

# MAINE STATE LEGISLATURE

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# PUBLIC DOCUMENTS

OF THE

## STATE OF MAINE

BEING THE

# REPORTS

OF THE VARIOUS

PUBLIC OFFICERS  
DEPARTMENTS AND  
INSTITUTIONS

FOR THE YEAR 1919



# **Seventh Annual Report**

OF THE

## **State Highway Commission**

OF THE

**STATE OF MAINE**

**From January 1, 1919, to December 31, 1919**

STATE OF MAINE.

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OFFICE OF STATE HIGHWAY COMMISSION,

AUGUSTA, MAINE, Feb. 18, 1920.

*To His Excellency, Carl E. Milliken, Governor, and the Honorable Council:*

We have the honor to present the seventh annual report of the State Highway Commission from January 1, 1919, to December 31, 1919.

W. M. AYER, Chairman,  
P. J. DEERING,  
F. A. PEABODY,

*State Highway Commission.*

REPORTS OF THE STATE HIGHWAY COMMISSION  
FOR THE YEAR ENDING DECEMBER 31, 1919.

*To the Honorable Governor and Council:*

In accordance with section 3, chapter 25, of the Revised Statutes of 1916, the State Highway Commission herewith respectfully makes annual report to the Governor and Council of its doings and expenditures of its office for the fiscal year ending December 31, 1919.

An examination of the financial operations of this Department as set forth in statements immediately following discloses that the year's activities have been light in state highway construction work but heavy in state aid construction, maintenance and bridge work.

STATE HIGHWAYS.

On account of very limited appropriations available during the year state highway work has been confined to completing work undertaken during 1918. All such work, with the exception of the job between Mattawamkeag and Macwahoc, was finished during 1919. Two contracts for new work were let late in the season. In September contract was let for 9.35 miles of state highway in Vassalboro, which at present is the only really bad piece of road between Portland and Bangor on the interior route. Only a small amount of work was done on this contract in the fall of 1919 but it is confidently expected that work will be completed during the season of 1920. In December contract was let for 7.05 miles of state highway in Enfield, running from the end of the Howland-Enfield bridge to the Howland-Lincoln town line. Owing to the lateness of the season no work was done on this contract but the contractor is getting things in readiness to make an early start in the spring of 1920. In October work was started on a day labor basis in the reconstruction of the last two sections of unim-

proved road on the route from Bangor to Ellsworth. On account of favorable weather conditions one section,  $1\frac{1}{4}$  miles long, was completed early in January, 1920. It is planned to draw gravel through the winter for the completion of the other section, which is two miles in length, so that it will be possible to finish up this road early in the season of 1920.

Altogether twenty-four miles of state highway was finished during the year.

#### NEW BOND ISSUE.

Adequate finances for state highway work in the immediate future have been provided by the amendment to the constitution passed at the special election in September, 1919, authorizing the issue of eight million dollars of new highway and bridge bonds. The legislature in special session in November, 1919, authorized the issue of two million dollars worth of these bonds for state highway construction work in 1920. This amount, coupled with federal aid now available and to become available on July 1, 1920, gives a little more than four million dollars which will be available for state highway construction during the coming year.

#### FEDERAL AID ROADS.

As indicated by the Commission during the bond issue campaign, after the outcome of the September election was known we immediately recommended to the Secretary of Agriculture that the whole state highway system as previously designated by this Commission be made federal aid roads. The Secretary of Agriculture has approved this recommendation and hereafter substantially all state highway work will be done at the joint expense of the state and the federal government and the work will be under the general supervision of the federal government.

The program for 1920 contemplates the construction of about one hundred and fifty miles of state highway. Surveys were completed for all of this work during the fall and preliminary steps have been taken with the federal government for having all of these projects approved as federal aid projects. The

most of this mileage has been, so laid out that it will connect considerable stretches of state highway heretofore constructed, so that with the completion of this mileage long sections of continuous improved highway will be made available for the general travelling public. The only fear the Commission has about completing the program laid out is that we may not be able to secure sufficient contractors and laborers to handle the work. Every effort will be made, however, to do so.

#### STATE AID CONSTRUCTION.

More state aid highway construction was performed during 1919 than in any previous year. The expenditures were considerably over one million dollars and a total of two hundred and three miles of road was reconstructed. This was due to the fact that during 1917 and 1918 scarcity of labor made it impossible for many towns to expend state aid appropriations and they were carried over and expended in 1919. Notwithstanding the large expenditure made during the year, there is a balance of state aid apportioned to towns but unexpended at the end of the year amounting to \$137,078.44. If it is possible to clear up this balance during 1920 and expend the 1920 appropriation we should add another considerable mileage of improved road to the state aid system during the coming year.

This Commission has never been able financially to meet the requirements of the towns for state aid and we have felt for a long time that some means should be found by which more money could be made available for the payment of state aid, in order that towns could progress with the improvement of their state aid roads as fast as they were willing to appropriate money to do so. It is believed that more towns each year would take advantage of the five times provision in the state aid law if they could be assured that the state would meet them for the full amount of the appropriation made by the town. Scaling down state apportionments and consequently reducing the town's appropriation year after year has a tendency to discourage towns which are willing to undertake an enlarged program of state aid work under this provision. It is more or less embarrassing for the Commission, after explaining in detail the provisions of the five times law, which is done many,

many times during the year, to have to conclude the explanation by saying to the town that we have never yet been able to make apportionments under this provision on account of lack of funds.

There are many groups of towns which would co-operate under the provisions of chapter 154 of the Public Laws of 1917, the three town act, if they felt sure that the state could meet their requirements without depriving other towns which apply under the five times clause.

#### MAINTENANCE WORK.

Maintenance work was continued as it has been carried for the last three years, principally by the patrol method. In another part of this report will be found a detailed summary of that work. It will be noticed that the prevailing high costs of labor and material are reflected in the costs of this work as compared with similar costs in 1918.

Besides the patrol maintenance considerable work was done by gangs. This work is principally on improved state highways. We have a considerable mileage of gravel surfaced state highway which carries excessive motor vehicle traffic, official counts showing as high as 5500 motor vehicles passing a given point in twelve hours time, from seven o'clock in the morning until seven in the evening, this count being a daily average for one week. A plain gravel surface would not last a week under this kind of travel, so it has become necessary to give these sections a bituminous surface treatment in order to preserve them. A good many inquiries have been received about our method of surface treating gravel roads, so a brief summary of the operation will be given here.

Surface treatment can only be successfully applied to a clean, well bonded surface having a true cross section. The first step is the distribution of clean, coarse and sharp sand along the shoulder of the road in piles about thirty feet apart, using about forty to fifty cubic yards per mile. This sand is used to cover the bituminous material after it has been spread upon the road. The next step is to thoroughly clean the surface with a horse sweeper and hand brooms, in this way removing all dust and loose material. The bituminous material is then



spread from a pressure distributor tank mounted either on an automobile truck chassis or drawn by horses. The amount of bituminous material per square yard of surface depends on the condition of the surface and as a general thing good results will not be obtained by making a uniform distribution over the whole area because it is very rare that any considerable area will present exactly uniform conditions. This means in practice that more or less material per square yard must be used according to the condition of the surface. In our practice the amount of bituminous material is controlled entirely by the judgment of the man in charge of the work. He rides on the truck and from his knowledge of the conditions determines the amount of pressure to be applied to the tank, the opening of the valves that control the flow of the tar, and the speed of the truck. On new surfaces the rate of distribution will vary from four-tenths of a gallon to one-half a gallon per square yard. The second, third or fourth years, the application may be as light as one-quarter of a gallon per square yard and usually is from three-tenths to one-third of a gallon.

This work must be done on a warm day and on a dry surface. If traffic conditions would permit we would allow the bituminous material to penetrate the surface six hours before covering with sand, but we find it necessary to immediately cover with sand from the piles alongside the road to keep the bituminous material from stripping up under steel tire traffic. Furthermore, there is great liability of automobiles skidding on the fresh bituminous material, and this is another reason for immediately covering with sand. About one-half the sand is immediately applied and during the next three or four days a few men are left behind to sand spots which show an excess of bituminous material as they appear. This means going over the same length of road several times. It is very important that the smallest possible amount of bituminous material be used that will preserve the surface. Except where drainage and foundation conditions are absolutely perfect this bituminous surface treatment will break up the following spring. It is very necessary where the breaking up occurs that the surface be reshaped by using the road machine and the drag. The surface must be kept in shape until it is settled and bonded,

when another application can be made following substantially the steps outlined above, but using less bituminous material.

After three or four successive annual applications certain portions of the surface will become wavy. It is then necessary to break the surface by the use of a pressure scarifier or spike tooth harrow. It is sometimes necessary to plow short sections and for this the point of a road machine blade may be used. After this course has been broken up it must then be pulverized. This may be done with a spike tooth harrow or a steam roller with the picks. It also pulverizes more or less under travel. The pulverizing process can be hastened by working the material from one side of the road to the other with a road machine, letting travel break it up as much as possible. It is usually necessary to use a road machine every other day from the time the surface is broken until the road is bonded for another treatment. The more this material is worked over the more completely it will pulverize and a better surface will be presented for subsequent treatment. Immediately prior to the next treatment the surface must be carefully shaped. It may be necessary at this time to add a little binding material, preferably clay, but care should be taken not to use an excess of clay. Our practice has indicated that a quantity of finely pulverized clay (pulverized by frost action) about equal to the amount of sand cover, forty to fifty yards per mile, has given excellent results in preparing an old surface for retreatment. The retreatment of this surface after being broken is exactly identical with the original treatment, beginning with the sweeping. During the spring of 1919 a considerable mileage of road was broken up and retreated as above described with very excellent results.

#### STATE AND COUNTY AID BRIDGE WORK.

Applications for state and county assistance in the reconstruction of bridges were received in such numbers that had the state's appropriation for this work been double it would have been insufficient to have built all of these bridges. This has necessitated bringing a large number of petitions over to be acted on in 1920.

Upon the recommendation of the Highway Commission the legislature changed the proportions of cost to be paid by the town and the state so that as the cost of a bridge increases the proportional part of the cost is decreased to the town and likewise is increased to the state. In other words, the law is much more liberal now than it was originally.

On account of these liberal provisions and the further fact that over fifty petitions filed in 1919 must be acted on in 1920, the legislature at the special session in November, 1919, authorized the issue of \$500,000 of bridge bonds to provide funds for the state's share of the cost of bridge work during 1920. An active season in this line of work is anticipated.

#### INTERSTATE BRIDGE.

The legislature provided \$500,000 to meet a similar appropriation by the state of New Hampshire and by the federal government for the construction of an interstate memorial bridge between Portsmouth, New Hampshire, and Kittery, Maine, located so as to convenience the Navy Yard at Kittery. A commission, consisting of Governor Milliken, Governor Bartlett and Secretary of the Navy Daniels, has this work under general charge. Each commissioner has appointed an engineer commissioner and the bridge engineer of this department has been appointed to represent Governor Milliken. It is expected that the design for the structure will be prepared by the bridge engineer of this department.

#### INTERNATIONAL BRIDGE.

The legislature also provided for the construction of an international bridge over the St. John river between Madawaska, Maine, and Edmundston, New Brunswick. Plans are well in hand for this structure and immediately the Dominion Parliament makes available its share of the cost, contracts will be let for this work.

#### MT. DESERT BRIDGE.

During the year 1919 work on the so called Mt. Desert bridge, which connects Mt. Desert island with the main land, was completed. Settlement was made with Otto Nelson and

J. F. Spellman & Sons, to whom the contract was originally let, and work was completed under contract with Cyr Brothers Company of Waterville. An extremely satisfactory job has resulted and the Mt. Desert Bridge District has decided to dedicate this bridge as a memorial to the soldiers and sailors of Hancock county who lost their lives in the late war. Dedication exercises will be held probably on next Memorial Day.

#### FEDERAL AID—EQUIPMENT.

By act approved February 28, 1919, Congress directed the Secretary of War to distribute to the state highway departments through the Secretary of Agriculture, surplus road building equipment, including motor vehicles and all kinds of road machinery, tools and equipment, also engineering instruments and supplies, not longer needed by the War Department, the same to be used by the state highway department in the construction and maintenance of federal aid roads. The basis for distribution is the same as for distributing federal aid appropriations to the states. Maine's share of this distribution is practically one per cent of the total. Under this provision the state received during 1919 the following list of equipment:

- 10 Used Ford Touring Cars
- 1 Chandler Touring Car (Used)
- 1 National Touring Car (Used)
- 1 Two Ton International Truck
- 12 Three Ton Peerless Trucks
- 3 Five Ton Peerless Trucks
- 14 Three Ton Heavy Aviation Trucks
- 4 One and One-half Ton Light Aviation Trucks
- 75 Two Ton Nash Quad Trucks
- 2 F. W. D. trucks
- 2 Three Ton Kelly Springfield Trucks
- 20 Packards
- 2 Two Ton Pierce Trucks
- 1 Ford Ambulance
- 4 G. M. C. Ambulances
- 4 Holt Ten Ton Tractors
- 2 Motorcycles (Cleveland)

2	Sprinkling Wagons
2	Cases Steel Tanks (480 Gals.)
12	Steel Tanks
3	One-Half Yard Clam Shell Lakewood
1	Derrick
1	Power Pump
20	Forges
1	Planimeter
6	Levels
4	Bundles Shovels (36)
100	Lanterns
40	Pyramidal Tents
	Stanley Hook Skid Chains
	Nash Quad Parts

We expect to receive an allotment of about 110 more trucks. The first of these trucks were received during July. They were immediately fitted up with temporary bodies and some sixty trucks were put out on construction and maintenance work during the following months. The Commission is not authorized to sell or lease these trucks to towns but it is hoped that legislation will be enacted which will permit them to be used more generally than on strictly federal aid work.

It is the purpose of this Commission to keep a strict account with each piece of this equipment, also a strict record of the work performed, so that costs may be established for doing work with motor equipment. A rental charge is made on the basis of ton days, with the idea of creating a fund to keep these trucks in thorough repair and to replace them when repairs are no longer economical.

We also expect to receive other equipment, consisting of road rollers, stone crushers, graders, steam drills, boilers, sprinklers, oilers, concrete mixers, and in fact a complete equipment of all kinds of road building machinery.

#### BATH FERRY.

The legislature directed the Governor and Council to purchase and take over on or after October 1 all the property, rights and franchises of the People's Ferry owned by the city

of Bath and the town of Woolwich, the same to be hereafter operated by the State Highway Commission and the fares to be supervised and adjusted by the Public Utilities Commission. This ferry is an important connecting link in the state highway between Bath and Rockland. During the season of 1919 between 55,000 and 60,000 automobiles were carried across this ferry. The boat which has been in use for several years is substantial but small, accommodating only about ten machines, and many times in the summer season automobiles are forced to wait two hours or more to be carried across the river.

The legislature authorized the state to purchase or build a new boat and in November the State Highway Commission by direction of the Governor and Council purchased a ferry boat from the city of New London, Connecticut, which will accommodate twenty-two to twenty-four machines. It is the intention of the Commission to build new approaches on each side of the river and to run both boats during the season of heavy travel, and it is hoped in the future to very much remedy conditions which have pertained at this point during the last few years.

#### COLOR BANDS.

During the year the Commission has co-operated with the Maine Automobile Association in carrying on the work of marking state highway routes with distinctive color bands. This work, which was initiated by the Maine Automobile Association, has proved to be very popular and very much of a help, not only to tourists but to the citizens of this state when travelling in unfamiliar sections of the state. It is the purpose of the Commission to complete the marking of all state highways by color bands. It is possible that some secondary routes will be marked.

#### DANGER SIGNS.

During the year the Commission has erected along many miles of state highway danger signs warning users of the highway of dangerous curves, intersecting roads, and right angle corners. This work will be continued until substantially all of the dangerous points have been signed.

## NEW LEGISLATION.

At the special session in November, 1919, the legislature passed the Granville Act, so called, which is designed to grant relief to certain towns in the care of their third class highways. We understand this act to be as follows: Towns whose appropriation for ways and bridges, exclusive of appropriations for state aid work and appropriations under the state and county bridge act, shall be an amount not less than the average by such towns appropriated for ways and bridges for the five years immediately preceding, provided the five year average be not less than four mills on the valuation of such towns, shall receive from the state the following amounts: To towns whose tax rate is four mills and under five mil's, \$10.00 for each mile of wrought highway in the town, and for each one mill increase above said four mills in the tax rate for highway purposes shall receive from the state an increase of \$1.00 per mile of wrought highway.

This fund is to be expended on some road in the town which shall be agreed upon between the municipal officers of the town and the State Highway Commission. The type of construction must also be mutually agreed upon and the work must be completed before October 1.

It will be noted that in order to qualify for aid under this act towns must furnish the State Highway Commission with their appropriation for ways and bridges for each of the five years last passed, as well as the appropriation for the current year, each of these appropriations to be exclusive of money raised for state aid road purposes or for bridges under the state and county bridge aid act.

Towns must also furnish the State Highway Commission with a mileage survey of their roads.

Early in December the Commission undertook the first step in administering this law by requesting towns to make a speedometer survey of their roads. Only three or four towns complied with this request, so that the operation of this act will necessarily be delayed until such time as towns can furnish this information relative to mileage, which will be the late spring or early summer of 1920.

It can readily be seen that this act will necessitate a vast amount of detailed figuring of tax rates and it is hoped that the municipal officers will co-operate with the Highway Commission in every way possible in putting this act into effect.

In conclusion we desire to express our full appreciation of the co-operation and support which we have at all times had from your body.

Respectfully submitted,

W. M. AYER, Chairman,

P. J. DEERING,

F. A. PEABODY,

*State Highway Commission.*



## MAINE STATE HIGHWAY COMMISSION.

## Financial Statements, 1919.

## MAINTENANCE AND ADMINISTRATION.

## CREDITS.

Tar sold.....	\$514 48
Permit to open highways.....	175 52
Ford truck sold (purchased by State in 1917).....	300 00
Checks cancelled.....	231 74
Refund on freight.....	36 40
Refund on insurance on truck sold.....	62 10
Refund on printing bill.....	12 00
Discount on 1918 oil contract.....	125 17
Mileages redeemed (purchased in 1918).....	195 43
Depreciation and rental State trucks (cost & maintenance).....	22,326 01
Depreciation and rental equipment (cost & maintenance).....	5,086 82
Depreciation and rental portable camps.....	5,892 79
Patrol maintenance for 1917.....	1,785 60
Patrol maintenance for 1918.....	13,355 30
Patrol maintenance for 1919.....	209,692 63
Patrol maintenance for 1918 (not deposited).....	3,029 51
Patrol maintenance for 1919 (not deposited).....	6,711 56
Patrol maintenance overpaid.....	2,300 78
Transferred from auto fees.....	664,486 69
Available funds.....	\$936,320 53
* Amount overdrawn.....	5,118 54
Total.....	\$941,439 07

\* The balance overdrawn as reported above differs from that reported by the State Auditor in the amount of \$7,988.99 which amount is entered on the Highway Books in 1919 and not until 1920 on Auditor's.

## MAINTENANCE AND ADMINISTRATION

## EXPENDITURES.

## ADMINISTRATION.

Salaries of Commissioners.....	\$3,000 00	
Salary of Chief Engineer.....	5,000 00	
Salaries of Assistants.....	11,350 92	
Salaries of Stenographers and Clerks.....	9,694 54	
Salaries of Engineers.....	209 26	
Expenses of Commissioners.....	1,564 50	
Expenses of Chief Engineer.....	1,103 61	
Expenses of Assistants.....	2,540 78	
Expenses and wages of Supervisors.....	2,011 43	
Office furnishings.....	466 19	
Office stationery and supplies.....	1,224 96	
Drafting room supplies.....	26 34	
Postage.....	1,490 87	
General printing account.....	1,678 38	
Printing and binding annual report.....	433 49	
Telephone and telegraph service.....	1,203 41	
Incidental expenses.....	418 97	
Commissioners' cars Stevens-Duryea.....	\$1955 74	
National.....	166 01	
	2,071 75	
Special report.....	1,491 53	
Total administration charges.....		\$46,980 93

## MAINTENANCE.

Overdraft January 1, 1919.....	\$98,530 58	
Adjustment to balance of previous year.....	4,702 27	
* Auto Bureau (Secretary of State's office).....	32,705 46	
* Auto Inspectors (Attorney General's office).....	24,273 26	
Garage and shop equipment.....	1,805 43	
State auto trucks (maintenance).....	12,649 29	
Equipment (cost).....	5,855 99	
Equipment (maintenance).....	827 41	
Portable camps.....	6,915 53	
Erecting highway danger signs.....	3,282 71	
Color bands.....	601 90	
Refunds on overpayment of 1918 patrol.....	2,955 02	
Transfer to mill tax highway fund.....	50 75	
Transfer to improvement state roads, J. F.....	20 30	
		\$195,175 90
Section 17.....	\$2,142 70	
State aid highway improved.....	162,326 44	
State aid highway unimproved.....	176,765 44	
State highway improved.....	276,540 53	
State highway unimproved.....	71,766 06	
Town funds not deposited but expended under supervision of department.....	9,741 07	
		699,282 24
Total expenditures for maintenance and administration in 1919.....		\$941,439 07

NOTE:—Funds expended for maintenance patrol in 1919 as follows:

State funds.....	\$473,136 98	
Town funds.....	216,404 19	
Total amount expended for maintenance of roads in 1919.....		\$689,541 17
Amount of towns' patrol requisitions unpaid Dec. 31, 1919.....		\$9,741 07

\* This expense not under supervision of State Highway Department.

## MILL TAX HIGHWAY FUND.

## CREDITS.

Appropriation (1919).....		\$377,442 00
Federal Aid "H" Winslow.....	\$12,111 43	
"Q" Topsham.....	1,514 11	
"Q" Bowdoinham.....	32,407 00	
"Q" Richmond.....	11,884 95	
"Q" Bowdoin.....	7,094 11	
		65,011 60
Receipts to "Q" Bowdoinham.....		1,284 66
"Q" Richmond.....		553 49
"E" Winthrop.....		204 89
"C" Yarmouth.....		1,075 15
Maintenance and rental machinery and equip- ment.....		1,705 72
Checks cancelled.....		397 97
Miscellaneous receipts.....		485 95
Transfer from maintenance.....		469 00
Transfer from federal truck account.....		12,443 74
Miscellaneous credits by transfer.....		1,102 04
Rental charges motor transport and equipment account "E" Winthrop, "Q" Richmond and "K" Mattawamkeag...		4,519 75
* Balance overdrawn.....		16,927 36
		<b>\$483,623 32</b>

## EXPENDITURES.

Overdraft January 1, 1919.....	\$1,993 92
Adjustment to balance of previous years.....	251 15
Labor and material.....	322 629 78
Engineering and inspection.....	12,075 54
Advertising.....	133 11
General expense and right of way.....	1,010 64
Surveys.....	7,734 51
Plans and computations.....	1,296 00
Transfer to maintenance and administration.....	1,658 35
Transfer to federal trucks (maintenance).....	24,770 57
Rental charges motor transport and equipment account "E" Winthrop, "Q" Richmond and "K" Mattawamkeag.....	4,519 75
Transfer to special resolves (Chap. 171).....	95,550 00
	<b>\$483,623 32</b>

\* The overdraft reported by State Auditor is larger by \$8,000.99 than that reported by the Highway Commission. The Highway Commission have credits for this amount entered in 1919, which will not be entered on the State Auditor's books until 1920.

## MOTOR TRANSPORT AND EQUIPMENT ACCOUNT.

Rental charges received through State Treasurer.....	\$8,814 81
Rental charges received from mill tax Highway Fund.....	4,519 75
Rental charges received from maintenance and administration.....	12,443 74
Debit balance.....	7,807 08
	<b>\$33,585 38</b>
Federal truck expenditures.....	\$29,331 60
Federal equipment expenditures.....	232 44
Charged on M. & R. Auto Trucks account, transferred.....	4,021 34
	<b>\$33,585 38</b>

## IMPROVEMENT STATE ROADS J. F.

## CREDITS.

Unexpended balance from previous years.....	\$244,623 47
Apportionment, Section 20.....	375,175 01
Apportionment, Section 21.....	123,125 68
Adjustment to balance of 1917.....	33 73
Transferred to special resolves.....	535 60
registration of automobiles.....	11 40
maintenance.....	266 41
mill tax, Highway Fund.....	13 17
Webster bridge.....	13 24
Cities and towns appropriation deposited.....	91,650 35
Cities and towns appropriation not deposited but expended under supervision of department.....	373,567 60
Rockland.....	26,975 60
Waldoboro.....	4,500 00
Brunswick.....	8,745 92
Winthrop.....	714 96
Canceled checks.....	1,240 28
Earth sold (Boothbay).....	596 72
Gravel (Waldoboro).....	13 80
Unapportioned appropriation (to maintenance appropriation).....	1,699 31
	<u>\$1,253,502.25</u>

## EXPENDITURES.

Labor and material.....	\$1,098,279.33
Engineering.....	3,856 40
Inspection.....	11,862 94
Transfer to Grand Isle Bridge.....	693 40
"    " Morrill, maintenance and administration.....	25 09
"    " Special resolves.....	8 65
"    " Beddington Bridge.....	600 00
"    " Macwahoc Bridge.....	1,098 00
Balance to 1920.....	137,078.44
	<u>\$1,253,502.25</u>

## STATE AID CONSTRUCTION BRIDGES.

## CREDITS.

Unexpended balance from previous years.....	\$91,584 95
State's appropriation.....	100,000 00
Counties.....	129,536 92
Towns.....	120,848 69
Mount Desert (credit-cement bags, lumber, etc).....	2,027 50
Monticello (credit cement).....	848 96
Perry, claim paid by Bonding Co.....	4,370 80
Bingham (credit-cement bags).....	222 40
Casco-Naples (credit cement).....	472 41
Additional credits.....	580 83
Mileage redeemed (1918).....	20 06
	<u>\$450,513 52</u>

## EXPENDITURES.

Labor and material.....	\$327,789 33
Engineering and inspection.....	12,933 55
Advertising.....	162 86
Refunds to towns.....	1,405 28
Refunds to counties.....	2,043 16
Charges by transfer.....	13 44
Balance to 1920.....	106,165 90
	<u>\$450,513 52</u>

## REGISTRATION OF AUTOMOBILES.

## CREDITS.

Unexpended balance from previous years.....	\$1,043 92
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## DEBITS.

Labor and material.....	\$840 00
Transfer to special resolve.....	103 52
Balance to 1920.....	100 40
	<hr/>
	\$1,043 92

## SPECIAL RESOLVES.

## CREDITS.

Unexpended balance from previous years.....	\$7,564 03
Appropriation by Chapter 171, Res. 1919.....	95,550 00
Towns appropriation deposited.....	9,700 00
People's Ferry Co., Bath.....	10,000 00
Madawaska-Edmunston Bridge.....	4,985 26
Transfer from registration of automobiles appropriation.....	103 52
Transfer from State aid.....	1 57
Edgar Chase Harnden, claim.....	457 12
John G. Fleming, deficiency.....	2,093 90
Town of Castine, deficiency.....	147 80
Town of Scarboro, deficiency.....	1,329 06
Public Roads, Oxford County, deficiency.....	287 07
Estate of Nicola Dinora.....	1,250 00
Miscellaneous credits.....	487 31
Cancelled checks.....	706 45
	<hr/>
	\$134,663 09

## EXPENDITURES.

Labor and material, Res. 1919.....	\$75,822 65
Engineering, Res. 1919.....	1,332 88
Labor and material, Res. 1917.....	3,130 20
Engineering, Res. 1917.....	5 71
Engineering charges on Madawaska-Edmundston Bridge.....	369 83
Passadumkeag (1917 Resolve) balance lapsed July 1, 1919.....	307 91
Transfer to State Aid.....	535 60
Transfer to Fort Kent & St. Francis Bridge.....	2,500 00
Transfer to Indian Township, maintenance.....	1,025 48
Edgar Chase Harnden, claim.....	457 12
John G. Fleming, deficiency.....	2,093 90
Town of Castine, deficiency.....	147 80
Town of Scarboro, deficiency.....	1,329 06
Public roads, Oxford County, deficiency.....	287 07
Estate of Nicola Dinora, deficiency.....	1,250 00
Balance to 1920, 1917 Res.....	2,113 23
Balance to 1920, 1919 Res.....	41,354 65
	<hr/>
	\$134,663 09

1919 RECAPITULATION.

APPROPRIATION.	Adminis- tration.	Engineer- ing.	Inspec- tion.	Advertis- ing.	General expense and right of way.	Labor and material.	Special appro. (Miscel- laneous.)	Total expendi- ture under supervision of department.
Administration.....	\$46,980 93	-	-	-	-	-	-	\$46,980 93
Maintenance appropriation.....	-	-	-	-	-	\$91,254 03	-	91,254 03
Maintenance (Sec. 17).....	-	-	-	-	-	2,142 70	-	2,142 70
Maintenance State Aid Highways.....	-	-	\$12,116 16	-	-	326,975 72	-	339,091 88
Maintenance State Highways.....	-	-	13,039 86	-	-	335,266 73	-	348,306 59
State Highway Construction.....	-	\$21,106 05	-	\$133 11	\$1,010 64	322,629 78	-	344,879 58
Motor Transport and Equipment.....	-	-	-	-	-	33,585 38	-	33,585 38
State Aid Highways Construction.....	-	\$,856 40	11,862 94	-	-	1,098,279 33	-	1,113,998 67
State Aid Construction Bridges.....	-	12,933 55	-	162 86	-	327,789 33	-	340,885 74
Registration of Automobiles.....	-	-	-	-	-	840 00	-	840 00
Special Appropriations.....	-	1,708 42	-	-	-	78,952 85	\$5,564 95	86,226 22
Totals.....	\$46,980 93	\$39,604 42	\$37,018 96	\$295 97	\$1,010 64	\$2,617,715 85	\$5,564 95	\$2,748,191 72

Expense for Auto Bureau (Secretary of State) and Inspectors (Attorney General) not under control of Highway Commission..... \$56,978 72

SUPERVISION CHARGES.

Administration.....	\$46,980 93
Engineering.....	39,604 42
Inspection.....	37,018 96
Advertising.....	295 97
General Expense and right of way.....	1,010 64
	<u>\$124,910 92</u>

LABOR AND MATERIAL.

Maintenance.....	\$755,639 18
State Highway Construction.....	356,215 16
State Aid Highway Construction.....	1,098,279 33
State Aid Construction Bridges.....	327,789 33
Registration of Automobiles.....	840 00
Special appropriations.....	78,952 85
	<u>\$2,617,715 85</u>

Supervision charges .0477 of net construction..... \$2,617,715 85  
 Supervision charges .0454 of gross expenditure..... 2,748,191 72

STATE HIGHWAYS.

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The State Highway construction work unfinished January 1st, 1919, which has been continued or completed during the year, and the work undertaken during 1919 is herewith briefly described without repetition of previous publications.

The location, length, width and type of surface of each section is given, also the name of the contractor or superintendent.

Detailed figures on cost, are shown in a table of expenditures which follows, and it should be noticed in this table that the columns for the cost of surveys and plans and computations are applicable to the construction work to be done in 1920, rather than to the work done in 1919, except in a few instances where cost of labor and material are shown on the same line.

## STATE HIGHWAY "C."

*Yarmouth*—The bridge and approaches at Cousins river, including a bituminous macadam surface 600 feet in length and 18 feet wide, was completed during the year. Total expenditures, \$2,560.67.

## STATE HIGHWAY "D."

*Camden*—Work begun in 1918 consisting of culverts and surfacing with gravel, was completed. Total expenditures during the year, \$6,323.45. Supt. P. R. Keller.

*So. Thomaston Spur*—This work begun in 1917 was suspended during 1918 and resumed in 1919. Length built during the year 0.68 miles, width 16 feet. Surfacing material, gravel. Expenditures, \$4,584.56. Supt. John S. Gardiner.

## STATE HIGHWAY "E."

*Auburn*—This contract begun in 1917 was completed and an additional length of three-tenths (0.3) of a mile was added to the original contract. Expenditure during 1919 was \$33,829.86.

*Winthrop*—Work in this section begun in 1918 was continued under the same management, completing the section of 4.35 miles previously reported. Expenditures, \$59,889.55.

## STATE HIGHWAY "H."

*Vassalboro*—A contract has been made to build a section of road beginning at the Augusta city line on the river road and extending northerly along the river road to the Winslow town line. Work was begun late in the season to the extent of about 5 per cent of the cost. Materials have been ordered and preparations have been made to resume operations early in 1920.

Length 9.35 miles, width of surface 16 feet, total width 21 feet, depth 12 1-2 inches. Surface bituminous macadam. Contractor Amos D. Bridges Sons, Inc. Expenditures 1919, \$10,453.61. Federal aid to the extent of 50 per cent will be received on this project.

*Winslow*—The contract for this work begun in 1918 was completed during the year. Expenditures \$46,223.54. Federal aid received \$12,111.43. Final voucher for 50% of federal aid has been submitted and balance will be received during 1920.

## STATE HIGHWAY "K."

*Enfield*—A contract has been made for a gravel road beginning at the bridge across the Penobscot river to Howland and extending along the river road to the south line of the town of Lincoln. Length 7.05 miles, width 21 feet. Gravel surface. Contractor, M. Seretto. Expenditures \$9,645.95. Work will be resumed early in the year. Federal aid to the extent of 50 per cent will be received as the work progresses.

*Lincoln*—The contract begun in 1918 has been completed. Expenditures, \$8,869.57.



*Mattawamkeag*—Work was resumed on this section early in the season and continued until late in the fall under the direction of A. H. Hill. The work consisted principally of grading, foundations and graveling.

Length in addition to the work of 1918, 1.68 miles, surfacing not completed. Expenditures, \$26,906.60.

Monticello—The work, in this town is a continuation of that of 1918, and consists of gravel surfacing. Expenditures of 1919 are \$7,586.23.

#### STATE HIGHWAY "M."

*Dedham*—Work was resumed late in the season, and consisted of grading and graveling. Length, 1.25 miles; width, 21 feet. Expenditures, \$12,173.97.

#### STATE HIGHWAY "Q."

*Topsham*—This section referred to in the 1918 report as section 2 has been completed during the year by the contractors Amos D. Bridges & Sons, Inc. Expenditures \$11,591.98. Federal Aid received \$1,514.11.

*Bowdoin*—This section also referred to as section 2 has been completed. Expenditures, \$26,397.89. Federal Aid received, \$7,094.11.

*Bowdoinham*—This section referred to in the 1918 report as section 2, has been completed. Expenditures, \$5,674.23. Federal Aid received, \$32,407.00.

*Richmond*—This section has been completed by force account. Expenditures, \$82,617.82. Federal Aid, \$11,884.95.

#### STATE HIGHWAY "Z."

*Topsham*—Work done in 1918 was completed during the year. Expenditures, \$731.46.

## "E" AUBURN—4.17 MILES.

CONTRACTOR—A. D. BRIDGES' SONS, HAZARDVILLE, CONN.

Item.	ESTIMATED QUANTITIES.		Price bid.	Amount.	Actual Quantities.		Amount.
1	2,500	C. Y. Earth Excavation	\$1 25	\$3,125 00	6,227	C. Y.	\$7,783 75
2	40	C. Y. Rock Excavation	4 00	160 00	46	C. Y.	184 00
3	3,600	C. Y. Borrow	1 25	4,500 00	5,961	C. Y.	7,451 25
4	20	C. Y. St. V-drain	3 00	60 00	-	-	-
5	10	C. Y. Gravel V-drain	3 00	30 00	-	-	-
6	150	C. Y. Stone base	3 00	450 00	1,681	C. Y.	5,043 00
7	200	C. Y. Gravel base	3 00	600 00	171	C. Y.	513 00
8	16	C. Y. "A" concrete	20 00	320 00	34.4	C. Y.	688 00
9	27	C. Y. "B" concrete	18 00	486 00	38.5	C. Y.	693 00
10	6	C. Y. "C" concrete	16 00	96 00	-	-	-
11	12	C. Y. Stone masonry	12 00	144 00	15.2	C. Y.	182 40
12	28	L. F. 12 inch pipe	1 00	28 00	28	L. F.	28 00
13	26	L. F. 14 inch pipe	1 00	26 00	-	-	-
14	26	L. F. 16 inch pipe	1 00	26 00	-	-	-
15	30	L. F. 18 inch pipe	1 10	33 00	-	-	-
16	44	L. F. 24 inch pipe	1 25	55 00	62	L. F.	77 50
17	2,850	C. Y. Side under	3 65	10,402 50	3,243.5	C. Y.	11,838 77
18	800	L. F. Wd. Gd. rail	40	320 00	1,008	L. F.	403 20
21	80	C. Y. Gravel surface	3 00	240 00	32	C. Y.	96 00
22	41,956	S. Y. 6-inch Mac. Sur.	1 00	41,956 00	42,090	S. Y.	42,090 00
23	83,912	Gals. Bit. Mat.	06	5,034 72	88,368	Gals.	5,302 08
25	50	S. Y. Cob. Pav'g.	1 00	50 00	-	-	-
26	4,800	L. F. 6-inch tile	08	384 00	4,916	L. F.	393 28
		S. Y. 5-inch tile	07	-	260	L. F.	18 20
27	6,620	S. Y. 4-inch tile	06	397 20	6,894	L. F.	413 64
	Overhaul		-	-	-	-	6 85
	52.3 Cubic yards, $\frac{1}{2}$ stone		-	-	-	-	156 90
	Extra work		-	-	-	-	2,446 96
				\$68,923 42			\$85,809 78

## "H" WINSLOW—3.50 MILES.

CONTRACTORS—GREENWOOD &amp; FORD, SKOWHEGAN, ME.

Item.	ESTIMATED QUANTITIES.		Price bid.	Amount.	Actual Quantities.		Amount.
1	6,650	C. Y. Excav	\$1 20	\$7,980 00	9,723.3	C. Y.	\$11,667 96
2	100	C. Y. Rock Excav	5 50	550 00	38.08	C. Y.	209 44
3	4,750	C. Y. Borrow	1 30	6,175 00	2,643	C. Y.	3,435 90
4	100	C. Y. Stone V-drain	2 50	250 00	56	C. Y.	140 00
6	1,200	C. Y. Stone base	3 00	3,600 00	1,411	C. Y.	4,233 00
7	200	C. Y. Gravel base	3 00	600 00	516.5	C. Y.	1,549 50
8	22	C. Y. "A" concrete	26 00	572 00	43.46	C. Y.	1,129 96
9	60	C. Y. "B" concrete	24 00	1,440 00	102.67	C. Y.	2,464 08
11	20	C. Y. Stone Mas'y	20 00	400 00	-	-	-
12	94	L. F. 12-inch pipe	1 00	94 00	68	L. F.	68 00
13	26	L. F. 14-inch pipe	1 05	27 30	26	L. F.	27 30
14	224	L. F. 16-inch pipe	1 15	257 60	278	L. F.	319 70
15	84	L. F. 18-inch pipe	1 25	105 00	84	L. F.	105 00
17	150	C. Y. Underdrain	3 00	450 00	188	C. Y.	564 00
18	2,800	L. F. Wd. Gd. rail	75	2,100 00	2,707	L. F.	2,030 25
21	275	C. Y. Gravel surface	3 00	825 00	96	C. Y.	288 00
22	32,951	S. Y. Macadam surface	1 10	36,241 10	32,846	S. Y.	36,130 60
23	74,140	Gals. Bit. Mat.	08	5,931 20	72,603	Gals.	5,808 24
25	500	S. Y. Cobble paving	3 00	1,500 00	-	-	-
				\$69,103 20			\$70,170 93

"H" VASSALBORO—9.35 MILES.

CONTRACTOR—A. D. BIDDGES' SONS, HAZARDVILLE, CONN.  
3% Completed.

Item.	ESTIMATED QUANTITIES.			Price	Amount.	Actual		Amount.
				bid.		Quantities.		
1	23,593	C. Y.	Excav. ....	\$1 75	\$41,287 75	2,778	C. Y.	\$4,861 50
2	570	C. Y.	Rock Exc. ....	4 00	2,280 00	4½	C. Y.	18 00
3	4,750	C. Y.	Borrow. ....	1 75	8,312 50	-	-	-
4	600	C. Y.	Stone V-drain. ....	4 50	2,700 00	-	-	-
6	18,134	C. Y.	Stone base. ....	4 50	81,603 00	-	-	-
7	4,589	C. Y.	2-inch Gr. Sub-base	4 00	18,356 00	249.6	C. Y.	998 40
8	126	C. Y.	"A" concrete. ....	20 00	2,520 00	-	-	-
9	255	C. Y.	"B" concrete. ....	18 00	4,590 00	-	-	-
11	50	C. Y.	Cem. Masr'y. ....	12 00	600 00	-	-	-
12	600	L. F.	12-inch pipe. ....	1 00	600 00	262	L. F.	262 00
13	4	L. F.	20-inch pipe. ....	2 00	8 00	4	L. F.	8 00
14	384	L. F.	16-inch pipe. ....	1 25	480 00	284	L. F.	355 00
15	188	L. F.	18-inch pipe. ....	1 50	282 00	84	L. F.	126 00
16	344	L. F.	24-inch pipe. ....	1 75	602 00	334	L. F.	584 50
17	1,000	C. Y.	Underdrains. ....	4 50	4,500 00	-	-	-
18	1,774	L. F.	Wd. Gd. rail. ....	60	1,064 40	-	-	-
21	976	C. Y.	Gravel road. ....	4 00	3,904 00	-	-	-
22	80,980	S. Y.	2½ inch macadam. ...	66	53,446 80	-	-	-
23	176,898	Gals.	Bit. material. ....	07	12,382 86	-	-	-
25	2,215	S. Y.	Cobble paving. ....	1 50	3,322 50	-	-	-
26	6,639	S. Y.	6-inch Macadam. ...	1 30	8,630 70	-	-	-
27	400	S. Y.	Reconst't'd St. Bs.	4 50	1,800 00	-	-	-
					\$253,272.51			\$7,213 40

## "K" LINCOLN—5.30 MILES.

CONTRACTORS—ROGERS &amp; MULLANEY, BANGOR, MAINE.

Item.	ESTIMATED QUANTITIES.		Price bid.	Amount.	Actual Quantities.		Amount.	
1	8,000	C. Y.	Excav. ....	\$0 70	\$5,600 00	10,992	C. Y.	\$7,694 40
2	50	C. Y.	Rock Excav. ....	2 00	100 00	52	C. Y.	104 00
3	500	C. Y.	Borrow. ....	70	350 00	7,255	C. Y.	5,078 50
4	50	C. Y.	St. V-drain. ....	1 75	87 50	207.3	C. Y.	362 77
5	50	C. Y.	Gravel V-drain. ....	1 50	75 00	141	C. Y.	211 50
6	100	C. Y.	Stone base. ....	1 75	175 00	-	-	-
7	100	C. Y.	Gravel base. ....	1 75	175 00	323.3	C. Y.	565 77
8	136	C. Y.	"A" concrete. ....	15 00	2,040 00	67.86	C. Y.	1,017 90
9	225	C. Y.	"B" concrete. ....	14 00	3,150 00	417.65	C. Y.	5,847 10
10	30	C. Y.	"C" concrete. ....	12 00	360 00	-	-	-
11	20	C. Y.	Stone Mas'y. ....	8 00	160 00	-	-	-
12	338	L. F.	12-inch pipe. ....	45	152 10	364	L. F.	163 80
14	130	L. F.	16-inch pipe. ....	55	71 50	182	L. F.	100 10
15	52	L. F.	18-inch pipe. ....	65	33 80	52	L. F.	33 80
16	28	L. F.	24-inch pipe. ....	90	25 20	28	L. F.	25 20
17	100	C. Y.	Underdrain. ....	1 50	150 00	167	C. Y.	250 50
18	1,200	L. F.	Wd. Gd. rail. ....	50	600 00	970	L. F.	485 00
21	9,800	C. Y.	Gravel surface. ....	1 90	18,620 00	10,170	C. Y.	19,323 00
25	100	S. Y.	Cob. paving. ....	80	80 00	-	-	-
					\$32,005 10			\$41,263 34

FEDERAL AID PROJECT NO. 1—SECTION C.  
 "Q" BOWDOINHAM, BOWDOIN, AND TOPSHAM.  
 4.28 MILES.

CONTRACTOR—A. D. BRIDGES' SONS, HAZARDVILLE, CONN.

Item.	ESTIMATED QUANTITIES.			Price bid.	Amount.	Actual Quantities.		Amount.
1	10,615	C. Y.	Excav.....	\$1 20	\$12,738 00	11,225	C. Y.	\$13,470 00
	2,063	C. Y.	Rock Exc.....	3 00	6,189 00	1,173.4	C. Y.	3,520 20
	1,647	C. Y.	Borrow.....	1 20	1,976 40	7,128	C. Y.	8,553 60
	-	C. Y.	Stone V-drain.....	2 50	-	190	C. Y.	475 00
	-	C. Y.	Gravel V-drain.....	2 50	-	-	-	-
	2,134	C. Y.	Stone base.....	2 25	4,801 50	3,417	C. Y.	7,688 25
	826	C. Y.	Gravel base.....	2 25	1,858 50	1,141	C. Y.	2,567 25
	22.4	C. Y.	"A" concrete.....	20 00	448 00	46.24	C. Y.	924 80
	112.50	C. Y.	"B" concrete.....	18 00	2,025 00	197.1	C. Y.	3,547 80
	10	C. Y.	"C" concrete.....	16 00	160 00	10	C. Y.	160 00
10	-	C. Y.	Stone Mas'r'y.....	16 00	-	-	-	-
11	-	L. F.	12-inch pipe.....	80	384 00	472	L. F.	377 60
12	480	L. F.	14-inch pipe.....	1 00	-	-	-	-
13	-	L. F.	16-inch pipe.....	1 00	350 00	326	L. F.	326 00
14	350	L. F.	18-inch pipe.....	1 10	116 60	106	L. F.	116 60
15	106	L. F.	24-inch pipe.....	1 25	220 00	118	L. F.	147 50
16	176	L. F.	Side underdrain...	3 35	647 85	3,016.4	L. F.	596 41
17	-	L. F.	Wd. Gd. rail.....	2 50	-	-	-	-
18	1,851	L. F.	Ir. Gd. rail.....	2 50	4,627 50	3,016	L. F.	7,643 50
19	-	C. Y.	Gravel surface.....	2 50	250 00	195	C. Y.	487 50
21	100	S. Y.	6-inch Mac. Surf..	80	32,136 00	40,260	S. Y.	32,208 00
22	40,170	S. Y.	Cob. Pav'g.....	1 00	616 00	-	-	-
25	616	S. Y.	Bit. Mat.(bbl.)....	05	4,519 10	86,628	Gals.	4,331 40
26	90,382	Gals.	Overhaul.....	-	-	-	-	55 95
			Extra work.....	-	-	-	-	219 85
					\$69,435 95			\$80,829 31

## EXPENDITURES ON STATE HIGHWAYS FROM STATE HIGHWAY

Highway.	TOWN.	ENGINEERING AND ADVERTISING.					LABOR AND MATERIAL.			
		Surveys.	Plans and computations.	Advertising.	Engineering and inspection.	General expense and right of way.	Total.	Grading.	Drainage.	Culverts.
A	Kittery-Portsmouth.....	-	-	-	\$547 01	-	\$547 01	-	-	-
B	Windham.....	\$235 56	-	-	-	-	235 56	-	-	-
B	Westbrook.....	319 75	-	-	-	-	319 75	-	-	-
C	Yarmouth.....	-	-	-	-	-	-	\$122 00	\$99 91	-
C	Brunswick.....	7 80	-	-	-	-	7 80	-	-	-
D	Wiscasset.....	-	-	-	28 56	-	28 56	-	-	-
D	Newcastle.....	-	-	\$1 31	-	-	1 31	-	-	-
D	Nobleboro.....	-	-	-	-	\$125 50	125 50	-	-	-
D	Camden.....	-	-	-	995 44	-	995 44	138 00	-	\$1,491 57
D	Northport.....	-	-	1 31	-	-	1 31	-	-	-
D	So. Thomaston.....	-	-	-	43 74	-	43 74	1,573 71	-	96 40
E	Falmouth.....	331 78	\$23 54	1 31	14 36	-	370 99	-	-	-
E	Cumberland.....	166 60	-	-	4 42	-	171 02	-	-	-
E	Gray.....	379 08	-	-	4 42	-	383 50	-	-	36 00
E	New Gl'cester.....	512 24	-	-	4 42	-	516 66	-	-	-
E	Auburn.....	151 74	-	-	1,211 57	75 00	1,438 31	5,384 38	3,472 75	2,379 41
E	Greene.....	-	-	-	-	-	-	6 00	-	-
E	Monmouth.....	-	-	-	5 84	-	5 84	-	-	-
E	Winthrop.....	19 46	9 79	1 31	1,308 49	-	1,339 05	9,794 94.	2,516 86	1,130 06
F	Turner.....	108 41	15 57	-	-	-	123 98	-	-	-
F	Livermore.....	74 41	11 10	-	-	-	85 51	-	-	-
F	Wilton.....	210 39	60 88	-	-	-	280 27	-	-	-
F	Farmington.....	162 19	16 65	-	-	-	178 84	-	-	-
F	Letter E. Twp.....	-	-	-	-	-	-	40 11	-	-
G	Belgrade.....	592 11	-	-	-	-	592 11	-	-	-
G	Oakland.....	185 47	-	-	-	50 00	235 47	-	-	-
G	Waterville.....	-	-	-	-	50	50	-	-	-
H	Vassalboro.....	5 38	320 13	23 13	713 10	330 90	1,392 64	4,437 26	898 56	3,725 15
H	Winslow.....	5 38	28 83	1 31	1,104 18	12 69	1,152 39	7,283 26	4,366 70	3,181 86
H	Fairfield.....	84 95	-	-	-	-	84 95	-	-	-
H	Skowhegan.....	491 55	-	-	-	-	491 55	-	-	-
H	Sandy Bay.....	-	-	-	-	100 69	100 69	-	-	-
I	Pittsfield.....	-	-	-	54 50	49 55	104 05	-	40 30	34 20
I	Newport.....	-	-	-	7 50	-	7 50	-	-	-
J	Newport.....	266 16	-	-	-	-	266 16	-	-	-
J	Corinna.....	419 59	-	-	-	-	419 59	-	-	-
J	Dexter.....	393 66	-	-	-	-	393 66	-	-	-
J	Foxcroft.....	2 00	-	-	-	-	2 00	-	-	-
K	Enfield.....	126 72	110 69	100 79	615 83	-	954 03	-	-	8,691 92
K	Lincoln.....	-	-	1 32	772 73	-	774 05	4,027 19	690 65	748 31
K	Mattawamk'g.....	-	-	-	304 77	-	304 77	9,534 77	521 74	617 74
K	Molunkus.....	-	-	-	98 85	-	98 85	-	-	-
K	Sherman.....	20 38	152 02	-	20 75	-	193 15	-	-	-
K	Crystal.....	9 22	60 95	-	-	-	70 17	-	-	-
K	Island Falls.....	17 78	32 50	-	19 22	-	69 50	-	-	-
K	Dyer Brook.....	9 13	42 33	-	4 81	-	56 27	-	-	-
K	New Limerick.....	-	-	-	-	-	-	-	-	-
K	Houlton.....	269 37	-	-	-	-	269 37	-	-	-
K	Littleton.....	396 93	-	-	-	-	396 93	-	-	-
K	Monticello.....	-	-	-	7 21	25 00	32 21	477 54	-	179 42
K	Bridgewater.....	-	-	-	-	-	-	-	-	30.75
K	Blaine.....	-	-	-	-	-	-	-	-	-
K	Van Buren.....	-	-	1 32	-	-	1 32	-	-	-

MILL TAX, JANUARY I, 1919, TO JANUARY I, 1920.

LABOR AND MATERIAL.					Amount approved for payment.	CREDIT.	
Surfacing.	Guard rails.	Bridges.	Shoulder work, camp and provisions.	Total.		EXPLANATION.	Amount.
-	-	-	-	-	\$547 01		-
-	-	-	-	-	235 56		-
-	-	-	-	-	319 75		-
\$2,099 34	\$179 67		\$59 75	\$2,560 67	2,560 67	Credit on cement, cr. bridges	\$338 84
-	117 15	\$192 75	-	309 90	317 70		-
-	-	-	-	-	28 56		-
-	-	-	-	-	1 31	Cr. on culverts & Cem. bags.	44 70
-	-	-	-	-	125 50	Cr. culverts, lumber.	35 20
3,643 76	35 95	-	*18 73	5,328 01	6,323 45		-
-	-	-	-	-	1 31		-
2,870 71	-	-	-	4,540 82	4,584 56		-
-	-	-	-	-	370 99		-
-	-	-	-	-	171 02		-
-	-	-	-	36 00	36 00		-
19,349 97	1,805 04	-	-	32,391 55	33,828 86		-
-	-	-	-	6 00	6 00		-
44,896 21	212 43	-	-	58,550 50	59,889 55		-
-	-	-	-	-	123 98		-
-	-	-	-	-	85 51		-
-	-	-	-	-	280 27		-
-	-	-	-	40 11	178 84		-
-	-	-	-	-	40 11		-
-	-	-	-	-	592 11		-
-	-	-	-	-	235 47	Tarvia credit.	62 40
-	-	-	-	-	50		-
28,206 01	2,033 32	-	-	9,060 97	10,453 61	Federal aid.	12,111 43
-	-	-	-	45,071 15	46,223 54		-
-	-	-	-	-	84 95		-
-	-	-	-	-	491 55		-
-	-	-	-	-	100 69		-
-	-	-	-	74 50	178 55		-
-	-	-	-	-	7 50		-
-	-	-	-	-	266 16		-
-	-	-	-	-	419 59		-
-	-	-	-	-	393 66		-
-	-	-	-	-	2 00		-
2,580 34	49 03	-	-	8,601 92	9,645 95		-
12,524 92	-	-	*3,402 66	8,095 52	8,869 57		-
-	-	-	-	26,601 83	26,906 60		-
-	-	-	-	-	98 85		-
-	-	-	-	-	193 15		-
-	-	-	-	-	70 17		-
-	-	-	-	-	69 50		-
-	-	-	-	-	56 27		-
-	-	1,363 74	-	1,363 74	1,363 74		-
-	-	-	-	-	37		-
-	-	-	-	-	269 37		-
-	-	-	-	-	396 93		-
4,089 90	93 71	2,713 45	-	7,554 02	7,586 23	Groceries sold.	66 43
332 70	-	-	-	363 45	363 45	Hauling rocks credit bridge.	50 00
-	-	-	-	-	1 32		-

## EXPENDITURES ON STATE HIGHWAYS FROM STATE HIGHWAY

Highway.	Town.	ENGINEERING AND ADVERTISING.					Total.	LABOR AND MATERIAL.		
		Surveys.	Plans and computations.	Advertising.	Engineering and inspection.	General expense and right of way.		Grading.	Drainage.	Culverts.
L	Belfast.....	272 31	-	-	-	-	272 31	-	-	-
L	Searsport.....	-	-	-	-	-	-	-	-	-
M	Dedham.....	-	-	-	-	-	-	11,613 09	190 00	370 88
M	Ellsworth.....	-	-	-	-	1 03	1 03	-	-	-
N	Edmunds.....	-	-	-	38 45	2 09	40 50	-	-	-
N	Pembroke.....	-	66 33	-	-	-	66 33	-	-	-
N	Perry.....	175 90	333 29	-	-	-	509 19	-	-	-
O	Livermore.....	113 90	-	-	-	-	113 90	-	-	-
O	Hartford.....	18 78	-	-	-	-	18 78	-	-	-
O	Canton.....	497 46	-	-	-	-	497 46	-	-	-
Q	Topsham.....	253 60	-	-	378 24	51 56	683 40	3,069 65	1,807 95	167 10
Q	Bowdoinham.....	-	-	-	43 60	1 03	44 63	1,533 12	1,091 21	-
Q	Richmond.....	-	-	-	2,590 77	-	2,590 70	21,637 26	11,357 08	2,598 94
Q	Bowdoin.....	-	-	-	1,007 11	38 50	1,045 61	7,206 08	2,500 71	906 47
S	Oxford.....	214 54	-	-	-	-	214 54	-	-	-
S	Norway.....	101 74	-	-	89 34	-	191 08	-	-	-
S	Greenwood.....	-	-	-	-	-	-	-	-	-
S	Bethel.....	-	-	-	-	1 00	1 00	-	-	-
Z	Lisbon.....	103 84	-	-	75	100 00	204 59	-	-	-
Z	Topsham.....	7 25	2 40	-	35 56	45 60	90 81	168 33	9 00	60 86
	Mach. & Equip	-	-	-	-	-	-	-	-	-
	Maint. & Ren'l	-	-	-	-	-	-	-	-	-
	Mach. & Equip	-	-	-	-	-	-	-	-	-
	Exp. of issuing	-	-	-	-	-	-	-	-	-
	Bonds.....	-	-	-	-	-	-	-	-	-
	Totals.....	\$7,734 51	\$1,296 00	\$133 11	\$12,075 54	\$1,010 64	\$22,249 80	\$88,046 69	\$29,563 42	\$26,447 04

\* Camp and provisions.



## MILL TAX, JANUARY 1, 1919, TO JANUARY 1, 1920.

LABOR AND MATERIAL.					Amount approved for payment.	CREDIT.	
Surfacing.	Guard rais.	Bridges.	Shoulder work, camp and provisions.	Total.		EXPLANATION.	Amount.
-	-	-	-	-	272 31	Overpayment Est. No. 13 Roger & Mullaney.	- 288 26
-	-	-	-	12,173 97	12,173 97		-
-	-	-	-	-	1 03		-
-	-	-	-	-	40 54		-
-	-	-	-	-	66 33		-
-	-	-	-	-	509 19		-
-	-	-	-	-	113 90		-
-	-	-	-	-	18 78		-
-	-	-	-	-	497 46		-
5,595 19	268 69	-	-	10,908 58	11,591 98	Federal aid.	- 1,514 11
2,972 72	32 55	-	-	5,629 60	5,674 23	Adj. on 1918 acct. cr. culv.	- 622 35
44,282 23	126 71	18 60	6 23	80,027 05	82,617 82	Federal aid.	- 32,407 00
14,176 56	562 46	-	-	25,352 28	26,397 89	Federal aid.	- 11,884 95
-	-	-	-	-	214 54	Federal aid.	- 7,094 11
-	-	-	-	-	191 08		-
-	50	4 95	-	5 45	5 45		-
-	-	-	-	-	1 00		-
-	-	-	-	-	204 59		-
-	402 46	-	-	640 65	731 46	Credit on Tarvia surface.	- 639 92
-	-	-	-	-	-		- 11,620 47
-	-	-	-	-	-		- 4 79
-	-	-	-	182 71	182 71		-
\$187,621 06	\$5,924 12	\$4,288 54	\$3,487 37	\$345,560 95	\$367,810 75	Balance . . . . . \$289,025 79	- \$78,784 96

## STATE HIGHWAYS CONSTRUCTED.

1914-1919 Inclusive.

COUNTY.	Highway.	Work done.	TOWN.	TYPE OF CONSTRUCTION.		Length—miles.
				Contract.	Force Acc't.	
Androscoggin...	E	1914	Greene.....		Gravel	2.27
	E	1914	Leeds.....		Gravel	1.45
	S	1915	Poland No. 1.....	Gravel		3.65
	S	1915-1916	Poland No. 2.....	Macadam		2.10
	E	1916	Greene No. 2.....	Grav. & Mac.		1.80
	E	1916	Lewiston.....	Gravel		2.60
	S	1916	Mechanic Falls.....	Gravel		2.60
	E	1917	Greene.....		Gravel	1.69
	Z	1917	Lisbon.....		Gravel	0.50
	E	1918	Auburn.....	Bit. Mac.		4.17
	E	1919	Auburn.....	Bit. Mac.		0.30
						23.13
	Aroostook.....	K	1914-1915	New Limerick.....		Gravel
K		1914-1915	Houlton.....		Gravel	2.72
K		1915	Presque Isle.....		Gravel	6.02
K		1915	Caribou.....		Gravel	5.48
K		1916	Ludlow.....		Gravel	0.24
K		1916	Smyrna.....		Gravel	0.64
K		1916	Bridgewater.....		Gravel	6.55
K		1917	Blaine.....		Gravel	3.41
K		1918	Molunkus.....		Gravel	2.32
K		1918	Monticello.....		Gravel	2.25
					36.32	
Cumberland...	A	1915	Scarboro No. 1.....	Concrete		5.47
	A	1915	So. Portland.....	Concrete		2.09
	B	1915	Raymond.....		Sand-Clay	0.98
	B	1915	Windham.....		Sand-Clay	2.00
	C	1914-1915	Falmouth.....	Bit. Mac.		4.05
	C	1914-1915	Cumberland.....	Bit. Mac.		3.16
	C	1914-1915	Yarmouth.....	Bit. Mac.		3.12
	C	1914-1915	Freeport.....	Bit. Mac.		7.56
	C	1914-1915	Brunswick.....	Bit. Mac.		2.98
	B	1915	Bridgton.....	Gravel.....		1.08
	B	1916	Bridgton.....		Gravel	0.50
	A	1916	Scarboro No. 2.....	Concrete		0.64
C	1916	Brunswick.....		Bit. Mac.	4.59	
					38.22	
Franklin.....	F	1914-1915	Farmington.....	Gravel		3.62
	F	1914-1915	Strong.....	Gravel		3.44
	F	1915	Sandy River.....		Gravel	4.66
	F	1916	Sandy River.....		Gravel	1.40
	F	1917	Letter E. Pl.....		Gravel	0.41
	F	1917	Sandy River.....		Gravel	0.78
	F	1918	Letter E. Pl.....		Gravel	0.52
	F	1918	Madrid.....		Gravel	0.25
						15.08
Hancock.....	M	1915	Dedham.....		Gravel	2.23
	M	1915	Ellsworth.....		Gravel	0.91
	M	1915	Ellsworth.....	Gravel		0.77
	M	1914-1915	Trenton.....	Gravel		6.02
	M	1916	Dedham.....		Gravel	1.35
	M	1916	Ellsworth.....		Gravel	1.23
	N	1916	Sullivan.....	Gravel		0.66
	M	1917	Trenton.....	Gravel		0.57
	M	1917	Ellsworth.....		Gravel	3.75
	M	1919	Dedham.....		Gravel	1.25
					18.74	
Kennebec.....	E	1914-1915	Monmouth.....	Grav. & Mac.		4.88
	E	1914-1915	Winthrop.....	Gravel		1.86
	E	1915	Manchester.....	Macadam		2.68
	I	1916	Clinton.....	Gravel		4.89
	Q	1916	Gardiner.....	Gravel		4.55
	G	1917	Waterville.....	Gravel		1.84
	G	1917	Oakland.....	Bit. Mac.		1.41
	I	1917	Benton.....		Gravel	0.35
	H	1918	Winslow.....	Bit. Mac.		3.50
	E	1918	Winthrop.....	Bit. Mac.		4.35
	I	1918	Benton.....		Gravel	0.44
					30.75	

## STATE HIGHWAYS CONSTRUCTED—Continued.

COUNTY.	Highway.	Work done.	TOWN.	TYPE OF CONSTRUCTION.		Length—miles.	
				Contract.	Force Acc't.		
Knox.....	D	1914-1915	Warren.....	Gravel		5.86	
	D		1915	Thomaston.....	Gravel	1.28	
	D		1915	Thomaston.....	Gravel	0.36	
	D		1916	Thomaston.....	Concrete	0.12	
	D		1917	Thomaston spur.....	Gravel	0.59	
	D		1917	So. Thomaston spur.....	Gravel	1.80	
	D		1918	Camden.....	Gravel	2.44	
	D		1919	So. Thomaston spur.....	Gravel	0.68	13.13
Lincoln.....	D	1914-1915	Wiscasset.....	Gravel		3.94	
	D		1914	Waldoboro.....	Gravel	7.09	
	D		1916	Damariscotta.....	Gravel	3.22	
	D		1917	Edgecomb.....	Gravel	1.06	
	D		1917-1918	Newcastle.....	Gravel	3.63	
	D			1917	Nobleboro.....	Gravel	2.67
	D		1918	Nobleboro.....	Gravel	0.63	22.24
Oxford.....	B	1914-1918	Fryeburg.....	Gravel		7.41	
	S		1915	Oxford.....	Sand-Clay	3.77	
	S		1915	Woodstock.....	Gravel	0.52	
	S		1916	Bethel.....	Gravel	4.38	
	S		1916	Woodstock.....	Gravel	0.44	
	S		1917-1918	Greenwood.....	Gravel	1.28	
	S			1918	Woodstock.....	Gravel	0.32
Penobscot.....	I	1914-1915	Newport.....	Gravel		1.59	
	I		1914-1915	Etna.....	Gravel	3.08	
	I		1914-1915	Carmel.....	Gravel	4.93	
	I		1915	Hermon No. 1.....	Gravel	1.09	
	M		1915	Brewer.....	Gravel	0.44	
	M		1915	Holden No. 1.....	Gravel	2.67	
	I		1916	Hermon No. 2.....	Gravel	3.08	
	J		1916	Garland.....	Gravel	1.22	
	J		1916	Dexter.....	Gravel	0.11	
	M		1916	Holden No. 2.....	Gravel	1.00	
	I		1917	Newport.....	Gravel	0.17	
	J		1917-1918	Dexter.....	Gravel	2.26	
	K			1918	Lincoln.....	Gravel	5.30
	K			1918	Mattawamkeag.....	Gravel	2.82
	K			1919	Mattawamkeag.....	Gravel	1.68
	K			1919	Mattawamkeag.....	Gravel	1.82
	Piscataquis.....		J	1914-1915	Dover.....	Gravel	
J		1915-1916	Monson.....		Gravel	2.27	
J		1916	Guilford.....		Gravel	3.20	12.19
Sagadahoc.....	D	1917-1918	Woolwich.....	Gravel		5.65	
	Q		1916	Richmond.....	Gravel	0.56	
	Q		1917-1918	Bowdoinham.....	Bit. Mac.	6.05	
	Q		1917	Bath.....	Bit. Mac.	2.38	
	Q		1917-1918	Richmond.....	Bit. Mac.	5.24	
	Z		1917-1918	Topsham.....	Gravel	6.54	
	Q			1918	Bowdoinham.....	Bit. Mac.	1.44
	Q			1918	Bowdoin.....	Bit. Mac.	2.26
Q	1918	Topsham.....	Bit. Mac.	0.57	30.69		
Somerset.....	H	1914-1915	Fairfield.....	Gravel		2.29	
	H		1914-1915	Norridgewock.....	Gravel	5.61	
	H		1914	Madison.....	Gravel	1.08	
	H		1916	Fairfield No. 2.....	Gravel	1.88	
	I		1916	Palmyra.....	Gravel	2.56	
	I		1916	Detroit.....	Gravel	2.85	
	I		1917	Pittsfield No. 1.....	Gravel	6.16	
	I		1917	Pittsfield No. 2.....	Gravel	0.82	
	H		1917	Embden.....	Gravel	0.32	
	H		1918	The Forks.....	Gravel	0.05	
H	1918	Sandy Bay.....	Gravel	2.01	25.63		

## STATE HIGHWAYS CONSTRUCTED—Concluded.

COUNTY.	High-way.	Work done.	TOWN.	TYPE OF CONSTRUCTION.		Length—miles.	
				Contract.	Force Acc't.		
Waldo.....	I D L L D I	1916	*Jackman-Rockwood clearing and grubbing.....			22.21	
		1916	†Jackman-Long Pond, grading.....			8.93	
		1914	Burnham.....		Gravel	7.65	Bridge
		1914-1915	Northport.....	Gravel		2.53	
		1915-1916	Searsport.....	Gravel		0.34	
		1916	Prospect.....	Gravel		3.50	
		1916	Lincolnvile.....	Gravel		2.53	16.55
Washington....	N N N N N N	1914	Whiting.....	Gravel		9.22	
		1915	Edmunds No. 1.....	Gravel		1.95	
		1916	Edmunds No. 2.....	Gravel		2.00	
		1916	Cherryfield.....		Gravel	3.01	
		1917	Edmunds.....	Gravel		1.46	
		1918	Jonesboro.....		Gravel	1.97	19.61
York.....	A A A A A A	1914	York.....		Bit. Mac.	4.15	
		1914	Wells.....		Bit. Mac.	2.08	
		1914	Kennebunkport.....	Gravel		0.83	
		1914	Biddeford.....		Gravel	1.20	
		1916	Saco No. 1.....	Concrete		2.44	
		1916	Saco No. 2.....	Concrete		1.04	11.74

\* State aid.

† Special resolves.

## SUMMARY.

Gravel.....	270.21 miles
Macadam.....	4.78
Concrete.....	11.80
Sand-Clay.....	6.75
Bituminous Macadam.....	63.36
Gravel and Macadam.....	6.68
Clearing and Grubbing.....	22.21
Grading.....	8.93

394.72 miles

## STATE AID ROAD WORK.

INCLUDING EXPENDITURES FROM JANUARY 1, 1919 TO  
DECEMBER 31, 1919.

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During 1919 the total expenditures on account of state aid road work amounted to \$1,112,946.28: against this total cost \$604,941.05 was paid by the state from apportionments of state aid: of this amount \$403,550.43 was paid from the appropriation for the improvement of state roads for 1919 and \$201,390.62 was paid from unexpended balances of state aid apportionments brought forward from previous years: in addition to the above payments an appropriation of \$147.80 by a special resolve and \$159.15 from the maintenance fund were transferred to the appropriation for state aid roads and both amounts were expended on state aid road construction: the total payments from state appropriations, therefore, amounted to \$605,248.00: to this amount should be added \$911.48 which was received from the sale of material and rental of equipment and \$9,372.98 which was deposited with the state by street railway companies and expended for track paving.

The total disbursement by the state from state appropriations and from funds on deposit with the state, other than town appropriations, amounted to \$615,532.46. The total amount furnished by the towns and cities against the total cost was \$497,413.82: of the total cost \$3,856.40 was paid for engineering, \$11,862.94 for inspection and \$1,097,226.94 for labor and material.

In two towns 1919 state aid apportionments amounting to \$1,191.40 were transferred to the appropriation for bridges; in one town the sum of \$.07 was transferred from the 1918 balance to an appropriation under a special resolve; in one

town \$7.08 was transferred from 1917 balance to a special resolve appropriation and in one town \$400.00 from the 1915 apportionment of state aid was transferred to the appropriation for bridges.

The above amounts were expended on construction work together with additional funds from the appropriations to which they were transferred and in the same towns to which the original state aid apportionments were made.

The above amounts, transferred, are not included in the total expenditure shown above or in the payment of state aid.

Applications for state aid in 1919 were received from 487 towns, including cities and townships; of this number two towns have not completed work which was undertaken; 40 towns have carried the joint funds over to 1920 and in two towns the joint funds for 1919 were transferred to other appropriations, leaving 443 towns which have completed 1919 work. Of the towns which carried 1918-1917-1916 and 1915 joint funds over to 1919, thirty-eight joint funds from 1918, ten joint funds from 1917, two joint funds from 1916 and one joint fund from 1915 were combined with the 1919 joint funds and the expenditures reported with the 1919 work. In addition to the above, 46 towns have completed 1918 work and nine towns have completed 1917 work in 1919. In 10 towns unexpended balances of joint funds appropriated and apportioned under the provisions of chapter 154, P. L. 1917 have been expended in continuing the work in 1919.

Seventy-four towns applied for additional apportionments of state aid under the provisions of section 21, chapter 25, Revised Statutes of 1916; the additional state aid applied for amounted to \$194,016.69. After making the apportionment of state aid under section 20 of the above chapter, the balance of the state appropriation was not sufficient to permit of making the full apportionment of state aid under section 21; of the 74 towns which applied under section 21, 39 towns had never been apportioned additional aid prior to 1919 and the full apportionment was made to these towns, preference being given to them as provided for in this section. The apportionment of additional state aid to these towns amounted to \$86,606.07. The remaining 35 towns received 34 per cent of

the amounts for which they applied; the additional money apportioned to these 35 towns amounted to \$36,519.61.

Unexpended balances amounting to \$67,405.86 from apportionments of state aid made under chapter 154, P. L. 1917, in 1918 to towns on the Ossipee and Pequawket trails were brought forward to 1919. From these balances there has been expended in 1919 the sum of \$56,085.77 leaving unexpended balances of \$11,320.09 which will be available for expenditure in 1920. A tabular statement of expenditures on these trails will be found with this report.

Unexpended balances from 1919 apportionments, amounting to \$96,799.50, and balances of apportionments made prior to 1919, amounting to \$41,159.70, or a total of \$137,959.20, have been carried over to 1920; included in this amount is the sum of \$3,240.64 which is due from towns to balance their state aid accounts. In addition to the above balance, unexpended balances from town appropriations amounting to \$626.84 are on deposit with the state and are available for expenditure in 1920.

Of the work laid out for 1919, 147.885 miles were completed; 12.773 miles of 1918 state aid road; 7.203 miles of road on the Ossipee trail; 17.341 miles of road on the Pequawket trail and 1.874 miles of 1917 state aid road were also completed making a total of 187.076 miles completed in 1919.

#### STATEMENT OF TOTAL EXPENDITURES ON STATE AID ROADS, 1919.

Expended for engineering .....		\$3,856 40
"    "    inspection .....		11,862 94
"    "    labor and material .....		1,097,226 94
Total expenditures by State, towns and cities .....		<u>\$1,112,946 28</u>
Payments by State from State apportionments and from funds deposited with the State other than town appropriations.		
Paid from apportionments of State aid .....	\$604,941 05	
Paid from funds deposited with State by street railway companies .....	9,372 98	
Paid from funds received from material sold and rental of equipment .....	911 48	
Transferred from special resolve fund and expended on State aid roads .....	147 80	
Transferred from maintenance fund and expended on State aid roads .....	159 15	
		<u>615,532 46</u>
Paid by cities and towns .....		<u>\$497,413 82</u>

## STATE HIGHWAY COMMISSION.

## STATEMENT.

OF THE APPROPRIATION FOR THE IMPROVEMENT OF STATE AID ROADS.

Appropriated by State, Secs. 34-35, Chap. 25, R.S. 1916		\$500,000 00
Apportioned by State, Sec. 20	\$375,175 01	
Apportioned by State, Sec. 21	123,125 68	
Total apportionment of State aid		498,300 69
Unapportioned balance		\$1,699 31

## APPORTIONMENTS.

Total apportionment of State aid for 1919		\$498,300 69
Unexpended balances of 1918 apportionments	\$215,228 20	
"    "    "    1917	24,505 41	
"    "    "    1916	1,864 31	
"    "    "    1915	590 39	
"    "    "    1914	691 04	
"    "    "    1912	78 12	
Total unexpended balance of apportionments from previous years		242,957 47
Total apportionment of State aid available in 1920		\$741,258 16

## EXPENDITURES.

Expended from 1919 apportionments	\$403,550 43	
1919 apportionments transferred to other appropriations	1,191 40	
Expended from 1918 balances	176,403 24	
"    "    "    1917	22,514 13	
"    "    "    1916	1,513 70	
"    "    "    1915	190 39	
"    "    "    1914	691 04	
"    "    "    1912	78 12	
1918 apportionments transferred to other appropriations	07	
1917 apportionment transferred to other appropriations	7 08	
1915 apportionments transferred to other appropriations	400 00	
Total payments and transfers from State apportionments		\$606,539 60
Unexpended balances of State apportionment on hand		134,718 56
Balances of town appropriations on deposit with State		626 84
Balance on hand December 31, 1919		\$135,345 40
Due from towns, unpaid requisitions		3,240 64
		\$138,586 04

## BALANCES CARRIED OVER TO 1920.

Unexpended balances of 1919 apportionments, Dec. 31, 1919	\$96,799 50	
Unexpended balances of 1918 apportionments, Dec. 31, 1919	38,824 89	
Unexpended balances of 1917 apportionments, Dec. 31, 1919	1,984 20	
Unexpended balances of 1916 apportionments, Dec. 31, 1919	350 61	
Unexpended balances of town appro. deposited with State	626 84	
Total		\$138,586 04



## AUTOMOBILE FUND.

## APPORTIONMENTS MADE PRIOR TO 1919.

Unexpended balances from the apportionments made in 1913 and 1914 from the automobile fund amounting to \$1,043.92 were available for expenditure in 1917.

The total expenditure from the above balances amounted to \$840.00; the sum of \$103.52 was transferred to the appropriation for special resolves leaving unexpended balances of \$100.40 to be carried over to 1920. Of the above total expenditure \$458.28 was expended for road repairs; \$381.72 was expended in reimbursement to towns for construction and repair work on state aid roads.

## SPECIAL RESOLVES.

The work under special resolves in 1919 included the construction of 16.41 miles of gravel road, general repair work on roads, construction and repair of bridges, engineering and inspection work, and miscellaneous expenditures provided for by the resolves.

The total expenditure on account of this work amounted to \$112,565.22; of this amount the cities and towns have expended \$34,733.67 and \$77,831.55 has been paid by the state. The sum of \$71,700.53 was expended for road construction, \$34,306.67 for road repairs, \$744.96 for work on bridges, \$5,417.15 in payment of claims, \$369.83 for engineering work on the Madawaska-Edmundston bridge project, and \$26.08 for inspection charges on work, which has been laid over to 1920. Against this total expenditure the state has paid \$77,716.05 from special resolves, \$103.52 from balances of apportionments from the automobile fund and \$7.15 from state aid road apportionments transferred to special resolves, and \$4.83 received from the sale of material, or a total expendi-

ture by the state of \$77,831.55; of the total amount paid by the state \$1,708.42 was paid for engineering and inspection, \$5,417.15 in payment of claims, and \$70,705.98 as state aid for labor and material.

The sum of \$147.80 appropriated under chapter 106, resolves of 1919, was transferred to the appropriation for the improvement of state roads. This amount has not been included in the expenditure shown in the above statement.

The following is a statement of the appropriations and expenditures under special resolves:

### SPECIAL RESOLVES 1919.

#### Appropriations by State:

Construction and repair of roads, Chapter 171.....	\$95,550 00	
Transferred from apportionments from auto fund....	103 52	
Transferred from appropriation for improvement of State roads.....	07	
Madawaska-Edmunston bridge, Chapter 137.....	4,985 26	
Peoples Ferry Co., Bath, Chapter 212, P.L. 1919.....	10,000 00	
Claims.....	5,417 15	
Castine State aid road, Chapter 106.....	147 80	
Total.....		\$116,203 80

#### Expenditures by State:

Construction of roads.....	\$42,883 69	
Repair of roads.....	26,004 60	
Miscellaneous expenditures for inspection.....	26 08	
Engineering, Madawaska-Edmunston bridge.....	369 83	
Claims paid.....	5,417 15	
Transferred to appropriation for improvement of State roads.....	147 80	
Total.....		74,849 15
Balance, January 1, 1920.....		\$41,354 65

### SPECIAL RESOLVES 1917.

#### Balances of State appropriations from 1917:

Roads.....	\$3,670 83	
Bridges.....	1,868 60	
Transferred from appropriation for improvement of State roads.....	7 08	
Received from sale of construction material.....	4 83	
Total.....		\$5,551 34

#### Expenditures by State:

Road construction.....	\$1,825 92	
Road repair.....	559 32	
Bridge work.....	744 96	
Appropriation lapsed.....	307 91	
Total.....		\$3,438 11
Balance, January 1, 1920.....		\$2,113 23

SUMMARY OF EXPENDITURES ON 1919 STATE AID ROADS.  
INCLUDING EXPENDITURES FROM JANUARY 1, 1919 TO DECEMBER 31, 1919.

Number of towns.	NATURE OF IMPROVEMENT.	Square yards.	Length feet.	Cost of work.	Paid from State Aid Apportionments.	Paid from other state appropriations.	Paid from funds deposited with State by Public Utility Companies.	Paid from funds received from rental of equip. & sale of material.	Paid by cities and towns.	Length miles.	Cost per mile.	Cost per Sq. Yd. *
425	Gravel .....	-	750,896	\$744,678 68	\$431,214 64	\$147 80	-	\$610 52	\$312,705 72	142,215	\$5,236 29	-
2	Earth .....	-	2,800	1,708 67	841 23	-	-	-	867 44	0 53	3,223 90	-
1	Macadam .....	987	592	1,596 39	876 06	-	-	-	720 33	0 112	-	\$1.617
11	Bituminous Macadam .....	46,662	19,884	123,589 05	46,133 09	-	\$4,790 88	-	72,665 08	3 766	-	\$2.54
3	Concrete .....	9,973	3,791	43,824 69	12,344 71	-	-	-	31,479 98	0 718	-	\$3.047
1	Granite Block Pavement.....	9,805	2,873	29,490 85	5,676 40	-	4,582 10	-	19,232 35	0 544	-	\$3.008
2	Bridges.....	-	-	3,083 56	2,224 41	159 15	-	-	700 00	-	-	-
445	Totals.....	-	780,836	\$947,971 89	\$499,310 54	\$306 95	\$9,372 98	\$610 52	\$438,370 90	147,885	-	-

- 1 Town which built bituminous macadam also constructed a section of gravel road.  
1 City which built granite block pavement also constructed a section of concrete road.

2

- 443 Cities, towns and townships completed construction work in 1919.  
2 Towns, work not completed.  
2 Towns, 1919 apportionments transferred to other appropriations.  
40 Towns, 1919 joint funds carried over to 1920.

487 Cities, towns and townships received 1919 apportionments of state aid.

\* NOTE: In computing cost per square yard, the cost of concrete gutters, special drainage work and bridges over ten feet in span was deducted.

SUMMARY OF EXPENDITURES ON 1918 STATE AID ROADS COMPLETED IN 1919.  
INCLUDING EXPENDITURES FROM JANUARY 1, 1919 TO DECEMBER 31, 1919.

Number of Towns.	NATURE OF IMPROVEMENT.	Length feet.	Cost of work.	Paid from State apportionments.	Paid from funds received from rental of equipment and sale of material.	Paid by cities and towns.	Length miles.	Cost per mile.
46	Gravel.....	67,440	\$66,086 44	\$39,540 95	-	\$26,545 49	12.773	\$5,175 13
4	* Ossipee Trail, gravel.....	38,030	31,189 87	22,893 91	\$300 96	7,995 00	7.203	\$4,936 74
6	* Pequawket Trail, gravel ..	91,563	51,252 60	33,292 60	-	17,960 00	17.341	\$3,143 01
56	Totals.....	197,033	\$148,528 91	\$95,727 46	\$300.96	\$52,500 49	37.317	-

\* NOTE: In computing cost per mile, cost of work in 1918 has been added to total cost shown above.

SUMMARY OF EXPENDITURES ON 1917 STATE AID ROADS COMPLETED IN 1918.  
INCLUDING EXPENDITURES FROM JANUARY 1, 1919 TO DECEMBER 31, 1919.

Number of Towns.	NATURE OF IMPROVEMENT.	Length feet.	Cost of work.	Paid from State apportionments.	Paid by towns.	Length miles.	Cost per mile.
8	Gravel.....	9,895	\$8,389 37	\$4,179 94	\$4,209 43	1.874	\$4,486 30
8	Total.....	9,895	\$8,389 37	\$4,179 94	\$4,209 43	\$ 874	-

SUMMARY OF MISCELLANEOUS EXPENDITURES ON 1919-1918 AND 1917 WORK.

EXPLANATIONS.	Total cost.	Paid by State.	Paid by Towns
Miscellaneous payments for inspection, 1919 work.....	\$453 08	\$453 08	-
Miscellaneous payments on uncompleted construction work, 1919.....	3,374 48	1,341 48	\$2,033 00
Miscellaneous payments for inspection, 1918 work.....	93 72	93 72	-
Miscellaneous payments on construction work 1918.....	4,128 28	3,828 28	300 00
Miscellaneous payments for inspection, 1917 work.....	6 55	6 55	-
Totals.....	\$8,056 11	\$5,723 11	\$2,333 00

SUMMARY OF EXPENDITURES, APPORTIONMENTS FROM AUTOMOBILE FUND, 1913 AND 1914.

EXPLANATION.	Total cost.	Paid by State.	Paid by Towns
Expended for road repairs.....	\$458 28	\$458 28	-
Payments in reimbursement to towns on construction work.....	381 72	381 72	-
Totals.....	\$840 00	\$840 00	-

## SUMMARY OF EXPENDITURES UNDER SPECIAL LEGISLATIVE RESOLVES, 1919.

NATURE OF IMPROVEMENT.	Length—feet.	Cost of work.	Paid from Special Appropriations.	Paid from other appropriations.	Paid from funds received from sale of material.	Paid by towns.	Length—miles.	Cost per mile.
Construction work, gravel	82,548	\$69,874 61	\$42,780 17	\$103 52	-	\$26,963 92	15 63	\$4,470 54
Repair work, roads....	-	33,747 35	26,004 53	07	-	7,769 75	-	-
Misc. inspection charges	-	26 08	26 08	-	-	-	-	-
Engineering, bridges....	-	369 83	369 83	-	-	-	-	-
Claims.....	-	5,417 15	5,417 15	-	-	-	-	-
Totals.....	82,548	\$109,435 02	\$74,597 76	\$103 59	-	\$34,733 67	15.63	-

## SUMMARY OF EXPENDITURES UNDER SPECIAL LEGISLATIVE RESOLVES, 1917.

NATURE OF IMPROVEMENT.	Length—feet.	Cost of work.	Paid from Special Appropriations.	Paid from other appropriations.	Paid from funds received from sale of material.	Paid by towns.	Length—miles.	Cost per mile.
Construc'n work, gravel	4,120	\$1,825 92	\$1,814 01	\$7 08	\$4 83	-	0.78	\$2,340 72
Repair work, roads....	-	559 32	559 32	-	-	-	-	-
Bridge work.....	-	744 96	744 96	-	-	-	-	-
Totals.....	4,120	\$3,130 20	\$3,118 29	\$7 08	\$4 83	-	0.78	-

## GENERAL SUMMARY.

### EXPENDITURES ON STATE AID ROADS—SPECIAL RESOLVES AND FROM APPORTIONMENTS FROM THE AUTOMOBILE FUND

ITEM.	Total cost.	Total payments from State funds.	Paid from funds deposited with State by Public Utility Companies.	Paid from funds received from rental of equipment and material sold.	Paid by towns.	Length—miles.
1919 State aid road work, completed.....	\$947,971 89	\$499,617 49	\$9,372 98	\$610 52	\$438,370 90	147.885
1918 State aid road work, completed in 1919.....	148,528 91	95,727 46	-	300 96	52,500 49	37.317
1917 State aid road work, completed in 1919.....	8,389 37	4,179 94	-	-	4,209 43	1.874
Miscellaneous payments on inspection and construction work, 1917-1918 & 1919 funds.....	8,056 11	5,723 11	-	-	2,333 00	-
Expenditures from automobile fund.....	840 00	840 00	-	-	-	-
Expenditures, 1919 resolves.....	109,435 02	74,701 35	-	-	34,733 67	15.630
Expenditures, 1917 resolves.....	3,130 20	3,125 37	-	4 83	-	0.78
<b>Totals.....</b>	<b>\$1,226,351 50</b>	<b>\$683,914 72</b>	<b>\$9,372 98</b>	<b>\$916 31</b>	<b>\$532,147 49</b>	<b>203.486</b>

SPECIAL RE  
CONSTRUCTION AND

TOWN.	Required town appropriation, 1919.	State appropriation, 1919.	Cost engineering and inspection.	Cost labor and materials.
Alexander.....	\$400 00	\$600 00	\$6 35	\$784 79
Anson and Starks.....	2,750 00	2,000 00	65 68	4,289 67
Atkinson.....	250 00	750 00	22 99	714 24
Bancroft.....	500 00	1,000 00	12 45	1,487 55
Belfast.....	2,000 00	3,000 00	38 62	5,188 68
Bluehill.....	500 00	500 00	38 05	751 75
Brooks.....	400 00	600 00	13 19	1,060 33
Burnham.....	500 00	500 00	-	-
Carthage.....	500 00	500 00	4 40	-
Casco.....	1,250 00	2,500 00	76 54	3,224 82
Charleston.....	500 00	1,500 00	-	-
Chesterville and New Sharon.....	1,000 00	1,000 00	-	-
Crystal.....	-	1,000 00	8 99	987 35
Cushing.....	-	750 00	2 87	584 16
Danforth.....	-	2,000 00	5 00	-
Dixfield.....	-	1,000 00	11 82	1,005 06
Eagle Lake.....	500 00	250 00	-	-
Franklin & Cherryfield (Twp. 9-10).....	-	1,000 00	30 33	967 15
Fort Kent.....	1,000 00	1,000 00	-	-
Glenwood Plantation.....	1,000 00	1,000 00	-	-
Gouldsboro.....	-	1,250 00	-	1,250 00
Harrington.....	400 00	1,600 00	22 75	1,975 74
Hiram.....	-	1,000 00	34 45	902 58
Jerusalem Twp.....	2,000 00	2,000 00	23 38	2,419 73
Jonesboro.....	-	750 00	12 00	738 00
Knox.....	250 00	250 00	18 83	503 42
Lexington Plantation.....	-	1,500 00	18 11	1,622 45
Madison.....	500 00	500 00	14 42	927 85
Mariaville.....	-	500 00	-	-
Marion.....	-	500 00	13 70	463 50
Marshville & Whitneyville.....	-	2,103 52	49 81	2,027 94
Medford.....	-	500 00	-	-
Milbridge.....	1,250 00	2,500 00	36 25	3,698 11
Milford & Greenfield.....	-	1,000 00	8 00	992 00
Millinocket.....	1,000 00	1,000 07	24 30	1,975 77
Milo.....	1,000 00	1,000 00	36 02	1,932 81
Minot & Hebron.....	-	4,000 00	24 71	2,296 08
Mt. Desert & Southwest Harbor.....	2,500 00	2,500 00	-	5,844 42
Monmouth.....	500 00	1,500 00	6 42	921 50
Monson.....	500 00	500 00	-	4 01
New Portland.....	1,000 00	2,500 00	20 85	2,459 51
New Sweden.....	500 00	1,000 00	25 94	1,504 83
Oakfield.....	1,000 00	2,000 00	-	-
Orland.....	300 00	700 00	22 19	970 26
Orneville.....	-	1,000 00	20 76	966 14
Paris.....	1,000 00	1,000 00	1 42	1,989 78
Penobscot.....	-	2,000 00	21 08	1,802 94
Perry.....	300 00	500 00	7 35	789 90



SOLVES 1919.

REPAIR OF ROADS.

Total cost.	Paid by town.	Paid by State.	Balance State appropriation, 1919.	Length of road construction.	REPAIRS.
\$791 14	\$400 00	\$391 14	\$208 86	1128 G.	-
4,355 35	2,750 00	1,605 35	394 65	7733 G.	-
737 23	-	737 23	12 77	1350 G.	-
1,500 00	500 00	1,000 00	-	1050 G.	-
5,227 30	2,227 30	3,000 00	-	4250 G.	-
789 80	500 00	289 80	210 20	-	Repairs.
1,073 52	473 52	600 00	-	500 G.	-
-	-	-	500 00	-	-
4 40	-	4 40	495 60	-	-
3,301 36	1,250 00	2,051 36	448 64	-	Repairs.
-	-	-	1,500 00	-	-
-	-	-	1,000 00	-	-
996 34	-	996 34	3 66	-	Repairs.
587 03	-	587 03	162 97	1700 G.	-
5 00	-	5 00	1,995 00	-	-
1,016 88	16 88	1,000 00	-	2350 G.	-
-	-	-	250 00	-	-
997 48	-	997 48	2 52	1100 G.	-
-	-	-	1,000 00	-	-
-	-	-	1,000 00	-	-
1,250 00	-	1,250 00	-	-	Repairs.
1,998 49	400 00	1,598 49	1 51	-	Repairs.
937 03	-	937 03	62 97	1130 G.	-
2,443 11	2,000 00	443 11	1,556 89	4200 G.	-
750 00	-	750 00	-	-	Repairs.
522 25	272 25	250 00	-	400 G.	-
1,640 56	140 56	1,500 00	-	2250 G.	-
942 27	500 00	442 27	57 73	2000 G.	-
-	-	-	500 00	-	-
477 20	-	477 20	22 80	-	Repairs.
2,077 75	-	2,077 75	25 77	2700 G.	-
-	-	-	500 00	-	-
3,734 36	1,250 00	2,484 36	15 64	-	Repairs.
1,000 00	-	1,000 00	-	-	Repairs.
2,000 07	1,000 00	1,000 07	-	-	Repairs.
1,968 83	1,000 00	968 83	31 17	1900 G.	-
2,320 79	-	2,320 79	1,679 21	-	Repairs.
5,844 42	3,464 56	2,379 86	120 14	4240 G.	-
927 92	500 00	427 92	1,072 08	-	Repairs.
4 01	-	4 01	495 99	-	Repairs.
2,480 36	1,000 00	1,480 36	1,019 64	3350 G.	-
1,530 77	530 77	1,000 00	-	1600 G.	-
-	-	-	2,000 00	-	-
992 45	300 00	692 45	7 55	-	Repairs.
986 90	-	986 90	13 10	1035 G.	-
1,991 20	1,000 00	991 20	8 80	1400 G.	-
1,824 02	-	1,824 02	175 98	5280 G.	-
797 25	300 00	497 25	2 75	-	Repairs.

SPECIAL RE  
CONSTRUCTION AND

Town.	Required town appropriation, 1919.	State appropriation, 1919.	Cost engineering and inspection.	Cost labor and materials.
Peru.....	250 00	750 00	3 64	1,000 06
Prentiss.....	-	2,000 00	13 41	1,948 95
Readfield.....	1,000 00	1,000 00	13 87	1,679 14
Reed Plantation.....	-	1,000 00	-	-
Ripley.....	500 00	1,000 00	2 40	1,429 87
Robbinston.....	300 00	500 00	2 00	798 95
Rumford.....	1,500 00	1,500 00	2 75	3,189 27
Saco.....	5,000 00	5,000 00	76 59	9,382 54
Sebago.....	250 00	1,000 00	2 75	-
Sebec & Bowerbank.....	500 00	750 00	16 70	954 75
Skowhegan.....	500 00	500 00	18 82	1,721 65
Somerville.....	400 00	600 00	-	-
Steuben.....	-	500 00	3 81	496 19
Thorndike.....	-	500 00	8 53	-
Twps. 5 & 6 (Piscataquis Co.).....	-	750 00	19 14	662 50
Twps. 9, R. 2, & 1, R. 3, (Wash. County).....	-	1,250 00	58 41	1,175 79
Twp. No. 14 (Wash. Co.).....	-	650 00	-	650 00
Trenton & Lamoine.....	-	800 00	9 83	786 72
Trescott.....	-	500 00	10 69	484 42
Troy.....	-	1,000 00	-	-
Union.....	500 00	1,000 00	5 40	-
Unity.....	500 00	1,000 00	11 04	1,761 01
Warren.....	500 00	1,000 00	5 40	1,483 61
Washington.....	500 00	1,000 00	-	1,379 42
Wells-North Berwick & Berw'k	-	5,000 00	47 25	4,938 93
Windsor.....	500 00	500 00	-	-
Winthrop.....	1,000 00	1,000 00	-	-
Palmyra.....	500 00	1,000 00	-	1,694 40
Indian Township.....	-	3,000 00	200 43	2,672 17
Totals.....	\$41,250 00	\$95,653 59	\$1,332 88	\$102,315 16

NOTES: Total of State appropriations included \$103.52 which was transferred from apportionments from the Automobile Fund, also \$.07 which was transferred from state aid road apportionments; The total amount paid by the State includes these same amounts.

Anson & Starks; 6,453 ft. constructed in Starks—1,280 ft. constructed in Anson. Franklin & Cherryfield, (No. 9 & 10 Twps.) 700 feet constructed in No. 9—400 feet constructed in No. 10.

Marshfield & Whitneyville, 1,500 feet of gravel road constructed in Marshfield—1,200 feet of gravel constructed in Whitneyville.

Mt. Desert & Southwest Harbor, 4,240 feet of gravel road constructed in Mt. Desert—repair work in Southwest Harbor.

Wells, North Berwick and Berwick, 1,900 feet of gravel road constructed in Wells—1, 680 feet in Berwick and 1,800 feet in North Berwick.

SOLVES 1919.

REPAIR OF ROADS.

Total cost.	Paid by town.	Paid by State.	Balance State appropriation, 1919.	Length of road construction.	REPAIRS.
1,003 70 1,962 36 1,693 01	253 70 - 1,000 00	750 00 1,962 36 693 01	- 37 64 306 99	885 G. - 2650 G.	Repairs.
- 1,432 27 800 95	- 500 00 305 19	- 932 27 495 76	1,000 00 67 73 4 24	- 1450 G. -	Repairs.
3,192 02 9,459 13 2 75	1,692 02 5,000 00 -	1,500 00 4,459 13 2 75	- 540 87 997 25	3700 G. 6200 G. -	
971 45 1,740 47 -	500 00 1,240 47 -	471 45 500 00 -	278 55 - 600 00	- 1600 G. -	Repairs.
500 00 8 53 681 64	- - -	500 00 8 53 681 64	- 491 47 68 36	- - -	Repairs. Repairs.
1,234 20 650 00 796 55	- - -	1,234 20 650 00 796 55	15 80 - 3 45	- - -	Repairs. Repairs. Repairs.
495 11 - 5 40	- - -	495 11 - 5 40	4 89 1,000 00 994 60	1537 G. - -	
1,772 05 1,489 01 1,379 42	772 05 500 00 500 00	1,000 00 989 01 879 42	- 10 99 120 58	1750 G. 1800 G. 1500 G.	
4,986 18 - -	- - -	4,986 18 - -	13 82 500 00 1,000 00	5380 G. - -	
1,694 40 2,872 60	694 40 -	1,000 00 2,872 60	- 127 40	1450 G. -	Repairs.
\$103,648.04	\$34,733 67	\$68,914 37	\$26,739 22	82,548 G.	

## MISCELLANEOUS PAYMENTS.

	State ap- propriation, 1919.	Payments by State.	Balance of state's ap- propriation.	
Madawaska and Ed- mundston Bridge...	\$4,985 26	\$369 83	\$4,615 43	\$369.83 expended for engineering.
People's Ferry Co., Bath.....	10,000 00	-	10,000 00	
Totals.....	\$14,985 26	\$369 83	\$14,615 43	

## CLAIMS.

	State ap- propriation, 1919.	Payments by State.	Balance of State's ap- propriation.
Edgar Chase Harnden.....	\$457 12	\$457 12	-
Nicola Dinora estate.....	1,250 00	1,250 00	-
John C. Fleming.....	2,093 90	2,093 90	-
Town of Scarboro.....	1,329 06	1,329 06	-
Treasurer of Oxford County.....	287 07	287 07	-
Totals.....	\$5,417 15	\$5,417 15	-

SPECIAL RESOLVES 1917.

ROADS.	Required State appropriation, 1917.	Cost engineering and inspection.	Cost labor and materials.	Total cost.	Paid by State.	Balance State appropriation, 1917.	Length of road constructed.	Repairs.
Edgecomb and Boothbay .....	\$1,200 72	-	\$1,200 72	\$1,200 72	\$1,200 72	-	1,000	G.
Jackman and Rockwood .....	1,079 62	-	24 72	24 72	24 72	\$1,054 90	-	Repairs.
Perry .....	184 70	-	-	-	-	184 70	-	
Prentiss .....	576 68	-	534 60	534 60	534 60	42 08	-	Repairs.
Sidney .....	641 02	\$5 71	619 49	625 20	625 20	15 82	3,120	G.
Totals .....	\$3,682 74	\$5 71	\$2,379 53	\$2,385 24	\$2,385 24	\$1,297 50	4,120	ft. G.
BRIDGES.								
Bingham .....	\$163 70	-	\$163 70	\$163 70	\$163 70	-		
Fort Kent and St. Francis .....	475 40	-	-	-	-	\$475 40		
Mt. Desert toll bridge .....	921 59	-	581 26	581 26	\$581 26	340 33		
Passadumkeag .....	307 91	-	-	-	-	-	Balance of	\$307.91 lapsed.
Totals .....	\$1,868 60	-	\$744 96	\$744 96	\$744 96	\$815 73		

NOTE: Edgecomb & Boothbay, total State appropriation includes \$7.08 transferred from State aid road apportionments and \$4.83 received from sale of material; payments by State include these same amounts.

## STATE AID BRIDGE CONSTRUCTION.

By the passage of an amendment to chapter 319 of the laws of 1915, the Legislature changed the proportional parts of the cost of bridge construction that the towns and the State were to pay under the terms of the State Aid Law. The fifty per cent of the cost heretofore paid by each town, was to be reduced by the proportion that the cost of the work bore to the assessed valuation. This amendment had the effect of postponing all petitions from towns of low assessed valuation, until after the expiration of the referendum period, and consequently not many petitions were acted on favorably until July 1st. The scarcity of labor and material has delayed construction in numerous instances, also petitions were favorably considered only in cases where the safety of the traveling public was endangered.

During the year 1919 there were thirty-three new applications for State and County Aid for the construction of bridges, and there were eleven petitions continued from the previous year awaiting action by the various towns. Of these petitions twenty-three were favorably acted upon and contracts let for their construction. At the close of the year there were four petitions on which no action had been taken, three that were discontinued for various reasons by the Joint Board, and eighteen in which the towns have neglected to provide an appropriation covering their share of the cost of construction.

Of the projects whose completion was postponed by the cold weather of last winter, all but one have been finished and accepted.

Of the new work placed under construction during this year, ten contracts remain uncompleted by reason of cold weather, two have had their final accounts completed and fourteen have the work finished and accepted and the final accounts are now being made out.

Total expenditures under the State and County Bridge Aid Law supervised by the Commission during the year, amount to \$327,937.48. Of this amount there was paid by the State from the annual appropriation the sum of \$96,943.54.

Included in the last amount are various expenses in connection with surveys and investigations relative to projects not yet approved by joint boards, also some items of expense in connection with plans and estimates on petitions which were subsequently dismissed.

At the close of the year the project for an International Bridge between the State of Maine and the Dominion of Canada, connecting the village of Madawaska in the State of Maine with the city of Edmundston in the province of New Brunswick, was provided with an appropriation by the Legislature of the State of Maine and the Parliament of the Dominion of Canada. The Congress of the United States having made an appropriation of one-half million dollars for the Portsmouth-Kittery Bridge, and the Legislatures of the states of New Hampshire and Maine having appropriated a like sum, this project was also ready for preliminary study. This department has been occupied in making the necessary surveys and estimates including soundings to determine the character of the foundations. During the ensuing year no doubt, both of these projects will be placed under contract for construction.

The following list comprises the bridges that were completed during the year 1919:

Town.	County.	Contractor.	Total cost.	Description.
Bingham.....	Somerset.....	Force account....	\$1,5927 00	Reynolds Bridge, overall 54 ft., roadway 20 ft.; 2 abutments.
Camden.....	Knox.....	Force account....	3,224 91	Collins Bridge, overall 34 ft., roadway 20 ft.; 2 abutments.
Casco-Naples..	Cumberland..	James H. Kerr..	20,751 06	Spring Brook Bridge, box culvert; 10 ft. 6 in. by 10 ft.; 26 ft. long; roadway 20 ft.; 2 concrete abutments.
Easton.....	Aroostook....	Cyr Bros. Co....	9,283 72	Songo Lock; 2 spans at 59 ft. 6 in.; 119 ft. overall; roadway 14 ft.; 2 abutments; 1 pier.
Fort Kent.....	Aroostook....	Town of F't. Kent	4,049 20	Prestile Brook; overall 30 ft.; 24 ft. roadway; 5 ft. sidewalk; 2 concrete abutments.
Monticello....	Aroostook....	Cyr Bros. Co....	35,492 50	Daigle Brook; overall 19 ft.; roadway 20 ft.; 2 concrete abutments.
Marshfield....	Washington..	Town of Marsh'ld	4,812 92	Meduxnekeag Stream; 3 spans at 56 ft.; overall 168 ft.; roadway 18 ft.; sidewalk 4 ft.; 2 concrete abutments.
New Limerick..	Aroostook....	G. W. Van Tasel..	3,899 35	Mark Longfellow Bridge; overall 23 ft.; roadway 20 ft.; 2 stone abutments.
Norridgewock..	Somerset.....	Edmund Cyr & Co	9,987 74	Hunter Brook Bridge; overall 23 ft. 5½ in.; roadway 20 ft.; 2 concrete abutments.
No. Berwick... York.....	York.....	Frank W. Fleming	6,505 72	Hale Stream; overall 21 ft. 6 in.; roadway 20 ft.; 2 concrete abutments.
Perry.....	Washington..	Lester C. Wilbur.	15,956 99	Great Works River; 2 concrete abutments. Old steel bridge repainted and replanked.
Prospect.....	Waldo.....	Edmund Cyr & Co	1,442 46	Little River overall 43 ft.; roadway 20 ft.; 2 stone abutments.
Rumford.....	Oxford.....	James H. Kerr..	25,512 31	Marsh River; timber bridge on pile foundation; 14 ft. span.
St. John Pl... Aroostook....	Aroostook....	W. P. Wheelock..	4,557 94	Lagoon Bridge; overall 104 ft.; roadway 20 ft.; 1 pier; 2 concrete abutments; pile foundation.
Winslow.....	Kennebec.....	Cyr Bros. Co....	16,519 24	Sinclair Brook; overall 15 ft.; roadway 20 ft.; 2 concrete abutments.
Yarmouth.....	Cumberland..	Cyr. Bros. Co....	27,387 30	Chaffee Brook; 60 ft. length; span 15 ft.; concrete abutments.
Newry.....	Oxford.....	Edmund Cyr & Co	6,000 00	Cousins River; 2 spans at 58 ft. 5 in.; overall 116 ft. 10 in.; roadway 20 ft.; 1 stone pier; 2 stone abutments; pile foundation.
				Branch Brook Bridge; overall 39 ft.; roadway 20 ft.; concrete abutments.



The following list comprises the bridges whose construction was started during the year 1919 and were uncompleted at the close of the year:

Town.	County.	Contractor.	Estimated cost.	Description.
Alna-Newcastle	Lincoln . . . . .	F. W. Carleton . .	\$48,000 00	Sheepsfoot Bridge; timber trestle 214 ft. 6½ in.; 2 timber swing spans of 102 ft.; 65 ft. of fill; 2 concrete abutments; 20 ft. roadway.
Ashland . . . . .	Aroostook . . . .	Edmund Cyr & Co	20,000 00	Little Machias River; overall 59 ft.; roadway 20 ft.; concrete abutments.
Beddington . . . .	Washington . . . .	Force account . . . .	8,000 00	Blacks Tannery Bridge; timber truss bridge; 60 ft. span; 2 stone faced concrete abutments; 18 ft. roadway.
Dover . . . . .	Piscataquis . . . .	Town of Dover . . . .	5,100 00	South Mills Bridge; 22 ft. and 6 in. overall; roadway 20 ft.; concrete abutments; stone retaining walls relaid.
Grand Isle . . . . .	Aroostook . . . . .	Town of Gr'd Isle	5,000 00	Cormier Brook; 7 ft. clear span; 21 ft. roadway; concrete abutments.
Houlton . . . . .	Aroostook . . . . .	G. W. Van Tasel . . . .	4,000 00	Pearce Brook Bridge; Green St.; 10 ft. clear span; 34 ft. 7 in. overall; 21 ft. roadway; 5 ft. sidewalk.
Howland . . . . .	Penobscot . . . . .	Cyr Bros. Co. . . . .	55,000 00	Piscataquis River Bridge; 3 concrete piers; 2 concrete abutments. Painting and replanking of old steel bridge
Lincolntonville . . . .	Waldo . . . . .	Cyr Bros. Co. . . . .	20,000 00	Duck Trap Bridge; overall 59 ft.; stone faced concrete abutments.
Macwahoc Pl. . . . .	Aroostook . . . . .	Assessors of Macwahoc . . . . .	9,000 00	Macwahoc Stream; overall 39 ft.; 2 concrete abutments; roadway 20 ft.
Mechanic Falls . . . .	Androscoggin . . . .	James H. Kerr . . . .	40,000 00	Red Bridge; 2 spans at 54 ft.; overall 108 ft; concrete pier and abutments; pile foundation.
Old Town . . . . .	Penobscot . . . . .	Cyr Bros. Co. . . . .	56,500 00	Gilman Falls Bridge; 3 arch spans, 113 ft. each; overall 396 ft.; 20 ft. roadway; concrete abutments and piers.
Richmond . . . . .	Sagadahoc . . . . .	Cyr Bros. Co. . . . .	9,700 00	Mill Stream Bridge; length 46 ft. 10 in.; clear span 13 ft.; old abutments faced with concrete.
Standish . . . . .	Cumberland . . . .	Force account . . . .	1,800 00	Inlet of Watchee Lake; overall 16 ft., 3 in.; 20 ft. roadway; pile foundation.
Trescott . . . . .	Washington . . . .	H. A. Brawn . . . . .	8,640 00	East Stream Bridge; overall 34 ft., 3 in.; 20 ft. roadway; 2 concrete abutments.
Trenton . . . . .	Hancock . . . . .	Cyr Bros. Co. . . . . Boston Bridge Co. Nelson & Spelman. Daniel O'Connell. H. F. Emery.	165,000 00	Mt. Desert Bridge; 9 spans at 59 ft.; 1 steel swing span; 115 ft., 10 in.; overall 646 ft., 10 in.; stone faced concrete piers and abutments; new approaches.

## MAINTENANCE WORK FOR 1919.

Maintenance work during 1919 was performed generally by patrol maintenance. 478 patrolmen were employed in caring for 4,284.52 miles of roads in 475 towns. Of this mileage 668.60 miles was improved State Highway, 843.72 miles improved State Aid Highway and the balance or 2,772.20 miles was unimproved road. There was also maintained by special arrangement with the towns 74.12 miles of improved State Aid Road.

A total expenditure for labor and material of \$653,452.91 was made on this work, including \$18,354.34 furnished by the State for road machine work. The State also furnished supervision and inspection for the work amounting to \$25,156.02, making the total gross expenditure chargeable to maintenance of \$678,608.93. Of this amount the State furnished \$471,376.04 and the cities and towns furnished \$207,232.89. The average expenditure per mile was \$155.69.

On the 668.60 miles of improved state highway, the expenditure for labor and material and supervision was \$275,666.65 or an average expenditure per mile of \$412.30. The expenditure on the 3,615.92 miles of other road under patrol was for labor, material and supervision \$382,445.24 or an average expenditure per mile of \$105.77.

# EXPENDITURES UNDER DIRECTION OF STATE HIGHWAY COMMISSION.

1913—1919.

Year.	State highways.	State aid highways.	*Registra- tion of autos.	Mainten- ance.	Special resolves.	State aid construction of bridges.	Special apportion- ments.	Miscel.	Adm.	Totals.
1913..	\$169,880 46	\$409,525 56	\$155,002 83	16,877 07	\$103,071 97	.....	\$26,152 27	\$2,702 53	\$4,736 47	\$871,072 09
1914..	829,142 37	628,446 88	16,877 07	\$90,886 46	102,285 64	.....	.....	.....	42,648 96	1,710,287 38
1915..	563,810 73	559,377 57	10,439 38	169,777 64	76,950 51	.....	.....	.....	38,545 79	1,418,901 62
1916..	485,644 72	488,517 93	821 61	288,450 52	144,957 19	.....	.....	.....	37,402 41	1,445,794 38
1917..	459,962 01	528,119 54	261 43	494,349 40	125,247 94	\$121,647 81	.....	.....	37,734 08	1,767,322 21
1918..	723,123 20	627,747 69	496 60	634,299 34	49,850 44	275,611 33	.....	.....	42,941 31	2,354,069 91
1919..	344,879 58	1,113,998 67	840 00	780,795 20	111,259 89	340,885 74	.....	\$33,585 38	46,980 93	2,773,225 39
Totals.	\$3,576,443 07	\$4,355,733 84	\$184,738 92	\$2,458,558 56	\$713,623 58	\$738,144 88	\$26,152 27	\$36,287 91	\$250,989 95	\$12,340,672 98

\* Fees apportioned by Governor and Council prior to July, 1913. † Motor transport and equipment.  
 † Includes \$25,033.67 not deposited with State, but expended under direction of State Highway Commission.

## APPROXIMATE ROAD MILEAGE.

1913—1919.

	State highways.	State aid highways.	Special ap- portionments.	Registration of autos.	Special resolves.	Totals.
Gravel.....	270.21	895.27	0.25	-	16.41	1,182.14
Macadam.....	4.78	16.93	0.70	-	-	22.41
Concrete.....	11.80	6.24	-	-	-	18.04
Bituminous Macadam.....	63.36	15.07	0.11	-	-	78.54
Gravel and Macadam.....	6.68	-	-	-	-	6.68
Clearing and grubbing.....	22.21	-	-	-	-	22.21
Grading.....	8.93	-	-	-	-	8.93
Earth and gravel.....	-	-	1.06	46.0	34.5	81.56
Sand-clay.....	6.75	3.31	-	-	-	10.06
Wood-block.....	-	0.10	-	-	-	0.10
Granite block.....	-	1.46	-	-	-	1.46
Earth.....	-	44.51	-	-	-	44.51
Totals.....	394.72	982.89	2.12	46.0	50.91	1,476.64

STATE HIGHWAY COMMISSION.



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