulted in no state bonded debt for highways, and no interest payments for such account. There is to be considered on the other hand such items as the present condition of the system and whether even today the funds available will bring the surfacing requirements up to the proper standard without undue costs in delay, high maintenance, congestion and vehicle operating costs. Maintenance in the past appears to have been high, although there has been considerable work of a reconstruction nature included.

The motor vehicle registration fees and gasoline taxes have gone far in the provision of the funds much needed, but do not seem to have been adequate to accomplish the desired result shortly, although the average tax has been fairly heavy.

The offsets to the interest payments on bonds may thus be indicated from the experience of Connecticut as:

- (a) High road maintenance costs, due to desire to keep roads in service as long as possible.
- (b) Inadequately surfaced system of highways due to necessity for reconstruction when a heavy motor traffic developed.
- (c) High motor vehicle operating costs resulting from inadequate surfacing, both types and mileage.
- (d) High motor vehicle taxes.

TABLE 1

#### *Motor Vehicle Taxation by Years*

Year	Automobile Receipts	Gasoline Tax
1907-1908.....	\$61,747.50	.....
1908-1909.....	58,534.65	.....
1909-1910.....	162,275.10	.....
1910-1911.....	230,120.89	.....
1911-1912.....	255,124.06	.....
1912-1913.....	324,963.45	.....

TABLE 1—(Continued)  
Motor Vehicle Taxation by Years

Year	Automobile Receipts	Gasoline Tax
1913-1914.....	\$406,623.34	.....
1914-1915.....	536,970.09	.....
1915-1916.....	768,727.91	.....
1916-1917.....	1,059,066.10	.....
1917-1918.....	1,306,686.84	.....
1918-1919.....	1,361,898.44	.....
1919-1920.....	1,816,809.93	.....
1920-1921.....	2,126,772.88	.....
1921-1922.....	3,405,084.75	.....
1922-1923.....	4,227,767.23	.....
1923-1924.....	5,058,908.73	\$962,479.44
1924-1925.....	5,582,071.25	1,130,255.54
1925-1926.....	6,110,728.74	2,404,725.59
1926-1927.....	6,837,584.78	2,886,648.54
1927-1928.....	7,360,782.87	3,106,932.49
Total.....	\$49,059,249.53	\$10,491,041.60

TABLE 2  
State Highway Expenditures by Years

Year	Total
1895.....	\$1,984
1896.....	43,546
1897.....	122,343
1898.....	78,722
1899.....	117,974
1900.....	99,159
1901.....	183,924
1902.....	129,429
1903.....	202,809
1904.....	181,589
1905.....	250,404
1906.....	167,886
1907.....	272,892
1908.....	346,470
1909.....	863,524
1910.....	1,200,946
1911.....	1,585,730
1912.....	1,453,512
1913.....	3,483,575
1914.....	3,423,218
1915.....	2,235,361
1916.....	1,950,948
1917.....	2,528,222
1918.....	3,569,306

TABLE 2—(Continued)  
State Highway Expenditures by Years

Year	Total
1919.....	\$2,385,934
1920.....	5,634,366
1921.....	7,127,961
1922.....	5,997,849
1923.....	6,912,856
1924.....	8,689,959
1925.....	8,611,936
1926.....	10,503,716
1927.....	12,783,981
Total 1895-1927.....	\$93,142,031

TABLE 3  
New Construction and Reconstruction by Years

Year	Total Constructed	Total Reconstructed	Total Miles Built
1911-12.....	923.77	54.85	978.62
1912-14.....	330.90	66.20	397.10
1914-16.....	136.78	75.73	212.51
1916-17.....	28.26	31.27	59.53
1917-18.....	20.50	34.47	54.97
1918-19.....	27.81	21.78	49.59
1919-20.....	42.66	20.57	63.23
1920-21.....	54.29	14.21	68.50
1921-22.....	77.45	60.74	138.19
1922-23.....	81.69	35.37	117.06
1923-24.....	41.93	89.78	131.71
1924-25.....	52.10	61.47	113.57
1925-26.....	95.63	104.97	200.60
1926-27.....	17.20	103.27	120.47
1927-28.....	51.05	129.38	180.43

## APPENDIX C

### Maryland

Area (sq. miles—41st in rank) . . . . .	12,327
Population (1928 est.) . . . . .	1,537,085
Population per square mile . . . . .	124.7
Total highway mileage . . . . .	14,701
Miles in state system . . . . .	2,519
Total motor vehicle registration . . . . .	285,000
Average motor vehicle license fee . . . . .	\$10.64
Average gasoline tax payment . . . . .	\$19.02
Average investment per mile state surfacing <sup>1</sup> . . . . .	\$25,300
Average cost per mile of maintenance state system . . . . .	\$1,600
Date establishment state highway department . . . . .	1898
Date establishment state highway system . . . . .	1908

<sup>1</sup> Converted to low type.

Maryland represents a state of dense population, both agricultural and industrial. The arterial highway system has been financed from bond issues based upon levies on real property with motor vehicle revenues reserved for maintenance. Latterly part of the gasoline tax funds have been devoted to secondary road improvement under State Control.

Total road mileage of the state is 14,701, of which 2,519 miles is on the state system—17%.

The entire system has been improved; 1,029 miles or 40% is of the higher type surface.

Maryland roads date from Colonial days, many of them being developed as private toll roads. Prior to state participation in road building the counties built and maintained roads from local revenues, largely taxes on real property.

#### State Early Recognized Responsibility

The state entered road building as a unit in 1898 with the establishment of an advisory commission.

The next step was the establishment of state-aid in 1904 with an annual appropriation of \$200,000 from state funds for cooperative expenditure on the more important roads.

In 1906 the main road between Baltimore and Washington was taken over for state construction and maintenance.

### **First State Bond Issue 1908**

By 1908 the whole state was awake to the need for an adequate highway system. The highway division made a special report recommending :

1. Improvement of a system of main roads and feeders.
2. Main arteries to be improved and maintained by the state.
3. Balance of this system to be built and maintained jointly by state and county.
4. The enactment of permissive legislation to acquire turnpikes.

The legislature agreed, established the State Roads Commission and authorized a bond issue of \$5,000,000 to begin the state system.

### **System Immediately Selected**

After careful survey and extensive hearings the State Roads Commission selected a road system of 1,300 miles, estimating that it could be improved for \$15,000,000.

It was recognized that two alternatives faced the State:

1. To increase property taxes very materially to improve the roads, or
2. To issue bonds, secured by the property, and pay for the roads as they were used.

The latter course was chosen with the authorization of the \$5,000,000 bond issue, followed by others until a total of \$38,000,000 had been issued to 1928; of which \$20,000,000 had been retired, with \$17,000,000 outstanding.

### **Was Fourth State to Bond for State Roads**

Maryland was the fourth state to issue bonds for state highway improvement—Massachusetts being first in 1894, New York and Rhode Island following in 1906 and Maryland in 1908.

### **Serial Plan Followed**

The first three bond issues were sold on the sinking fund basis, but this was abandoned in 1914 in favor of the straight serial bond. None were issued for more than a 15-year term.

By 1928 the state had issued a total of \$38,000,000 in bonds, of which \$20,000,000 had been retired.

The interest and principal payments on the \$20,000,000 of bonds retired has totaled \$33,000,000, so that the extra cost of early improvement of the roads was about \$13,000,000 over a 20-year period. (See A attached.)

### **Early System Completed in 1918**

The system of 1,300 miles selected in 1908 and 1910 was initially improved by 1918. Maryland was thus the first state to select a definite system of roads and complete that job.

Since that time the system has been nearly doubled by the addition of 1,200 miles from time to time, which in turn have been constructed from bond funds.

Today the state is fast approaching the time when it will be able to change from the bond plan to a "pay-as-you-go" basis, financing both new construction, reconstruction and maintenance from the current revenues.

In 1927 the State Road Commission expended more than \$10,000,000 on construction, maintenance, administration, and interest and principal on bonds.

During the same year, the motor vehicle and gasoline taxes were more than \$7,000,000.

### **Counties Spared Heavy Burden**

To 1927 the counties had issued about \$7,000,000 in bonds—less than a fifth of the state total—and then largely for the building of lateral and county roads not on the main state system.

### **Service Value State System—\$9,000,000**

The annual service value of the state system at one cent per vehicle mile amounts to more than \$9,000,000. (University of Maryland engineering survey shows in excess of average of 1,000 vehicles per day on state system in 1928.)

### **Motor Taxes Moderate**

Motor vehicles were not registered and taxed until 1910 when it was foreseen that they might be a source of future revenue, possibly reaching "\$100,000 a year."

The average registration tax was \$9.70 in 1913, but is today about \$7.50 plus a four-cent gasoline tax. The registration tax was reduced when the gasoline tax was first levied.

Registrations increased from 14,000 in 1913 to 285,311 in 1928.

All motor vehicles are also taxed as personal property.

### **User Required to Maintain Roads**

While the roads were built by the general taxpayer, the state required the user to maintain them. Thus all reconstruction, maintenance and betterments have been made from the motor tax receipts.

In 1926 the legislature authorized the use of 1½ cents of the gasoline tax for lateral road construction and ½c for grade crossing elimination.

This clearly indicates that the state policy has been to shift more and more of the burden to the user as he has increased in number and ability to pay.

### **Burden Light on Farmer**

Taxes on farm lands in the state have increased but 70% as an average from 1913-14 to 1921-22 as compared with an average increase of 126% for the United States as a whole.

Rural free delivery postal mileage amounts to 11,152 miles or almost the entire highway mileage of the state.

### **Gained Five Years on Main System Improvement**

Based on using for main road development only the funds as they would have been available from motor taxes and from the state tax used for interest and principal payments on the bonds, the state would probably have taken at least five years longer to complete the original state highway system of 1,300 miles. Under the bond plan they completed the original system in 1918 and have since doubled the original mileage and improved it.

The state is now raising the road types under the heading of maintenance chargeable to the vehicle.

The lateral roads are now being improved, some of them at present financed from bonds, but more and more of the



burden being shifted to the road user as the volume of funds available from the gasoline tax grows with road use.

Briefly the accomplishments under the bond plan have been:

- a. Saving of five years in improvement initial 1,300 miles state system. (1918.)
- b. Ability to proceed with improvement additional 1,200 miles from 1918 on.
- c. Vehicle operating cost savings on (a) and (b).
- d. Enhanced real property values.
- e. Social and economic advantage to farmers.
- f. Uniting of state by an improved main highway system at an early date. (Maryland being first to complete improvement of definitely laid out system.)
- g. Possibility of immediate action at present time on meeting traffic demands for widening, strengthening main roads, and improvement of lateral or secondary roads.

**TABLE 1**  
*State of Maryland—Loans Issued for Road Building*  
 September 30, 1928

Title of Loan	Total Amount	Amount Redeemed	Balance Outstanding	Rate	Interest Charges*
State Roads Loan.....	\$5,000,000.00	\$5,000,000.00	.....	3½%	\$2,625,000.00
Public Highways Loan.....	1,000,000.00	750,000.00	\$250,000.00	4%	595,000.00
State Loan of 1912.....	3,170,000.00	3,170,000.00	.....	4%	1,902,000.00
State Roads Loan of 1914.....	6,600,000.00	5,631,000.00	969,000.00	4%	2,491,440.00
Consolidated Loan of 1913.....	40,000.00	40,000.00	.....	4%	24,000.00
Three Million Dollar Loan.....	2,700,000.00	1,738,000.00	962,000.00	4%	960,318.00
Road Loan of 1918.....	3,000,000.00	1,519,000.00	1,481,000.00	4½%	1,091,250.00
Bridge Loan of 1920.....	250,000.00	69,000.00	181,000.00	4½%	66,825.00
Lateral and Post Road Loan, 1920.....	3,000,000.00	1,063,000.00	1,937,000.00	4½%	932,242.50
Lateral Post Road and Bridge Loan, 1922.....	3,150,000.00	675,000.00	2,475,000.00	4½%	738,900.00
Balto.-Sou. Md. Trunk Line Road Loan.....	1,000,000.00	149,000.00	851,000.00	4½%	417,240.00
Lateral and Post Road Loan, 1924.....	4,500,000.00	264,000.00	4,236,000.00	4½%	794,340.00
Bridge and Grade Crossing Loan, 1924.....	900,000.00	54,000.00	846,000.00	4½%	158,760.00
Lateral and Post Road Loan, 1927.....	2,125,000.00	.....	2,125,000.00	4½-4¾%	61,875.00
Bridge Loan of 1927.....	1,000,000.00	.....	1,000,000.00	4½-4¾%	22,500.00
	<u>\$37,435,000.00</u>	<u>\$20,122,000.00</u>	<u>\$17,313,000.00</u>		<u>\$12,881,690.50</u>

\* Total cost of interest on each loan from the date of issue to the last semi-annual interest date prior to September 30th, 1928.

NOTE: The term "Roads" or "Road Building" is intended to include all improved highways, bridges and streets which are a part of the State Highway System. The proceeds of the above loans represent practically all the money spent by the state for the construction of new roads. The counties of the state have, until recently, contributed an equal amount. The money to carry these loans and redeem them at maturity is raised by direct taxes on Real and Personal Property. All special taxes such as Motor Vehicle registration and license fees, and two cents of the Gasoline Tax, are used for maintenance and upkeep. The remaining two cents of the present Gasoline Tax, recently inaugurated, is being used for new construction, and is intended to relieve the Counties of the contributions formerly furnished by them. The general conclusion is, then, that the taxpayer built the roads and the motorist maintained them until the Gas Tax was raised from two to four cents in April, 1927, since which time the motorist has also had a share in the building.

TABLE 2

*Motor Vehicle Registration and Taxes by Years*

Year	Registration Total	Registration Fees	Gasoline Tax	Total
1907.....		\$ 2,719.00		
1908.....		4,860.00		
1909.....		3,016.00		
1910.....		9,301.00		
1911.....		75,000.00		
1912.....		60,000.00		
1913.....	14,217	138,845.91		
1914.....	20,213	190,653.10		
1915.....	31,047	285,859.27		
1916.....	44,245	565,302.00		
1917.....	60,943	807,395.00		
1918.....	74,666	1,189,984.00		
1919.....	95,634	1,776,410.22		
1920.....	102,841	2,124,924.84		
1921.....	136,249	2,460,162.04		
1922.....	165,624	2,824,843.91	\$ 395,545.53	\$3,220,389.44
1923.....	169,351	3,536,955.20	737,896.00	4,274,851.20
1924.....	198,398	2,332,953.00	1,641,994.00	3,975,947.00
1925.....	234,247	2,576,301.00	2,003,632.00	4,579,933.00
1926.....	252,852	2,928,268.00	2,357,577.00	5,285,845.00
1927.....	270,935	2,987,912.00	4,314,297.00	7,302,209.00
1928.....	285,311	3,034,621.00	5,425,873.00	8,745,805.00

TABLE 3

*Steps in Progress Highway Legislation in Maryland*

- 1666 Enactment first road law of 1666, establishing county road overseers.  
1787 Experiment with publicly owned toll roads.  
1804 Experiment with privately owned toll roads.  
1870 Joint public and private roads.  
1898 State advisory agency created, looking to uniformity among counties.  
1904 State financial aid in road construction— $\left\{ \begin{array}{l} \$10,000 \\ \$20,000 \end{array} \right\}$  Annual appropriation  
1906 State assumption of responsibility for construction and maintenance a main road 9W—\$30,000 each of first three years.  
1908 Recognition of responsibility of State for system of main roads and authorization of bonds to build and maintain same. First bond issue \$5,000,000.  
1916 Cooperation with Federal Government on a national system, practically co-extensive with State system.  
1922 Levy gasoline tax.  
1918-1928 Extension State highway system mileage, addition special services such as snow removal, grade crossing elimination, State camps.  
1924 Increase gasoline tax.  
1926 Increase gasoline tax.

*Maryland State Highway Department Expenditures*

1898-1927

1898-1907.....	\$1,517,823
1908-1919.....	28,055,959 <sup>1</sup>
1920.....	3,000,000
1921.....	7,616,427
1922.....	5,181,125
1923.....	7,762,372
1924.....	12,727,535
1925.....	12,024,781
1926.....	10,597,544
1927.....	10,500,000 <sup>1</sup>
	\$98,983,566
Deduct bond retirements.....	20,122,000
	\$78,861,566
Add interest on bonds still outstanding.....	11,000,000 <sup>1</sup>
	\$89,861,566

<sup>1</sup> Estimated.

## APPENDIX D

### Illinois

Area (sq. miles—23rd in rank).....	56,665
Population (1925 estimate).....	6,964,950
Population per square mile.....	122.8
Total highway mileage.....	97,000
State highway system mileage.....	9,800
Total motor vehicle registration.....	1,504,000
Average motor vehicle license fee (gross).....	\$10.32
Average gasoline tax payment.....(3c tax effective August 1, 1929, will amount to about \$15 per vehicle per year.)	
Average investment per mile state surfacing.....	\$26,000*
Average cost per mile of maintenance.....	\$360
Date establishment state highway department.....	1913
Date establishment state highway system.....	1917

\* Converted to low type.

Illinois is a state in which the systematic improvement of the highways was deferred until traffic had reached an advanced state of development, necessitating an accelerated program of construction, and in which the need was met by the issuance of bonds financed by vehicle taxes.

It is largely an agricultural state, large in area, and heavily populated. The northern part of the state is almost entirely industrial and urban. About two-thirds of the population is urban, i. e., located in towns of 10,000 population or more.

The present total rural highway mileage is 97,287, divided into:

State system.....	9,890
State aid or secondary system.....	23,011
Local roads.....	64,386

The state system is built and maintained by the Division of Highways, the state aid system constructed by the counties under supervision of the state and paid for by funds allotted by the state. Where they wish to build roads faster than such funds are available they may finance the whole project subject to approval of plan by the Division of Highways. Where such roads are taken into the state system and are of suitable design, the entire cost may be refunded to the counties. The roads are then maintained by the counties.

### **No State Action Until 1913**

Prior to 1913 all rural road construction and maintenance was in the hands of the counties, townships and local political sub-divisions.

Road work was financed by poll taxes, (payable in cash or labor) by tax levies on real property and some miscellaneous revenues, all raised and expended locally.

There was a considerable mileage of light-surfaced roads completely under local control, but no connected system of any kind and no uniform or concerted effort toward the creation of such a system.

### **State Aid in 1913**

This condition and the growing demand for better roads led to the enactment of the State Aid Law in 1913, which created the State Highway Department. This law also specified that there should be a connected system of county trunk roads, approximately 17,000 miles in length.

It further provided for the appointment of a county superintendent of highways of each county.

### **Motor Tax Receipts Allotted to Counties**

While motor vehicles were taxed in 1911 the revenues were but \$75,000, increasing, however, to more than \$500,000 in 1913, with the registration of nearly 95,000 vehicles.

The Act of 1913 provided for an allotment of these motor license fee receipts to each county of the state which was met on the part of the county with an equal amount raised by general taxation.

### **Limited State Control Unsatisfactory**

The county boards were permitted to select the type of construction which required the approval of the State Highway Department. The cost was borne jointly—the state share coming from motor tax receipts. High type construction was maintained entirely by the state, intermediate types jointly, and the low types by the counties.

It was very soon found that this method of construction, while furnishing a very good object lesson as to the value of good roads, resulted in a "patch-work" of various types.

The revenues allotted to the counties by the state, as well as the revenues raised by the counties from taxation, were also found to be inadequate to build a connected system.

The traffic demand had now reached such a point that unusual action was required, both as to financing and administration.

### **Bonds Authorized in 1917**

A general reorganization of the State Departments was effected in 1917, whereby the State Highway Department became the Division of Highways under the Department of Public Works and Buildings. At the same session of the legislature, an Act providing for a bond issue of \$60,000,000 was passed for the financing of a connected system of state highways, totaling approximately 4,800 miles. The Act provided that the principal and interest on the bonds should be paid from motor vehicle tax receipts, any surplus after these payments to be devoted to road construction.

The proposition was submitted to a referendum vote of the people in November 1918, and passed by a three to one majority.

### **Highway Officials Plan System**

The system of highways provided for in this Act was planned by the Superintendent of Highways and the Chief Highway Engineer and approved by the Director of the Department of Public Works and Buildings and the Governor.

As the total road mileage of the state is about 97,000 this proposed system was about 5% of the total.

### **Federal Government Began Cooperation**

It was about this time that the Federal Government began financial assistance to the states.

The main sources of funds available for the state highway system at this time were:

1. Proceeds of bond sales (Interest and Principal paid by motor taxes).
2. Federal Aid.
3. Surplus motor vehicle taxes.
4. Small miscellaneous receipts.

The state did not draw on the taxation of real property for road improvement or maintenance, either directly as such, or for payment of the bonds. The construction and maintenance of township and roads of local use was, however, left to general local taxation to finance.

#### **Motor Fees Reserved by State**

Since the principal and interest payments on the \$60,000,000 bond issue constituted a prior lien on the motor vehicle tax receipts, the state reserved all of these funds to itself. Even maintenance of the state highway system and other roads for which the state was responsible was second in importance.

Later, however, (1929) in common with a great many other states, with the imposition of a gasoline tax the state made provision for the return of part of these revenues to the counties.

#### **Additional Funds Needed With Increasing Traffic**

It was quickly found that the \$60,000,000 bond issue would not complete the 4,800-mile system first selected and that the system needed enlarging as traffic continued to increase.

The Legislature passed an Act in 1923 adding 5,000 miles to the system and authorizing an additional bond issue of \$100,000,000 for its construction.

#### **More Funds Will be Needed**

The present state road system comprises 9,800 miles or about 10% of the total road mileage of the state. While only some 5,900 miles of the system had been surfaced to the end of 1928, the work done was all of high type surfaces.

There remains about \$23,000,000 of the last bond issue and some 3,900 miles of road to surface. Table 1 gives the indicated surplus from motor vehicle fees after meeting the interest and principal payments on the road bonds. Table 2 shows annual expenditures averaging \$27,000,000 a year.



With the present surplus of motor fees in excess of \$10,000,000 a year, Federal funds of \$3,000,000 a year and gasoline tax revenues from the new tax amounting to \$20,000,000 a year, it is evident that the remaining mileage of the state system can be completed in three or four years on a pay-as-you-go basis and maintaining the current rate of construction. (State receives two-thirds; counties one-third under new gas tax law.)

Maintenance will, of course, be a constantly increasing charge as the total mileage mounts, but is at a very low figure per mile due to the high type of construction.

### **Gasoline Tax to Finish the Job**

Realizing that the \$100,000,000 bond issue would not suffice to complete the system the state levied a two-cent gasoline tax in 1927—one cent to be allotted to the state for construction on the State Highway system and one cent to the counties in proportion to motor registration fees, to be used in the construction on the state-aid system on secondary highways.

The bill was declared unconstitutional in 1928, however, and a new bill providing for a three cent tax was introduced and passed at the 1929 session of the Legislature. As indicated above this will be the means of providing enough surplus revenue to continue construction at the present rate of progress on current revenues and reaching early completion of the present system.

The state will then be enabled to proceed with the building of secondary roads, enlarging and strengthening the present system in metropolitan areas, grade separation, and parallel routes.

### **Bond Plan Obtained Results for Road User**

The average motor vehicle registration tax is about \$10. The addition of the gasoline tax will increase this annual payment to about \$25, which is the present average for the United States. This will apparently complete the surfacing of the present state system, amortize the bond issues, main-

tain the roads and provide a residue for the development of secondary roads and the further improvement of the state system as just outlined.

Tables are appended showing—

- (1) The principal and interest payments on the bonds and surplus of motor vehicle fees;
- (2) State highway department expenditures;
- (3) Mileage of state highways constructed by years;
- (4) The bond sale receipts by years;
- (5) Motor vehicle registration and tax receipts;
- (6) Local expenditures.

**TABLE 1**  
*Illinois Highway Bond Data*

Year	Bond funds available for construction each year	Principal payments, \$60,000,000 issue	Principal payments \$100,000 issue	Interest payments, \$60,000,000 issue	Interest payments, \$100,000,000 issue	Total principal and interest payments, both issues	MOTOR VEHICLE TAX RECEIPTS			Surplus over interest and principal requirement
							Registration	Gas Tax	Total	
1921	\$4,709,477.78						\$6,862,125.83		\$6,862,125.83	\$6,862,126
1922	12,023,966.76			\$96,120.00		\$96,120.00	7,904,219.71		7,904,219.71	7,808,100
1923	24,100,867.70			661,340.00		661,340.00	9,689,702.77		9,689,702.77	9,028,363
1924	17,704,000.00			1,388,813.35		1,388,813.35	11,557,838.94		11,557,838.94	10,169,026
1925	23,452,600.00			2,156,823.72	\$536,480.00	2,678,303.72	13,050,977.39		13,050,977.39	10,363,673
1926	4,953,100.00	2,000,000.00		2,403,143.18	1,107,700.00	5,510,843.18	13,937,579.64		13,937,579.64	8,426,737
1927	12,157,100.00	2,000,000.00		2,326,149.75	1,279,860.00	5,606,009.75	15,589,365.19	3,953,047.72	19,542,412.91	13,936,403
1928	35,048,600.00	1,999,000.00*		2,235,480.00	1,914,536.11	6,149,016.11	15,069,830.33	2,439,728.14	17,509,558.47	11,360,542
Totals	\$134,149,712.24**	\$5,999,000.00	\$	\$11,267,870.00	\$4,832,576.11	\$22,099,446.11	\$93,661,639.80	\$6,392,775.86	\$100,054,415.66	\$

\* A \$1,000.00 coupon was not presented for payment until January, 1929.

\*\* The amount shown in the first column represents the amount derived from the sale of \$137,000,000.00 in bonds.

**TABLE 2**  
*Illinois State Highway Expenditures*

Year	State expenditures for					Total
	Road and bridge construction	Road and bridge maintenance	Principal payments on bonds	Interest payments on bonds	Miscellaneous	
1921	\$15,236,635.03	\$358,658.85			\$4,000.00	\$15,599,293.88
1922	21,727,088.97	640,503.01		\$96,120.00		22,463,711.98
1923	29,883,810.06	1,110,034.41		661,340.00		31,655,184.47
1924	37,417,474.90	2,044,860.69		1,388,813.35		40,851,148.94
1925	31,554,041.51	1,834,637.74		2,687,303.72		36,075,982.97
1926	16,495,059.03	2,264,770.58	\$2,000,000.00	3,510,843.18		24,270,672.79
1927	21,961,462.82	2,721,444.45	2,000,000.00	3,606,009.75		30,288,917.02
1928	44,462,809.00	2,859,756.51	1,999,000.00	4,150,016.11		53,471,581.62
Total	\$218,738,381.32	\$13,834,666.24	\$5,999,000.00	\$16,100,446.11	\$4,000.00	\$254,676,393.67

**TABLE 3**  
*Illinois State Highway Mileage Built by Years*

Year	State Highway or Primary System	State Aid or Secondary System	Total
1914.....		53.58	53.58
1915.....		100.27	100.27
1916.....		135.41	135.41
1917.....		184.38	184.38
1918.....	6.77	93.36	100.13
1919.....	152.54	102.06	254.60
1920.....	270.60	94.92	365.52
1921.....	285.62	128.32	413.94
1922.....	546.95	194.15	741.10
1923.....	858.31	226.71	1,085.02
1924.....	1,018.21	211.27	2,229.48
1925.....	786.86	119.54	906.40
1926.....	361.79	101.95	463.74
1927.....	522.98	145.46	668.44
1928.....	1,075.27	229.48	1,304.75
	<hr/> 5,885.90	<hr/> 2,120.86	<hr/> 8,006.76
Less widened and replaced mileage.....	11.03	277.47	288.50
Total.....	<hr/> 5,874.87	<hr/> 1,843.39	<hr/> 7,718.26

The following table shows the type or character of roads which have been built in the State of Illinois during the years 1913 to 1928 inclusive:

Type	Mileage
Concrete.....	7,260.78
Brick.....	153.63
Asphalt.....	34.21
Bit. Concrete.....	6.87
Bit. Macadam.....	58.85
Gravel.....	186.61
Total.....	<hr/> 7,718.26

**TABLE 4**  
*Illinois Motor Vehicle Registration by Years*

Year	Number of Vehicles
1913.....	94,646
1914.....	131,140
1915.....	180,832
1916.....	248,429
1917.....	340,252
1918.....	389,761
1919.....	478,438
1920.....	568,759
1921.....	670,452
1922.....	785,378
1923.....	969,092
1924.....	1,132,641
1925.....	1,627,734
1926.....	1,375,191
1927.....	1,443,579
1928.....	1,508,907

TABLE 5

Year	Motor License Fees	Gasoline Tax	Total
1913.....	\$507,134.77	.....	\$507,134.77
1914.....	703,403.70	.....	703,403.70
1915.....	924,905.74	.....	924,905.74
1916.....	1,242,509.65	.....	1,242,509.65
1917.....	1,587,772.69	.....	1,587,772.69
1918.....	2,762,567.53	.....	2,762,567.53
1919.....	3,262,176.57	.....	3,262,176.57
1920.....	5,893,586.02	.....	5,893,586.02
1921.....	6,663,910.22	.....	6,663,910.22
1922.....	7,861,211.21	.....	7,861,211.21
1923.....	9,630,367.77	.....	9,630,367.77
1924.....	11,513,957.05	.....	11,513,957.05
1925.....	12,936,882.13	.....	12,936,882.13
1926.....	14,047,207.86	.....	14,047,207.86
1927.....	14,839,593.29	\$3,904,547.87	18,722,141.16
1928.....	15,521,582.88	2,391,202.84	17,912,785.72
Total.....	\$109,898,769.08	\$6,295,750.71	\$116,194,519.79

TABLE 6

*Local Highway Expenditures in Illinois by Years*

Year	Amount
1913.....	\$7,102,976.00
1914.....	7,634,422.00
1915.....	9,089,455.00
1916.....	9,564,701.00
1917.....	9,646,273.00
1918.....	9,939,660.00
1919.....	13,149,672.00
1920.....	14,206,308.00
1921.....	15,920,082.00
1922.....	14,216,503.00
1923.....	12,363,607.00
1924.....	12,221,928.00
1925.....	12,340,755.00
1926.....	11,805,397.00
1927.....	11,526,188.00

## APPENDIX E

### Nevada

Area (sq. miles—6th in rank) . . . . .	110,690
Population . . . . .	80,000
Population per square mile . . . . .	.....
Total highway mileage . . . . .	23,659
Miles in state system . . . . .	3,552
Total motor vehicle registration . . . . .	27,376
Average motor vehicle license fee . . . . .	\$9.10
Average gasoline tax payment . . . . .	\$19.40
Average investment per mile state surfacing <sup>1</sup> . . . . .	\$14,000
Average cost per mile of maintenance . . . . .	\$93
Date establishment state highway department . . . . .	1917
Date establishment state highway system . . . . .	1917

<sup>1</sup> Converted to low type.

Nevada is a state of large area and sparse population. Nearly 80% of the state's area is in public land (Federal Government owned) and is exempt from state taxation, thereby placing the burden of financing highway construction and maintenance on the small remainder of privately owned land.

There are but few important towns and these are situated far apart. Reno is the principal city with a population of 20,000 and is located at the extreme northwestern portion of the state. Next is Las Vegas with 6,000 inhabitants situated in the southern end of the state. Ely and McGill, mining towns, located 15 miles apart are in the eastern section and have a combined population of approximately 7,000. Elko in the northern part of the state has a population of 3,500. These centers of population average nearly 500 miles distant from each other.

The climate of the major portion of the state is quite arid, mining ranks as the principal industry, with cattle and sheep raising next, and lastly farming, depending entirely on irrigation.

The road mileage of the state is 23,700 of which 3,554 miles are on the state system—16% of the total.

### Real Road Work Began in 1917

The State Highway Department was created in 1917 to comply with the Federal Aid Road Act in the cooperative construction of post roads.

Upon the creation of the Department a log of all roads was made, resulting in the fact that the total mileage was 22,000, mostly one way, or single track roads and trails.

The construction and maintenance of these roads had been carried on by the counties and financed entirely by them. Their work, however, consisted of little more than general maintenance.

There were only a few more than a thousand vehicles registered in the whole state at the time of the creation of the State Highway Department.

The present results in construction and maintenance have been accomplished through the State Highway Department. The counties cooperate with the Department in the construction of roads on the state system in the county, paying for these roads from the County State Highway Fund referred to later.

### **Financial Policies**

With the establishment of the Department of Highways the Legislature appropriated \$40,000 to which was added a state tax on real property, the motor license fees, and part of the Racing Commission fees.

In addition the Legislature directed the counties to levy a tax on real property for a County State Highway Fund from which fund money was to be spent on the State Highway System in the county under the direction of the State Highway Engineer.

State highway bonds were issued in 1920, 1921, 1925, 1927 and 1928, totaling \$1,100,000, retired as to principal and interest from the motor vehicle tax receipts.

A review of the state highway income for 1928 indicates that the state tax levy for highways has been reduced to a negligible amount (reinstated as noted below under property taxation). The counties still provide a considerable portion of the revenue. The motor vehicle license fees and gasoline taxes, together with the Federal Aid funds constitute the bulk of the state highway income. The surplus of motor license taxes is available after meeting the interest and principal on the highway bonds.

### **Property Tax Burden Reduced**

In 1917 a tax of 7 cents for highways was levied on each \$100 of taxable property within the state. This was increased to 10 cents for 1918, 1919 and 1920. Reduced to 6 cents for 1921, 1922, 1923 and 1924. Reduced to 2 cents for 1925 and 1926, and eliminated for 1927 and 1928. The 1928 legislature, however, placed a rate of 5 cents for highway maintenance.

### **Federal Aid Pays Half Total State Road Cost**

Later amendments to the Federal Aid Road Act have made it possible for the Federal Government to pay up to 87% of the total cost of roads on the Federal Aid System, because of the public lands within the state. From 1917 to 1928 half of the state highway income was Federal Aid money.

### **Vehicles First Taxed in 1913**

The first year's registration of vehicles in 1913 disclosed a list of 1,093 vehicles which paid \$3,322 in fees. The law provided that the proceeds of this registration tax were to be placed in an automobile road fund to be distributed to the counties after it had reached \$25,000, then to be used for road betterments.

The Act was amended in 1915 by fixing definite fees by horsepower; in 1917 by placing the proceeds in the State Highway Fund (apparently before the counties were given any money). The basis of the license fee was changed in 1919 and the proceeds placed in the Nevada highway bond redemption fund.

The Amendment of 1923 provided for the placing of the balance of the proceeds from the fee, after cost of collections, bond interest and redemption had been cared for, in the State Highway Fund.

This fee was reduced in 1926. The average fee today is \$9.00, while the gasoline tax produces an average of \$19.00 per vehicle.



### **Gasoline Tax Levied in 1923**

A tax of 2 cents per gallon was levied on gasoline in 1923 and the proceeds divided \$60,000 to the State Highway Fund and the balance pro-rated to the counties.

In 1925 the tax was increased to 4 cents and the net revenue apportioned equally to the State Highway Fund and the County State Highway Fund.

### **Most of Mileage Low Type Surfacing**

From these taxes have come the funds with which 1,561 miles of the state system of 3,554 miles have been surfaced. But 73 miles or 5% is of a high type surfacing.

While the state is so located that there is a heavy volume of transcontinental and interstate traffic, there are very few routes with volume sufficiently heavy to justify any greater investment.

The motor vehicle registration of the state now amounts to 27,376 vehicles—both passenger cars and trucks or nearly one for every three persons. This registration averages but 8 vehicles per mile of state highway, again indicating both the need and ability to pay for a low investment per mile for improvement.

The annual traffic counts have shown a growth in the traffic but the 1928 count showed but one route on which traffic amounted to as much as 3,000 vehicles a day; one on which traffic was over 2,000 vehicles; and four on which the traffic was over 1,000 vehicles. These figures were based on counts at 45 stations on the state system.

### **Expenditures Uniform**

Expenditures have remained fairly constant except for 1924 and 1925 when more Federal funds were used. While the gasoline tax has been producing more available funds, the state tax levy has been reduced offsetting this increase.

Maintenance has increased with the increased mileage of roads constructed, but the average for the system is but \$93 per mile.

Based on the volume of traffic on the state system the present method of financing seems to be proceeding satisfactorily, while the annual traffic counts check the performance of road service.

TABLE 1  
*Automobile Registration and License Fees 1913-1928*

Year	Numbered Registered	Fee
1913.....	1,093	\$3,322.94
1914.....	1,683	4,331.08
1915.....	2,000	7,298.01
1916.....	4,655	17,721.85
1917.....	6,725	31,717.50
1918.....	8,151	31,082.75
1919.....	9,305	37,550.75
1920.....	10,464	103,318.33
1921.....	10,821	125,410.32
1922.....	12,647	120,944.38
1923.....	15,698	153,481.10
1924.....	18,892	181,969.85
1925.....	21,681	209,231.02
1926.....	24,222	209,919.71
1927.....	25,815	229,839.32
1928.....	27,376	249,110.62

TABLE 2  
*Mileage of Existing Highways Constructed by the State Highway Department  
Classified as to Types of Surfacing*

	Miles
Graded and Drained.....	125.28
Gravel Surfaced.....	1,241.25
Asphalt Concrete.....	1.96
Asphalt Macadam.....	20.56
Cement Concrete.....	50.99
Bituminous Treated Surface.....	121.66
Total.....	1,561.70



**TABLE 3**  
**Nevada State Highway Income and Expenditures**

	INCOME											
	1917-1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	Total
Legislative Appropriation.....	\$40,000.00											\$40,000.00
State Tax Levy.....	181,050.33	206,570.68	\$113,000.86	\$203,961.89	\$121,980.72	\$117,625.14	\$119,466.65	\$120,154.54	\$40,541.67	\$42,290.80	\$1,131.85	1,267,775.13
Auto License Fees.....	63,851.10	30,738.25	329.75				96,877.15	239,995.85	71,357.72	97,797.58	109,749.02	710,696.42
Gas Tax.....							60,000.00	156,149.03	230,389.73	233,501.30	259,731.32	939,771.38
Racing Commission Fees.....	17,024.99	7,451.92	20,055.18	11,998.61	20,866.97	23,624.57		9,669.00		11,145.91	7,515.03	129,352.18
Miscellaneous Refunds.....	195.16	181.88		39.81	609.19	6,730.16	1,156.07	26.00	90.97	10,040.81	4,988.24	24,058.30
Sales and Service (Inter-Department) ..	13,680.14	94,750.62	76,926.10	69,454.38	124,495.63	110,993.06	124,238.44	86,255.82	98,329.34	236,743.80		1,035,867.33
Right of Way Refunds.....	6,076.78											6,076.78
State Highway Bonds.....		475,000.00	325,000.00					100,000.00		100,000.00	100,000.00	1,100,000.00
Federal Construction Refunds.....	125,570.65	385,906.73	566,590.63	754,815.47	1,287,060.51	2,146,590.15	1,735,853.73	930,747.40	995,545.02	1,040,934.23		9,969,614.52
County Construction Refunds.....	88,982.23	225,211.33	439,976.51	354,533.08	415,395.30	548,504.67	420,680.97	390,591.84	343,629.21	243,287.44		3,470,792.58
County Refunds on State Maintenance.....										42,000.00	17,000.00	59,000.00
County Maintenance Refunds.....								15,742.65	23,644.27	20,885.56	13,172.26	73,444.74
Lincoln Hwy. Assn. Const. Refunds.....		16,380.00	10,000.00	12,152.99	18,021.14	14,872.47						71,426.60
Utah-Nev.-Cal. Assn. Const. Refunds.....								7,200.00	16,631.47			23,831.47
San Francisco-Bay City Const. Refunds.....										25,000.00		25,000.00
City Construction Refunds.....				25,205.79	15,678.64	42,335.31	39,798.62	13,472.71	180.15	8,822.50		145,493.72
Railway Crossing Const. Refunds.....						41,505.52	17,710.48	38,982.55	36,153.53	18,874.57		153,226.65
Special Maintenance Deposits.....					2,000.00							2,000.00
Accounts Receivable.....	7,730.56	45,496.18	80,192.07	37,019.61	68,751.67	78,092.07	28,951.88	28,299.26	33,773.10	33,991.50		442,297.90
Lahontan Plant Depreciation.....				24,397.90								24,397.90
<b>GRAND TOTALS.....</b>	<b>\$302,121.58</b>	<b>\$486,983.10</b>	<b>\$1,376,130.65</b>	<b>\$1,739,083.52</b>	<b>\$1,398,638.20</b>	<b>\$2,077,382.76</b>	<b>\$3,260,393.12</b>	<b>\$3,016,171.19</b>	<b>\$1,871,005.41</b>	<b>\$2,090,272.31</b>	<b>\$2,095,941.76</b>	<b>\$19,714,123.60</b>

	EXPENDITURES											
	1917-1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	Total
Highway Construction.....	\$392,885.57	\$1,160,384.07	\$1,099,020.91	\$1,207,692.59	\$1,905,394.98	\$2,711,020.37	\$2,411,359.98	\$983,329.90	\$1,480,659.77	\$1,262,723.82		\$14,614,471.96
Surveys, P-E R-W.....	\$36,074.62	45,249.36	60,001.76	43,018.03	98,959.03	114,561.55	64,194.80	61,197.20	55,367.50	53,586.22	61,177.04	693,387.11
Plant Inventories.....	1,415.05	98,908.52										100,323.57
Equipment Inventory Accts.....	24,662.09	83,826.90	72,212.83	37,924.28	47,323.35	30,845.47	12,414.82	11,476.21	11,200.18	310.99	33,796.43	365,993.60
Reno Plant.....				51,613.09	45,287.54	74,538.34	100,921.08	111,686.99	75,132.18	84,663.47	201,001.91	744,844.60
Lahontan Plant.....				3,547.67	16,250.62	538.06	1,015.00 Cr.		350.00		1,534.03 Cr.	18,137.32
Vista Plant.....								27,955.70	1,110.91 Cr.	9,068.51 Cr.	458.79 Cr.	17,317.49
Hafed Plant.....	1,088.53			317.50	154.83							1,560.86
Accounts Receivable.....	16,115.58	48,204.69	125,301.47	1,645.65	83,088.96	35,207.72	23,511.30	26,335.82	32,875.67	34,303.47		426,590.33
Section 31—Refunds.....	2,500.00	19,129.46	10,000.00	6,946.89	1,530.82							40,107.17
General Administration.....	34,979.40	38,323.07	60,153.72	59,088.39	69,221.61	74,851.86	96,852.27	98,736.21	95,756.81	79,258.06	58,313.41	765,534.81
Maintenance.....	16,596.54	29,330.21	44,121.16	33,601.26	61,997.55	110,724.87	122,788.60	216,714.62	306,899.52	343,399.28	359,262.08	1,645,435.69
County Maintenance.....								23,355.84	13,864.62	25,593.62	19,422.92	82,237.00
<b>GRAND TOTALS.....</b>	<b>\$114,812.65</b>	<b>\$627,363.73</b>	<b>\$1,553,986.75</b>	<b>\$1,460,379.49</b>	<b>\$1,550,063.59</b>	<b>\$2,394,544.09</b>	<b>\$3,142,384.66</b>	<b>\$2,985,994.05</b>	<b>\$1,567,125.62</b>	<b>\$2,091,278.57</b>	<b>\$2,028,008.31</b>	<b>\$19,515,941.51</b>