

# MAINE STATE LEGISLATURE

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PUBLIC DOCUMENTS OF MAINE

1910

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

DEPARTMENTS AND INSTITUTIONS

For the Year 1909.

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VOLUME III.

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AUGUSTA  
KENNEBEC JOURNAL PRINT  
1910



Readfield. 1909 section of State Road. "V" drain foundation; gravel surface.

FIFTH ANNUAL REPORT

OF THE

COMMISSIONER OF HIGHWAYS

FOR THE

STATE OF MAINE

FOR THE YEAR

1909

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AUGUSTA

KENNEBEC JOURNAL PRINT

1910

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STATE OF MAINE.

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OFFICE OF COMMISSIONER OF HIGHWAYS,  
AUGUSTA, January 25, 1910.

*To His Excellency, Bert. M. Fernald, Governor, and the Honorable Council:*

I have the honor to present the fifth annual report of the Commissioner of Highways.

Very respectfully,

PAUL D. SARGENT,  
*Commissioner.*

ORGANIZATION OF STATE HIGHWAY  
DEPARTMENT.

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PAUL D. SARGENT, Machias.....Commissioner  
IRVIN W. BARBOUR, Portland.....Asst. Commissioner  
H. J. GLENDENNING, Portland.....Clerk  
ANNIE P. BIBBER, Lisbon Falls.....Stenographer  
LILLIAN W. CHUTE, Augusta.....Stenographer

## REPORT

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The work of the State Highway Department during the year 1909 has been carried out along the lines instituted in 1908, and described in detail in the report for that year. The only change of importance has been more supervision over the work through the inspectors and in the judgment of all who have given the matter careful attention the increased amount of supervision has been reflected in a better class of work. We have also required a closer accounting by the towns of the expenditure of state road funds. This matter is discussed in a later paragraph.

A total of five hundred and one applications for state aid were received as follows:

Cities .....	18
Towns .....	416
Organized Plantations .....	31
County Commissioners for Unincorporated Townships .....	36
Total .....	<hr/> 501

Of the above number fifteen towns have applied to the department for permission to allow their joint fund to lay over until 1910 and be expended at that time. Permission has been granted.

In these fifteen towns a total joint fund of five thousand one hundred ninety dollars and thirty-seven cents (\$5,190.37) is available in 1910. Upon satisfactory expenditure of this amount, state aid amounting to two thousand seven hundred fifty-eight dollars and eighty-seven cents (\$2,758.87) already apportioned will be approved and paid.

In seven towns the work has not been completed; in one town the work done did not pass inspection; and in one town the work was completed in a satisfactory manner, but the municipal officers have refused to forward the proper certificates and



payrolls signed for the full amount of the joint fund on the ground that only the town's share of the joint fund has been paid to the laborers. To these nine towns state aid amounting to two thousand seven hundred five dollars and twenty-four cents (\$2,705.24) was apportioned and will be paid on proper evidence of satisfactory work having been completed.

In four hundred seventy-seven places the joint funds have been expended in completing as many pieces of highway improvement. Collectively the results are as follows:

No. of Towns.	Nature of Improvement.	Square yards.	Length in feet.	Cost.	Aid.
1	Block paving .....	1,356	714	\$ 2,197 00	\$ 910 00
34	Macadam .....	107,480	41,411	62,515 28	18,580 35
5	*Bituminous macadam .....	20,110	75,065	123,044 70	6,980 19
335	Gravel .....		290,385	150,970 82	69,742 92
84	Earth and drainage.....		71,220	34,223 97	16,537 84
4	Earth and gravel.....		4,907	1,685 53	854 25
8	Abutments and culverts.....			1,519 44	852 22
6	Bridges .....			2,344 41	700 75
477	Total.....		413,702	\$278,501 15	\$115,208 52

\*Not including Westbrook.

†Including 224 lineal feet of Granite Block on Hassam Base.

‡Reports show 10,671 feet additional not classified as to surfacing material, making a total length of state road of all classes of 424,373 feet or 80.37 miles.

From above table we learn that the average cost per mile (including the cost of the bridge and culvert jobs) is \$3,465.24.

Average cost, block paving, per square yard.....	\$1.62
Average cost, macadam, per square yard.....	0.5818
Average cost, bituminous macadam, per square yard.....	1.145
Average cost, gravel road, per mile.....	2,744.90
(55 miles of gravel road built; surface from 12 to 21 feet in width.)	
Average cost, earth and drainage, per mile.....	2,536.00
(13.49 miles.)	

It is thus seen that a total expenditure of \$278,501.15 has been made under the impetus of the law. Of this amount the State has furnished \$115,208.52 of 1909 aid and \$5,094.24 unexpended balances of 1908 aid. Under the terms of the law in order to draw the 1909 aid the towns were obliged to expend \$236,290.27; as a matter of fact 350 towns expended in excess of their joint funds \$44,998.16 in order to satisfactorily finish up the work they had undertaken. At the same time it should be noted that 102 towns did not expend the full amount of their joint funds and in consequence a total of \$4,480.85, state aid, stands to the credit of these towns. Each town which did not get its total state aid will be entitled to draw its balance at any time in 1910 when a certificate is presented to the depart-

ment showing that the amount has been expended in extending the 1909 section of state road, according to specifications issued by the department; or the amount due the town may be used in connection with the 1910 appropriation made by the town, if any. The latter course, would, in the opinion of the department, be the better.

1908 WORK COMPLETED IN 1909.

Besides the work performed by the expenditure of the 1909 joint funds seven jobs which were started last year have been completed this year. The total expenditure on account of same was \$9,983.34 and against this expenditure state aid amounting to \$3,317.37, apportioned in 1908, has been paid to the towns.

The work performed was as follows:

Kind	Sq. yds.	Length in ft.	Cost.	Aid.
Macadam .....	9,621	3,200	\$6,923 97	\$1,520 81
Gravel .....	8,841	3,055	3,059 37	1,796 56
Totals .....	18,462	6,255	\$9,983 34	\$3,317 37

A tabular statement of above work will be found elsewhere in this report.

STATEMENT OF 1908 APPROPRIATION.

CR.		
By balance reported in 1908.....	\$11,107 72	
By error in Hermon unexpended balance.....	22 12	\$11,129 84
<hr/>		
DR.		
To paid 20 Inspectors, services and expenses..	\$6,798 68	
To paid Engineer's services ac. Kittery & Portland trunk line .....	418 63	
To balance to Kittery & Portland trunk line...	3,912 53	\$11,129 84
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STATEMENT OF 1909 APPROPRIATION.

CR.		
By appropriation, 1-3 mill on State valuation..	\$142,737 49	\$142,737 49
<hr/>		
DR.		
To state aid apportioned and paid.....	\$115,208 52	
To state aid apportioned and unpaid.....	9,944 86	
To apportionment to Rockland & Bangor trunk line .....	5,000 00	
To balance to 1910.....	12,584 11	\$142,737 49
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## STATE ROAD ACCOUNTING BY TOWNS.

During the present year we have attempted to get a closer accounting of the expenditure of state road funds. To this end time books and payroll blanks were prepared and sent to every town with the following circular letter:

DEAR SIR:

From reports and requests which come to this office it is apparent that great diversity exists in the several towns in the matter of keeping track of highway expenditures and this has been a source of considerable trouble and perplexity to several boards of municipal officers.

As a result of these inquiries, requests and personal calls from municipal officers regarding this subject we have prepared a time book and a payroll blank for use in connection with state road work and we hope that their use will suggest to municipal officers a simple form of keeping track of the expenditure of highway funds.

A rule which has been in force since the creation of the office of state auditor is that no special appropriation for road or bridge work will be paid until vouchers are on file for every cent of expenditure contemplated by the resolve. As many of the appropriations are smaller than the amount of state aid due a good many towns it would seem that the same rule might well apply to the matter of paying state aid.

A careful inspection of the time book will show how it is to be used. The time made by each man is entered on the first page opposite his name. Then each night the foreman should classify under one of the sub-headings on the short pages the proportion of that day's time spent on the different kinds of work, entering the same under the proper date. At the completion of the work it is only necessary to total the time shown under each sub-heading and we have the cost of doing that class of work.

The payroll had better be held in the selectmen's office and made up from the foreman's time book each week, two weeks or once a month, as you are in the habit of paying off. It should show all the information called for; that is, under occupation would go "Foreman," "Laborer" or "Single team and driver" or "Double team and driver." The time employed should be filled out in hours or days. The rate for the same should be given and the total amount, too. Then as each man is given his order, let him sign in the proper column; when the man gets his pay from the treasurer on the order he will have to endorse it and that will make the town's receipt and the payroll blank can be forwarded to the state highway department and that will make the state's receipt. This may look like a double receipt but it is identically the method used in paying off in each state department and institution.

At the bottom of the sheet should be shown all material purchased during the period covered by the payroll. In the first column the kind of material; in the second column, the quantity; in the third column, the price per unit; that is per foot of culvert or per barrel of cement, etc.,

and then carry the extension out into the column headed "Amount." This will bring the items all in the proper position for totaling so that at each period of settlement the total expenditure for labor and material up to date can be known. You will also note that we have left a chance for the road commissioner or foreman and for the chairman of the municipal officers to certify that the expense incurred has been in connection with state road work. This is simply because in some towns accounts in the past have been so mixed that it was a matter of guess-work when the job was completed to know just what was state road expense and what was not. This year an expenditure of about \$300,000.00 will be made in connection with state roads and it seems to me that it is a fair proposition that a strict accounting for all of these funds should be made. Your help and co-operation in this matter is solicited and will be appreciated. If you can use more of the time books and payrolls in connection with town work we will be glad to supply them to you.

Any instruction which is not made clear in this circular will be furnished by the state road inspectors on your request.

Yours very truly,

PAUL D. SARGENT,

*Commissioner.*

These payrolls were filed with the certificate of completion as a voucher to support the claim.

The department considers this a step in the right direction but our inspectors have experienced considerable difficulty in getting payrolls properly signed up.

#### MEETINGS.

During the spring months the series of county road meetings was held as usual with about the same attendance that we have had in the past. As about one-third of the towns elect new officials each year these meetings afford opportunity for these new officials to learn the provisions of the state road law and the requirements of the department relative to the construction of state roads. On account of these new officials the same general topics are discussed year after year and in consequence, to those who have attended two or more meetings, it may seem that nothing new develops in these discussions or in the work from year to year. It seems necessary, however, to call to mind the fundamental principles underlying all road construction and then to take up in detail such topics as are suggested by those in attendance at the meetings.

## MEETING OF AMERICAN ROAD MAKERS.

Your commissioner attended a meeting of the American Road Makers at Columbus, Ohio, October 26, 27, 28 and 29. This Association is composed of the State Highway Commissioners and others interested in improved highway work. Representatives from thirty-three states were present and the discussions at the convention were both interesting and profitable. Your commissioner gave a talk on state road work in Maine.

## TRUNK LINE CONSTRUCTION.

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The last Legislature amended the state road law as follows:

Section 13. After providing for the payment of state aid applied for, the balance of the fund or any part thereof may be expended by the state commissioner of highways in rebuilding and improving the main thoroughfares of through travel in the State, with the object of establishing a complete system of continuous main highways throughout the State. The location of roads to be improved under this section and the apportionment of funds for the same shall be determined by the state commissioner of highways subject to the approval of the governor and council. The same general provisions made for the construction and maintenance of other state roads under this act shall apply to roads constructed under authority of this section, except that the whole cost of construction may be paid by the State.

As shown elsewhere there is available from the 1908 appropriation the sum of \$4,331.16 and from the 1909 appropriation the sum of \$12,518.11 which may be used for the reconstruction of trunk line roads. From the 1910 appropriation there will be \$93,000 or more available, less the cost of general inspection.

No trunk line construction has been undertaken as yet but a section of the Rockland & Bangor trunk line running up Penobscot bay and river has been selected and "\$5,000.00 or a sum not greatly in excess thereof" has been apportioned for expenditure on this section. A survey and plan of about five miles of this road has been completed and it is expected that contracts will be let early in 1910 for the building of a bituminous macadam road. Together with this \$5,000.00 will be expended \$20,100 which was raised as follows:

Through the solicitation of David Talbot of Rockland:

From Hiram Ricker and Sons.....	\$700 00
From Ricker Hotel Co. ....	700 00
From C. H. K. Curtis .....	2,700 00
From George Warren Smith .....	2,000 00
From J. C. Strawbridge .....	1,000 00
From S. H. Henry .....	2,000 00
From A. H. Chatfield .....	1,000 00

From Chauncey Keep .....	1,000 00
From John J. Collins .....	100 00
From John Gribbel .....	500 00
From H. B. Boorland .....	300 00
From W. F. Hooper .....	100 00
Appropriation, city of Rockland.....	4,000 00
Appropriation, town of Rockport....	4,000 00

Two sections of the trunk line running from Poland Springs to the White Mountains, one mile in Poland and one mile in Casco, have been selected and approved and the sum of \$750.00 has been apportioned for each of these sections to be expended with a like amount to be furnished by subscriptions solicited by A. B. Ricker, Esq., of South Poland and appropriations by each of the towns. Each of these jobs will be drainage and grading work only. Contracts were let for both jobs in December.

During the last two months of 1909 a party of surveyors made survey of a portion of the trunk line from Kittery to Portland. The survey is now being plotted and as soon as estimates are complete the governor and council will be asked to approve the location, and apportionment of funds for construction of certain sections of this thoroughfare. It is hoped that construction of these sections may begin early in the spring.

The present survey begins at the bridge between Kittery, Maine, and Portsmouth, N. H., and extends into York. It is planned to reconstruct several other sections of this thoroughfare in 1910.

#### A TENTATIVE SYSTEM OF TRUNK LINES.

There is a growing sentiment in many sections of the State that the future development of our tourist and summer resort business depends largely upon the development of our system of trunk line highways. Our neighboring state of New Hampshire has already realized this and their Legislature at its last session authorized the expenditure by the State of one million dollars (\$1,000,000.00) for the construction of the three trunk lines running from the Massachusetts state line into the White Mountains.

Several of the other states have made large appropriations for similar purposes and have also declared by legislation that certain leading thoroughfares shall be taken over by the State for purposes of construction and maintenance.

It is the belief of your commissioner that at no very distant time the State of Maine will pass similar legislation. With this thought in mind a system of trunk lines has been tentatively worked out by the department and in general terms that system is as follows:

It would seem that the trunk of most importance to the State would start at the New Hampshire line at Kittery and extend through York, Wells, Kennebunk, Kennebunkport, Biddeford, Saco, Old Orchard, Scarborough, South Portland, Portland, Falmouth, Cumberland, Gray, New Gloucester, Auburn, Lewiston, Greene, Monmouth, Winthrop, Manchester, Augusta, Vassalboro, Winslow, Waterville, Fairfield, Benton, Clinton, Burnham, Pittsfield, Detroit, Palmyra, Newport, Plymouth, Etna, Carmel, Hermon to Bangor. This route is approximately 185 miles in length and includes all of the larger cities of the State.

Another trunk should start at Portland and run through Falmouth, Cumberland, Yarmouth, Freeport, Brunswick, Bath, Woolwich, Wiscasset, Newcastle, Damariscotta, Nobleboro, Waldoboro, Warren, Thomaston, Rockland, Rockport, Camden, Lincolnville, Northport, Belfast, Searsport, Stockton Springs, Prospect, Frankfort, Winterport, Hampden to Bangor, a length of about 130 miles.

A link should also be constructed between Brunswick and Augusta, following the Kennebec river, a distance of about 30 miles.

From Bangor a trunk should run northerly along the Penobscot river through Mattawamkeag and thence to Houlton, Presque Isle, Ft. Fairfield and Caribou, with branches to Van Buren and Ft. Kent on the northern Canadian border. This trunk would be about 255 miles in length.

Easterly from Bangor a trunk should extend to Ellsworth and Bar Harbor across the coast of Hancock and Washington Counties, passing through Machias and to Eastport and Calais. This trunk would be about 175 miles in length.

Another route of importance would lead from Waterville through Fairfield, Skowhegan, Norridgewock and Madison, up



the Kennebec river to The Forks and by the old Quebec road to the Quebec line, a distance of about 110 miles.

From Norridgewock a line should run through Mercer and New Sharon to Farmington and through Strong, Avon, Phillips and Sandy River Plantation to Rangeley, a distance of 50 miles.

From the New Hampshire line at Fryeburg through Bridgton, Naples, Casco, Raymond, Windham and Westbrook to Portland, a distance of 47 miles.

From the latter route a line should run from Naples through Casco and Poland to Danville Junction, connecting with the main trunk line there, a distance of 19 miles.

Another line should run from Auburn, through Mechanic Falls or via Danville Junction and Poland through Oxford, Paris, Norway, Greenwood and Bethel to Gilead on the New Hampshire line, a distance of 45 miles. This route could be extended from Bethel through Newry and Grafton and Upton on the New Hampshire line, a distance of about 22 miles.

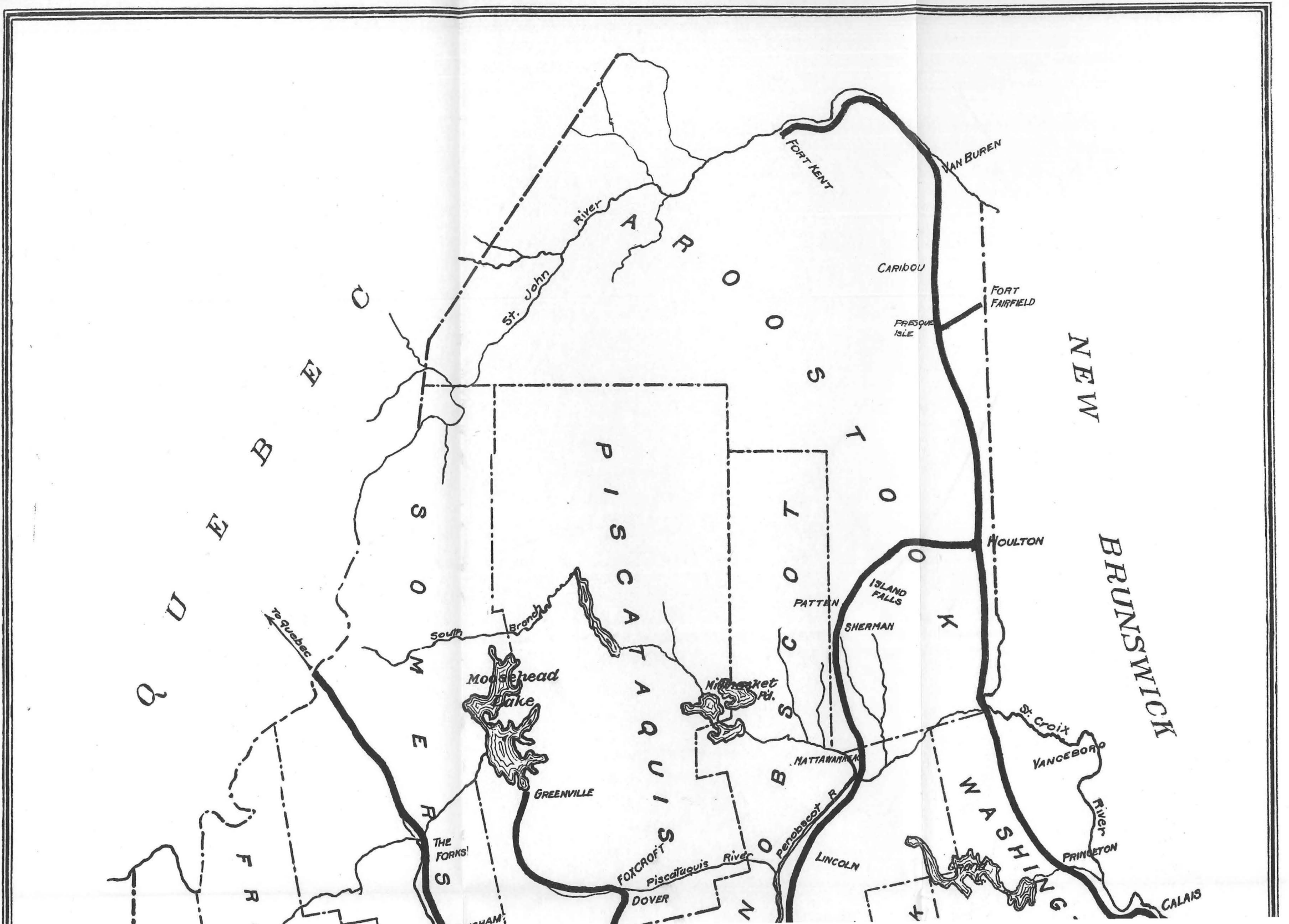
From the main trunk a line should run from Auburn or Winthrop to Bethel, passing up the Androscoggin valley through Rumford, a distance of 45 to 50 miles.

From Newport a line should run through Corinna, Dexter, Sangerville to Dover and Foxcroft, a distance of about 24 miles; and it should also be extended through Guilford, Abbot, Monson, Blanchard and Shirley to Greenville on Moosehead lake, a distance of about 30 miles.

The above routes total a little over 1,150 miles in length and it is believed that they would fairly well meet the needs of the State. Some of the routes named might be dispensed with while in some cases short connecting links between these routes and short feeders might be added to make the system more useful and practical.

It should be clearly understood that the routes described above have not been examined in detail. They have been worked out from an inspection of the map and from information collected from county commissioners and others interested in road work and acquainted with road conditions.

It is hoped that this brief reference to the subject and the description of the routes given may serve to bring the matter to the attention of the people of the State and elicit discussion.





STATE HIGHWAY DEPT.  
 MAP OF  
**STATE OF MAINE**  
 SHOWING  
 A TENTATIVE SYSTEM OF TRUNK LINES

JAN. 1910

*Paul A. Sargent*  
 STATE HIGHWAY COM'R

## CHANGES OF LOCATION.

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During the year there have been received at the department nine petitions for change of location of state road. Eight of these were heard. A petition was received from Lexington Plantation on July 27th. As road building was well in progress at that time and continued up to November first, opportunity was not presented for hearing this petition. It will be taken up early in the season of 1910.

Two petitions, received late in 1908, were not heard until 1909. The petitions heard were disposed of as follows:

### PETITIONS HEARD.

*Bluehill, Hancock County.* Original designation: "Road beginning at the town line between Sedgwick and Bluehill at North Sedgwick, thence through Bluehill Falls through South street, to the corner near Bluehill Inn, through the village of Bluehill over Green's Hill to the town line between Bluehill and Surry."

Road petitioned for: "Road beginning at Bunker's Corner, so called, in Bluehill village, and thence by Parker's Point to the angle near Austin Chatto's house."

Petition, signed by 245 voters out of a total of 474, received at department May 14, 1909.

Hearing ordered for June 10, 1909, at Bluehill. Hearing held as ordered.

Decision rendered June 17, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

Frank P. Greene, Chairman, Selectmen.

Everett E. Turner, County Commissioner, Washington County.

*Canton, Oxford County.* Original designation: "Road commencing at Livemore town line, thence running northwesterly through Canton village, to Peru town line for about eight miles."

Road petitioned for: "Road beginning at the square in Canton village and leading from Canton to Jay on the direct road to Farmington."

Petition signed by 149 voters out of a total of 284, received at the department April 26, 1909.

Hearing ordered for May 6, 1909. Hearing held as ordered.

Decision withheld, as it was found that on the road petitioned for was a toll bridge, which is owned by a corporation, and should a road be designated on either end of the bridge complications might arise, if at any time the corporation should see fit to remove the toll bridge. This question has been submitted to the legal department of the State.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

M. A. Waite, Chairman, Selectmen.

Sherman I. Bean, County Commissioner, Franklin County.

*Columbia, Washington County.* Original designation: "Road beginning from the north line of the town of Addison, thence north passing the W. C. R. R. station to Epping, upper corner, thence to "Saco," thence easterly to Little River and the west line of Columbia Falls."

Road petitioned for: "Road beginning at E. W. Leighton's, over cross road, so called, to Epping Corner, then to Little River, by way of Iron Bridge, then to town line near George H. Norton's."

Petition signed by 101 voters, out of a total of 165, received at department April 13, 1909.

Hearing ordered for June 9, 1909, at Epping, Columbia.

Hearing held as ordered.

Decision rendered June 17, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

H. L. Worcester, Chairman, Selectmen.

C. E. Dunn, County Commissioner, Aroostook County.

*Corinna, Penobscot County.* Original designation: "Road beginning at the Dexter town line on the telegraph road, thence southerly by said road through the town of Corinna to the Newport town line."

Road petitioned for: "Road beginning on the St. Albans road on the westerly line of Corinna running through Corinna village on the Exeter road to the easterly line of Corinna."

Petition, signed by 248 voters out of a total of 417, received at department April 21, 1909.

Hearing ordered for June 23, 1909, at Corinna. Hearing held as ordered.

Decision rendered June 29, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

Chas. L. Jones, Chairman, Selectmen.

Fred R. Page, County Commissioner, Hancock County.

*Livermore, Androscoggin County.* Original designation: "Road beginning at the Iron Bridge at Livermore Falls to Richmond's Mills to Livermore Center; thence to Turner line near North Turner Bridge."

Road petitioned for: "Road beginning at Iron Bridge, at Livermore Falls, to North Livermore to Brettun's Mills to Turner line, above North Turner village, it being the main thoroughfare."

Petition, signed by 178 voters out of a total of 327, received at department August 13, 1908. Conditions were such that a hearing could not be arranged for until the date given below.

Hearing ordered for May 4, 1909, at the Norlands, Livermore. Hearing held as ordered.

Decision rendered May 7, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

D. R. Briggs, Chairman, Selectmen.

Adelbert Delano, County Commissioner, Oxford County.

*Milo, Piscataquis County.* Original designation: "Road beginning at the north line of said Milo village on the west side of Pleasant river, thence southerly through Milo village across

Sebec stream past the station of the B. & A. R. R. Co. in Milo village to east line of town of Sebec."

Road petitioned for: "Road beginning at the west line of the town, to wit: At the point where it now begins, thence easterly over the present route through Main street in Milo village to the junction of Park street with said Main street, thence continuing easterly to and across Pleasant river, thence at right angles southerly down said river and over the Mayo hill, so called, to the south line of said town."

Petition, signed by 337 voters out of a total of 610, received at department April 28, 1909.

Hearing ordered for June 11, 1909. Hearing held as ordered.

Decision rendered June 18, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

Henry W. Briggs, Chairman, Selectmen.

F. V. Buzzell, County Commissioner.

*Minot, Androscoggin County.* Original designation: "Road leading from West Minot to Auburn line."

Road petitioned for: "Road leading from West Minot to Auburn and known as the Garfield road."

Petition, signed by 169 voters out of a total of 233, received at department October 30, 1908. This was received so late in the season that it was deemed not advisable to hold hearing until date given below.

Hearing ordered for May 5, 1909. Hearing held as ordered. Decision rendered May 7, 1909, confirming original designation.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

E. K. Wilbur, Chairman, Selectmen.

Adelbert Delano, County Commissioner, Oxford County.

Note: Mr. Wilbur did not concur in this decision.

*New Sweden, Aroostook County.* Original designation: "Road beginning at the north line of Woodland on the 'Woodland road,' thence northerly to the 'West road' corner, thence easterly on the Starch Factory road by the way of New Sweden Station to the Madawaska schoolhouse. Also from the 'Capital' southerly along the 'Caribou road' to the Woodland line."

Road petitioned for: "Road beginning at the Jemtland road, so called, at southwest corner of C. A. A. Johnson lot. Thence north to the Stockholm town line, meaning the road now traveled to Madawaska Lakes."

Petition signed by 114 voters out of a total of 220, received at department May 31, 1909.

Hearing ordered for July 1, 1909, at New Sweden. Hearing held as ordered.

Decision rendered July 27, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

I. W. Barbour, Assistant Highway Commissioner.

A. H. Tornquist, Chairman, Selectmen.

F. V. Buzzell, County Commissioner, Penobscot County.

*North Berwick, York County.* Original designation: "Road beginning at the division line between the towns of North Berwick and Sanford and running past the North Berwick Fair Grounds and Prescott's Hill to the Old Corner, so called; thence over the bridge above the North Berwick Woolen Mills to Weymouth's Corner, so called; thence from Weymouth's Corner along Main street past Commercial Block, and over the Boston and Maine R. R. known as Main street crossing, thence along the road known as the road to Tatnic, to the South Berwick line."

Road petitioned for: "Road beginning at the division line between the towns of South Berwick and North Berwick and running northeasterly to the Old Corner, so called, thence over the bridge above North Berwick Woolen Mills to Weymouth Corner, so called, thence from Weymouth Corner along Main street, past Commercial Block and over the B. & M. railroad known as Main street crossing, thence along the road known as the road to Tatnic to the South Berwick line."

Petition, signed by 281 voters out of a total of 540, received at department July 30, 1909.

Hearing ordered for August 31, 1909, at North Berwick.

Hearing held as ordered.

Decision rendered September 10, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.



A. W. Chadbourne, Chairman, Selectmen.

Edward H. Trickey, County Commissioner, Cumberland County.

*Whiting, Washington County.* Original designation: "Road beginning at the west line of said Whiting on Machias road, thence easterly through Whiting village to the west line of Trescott."

Road petitioned for: "Road beginning at the guide board in the village on the Machias road and running to the Edmunds line on the Dennysville road, so called, a distance of about three-quarters of a mile."

Petition, signed by 60 voters out of a total of 109, received at department May 19, 1909.

Hearing ordered for June 8, 1909, at Whiting. Hearing held as ordered.

Decision rendered June 18, 1909, ordering that the road as petitioned for be designated as the state road.

Sitting at hearing,

Paul D. Sargent, State Commissioner of Highways.

E. H. Dinsmore, Chairman, Selectmen.

C. E. Dunn, County Commissioner, Aroostook County.

## BITUMINOUS MACADAM.

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In the states which have gone into state road building most extensively it has been observed since the use of the automobile has become quite general that macadam and gravel roads which formerly would last for years under horse-drawn traffic, fast deteriorate under automobile traffic. The dust raised from the surfaces of these roads by swiftly passing machines is also very objectionable and in many cases has proved to be a positive injury to abutting property. In consequence, road engineers and chemists and engineers employed by commercial concerns have been studying methods for preventing the rapid wear of these roads and for suppressing the dust.

Tar and asphalt are the materials which have been most generally employed either in construction of new roads as a binder or as a surface treatment for old roads to keep the dust down. Where new macadam has been built with a bituminous binder or old roads given a surface treatment it has been observed that the wearing of the road has practically stopped and that the roads have been far more satisfactory to all classes of users. Realizing that the automobile has come to stay and that the State of Maine will soon be called upon to meet the consequent road problems, we have, during the present year, built bituminous macadam roads in Hallowell, Lewiston, Madison, Portland, Richmond and Westbrook. As this is a new kind of road in this state, we will briefly describe the form of construction we have followed.

The roadbed is prepared as in the construction of a regular macadam or gravel road. On the sections built this year we have then spread seven inches of No. 1 stone, that is, crushed stone varying in size from  $1\frac{1}{4}$  inches to  $2\frac{1}{2}$  inches, which after thorough rolling with a steam roller compacts to about five inches. Over this is spread a three-inch layer of No. 2 stone which has been thoroughly mixed and coated with a bituminous binder. After spreading, this is allowed to stand from a few hours to a day, depending upon the temperature of the air,

after which it is rolled down to about two inches. It is then allowed to set until sufficiently hard, after which the surface is painted with hot refined coal gas tar or hot asphalt and immediately covered with from  $\frac{1}{4}$  to  $\frac{1}{2}$  inch of dry stone screenings from which all dust has been removed. A light rolling is then given to force the screenings into the surface voids of the No. 2 course and into the surface coat of bituminous material. This completely seals the surface of the road, making it impervious to moisture and also makes a gritty surface which affords a good foothold for horses.

The following points must be observed in carrying out this work:

The stone must be clean and dry. Tar or asphalt will not adhere to dirty, dusty or damp stone. A uniform grade of stone and bituminous materials should be used. Thorough mixing and careful spreading and rolling must be insisted upon. The road must not be opened for traffic until the bituminous binder has completely set.

The advantages claimed for this form of construction are that it is waterproof and consequently sanitary; noiseless, dustless, and that the wear is almost imperceptible, making the maintenance expense very light. The road is resilient, making it very easy for horses to work upon. Automobile traffic does not injure it but rather benefits it. The statements made in this paragraph are not conclusions based upon experience in Maine. They are the conclusions of officials who have been building and observing these roads for four or five years.

Your commissioner has made more or less investigation of this style of construction during the year and all of the above statements seem to be warranted. The cost of this construction generally speaking is about 50% more than for ordinary macadam. The method described above is called the "mixing method." Similar results are accomplished by what is called the "grouting method" or "penetration method." By this method the bituminous material instead of being mixed with the No. 2 course is spread upon it after it is partially rolled and allowed to penetrate. The road is finished as in the mixing method. It has seemed to your commissioner that such uniform results could not be obtained by this method as by the mixing method and no work of this kind has been undertaken.

We have repeated in former reports that we have tried to profit by experimental work conducted in other states where appropriations for this kind of work are available. The same line has been followed in the case of bituminous macadam. Roads in Massachusetts and Rhode Island have been examined several times and the construction outlined above is that which appeared to be giving the best satisfaction. This style of road has been built in Rhode Island during the past four years under the direction of A. H. Blanchard, M. Am. Soc. C. E., Deputy State Engineer, and we have followed his specifications and method of work and used the same materials which his laboratory tests and experience have indicated to be satisfactory.

The method of conducting this work is as follows: A contract is let for the construction of a plain macadam road. A supplementary contract is let specifying at what prices extra labor on account of the bituminous work will be furnished and what discounts will be made on account of substituting the bituminous second course for the ordinary macadam. In this way the exact labor cost can be determined. Furthermore the department or the city or town furnishes the bituminous material so that the contractor makes no profit on this and we know we are getting good material.

Form of the supplementary contract is given herewith:

STATE OF MAINE.

STATE HIGHWAY DEPARTMENT.

AGREEMENT AND SPECIFICATIONS.

For Extra Work, on Account of Construction of Bituminous Macadam Surface on a section of State Highway in the.....of..... County of.....State of Maine.

THIS AGREEMENT, made and entered into this.....1909, between the.....party of the first part, and..... party of the second part:

WITNESSETH, that the said party of the second part agrees with the said party of the first part to do all the work and furnish all the material (not herein agreed to be furnished by the party of the first part) to construct and complete ready for use, the bituminous surface on a section of State Highway in the.....of.....County of..... State of Maine, in accordance with and as described in the specifications herein contained, and in full accordance with the terms of this agreement.

That the said party of the second part further agrees with the said party of the first part to furnish labor in such quantities as may be described by the engineer at the following prices:

Common laborer .....	at	per hour
Labor competent to work and handle bituminous products .....	at	per hour
Single team and driver.....	at	per hour
Double team and driver.....	at	per hour

That the said party of the second part further agrees with the said party of the first part to deduct from the total labor cost of each gang engaged in the laying of the stone mixed with the bituminous compound for each 10-hour day, or its equivalent:

1 common laborer, 10 hours.....	at	per hour
1 watering cart,        hours.....	at	per hour

That the said party of the first part agrees to pay the said party of the second part the costs of labor at aforesaid prices on the extra work directly connected with laying the bituminous macadam surface, plus 15 per cent.

That the said party of the second part further agrees with the said party of the first part to furnish tar kettles and accessories, including rakes, shovels, dippers, mixing boards, axes, brooms, pails, etc., and the said party of the first part agrees to pay the said party of the second part for the use of aforesaid utensils.....cents per day for each kettle actually used when the bituminous surface is being laid.

That the said party of the second part agrees with the said party of the first part to furnish cord wood at.....per cord. That the said party of the first part agrees with the said party of the second part to furnish all the bituminous material.

That it is mutually agreed that the party of the first part reserves the right to change at any time the method of construction; the bituminous compound; to require that the stone and bituminous compound shall either be mixed by hand or machine; to require that the stone shall be heated.

The said party of the first part to supply the machines or driers if used.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands the year and date first above written.

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Specifications for placing the bituminous material are as follows:

STATE HIGHWAY DEPARTMENT.

SPECIFICATIONS FOR BITUMINOUS MACADAM.

These specifications are supplementary to and an integral part of the Standard Specifications, of the State Highway Department, for macadam roads, and in no way replace them, except in so far as the construction of the No. 2 course and finished surface is concerned.

PLANT.—The roller used in rolling the bituminous macadam surface shall not weigh more than ten tons.

The kettles shall be of such shape and size that they can be easily transported by hand from point to point. No kettle, however, shall be used that will not hold two barrels of tar, except by special permission of the engineer.

When mixing on the road, a mixing board shall be provided for each gang so engaged. The mixing board shall be made of 2-inch plank in three sections each 8' x 8'.

BITUMINOUS COMPOUNDS.—Coal-tar shall be placed in the kettles so that the depth of tar is not more than 18" unless otherwise directed by the engineer. Water in the tar shall be caught when the tar is being run into the kettle. If any rises to the surface of the tar in the kettle it shall be skimmed off. When tar is the only bituminous compound used, it shall be heated for two hours at a temperature between 150 degrees and 180 degrees Fahr., then raised to at least 200 degrees before using.

Kettles shall be placed so that hot tar will not have to be carried more than 50 feet.

In storing tar, barrels shall be laid on their sides with the bungs up. Asphalt shall be placed in the kettles in such quantities as may be desired, and brought to a heat of 350 degrees Fahr., before using. When the bituminous compound consists of tar and asphalt mixed half and half, the tar shall be heated in one kettle and the asphalt in another. The tar shall be brought to 200 degrees Fahr., before using; the asphalt to 350 degrees Fahr., before using. In mixing by hand the tar shall be placed on the stones before the asphalt.

STONE.—The No. 2 stone must be dry and free from dust. No No. 1 stone will be allowed in the No. 2 course. No work shall be done when the No. 1 course is wet. The work shall not be resumed until the stone has dried out to the satisfaction of the inspector.

MIXING BITUMINOUS COMPOUND.—The bituminous compound shall be mixed with the stone either by hand or by machine until the stone is thoroughly coated to the satisfaction of the engineer or inspector. One and one-quarter gallons of bituminous compound shall be used per square yard of surface, unless otherwise directed by the engineer. The No. 2 stone shall be laid to a thickness of three inches and rolled to two inches. The No. 2 course shall be rolled as directed by the engineer or inspector.

**PAINTING.**—After the surface has been thoroughly rolled and shaped up to the satisfaction of the engineer, the surface shall be swept clean. The bituminous compound shall be spread on the surface either by brooms or mops. Six-tenths of a gallon of the bituminous compound shall be used per square yard of surface, unless otherwise directed by the engineer.

**DUST.**—Dust screenings shall be perfectly dry. Dust screenings shall be put on to a thickness not exceeding  $\frac{1}{4}$  inch unless otherwise directed by the engineer or inspector. No dust shall be put on until the surface has set to the satisfaction of the engineer or inspector.

When the surface is required to be painted, the dust screenings shall be put on immediately after the flush coat of bituminous compound has been applied. The surface shall be rolled as directed by the engineer or inspector.

**SCREENINGS FOR FLUSH COAT.**—Screening for the tar flush coat shall consist of crushed stone of the kind and quality above specified, that will pass through a one-half inch circular ring and be retained on a screen having meshes one-eighth of an inch square.

On the Hallowell, Lewiston, Portland and Westbrook jobs a bituminous binder consisting of 50% refined coal-tar and 50% asphalt was used. For the mixing .625 gals. of each per square yard was specified. For painting .6 gals. of refined tar per square yard was used.

All asphalt used was "J" grade from the Texas Co. of Providence, R. I.

The following tars were used:

At Hallowell: From Sagadahoc Light and Power Co. at Bath, crude tar refined on road; from Kennebec Light and Heat Co. at Gardiner, crude tar refined on road; from American Tar Co., Malden, Mass., Tarite, a refined tar.

At Lewiston: From American Tar Co., Tarite.

At Portland: From Portland Gas Light Co., crude tar refined on the road.

At Westbrook: From American Tar Co., Tarite.

At Richmond and at Madison, Tarvia "X," a refined coal-tar manufactured by the Barrett Manufacturing Co., was used without any asphalt.

All bituminous materials used this year have been sampled freely and these samples will be tested at the Experiment Station, Orono.

The details of quantities and costs on each of these jobs will be found under the section of this report dealing with contracts.

## CONTRACTS.

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No change has been made in the method of handling contract work except that under an amendment passed by the last legislature the department is authorized to let a contract to a city or town for the construction of its section of state road, without competition, provided the city or town will take the work at the estimated cost made by the department. The greater part of the contracts this year have been let under this arrangement. It has saved considerable time in starting the work and the expense of advertising; this method also assures the expenditure of the full joint fund on the road and the record will show that in most places more work was done than was called for in the contract.

Following will be found a short summary of each of the contract jobs together with such cost data as we have been able to obtain from reports by municipal officers.

Note:—It should be borne in mind that all state road contracts are let on a lump sum basis. Contractors are required, however, in submitting proposals to attach a unit price to each item of work shown. These unit prices are used as a basis for making monthly estimates.

In estimating the cost of contract jobs the department generally reserves a small amount of the joint fund for the payment of engineering, advertising and contingent expenses.

Mr. I. W. Barbour, Assistant Commissioner, has had immediate supervision of contract work the present year.

### AUBURN.

Contract No. 23. Contractor, city of Auburn; F. F. Goss, street commissioner; R. A. Swift, city engineer; nature of improvement, granite block paving; area, 1,356 square yards; cost per square yard, \$1.62; work begun, August 31st; completed November 6th.



The section of state road selected to be improved begins at Court street and extends southerly along Minot avenue.

Improvement was made on the easterly side of this avenue between the electric railroad track and the curbing.

Quantities and unit prices estimated by the department.

600 lineal feet of road graded @ 11½c.

1,200 square yards granite block paving @ \$1.82.

Lump sum amount of contract..... \$2,252 25

Cost items compiled from certificates of municipal officers.

Length, 714 feet; width, 23 feet (including car track).

Cost—Paving blocks @ \$1.10 per square yard....	\$2,014 10
Grading and laying paving.....	932 17
Rebuilding and regrading catch basins.....	18 38
Sand .....	16 10

Total cost of work.....	\$2,980 75
Electric railroad's share, 475 square yards..	783 75

Net cost .....	\$2,197 00
Amount set aside and appropriated by city, sections 4 and 5.....	\$1,287 00
State aid apportioned under section 6.....	905 25

Joint fund .....	\$2,252 25
Net cost of work.....	\$2,197 00
Cost to city .....	1,287 00

State aid approved .....	\$910 00
Unexpended balance available for expenditure in 1910 .....	\$55 25

### AUGUSTA.

Contract No. 39. Contractor, city of Augusta; W. S. Knowles, street commissioner; H. F. Hill, city engineer; nature of improvement, grading, drainage and gravel surface; area, 9,134 square yards; cost per square yard, including grading, \$0.22; work begun, October 9th; completed November 7th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northerly along the Bond Brook road; the material used was selected on account of its location at one end of the work and is a fair quality of gravel.

Quantities and unit prices estimated by the department.

3,973 lineal feet of road graded @ \$0.08.	
9,134 square yards of gravel surface @ \$0.15.	
30 lineal feet of 16-inch metal culvert @ \$1.40.	
24 lineal feet of 20-inch metal culvert @ \$1.85.	
1,330 lineal feet of guard-rail @ \$0.20.	
Repairing and cleaning culverts, \$30.	
Repairing and removing old fences, \$100.	
Lump sum amount of contract.....	\$2,257 50
Cost items compiled from certificates of municipal officers.	
Length, 3,973 lineal feet; width, 21 feet; depth, 9½ inches.	
<i>Cost</i> —Gravel, 3,347 loads @ \$0.08.....	\$267 76
Labor, 419 days @ \$1.73½.....	726 96
Superintendence, 25 days @ \$3.00.....	75 00
Team labor, 225 1-3 days @ \$4.00.....	901 33
Guard-rail lumber .....	69 57
Guard-rail labor, 44 days @ \$1.68¾.....	74 25
Culverts, including freight.....	53 70
Coal, oil and waste.....	31 74
Survey and plan .....	57 19
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Total cost of work.....	\$2,257 50
Amount set aside and appropriated by city, sections 4 and 5.....	\$1,290 00
State aid apportioned under section 6.....	967 50
	<hr/>
Joint fund .....	\$2,257 50
Net cost of work .....	\$2,257 50
Cost to city .....	1,290 00
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State aid approved .....	\$967 50

## BATH.

Contract No. 39. Contractor, city of Bath; Oscar F. Williams, street commissioner; Stephen Litchfield, engineer; nature of improvement, grading, drainage and macadam surface; area, 3,400 square yards; cost per square yard, \$.83; work begun, October 4th; completed November 26th.

The section of state road selected to be improved begins at Center street and extends southerly along High street. Macadam surface was the principal item of cost.

Quantities and unit prices estimated by the department.

1,600 lineal feet of road graded @ \$.20.	
3,200 square yards of macadam surface @ \$.44.	
360 lineal feet of 8-inch vitrified pipe @ \$.60.	
4 catch basins complete, \$25.00 each.	
Regrading one catch basin, \$15.00.	
Lump sum amount of contract.....	\$2,139 36
Cost items compiled from certificates of municipal officers.	
Length, 1,700 feet; width, 18 feet of macadam; total width, 24 feet; depth, 8 inches.	
Cost—Labor, teams and roller.....	\$1,593 00
Engineering .....	29 75
Crushed stone @ \$2.00 per load.....	1,220 00
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Total cost of work.....	\$2,842 75
Amount set aside and appropriated by city, sections 4 and 5.....	\$1,222 50
State aid apportioned under section 6.....	916 86
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Joint fund .....	\$2,139 36
Additional amount furnished by city.....	703 39
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Net cost of work.....	\$2,842 75
Cost to city .....	1,925 89
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State aid approved .....	\$916 86

BELFAST.

Contract No. 28. Contractor, city of Belfast; H. S. Cunningham, street commissioner; A. D. Hayes, city engineer; nature of improvement, grading, drainage and macadam surface; area, 3,233 square yards; cost per square yard, including grading, \$0.56; work begun, August 17th; completed September 30th.

The section of state road selected to be improved begins at the intersection of Main and High streets and extends northeasterly along High street to Bridge street. This section is in the business part of the city and called for considerable grading and preliminary work, on account of the difference in elevation of the sidewalks on opposite sides of the street, before the macadam surface could be placed.

Quantities and unit prices estimated by the department.

600 lineal feet of grading @ \$0.31.	
3,200 square yards of macadam surface @ \$0.42.	
75 lineal feet of 8-inch vitrified pipe @ \$0.35.	
139 square yards cobble gutter @ \$1.06.	
3 catch basins @ \$45.00.	
2 drop inlets @ \$12.00.	
1 drop inlet to be rebuilt @ \$8.00.	
50 square yards cobble gutter to be relaid @ \$0.25.	
Lump sum amount of contract.....	\$1,911 00
Cost items compiled from certificates of municipal officers:	

Length, 600 feet; width, 48½ feet; depth, 8 inches.

<i>Cost</i> —Labor, including stone crushing, teaming, rolling, etc. ....	\$1,120 30
Field rock, 1,200 tons @ \$0.50.....	600 00
Coal, oil and blacksmith labor.....	82 00
2,300 paving blocks .....	96 00
Sand and gravel .....	35 00
Two inlets .....	20 00
Tile pipe, 123 feet @ \$0.125.....	15 43
Three catch basins .....	135 00
Engineering .....	115 00

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Total cost of work..... \$2,218 73

Amount set aside and appropriated by the city, sections 4 and 5.....	\$1,092 00
State aid, section 6.....	819 00
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Joint fund, 1909.....	\$1,911 00
Unexpended balance of 1908 joint fund transferred to 1909 by agreement.....	259 38
Additional amount furnished by city.....	48 35
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Net cost of work.....	\$2,218 73
Cost to city.....	1,399 73
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State aid approved.....	\$819 00

## BETHEL.

Contract No. 9. Contractor, town of Bethel; W. A. Emery, road commissioner; I. M. Clark, engineer; nature of improvement, drainage and gravel surface; area, 3,055 square yards; cost per square yard, \$0.18; work begun August 5th; completed August 24th.

The section of state road selected to be improved begins at the northerly end of the covered bridge across the Androscoggin river and extends northerly; the road was underdrained by side drains about 4 feet deep and 16 inches wide under each ditch; these drains were filled with cobble stones and gravel; river gravel was used for surfacing and a finer material used for binding the gravel.

Quantities and unit prices estimated by the department.

1,100 lineal feet of road graded @ \$0.06.	
2,811 square yards gravel surface @ \$0.14.	
142 lineal feet 8-inch vitrified pipe @ \$0.40.	
1,900 lineal feet of underdrain @ \$0.28.	
Lump sum amount of contract.....	\$1,071 93
Cost items compiled from certificates of municipal officers.	
Length, 1,250 lineal feet; width, 22 feet; depth, 12 inches.	
Cost—Grading.....	\$47 00
Labor.....	504 74

142 lineal feet 8-inch vitrified pipe.....	57 60
Side drain, 2,200 feet x 20 inches.....	523 71
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Total cost of work.....	\$1,133 05
Amount set aside and appropriated by town, sections 4 and 5.....	\$487 50
Unexpended balance from 1908 apportionment....	96 93
State aid apportioned under section 6.....	487 50
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Joint fund .....	\$1,071 93
Additional amount furnished by town.....	61 12
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Net cost of work.....	\$1,133 05
Cost to town .....	548 62
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State aid approved .....	\$584 43

BIDDEFORD.

Contract No. 25. Contractor, city of Biddeford; Frederick M. Rose, street commissioner; W. T. Allen, engineer; nature of improvement, grading and macadam surface; area, 4,323 square yards; cost per square yard, including grading, \$0.93; work begun September 20th; completed November 24th.

The section of state road selected to be improved begins at the southwesterly end of the 1908 work and extends southwesterly along Elm street through "Five Points." The subsoil of a part of this section is loose sand and from the experience with this material in 1908 it was decided to build a stone foundation before placing the macadam surface; the No. 1 stone for the macadam was quarried and crushed at the city crusher, the trap rock for the No. 2 course and the screenings was obtained from Massachusetts.

Quantities and unit prices estimated by the department.

1,400 feet of road graded @ \$0.23.	
3,889 square yards of macadam surface @ \$0.54.	
Lump sum amount of contract.....	\$2,436 00
Cost items compiled from certificates of municipal officers.	

Length, 1,400 feet; width, 27.8 feet; depth, 6 inches.

Cost—211.35 tons crushed stone @ \$0.85.....	\$179 65
Freight on crushed stone.....	113 49
4,500 bricks @ \$8.00 per M.....	36 00
32.08 tons of coal @ \$5.00.....	160 46
Dynamite, caps, signs, etc.....	34 65
20 gals. oil @ \$0.13.....	2 60
Tools .....	24 63
Labor, 984 <sup>7</sup> / <sub>8</sub> days @ \$1.75.....	1,723 47
Team, 311 5-6 days @ \$4.00.....	1,247 33
Carpenter, ½ day @ \$2.50.....	1 25
Foreman, 17 days @ \$2.00.....	34 00
Blacksmith .....	96 90
Mason, 10 days @ \$3.50.....	35 00
Engineer at crusher, 61 days @ \$3.00.....	183 00
Labor, steam drill and roller, 75½ days @ \$2.75 .....	207 62
Repairing hose, 4½ days @ \$2.00.....	9 00
Survey and plan .....	61 50
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Total cost of work.....	\$4,150 55
Amount set aside and appropriated by city, sec- tions 4 and 5.....	\$1,392 00
State aid apportioned under section 6.....	1,044 00
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Joint fund .....	\$2,436 00
Additional amount furnished by city.....	1,714 55
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Net cost of work.....	\$4,150 55
Cost to city .....	3,106 55
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State aid approved .....	\$1,044 00

## BREWER.

Contract No. 19. Contractor, city of Brewer; W. F. Parker, street commissioner; R. E. Mullaney, engineer; nature of improvement, grading, drainage and macadam surface; area, 4,200 square yards; cost per square yard, including grading, \$0.33; work begun, August 9th; completed October 30th.

The section of state road selected to be improved begins at the southerly end of the 1908 work at Brimmer street and ex-

tends southerly along Main street to Burr street. Improvement was made by raising the grade and surfacing with macadam. This street has an electric car track in the center and the macadam surface on each side is 12 feet wide.

Quantities and unit prices estimated by the department.

1,500 feet of road graded @ \$0.06.

4,000 yards of macadam surface @ \$0.30.

2 catch basins complete @ \$35.00.

Lump sum amount of contract..... \$1,464 75

Cost items compiled from certificates of municipal officers.

Length, 1,575 lineal feet; width, 24 feet; depth, 6 inches.

Cost—Grading 200 cubic yards.....	\$52 00
Macadam surface .....	1,298 75
Road machine work .....	16 00
3 catch basins .....	120 00

Total cost of work..... \$1,486 75

Amount set aside and appropriated by city, sections 4 and 5..... \$837 00

State aid apportioned under section 6..... 627 75

Joint fund .....

\$1,464 75

Additional amount furnished by city..... 22 00

Net cost of work..... \$1,486 75

Cost to city .....

859 00

State aid approved .....

\$627 75

BRIDGTON.

Contract No. 3. Contractor, town of Bridgton; John C. Pillsbury, road commissioner; D. Eugene Chaplin, engineer; nature of improvement, drainage and gravel surface; area, 2,779 square yards; cost per square yard including grading, \$0.37; work begun August 5th; completed September 18th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northerly



towards the junction of the Bridgton and Fryeburg roads. This section of road is practically level with high land on the west side, the drainage from which crosses the road, causing the surface to break up in the spring and indicating the necessity of underdrainage, although the soil is loamy gravel. From past experience with this material a "V" drain foundation was decided upon and the excavated material used for covering.

Quantities and unit prices estimated by the department.

1,450 lineal feet "V" drained and graded @ \$0.30.	
3,383 square yards gravel surface @ \$0.10.	
80 cubic yards dry stone masonry @ \$3.00.	
Lump sum amount of contract.....	\$1,013 30
Cost items compiled from certificates of municipal officers.	
Length, 1,191 feet; width, 21 feet; depth, 12 inches.	
Cost—1,191 lineal feet of "V" drain, 12 feet wide x 27 inches deep.	
3 culverts dry stone masonry, 22 inches x 22 inches x 30.5 feet each, total length 91.5 feet.	
Foreman, 37 days @ \$2.50.....	\$92 50
Labor, 324 days .....	607 66
Teams, 126 days @ \$2.50.....	315 00
Blacksmith and incidental work.....	21 58
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Total cost of work.....	\$1,036 74
Amount set aside and appropriated by town, sections 4 and 5.....	\$586 50
Unexpended balance from 1908.....	10 37
State aid apportioned under section 6.....	439 87
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Joint fund .....	\$1,036 74
Net cost of work.....	\$1,036 74
Cost to town .....	586 50
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State aid approved .....	\$450 24

BRUNSWICK.

Contract No. 2. Contractor, Chas. E. Hacker; Stephen Litchfield, engineer; nature of improvement, grading, draining and macadam surface; area, 2,000 square yards; cost per square yard, including grading and drainage, \$0.90; work begun, June 9th; completed August 7th.

The section of state road selected to be improved begins at the easterly end of the 1908 work and extends easterly. Grading and macadam surface were the principal items of cost.

Estimate of quantities and contractor's prices submitted for purpose of monthly estimates.

1,200 lineal feet of road graded @ \$0.30.	
2,000 square yards macadam surface @ \$0.68.	
14 lineal feet of 10-inch vitrified pipe, \$0.69.	
30 lineal feet of 14-inch metal culvert @ \$1.25.	
4½ cubic yards concrete masonry end walls @ \$8.88.	
16 lineal feet of guard rail @ \$0.25.	
Relaying tile pipe, \$3.00.	
Lump sum amount of contract.....	\$1,800 00
Cost items compiled from certificates of municipal officers.	
Length, 1,200 feet; width, 15 feet of macadam; depth, 7 inches.	
<i>Cost</i> —Grading 600 cubic yards.	
Metal culvert, 14 inches x 30 feet.	
Relaying 45 feet of 10-inch vitrified pipe.	•
Laying 8 feet of 10-inch vitrified pipe.	
Engineering and advertising .....	\$84 50
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Total cost of work.....	\$1,884 50
Amount set aside and appropriated by town, sections 4 and 5.....	\$982 50
State aid apportioned under section 6.....	736 87
	<hr/>
Joint fund .....	\$1,719 37
Additional amount furnished by town.....	165 13
	<hr/>
Net cost of work.....	\$1,884 50

Cost to town .....	1,147 63
State aid approved .....	\$736 87.

## CALAIS.

Contract No. 16. Contractor, city of Calais; Ansley P. Gardiner, street commissioner; Chas. F. Pray, engineer; nature of improvement, grading, drainage and macadam surface; area, 4,900 square yards; cost per square yard, including grading, \$0.32; work begun August 24th; completed October 19th.

The section of state road selected to be improved begins at the easterly end of the 1908 work and extends easterly along North street. This street had been previously macadamized, but the surface was worn out and the work to be done consisted of resurfacing with crushed stone and drainage work.

Quantities and unit prices estimated by the department.

2,100 lineal feet of road graded @ \$0.054.	
4,900 square yards of macadam surface @ \$0.27.	
10 cubic yards of concrete masonry @ \$14.80.	
100 lineal feet of "V" drain @ \$0.53.	
Lump sum amount of contract.....	\$1,766 61
Cost items compiled from certificates of municipal officers.	
Length, 2,100 feet; width, 21 feet; depth, 6 inches.	
<i>Cost</i> —Macadam surface .....	\$1,442 29
Grading, 40 cubic yards @ \$0.35.....	139 82
Concrete culvert, 15 inches x 32 feet.....	95 00
Repairing stone culvert .....	13 34
Stone drain, 50 feet x 2 feet.....	18 00
Engineering, guard-rail, relaying wall, etc...	103 20
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Total cost of work.....	\$1,811 65
Amount set aside and appropriated by city, sections 4 and 5.....	\$1,009 50
State aid apportioned under section 6.....	757 11
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Joint fund .....	\$1,766 61
Additional amount furnished by city.....	45 04
	<hr/>
Net cost of work.....	\$1,811 65

Cost to city .....	1,054 54
State aid approved .....	<u>\$757 11</u>

CAMDEN.

Contract No. 41. Contractor, town of Camden; Fred B. Annis, street commissioner; F. H. Marshall, engineer; nature of improvement, grading, drainage, gravel and macadam surface; area, 2,473 square yards; cost per square yard, including grading, \$0.43; work begun August 20th; completed November 1st.

The section of state road selected to be improved begins at the bridge and extends northeasterly along Main and High streets. The natural soil is clay, and after the grade was lowered this material would not support a macadam surface. It therefore became necessary to excavate a section in the form of a "V" drain, fill with stone and roll the same to form a foundation before building the macadam surface.

Quantities and unit prices estimated by the department.

750 lineal feet of road graded @ \$0.20.	
2,595 square yards of gravel and crushed stone surface @ \$0.39.	
310 square yards of block paved gutters @ \$1.25.	
2 catch basins, complete, @ \$45.00.	
Lump sum amount of contract.....	\$1,640 61
Cost items compiled from certificates of municipal officers.	

Length, 750 feet; width, 29.6 feet; depth, 8 inches.

Cost—"V" drain, 80 feet x 10 feet x 2 feet deep..	\$42 10
Gravel surface, 750 feet x 29.6 feet x 3 inches	155 40
Macadam surface, 750 feet x 29.6 feet x 5 inches .....	637 35
Grading, 340 cubic yards.....	174 44
Catch basin, complete, .....	110 00
Rebuilding catch basin .....	28 79
Block paved gutter, 723 feet x 4 feet wide..	405 40
Teaming .....	19 05
Land rental for crusher.....	10 00
Rolling 2,473 square yards.....	38 60

Engineering, superintendence, blacksmith, etc. ....	91 39
<b>Total cost of work</b> .....	<b>\$1,712 52</b>
Set aside and appropriated by town, sections 4 and 5	\$937 50
State aid apportioned under section 6.....	703 11
Joint fund .....	\$1,640 61
Additional amount furnished by town.....	71 91
Net cost of work.....	\$1,712 52
Cost to town .....	1,009 41
State aid approved .....	\$703 11

## CARIBOU.

Contract No. 10. Contractor, town of Caribou; A. D. Estey, road commissioner; P. L. Hardison, engineer; nature of improvement, grading and macadam surface; area, 2,178 square yards; cost per square yard, including grading, \$0.51; work begun June 5th; completed July 17th.

The section of state road selected to be improved begins at the Aroostook River bridge and extends westerly along Water street. This street is one of the heaviest traveled thoroughfares in the town and therefore called for a wide roadway and fairly heavy construction.

Quantities and unit prices estimated by the department.

533 lineal feet of road graded @ \$0.25.	
2,178 square yards of macadam surface @ \$0.40.	
Lump sum amount of contract.....	\$1,004 40
Cost items compiled from certificates of municipal officers.	
Length, 533 feet; width, 37 feet; depth, 10 inches.	
Cost—Macadam surface .....	\$956 00
Grading, 400 cubic yards.....	100 00
Road machine work, 533 feet x 40 feet.....	50 00
<b>Total cost of work</b> .....	<b>\$1,106 00</b>

Amount set aside and appropriated by town, sections 4 and 5.....	\$778 50
State aid apportioned under section 6.....	583 86
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Joint fund .....	\$1,362 36
Net cost of work.....	\$1,106 00
Cost to town .....	880 10
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State aid approved .....	\$225 90
Unexpended balance available for expenditure in 1910 .....	\$357 96

DEXTER.

Contract No. 44. Contractor, town of Dexter; G. D. Chandler, road commissioner; Walter B. Gould, engineer; nature of improvement, drainage, grading and macadam surface; area, 1,425 square yards; cost per square yard for macadam surface, \$0.32; cost per square yard, including grading, \$0.54; work begun September 20th; completed November 5th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northerly. A "V" drain foundation was built under the greater part of the work before macadamizing.

Quantities and unit prices estimated by the department.

500 lineal feet of road graded @ \$0.054.	
1,000 square yards of macadam surface @ \$0.50.	
44 lineal feet of 18-inch metal culvert @ \$0.90.	
66 square yards of cobble gutters @ \$0.30.	
500 lineal feet of "V" drain @ \$0.75.	
Lump sum amount of contract.....	\$961 40
Cost items compiled from certificates of municipal officers.	
Length, 675 feet; width, 19 feet; depth, 8 inches.	
Cost—"V" drain, 535 feet x 14 feet x 2 feet deep..	\$313 84
Macadam surface .....	451 66
Metal culvert, 18 inches x 44 feet, with concrete end .....	60 00
Concrete culvert, with stone covering, 24 inches x 16 inches x 55 feet.....	63 50

Cobble gutter, 171 feet x 4 feet.....	20 00
Driveways, ditches and slopes.....	100 30
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Total cost of work.....	\$1,009 30
Amount set aside and appropriated by town, sections 4 and 5.....	520 50
Unexpended balance from 1908.....	243 44
State aid apportioned under section 6.....	390 37
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Joint fund .....	\$1,154 31
Net cost of work.....	\$1,009 30
Cost to town .....	568 40
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State aid approved .....	\$440 90
Unexpended balance available for expenditure in 1910 .....	\$192 91

## EAST LIVERMORE.

Contract No. 26. Contractor, town of East Livermore; George W. Dyke, road commissioner; I. T. Monroe, engineer; nature of improvement, grading and macadam surface; area, 2,212 square yards; cost per square yard, including grading, \$0.51; work begun September 9th; completed October 28th.

The section of state road selected to be improved begins at Depot street, at the end of the 1908 work, and extends north-erly through Main street, the principal business section of the town, to the Maine Central railroad crossing. The improve-ment consisted of grading and macadam surface having a width of 54 feet.

Quantities and unit prices estimated by the department.

340 lineal feet of road graded @ \$0.21.	
2,212 square yards of macadam surface @ \$0.42.	
Lump sum amount of contract.....	\$1,034 25
Cost items compiled from certificates of municipal officers.	

Length, 340 feet; width, 54 feet; depth, 8 inches.

Cost—Labor and teaming.....	\$284 25
772.66 tons of No. 1 and No. 2 stone @ \$0.85	656 76
Two cars of stone dust @ \$5.00.....	10 00

Freight on stone .....	157 04
Road machine work .....	27 00
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Total cost of work.....	\$1,135 05
Amount set aside and appropriated by town, sections 4 and 5.....	\$591 00
State aid apportioned under section 6.....	443 25
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Joint fund .....	\$1,034 25
Additional amount furnished by the town.....	100 80
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Net cost of work.....	\$1,135 05
Cost to town .....	691 80
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State aid approved .....	\$443 25

EASTPORT.

Contract No. 22. Contractor, city of Eastport; T. H. Bucknam, street commissioner; Chas. F. Pray, engineer; nature of improvement, grading, drainage and gravel surface; area, 4,083 square yards; cost per square yard, including grading, \$0.25; work begun August 25th; completed November 16th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northerly and westerly. The principal item of cost was gravel surface.

Quantities and unit prices estimated by the department.

1,450 lineal feet of road graded @ \$0.26.	
3,380 square yards of gravel surface @ \$0.18.	
40 lineal feet of 12-inch metal culvert @ \$1.00.	
30 lineal feet of 24-inch metal culvert @ \$1.90.	
7 cubic yards concrete masonry @ \$7.00.	
Lump sum amount of contract.....	\$1,147 12
Cost items compiled from certificates of municipal officers.	
Length, 1,750 feet; width, 21 feet; depth, 8 inches.	
Cost—Labor and teaming.....	\$941 32
Gravel, 453 loads @ \$0.15.....	67 95
24 barrels of sand @ \$0.15.....	3 60



Metal culvert, 24 inches x 40 feet.....	88 00
Engineering, dynamite, etc.....	77 10
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Total cost of work.....	\$1,177 97
Amount set aside and appropriated by city, sections 4 and 5.....	\$655 50
State aid apportioned under section 6.....	491 62
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Joint fund .....	\$1,147 12
Additional amount furnished by city.....	30 85
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Net cost of work.....	\$1,177 97
Cost to city .....	686 35
State aid .....	\$491 62

## EDEN.

Contract No. 47. Contractor, town of Eden; M. L. Hamor, road commissioner; E. I. Lord, engineer; nature of improvement, grading, drainage and macadam surface; area, 2,933 square yards; cost per square yard, including grading, \$0.66; work begun October 15th; completed December 15th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northerly toward the village of Bar Harbor. The work consists of grading, drainage and macadam surface. A large amount of ledge was encountered in laying the pipe drain.

Quantities and unit prices estimated by the department.

1,100 lineal feet of road graded @ \$0.106.	
2,933 square yards of macadam surface @ \$0.50.	
140 lineal feet of 15-inch vitrified pipe @ \$0.60.	
240 lineal feet of 12-inch vitrified pipe @ \$0.50.	
42 lineal feet of 20-inch metal culvert @ \$1.55.	
36 lineal feet of 15-inch metal culvert @ \$1.20.	
3 catch basins complete @ \$25.00.	
1 catch basin (without cover), \$15.00.	
Lump sum amount of contract.....	\$1,985 87
Cost items compiled from certificates of municipal officers.	
Length, 1,100 feet; width, 24 feet; depth, 8 inches.	

Cost—Macadam surface .....	\$1,485 24
Grading, 3,666 square yards.....	440 00
Vitrified pipe drain, 245 feet of 15-inch and 135 feet of 12-inch.....	668 16
6 catch basins .....	138 03
Iron culvert, 20 inches x 40 feet.....	90 00
Iron culvert, 15 inches x 65 feet.....	130 00
Engineering .....	60 75
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Total cost of work.....	\$3,012 18
Amount set aside and appropriated by town, sec- tions 4 and 5.....	\$1,098 00
State aid apportioned under section 6.....	823 50
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Joint fund .....	\$1,921 50
Additional amount furnished by town.....	1,090 68
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Net cost of work.....	\$3,012 18
Cost to town .....	2,188 68
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State aid approved .....	\$823 50

ELLSWORTH.

Contract No. 42. Contractor, city of Ellsworth; Fred B. Marden, street commissioner; Ira B. Hagan, Jr., engineer; nature of improvement, grading, drainage and macadam surface; area, 2,100 square yards; cost per square yard, including drainage and grading, \$0.79; work begun, October 11; completed, November 30.

The section of state road selected to be improved begins on State street about 600 feet southerly of its junction with the Bangor road and extends northerly along High street and the Bangor road. The improvement required from 6 to 12 inches of filling before macadam surface was placed.

Quantities and unit prices estimated by the department.

- 900 lineal feet of road graded @ \$0.08 1-3.
- 2,100 square yards of macadam surface @ \$0.50.
- 90 lineal feet of 10-inch metal culvert @ \$0.90.
- 24 cubic yards of cement stone masonry @ \$6.00.
- 2 concrete culvert ends @ \$7.50.

Lump sum amount of contract.....	\$1,396 50
Cost items compiled from certificates of municipal officers.	
Length, 900 feet; width, 21 feet; depth, 8 inches at center, 3 inches at sides.	
Cost—900 lineal feet of macadam surface.	
Stone culvert, 2 feet x 3 feet x 30 feet.	
Metal culvert, 10 inches x 12 inches x 100 feet.	
Road machine work, 350 feet.	
Total cost of work.....	\$1,661 04
Amount set aside and appropriated by city, sections 4 and 5.....	\$798 00
State aid apportioned under section 6.....	598 50
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Joint fund .....	\$1,396 50
Additional amount furnished by city.....	164 54
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Net cost of work.....	\$1,661 04
Cost to city .....	1,062 54
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State aid approved .....	\$598 50

#### FAIRFIELD.

Contract No. 20. Contractor, town of Fairfield; Ed. Hoxie, superintendent; Greene & Wilson, engineers; nature of improvement, drainage, grading and gravel surface; area, 3,032 square yards; cost per square yard, including "V" drain, \$0.36; work begun, August 26th; completed November 9th.

The section of state road selected to be improved begins at Tobey brook and extends northerly. A "V" drain was built practically the entire length of this section and the excavated material used for covering; this material was sandy clay. Gravel was used for surfacing.

Quantities and unit prices estimated by the department.

1,600 lineal feet of road graded @ \$0.05.	
2,666 square yards of sandy clay and gravel surface @ \$0.12.	
1,400 lineal feet of "V" drain @ \$0.50.	
Lump sum amount of contract.....	\$1,136 62
Cost items compiled from certificates of municipal officers.	
Length, 1,819 feet; width, gravel, 15 feet; total width, 22 feet; depth, 4 to 5 inches.	
Cost—"V" drain, 1,819 feet x 12 feet x 2 feet....	\$768 85
Gravel surface, 1,819 feet x 15 feet x 5 inches	301 50
Road machine work .....	35 00
Guard-rail .....	60 00
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Total cost of work.....	\$1,165 35
Amount set aside and appropriated by town, sections 4 and 5.....	\$649 50
State aid apportioned under section 6.....	487 12
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Joint fund .....	\$1,136 62
Additional amount furnished by town.....	28 73
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Net cost of work:.....	\$1,165 35
Cost to town .....	678 23
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State aid approved .....	\$487 12

FALMOUTH.

Contract No. 8. Contractor, town of Falmouth; Iver H. Iverson, road commissioner; Silas Skillin, engineer; nature of improvement, drainage, grading and gravel surface; area, 3,596 square yards; cost per square yard, including cost of "V" drain, \$0.20; work begun August 9th; completed October 7th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northeasterly. This section was underdrained for about two-thirds of its length and gravel was used for surfacing.

Quantities and unit prices estimated by the department.

1,400 lineal feet of road graded @ \$0.16.

3,266 square yards of gravel surface @ \$0.06.

40 lineal feet of 12-inch metal culvert @ \$1.00.

1,000 lineal feet of "V" drain @ \$0.40.

Rebuilding stone culvert, \$150.00.

Lump sum amount of contract..... \$1,021 12

Cost items compiled from certificates of municipal officers.

Length, 1,541 feet; width of gravel, 21 feet; total width, 28 feet; depth, 3 inches.

Cost—"V" drain, 1,000 feet x 12 feet x 18 inches..	\$392 75
Gravel surface, 1,541 feet x 15 feet x 3 inches	147 88
Grading .....	168 09
Metal culvert, 12 inches x 37 feet.....	37 50
Metal culvert, 18 inches x 16 feet.....	31 00
Stone culvert, 4 feet x 4½ feet x 45 feet....	146 25
Clearing right of way.....	62 75
Engineering, advertising and superintendence .....	34 90

Total cost of work..... \$1,021 12

Amount set aside and appropriated by town, sections 4 and 5.....	\$583 50
State aid apportioned under section 6.....	437 62

Joint fund .....	\$1,021 12
Net cost of work.....	\$1,021 12
Cost to town .....	583 50

State aid approved .....

	\$437 62
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FARMINGTON.

Contract No. 24. Contractor, town of Farmington; N. R. Knowlton, chairman selectmen; W. G. Mallett, engineer; nature of improvement, grading, drainage and macadam surface; area, 2,444 square yards; cost per square yard, including grading, \$0.50; work begun August 16th; completed October 23rd.

The section of state road selected to be improved begins at the southerly end of the 1908 work and extends southerly. The principal item of cost was macadam surface.

Quantities and unit prices estimated by the department.

900 lineal feet of road graded @ \$0.06.	
2,111 square yards macadam surface @ \$0.57.	
36 lineal feet of 12-inch metal culvert @ \$1.00.	
2 cubic yards cement masonry @ \$5.00.	
Lump sum amount of contract.....	\$1,312 00
Cost items compiled from certificates of municipal officers.	
Length, 1,000 feet; width, 22 feet; depth, 7 inches.	
Cost—Labor .....	\$284 45
Crushed stone .....	534 26
Freight on crushed stone.....	286 50
Sprinkling and rolling .....	85 00
Grading .....	42 00
Tile pipe, 8 inches x 80 feet.....	12 00
Catch basin .....	9 00
Incidentals .....	5 50
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Total cost of work.....	\$1,258 71
Amount set aside and appropriated by town, sections 4 and 5.....	\$730 50
Unexpended balance from 1908.....	33 63
State aid apportioned under section 6.....	547 87
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Joint fund .....	\$1,312 00
Net cost of work.....	\$1,258 71
Cost to town .....	730 50
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State aid approved .....	\$528 21
Unexpended balance available for 1910.....	\$53 29

## FORT FAIRFIELD.

Contract No. 11. Contractor, town of Fort Fairfield; Chas. J. Knight, road commissioner; P. L. Hardison, engineer; nature of improvement, grading, drainage and macadam surface; area, 2,178 square yards; cost per square yard, including cost of "V" drain, \$0.59; work begun July 26th; completed September 11th.

The section of state road selected to be improved begins at the northerly end of the Aroostook River bridge and extends easterly along Riverside avenue. The principal cost items were grading and macadam surface.

Quantities and unit prices estimated by the department.

1,200 lineal feet of road graded @ \$0.07.	
2,400 square yards of macadam road @ \$0.48.	
97 lineal feet of 16-inch metal culvert @ \$1.30.	
30 lineal feet of 24-inch metal culvert at \$1.80.	
5 cubic yards of concrete masonry @ \$6.00.	
240 lineal feet of "V" drain at \$0.30.	
1 catch basin complete @ \$30.00.	
Lump sum amount of contract.....	\$1,643 25
Cost items compiled from certificates of municipal officers.	
Length, 1,400 feet; width of macadam, 14 feet; total width, 30 feet; depth, 9 inches.	
Cost—"V" drain, 240 feet x 12 feet x 2 feet.	
Metal culvert, 16 inches x 100 feet.	
Metal culvert, 30 inches x 32 feet.	
Labor .....	\$996 64
Stone, 589 loads @ \$0.50.....	294 50
Cement .....	48 52
Culverts .....	193 50
Lumber .....	14 40
Engineering, freight, etc. ....	95 69
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Total cost of work.....	\$1,643 25
Amount set aside and appropriated by town, sections 4 and 5.....	\$939 00
State aid apportioned under section 6.....	704 25
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Joint fund .....	\$1,643 25

Net cost of work.....	\$1,643 25
Cost to town .....	939 00
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State aid approved .....	\$704 25

GARDINER.

Contract No. 46. Contractor, city of Gardiner; Chas. E. Pickering, foreman; Frederic Danforth, engineer; nature of improvement, grading, draining and macadam surface; area, 2,800 square yards; cost per square yard, including cost of "V" drain, \$0.91; work begun October 4th; completed November 30th.

The section of state road selected to be improved begins at the south end of the upper bridge across Cobbossee stream and extends easterly along Central avenue. Culverts and under-drainage were the principal items of cost besides macadam surface.

Quantities and unit prices estimated by the department.

1,200 lineal feet of road graded @ \$0.06.	
2,800 square yards of macadam surface @ \$0.40.	
40 lineal feet of 18-inch metal culvert @ \$1.75.	
40 lineal feet of 24-inch metal culvert @ \$2.00.	
100 lineal feet of "V" drain @ \$0.50.	
Repairing and rebuilding culverts, \$160.00.	
Lump sum amount of contract.....	\$1,640 62
Cost items compiled from certificates of municipal officers.	
Length, 1,200 feet; width, 21 feet; depth, 9 inches.	
Cost—"V" drain, 100 feet x 8 feet x 2 feet.....	\$37 75
Macadam surface .....	2,074 11
Grading 1,200 feet .....	433 86
Stone culvert, 2 feet x 2 feet x 35 feet....	51 75
Stone culvert, 3 feet x 2½ feet x 60 feet...	123 55
Iron culvert, 18 inches x 40 feet.....	65 75
Iron culvert, 24 inches x 38 feet.....	86 55
Superintendence, 55 days @ \$3.00.....	165 00
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Total cost of work.....	\$3,038 32
Amount charged to L. A. & W. St. Ry.....	37 65
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Net cost of work.....	\$3,000 67



Amount set aside and appropriated by city, sections 4 and 5.....	\$937 50
State aid apportioned under section 6.....	703 12
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Joint fund .....	\$1,640 62
Additional amount furnished by city.....	1,360 05
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Net cost of work.....	\$3,000 67
Cost to city .....	2,297 55
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State aid approved .....	\$703 12

## GORHAM.

Contract No. 33. Contractor, town of Gorham; W. F. Pillsbury, chairman selectmen; H. W. Grant, engineer; nature of improvement, grading, and surfacing with ledge chips; area, 2,000 square yards; cost per square yard, \$0.47; work begun September 15th; completed November 15th.

The section of state road selected to be improved begins at the westerly end of the 1908 work and extends westerly toward Gorham village. Ledge excavation and filling were the principal cost items. Soft ledge chips were used for surfacing on account of their proximity to the work and the difficulty of obtaining suitable gravel.

Quantities and unit prices estimated by the department.

1,200 lineal feet of road graded @ \$0.60.

2,000 square yards of ledge chip surface @ \$0.15.

Lump sum amount of contract..... \$1,047 37

Cost items compiled from certificates of municipal officers.

Length, 1,200 feet; width, 21 feet; depth, 8 inches.

Cost—Labor on ledge excavation and chip surface	\$914 01
Metal culvert, 18 inches x 18 feet,	
Metal culvert, 12 inches x 28 feet,	
Metal culvert, 10 inches x 18 feet,	
Metal culvert, 12 inches x 22 feet,	
Total, not including freight on same.....	75 46
Dynamite, fuel, etc. ....	24 22

Lumber .....	1 50
Surveying .....	26 70
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Total cost of work.....	\$1,041 89
Amount set aside and appropriated by town, sections 4 and 5.....	\$598 50
State aid apportioned under section 6.....	448 87
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Joint fund .....	\$1,047 37
Net cost of work.....	\$1,041 89
Cost to town .....	598 50
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State aid approved .....	\$443 39
Unexpended balance available for expenditure in 1910 .....	\$5 48

HALLOWELL.

Contract No. 6. Contractor, city of Hallowell; John Burns, street commissioner; E. E. Greenwood & Co., engineers; nature of improvement, grading and bituminous macadam surface; area, 3,127 square yards; cost per square yard, including grading, \$1.10; work begun July 28th; completed September 23rd.

The section of state road selected to be improved begins at Winthrop street and extends southerly along Water street to Union street. An electric railroad track occupies the center of the street and is paved with granite blocks between the rails and 18 inches outside the rails. This section of Water street is the principal business thoroughfare and is subjected to heavy traffic. The volume of traffic, however, is not as great as in larger cities. The principal cost item was bituminous macadam surface. The work was advertised and the contract awarded to the city of Hallowell, the lowest bidder.

Quantities and unit prices submitted by the city of Hallowell.

650 lineal feet of road graded @ \$0.25.	
2,756 square yards plain macadam @ \$0.18.	
Laying 265 square yards granite block paving @ \$0.20.	
106 square yards granite block paving relaid @ \$0.25.	
Lump sum amount of contract.....	\$753 00

Extra labor and material for bituminous surface:

Common labor @ \$0.25 per hour.

Skilled labor @ \$0.30 per hour.

Single team and driver @ \$0.33 1-3 per hour.

Double team and driver @ \$0.45 per hour.

Use of kettles, etc., \$0.50 per day.

Wood @ \$4.00 per cord.

Deduct from labor 10 hours @ \$0.25 per hour for each tar gang.

Specifications, which appear in another part of this report, were prepared for building a bituminous macadam surface in place of plain macadam.

Prices actually paid for labor per 9-hour day were as follows:

Foreman, \$5.00; one tar man, \$3.00; one tar man, \$2.00; common labor, \$1.65; double team and driver, \$3.75; single team and driver, \$3.00.

The tar gang consisted of a foreman, two tar men and six laborers.

From the certificates of municipal officers we have computed the following unit cost items:

Texaco asphalt, grade "J," per gallon, \$0.109.

Gallons, grade "J" asphalt, per square yard, 0.827.

Cost of grade "J" asphalt, per square yard, \$0.091.

Tarite, per gallon, \$0.059.

Gallons tarite, per square yard, 1.88.

Cost of tarite, per square yard, \$0.113.

Rock at crusher, per square yard.....	\$0.272
Common labor at crusher and on grading, per square yard .....	0.191
Teaming rock and team work on grading, per square yard .....	0.179
Rolling, per square yard.....	0.101
Labor on bituminous surface, per square yard....	0.158
Asphalt, per square yard.....	0.191
Tarite, per square yard.....	0.113

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Total cost, per square yard..... **\$1.10**

Following are the cost items compiled from certificates of municipal officers, from which the above unit cost items were computed:

Length, 650 feet; width, 36 feet; depth, 7 inches.

Cost—Labor, including stone crushing.....	\$526 25
Granite block paved gutter, 1,000 feet x 3 feet .....	412 50
Steam roller, including engineer and coal...	279 90
Advertising .....	2 25
Surveying .....	43 75
Labor and superintendence on bituminous surface .....	400 00
Teaming .....	495 21
Rent of kettles and incidental expenses.....	35 94
Stone before crushing .....	750 00
Texaco, grade "J," asphalt, 9½ tons.....	250 55
Bath tar, 50 bbls., including freight, Gardiner tar, 17 bbls., including freight, Tarite, 37 bbls., including freight.....	311 80
Total cost of work.....	<hr/> \$3,507 15
Amount set aside and appropriated by city, sec- tions 4 and 5.....	\$577 50
State aid apportioned under section 6.....	433 12
Joint fund .....	<hr/> \$1,010 62
Additional amount furnished by city.....	2,496 53
Net cost of work.....	<hr/> \$3,507 15
Cost to city .....	3,074 03
State aid approved .....	<hr/> \$433 12

HOULTON.

Contract No. 12. Contractor, town of Houlton; George W. Small, street commissioner; P. N. Burleigh, engineer; nature of improvement, grading and macadam surface; area, 3,500 square yards; cost per square yard, \$0.71; work begun June 28th; completed August 30th.

The section of state road selected to be improved begins at the southerly end of the 1908 work and extends southerly. This work required surface water drainage by means of a tile drain under the side ditch and the principal cost item was macadam surface.

Quantities and unit prices estimated by the department.

1,100 feet of road graded @ \$0.36.	
2,566 square yards of macadam surface @ \$0.45.	
Lump sum amount of contract.....	\$1,546 12
Cost items compiled from certificates of municipal officers.	
Length, 1,500 feet; width, 21 feet; depth, 9 inches.	
<i>Cost</i> —Tile drain, 1,383 feet.....	\$560 13
Gravel surface, 1,500 feet x 21 feet x 9 inches	510 00
Macadam surface, 1,500 feet x 21 feet x 9 inches .....	1,236 00
Grading, 350 cubic yards of earth, 60 cubic yards rock .....	150 00
Blacksmith work and iron.....	43 60
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Total cost of work.....	\$2,499 73
Amount set aside and appropriated by town, sections 4 and 5.....	\$883 50
State aid apportioned under section 6.....	662 62
	<hr/>
Joint fund .....	\$1,546 12
Additional amount furnished by town.....	953 61
	<hr/>
Net cost of work.....	\$2,499 73
Cost to town .....	1,837 11
	<hr/>
State aid approved .....	\$662 62

### JAY.

Contract No. 43. Contractor, town of Jay; Elmer Bryant, road commissioner; I. T. Monroe, engineer; nature of improvement, grading fill, and gravel surface; area, 1,833 square yards; cost per square yard, including heavy fill, \$0.69; work begun, October 5th; completed December 11th.

The section of state road selected to be improved begins about half a mile north of North Jay village. This section was selected on account of the extreme curvature at the crossing of a small stream; by diverting the stream and extending the abutments of the bridge a crossing was obtained which took out a reversed curve in the road, making practically a straight course. The cost of extending the abutments was paid by the town and the principal item of cost was a rock fill, about 200 feet long and from 6 to 8 feet deep, nearly all of which was made outside of the old roadway.

Quantities and unit prices estimated by the department.

1,100 lineal feet of road graded @ \$0.71.	
1,833 square yards of gravel surface @ \$0.21.	
360 lineal feet of guard-rail @ \$0.25.	
Diversion of brook, \$25.00.	
Lump sum amount of contract.....	\$1,294 12
Cost items compiled from certificates of municipal officers.	
Length, 1,100 feet; width of surfacing, 15 feet; total width, 22 feet; depth, 8 inches.	
<i>Cost</i> —Gravel surface .....	\$318 17
Earth grading .....	142 15
Rock grading .....	810 57
Labor on guard-rail.....	27 67
Material .....	88 15
	<hr/>
Total cost of work.....	\$1,386 71
Amount set aside and appropriated by town, sections 4 and 5.....	\$739 50
State aid apportioned under section 6.....	554 62
	<hr/>
Joint fund .....	\$1,294 12
Additional amount furnished by town.....	92 59
	<hr/>
Net cost of work.....	\$1,386 71
Cost to town .....	832 09
	<hr/>
State aid approved .....	554 62

## KENNEBUNKPORT.

Contract No. 27. Contractor, Edwin D. Seavey; W. S. Marsh, engineer; nature of improvement, grading, drainage and gravel surface; area, 2,333 square yards; cost per square yard, \$0.45; work begun September 29th; completed October 26th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northeasterly. The principal cost item was gravel surface.

Estimate of quantities and contractor's prices submitted for purpose of monthly estimates.

1,000 lineal feet of road graded @ \$0.15.

2,333 square yards of gravel surface @ \$0.30.

6 cubic yards cement stone masonry @ \$5.00.

350 lineal feet of "V" drain @ \$0.50.

Lump sum amount of contract..... \$1,049 85

Cost items compiled from certificates of municipal officers.

Length, 1,000 feet; width, 23 feet; depth, 8 inches.

Cost—"V" drain, 350 feet x 12 feet x 2 feet.

Gravel surface.

Stone culvert extension, 2 feet x 2½ feet x 4 feet.

Total cost of work.....	\$1,049 85
Amount set aside and appropriated by town, sections 4 and 5.....	\$592 50
Unexpended balance from 1908.....	4 62
State aid apportioned under section 6.....	444 37
Joint fund .....	\$1,041 49
Additional amount furnished by town.....	8 36
Net cost of work.....	\$1,049 85
Cost to town .....	600 86
State aid approved .....	\$448 99

LEWISTON.

Contract No. 15. Contractor, city of Lewiston; John J. Ryan, superintendent of streets; John A. Jones, city engineer; nature of improvement, grading and bituminous macadam surface; area, 4,509 square yards; cost per square yard, \$0.90; work begun August 23rd; completed November 10th.

The section of state road selected to be improved begins on Main street, at Blake street, and extends easterly along Main and Sabattus streets to the easterly side of College avenue. The principal item of cost was bituminous macadam surface, which called for regrading the entire square formed by Main and Sabattus streets, the placing of new girder rails in the center of the street and paving between and 18 inches outside the rails with granite blocks. The cost of regrading the track and paving was paid entirely by the railroad company. The city of Lewiston was the lowest bidder for this work.

Quantities and unit prices submitted by the city of Lewiston.

2,564 square yards of road graded @ \$0.06.

2,486 square yards of plain macadam road @ \$0.46.

78 square yards of block paved gutter @ \$2.00.

Lump sum amount of contract..... \$1,453 40

Extra labor and material for bituminous surface:

Common labor @ \$0.194 per hour.

Skilled labor @ \$0.333 per hour.

Single team and driver @ \$0.305 per hour.

Double team and driver @ \$0.444 per hour.

Use of tar kettles, etc., @ \$0.50 per day.

Wood @ \$7.50 per cord.

Deduct one laborer 9 hours @ \$0.194 per hour for each tar gang.

Deduct one watering cart 9 hours @ \$0.444 per hour for each tar gang.

Specifications, which appear in another part of this report, were prepared for building a bituminous macadam surface in place of plain macadam.

Prices actually paid for labor per 9-hour day are as follows:

Foreman, \$5.00; tar man, \$2.50; common labor, \$1.75; double team and driver, \$4.00.



The tar gang consisted of a foreman, one tar man and eight laborers.

From the certificates of the municipal officers we have computed the following cost items:

Texaco asphalt, grade "J," per gallon, \$0.111.

Asphalt, grade "J," gallons per square yard, 1.147.

Cost of grade "J" asphalt, per square yard, \$0.128.

Tarite, per gallon, \$0.065.

Tarite, gallons per square yard, 1.697.

Cost of tarite, per square yard, \$0.110.

Cost items compiled from certificates of municipal officers.

Length, 927 feet; width, 43.8 feet; depth, 8 inches.

Cost—Labor and 52 square yards block paved gutter	\$1,684 97
Texaco asphalt, grade "J," 43,956 pounds @ \$24.80 per ton, plus freight.....	588 00
Tarite, 7,803 gallons @ \$0.065.....	507 19
Wood, 7 cords @ \$7.50.....	52 50
Oil, 100 gallons @ \$0.12.....	12 00
702 tons of No. 1 crushed stone @ \$1.10...	772 20
368 tons of No. 2 crushed stone @ \$1.10...	404 80
27 tons of crushed stone screenings @ \$1.10	29 70
	<hr/>
Total cost of work.....	\$4,051 36
Amount set aside and appropriated by city, sections 4 and 5.....	\$1,926 00
Extra amount appropriated by city.....	74 00
State aid apportioned under section 6.....	1,444 50
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Joint fund .....	\$3,444 50
Additional amount furnished by city.....	606 86
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Net cost of work.....	\$4,051 36
Cost to city .....	2,606 86
	<hr/>
State aid approved .....	\$1,444 50

LISBON.

Contract No. 36. Contractor, town of Lisbon; George H. McIntosh, street commissioner; Stephen Litchfield, engineer; nature of improvement, grading, drainage and gravel surface; area, 6,133 square yards; cost per square yard, including grading, \$0.24; work begun September 1st; completed November 6th.

The section of state road selected to be improved begins at the northeasterly end of the 1907 work and extends northeasterly. The principal item of cost was the gravel surface.

Quantities and unit prices estimated by the department.

2,300 lineal feet of road graded @ \$0.10.

6,133 square yards of gravel surface @ \$0.17.

26 cubic yards of concrete or cement stone masonry

@ \$5.00.

150 feet of guard-rail @ \$0.25.

Lump sum amount of contract..... \$1,569 75

Cost items compiled from certificates of municipal officers.

Length, 2,300 feet; width, 24 feet; depth, 12 inches.

Cost—Labor and teaming .....	\$1,410 90
Dynamite and tools .....	11 87
Iron, 372 lbs. ....	12 08
Lumber .....	22 44
Cement and tools .....	60 75
Gravel, 1,482 loads @ \$0.05.....	74 10
Engineering .....	50 00

Total cost of work..... \$1,642 14

Amount set aside and appropriated by town, sections 4 and 5..... \$897 00

State aid apportioned under section 6..... 672 75

Joint fund .....

Additional amount furnished by town..... 72 39

Net cost of work..... \$1,642 14

Cost to town .....

State aid approved .....

\$672 75

## MADISON.

Contract No. 37. Contractor, town of Madison; B. F. Burns, road commissioner; Snow & Humphreys, engineers; nature of improvement, grading, drainage and tarvia macadam surface; area, 1,830 square yards; cost per square yard, \$0.89; work begun September 1st; completed October 20th.

The section of state road selected to be improved begins at the easterly end of the 1908 work at Maple street and extends easterly along Main street to the easterly side of Madison street. An electric railroad car track occupies the center of the street and the bituminous macadam surface was built from curb to curb, including the space between the car tracks. Considerable grading was required on account of raising the track 12 inches and the foundation course was built of coarse gravel instead of No. 1 stone. The No. 2 course was built of tarvia "X" and stone ranging from 1 inch to 2½ inches mixed by hand to a depth of 4 inches and rolled to 3 inches; this course was painted with tarvia "X," covered with stone screenings and rolled.

Quantities and unit prices estimated by the department.

305 lineal feet of road graded @ \$0.23.

1,443 square yards of tarvia macadam surface @  
\$0.75.

115 square yards cobble gutter @ \$0.60.

Lump sum amount of contract..... \$1,246 87

From the certificates of municipal officers we have  
computed the following cost items:

Tarvia "X," gallons per square yard, 1.53.

Cost of tarvia "X" per gallon, \$0.106.

Cost of tarvia "X," per square yard, \$0.162.

Cost items compiled from certificates of municipal  
officers.

Length, 305 feet; width, 54 feet; depth, 8 inches.

Tarvia macadam surface, 3 inches deep; gravel  
foundation, 5 inches deep.

Cost—Labor .....	\$602 47
56 barrels tarvia "X".....	298 00
Norridgewock crushed stone, 284 tons.....	340 86
Unloading stone .....	75 00

Skowhegan crushed stone .....	17 50
Hauling and placing gravel.....	300 00
Engineering .....	19 16
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Total cost of work.....	\$1,652 99
Amount set aside and appropriated by town, sections 4 and 5.....	\$712 50
State aid apportioned under section 6.....	534 37
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Joint fund .....	\$1,246 87
Additional amount furnished by town.....	406 12
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Net cost of work.....	\$1,652 99
Cost to town .....	1,118 62
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State aid approved .....	\$534 37

MOUNT DESERT.

Contract No. 48. Contractor, town of Mt. Desert; T. M. Richardson, road commissioner; Chas. P. Simpson, engineer; nature of improvement, grading and gravel surface; work begun in 1909 but not completed.

The section of state road selected to be improved begins at the easterly end of the 1908 section and extends easterly. Ledge excavation to reduce grade is the principal item of cost.

Quantities and unit prices estimated by the department.

1,030 lineal feet of road graded @ \$.776.	
1,717 square yards gravel surface @ \$.26.	
Rebuilding 120 lineal feet of guard-rail, \$10.00.	
Lump sum amount of contract.....	\$1,256 71
Amount set aside and appropriated by town, sections 4 and 5.....	\$733 50
Unexpended balance from 1908.....	53 09
State aid apportioned under section 6.....	550 12
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Joint fund .....	\$1,336 71
Allowance for engineering .....	80 00
	<hr/>
Amount of contract .....	\$1,256 71

## PITTSFIELD.

Contract No. 34. Contractor, town of Pittsfield; A. T. Randlett, road commissioner; O. E. Libby, engineer; nature of improvement, drainage and earth surface; area, 3,976 square yards; cost per square yard, including "V" drain, \$0.22; work begun September 20th; completed November 10th.

The section of state road to be improved begins at the northerly end of the 1908 work and extends northerly. A "V" drain foundation was built the entire length of the work and the excavated material used for surfacing; this surfacing material is sandy clay, which, when underdrained, gives a very satisfactory road at low cost compared with the cost of hauling gravel from the northerly part of the town, a distance of three or four miles.

Quantities and unit prices estimated by the department.

1,300 lineal feet of road graded @ \$0.10.	
3,033 square yards of earth surface @ \$0.04¼.	
60 cubic yards of cement stone masonry @ \$2.00.	
1,300 lineal feet of "V" drain @ \$0.30.	
150 lineal feet of open ditch @ \$0.03 1-3.	
Lump sum amount of contract.....	\$775 00
Extension of work under agreement between municipal officers and State Highway Commissioner	251 49
	<hr/>
	\$1,026 49
Cost items compiled from certificates of municipal officers.	
Length, 1,704 feet; width, 21 feet; depth, 12 inches.	
Cost—"V" drain, 1,704 feet x 12 inches x 2 feet...	\$852 00
Cement stone culvert, 15 inches x 30 inches x 24 feet,	
Cement stone culvert, 15 inches x 36 inches x 26 feet .....	120 00
Advertising .....	11 50
Side outlet ditches and driveways.....	16 00
Surveying, inspection, etc. ....	26 99
	<hr/>
Total cost of the work.....	\$1,026 49





Portland. 1909 section of State Road. Bituminous Macadam.

Amount set aside and appropriated by town, sections 4 and 5.....	\$589 50
State aid apportioned under section 6.....	442 12
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Joint fund .....	\$1,031 62
Net cost of work.....	\$1,026 49
Cost to town .....	589 50
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State aid approved .....	\$436 99
Unexpended balance available for expenditure in 1910 .....	\$5 13

PORTLAND.

Contract No. 31. Contractor, Northeastern Paving & Construction Co.; Bion Bradbury, Jr., Commissioner of Public Works; nature of improvement, grading, bituminous macadam surface and granite block paving on Hassam base; area, bituminous macadam surface, 8,807 square yards; cost per square yard, \$1.03; work begun September 8th; completed December 1st.

The section of state road selected to be improved, begins at the northerly end of the 1908 work and extends northerly along Vaughan and Bramhall streets to Congress street. The principal item of cost was the bituminous macadam surface, extending from the electric railroad location 8 feet wide in the center of the street, to a cobble gutter on each side and from curb to curb where there is no car track. A short section at the northerly end of the work was paved with granite blocks laid on a concrete base. The work was advertised and the contract awarded to the Northeastern Paving and Construction Co., the lowest bidder.

- Quantities and unit prices submitted by the contractor.
- 2,683 lineal feet of road graded @ \$0.42½.
  - 7,950 square yards macadam surface @ \$0.53.
  - 60 lineal feet of 8-inch vitrified pipe @ \$0.45.
  - 1,925 square yards cobble gutter relaid @ \$0.23.
  - 515 square yards block paving at rails @ \$1.40.
  - 3 catch basins complete @ \$70.72.



600 square yards granite block paving on concrete base at \$2.80.

Lump sum amount of contract..... \$8,436 68

Extra labor and material for bituminous surface:

Common labor @ \$.19½ per hour.

Skilled labor at \$.20 per hour.

Single team and driver @ \$.38 8-9 per hour.

Double team and driver @ \$.55 5-9 per hour

Rent of kettles each @ \$.05 per day.

Wood, per cord, \$4.00.

Deduct 10 hours @ \$.15 per hour for each tar gang per day.

Specifications which appear in another part of this report were prepared for building a bituminous macadam surface in place of plain macadam.

From the certificates of the municipal officers we have computed the following unit cost items:

Grading, per square yard.....	\$0.118
Macadam surface, contract price, per square yard..	0.530
Labor and teaming on bituminous surface, per square yard .....	0.191
Texaco, grade "J" asphalt, per square yard.....	0.065
Tar, per square yard.....	0.098
Incidentals, per square yard.....	0.023

Total cost per square yard of bituminous macadam surface .....	\$1.03
Cost of Texaco, grade "J" asphalt, per gallon....	\$0.096
Cost of tar, per gallon.....	0.055
Cost items compiled from certificates of municipal officers.	

Length, 2,683 feet; width, 39 feet; depth, 7 inches.

Cost—Granite headers, 515 square yards.....	\$721 00
Granite block paving on concrete base, 626 1-10 square yards.....	1,753 08
Bituminous macadam surface, 8,807 square yards .....	8,160 51
Grading, 2,408 cubic yards .....	1,176 40
3 catch basins .....	212 16

76 feet of 8-inch vitrified pipe.....	34 20
1,476.7 square yards cobble gutter, relaid..	339 64
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Total cost of work.....	\$12,396 99
Amount set aside and appropriated by city, sections 4 and 5.....	\$7,441 50
Unexpended balance from 1908.....	883 79
State aid apportioned under section 6.....	5,581 12
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Joint fund .....	\$13,906 41
Net cost of work.....	\$12,396 99
Cost to city .....	7,441 50
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State aid approved .....	\$4,955 49
Unexpended balance available for expenditure in 1910 .....	\$1,509 42

PRESQUE ISLE.

Contract No. 14. Contractor, town of Presque Isle; George F. Pomroy, road commissioner; P. L. Hardison, engineer; nature of improvement, grading, drainage and gravel surface; area, 4,889 square yards; cost per square yard, including grading, \$0.21; work begun August 17th; completed October 2nd.

The section of state road selected to be improved begins at the southerly end of the 1908 work and extends southerly along Main street, the principal business thoroughfare. The principal item of cost was gravel surface, the material for which was taken from the town pit instead of the river bed, as in 1908. This pit gravel is somewhat inferior to that obtained from the river bed but binds well and should give a substantial road, but possibly somewhat muddy.

- Quantities and unit prices estimated by the department.
- 1,100 lineal feet of road graded @ \$0.22.
  - 4,778 square yards of gravel surface @ \$0.15.
  - 1,200 square yards of cobble gutter @ \$0.50.
  - 1 catch basin complete, \$30.00.
  - 1 catch basin rebuilt, \$5.00.
  - Lump sum amount of contract..... \$1,601 25

Cost items compiled from certificates of municipal officers.

Length, 1,100 feet; width, 40 feet; depth, 10 inches.

Cost—Gravel surface .....	\$650 00
Grading .....	215 00
Cobble gutter, 1,000 feet x 6 feet.....	296 39
3 catch basins and repairing 1 basin.....	90 00
Engineering and superintendence .....	242 95
Incidentals .....	16 11
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Total cost of work.....	\$1,510 45
Amount set aside and appropriated by town, sections 4 and 5.....	\$915 00
State aid apportioned under section 6.....	686 25
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Joint fund .....	\$1,601 25
Net cost of work.....	\$1,510 45
Cost to town .....	915 00
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State aid approved .....	\$595 45
Unexpended balance available for expenditure in 1910 .....	\$90 80

#### ROCKLAND.

Contract No. 40. Contractor, city of Rockland; Dexter Simmons, road commissioner; O. H. Tripp, city engineer; nature of improvement, grading, drainage and gravel surface; area, 3,733 square yards; cost per square yard, including stone base and grading, \$0.41; work begun October 4th; completed December 2nd.

The section of state road selected to be improved begins at the Rockport town line and extends southwesterly along the west shore of Chickawaukee lake. A stone base, metal culverts and gravel surface were the principal cost items.

Quantities and unit prices estimated by the department.

1,600 lineal feet of road graded @ \$0.41.	
3,733 square yards of gravel surface @ \$0.24.	
110 lineal feet of 18-inch metal culvert @ \$1.30.	
26 lineal feet of 12-inch metal culvert @ \$0.70.	
12 concrete masonry end walls @ \$5.00.	
Lump sum amount of contract.....	\$1,735 12
Cost items compiled from certificates of municipal officers.	
Length, 1,600 feet; width, 23 feet; depth, 8 inches.	
<i>Cost</i> —Stone base, 1,600 feet x 14 feet x 8 inches..	\$599 93
Gravel surface .....	207 07
Gravel, 1,138 cubic yards, rock, 40 cubic yards .....	624 95
Metal culverts with concrete ends, 18 inches x 142 feet,	
Metal culverts with concrete ends, 12 inches x 22 feet .....	492 80
Clearing and cleaning ditches, 1,600 feet...	211 54
Road machine work .....	10 50
Rolling .....	76 44
Engineering .....	81 95
Guard-rail .....	60 83
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Total cost of work.....	\$2,366 01
Amount set aside and appropriated by city, sections 4 and 5.....	\$991 50
State aid apportioned under section 6.....	743 62
Extra appropriation .....	8 50
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Joint fund .....	\$1,743 62
Additional amount furnished by city.....	622 39
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Net cost of work.....	\$2,366 01
Cost to city .....	1,622 39
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State aid approved .....	\$743 62

## RUMFORD.

Contract No. 5. Contractor, town of Rumford; I. W. Greene, road commissioner; Henry C. French, engineer; nature of improvement, grading, drainage and macadam surface; area, 12,437 square yards; cost per square yard, including grading, \$0.55; work begun July 30th; completed November 5th.

The section of state road selected to be improved begins at the west end of the 1908 work and extends westerly. Grading and macadam are the principal items of cost. About 4,000 feet of this road is over a new location, laid out principally to shorten the old road and remove it from the danger of high water of the Androscoggin river; the bulk of the grading was done by the town in 1908 and the grading done under the contract was principally shaping, filling and rolling. The amount of work done is due to a special appropriation made by the town for this purpose and the contract was let to the town after competitive bids were received ranging from \$6,000.00 to \$8,491.97, the town being the lowest of four bidders.

Estimate of quantities and contractor's prices submitted for purpose of monthly estimate.

6,831 lineal feet of road graded @ \$0.15.	
12,437 square yards macadam surface @ \$0.30.	
124 lineal feet of 12-inch metal culvert @ \$1.00.	
70 cubic yards of cement stone masonry @ \$5.25.	
23 cubic yards of concrete masonry @ \$12.00.	
190 lineal feet of "V" drain @ \$1.00.	
2 catch basins complete @ \$50.00.	
1,024 lineal feet of side ditch @ \$0.15.	
Lump sum amount of contract.....	\$6,000 00
Cost items compiled from certificates of municipal officers.	

Length, 6,831 feet; width, 15 to 20 feet; depth, 8 inches at center, 3 inches at sides.

Cost—"V" drain, 190 feet x 12 feet x 2 feet.....	\$200 00
Macadam surface.....	4,974 80
Grading earth and rock.....	1,535 00
Stone culvert, 2 feet x 3 feet x 26 feet....	84 00
Stone culvert, 2 feet x 2 feet x 28 feet....	66 00
Iron culvert, 12 inches x 122 feet.....	125 00

Road machine work .....	80 00
Repairing culverts, building concrete ends, etc. ....	300 00
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Total cost of work.....	\$7,364 80
Amount set aside and appropriated by town, sec- tions 4 and 5.....	\$885 00
Special appropriation by town.....	4,410 00
State aid apportioned under section 6.....	663 75
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Joint fund .....	\$5,958 75
Additional amount furnished by town.....	1,406 05
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Net cost of work.....	\$7,364 80
Cost of town .....	6,701 05
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State aid approved .....	\$663 75

SACO.

Contract No. 32. Contractor, city of Saco; R. W. Libby, street commissioner and engineer; nature of improvement, grading, drainage and macadam surface; area, 3,014 square yards; cost per square yard, including grading, \$0.66; work begun, August 30th; completed November 20th.

The section of state road selected to be improved begins at the easterly end of the 1908 work on Main street and extends easterly along Main street. An electric railroad track occupies the center of the street and the macadam surface has been built on each side. The city of Saco owns and operates a crushing plant from which the stone used was obtained.

Quantities and unit prices estimated by the department.

750 lineal feet of road graded @ \$0.23.	
2,917 square yards of macadam surface @ \$0.60.	
52 lineal feet of 8-inch vitrified pipe @ \$0.30.	
100 lineal feet of 8-inch vitrified pipe at \$0.20.	
3 catch basins complete @ \$14.16.	
Lump sum amount of contract.....	\$2,005 50
Cost items compiled from certificates of municipal officers.	

Length, 775 feet; width, 35 feet; depth, 5 inches.

Cost—Macadam surface .....	\$1,760 25
Excavation, 472 cubic yards.....	188 80
Gravel filling, 44 cubic yards.....	44 00
3 catch basins .....	55 75
60 feet of 8-inch tile drain.....	12 00
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Total cost of work.....	\$2,060 80
Amount set aside and appropriated by city, sections 4 and 5.....	\$1,074 00
Extra amount appropriated by city.....	126 00
State aid apportioned under section 6.....	805 50
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Joint fund .....	\$2,005 50
Additional amount furnished by city.....	55 30
	<hr/>
Net cost of work.....	\$2,060 80
Cost to city .....	1,255 30
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State aid approved .....	\$805 50

## SANFORD.

Contract No. 21. Contractor, town of Sanford; J. G. Ridley, road commissioner and engineer; nature of improvement, grading, drainage and macadam surface; area, 3,690 square yards macadam surface; cost per square yard, not including grading, \$0.24; work begun August 16th; completed November 12th.

The section of state road selected to be improved begins at the southerly end of the 1908 work and extends southerly. The 1909 road was built in a new location, laid out by the county commissioners, which straightened the road and reduced the grades, but made the grading unusually expensive. The amount of work done is largely due to the generosity of E. M. Goodall, who contributed \$1,000.00 towards it.

Quantities and unit prices estimated by the department.

1,985 lineal feet of road graded @ \$0.18.

3,529 square yards macadam surface @ \$0.25.

30 lineal feet of 12-inch metal culvert with end walls, \$28.00.

900 lineal feet of guard-rail, \$225.00.	
Concrete culvert, 3 feet x 4 feet x 36 feet, \$200.00.	
Lump sum amount of contract.....	\$1,716 62
Cost items compiled from certificates of municipal officers.	
Length, 2,425 feet; width, 22 feet; depth, 7 inches.	
<i>Cost</i> —Gravel surface, 350 feet x 22 feet.....	\$350 00
Crushed stone surface, 2,075 feet x 16 feet x 7 inches .....	893 94
Grading 2,688 cubic yards @ \$0.45.....	1,209 64
Concrete culvert, 40 inches x 46 inches x 33 feet .....	225 11
Iron culvert, 20 inches x 33 feet.....	28 15
Iron culvert, 12 inches x 33 feet.....	29 88
400 feet guard-rail.....	36 99
	<hr/>
Total cost of work.....	\$2,773 71
Amount set aside and appropriated by town, sections 4 and 5.....	\$955 50
Extra amount appropriated by town.....	44 50
State aid apportioned under section 6.....	716 62
	<hr/>
Joint fund .....	\$1,716 62
Additional amount furnished by E. M. Goodall and town .....	1,057 09
	<hr/>
Net cost of work.....	\$2,773 71
Cost to town (\$1,000 of this amount was paid by E. M. Goodall).....	2,057 09
	<hr/>
State aid approved .....	\$716 62

SKOWHEGAN.

Contract No. 30. Contractor, town of Skowhegan; George H. Webb, street commissioner; John H. Burleigh, engineer; nature of improvement, grading, drainage and macadam surface; area, 2,583 square yards; cost per square yard, including grading, \$0.60; work begun, August 16th; completed October 12th.



The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northerly. The natural soil is clay and in reducing the grades the old crust of the road was removed, making several soft spots which required the removal of more material before the macadam surface could be placed. The item of grading therefore was larger than anticipated.

Quantities and unit prices estimated by the department.

1,500 lineal feet of road graded @ \$0.16.	
2,500 square yards macadam surface @ \$0.40.	
25 lineal feet of reinforced 12-inch vitrified pipe,	
\$3.00.	
40 lineal feet of 8-inch metal culvert @ \$0.85.	
Concrete culvert, 2½ feet x 3 feet x 35 feet.....	\$225 00
200 lineal feet of side drain @ \$0.44.	
Lump sum amount of contract.....	\$1,664 25
Cost items compiled from certificates of municipal officers.	
Length, 1,550 feet; width, of macadam, 15 feet; depth, 6 inches.	
Cost—"V" drain, 60 feet x 15 feet x 18 inches....	\$49 49
Crushed stone surface .....	1,104 83
Grading 684 cubic yards.....	389 52
Concrete culvert, 2½ feet x 3 feet x 26 feet	194 85
Reinforced tile pipe, 12 inches x 26 feet....	40 18
3 metal culverts, 10 inches x 20 feet.....	42 00
Stone drain, 200 feet x 3 feet wide.....	140 30
Clearing right of way.....	30 24
Engineering, guard-rail, etc.....	143 44
	<hr/>
Total cost of work.....	\$2,134 85
Amount set aside and appropriated by town, sections 4 and 5.....	\$951 00
State aid apportioned under section 6.....	713 25
	<hr/>
Joint fund .....	\$1,664 25
Additional amount furnished by town.....	470 60
	<hr/>
Net cost of work.....	\$2,134 85

Cost to town .....	1,421 60
State aid approved .....	\$713 25

SOUTH BERWICK.

Contract No. 13. Contractor, Edward A. Warren; W. S. Marsh, engineer; nature of improvement, grading, drainage and macadam surface; area, 1,530 square yards; cost per square yard, \$0.61; work begun August 26th; completed November 4th.

The section of state road selected to be improved begins at the southerly end of the 1908 work and extends southerly. Massachusetts trap rock was used for surfacing and this was the principal item of cost. Of three proposals received for doing the work the difference between the lowest and highest was \$698.34. The contract was awarded to the lowest bidder.

Estimated quantities and contractor's prices submitted for purpose of monthly estimates.

626 lineal feet of road graded @ \$0.25.

1,460 square yards of macadam surface @ \$0.52.

1 catch basin (without cover), \$32.50.

1 drop inlet, \$15.00.

Lump sum amount of contract..... \$963 20

Cost items compiled from certificates of municipal officers.

Length, 626 feet; width, 22 feet; depth, 8 inches.

<i>Cost</i> —Amount of contract .....	\$963 20
20 square yards extra macadam surface....	15 00
65 square yards cobble gutter.....	25 65
Culvert extension .....	1 70
Crushed stone .....	7 77
Engineering .....	16 50
Inspection and telephone .....	28 05
Advertising .....	5 75

Total cost of work..... \$1,063 62

Amount set aside and appropriated by town, sections 4 and 5.....	\$471 00
Extra amount appropriated by town.....	193 00
State aid apportioned under section 6.....	353 25
	<hr/>
Joint fund .....	\$1,017 25
Extra amount furnished by town.....	46 37
	<hr/>
Net cost of work.....	\$1,063 62
Cost to town .....	710 37
	<hr/>
State aid approved .....	\$353 25

## SOUTH PORTLAND.

Contract No. 4. Contractor, T. W. Marshall & Co.; H. M. Arey, commissioner of public works; nature of improvement, grading and macadam surface; area, 1,458 square yards; cost per square yard, including grading, \$0.93; work begun August 16th; completed September 25th.

The section of state road selected to be improved begins about 400 feet southeasterly from the 1908 work and extends southeasterly along Ocean avenue. An electric railroad track occupies the center of the street and the principal items of cost were grading and macadam surface on each side of the track. The contract for this work was awarded to the lowest bidder; the difference between the lowest and highest of three bids, including the bid of the city, was \$258.28.

Estimated quantities and contractor's prices submitted for purpose of monthly estimates.

525 lineal feet of road graded @ \$0.25.

1,458 square yards macadam surface @ \$0.855.

50 lineal feet of 10-inch metal culvert @ \$0.85.

Lump sum amount of contract..... \$1,420 34

Cost items compiled from certificates of municipal officers.

Length, 525 feet; width, 25 feet; depth, 7 inches.

<i>Cost</i> —Macadam surface .....	\$1,225 97
Grading, 403.4 cubic yards.....	131 47
Iron culvert, 10 inches x 74 feet.....	63 90
	<hr/>
Total cost of work.....	\$1,420 34
Amount set aside and appropriated by city, sections 4 and 5.....	\$811 50
State aid apportioned under section 6.....	608 62
	<hr/>
Joint fund .....	\$1,420 12
Additional amount furnished by the city.....	22
	<hr/>
Net cost of work.....	\$1,420 34
Cost to city .....	811 72
	<hr/>
State aid approved .....	\$608 62

WATERVILLE.

Contract No. 38. Contractor, city of Waterville; J. M. Cratty, street commissioner; J. H. Burleigh, city engineer; nature of improvement, grading, drainage and macadam surface; area, 5,777 square yards; cost per square yard, including grading, \$0.47; work begun September 18th; completed November 6th.

The section of state road selected to be improved begins at the lower crossing of College avenue and the Maine Central railroad and extends northerly along College avenue. Situated on the main thoroughfare between the town of Fairfield and the city of Waterville and separating the college grounds from the railroad station lawns, a wide roadway is required and a width of 40 feet was obtained between the electric railroad track on the east and a proposed 10-foot sidewalk on the west. The principal items of cost were grading and macadam surface, coarse gravel being used for filling, and crushed field stone, from the city crushing plant, for surfacing.

Quantities and unit prices estimated by the department.

900 lineal feet of road graded @ \$0.25.	
3.465 square yards of macadam surface @ \$0.45.	
Lump sum amount of contract.....	\$1,897 87

Cost items compiled from certificates of municipal officers.

Length, 1,300 feet; width, 40 feet; depth, 8 inches.

Cost—Macadam surface .....	\$2,493 78
Grading .....	232 62
	<hr/>
Total cost of work.....	\$2,726 40
Amount set aside and appropriated by city, sections 4 and 5.....	\$1,084 50
State aid apportioned under section 6.....	813 37
	<hr/>
Joint fund .....	\$1,897 87
Additional amount furnished by city.....	828 53
	<hr/>
Net cost of work.....	\$2,726 40
Cost to city .....	1,913 03
	<hr/>
State aid approved .....	\$813 37

### WESTBROOK.

Contract No. 17. Contractor, city of Westbrook; George Cobb, street commissioner; H. W. Grant, engineer; nature of improvement, grading, drainage and bituminous macadam surface; area, 4,290 square yards; cost per square yard, including cost of "V" drain, \$1.49; work begun August 18th; discontinued November 18th.

The section of state road selected to be improved begins at the crossing of Main street and the Maine Central railroad location and extends westerly along Main street on the northerly side of the electric railroad track. Underdrainage was required and a cinder "V" drain was built for this purpose. The bottom course of macadam was built of old macadam excavated, run through the crusher and screened; the No. 2 course was composed of Massachusetts trap rock and bituminous binder mixed by hand. The No. 2 course was painted, covered with screenings and rolled.

Quantities and unit prices estimated by the department.

3,091.5 lineal feet of road graded @ \$0.194.

5,993 square yards macadam surface @ \$0.604.



Westbrook. 1909 section of State Road. Bituminous Macadam.



1,600 lineal feet of "V" drain, 8 feet wide, @ \$0.16.  
 150 lineal feet of "V" drain, 12 feet wide, @ \$0.20.  
 5 catch basins complete @ \$30.00.  
 Lump sum amount of contract. . . . . \$4,663 95  
 Extra labor and material for bituminous surface:

Common labor @ \$0.194 per hour.  
 Skilled labor at \$0.333 per hour.  
 Single team and driver @ \$0.333 per hour.  
 Double team and driver @ \$0.444 per hour.  
 Use of kettles, etc., each per day, \$0.50.  
 Wood, per cord, \$7.50.

Deduct from each day's labor by tar gang, one laborer 10 hours @ \$0.175 per hour.

Deduct watering cart 2½ hours @ \$0.40.

Specifications which appear in another part of this report were prepared for building a bituminous macadam surface in place of plain macadam.

From the certificates of the municipal officers we have computed the following unit cost items:

Texaco, grade "J" asphalt, cost per gallon, \$0.096.

Tarite, cost per gallon, \$0.065.

Trap rock for No. 2 course, cost per ton, \$1.37.

No. of gallons asphalt, per square yard, 0.863.

No. of gallons tarite, per square yard, 1.488, of which .65 gallons was used in painting surface.

Cost items compiled from certificates of municipal officers.

Length, 2,117 feet; width, 13 to 23 feet; depth, 7 inches.

Cost—Macadam base, 4,290 square yards of No. 1 stone and "V" drain, 1,872 feet x 9 feet x 18 inches . . . . . \$4,924 56  
 Bituminous macadam surface, 4,290 square yards . . . . . 1,446 89  
 5 catch basins . . . . . 175 00  
 Engineering and inspection, not including bituminous work . . . . . 137 70

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Total cost of work to date. . . . . \$6,684 15



This contract was not completed during the year 1909 and therefore no state aid was paid. The amount of aid to be paid when the contract is completed is \$925.87.

### WINSLOW.

Contract No. 18. Contractor, town of Winslow; Forrest Reynolds, road commissioner; J. H. Burleigh, engineer; nature of improvement, grading and macadam surface; area, 4,849 square yards; cost per square yard, \$0.49; work begun October 17th; completed November 5th.

The section of state road selected to be improved begins at the northerly end of the 1908 work and extends northerly. Principal cost item, macadam surface; and as this street is the main thoroughfare between Winslow and Waterville it was macadamized wider than usual.

Quantities and unit prices estimated by the department.

1,000 lineal feet of road graded @ \$0.10.

3,333 square yards of macadam surface @ \$0.45.

Lump sum amount of contract..... \$1,588 12

Cost items compiled from certificates of municipal officers.

Length, 1,265 feet; width, 34½ feet; depth, 8 inches.

Cost—Macadam surface ..... \$2,218 20

Grading, 301 cubic yards..... 116 64

Iron pipe, 14 inches x 46 feet..... 32 02

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Total cost of work..... \$2,366 86

Cost of 1,310 tons of field stone per ton, \$0.50.

Cost of 300 tons of field stone per ton, \$0.75.

Cost of 2,135 lbs. of iron pipe per pound, \$0.015.

Amount set aside and appropriated by town, sec-

tions 4 and 5..... \$907 50

State aid apportioned under section 6..... 680 62

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Joint fund ..... \$1,588 12

Additional amount furnished by town..... 778 74

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Net cost of work..... \$2,366 86

Cost to town ..... 1,686 24

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State aid approved ..... \$680 62

YARMOUTH.

Contract No. 45. Contractor, town of Yarmouth; John W. Gooch, road commissioner; F. B. Merrill, engineer; nature of improvement, grading, drainage and gravel surface; area, 8,540 square yards; cost per square yard, including grading, \$0.13; work begun October 1st; completed November 5th.

The section of state road selected to be improved begins at the southwesterly end of the 1908 work, at the crossing of the Grand Trunk railroad, and extends southwesterly along Portland street to the Cumberland line. The principal items of cost were grading and gravel surface.

Quantities and unit prices estimated by the department.  
 2,600 lineal feet of road graded @ \$0.10.  
 4,333 square yards of gravel surface @ \$0.25.  
 Cement stone culvert, 2 feet x 2 feet x 26 feet,  
 \$120.00.

Lump sum amount of contract..... \$1,487 15  
 Cost items compiled from certificates of municipal officers.

Length, 3,660 feet; width, 21 feet; depth, 8 inches.

Cost—Drain, 350 feet x 3½ feet x 2 feet.....	\$125 00
Gravel surface .....	500 00
Grading .....	491 70
Stone culvert, 2 feet x 2 feet x 28 feet....	120 00
Stone culvert, 1 foot x 1½ feet x 27 feet...	65 00
Stone culvert rebuilt, 1 foot x 1 foot x 27 feet .....	15 00
Clearing right of way.....	75 00
Road machine work .....	75 00
Engineering .....	20 45

Total cost of work.....	\$1,487 15
Amount set aside and appropriated by town, sections 4 and 5.....	\$621 00
Unexpended balance from 1908.....	400 40
State aid apportioned under section 6.....	465 75

Joint fund ..... \$1,487 15

Net cost of work.....	\$1,487 15
Cost to town .....	621 00
	<hr/>
State aid approved .....	\$866 15

## YORK.

Contract No. 1. Contractors, Bragdon and Grant; J. W. Gowen, engineer; nature of improvement, grading, drainage and gravel surface; area, 3,600 square yards; cost per square yard, \$0.48; work begun June 1st; completed September 1st.

The section of state road selected to be improved begins at the southerly end of the 1908 work and extends southerly. Gravel surface and grading were the principal items of cost. One bid was received for doing this work.

Estimate of quantities and contractor's prices submitted for the purpose of monthly estimates.

1,500 lineal feet of road graded @ \$0.50.

3,600 square yards of gravel surface @ \$0.26.

40 lineal feet of 12-inch cast iron pipe @ \$1.50.

Lump sum amount of contract..... \$1,746 00

Cost items compiled from certificates of municipal officers.

Length, 1,500 feet; width, 21 feet; depth, 6 inches.

Cost—Gravel surface,

Iron culvert, 12 inches x 36 feet..... \$1,746 00

Engineering and advertising .....

54 00

Total cost of work..... \$1,800 00

Amount set aside and appropriated by town, sections 4 and 5..... \$1,029 00

State aid apportioned under section 6..... 771 75

Joint fund .....

\$1,800 75

Net cost of work..... \$1,800 00

Cost to town .....

1,029 00

State aid approved .....

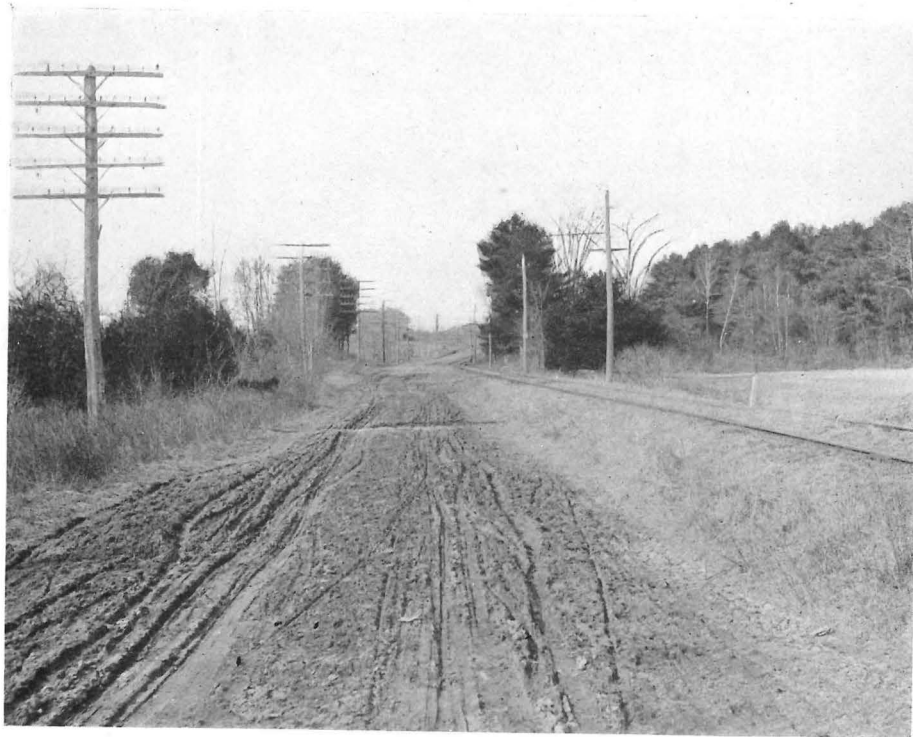
\$771 00

Unexpended balance available for expenditure in

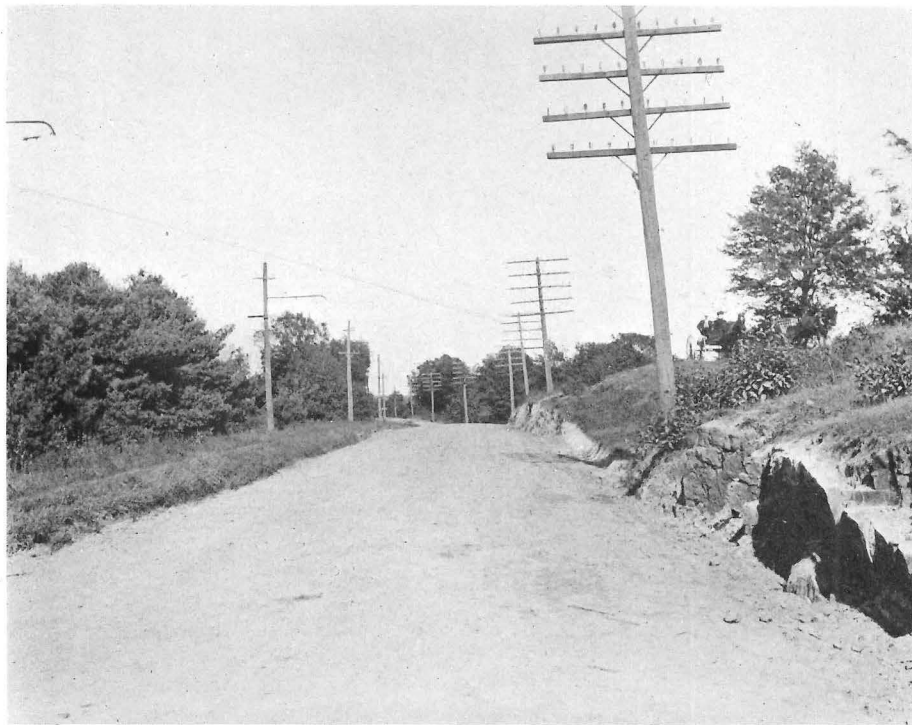
1910 .....

\$0 75





York. 1909 section of State Road before improvement.



York. 1909 section of State Road after improvement. Gravel road.



1908 WORK COMPLETED IN 1909.

The following jobs begun in 1908 have been finished during the year :

BANGOR, EXTENSION OF 1908 WORK.

Contract No. 38, (see 1908 report, page 47). Contractor, city of Bangor; Charles A. Woodbury, street commissioner; P. H. Coombs, city engineer; area, 2,666 square yards; cost per square yard, \$0.54.

Under a clause of the 1908 contract with the city of Bangor calling for the work to be extended in case the contract was completed at a less cost than the contract price, the city was allowed, in 1909, to extend the 1908 work westerly as far as the unexpended balance of the joint fund, \$1,093.65, would carry it.

The work of grading, widening and surfacing with gravel was extended westerly a length of 600 feet.

Cost items:

Length, 600 feet; width, 40 feet; depth, 8 inches.

Grading and ledge excavation to widen and surface drain road.

1 iron culvert, 18 inches x 45 feet long.

Gravel surface, 600 feet x 40 feet x 8 inches.

Total cost .....	\$1,450 38
Unexpended balance of 1908 aid approved.....	1,093 65
	<hr/>
Additional amount furnished by city.....	\$356 73

BELFAST, COMPLETION OF 1908 CONTRACT.

Contract No. 30, (see 1908 report, page 50). Contractor, city of Belfast; Harvey S. Cunningham, street commissioner; A. D. Hayes, city engineer; area, 511 square yards; cost per square yard, \$0.69.

At the close of 1908 there remained to be built 200 feet of road to complete the 1908 contract. There also remained \$613.88 of the joint fund unexpended. Permission was given the city to complete the 1908 contract and use the balance of



the joint fund remaining, in connection with the 1909 joint fund, which was used in extending the state road northerly.

Quantities of work and cost of same:

Length, 200 feet; width of macadam, 23 feet; depth, 8 inches at center, 3 inches at sides.....	\$354 50
Transferred to 1909 joint fund.....	259 38

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\$613 88

### ELLSWORTH, 1908.

Contract No. 6, (see page 62 of 1908 report). Contractor, city of Ellsworth; Clifton Woodward, street commissioner; Ira B. Hagan, Jr., engineer; nature of improvement, grading, drainage and macadam surface; area, 4,670 square yards; cost per square yard, including grading and drainage, \$0.83; work begun September 18th, 1908; completed August, 1909.

The section of state road selected to be improved, is located on High street, beginning at Beals avenue and extending southerly.

Estimate of quantities and amount of work to be done.

2,000 lineal feet of road graded.	
4,670 square yards of macadam surface.	
1 16-inch metal culvert, 30 feet long.	
1 20-inch metal culvert, 30 feet long.	
1 stone masonry culvert, 3 feet x 3 feet x 30 feet.	
200 lineal feet of underdrain.	
Lump sum amount of contract.....	\$1,250 00
Cost items compiled from certificates of municipal officers.	
Length, 2,000 feet; width, 21 feet; depth, 8 inches at center, 3 inches at sides.	
Macadam surface.	
Stone culvert, 3 feet x 3 feet x 35 feet.	
Metal culvert, 16 inches x 28 feet.	
Metal culvert, 16 inches x 30 feet.	
Road machine work, 2,000 feet.	
Total cost of work.....	\$3,879 03
Amount set aside and appropriated by city, sections 4 and 5.....	\$754 50
State aid apportioned under section 6.....	565 87

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Joint fund ..... \$1,320 37

Additional amount furnished by city.....	2,558 66
Net cost of work.....	\$3,879 03
Cost to city .....	3,313 16
State aid approved .....	565 87

MT. DESERT, 1908.

Contract No. 37, (see page 75 of 1908 report). Contractor, C. D. Joy; C. P. Simpson, engineer; nature of improvement, grading, drainage and gravel surface; area, 1,400 square yards; cost per square yard, \$0.84.

The section of state road selected to be improved is located between Seal Harbor and Asticou, near the residence of C. W. Eliot.

Estimate of quantities and contractor's prices submitted for purpose of monthly estimates.

600 lineal feet of grading.

1,400 square yards gravel surface.

40 lineal feet of 24-inch metal culvert.

400 lineal feet of guard-rail.

Lump sum amount of contract.....	\$1,096 00
Length, 600 feet; width, 21 feet; depth, 4 inches.	
Amount paid contractor, including extra labor....	\$1,124 00
Engineering and inspection.....	45 25
Advertising .....	6 16

Total cost of work.....	\$1,175 41
Amount set aside and appropriated by town, sections 4 and 5.....	\$702 00
State aid apportioned under section 6.....	526 50

Joint fund .....	\$1,228 50
Net cost of work.....	\$1,175 41
Cost to town .....	702 00

State aid approved .....	\$473 41
Unexpended balance available for expenditure in 1909 .....	\$53 09

## WINSLOW, 1908.

Contract No. 26, (see page 96 of 1908 report). Contractor, town of Winslow; E. E. Smith, road commissioner, 1908; Forrest Reynolds, road commissioner, 1909; J. H. Burleigh, engineer; area, 4,444 square yards; cost per square yard, \$0.60; work begun November 3rd, 1908; discontinued November 18th, 1908; resumed October 20th, 1909; completed November 16th, 1909.

The section of state road selected to be improved begins at the northerly end of the Seabastcook bridge and extends northerly.

Estimate of quantities and amount of work to be done.

1,000 lineal feet of road graded.	
3,600 square yards of macadam surface.	
2 catch basins complete.	
50 feet of 8-inch tile pipe.	
Lump sum amount of contract.....	\$1,512 00
Cost items compiled from certificates of municipal officers.	
Length, 1,000 feet; width, 40 feet; depth, 6 to 8 inches.	
<i>Cost</i> —Crushed stone surface.....	\$2,515 48
Grading, 451 cubic yards.....	174 96
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Total cost of work.....	\$2,690 44
Cost of 690 tons of field stone at crusher, per ton, \$0.50.	
Cost of 635 tons of crushed stone, per ton, \$1.305.	
Amount set aside and appropriated by town, sections 4 and 5.....	\$864 00
State aid apportioned under section 6.....	648 00
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Joint fund .....	\$1,512 00
Additional amount furnished by town.....	1,178 44
	<hr/>
Net cost of work.....	\$2,690 44
Cost to town .....	2,042 44
	<hr/>
State aid approved .....	\$648 00

TABLE OF COMPARATIVE COSTS.  
1909 State Road Contracts.

TOWN OR CITY.	Length of road improved—feet.	Total width of road—feet.	Width of finished road—feet.	Depth of finished surface—inches.	Number square yards of finished surface.	Macadam per square yard.	Gravel per square yard.	Block paving per square yard.	Bituminous macadam per square yard.	Earth surface per square yard.
Auburn	714	23	17		1356			\$1 62		
Augusta	3973	21	20.6	9	9134		\$0 22			
Bath	1700	24	18	8	3400	\$0 83				
Belfast	600	48.5	48.5	8	3232	0 56				
Bethel	1250	25	22	12	3055	0 18				
Biddeford	1400	27.8	27.8	6	4323	0 93				
Brewer	1575	32	24	6	4200	0 33				
Bridgton	1191	31	21	12	2779		0 37			
Brunswick	1200	21	15	7	2000	0 90				
Calais	2100	21	21	6	4900	0 32				
Camden	750	29.6	29.6	8	2473	0 43				
Caribou	533	37	37	10	2178	0 51				
Dexter	675	27	19	8	1425	0 32				
East Livermore	340	54	54	8	2212	0 61				
Eastport	1750	21	21	8	4083		0 25			
Eden	1100	30	24	8	2933	0 66				
Ellsworth	900	21	21	8	2100	0 79				
Fairfield	1819	22	15	4½	3032		†0 36			
Falmouth	1541	28	21	3	3596		†0 20			
Farmington	1000	22	22	7	2444	0 50				
Fort Fairfield	1400	30	14	9	2178	†0 59				
Gardiner	1200	21	21	9	2800	†0 91				
Gorham	1200	21	15	8	2000		0 47			
Hallowell	650	44	36	7	3127			\$1 10		
Houlton	1500	21	21	9	3500	0 71				
Jay	1100	22	15	8	1853		0 69			
Kennebunkport	1000	23	21	8	2333		0 45			
Lewiston	927	43.8	43.8	8	4509			0 90		
Lisbon	2300	24	24	12	6133		0 24			
Madison	305	54	54	8	1830			0 89		
Mount Desert*										
Pittsfield	1704	21	21	12	3976					
Portland	2683	39	39	7	8807				1 03	†\$0 22
Presque Isle	1100	40	40	10	4839		0 21			
Rockland	1600	23	21	8	3733		0 41			
Rumford	6831	21	15 to 20	5½	12,437	0 55				
Saco	775	35	35	5	3014	0 66				
Sanford	2425	22	16	7	3690	†0 24				
Skowhegan	1550	21	15	6	2583	0 60				
South Berwick	626	22	22	8	1530	0 61				
South Portland	525	25	25	7	1458	0 93				
Waterville	1300	40	40	8	5777	0 47				
Westbrook*	2117	13-23	13-23	7	4390				†1 49	
Winslow	1265	34.5	34.5	8	4849	0 49				
Yarmouth	3630	21	21	8	8540		0 13			
York	1500	21	21	6	3600		0 48			
Average						\$0 598	\$0 333	\$1 62	\$1 08	\$0 22

All cost per square yard items include grading unless otherwise indicated below.

\* Not completed.

† Including "V" drain.

‡ Not including grading.

## TABULAR STATEMENT OF

NOTE:—In column showing material with which road is surfaced macadam, † indicates block paving, ‡ indicates earth

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—inches.	Length—feet.	Cost.
Abbot.....	Pisc.	1550	21	150	1550	{ Stone....	18x24	26	21 75
Acton.....	York.	600	21	-	600	.....	11x15	27	15 00
Addison.....	Was.	910	21	-	910	{ Metal....	12	24	33 30
Albany.....	Oxf.	550	21	400	550	{ Stone....	18x24	21	15 00
Albion.....	Ken.	1790	27	-	1790	{ Metal....	12	27	24 51
Alexander.....	Was.	974	22	-	974	{ Metal....	18	24	26 40
Alfred.....	York.	510	21	450	510	.....	-	-	-
Alna.....	Lin.	800	21	-	800	{ Metal....	10	24	-
Alton.....	Pen.	203	21	203	203	{ Metal....	12	22	65 07
Amherst.....	Han.	335	24	230	335	.....	-	-	-
Amity.....	Aro.	275	21	275	275	.....	-	-	-
Andover.....	Oxf.	1716	21	-	1716	{ Stone....	18x20	25	23 14
Anson.....	Som.	1450	30	-	1050	{ Metal....	10	28	36 35
Appleton 1.....	Kno.	**	-	-	-	{ Metal....	24	45	100 00
Argyle.....	Pen.	210	22	200	210	{ Stone....	36x36	32	200 00
Arrowsic.....	Sag.	-	†	-	-	.....	-	-	-
Ashland.....	Aro.	2271	25	50	2221	{ Metal....	10to20	342	297 26
Athens.....	Som.	1073	21	908	1073	{ Tile....	6	22	9 01
Atkinson.....	Pisc.	450	21	450	450	{ Tile....	12	44	32 10
Auburn 2.....	And.	714	23	-	714	.....	-	-	-
Augusta.....	Ken.	3973	21	-	3973	{ Metal....	16	30	51 95
Aurora.....	Han.	393	21	52	393	{ Metal....	20	30	-
Avon.....	Fran.	2640	21	-	2640	{ Metal....	20	24	53 70
Baileyville.....	Was.	1400	24	-	1400	.....	-	-	-
Bald Mt. Twp. 2 R. 3.....	Som.	1200	20	-	1200	{ Stone....	20x24	23	20 00
Baldwin.....	Cum.	1565	24	-	1565	{ Stone....	20x20	21	15 00
Bancroft 3.....	Aro.	**	-	-	-	{ Tile....	4	36	5 04
Baring.....	Was.	860	24	-	860	{ Metal....	12	30	24 66
Bath.....	Sag.	1700	24	-	1700	.....	-	-	-
Beddington.....	Was.	150	21	-	150	{ Metal....	12	20	20 00
						{ 2 Metal..	18x18	26	20 00
						.....	18x18	26	-
						.....	18x18	26	-
						.....	-	-	-
						{ Metal....	18	24	29 32
						{ 2 Metal..	10	26	58 40
						.....	-	-	-
						.....	-	-	-

1 Appleton: two cement masonry abutments 9 feet high x 20 feet long. I beam bridge 15 feet span x 18 feet roadway—concrete floor.

2 Auburn: granite block paving.

3 Bancroft: two cement masonry abutments 4 feet high, 22 feet long. Ten feet span, wooden floor. Two 25 foot approaches.

\*\* Bridge.

†† Not completed.

**STATE ROAD WORK IN 1909.**

§ indicates macadam, || indicates earth, \* indicates bituminous and gravel, figures with no index show gravel surface.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$338 99	\$341 25	\$202 49	\$2 26	-	\$0 21
494 02	313 87	174 37	-	\$180 15	0 82
262 82	251 25	150 75	-	11 57	0 29
312 75	315 00	186 75	2 25	-	0 57
425 25	425 25	236 25	-	-	0 24
145 00	135 00	90 00	-	10 00	0 15
378 18	378 00	210 00	-	0 18	0 74
360 62	360 00	216 00	-	0 62	0 45
261 09	175 50	117 00	-	85 59	1 28
170 76	184 50	109 26	13 74	-	0 51
365 39	220 50	147 00	-	144 89	1 33
378 80	378 00	210 00	-	0 30	0 22
778 63	753 00	376 50	-	25 63	0 54
559 83	283 50	157 00	0 50	276 33	-
237 18	130 50	87 00	-	106 68	1 13
564 76	561 00	280 50	-	3 76	0 25
466 33	340 87	189 37	-	125 46	0 43
319 33	307 50	184 50	-	11 83	0 71
2197 00	2252 25	910 00	55 25	-	3 08
2257 50	2257 50	967 50	-	-	0 57
105 15	108 00	69 15	2 85	-	0 27
310 92	318 75	183 42	7 83	-	0 12
1026 88	837 00	418 50	-	189 88	0 73
287 50	286 87	159 37	-	0 63	0 24
413 45	418 50	227 45	5 05	-	0 26
189 95	121 50	81 00	-	68 45	-
258 74	207 00	138 00	-	51 74	0 30
2842 75	2139 36	916 86	-	703 39	1 67
67 50	67 50	45 00	-	-	0 45

## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—inches.	Length—feet.	Cost.
Belfast .....	Wal.	600	48 <sup>1</sup>	-	\$600	Stone .....	18x18	54 <sup>1</sup>	-
Belgrade .....	Ken.	600	21	500	600	Metal .....	12	22	\$22 65
Belmont .....	Wal.	1779	26	636	¶1143	{ 2 Stone .....	24x24	22	22 15
						{ Metal .....	10	24	19 30
Benedicta .....	Aro.	**							
Benton .....	Ken.	1240	21	520	550	{ Metal .....	16	25	67 96
						{ Metal .....	24	25	82 96
						{ Metal .....	24	25	66 96
Berwick .....	York.	706	22	-	\$706				
Bethel .....	Oxf.	1250	25	-	1250	142 ft. of 8 in			
						drain pipe			
Biddeford .....	York.	1400	27.8	-	\$1400				57 60
Bigelow Pl. ....	Som.	-	-	-	-	{ Stone .....	18x18	22	50 00
						{ Stone .....	24x24	22	67 30
Bingham .....	Som.	2000	31	-	2000				
Blaine .....	Aro.	450	24	300	450	2 Stone .....	20x20	¶26	66 00
Blanchard .....	Pis.	246	21	246	¶246				
Bluehill .....	Han.	††							
Boothbay .....	Lin.	1640	22	325	¶1640	{ Iron .....	2-10	22	
						{ Iron .....	18	24	33 89
Boothbay Harbor ..	Lin.	700	21	-	700				
Bowdoin .....	Sag.	480	21	-	480				
Bowdoinham .....	Sag.	1300	21	-	1300				
Bradford .....	Pen.	430	21	430	430	Metal .....	16	24	49 46
Bradley .....	Pen.	1000	28	-	1000	Metal .....	20	28	60 55
Bremen <sup>1</sup> .....	Lin.	95	31.5	-	95				
Brewer .....	Pen.	1575	24	-	\$1575				
Bridgewater .....	Aro.	350	21	250	350				
Bridgton .....	Cum.	1191	21	1191	1191	{ Stone .....	22x22	31	-
						{ Stone .....	22x22	30	-
						{ Stone .....	22x22	30.5	-
Brighton Pl. ....	Som.	††							
Bristol .....	Lin.	785	21	-	785	Metal .....	10	48	36 12
Brooklin .....	Han.	500	21	182	500	Stone .....	48x48	21	91 00
Brooks .....	Wal.	1228	21	844	1228				
Brooksville .....	Han.	1550	24	800	1550	Stone .....			
Brookton .....	Was.	270	23-25	146	270				
Brownfield .....	Oxf.	990	23	-	990				
Brownville .....	Pis.	1120	21	-	1120				
Brunswick .....	Cum.	1200	21	-	\$1200	Metal .....	14	30	-
Buckfield .....	Oxf.	1631	21	-	¶1631	Metal .....	12	27	22 50
Bucksport .....	Han.	**							
Burlington .....	Pen.	495	28	494	495	Metal .....	18	28	34 89
Burnham .....	Wal.	1920	22	810	1920	Metal .....	12	22	61 58
Buxton .....	Yor.	845	25	845	845	Metal .....	12	26	49 39
Byron .....	Oxf.	260	21	-	260	Stone .....	24x48	22	93 12
Calais .....	Was.	2100	21	52	\$2100	Concrete ..	15x15	32	95 00

<sup>1</sup> Bremen : work was practically all ledge excavation.

¶ Each.

\*\* Laid over.

†† Not completed.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$2218 73 443 91	\$1911 00 510 00	\$819 00 188 91	- 66 09	\$307 73 -	\$3 70 0 74
261 89	202 50	121 50	-	59 89	0 15
592 19 820 25	537 00 658 86	268 50 282 36	- -	55 19 161 39	0 48 1 16
1133 05 4150 55	975 00 2436 00	487 50 1044 00	- -	158 05 1714 55	0 91 2 96
117 30	117 00	78 00	-	0 30	-
625 67 518 11 211 50	374 62 283 50 211 50	208 12 157 50 141 00	- - -	251 05 234 61 -	0 31 1 15 0 86
639 00 1022 32	639 00 999 00	319 50 499 50	- -	- 23 32	0 39 1 46
411 73 577 86 282 71	381 37 567 00 313 87	211 87 283 50 143 21	- - 31 16	30 36 10 86 -	0 86 0 44 0 66
372 99 265 60 1486 75	367 50 282 50 1464 75	220 50 157 50 627 75	- - -	5 49 3 10 22 00	0 87 2 79 0 94
493 51	445 50	247 50	-	48 01	1 41
1036 74	1026 37	439 87	-	10 37	0 87
1047 57 271 63 428 06	942 00 273 75 320 62	471 00 126 88 178 12	- - 2 12	105 57 - 107 44	1 33 0 54 0 35
340 08 169 91 505 65	344 25 153 00 357 75	187 08 102 00 198 75	- - 4 17	- 16 91 147 90	0 22 0 63 0 51
671 60 1894 50 547 20	594 00 1719 37 486 00	283 45 786 87 270 00	- - 13 55	77 60 165 13 61 20	0 60 1 57 0 33
347 02 397 48	238 75 300 00	173 25 180 00	- -	58 27 97 48	0 70 0 21
826 86 194 87 1811 65	826 86 206 25 1766 61	354 36 97 47 757 11	- - 11 38	- - 45 04	0 98 0 75 0 86



## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—inches.	Length—feet.	Cost.
Cambridge.....	Som.	285	21	158	285	.....	-	-	-
Camden.....	Kno.	750	29.6	80	750	.....	-	-	-
Canaan.....	Som.	198	24	-	1270	.....	-	-	-
Canton.....	Oxf.	794	21	519	794	Stone.....	46x28	23	\$71 88
Cape Elizabeth.....	Cum.	550	24	-	550	.....	-	-	-
Caribou <sup>1</sup> .....	Aro.	538	37	-	\$533	.....	-	-	-
Carmel.....	Pen.	1000	32	1000	11000	{ Stone.....	24x48	-	-
Caratunk Pl.....	Som.	240	21	-	241	{ Stone.....	24x36	27	98 00
Carroll.....	Pen.	675	22	675	675	Iron.....	10	24	29 30
Carrying Place Twp.....	Som.	**	-	-	-	Stone.....	18x18	22	48 65
Carthage.....	Fra.	950	21	-	950	.....	-	-	-
Cary Pl.....	Aro.	280	20	280	280	.....	-	-	-
Casco <sup>2</sup> .....	Cum.	256	26	-	1256	.....	-	-	350 00
Castine.....	Han.	1450	23	170	1450	.....	-	-	-
Castle Hill.....	Aro.	330	22	330	330	.....	-	-	-
Caswell Pl.....	Aro.	279	22	270	270	{ Plank Tp	54x108	22	29 30
Centerville.....	Was.	660	21	-	660	{ Stone.....	10	24	35 77
Chapman Pl.....	Aro.	560	21	260	1560	Stone.....	12x12	22	5 00
Charleston.....	Pen.	390	21	-	390	.....	-	-	-
Charlotte.....	Was.	650	21	-	650	.....	-	-	-
Chelsea.....	Ken.	400	21	200	400	.....	-	-	-
Cherryfield.....	Was.	550	23	-	550	Stone.....	36x48	39	302 81
Chester.....	Pen.	1419	21	-	1419	Metal.....	18	22	43 85
Chesterville.....	Fra.	1200	24	600	1600	Stone.....	24x30	24	30 25
China.....	Ken.	2330	29	2300	12330	Stone.....	24x24	30	22 00
Clifton.....	Pen.	400	23	400	400	Stone.....	30x30	24	15 50
Clinton.....	Ken.	709	30	375	709	Concrete.....	24	54	81 00
Columbia.....	Was.	925	12	-	925	Metal.....	10	94	115 84
Columbia Falls.....	Was.	1200	21	-	1200	{ Metal.....	30	24	75 70
Concord.....	Som.	850	24	-	850	{ Metal.....	10	24	37 30
Counor Pl.....	Aro.	620	21	-	620	.....	-	-	-
Cooper.....	Was.	512	21	-	512	Stone.....	24x24	22	44 75
Cophn Pl.....	Fra.	412	21	-	412	.....	-	-	-
Corinna.....	Pen.	1037	27	1012	11037	Stone.....	15x18	18	5 26
Corinth.....	Pen.	660	21	-	660	Stone.....	48x28	29	133 33
Cornish.....	Yor.	850	23	-	850	Metal.....	12	30	24 44
Cornville.....	Som.	775	28	775	1775	{ Metal.....	18	22	1
Crawford.....	Was.	140	21	140	140	{ Metal.....	15	22	1
Crockettown <sup>3</sup> Twp. 4. R. 2	Fra.	95	21	-	195	Stone.....	24x24	22	22 25
						.....	-	-	-

<sup>1</sup> Caribou: unexpended balance figured on basis of contract price.

<sup>2</sup> Casco: work principally stone retaining walls and guard rails on bridge approach whole length.

<sup>3</sup> Crockettown: Ledge excavation.

\*\* Laid over.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$239 85	\$240 00	\$143 85	\$0 15	-	\$0 90
1712 52	1640 61	703 11	-	\$71 91	2 28
340 41	351 00	184 41	10 59	-	1 72
898 46	394 87	219 37	-	3 59	0 50
1185 06	708 75	303 75	-	476 31	2 15
1106 00	1362 36	225 90	357 96	-	2 07
417 30	361 12	200 62	-	56 18	0 42
284 04	195 00	117 00	-	89 04	1 18
406 34	277 50	166 50	-	123 84	0 60
315 60	303 75	182 25	-	11 85	0 33
181 75	81 00	54 00	-	100 75	0 65
375 00	334 12	185 62	-	40 88	1 46
574 07	588 00	277 83	13 93	-	0 39
215 00	206 25	123 75	-	8 75	0 65
143 13	144 00	95 13	0 87	-	0 51
136 23	121 50	81 00	-	14 73	0 21
213 38	220 50	139 88	7 12	-	0 38
374 08	354 37	196 87	-	19 72	0 96
178 38	184 50	116 88	6 12	-	2 74
313 81	300 00	180 00	-	13 81	0 78
639 81	523 12	290 62	-	116 69	1 16
175 37	175 50	116 87	0 13	-	0 12
281 75	310 50	121 70	28 75	-	0 23
584 25	558 00	279 00	-	26 25	0 25
145 00	139 50	93 00	-	5 50	0 36
701 00	594 00	297 00	-	107 00	0 99
206 25	206 25	123 75	-	-	0 22
310 52	311 25	186 02	0 73	-	0 26
182 31	198 00	116 31	15 69	-	0 21
175 76	139 50	93 00	-	36 26	0 28
244 58	126 00	84 00	-	118 58	0 48
219 70	206 25	123 75	-	13 45	0 54
553 76	550 12	305 62	-	3 64	0 53
587 62	496 12	275 62	-	91 50	0 89
422 99	421 87	234 37	-	1 12	0 50
450 62	361 12	200 62	-	89 50	0 58
97 40	94 50	63 00	-	2 90	0 70
135 00	135 00	81 00	-	-	1 42

TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Crystal .....	Aro.	300	30	300	300	Metal.....	16	20	\$18 00
Cumberland .....	Cum.	2563	22	-	2563	{ 2 Stone..	15x18	30	54 98
						{ Stone....	24x24	-	-
Cushing .....	Kno.	275	21	250	275	{ 2 Metal..	10	30	54 46
						{ Tile.....	6	14	5 77
						{ Metal....	10	24	34 84
						{ Metal....	10	24	34 85
Cutler .....	Was.	137	22	-	137	Metal.....	42	24	167 78
Dallas Pl. ....	Fra.	75	21	-	75	Stone.....	36x48	24	151 70
Damariscotta ..	Lin.	1100	21	-	1100	Metal.....	8	52	34 95
Danforth <sup>2</sup> .....	Was.	550	23	-	540	Stone.....	120x48	23	336 49
Dayton .....	Yor.	580	23	-	580	.....	-	-	-
Dead River Pl. .	Som.	300	25	-	300	.....	-	-	-
Dedham .....	Han.	465	21	110	465	Stone.....	22x24	24	54 43
Deer Isle .....	Han.	1000	21	525	.....	Stone.....	24x24	31	75 00
Denmark .....	Oxf.	670	27	-	670	.....	-	-	-
Dennistown Pl. .	Som.	1600	19	-	1600	{ Metal....	24	22	41 20
						{ Metal....	12	18	16 40
Dennysville .....	Was.	1630	21	-	1600	{ Metal....	10	18	14 60
						{ Metal....	12	**23	55 00
Detroit .....	Som.	500	20	10	1500	{ Metal....	16	14	-
						{ Metal....	20	50	85 07
Dexter <sup>3</sup> .....	Pen.	675	27	535	\$675	{ Concrete.	24x16	55	63 50
Dixfield .....	Oxf.	945	28	-	945	{ Metal....	18	44	60 00
Dixmont .....	Pen.	997	30	987	997	Metal.....	24	24	55 95
Dover .....	Pis.	390	43	360	390	.....	-	-	-
Dresden .....	Lin.	800	23	-	1800	{ Metal....	12	30	33 00
Durham .....	And	440	47	-	440	{ Metal....	12	24	28 20
Dyer Brook .....	Aro.	1071	24	120	1951	Concrete..	16x18	23	40 50
Eagle Lake Pl. .	Aro.	800	21	-	1800	Stone.....	36x36	24	15 87
Eastbrook .....	Han.	250	21	-	250	.....	-	-	-
East Livermore .	And.	340	54	-	\$340	.....	-	-	-
East Machias <sup>4</sup> .	Was.	700	21	500	700	.....	-	-	-
East Millinocket.	Pen.	1500	22	175	1500	Metal.....	30	22	55 20
Easton .....	Aro.	1320	26	198	11320	Metal.....	20	40	40 00
Eastport .....	Was.	1750	21	-	1750	Metal.....	24	40	94 12
Eddington .....	Pen.	1188	33	281	\$1188	{ Stone....	16x16	30	37 85
						{ Stone....	24x24	33	-
Eden .....	Han.	1100	24	-	\$1100	{ Metal....	15	65	130 00
Edgecomb .....	Lin.	1000	21	-	1000	{ Metal....	20	40	90 00
						{ Metal....	16	20	44 17
Edinburg .....	Pen.	1400	25	-	1400	{ Metal....	8	40	46 20
						{ Metal....	12	22	-

1 Dallas Pl.: Two cement masonry abutments 4 ft. 6 in. high by 22 ft. long. Ten ft. span, wood.  
 2 Danforth: Two cement masonry abutments 4 ft. high x 23 ft. long. Ten ft. span I-beams with concrete floor.  
 3 Dexter: Unexpended balance figured on basis of contract price.  
 4 East Machias: I-beam bridge 15 ft. long, 20 ft. wide, with concrete floor. Cost \$236.75.  
 \*\* Each.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$288 80	\$266 25	\$159 75	-	\$22 05	\$0 96
719 88	708 50	301 50	-	16 38	0 28
250 81	247 50	148 50	-	3 31	0 91
213 16	211 50	141 00	-	1 66	1 14
273 70	220 50	147 00	-	53 20	3 65
586 00	550 12	305 62	-	36 12	0 53
446 33	364 50	202 50	-	81 83	0 81
376 81	277 50	166 50	-	99 31	0 65
97 00	130 50	53 50	\$33 50	-	0 32
236 78	216 00	144 00	-	20 78	0 51
608 50	472 50	262 50	-	136 00	0 61
440 43	425 25	236 25	-	15 18	0 66
182 95	150 00	90 00	-	32 95	0 11
305 61	300 00	180 00	-	5 61	0 19
351 65	318 75	191 25	-	32 90	0 70
1009 30	910 87	197 46	192 91	-	1 50
490 85	492 75	271 35	2 40	-	0 52
300 35	280 12	154 10	1 52	20 23	0 30
435 21	674 62	49 71	239 41	-	1 12
410 40	401 62	223 12	-	8 78	0 51
421 00	432 00	229 00	11 00	-	0 96
329 47	232 50	139 50	-	96 97	0 31
297 00	297 00	165 00	-	-	0 37
138 34	130 50	87 00	-	7 84	0 55
1135 05	1034 25	443 25	-	100 80	3 34
513 25	469 12	260 62	-	44 13	0 73
672 36	523 12	290 62	-	149 84	0 45
549 59	546 75	303 75	-	2 84	0 42
1177 97	1147 12	491 62	-	30 85	0 67
443 13	333 75	200 25	-	109 38	0 37
3012 18	1921 50	823 50	-	1090 68	2 73
337 17	348 75	197 67	11 58	-	0 34
123 08	67 50	45 00	-	55 58	0 09

## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Edmunds.....	Was.	1100	22	-	1100	2 Metal....	10	24	\$64 15
Eliot.....	Yor.	1250	21	-	1250	Metal.....	10	26	29 50
Ellsworth.....	Han.	900	21	-	\$900	{ Stone....	24x36	80	-
						{ Metal....	10-12	100	-
Embden.....	Som.	425	21	240	425		-	-	-
Enfield.....	Pen.	320	21	320	320	Stone.....	30x30	24	70 84
Etna.....	Pen.	742	28	742	742	2 Metal....	18	24	51 05
Eustis.....	Fra.	600	24	475	600	Stone.....	36x48	15	27 75
Exeter.....	Pen.	715	30	450	715	{ Stone....	15x24	27	28 00
Fairfield.....	Som.	1890	22	1819	1819	{ Stone....	24x30	24	25 50
Falmouth.....	Cum.	1541	28	1000	1541	{ Metal....	18	16	31 00
						{ Stone....	48x54	45	146 25
						{ Metal....	12	37	37 50
Farmingdale.....	Ken.	††							
Farmington.....	Fra.	1000	22	-	\$1000	Tile.....	8	80	12 00
Fayette.....	Ken.	1250	21	950	1250	Metal.....	18	24	37 29
Flagstaff Pl.....	Som.	-	-	-	-	Stone.....	36x36	25	204 00
Forest City.....	Was.	335	22	-	335		-	-	-
Fort Fairfield.....	Aro.	1400	30	240	\$1400	{ Metal....	30	32	
						{ Metal....	16	100	193 50
						{ Concrete	30	20	
Fort Kent.....	Aro.	3700	24	300	3700	Metal....	20	100	233 48
						Tile.....	10	150	
Foxcroft.....	Pis.	840	36½	-	\$840	Metal.....	16	52	105 91
Frankfort.....	Wal.	400	25	400	400	Metal.....	18	45	94 65
Franklin.....	Han.	414	21	-	414	Stone.....	24x24	33	50 25
Freedom.....	Wal.	1155	21	874	858		-	-	-
Freeman 1.....	Fra.	†*							
Freeport.....	Cum.	500	35	-	\$500	Stone.....	48x72	-	168 41
Friendship.....	Kno.	390	21	250	390	Metal.....	10	24	42 12
Fryeburg.....	Oxf.	1665	21	215	1665		-	-	-
Gardiner.....	Ken.	1200	21	100	\$1200	{ Stone....	24x24	35	51 75
						{ Stone....	36x30	60	123 55
						{ Metal....	18	40	65 75
						{ Metal....	24	38	86 55
Garland.....	Pen.	500	21	500	\$500		-	-	-
Georgetown.....	Sag.	500	21	-	\$500	Stone.....	12x15	23	24 75
Gilead.....	Oxf.	577	21	-	578	Stone.....	36x36	15	17 56
						{ Metal....	18	18	
						{ Metal....	12	28	
Gorham 2.....	Cum.	1200	21	-	\$1200	{ Metal....	10	18	75 46
						{ Metal....	12	22	
Gouldsboro.....	Han.	275	21	-	275		-	-	-
Grafton.....	Oxf.	387	21	387	387		-	-	-
Grand Falls Pl.....	Pen.	††							

1 Freeman: Two cement stone masonry abutments 7 ft. high, 24 ft. long, wooden floor. Approaches 23 ft. wide x 70 ft. long.

2 Gorham: Disintegrated rock.

†† Laid over.

\*\* Bridge.

† Each.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$344 00	\$216 00	\$144 00	-	\$128 00	\$0 31
533 40	552 00	276 00	-	-	0 43
1661 04	1396 50	598 50	-	264 54	1 85
308 67	300 37	166 87	-	8 30	0 73
304 99	307 12	168 49	2 13	-	0 95
407 14	277 50	166 50	-	129 64	0 55
319 97	317 25	176 25	-	2 72	0 53
346 00	344 25	191 25	-	1 75	0 48
1165 35	1136 62	487 12	-	28 73	0 62
1021 12	1021 12	437 62	-	-	0 66
1258 71	1278 37	494 58	19 66	-	1 26
533 89	292 50	175 50	-	241 39	0 43
204 00	135 00	90 00	-	69 00	-
58 13	31 50	20 63	0 37	26 63	0 17
1643 25	1643 25	704 25	-	-	1 17
1304 23	513 00	256 50	-	791 23	0 35
1365 25	927 00	463 50	-	438 25	1 63
377 63	344 25	191 25	-	33 38	0 94
390 64	391 50	216 64	0 86	-	0 94
593 51	315 00	189 00	-	278 51	0 52
450 23	191 25	114 75	-	258 98	-
926 62	897 75	384 75	-	28 87	1 85
314 98	286 87	159 37	-	28 11	0 81
857 97	822 00	411 00	-	35 97	0 51
3000 67	1640 62	703 12	-	1360 05	2 50
382 62	334 12	185 62	-	48 50	0 76
336 19	320 62	178 12	-	15 57	0 67
236 26	236 25	141 75	-	0 01	0 41
1041 89	1047 37	443 39	5 48	-	0 87
432 10	391 50	217 50	-	40 60	1 57
475 37	318 75	191 25	-	166 62	1 23

## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Grand Isle.....	Aro.	1200	26	510	1200	Metal.....	10	25	\$29 50
Gray.....	Cum.	3000	24	-	3000	{ Stone....	24x24	12	22 50
Greenbush.....	Pen.	768	21	-	768	{ Stone....	15x15	8	-
Greene.....	And.	990	28	330	990	Stone.....	24x36	30	46 00
Greenfield.....	Pen.	400	21	-	400				
Greenville.....	Pis.	400	22	-	400	Metal.....	16	26	50 00
Greenwood.....	Oxf.	625	22	-	625	Metal.....	10	22	15 40
Guilford.....	Pis.	1733	21	644	1733	Stone.....	54x84	25	227 00
Hallowell 1.....	Ken.	650	36	-	650				
Hamlin Pl.....	Aro.	700	32	-	700				
Hammond Pl.....	Aro.	**							
Hampden.....	Pen.	1550	21	1550	1550	Stone and Wood....	144	23	18 06
Hancock.....	Han.	900	21	-	900				
Hanover.....	Oxf.	350	21	-	350				
Harmony.....	Som.	600	21	-	600	Stone.....	18x18	24	25 00
Harpwell.....	Cum.	1400	23	-	1400	{ Metal....	12	30	29 50
Harrington.....	Was.	280	22	280	280	{ Metal....	10	30	25 00
Harrison.....	Cum.	1050	23	125	1050	Stone.....	18x20	24	27 50
Hartford.....	Oxf.	1225	21	660	1225	Stone.....	66x66	24	219 63
Hartland.....	Som.	1172	24	1172	1172	{ Iron.....	48x48	8	34 75
Haynesville.....	Aro.	404	21	-	404	{ Iron.....	10	20	53 84
Hebron.....	Oxf.	650	21	375	650	{ Metal....	12	24	38 40
						{ Metal....	12	32	16 75
Hermon.....	Pen.	2000	24	-	2000	{ Metal....	12	32	16 75
						{ Tile.....	30	28	198 74
Hersey 2.....	Aro.	120	22	-		{ Metal....	16	28	-
Highland Pl.....	Som.	600	22	-	600				
Hiram.....	Oxf.	550	27	-	550	Metal.....	20	22	35 00
Hodgdon.....	Aro.	594	23	594	594	{ Metal....	10	36	57 05
						{ Metal....	10	24	61 60
Holden.....	Pen.	800	24	800	800	Iron.....	16	24	36 82
Hollis.....	Yor.	810	25	810	810	Metal.....	16	26	31 50
Hope.....	Kno.	400	21-24	250	400	Stone.....	42x60	26	85 00
Houlton.....	Aro.	1500	30	1383	\$1500				
Howland.....	Pen.	925	22	-	800				
Hudson.....	Pen.	245	21	-	245	Metal.....	16	22	46 40
Industry.....	Fra.	1100	21	325	400	Stone.....	24x24	24	38 50
Island Falls.....	Aro.	1300	26	475	475	{ Metal....	10	20	18 38
						{ Metal....	14	20	41 50
Isle au Haut.....	Han.	100	16	-	100	Stone.....	48x30	18	154 90

1 Hallowell: Bituminous macadam.

2 Hersey: Two cement stone abutments 22 ft. long, span 12 ft., wood floor.

\*\* Laid over.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$247 00	\$255 00	\$145 00	\$8 00	-	\$0 21
559 98	531 00	262 35	3 15	\$28 98	0 19
184 50	184 50	123 00	-	-	0 24
439 25	354 37	196 87	-	84 88	0 44
112 35	112 50	74 85	0 15	-	0 28
485 26	546 00	212 26	60 74	-	1 21
359 52	356 25	213 75	-	3 27	0 57
806 04	801 00	400 50	-	5 04	0 46
3,507 15	1,010 62	433 12	-	2,496 53	0 54
229 83	211 50	141 00	-	18 33	0 33
776 69	801 00	376 19	24 31	-	0 50
361 12	361 12	200 62	-	-	0 40
189 00	189 00	126 00	-	-	0 54
357 04	303 75	126 93	5532	53 29	0 59
908 29	936 00	440 29	27 71	-	0 65
340 00	296 25	177 75	-	43 75	1 21
586 33	519 75	288 75	-	66 58	0 56
378 57	344 25	191 25	-	34 32	0 31
551 67	553 50	305 67	1 83	-	0 47
208 35	171 00	114 00	-	37 35	0 52
293 81	285 00	166 86	4 14	8 81	0 45
590 53	482 62	268 12	-	107 91	0 30
173 98	153 00	102 00	-	20 98	1 45
181 75	130 50	82 07	4 93	51 25	0 30
475 01	472 50	262 50	-	2 51	0 86
391 97	371 25	206 25	-	20 72	0 66
308 92	307 50	184 50	-	1 42	0 39
768 10	627 00	313 50	-	141 10	0 95
525 59	262 50	157 50	-	263 09	1 31
2,499 73	1,546 12	662 62	-	953 61	1 66
356 44	330 75	183 75	-	25 69	0 38
237 90	213 75	128 25	-	24 15	0 97
246 63	210 00	126 00	-	36 63	0 22
471 22	432 00	220 71	19 29	39 22	0 36
219 40	189 00	126 00	-	30 40	2 19



## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—inches.	Length—feet.	Cost.
Jackman Pl.....	Som.	700	21	-	700	{ Metal....	12	20	\$16 00
Jackson.....	Wal.	600	21	600	600	{ Metal....	12	22	17 60
Jay.....	Fra.	1100	22	-	1100	{ Metal....	10	64	44 80
Jefferson.....	Lin.	1065	21	800	1065	{ Metal....	14	22	44 10
Jerusalem Twp.....	Fra.	120	21	-	¶120	-	-	-	-
Johnson Mt. Twp.....	Som.	200	19	-	200	{ Metal....	10	16	11 20
Jonesboro.....	Was.	600	23	-	600	2Stone....	12x20	22	71 57
Jonesport.....	Was.	1000	26	104	1000	2Metal....	10	¶26	62 52
Kenduskeag.....	Pen.	900	28	900	900	2Metal....	¶12	26	40 45
Kennebunk.....	Yor.	**	-	-	-	-	-	-	-
Kennebunkport.....	Yor.	1000	23	350	1000	Stone.....	24x30	4	-
Kingfield.....	Fra.	480	21	-	480	Metal.....	10	72	75 10
Kingman.....	Pen.	**	-	-	-	-	-	-	-
Kittery.....*	Yor.	1280	21	300	980	Metal.....	10	26	32 00
Knox.....	Wal.	1500	21	-	¶1500	4Stone....	¶18x24	29	64 62
Lagrange.....	Pen.	460	25	-	460	Metal.....	15	22	49 19
Lakeville Pl.....	Pen.	324	21	291	324	Stone.....	18x24	29	31 07
Lamoine.....	Han.	478	21	418	478	-	-	-	-
Lang Pl.....	Fra.	780	21	-	780	Iron.....	10	24	51 15
Lebanon.....	Yor.	1050	23	1050	1050	{ Metal....	18	26	113 65
Lee.....	Pen.	2240	24	-	¶2240	{ Stone....	24	26	40 00
Leeds.....	And.	2046	21	-	2046	{ Stone....	36	26	38 00
Levant.....	Pen.	1000	30	990	1000	Stone.....	24x36	23	58 55
Lewiston*.....	And.	927	64	-	927	{ Metal....	12	24	46 50
Lexington Pl.....	Som.	**	-	-	-	{ Metal....	8	28	-
Liberty.....	Wal.	900	22	700	900	-	-	-	-
Limerick.....	Yor.	950	26	400	950	{ Concrete	15	24	27 59
Limestone.....	Aro.	1585	24	755	1585	{ Stone....	36x48	28	11 10
Limington.....	Yor.	732	23	500	732	{ Metal....	18	24	50 60
Lincoln.....	Pen.	1800	28	1200	1800	{ Metal....	36	26	81 90
Lincoln Pl.....	Oxf.	540	21	20	520	{ Stone....	18x18	23	16 24
Lincolntonville 1.....	Wal.	180	26	-	¶180	{ Stone....	18x20	23	18 08
Linneus.....	Aro.	419	23	419	419	{ Stone....	24x30	28	14 00
						{ Stone....	24x30	30	16 00

1 Lincolnville: Retaining wall and rock filling at "Duck Trap."

\*\* Laid over.

¶ Each.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1908 joint fund.	Cost per linear foot.
\$256 90	\$217 50	\$130 50	-	\$39 40	\$0 37
295 45	277 50	166 50	-	17 95	0 49
1,386 71	1,294 12	554 62	-	92 59	1 26
479 25	479 25	266 25	-	-	0 45
160 33	127 50	75 50	-	32 83	1 33
113 40	103 50	69 00	-	9 90	0 57
217 78	198 75	119 25	-	19 03	0 36
534 60	528 00	264 00	-	6 60	0 53
447 69	337 50	202 50	-	110 19	0 50
1,049 85	1,036 87	444 37	-	12 98	1 05
430 74	418 50	232 50	-	12 24	0 90
879 25	939 00	409 75	\$59 75	-	0 68
397 27	371 25	222 75	-	26 02	0 26
376 60	303 75	168 75	-	72 85	0 82
316 15	277 50	166 50	-	38 65	0 98
338 37	341 25	201 87	2 88	-	0 71
200 77	198 00	132 00	-	2 77	0 26
921 35	502 87	279 37	-	418 48	0 88
246 87	236 25	141 75	-	10 62	0 11
371 32	371 25	206 25	-	0 07	0 18
289 69	280 12	155 62	-	9 57	0 28
4,051 36	3,370 50	1,444 50	-	680 86	4 37
313 45	273 75	164 25	-	39 70	0 35
506 25	506 25	281 25	-	-	0 53
517 97	501 00	250 50	-	16 97	0 33
402 00	401 62	223 12	-	0 38	0 55
681 56	636 00	318 00	-	45 56	0 38
232 70	300 00	112 70	67 30	-	0 43
388 68	357 75	198 75	-	30 93	2 16
307 53	300 37	166 87	-	7 16	0 73

## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	C.V. drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Lisbon.....	And.	2300	24	-	2300	Concrete ..	24x24	33	163 15
Litchfield.....	Ken.	667	24	300	¶667	{ Stone....	24x30	285	106 25
						{ Metal....	20	85	47 25
Littleton.....	Aro.	1050	21	175	1050	{ Metal....	12	44	35 20
						{ Metal....	20	22	41 55
Livermore.....	And.	500	21	-	500	Metal.....	12	30	24 00
Lovell.....	Oxf.	984	25	306	984	2Metal....	¶12	26	60 98
Lowell.....	Pen.	429	24	429	429				-
Lubec.....	Was.	3745	21	705	3745	Metal.....	24	26	78 81
Ludlow.....	Aro.	525	25	525	525				-
Lyman.....	Yor.	840	21	800	840	Metal.....	12	26	35 00
Machias.....	Was.	1750	21	800	1750				-
Machiasport.....	Was.	1000	21	-	1000	Metal.....	16	23	31 25
Macwahoc Pl.....	Aro.	1700	22	-	1700	Stone.....	36x36	22	35 00
Madawaska 1.....	Aro.	500	25	-	482	{ Bridge...}	-	-	458 07
Madison*.....	Som.	305	54	-	305	{ Iron....}	10	38	26 60
Madrid.....	Fra.	2519	21.5	-	2519	{ Stone....	18x24	24	21 00
						{ Stone....	18x24	24	23 25
						{ 2 Stone..}	18x24	24	29 75
Magalloway Pl.....	Oxf.	1045	20	-	1045	{ Tile Pipe}	6	20	6 65
Manchester.....	Ken.	425	21	425	¶425	{ Metal....}	6	22	16 00
Mapleton.....	Aro.	275	23	275	275	Stone.....	24x36	25	-
									-
Mariaville.....	Han.	**							-
Marion.....	Was.	260	27	260	260				-
Marshfield.....	Was.	500	21	-	500	Metal.....	10	23	45 79
Mars Hill.....	Aro.	975	22	300	975				-
Masardis.....	Aro.	-	-	-	-	{ Metal....}	30	40	-
						{ Metal....}	20	22	138 00
						{ Metal....}	16	22	-
Mattamiscontis Twp.....	Pen.	300	21	-	300	Stone.....	24	24	11 75
Mattawamkeag.....	Pen.	1500	21to24	-	1500	Metal.....	12	24	19 40
Maxfield.....	Pen.	384	24	76	384	Stone.....	42x42	22	94 62
Mayfield Pl.....	Som.	-	-	-	-	{ Metal....}	10	48	33 60
						{ Metal....}	8	48	28 80
Mechanic Falls.....	And	2600	23	-	2600	{ Metal....}	8	25	-
						{ Metal....}	16	30	75 00
						{ Metal....}	16	30	-
Meddybemps.....	Was.	**							-
Medford.....	Pis.	143	21	-	¶143				-
Medway.....	Pen.	**							-
Mercer.....	Som.	495	26	495	495				-
Merrill Pl.....	Aro.	412	21	412	412	Stone.....	30x30	22	22 00

1 Madawaska: Two concrete abutments 20 ft. long, 10 ft. 3 in. high and 4 wings. Steel bridge 18 ft. span, 18 ft. roadway.

\*\* Laid over.

¶ Each.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$1,642 14	\$1,569 75	\$672 75	-	\$72 39	\$0 71
616 08	415 12	230 62	-	200 96	0 92
480 42	452 25	251 25	-	28 17	0 46
533 38	533 25	296 25	-	0 13	1 06
565 22	533 25	296 25	-	31 97	0 57
292 00	180 00	120 00	-	112 00	0 68
846 63	852 00	420 63	\$5 37	-	0 22
217 50	217 50	130 50	-	-	0 41
477 83	435 37	241 87	-	42 46	0 57
851 63	864 00	419 63	12 37	-	0 49
395 85	356 25	213 75	-	39 60	0 40
135 80	121 50	81 00	-	14 30	0 08
810 33	371 25	222 75	-	439 08	1 62
1,652 99	1,246 87	534 37	-	406 12	5 42
419 45	207 00	138 00	-	212 45	0 17
227 45	266 25	120 95	38 80	-	0 22
429 72	330 75	183 75	-	98 97	1 01
231 56	327 37	86 06	95 81	-	0 84
162 12	90 00	51 12	8 88	72 12	0 62
200 06	130 50	87 00	-	69 56	0 40
402 09	529 87	166 59	127 78	-	0 41
329 39	292 50	175 50	-	36 89	-
44 75	36 00	24 00	-	8 75	0 15
274 40	273 75	164 25	-	0 65	0 18
208 18	81 00	54 00	-	127 18	0 54
132 90	131 25	78 75	-	1 65	-
848 65	834 00	417 00	-	14 65	0 32
247 52	240 00	144 00	-	7 52	1 73
347 76	315 00	189 00	-	32 76	0 70
238 25	236 25	141 75	-	2 00	0 58

## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—inches.	Length—feet.	Cost.
Mexico.....	Oxf.	600	35	-	600	Stone..... (2 Metal...)	48x48 10 22	12 22	-
Milbridge.....	Was.	1000	21	-	1000	Metal... Metal... Metal... Stone... Metal...	12 22 20 22 20 22 36x42 10	24 22 24 22 24 22 24 22 62	\$90 35 225 81 81 65
Milford.....	Pen.	600	30	-	600	Metal... Metal... Metal...	24 12 16	60 24 24	102 30 19 20 24 00
Millinocket.....	Pen.	280	60	280	280	Metal.....	24	60	102 30
Milo.....	Pis.	650	21	490	650	Metal.....	16	24	24 00
Milton Pl.....	Oxf.	217	21	-	217	.....	-	-	-
Minot.....	And.	508	30	125	508	Stone.....	30x18	32	83 63
Monmouth.....	Ken.	760	22	760	\$662	Metal.....	14	30	83 69
Monroe.....	Wal.	345	21	-	345	Stone.....	18x24	21	10 40
Monson.....	Pis.	910	26	680	910	Stone... Metal...	20x20 14	50 26	40 19 60 03
Monticello.....	Aro.	550	21	-	550	.....	-	-	-
Montville.....	Wal.	800	22	800	\$800	Metal... Metal...	12 12	24 24	19 50 19 50
Moose River Pl.....	Som.	1567	21	-	1567	2Metal.....	12	88	74 61
Morrill.....	Wal.	528	21	528	528	Stone.....	20x24	22	21 50
Moscow L.....	Som.	-	-	-	-	.....	-	-	-
Mt. Chase.....	Pen.	**	-	-	-	.....	-	-	-
Mt. Desert.....	Han.	††	-	-	-	.....	-	-	-
Mt. Vernon.....	Ken.	716	25	716	716	Stone.....	18x24	32	-
Naples.....	Cum.	1100	21	200	1100	Stone..... Stone... Stone... Stone...	24x24 24x30 24x24 21x24	22 25 23 23	20 00 20 00 13 00 13 00
Newburg.....	Pen.	1534	27	1534	1534	.....	-	-	-
Newcastle.....	Lin.	750	28	-	750	.....	-	-	-
Newfield.....	Yor.	550	21	-	550	Stone.....	24x24	25	19 00
New Gloucester.....	Cum.	2010	24	830	2010	Stone... Stone... Stone...	10x18 12x18 12x18	16 33 33	47 32
New Limerick.....	Aro.	500	22	500	500	Metal.....	10	24	16 80
Newport.....	Pen.	1650	31	1650	\$1650	Metal... Metal... Stone... Stone... Stone...	6 14 18x18 18x18 18x18	12 30 30 30 30	- - - - -
New Portland.....	Som.	325	30	150	325	Concrete..	54x66	30	217 31
Newry.....	Oxf.	420	21	420	420	Metal.....	24	22	35 20
New Sharon.....	Fra.	1600	22	300	1600	Stone.....	18x24	25	23 50
New Sweden.....	Aro.	416	23	416	416	.....	-	-	-
New Vineyard.....	Fra.	440	22	100	\$440	.....	-	-	-
Nobleboro.....	Lin.	650	22	-	650	.....	-	-	-
Norridgewock 2.....	Som.	925	21	925	\$1050	.....	-	-	-
North Berwick.....	Yor.	800	23	800	\$800	.....	-	-	-

1 Moscow : Cement stone masonry abutments 9 ft. high, 20 ft. long, 2 wing walls. Span 16 ft. wooden floor.

2 Norridgewock : Disintegrated rock used for surface.

\*\* Laid over.

†† Not completed.

ROAD WORK IN 1909—Continued.

Cost of State road,	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$792 05	\$678 00	\$339 00	-	\$114 05	\$1 32
535 84	499 50	277 50	-	36 34	0 54
578 40	573 00	286 50	-	5 40	0 96
934 29	795 36	340 86	-	138 93	3 34
701 75	756 00	269 75	\$54 25	-	1 08
162 00	162 00	108 00	-	-	0 75
472 19	418 50	292 50	-	53 69	0 93
728 82	687 00	343 50	-	41 82	0 96
364 25	313 87	174 37	-	50 38	1 06
366 96	297 00	165 00	-	69 96	0 40
484 65	475 87	264 37	-	8 78	0 88
228 87	330 75	81 87	101 88	-	0 29
295 75	296 25	177 25	0 50	-	0 19
276 75	240 00	144 00	-	36 75	0 52
704 15	292 50	175 50	-	411 65	-
401 64	401 62	223 12	-	0 02	0 56
344 25	344 25	191 25	-	-	0 31
287 50	337 50	137 50	50 00	-	0 19
987 42	660 00	330 00	-	327 42	1 32
292 68	296 25	174 18	3 57	-	0 53
784 06	779 62	334 12	-	4 44	0 39
341 80	300 00	180 00	-	41 80	0 68
844 40	810 00	405 00	-	34 40	0 51
431 20	317 25	176 25	-	113 95	1 33
319 82	255 00	153 00	-	64 82	0 76
462 37	455 62	253 12	-	6 75	0 29
372 00	371 25	222 75	-	0 75	0 89
365 87	348 75	209 25	-	17 12	0 83
337 50	337 50	187 50	-	-	0 52
681 00	681 00	340 50	-	-	0 74
1,150 34	765 00	382 50	-	385 34	1 44

## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—inches.	Length—feet.	Cost.
North Haven	Kno.	331	21	331	331	Metal	14	24	\$23 86
Northport	Wal.	700	21	-	700	{ Stone	15x18	-	-
North Yarmouth	Cum.	720	30	710	720		12x12	27	34 50
Norway	Oxf.	950	23	950	950	{ Stone	24x24	24	72 75
No. 6, No. of Weld	Fra.	158	21	-	158	{ Stone	18x20	24	-
No. 7, So. Div.	Han.	110	21	100	110	-	-	-	-
No. 8, Pl.	Han.	300	20	-	300	-	-	-	-
No. 9, So. Div.	Han.	-	-	-	-	-	-	-	-
No. 10, So. Div. 1.	Han.	-	-	-	-	-	-	-	-
No. 21, Pl.	Han.	255	24	255	255	-	-	-	-
No. 22, M. Div.	Han.	200	18	140	200	Stone	24x24	21	-
No. 23, M. Div.	Han.	250	21	190	250	-	-	-	-
No. 14, Pl.	Was.	300	21	-	300	-	-	-	-
No. 19, Ea. Div.	Was.	500	21	-	500	-	-	-	-
No. 24, Mid. Div.	Was.	550	21	-	550	-	-	-	-
No. 29, Mid. Div.	Was.	500	21	-	500	-	-	-	-
No. 30, Mid. Div.	Was.	550	21	-	550	-	-	-	-
No. 31, Mid. Div.	Was.	550	21	-	550	-	-	-	-
Oakfield 2.	Aro.	366	24	-	366	-	-	-	-
Oakland	Ken.	580	27	530	500	Stone	48x48	60	400 00
Old Orchard 3.	Yor.	660	25	325	660	-	-	-	-
Orient	Aro.	678	21	178	678	Metal	20	26	39 45
Orland	Han.	2467	23	-	2467	{ Metal	12	44	38 20
Orneville	Pis.	280	21	-	280	{ Stone	24x30	23	94 64
						Stone	24x18	24	64 50
Orono	Pen.	1450	22	775	1450	Metal	-	-	45 76
Orrington	Pen.	1138	30	264	1138	-	-	-	-
Otis	Han.	180	21	175	190	Stone	30x18	25	35 50
Otisfield	Cum.	850	21	-	850	Stone	24x36	37	55 00
Oxford	Oxf.	1700	23	-	1700	Stone	24x24	27	31 20
Palermo	Wal.	345	21	-	345	Stone	24x24	24	56 27
Palmyra 4.	Som.	165	26	-	165	Stone	30x30	26	46 02
Paris	Oxf.	828	30	-	828	Tile drain	6	373	35 78
Parkman 5.	Pis.	300	22	-	300	-	-	-	-
Parlin Pond, T'p No. 3, R. 7	Som.	700	21	-	700	{ Metal	10	18	29 20
Parsonsfield	Yor.	900	21	125	900	{ Metal	10	18	-
Passadumkeag	Pen.	211	28	-	211	Stone	24x24	33	32 00

1 No. 10 So. Division: Bridge work.

2 Oakfield: Gravel fill at approaches to new bridge, 24 ft. wide x 366 ft. long av. depth 4 ft.

3 Old Orchard: Surfaced with disintegrated rock.

4 Palmyra: 150 ft. of ledge excavation, cost \$385.77.

5 Parkman: 531 cu. yds. ledge excavation, cost \$235.81.

¶ Certificates not received.

COMMISSIONER OF HIGHWAYS.

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ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$319 01	\$317 25	\$176 25	-	\$1 76	\$0 96
405 87	381 37	211 87	-	24 50	0 58
417 39	388 12	215 62	-	29 27	0 58
893 86	895 12	332 46	\$1 26	-	0 94
129 50	139 50	83 00	10 00	-	0 82
77 00	76 50	51 00	-	0 50	0 70
31 50	18 00	12 00	-	13 50	0 10
218 88	90 00	60 00	-	128 88	-
99 88	99 00	66 00	-	0 88	0 39
68 25	67 50	45 00	-	0 75	0 34
139 88	99 00	66 00	-	40 88	0 56
103 14	90 00	60 00	-	13 14	0 34
86 77	85 50	57 00	-	1 27	0 17
76 00	76 50	50 50	0 50	-	0 14
99 00	99 00	66 00	-	-	0 20
100 25	99 00	66 00	-	1 25	0 18
113 75	117 00	74 75	3 25	-	0 21
550 00	228 75	137 25	-	321 25	1 50
1,096 68	677 25	290 25	-	419 43	1 89
1,064 09	721 87	309 37	-	342 22	1 61
335 57	162 00	108 00	-	173 57	0 49
336 97	334 12	185 62	-	2 85	0 14
225 00	225 00	135 00	-	-	0 80
896 29	811 12	321 42	26 20	85 17	0 62
503 67	502 87	279 37	-	0 80	0 44
135 57	103 50	69 00	-	32 07	0 75
324 91	297 00	165 00	-	27 91	0 38
510 00	510 00	255 00	-	-	0 30
334 92	281 25	168 75	-	53 67	0 97
528 44	394 87	219 37	-	133 57	0 32
973 86	973 86	417 36	-	-	1 18
380 98	296 25	177 75	-	84 73	1 27
134 70	131 25	78 75	-	3 45	0 19
509 11	516 37	279 61	7 26	-	0 57
284 56	211 50	141 00	-	73 06	1 35



## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Patten 1.....	Pen.	957	24	-	\$983				
Pembroke.....	Was.	1540	21	-	1540	Metal.....	14	22	\$30 80
Penobscot.....	Han.	750	23	175	750	Stone.....	24x30	23	27 77
Perham.....	Aro.	**							
Perkins Twp.....	Fra.	50	21	-	50				
Perry.....	Was.	1500	21	-	1500	Stone.....	12x24	22	25 80
Peru.....	Oxf.	500	22	-	500	Metal.....	16	24	35 40
Phillips.....	Fra.	3350	21	-	1350	Metal.....	10x12	22	100 00
Phippsburg.....	Sag.	500	21	-	500				
Pittsfield.....	Som.	1704	21	1704	1704	{ Stone.....	15x36	26	120 00
						{ Stone.....	15x30	24	
						{ Stone.....	12x12	18	9 00
Pittston.....	Ken.	1550	25	-	1550	{ Stone.....	36x48	26	91 26
						{ Metal.....	8	108	87 02
						{ Metal.....	8	24	14 40
Pleasant Ridge Pl.....	Som.	-	-	-	-	{ Metal.....	10	24	16 80
						{ Metal.....	12	24	19 20
Plymouth.....	Pen.	677	21	577	675	Stone.....	17x17	25	16 00
Poland.....	And.	1350	26	1300	1350	{ Stone.....	18x18	23	
						{ Stone.....	18x18	23	127 00
						{ Stone.....	18x18	23	
Portage Lake.....	Aro.	1900	28	200	1900	{ Metal.....	12	36	
						{ Metal.....	12	36	106 76
Porter.....	Oxf.	600	23	-	600				
Portland.....	Cum.	2683	39	-	*2683				
Pownal.....	Cum.	1400	23	-	1400	Stone.....	16x22	22	13 75
Prentiss.....	Pen.	685	22	200	685				
Presque Isle.....	Aro.	1100	40	-	1100				
Princeton.....	Was.	875	22	725	875				
Prospect.....	Wal.	1200	21	-	1200	{ Stone.....	24x24	28	63 97
						{ Metal.....	12	24	72 70
						{ Metal.....	12	24	
Randolph.....	Ken.	715	22	-	715				
Rangeley.....	Fra.	436	32	436	436	Stone.....	18x20	62	48 00
Rangeley Pl.....	Fra.	800	21	-	800	Metal.....	10	24	35 67
Raymond.....	Cum.	2092	21	-	2092	Stone.....	15x15	22	-
						{ Metal.....	16	34	34 00
						{ Metal.....	16	26	26 00
Readfield.....	Ken.	1050	26	1050	1050	{ Metal.....	12	38	30 40
						{ Metal.....	16	26	26 00
Reed Pl.....	Aro.	400	21	400	400				
Richmond.....	Sag.	500	33	-	*500				
Ripley.....	Som.	450	21	350	450				
Robbinston.....	Was.	950	24	-	950	{ Metal.....	24	28	-
						{ Metal.....	24	28	-
						{ Metal.....	18	142	-
Rockland.....	Kno.	1600	23	1600	1600	{ Metal.....	12	22	492 80
Rockport.....	Kno.	375	30	360	375				

1 Patten: Includes cost of steel bridge 24 ft. wide by 20 ft. span.

\*\* Laid over.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$1,088 24	\$624 00	\$312 00	-	\$464 24	\$1 14
385 29	884 75	213 75	-	0 54	0 25
321 25	297 00	165 00	-	24 25	0 43
31 50	31 50	21 00	-	-	-
369 63	360 00	216 00	-	9 63	0 25
300 26	300 37	166 76	80 11	-	0 60
659 90	630 00	315 00	-	29 90	0 20
489 37	489 37	271 87	-	-	0 98
1,026 49	1,031 62	436 99	5 13	-	0 60
562 51	540 00	300 00	-	22 51	0 36
92 10	99 00	59 10	6 90	-	-
318 25	341 25	181 75	23 00	-	0 47
925 21	986 00	457 21	10 79	-	0 69
471 27	307 50	100 77	83 73	163 77	0 25
322 19	293 62	163 12	-	28 57	0 54
12,396 99	13,022 62	4,071 70	1,509 42	-	4 62
307 12	307 12	170 62	-	-	0 22
231 00	221 25	132 75	-	9 75	0 34
1,510 45	1,601 25	595 45	90 80	-	1 37
353 15	351 00	195 00	-	2 15	0 40
327 67	322 50	193 50	-	5 17	0 27
361 99	347 62	193 12	-	14 37	0 51
828 15	894 00	377 37	69 63	-	1 89
386 89	378 00	210 00	-	8 89	0 48
313 87	313 87	174 37	-	-	0 15
522 40	519 00	259 50	-	3 40	0 50
270 24	270 00	162 00	-	0 24	0 68
1,436 21	993 00	496 50	-	443 21	2 87
253 70	288 75	138 20	35 05	-	0 56
391 75	292 50	175 50	-	99 25	0 41
2,366 01	1,735 12	743 62	-	630 89	1 48
881 12	887 25	374 12	6 13	-	0 23

## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Rome.....	Ken.	561	25	-	561	Stone.....	15x18	25	\$21 00
Roque Bluffs.....	Was.	550	21	-	550	Metal.....	-	-	48 18
Roxbury.....	Oxf.	908	22	284	908	{ Metal.....	12	22	34 20
						{ Metal.....	12	22	
Rumford.....	Oxf.	6831	21	190	\$6831	{ Stone.....	24x36	26	84 00
						{ Stone.....	24x24	28	66 00
						{ Metal.....	12	122	125 00
Saco.....	Yor.	750	35	-	\$775				
St. Albans.....	Som.	300	24	-	\$300	Stone.....	18x36	24	30 00
St. Francis Pl.....	Aro.	1204	21	-	1204	Metal.....	48	24	103 00
St. George.....	Kno.	740	21	740	\$740	{ Stone.....	24x24	22	
						{ Stone.....	12x24	21	103 15
						{ Stone.....	24x30	23	
St. John Pl.....	Aro.	300	20	-	300	Cedar.....	72x98	26	-
Salem.....	Fra.	1650	21	-	\$1600	{ Metal.....	10	24	21 28
						{ Metal.....	10	24	21 28
						{ Metal.....	10	24	21 27
Sandy River Pl.....	Fra.	100	21	-	100				
Sandy Bay Twp 5, R. 3.....	Som.	500	19	-	500				
Sanford.....	Yor.	2425	22	-	\$2075	{ Concrete	40x46	33	225 11
						{ Metal.....	20	33	28 15
						{ Metal.....	12	33	29 88
Sangerville.....	Pis.	480	21	480	\$480				
Scarborough.....	Cum.	3640	23	-	3640	Metal.....	10	22	5 94
Searsmont.....	Wal.	1386	21	1386	\$1386	{ Stone.....	24x24	22	
						{ Stone.....	24x24	22	35 00
						{ Stone.....	24x24	22	
Searsport.....	Wal.	2185	30	1012	2185	{ Stone.....	24x24	30	35 00
						{ Stone.....	24x24	30	
						{ Stone.....	24x24	30	
Sebago.....	Cum.	410	26	410	410	{ Stone.....	14x16	26	62 66
						{ Stone.....	14x16	26	
						{ Stone.....	24x24	46	
Sebec.....	Pis.	285	21	-	\$285	Metal.....	42	32	138 41
Seboeis Pl.....	Pen.	1650	21	-	\$1650				
Sedgwick.....	Han.	950	21	220	950	Stone.....	18x24	23	25 00
Shapleigh.....	Yor.	850	23	-	\$850				
Sherman.....	Aro.	1350	28	-	\$1350	{ Metal.....	16	24	24 00
						{ Metal.....	16	22	25 50
Shirley.....	Pis.	580	24to27	-	580	Stone.....	13x18	27	9 00
Sidney.....	Ken.	1518	21	-	1518				
Silver Ridge Pl.....	Aro.	155	26	150	155				
Skowhegan.....	Som.	1550	24	60	\$1550	{ Concrete	30x36	26	194 85
						{ Stone.....	12x12	26	40 18
						{ Metal.....	10	20	42 00
Smithfield.....	Som.	1650	25	-	1650				
Smyrna.....	Aro.	837	24	-	837				
Solon.....	Som.	875	24	-	\$875	Metal.....	12	30	44 00
Somerville.....	Lin.	400	21	400	\$400	Stone.....	18x24	24	28 70
Sorrento.....	Han.	300	21	300	300	Stone.....	18x24	24	-
South Berwick.....	Yor.	626	22	-	\$626				
Southport.....	Lin.	600	21	120	600	Metal.....	10	44	67 89
South Portland.....	Cum.	625	25	-	\$625	Metal.....	10	74	62 90
South Thomaston.....	Kno.	445	23	445	\$445	Metal.....	16	34	49 62

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$221 25	\$221 25	\$132 75	-	-	\$0 39
161 87	58 50	39 00	-	\$103 37	0 29
490 43	228 75	137 25	-	261 68	0 54
7,364 80	1,548 75	663 75	-	5,816 05	1 08
2,060 80	1,879 50	805 50	-	181 30	2 75
554 96	469 12	260 62	-	85 84	1 85
426 54	216 00	144 00	-	210 54	0 35
912 96	459 00	255 00	-	453 96	1 23
600 00	157 50	105 00	-	442 50	2 00
181 00	148 50	99 00	-	32 50	0 11
189 82	213 75	104 32	\$23 93	-	1 90
147 00	144 00	96 00	-	3 00	0 29
2,773 71	1,672 12	716 62	-	1,101 59	1 14
480 15	537 00	211 65	56 85	-	1 00
897 31	826 87	354 37	-	70 44	0 24
376 11	374 62	208 12	-	1 49	0 27
741 14	744 00	369 14	2 86	-	0 34
281 00	285 00	167 00	4 00	-	0 69
372 95	371 25	222 75	-	1 70	1 31
148 50	148 50	99 00	-	-	0 09
329 69	281 25	168 75	-	48 44	0 35
371 50	303 75	182 25	-	67 75	0 44
396 19	327 37	181 87	-	68 82	0 29
214 13	216 00	142 13	1 87	-	0 37
934 72	472 50	224 72	-	462 22	0 62
76 60	72 00	48 00	37 78	4 60	0 49
2,134 85	1,664 25	713 25	-	470 60	1 38
336 65	333 75	200 25	-	2 90	0 20
255 00	255 00	153 00	-	-	0 30
426 61	432 00	234 61	5 39	-	0 48
189 00	130 50	87 00	-	58 50	0 47
346 63	313 87	174 37	-	32 76	1 15
1,063 62	824 25	353 25	-	239 37	1 70
466 60	459 00	255 00	-	7 60	0 78
1,420 12	1,420 12	608 62	-	-	2 70
471 61	469 12	260 62	-	2 49	1 06

TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	"V" drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Southwest Harbor .....	Han.	522	23	35	522	{ Metal.....	10	54	\$39 33
Springfield .....	Pen.	450	22	450	450	{ Stone.....	36x36	30	126 00
Stacyville Pl.....	Pen.	270	22to26	270	270	{ Stone.....	18x22	22	42 15
Standish.....	Cum.	1300	24	800	1300	{ Concrete..	18x18	34	110 16
Starks.....	Som.	421	25	264	421	{ Stone.....	24x24	49	15 53
Stetson.....	Pen.	792	30	792	792	{ Stone.....	-	-	-
Steuben.....	Was.	500	21	100	500	{ Stone.....	24x26	24	78 99
Stockton Springs.....	Wal.	1200	25	350	1200	{ Metal.....	10	54	50 00
Stoneham.....	Oxf.	275	21	-	275	{ Metal.....	36	24	76 40
Stonington.....	Han.	650	22	155	650	{ Stone.....	30x48	25	90 00
Stow.....	Oxf.	1750	21	-	1750	{ Stone.....	18x18	21	7 50
Strong.....	Fra.	560	21	-	560	{ Stone.....	-	-	-
Sullivan.....	Han.	475	23	-	475	{ Stone.....	-	-	-
Sumner.....	Oxf.	676	21	-	676	{ Metal.....	24	22	38 20
Surry.....	Han.	1100	21	-	1100	{ Stone.....	18x18	21	22 54
Swans Island.....	Han.	485	21	240	485	{ Stone.....	48x48	22	192 50
Swanville.....	Wal.	1065	21	600	1065	{ Stone.....	18x24	28	55 00
Sweden.....	Oxf.	2600	24	-	-	{ Metal.....	8	20	12 00
						{ Metal.....	12	84	90 00
						{ Metal.....	16	40	50 00
Talmadge.....	Was.	225	22	225	225	{ Metal.....	-	-	-
Temple.....	Fra.	554	21	-	554	{ Metal.....	12	48	60 45
						{ Metal.....	12	22	17 60
The Forks Pl.....	Som.	-	-	-	-	{ Metal.....	8	24	14 40
						{ Metal.....	10	80	56 00
Thomaston.....	Kno.	590	21	590	590	{ Metal.....	-	-	-
Thorndike.....	Wal.	1056	15	400	1056	{ Metal.....	14	24	38 74
Topsham.....	Was.	520	31	335	520	{ Metal.....	-	-	-
Topsfield.....	Sag.	740	22	-	740	{ Metal.....	10	78	99 20
Tremont.....	Han.	310	21	300	310	{ Metal.....	12	21	18 25
Trenton.....	Han.	250	21	250	250	{ Metal.....	12	24	20 22
Trescott.....	Was.	400	21	100	400	{ Metal.....	-	-	-
Troy.....	Wal.	1056	21	1056	1056	{ Metal.....	12	22	24 50
						{ Metal.....	12	32	-
						{ Metal.....	16	28	-
Turner.....	And.	2062	23	660	2062	{ Metal.....	20	32	136 60
						{ Metal.....	16	38	-
						{ Metal.....	16	30	-
Union.....	Kno.	550	21	550	550	{ Metal.....	20	75	134 00
						{ Concrete	72x48	25	276 97
Unity.....	Wal.	400	22	-	400	{ Cemented	-	-	-
Unity Pl.....	Ken.	180	21	-	180	{ stone.....	60x66	24	157 17
						{ Stone.....	-	-	-
Upton.....	Oxf.	420	21	900	420	{ Metal.....	16	24	26 63
Van Buren 1.....	Aro.	900	40	900	900	{ Metal.....	10	40	30 75
Vanceboro.....	Was.	800	21	300	800	{ Stone.....	18x18	21	27 45

1 Van Buren : Expended joint fund for 1908 and 1909 together.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$486 98	\$486 00	\$270 00	-	\$0 98	\$0 93
242 65	240 00	144 00	-	2 65	0 54
213 75	213 75	128 25	-	-	0 79
924 66	888 00	444 00	-	36 66	0 71
250 80	251 25	150 30	\$0 45	-	0 60
338 43	255 00	153 00	-	83 43	0 43
363 36	371 25	214 86	7 89	-	0 73
557 25	507 00	253 50	-	50 25	0 46
210 96	206 25	123 75	-	4 71	0 77
539 45	534 00	267 00	-	5 45	0 83
258 33	258 75	154 83	0 42	-	0 15
335 26	334 12	185 62	-	1 14	0 60
708 50	411 75	228 75	-	296 75	1 49
340 44	334 12	185 62	-	6 32	0 50
368 62	360 00	216 00	-	8 62	0 33
291 71	285 00	171 00	-	6 71	0 60
285 00	285 00	171 00	-	-	0 27
339 65	303 75	182 25	-	35 90	0 13
213 72	184 50	123 00	-	29 22	0 95
266 25	266 25	159 75	-	-	0 48
130 12	130 50	86 62	0 38	-	-
938 25	795 37	340 87	-	142 88	1 59
289 98	270 00	162 00	-	19 98	0 27
195 00	195 00	117 00	-	-	0 37
817 86	816 37	349 87	-	1 49	1 11
577 54	286 87	159 37	-	290 67	1 86
255 00	255 00	153 00	-	-	1 02
146 06	144 00	96 00	-	2 06	0 36
321 93	310 50	172 50	-	11 43	0 30
945 70	930 00	465 00	-	15 70	0 46
977 41	531 00	265 50	-	446 41	1 78
511 01	388 12	215 62	-	122 89	1 28
99 00	36 00	24 00	-	63 00	0 55
238 94	258 75	135 44	19 81	-	0 57
1,321 32	759 00	359 82	19 68	562 32	1 47
349 25	341 25	204 75	-	8 00	0 44

TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	V. drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Vassalboro .....	Ken.	1800	24	-	1800	.....	-	-	-
Verona .....	Han.	500	21	300	1500	.....	-	-	-
Vienna .....	Ken.	4500	21	-	14500	{ Stone.....	15x18	22	\$45 00
						{ Stone.....	42x36	22	90 00
Vinalhaven.....	Kno.	††							
Wade Pl.....	Aro.	**							
Waldo.....	Wal.	825	22	345	825	{ Metal.....	10	48	
						{ Metal.....	12	24	34 75
Waldoboro.....	Lin.	782	31	-	\$782	{ Tile.....	8	40	7 20
						{ Metal.....	12	22	24 10
Wales.....	Aud.	490	21	-	1490	{ Stone.....	24x18	24	32 00
						{ Metal.....	16	19	34 11
Wallagrass Pl.....	Aro.	942	22	-	1942	{ Metal.....	16	19	34 12
						{ Metal.....	16	19	37 08
Waltham <sup>1</sup> .....	Han.								
Warren.....	Kno.	1285	24	1185	1285	Metal.....	16	30	45 00
Washburn.....	Aro.	700	21	550	700	Metal.....	18	24	30 00
Washington.....	Kno.	285	21	§§345	285				
Waterboro.....	Yor.	1350	26	60	1350	Metal.....	16	26	27 30
Waterford.....	Oxf.	423	21	200	423	Metal.....	12	24	19 50
Waterville.....	Ken.	1300	40	-	\$1300				
Wayne.....	Ken.	744	22	-	744	{ Stone.....	18x18	27	23 55
						{ Metal.....	18	24	
						{ Metal.....	15	24	79 15
						{ Metal.....	15	24	
Webster.....	And.	1950	21	-	1950				
Webster Pl.....	Pen.	210	22	210	210				
Weld.....	Fra.	507	21	-	507	{ Metal.....	10	24	40 66
						{ Metal.....	10	24	
Wellington.....	Pis.	325	25	-	325	Stone.....	12x15	25	10 00
Wells.....	Yor.	2075	21	-	2075	Stone.....	24x24	8	3 75
Wesley.....	Was.	400	21	-	400				
West Bath.....	Sag.	560	21	175	560	Metal.....	12	34	36 18
Westbrook *.....	Cum.	††							
Westfield Pl.....	Aro.	1050	22	260	1050	Metal.....	24	26	41 60
						{ Metal.....	10	18	
West Forks Pl.....	Som.	800	21	-	800	{ Metal.....	10	18	25 20
						{ Metal.....	10	18	
West Gardiner.....	Ken.	325	24	300	325	Stone.....	15x18	27	53 25
Weston.....	Aro.	1050	21	150	1050				
Westport.....	Lin.	600	21	-	600	Metal.....	12	22	26 69
Whitefield.....	Lin.	1130	21	-	1130	Metal.....	8	22	-
Whiting <sup>2</sup> .....	Was.	70	21	-	-	Metal.....	30	28	64 40
Whitneyville.....	Was.	850	21	-	850				
Williamsburg.....	Pis.	205	21	-	205				
Willimantic.....	Pis.	600	21	-	600	{ Stone.....	20x24	25	29 00
						{ Stone.....	20x24	25	
Wilton.....	Fra.	1467	23	1137	1467	Metal.....	12	30	30 00

<sup>1</sup> Waltham : Not satisfactory.

<sup>2</sup> Whiting : Replacing a small bridge.

\* Westbrook : Bituminous macadam. Not completed.

†† Not completed.

\*\* Laid over.

§§ Tile drain.

ROAD WORK IN 1909—Continued.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$756 15	\$721 87	\$309 37	-	\$34 28	\$0 42
157 25	157 50	104 75	\$0 25	-	0 31
267 79	266 25	159 75	-	1 54	0 06
321 47	270 00	162 00	-	51 47	0 39
1,233 60	735 00	315 00	-	498 60	1 58
284 02	281 25	168 32	0 43	2 77	0 58
306 09	153 00	102 00	-	153 09	0 32
848 04	843 00	382 46	39 04	5 04	0 66
376 00	351 00	195 00	-	25 00	0 54
804 15	303 75	168 75	-	0 40	1 07
520 23	486 00	270 00	-	34 23	0 39
369 35	367 87	204 37	-	1 48	0 87
2,726 40	1,897 87	813 37	-	828 53	2 10
301 99	303 75	180 49	1 76	-	0 41
554 60	549 00	274 50	-	5 60	0 28
139 50	130 50	93 00	-	-	0 66
296 16	296 25	176 01	1 74	-	0 58
266 40	255 00	153 00	-	11 40	0 82
709 84	693 00	297 00	-	16 84	0 34
122 60	112 50	75 00	-	10 10	0 31
315 00	315 00	189 00	-	-	0 56
334 09	322 50	193 50	-	11 59	0 32
127 95	127 50	76 50	-	0 45	0 16
379 50	364 50	202 50	-	15 00	1 17
300 91	144 00	96 00	-	156 91	0 29
252 97	211 50	140 42	0 58	41 47	0 42
525 23	492 75	270 66	3 09	32 48	0 47
221 37	187 50	112 50	-	33 87	3 16
130 50	130 50	87 00	-	-	0 15
150 02	117 00	78 00	-	33 02	0 73
196 85	198 00	130 85	1 15	-	0 33
732 35	669 37	236 87	-	62 98	0 50



## TABULAR STATEMENT OF STATE

TOWN OR CITY.	County.	Total length—feet.	Finished width—feet.	V. drain or stone base—feet.	Macadam, gravel or earth surface—feet.	CULVERTS.			
						Kind.	Size—Inches.	Length—feet.	Cost.
Windham.....	Cum.	3188	21	546	3188	Metal.....	16	22	\$37 50
Windsor.....	Ken.	1050	21	130	1050	Stone.....	30x30	22	5 85
Winn.....	Pen.	870	24	260	1260	Stone.....	36x48	24	128 23
Winslow.....	Ken.	1285	34.5	-	\$1285	Metal.....	14	46	32 02
Winter Harbor.....	Han.	900	21	900	1900	.....	-	-	-
Winterport.....	Wal.	1617	28	-	1617	{ Stone.....	36x42	12	15 75
						{ Concrete	11x13	46	36 80
Winthrop 1.....	Ken.	900	21	150	1900	.....	-	-	-
Wiscasset 2.....	Lin.	575	21	-	575	Metal.....	10	22	14 40
Woodland.....	Aro.	††							
Woodstock.....	Oxf.	727	21	727	727	Stone.....	12x15	22	12 00
Woodville.....	Pen.	220	24	220	220	Stone.....	48x36	21	41 25
Woolwich.....	Sag.	1000	21	-	1000	Metal.....	8	44	20 25
Wyman Twp No. 4. R. 3...	Fra.	80	21	-	80	.....	-	-	-
Yarmouth.....	Cum.	3660	21	350	3660	{ Stone.....	24x24	28	120 00
						{ Stone.....	12x18	27	65 00
						{ Stone.....	12x12	27	15 00
York.....	Yor.	1500	21	-	1500	Metal.....	12	36	-

1 Winthrop: Reducing grade of hill from 12% to 8%, 900 ft. long.

2 Wiscasset: Work costing \$233.75 not accepted. To be finished spring 1910.

†† Not completed.

ROAD WORK IN 1909—*Concluded.*

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1909 joint fund.	Cost per linear foot.
\$856 94	\$761 25	\$326 25	-	\$95 69	\$0 27
290 06	280 12	155 62	-	9 94	0 28
317 22	315 00	189 00	-	2 22	0 36
2,366 86	1,588 12	680 62	-	778 74	1 87
527 34	513 00	256 50	-	14 34	0 59
750 28	567 00	283 50	-	183 28	0 46
944 14	937 12	401 62	-	7 02	1 05
282 25	516 00	24 25	\$233 75	-	0 49
343 25	320 62	178 12	-	22 63	0 47
215 50	166 50	111 00	-	49 00	0 98
593 88	391 50	217 50	-	202 38	0 59
94 50	94 50	63 00	-	-	1 17
1,487 15	1,086 75	465 75	-	400 40	0 41
1,800 00	1,800 75	771 00	0 75	-	1 20
\$278,501 15	\$236,290 27	\$115,208 52	-	\$44,998 16	-

TABLE II.

## Tabular Statement of 1908 State

TOWN OR CITY.	County.	Total length— feet.	Finished width— feet.	Macadam, gravel or earth surface— linear feet.	CULVERTS.			
					K ind.	Size—inches.	Length— feet.	Cost.
Bangor* .....	Penob....	600	40	600	Metal .	18	45	.....
Belfast* .....	Waldo ...	200	23	§200				.....
Ellsworth .....	Hancock	2000	21	§2000	{ Stone	36x36	35	.....
					{ Metal	16	28	.....
Mt. Desert .....	Hancock	600	21	600	Metal..	24	30	.....
							40	.....
Northfield .....	Wash....	850	21	850				.....
Robbinston .....	Wash....	1005	25	1005	{ Stone	42x48	22	150 00
					{ Stone	12x18	22	32 00
Winslow .....	Ken .....	1000	40	§1000				.....
				6255				

\* Extension of work partly completed and partly paid for in 1908.

§ Macadam. All other jobs, gravel surface.

TABLE II.

Road Work Completed in 1909.

Cost of State road.	Joint fund for State road.	Amount of State aid approved.	Unexpended balance.	Expended in excess of 1908 joint fund.	Cost per linear foot.
\$1450 38	.....	\$1093 65	.....	\$356 73	\$2 42
354 50	.....	306 94	.....	47 56	1 77
3879 03	\$1320 37	565 87	.....	2558 66	1 94
1175 41	1228 50	473 41	\$53 09	.....	1 96
96 34	.....	63 00	.....	.....	0 11
337 24	277 50	166 50	.....	59 74	0 34
2690 44	1512 00	648 00	.....	1178 44	2 69
<u>\$9983 34</u>		<u>\$3317 37</u>		<u>\$4201 13</u>	

TABLE III.

Statement Showing Amounts of Unexpended Balances of 1908 Aid Paid in 1909.

NAME OF TOWN.	Amount of 1908 aid paid in 1909.	NAME OF TOWN.	Amount of 1908 aid paid in 1909.
Appleton .....	\$3 25	Machiasport .....	\$36 95
Athens .....	117 19	Madawaska .....	218 25
Baring .....	6 61	Marion .....	54 00
Belmont .....	2 81	Milbridge .....	10 00
Bethel .....	96 93	Milford .....	2 75
Bridgton .....	10 37	New Gloucester .....	35
Brooklin .....	35 25	New Sharon .....	6 75
Brownville .....	91 15	New Vineyard .....	7 18
Buckfield .....	56 63	North Haven .....	1 56
Burlington .....	11 64	North Yarmouth .....	12 79
Burnham .....	92 43	No. 7, So. Div. ....	1 27
Byron .....	14 90	No. 9, So. Div. ....	9 00
Castine .....	2 24	No. 10, So. Div. ....	57 00
Centerville .....	14 24	No. 23, Mid. Div. ....	2 00
Cherryfield .....	8 01	Oakland .....	234 97
Chesterville .....	22 05	Orono .....	111 37
Clinton .....	107 00	Otisfield .....	4 88
Connor Pl. ....	11 00	Palermo .....	7 26
Coplin Pl. ....	13 25	Pittston .....	17 79
Corinna .....	2 57	Portage Lake .....	148 50
Crystal .....	2 56	Portland .....	883 89
Cumberland .....	5 87	Prentiss .....	50
Deer Isle .....	52 20	Rangeley .....	3 78
Dennistown Pl. ....	5 25	Rogue Bluffs .....	45 00
Dexter .....	243 44	St. Francis .....	138 00
Dixmont .....	21 75	Sorrento .....	66
Eastbrook .....	3 90	Southport .....	30
Etna .....	98 65	Stetson .....	09
Farmington .....	33 63	Stockton Springs .....	46 34
Forest City .....	18 00	Strong .....	57
Fort Kent .....	160 85	Sweden .....	4 28
Freedom .....	5 95	Union .....	236 25
Freeman .....	112 50	Unity Pl. ....	21 00
Gray .....	32 13	Van Buren .....	291 00
Greene .....	28 13	Wales .....	3 20
Harmony .....	108 61	Wallagrass .....	99 00
Hebron .....	12 95	Warren .....	44 08
Hermion .....	30 50	Weld .....	1 65
Highland Pl. ....	56 18	West Gardiner .....	01
Hiram .....	1 58	Westport .....	42 05
Hope .....	1 25	Whitefield .....	35 57
Island Falls .....	58 51	Wilton .....	11 20
Jackman .....	70	Windsor .....	7 84
Jackson .....	8 25	Winterport .....	02
Kennebunkport .....	4 62	Winthrop .....	87
Lakeville Pl. ....	2 45	Woodstock .....	1 97
Limestone .....	27	Yarmouth .....	400 40
Lowell .....	1 00		

TABLE IV.

Statement Showing Towns Having an Unexpended Balance of State Aid Standing to their Credit and Amounts of Same.

Abbot	\$2 26	Lubec	\$5 37
Albany	2 25	Machias	12 37
Amherst	13 74	Magalloway Pl.	38 80
Appleton	4 50	Mapleton	284 56
Arrowscopic	111 00	Mariaville	75 00
Auburn	55 25	Marion	8 88
Aurora	2 85	Mars Hill	127 78
Avon	7 83	Meddybemps	45 00
Baldwin	5 05	Medway	112 50
Belgrade	66 09	Milo	54 25
Benedicta	111 00	Montville	101 88
Bluehill	315 90	Moose River Pl.	50 50
Bradford	31 16	Mt. Chase	111 00
Brighton Pl.	123 00	Mt. Desert	603 21
Brooklin	37 37	Newburg	50 00
Brooksville	4 17	Newfield	3 57
Brownville	13 55	Norway	1 16
Bucksport	463 50	No. 6 No. of Weld	10 00
Byron	26 28	No. 8 Pl.	42 00
Cambridge	15	No. 33 Pl.	15
Canaan	10 59	No. 24, Mid. Div.	3 25
Caribou	357 96	No. 31, Mid. Div.	26 20
Carrying Pl. Twp.	81 00	Orono	7 26
Castine	16 17	Parsonsfield	219 50
Caswell Pl.	87	Perham	11
Chapman Pl.	7 12	Peru	5 13
Charlotte	6 12	Pittsfield	6
Chester	13	Pleasant Ridge Pl.	23 00
Chesterville	50 80	Plymouth	10 79
Columbia Falls	73	Poland	83 73
Concord	15 69	Portage Lake Pl.	90 80
Dead River Pl.	33 50	Portland	69 63
Dexter	192 91	Presque Isle	35 05
Dixfield	2 40	Rangley	6 13
Dixmont	1 52	Ripley	123 75
Dover	239 41	Rockport	23 93
Durham	11 00	Roxbury	56 85
Edgecomb	11 58	Sandy River Pl.	2 86
Enfield	2 13	Sangerville	4 00
Exeter	3 78	Searsport	1 81
Farmingdale	274 50	Sebago	37 78
Farmington	53 29	Shirley	1 00
Forest City	1 37	Sidney	5 39
Franklin	86	Silver Ridge	45
Frenchville	141 73	Solon	7 39
Gorham	5 48	Starks	42
Grand Falls Pl.	87 00	Steuben	38
Grand Isle	26 75	Stow	19 68
Gray	3 15	The Forks Pl.	25
Greenfield	15	Van Buren	358 50
Greenville	60 74	Verona	169 00
Hammond Pl.	90 00	Vinalhaven	43
Hampden	24 31	Wade Pl.	117 00
Harmony	55 32	Wales	39 04
Harpswell	27 71	Waltham	1 76
Hartland	1 83	Warren	1 74
Hebron	4 14	Wayne	925 87
Highland Pl.	4 93	Weld	58
Island Falls	19 29	Westbrook	3 09
Kennebunk	682 87	Westport	1 15
Kingman	191 21	Whitefield	233 75
Kittery	59 75	Willimantic	173 22
Lamoine	2 88	Wiscasset	75
Lexington Pl.	87 00	Woodland	
Lincoln Pl.	67 30	York	

## CONTRACTS.

	Survey and plan made by.	Work in charge of.	Inspector.
Auburn	R. A. Swift	F. F. Goss	Department.
Augusta	H. F. Hill	W. S. Knowles	"
Bangor	P. H. Coombs	C. A. Woodbury	"
Bath	Stephen Litchfield	O. F. Williams	Stephen Litchfield.
Belfast	A. D. Hayes	H. S. Cunningham	Department.
Bethel	I. M. Clark	W. A. Emery	"
Biddeford	W. T. Allen	F. M. Rose	"
Brewer	R. E. Mullaney	W. F. Parker	"
Bridgton	D. E. Chaplin	J. C. Pillsbury	"
Brunswick	Stephen Litchfield	C. E. Hacker	Stephen Litchfield.
Calais	C. F. Pray	A. P. Gardiner	C. F. Pray.
Camden	F. H. Marshall	F. B. Annis	F. H. Marshall.
Caribou	P. L. Hardison	A. D. Estey	Department.
Dexter	W. B. Gould	G. D. Chandler	H. S. Towne.
E. Livermore	I. T. Monroe	Geo. W. Dyke	Department.
Eastport	C. F. Pray	T. H. Bucknam	"
Eden	E. I. Lord	M. L. Hamor	"
Ellsworth	I. B. Hagan Jr.	F. B. Marden	I. B. Hagan Jr.
Fairfield	Greene & Wilson	Ed. Hoxie	Department.
Falmouth	Silas Skillin	I. H. Iverson	"
Farmington	W. G. Mallett	N. R. Knowlton	H. W. Gilman.
Fort Fairfield	P. L. Hardison	C. J. Knight	Department.
Gardiner	Frederic Danforth	C. E. Pickering	Frederic Danforth.
Gorham	H. W. Grant	W. F. Pillsbury	H. W. Grant.
Hallowell	E. E. Greenwood & Co.	John Burns	J. A. McLean.
Houlton	P. N. Burleigh	G. W. Small	Department.
Jay	I. T. Monroe	Elmer Bryant	H. W. Gilman.
Kennebunkport	W. S. Marsh	E. D. Seavey	A. J. Wiggin.
Lewiston	J. A. Jones	J. J. Ryan	J. A. McLean.
Lisbon	Stephen Litchfield	G. H. McIntosh	Stephen Litchfield.
Madison	Snow & Humphreys.	B. F. Burns	Department.
Mt. Desert	C. P. Simpson	T. M. Richardson	"
Pittsfield	O. E. Libby	A. T. Randlett	"
Portland	Bion Bradbury Jr.	N. E. Paving & Con. Co.	E. L. Lynch.
Presque Isle	P. L. Hardison	G. F. Pomroy	Department.
Rockland	O. H. Tripp	Dexter Simmons	F. H. Marshall.
Rumford	H. C. French	I. W. Greene	H. C. French.
Saco	R. W. Libby	R. W. Libby	Department.
Sanford	J. G. Ridley	J. G. Ridley	"
Skowhegan	J. H. Burleigh	Geo. H. Webb	"
South Berwick	W. S. Marsh	E. A. Warren	A. J. Wiggin.
South Portland	H. M. Arey	T. W. Marshall & Co.	Department.
Waterville	J. H. Burleigh	J. M. Craty	"
Westbrook	H. W. Grant	Geo. Cobb	H. W. Grant.
Winslow	J. H. Burleigh	Forrest Reynolds	Department.
Yarmouth	F. B. Merrill	J. W. Gooch	C. H. Mitchell.
York	J. W. Gowen	Bragdon & Grant	A. J. Wiggin.

NAMES OF INSPECTORS OF STATE ROAD WORK.

Work Performed by Towns and Cost of Same.

H. H. ADAMS, Belgrade, 18 towns.

Belgrade .....	\$443 91	Rome .....	\$221 25
Fayette .....	533 89	Sidney .....	934 72
Greene .....	439 25	Smithfield .....	336 65
Leeds .....	371 32	Turner .....	945 70
Litchfield .....	616 08	Vienna .....	267 79
Monmouth .....	728 82	Wales .....	284 02
Mt. Vernon .....	401 64	Wayne .....	301 99
Oakland .....	1,096 68	West Gardiner .....	379 50
Readfield .....	522 40	Winthrop .....	944 14

D. A. BALLARD, Fryeburg, 25 towns.

Andover .....	\$378 39	Mechanic Falls .....	\$848 65
Buckfield .....	547 20	Mexico .....	792 05
Byron .....	194 87	Milton Pl. ....	162 00
Canton .....	398 46	Minot .....	472 19
Dixfield .....	490 35	Newry .....	319 82
Gilead .....	236 26	Oxford .....	510 00
Grafton .....	475 37	Paris .....	973 86
Greenwood .....	359 52	Peru .....	300 23
Hanover .....	189 00	Roxbury .....	490 43
Hartford .....	378 57	Summer .....	340 44
Hebron .....	293 81	Upton .....	238 94
Lincoln Pl. ....	232 70	Woodstock .....	343 25
Magalloway Pl. ....	227 45		

G. S. P. BRANNEN, Danforth, 35 towns.

Alexander .....	\$145 00	Lubec .....	\$846 63
Amity .....	365 39	Marion .....	162 12
Baileyville .....	1,026 88	Orient .....	335 50
Bancroft .....	189 95	Pembroke .....	385 29
Baring .....	258 74	Perry .....	369 63
Brookton .....	169 91	Prentiss .....	231 00
Carroll .....	406 34	Princeton .....	353 15
Charlotte .....	178 38	Reed Pl. ....	270 24
Cooper .....	244 58	Robbinston .....	391 75
Crawford .....	97 40	Springfield .....	242 65
Cutler .....	213 16	Talmadge .....	213 72
Danforth .....	446 33	Topsfield .....	195 00
Dennysville .....	305 61	Trescott .....	146 06
East Machias .....	513 25	Webster Pl. ....	139 50
Edmunds .....	344 00	Weston .....	300 91
Forest City .....	58 13	Whiting .....	221 37
Haynesville .....	208 35	Vanceboro .....	349 25
Lakeville Pl. ....	316 15		

E. C. BUZZELL, Fryeburg, 15 towns.

Albany .....	\$312 75	Norway .....	\$893 86
Brownfield .....	505 65	Otisfield .....	324 91
Denmark .....	440 43	Porter .....	322 19
Fryeburg .....	857 97	Sweden .....	339 65
Harrison .....	586 33	Stoneham .....	210 96
Hiram .....	475 01	Stow .....	258 33
Lovell .....	565 22	Waterford .....	369 35
Napies .....	344 25		

F. V. BUZZELL, Lincoln, 25 towns.

Bradley .....	\$372 99	Edinburg .....	\$123 08
Burlington .....	347 02	Eddington .....	443 13
Chester .....	175 37	Enfield .....	304 99
Clifton .....	145 00	Greenbush .....	184 50
East Millinocket .....	672 96	Greenfield .....	439 25



## NAMES OF INSPECTORS—Continued.

Holden .....	\$308 92	Milford .....	\$578 40
Howland .....	356 44	Millinocket .....	934 29
Lee .....	246 87	Orrington .....	503 67
Lincoln .....	681 56	Passadumkeag .....	234 56
Lowell .....	292 00	Seboeis .....	148 50
Mattamiscontis .....	44 75	Winn .....	317 22
Mattawamkeag .....	274 40	Woodville .....	215 50
Maxfield .....	208 18		

## J. W. DAVIDSON, Houlton, 24 towns.

Blaine .....	\$518 11	Linneus .....	\$307 53
Bridgewater .....	493 51	Littleton .....	480 42
Cary Pl. ....	181 75	Ludlow .....	217 50
Caswell Pl. ....	143 13	Madawaska .....	810 33
Castle Hill .....	215 00	Mapleton .....	231 56
Chapman Pl. ....	213 38	Mars Hill .....	402 09
Connor Pl. ....	175 76	Monticello .....	484 65
Easton .....	549 59	New Limerick .....	341 80
Grand Isle .....	247 00	New Sweden .....	372 00
Hamlin Pl. ....	229 83	Van Buren .....	1,321 32
Hodgdon .....	371 25	Washburn .....	376 00
Limestone .....	517 97	Westfield Pl. ....	334 09

## H. W. GILMAN, West Farmington, 20 towns.

Avon .....	\$310 92	New Sharon .....	\$462 37
Carthage .....	315 60	New Vineyard .....	365 87
Chester ville .....	281 7	Phillips .....	659 90
Eustis .....	319 97	Rangeley .....	823 15
Freeman .....	450 23	Salem .....	181 00
Industry .....	246 63	Sandy River Pl. ....	189 87
Jay .....	554 62	Strong .....	335 26
Kingfield .....	430 74	Temple .....	266 25
Madrid .....	419 45	Weld .....	296 16
New Portland .....	431 20	Wilton .....	732 35

## IRA B. HAGAN, JR., Ellsworth, 17 towns.

Amherst .....	\$170 76	No. 21 Pl. ....	\$399 82
Aurora .....	105 15	Otis .....	135 57
Dedham .....	236 78	Sorrento .....	346 63
Eastbrook .....	138 34	Sullivan .....	708 50
Ellsworth .....	1,661 04	Swans Island .....	291 71
Franklin .....	390 64	Tremont .....	577 54
Gouldsboro .....	432 17	Trenton .....	255 00
Hancock .....	361 12	Winter Harbor .....	527 34
Lamoine .....	338 37		

## L. E. JACKMAN, Sherman Mills, 19 towns.

Ashland .....	\$564 76	Patten .....	\$1,038 24
Crystal .....	283 30	Portage Lake .....	471 27
Dyer Brook .....	329 47	St. Francis Pl. ....	426 54
Fort Kent .....	1,304 23	St. John Pl. ....	600 00
Hersey .....	173 9	Sherman .....	396 19
Island Falls .....	471 22	Silver Ridge .....	76 60
Macwahoc Pl. ....	135 80	Smyrna .....	255 00
Masardis .....	329 39	Stacyville .....	213 75
Merrill Pl. ....	238 25	Wallagrass .....	306 09
Oakfield .....	550 00		

## B. J. LIBBY, Oakland, 13 towns.

Anson .....	\$778 63	Mercer .....	\$347 76
Athens .....	466 32	Moose River Pl. ....	295 75
Bingham .....	625 67	Moscow .....	704 15
Caratunk Pl. ....	234 04	Norridgewock .....	631 00
Concord .....	182 31	Solon .....	426 61
Cornville .....	450 62	Starks .....	250 80
Embden .....	308 67		

NAMES OF INSPECTORS—Continued.

F. H. MARSHALL, Camden, 15 towns.

Appleton .....	\$559 83	St. George .....	\$912 96
Camden .....	1,712 52	South Thomaston .....	471 61
Cushing .....	250 81	Thomaston .....	938 25
Friendship .....	314 98	Union .....	977 41
Hope .....	525 59	Vinalhaven .....	717 63
Isle au Haut .....	219 40	Warren .....	848 04
North Haven .....	319 01	Washington .....	304 15
Rockport .....	881 12		

GEORGE MAWHINNEY, Jonesboro, 18 towns.

Addison .....	\$262 82	Machias .....	\$851 63
Beddington .....	67 50	Machiasport .....	395 85
Centerville .....	136 23	Marshfield .....	200 06
Cherryfield .....	639 81	Milbridge .....	535 84
Columbia .....	206 25	Northfield .....	62 34
Columbia Falls .....	310 52	Rogue Bluffs .....	161 87
Harrington .....	340 00	Steuben .....	363 36
Jonesboro .....	217 78	Wesley .....	122 60
Jonesport .....	534 60	Whitneyville .....	130 50

CHAS. MITCHELL, Yarmouth, 15 towns.

Baldwin .....	\$413 45	Poland .....	\$925 21
Cape Elizabeth .....	1,185 06	Pownal .....	307 12
Casco .....	375 00	Raymond .....	313 87
Cumberland .....	719 88	Sebago .....	281 00
Freeport .....	925 62	Standish .....	924 66
Gray .....	559 98	Windham .....	856 94
New Gloucester .....	784 06	Yarmouth .....	1,487 15
North Yarmouth .....	417 3.		

A. T. RANDLETT, Pittsfield, 17 towns.

Carmel .....	\$417 30	Levant .....	\$289 60
Corinna .....	553 76	Newburg .....	287 50
Dixmont .....	300 35	Newport .....	844 40
Etna .....	407 14	Orono .....	896 29
Exeter .....	346 00	Palmyra .....	528 44
Hampden .....	776 69	Plymouth .....	318 25
Hartland .....	551 67	St. Albans .....	554 96
Hermon .....	590 53	Stetson .....	338 43
Kenduskeag .....	447 69		

C. W. SHOREY, Belfast, 23 towns.

Belmont .....	\$261 89	Prospect .....	\$327 67
Brooks .....	428 06	Searsmont .....	376 11
Frankfort .....	377 63	Searsport .....	741 14
Freedom .....	593 51	Stockton Springs .....	557 25
Jackon .....	295 45	Swanville .....	285 00
Knox .....	397 27	Thorndike .....	289 98
Liberty .....	313 45	Troy .....	321 93
Lincolnton .....	388 68	Unity .....	511 01
Monroe .....	364 25	Unity Pl. .....	99 00
Montville .....	228 87	Waldo .....	321 41
Morrill .....	276 75	Winterport .....	750 28
Northport .....	405 87		

E. E. SMITH, Winslow, 13 towns.

Albion .....	\$425 25	Detroit .....	\$351 65
Benton .....	592 19	Palermo .....	334 92
Burnham .....	397 48	Pittston .....	562 51
Canaan .....	340 41	Randolph .....	361 99
Chelsea .....	313 81	Vassalboro .....	756 15
China .....	584 25	Windsor .....	290 06
Clinton .....	701 00		

## NAMES OF INSPECTORS—Concluded.

## J. J. SPINNEY, Bath, 26 towns.

Alna .....	\$360 62	Jefferson .....	\$479 25
Boothbay .....	639 0	Newcastle .....	937 42
Boothbay Harbor .....	1,022 32	Nobleboro .....	337 50
Bowdoin .....	411 73	Phippsburg .....	489 31
Bowdoinham .....	577 86	Somerville .....	139 00
Bremen .....	265 60	Southport .....	466 60
Bristol .....	1,047 57	Topsham .....	817 86
Damariscotta .....	536 00	Waldoboro .....	1,233 60
Dresden .....	410 40	Webster .....	554 60
Durham .....	421 00	West Bath .....	315 00
Edgecomb .....	337 1.	Westport .....	252 97
Georgetown .....	336 1	Whitefield .....	525 23
Harpwell .....	908 29	Woolwich .....	593 88

## AUSTIN T. STEVENS, Surry, 10 towns.

Brooklin .....	\$271 63	Penobscot .....	\$321 25
Brooksville .....	340 08	Sedgwick .....	329 69
Castine .....	574 07	Stonington .....	359 45
Deer Isle .....	608 50	Surry .....	363 62
Orland .....	336 97	Verona .....	157 25

## HENRY S. TOWNE, East Dover, 31 towns.

Abbot .....	\$338 99	Harmony .....	\$357 04
Alton .....	261 00	Hudson .....	237 90
Argyle .....	237 18	Lagrange .....	376 60
Atkinson .....	319 33	Medford .....	247 52
Blanchard .....	211 50	Milo .....	701 75
Bradford .....	232 71	Monson .....	366 96
Brownville .....	671 60	Orneville .....	225 00
Cambridge .....	239 85	Parkman .....	330 98
Charleston .....	374 09	Ripley .....	253 70
Corinth .....	587 62	Sangerville .....	480 15
Dexter .....	1,009 30	Sebec .....	372 95
Dover .....	435 21	Shirley .....	214 13
Foxcroft .....	1,365 25	Wellington .....	266 40
Garland .....	382 62	Williamsburg .....	150 02
Greenville .....	485 26	Willimantic .....	136 85
Guilford .....	806 04		

## A. J. WIGGIN, Kennebunk, 22 towns.

Acton .....	\$494 02	Limington .....	\$402 00
Alfred .....	378 13	Lyman .....	477 83
Berwick .....	820 2	Newfield .....	292 63
Buxton .....	826 86	North Berwick .....	1,150 34
Cornish .....	422 99	Old Orchard .....	1,064 09
Dayton .....	376 81	Parsonsfield .....	509 11
Eliot .....	533 40	Scarboro .....	897 31
Hollis .....	768 10	Shapleigh .....	371 50
Kittery .....	879 25	South Berwick .....	1,083 62
Lebanon .....	921 35	Waterboro .....	520 2.
Limerick .....	506 25	Wells .....	709 84

Statement Showing Names of Inspectors, No. of Days Worked, Salaries and expenses Paid, Cost of Work Inspected, and Percentage Cost of Inspection.

	Time in days.	Beginning.	Ending.	Expenses.	Salary.	Amount.	Total cost of work.	Cost of inspection—Per cent.	Number of towns.
H. H. Adams.....	52½	May 28	Nov. 13	\$125 18	\$157 50	\$282 68	\$9,769 75	2.8	18
D. A. Ballard.....	42	June 7	Nov. 4	141 12	126 00	267 12	10,193 75	2.6	25
G. S. P. Brannen..	97½	May 7	Nov. 30	286 46	292 50	578 96	10,641 39	5.4	35
E. C. Buzzell.....	30	May 15	Nov. 30	100 27	90 00	190 27	6,806 86	2.8	15
F. V. Buzzell.....	60	May 15	Nov. 3	163 62	180 00	343 62	8,603 55	3.9	25
J. W. Davidson....	76	May 20	Nov. 30	234 27	228 00	462 27	9,535 57	4.8	24
H. W. Gilman.....	58	May 14	Nov. 30	145 03	174 00	319 03	8,078 24	3.0	20
Ira B. Hagan, Jr..	55½	May 20	Dec. 13	152 16	166 50	318 66	6,776 47	4.7	17
L. E. Jackman....	33	May 15	Dec. 1	136 61	99 00	235 61	8,219 08	2.9	19
B. J. Libby.....	33	May 25	Nov. 25	113 04	99 00	212 04	5,802 34	3.7	13
F. H. Marshall....	68	May 21	Dec. 24	192 75	204 00	396 75	9,953 31	4.0	15
Geo. Mawhinney..	67	May 24	Nov. 29	139 60	201 00	390 60	5,540 56	7.0	18
C. H. Mitchell....	68	May 21	Dec. 29	178 52	204 00	382 52	10,477 39	3.6	15
A. T. Randlett....	28½	May 24	Nov. 30	90 38	85 50	175 88	8,449 09	2.1	17
C. W. Shorey.....	74½	Apr. 23	Nov. 30	225 53	223 50	449 03	8,912 52	5.0	23
E. E. Smith.....	30½	May 18	Nov. 30	88 26	91 50	179 76	6,111 67	2.9	13
J. J. Spinney.....	114½	May 1	Nov. 30	198 28	344 25	542 53	14,566 03	3.7	26
A. T. Stevens.....	37½	May 1	Dec. 27	106 78	112 50	219 28	3,847 51	5.7	10
H. S. Towne.....	72½	May 11	Dec. 30	209 74	217 50	427 24	12,835 59	3.3	31
A. J. Wiggins.....	97	May 3	Dec. 4	217 43	291 00	508 43	14,386 01	3.5	22
	1195½			\$3295 03	\$3587 25	\$6882 28	\$179,506 68	3.8	401

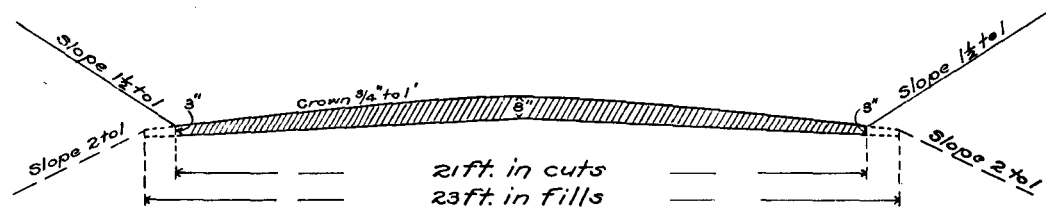
Note: A careful study of this table will disclose the fact that the cost of work under each inspector's supervision largely determines the percentage cost of inspection, i. e. the time and expense for seeing a \$200.00 job is the same as for a \$400.00 or \$600.00 job. Several inspectors, too, have to drive over practically all of their territory.

## EXPENDITURES OF OFFICE, 1909.

	Cr.	Dr.	Balance.
Salary of Commissioner.....	\$2,500 00	\$2,500 00	
Salary of Assistant.....	1,500 00	1,500 00	
Salary of Clerk.....	1,300 00	1,245 88	\$54 12
Stenographer, extra clerk hire, etc.....	2,700 00	1,433 60	1,266 40
Traveling expenses of Commissioner and Assistant .....	2,000 00	1,167 38	832 62
Office furnishings and equipment.....	1,200 00	827 11	* 372 89
Printing report, blank forms, circulars, stationery, supplies, express, telephone, postage, etc. ....	3,550 00	3,544 58	5 42

\* Balance carried forward to 1910 by Council order.

# ROAD SECTION A



## Specification:-

Thickness of courses after rolling is completed.

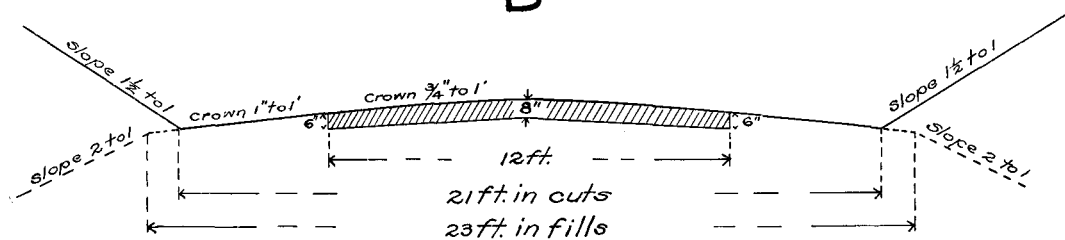
For macadam surface placed in two courses, bottom course 5 inches at center gradually diminishing in thickness to the sides, top course 3 inches, screenings or binder as called for.

For gravel surface placed in two courses, same as for macadam.



# ROAD SECTION

## B



### Specifications:-

Thickness of courses after rolling is completed.

For macadam surface placed in two courses, bottom course 5 inches at center, 4 inches at sides, top course 3 inches at center, 2 inches at sides, screenings or binder as called for.

For macadam surface placed in three courses, bottom course 5 inches at center, 3 inches at sides, middle course 2 inches, top course 1 inch, screenings or binder as called for.

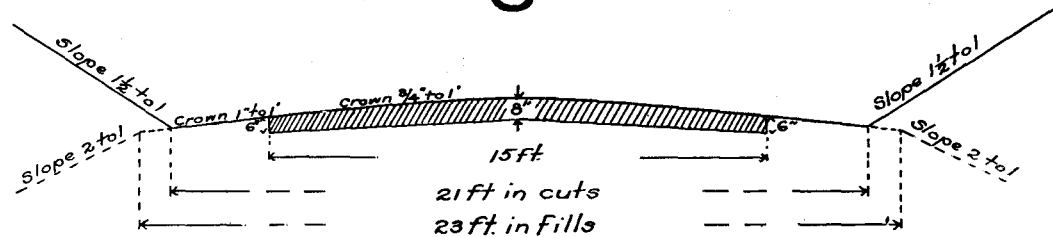
For gravel surface placed in two courses, bottom course 5 inches at center, 3 inches at sides, top course 3 inches, binder as called for.





# ROAD SECTION

## C



### Specifications:-

Thickness of courses after rolling is completed

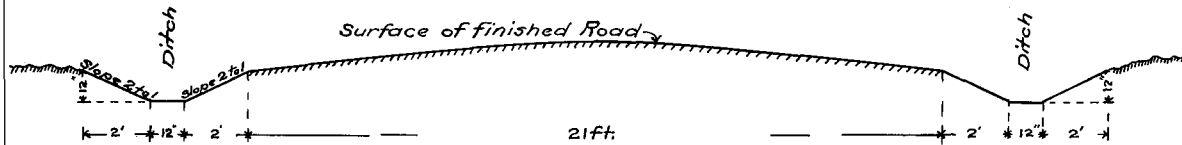
For macadam surface placed in two courses, bottom course 5 inches at center, 4 inches at sides, top course 3 inches at center, 2 inches at sides, screenings or binder as called for.

For macadam surface placed in three courses, bottom course 5 inches at center, 3 inches at sides, middle course 2 inches, top course 1 inch, Screenings or binder as called for.

For gravel surface placed in two courses, bottom course 5 inches at center, 3 inches at sides, top course 3 inches, binder as called for.



# ROAD SECTION D



**Note:-**

Where side ditches are needed the above cross-section may be taken as a standard, but should be varied to meet local conditions

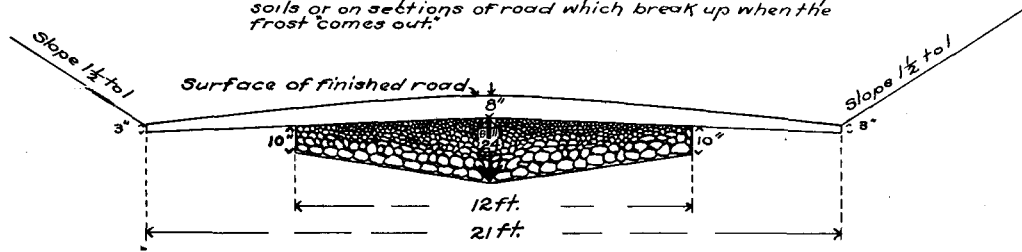
In wet, soggy soil, or where the drainage area of the ditches is large, the ditches should be made larger.

In sandy soil or on steep grades little ditching is necessary.



## "V" DRAIN FOUNDATION

To be used only where road lays over wet and heavy soils or on sections of road which break up when the frost comes out.



### Specification:-

Excavate center of road to the depth, width and form shown above.

Stones not exceeding eight inches in diameter shall be placed in the bottom of the trench, over these shall be placed stones gradually diminishing in size until at the top small pebbles and gravel shall be used

The surface of this foundation shall be finished with a crown and thoroughly compacted

Side outlets shall be provided about every 200 feet.



## WORK UNDER SPECIAL LEGISLATIVE RESOLVES.

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The last legislature placed in the hands of the department the supervision of several jobs for which special appropriations were made. Among them were the following which have been started during the year with a report of the progress made upon them.

Pressure of work for the small force of the department made it necessary to turn several of the bridge jobs over to E. E. Greenwood, C. E., for supervision.

### RESOLVE IN FAVOR OF AID IN REPAIRING HIGHWAY IN THE TOWN OF GREENBUSH.

Twelve hundred dollars (\$1,200.00) were appropriated, six hundred dollars (\$600.00) in 1909 and six hundred dollars (\$600.00) in 1910, to aid in the rebuilding of a section of highway in the town of Greenbush, including three or four sand hills. The Resolve provides that a sum of money be raised by said town, or otherwise, which together with the above amount shall be sufficient to complete said highway within two years from the date of approval of the Resolve, without further aid from the State.

A survey and plan was made of this road and the work was advertised for letting, but no proposals were received. This was probably due partly to the lateness of the season, as the work was not advertised until about October first, although plans and specifications were completed and forwarded to the municipal officers on the twenty-fourth of August. At a special town meeting, held on October eighteenth, 1909, the following vote was passed as reported by J. A. Atwood, Clerk:

"Article 2. Motioned to accept the 1200 dollars from State provided the state road commissioner complete the work with 600 dollars raised by the town the 600 dollars includes all advertising, surveying and all material used on said road."



• Of course the department was unable to comply with any such provision and nothing was done. The State appropriation, however, by action of the governor and council, has been made available for expenditure in 1910 and if the town makes a special appropriation, which in addition to the State appropriation, is sufficient to complete the work, it will be carried out the coming season.

RESOLVE IN FAVOR OF ROADS IN INDIAN TOWNSHIP.

Thirty-five hundred dollars appropriated for the construction and repair of roads and bridges in Indian Township, Washington County, for the year 1909 and the same amount for the year 1910. Each appropriation to be expended in each year as follows:

One thousand dollars (\$1,000.00) for ordinary maintenance and repair and two thousand five hundred dollars (\$2,500.00) for the permanent improvement of said roads.

The maintenance and repair work in 1909 was done under the direction of John Breen of Princeton, who has had charge of the work for several years. For permanent improvement several of the worst sections of the road leading from Princeton to Waite were selected, surveyed and mapped. Specifications were prepared and the work advertised for letting. No bids were received. The State commissioner of highways proceeded to repair one section of the road adjoining the bridge between Princeton and Indian Township, doing the work by day labor.

The following expenditures were made against this appropriation:

FOR MAINTENANCE.

Date	Vo. No.	Favor of	For.	Amount.
Jul. 29,	120	John Breen,	Pay Roll,	\$699 50
Oct. 20,	332	John Breen,	Pay Roll,	300 50
				<hr/>
For maintenance				\$1000 00

FOR PERMANENT REPAIRS.

Date	Vo. No.	Favor of	For	Amount.
Oct. 20,	229	Northeast Metal Culvert Co.	Culverts.	\$149 44
" "	294	Calais Advertiser	Advertising	4 50
" "	295	Bangor Daily News	"	16 00
" "	312	J. W. Edgerly	Survey	26 00
Nov. 18,	421	Northeast Metal Culvert Co.	Culverts	66 50
" "	525	John Breen	Payroll	182 87
Dec. 7,	561	Northeast Metal Culvert Co.	Culverts	685 52
" "	562	G. S. P. Brannen	Payroll	466 25
" "	563	Chas. A. Rolfe	Nails, ce- ment, etc.,	40 20
" "	643	J. C. Horsman		1 25
" "	644	Chas. A. Rolfe		2 50
" "	645	L. McKechnie & Sons,	Lumber for guard-rails	33 27
" "	646	G. S. P. Brannen	Payroll	21 25
" 17	782	C. F. Pray	Survey	111 65
				<hr/>
Unexpended balance				\$1,807 20
				692 80
				<hr/>
				\$2,500 00

As will be observed the appropriation for maintenance was entirely used up. There is an unexpended balance of six hundred ninety-two dollars and eighty cents (\$692.80) on account of permanent improvements which the governor and council have made available for expenditure in 1910.

The large bill for culverts was contracted late in the season and the culverts are on hand and will be placed during 1910.

RESOLVE IN FAVOR OF THE TOWN OF JONESBORO.

Appropriation of one thousand dollars (\$1,000.00) for the repair of the Drisko bridge in the town of Jonesboro.

After a careful survey of this location it was decided that the appropriation would only build a wooden structure. Plans and specifications were prepared for a bridge 163 ft. long and 16 ft. wide consisting of two king-post trusses, one 28 ft. and the other 31 ft. span and 6 spans resting on frame trestle bents; the trusses are at either end of the bridge and the shore end of each truss rests on a first-class granite abutment previously built by the town. The following bids were received on this work:

Grady & McCarthy, Bangor.....	\$937 00
New England Contracting Co., Worcester, Mass. ....	945 00
Chas. W. Smith, Jonesboro.....	957 37
B. D. & B. F. Whitney, Machias....	1,000 00

The contract was let to Grady & McCarthy and a first-class timber structure has been built. Other expenses in connection with this work were as follows:

Advertising, Bangor Daily News....	\$12 00
Inspection, Truman L. Ayers.....	23 38

leaving an unexpended balance of twenty-seven dollars and sixty-two cents (\$27.62) which reverted to the state treasury.

RESOLVE IN FAVOR OF AID IN BUILDING A HIGHWAY BRIDGE  
ACROSS THE EAST BRANCH OF THE PENOBSCOT RIVER IN THE  
TOWN OF MEDWAY.

Appropriation twenty thousand dollars (\$20,000.00) to be paid ten thousand dollars (\$10,000.00) in 1909 and ten thousand dollars (\$10,000.00) in 1910, provided the County of Penobscot, the towns of Millinocket, East Millinocket and Medway raise sufficient money, which together with the above appropriation, would be sufficient to complete said bridge within two years. This bridge is located wholly in the town of Medway and strictly speaking the town of Medway should have assumed all the care of financing the job and looking after the construction. It seemed better, however, on account of the financial condition of the town that the State should do this, so the state commissioner of highways assumed charge of the job and has let contracts in the name of the State for the masonry and the superstructure. The County of Penob-

scot, by its Commissioners, and each of the towns above named, by its municipal officers, have entered into contract with the State to provide in fixed amounts or proportions the additional cost of construction over and above the State's appropriation. The following bids were received:

On the superstructure:

Boston Bridge Works.....	\$13,699 00
American Bridge Company.....	13,140 00

The contract was awarded to the American Bridge Company.

After the award had been made, but before any work had been done, it was decided to change the length of spans to accommodate the log driving interests on the river, and the contract price for the bridge, as it will be constructed, is thirteen thousand three hundred fifty-two dollars (\$13,352.00).

On the substructure the following bids were received:

Leslie & Maher:

First-class masonry .....	\$15.00 per cu. yd.
Concrete masonry .....	15.00 per cu. yd.
Excavation under water...	1.50 per cu. yd.

Reed, Steward & Blunt of Skowhegan:

First-class masonry .....	\$14.50 per cu. yd.
Concrete masonry .....	8.50 per cu. yd.
Excavation under water...	2.00 per cu. yd.

The contract was awarded to Reed, Steward & Blunt of Skowhegan.

The masonry will be completed about February twentieth, and the bridge will be put on immediately after.

RESOLVE FOR THE MAINTENANCE OF STATE BRIDGES LOCATED IN  
THE CITY OF OLDTOWN AND THE TOWN OF MILFORD.

Appropriation one thousand two hundred fifty dollars (\$1,250.00) for the year 1909 and the same for the year 1910.

In connection with the ordinary maintenance work on these two bridges during the past year the Oldtown bridge was completely replanked and a rip-rap wall was built on the south side of the west approach of the Milford bridge to take the place of a hemlock wall, which was so badly decayed that a portion of it had fallen down. These two jobs were done by contract and the following bids were received:

NAME.	Floor per 1000 ft. B. M.	Floor beams per 1000 ft. B.M.	Rip-rap walls.
S. D. Crocker, Oldtown.....	\$30 00	\$30 00	\$624 40
Grady & McCarthy, Bangor..	29 40	31 40	529 00
Jas. McNulty, Oldtown.....	33 25	3½c. per ft. B. M.	
W. W. Frost & Co., Bangor..	35 00	45 00	1,561 00
E. T. Hartwell, Oldtown.....	32 00	36 00	899 00

The contract was let to Grady & McCarthy, and they received for doing the work nine hundred ninety-five dollars and fifty-eight cents (\$995.58).

The balance of the appropriation was expended for lighting and sweeping the bridge, repairing approaches and for advertising and inspection on above contract.

#### RESOLVE IN FAVOR OF THE TOWN OF SEBEC.

Appropriation, three thousand seven hundred fifty dollars (\$3,750.00) for the year 1909 to aid in the construction of a steel bridge across the Sebec river in the town of Sebec, provided an equal amount be furnished and expended by said town of Sebec for the same purpose.

Plans and specifications were prepared and advertised calling for two abutments and one pier of either stone masonry or concrete and for one steel span or two steel spans.

At the same time bids were invited for a reinforced concrete bridge, design to be submitted by the bidder. The following proposals were received:

#### FOR STEEL BRIDGE.

BIDDER.	176 ft. span.	Two 87 ft. spans
Penn Bridge Co. ....	\$6,120 00	\$4,680 00
Canton Bridge Co. ....	5,800 00	4,400 00
American Bridge Co. ....	6,847 00	5,600 00

#### FOR MASONRY.

	2nd class per cu. yd.	1-2-4 concrete per cu. yd.	1-3-6 concrete per cu. yd.	Exca. under water cu. yd.
Grady & McCarthy....		\$8 25	\$7 70	\$0 85
H. A. Brawn.....	\$13 00	14 67	14 00	1 50

FOR CONCRETE ARCH.

Hennebique Constr. Co. ....	\$10,150 00
J. L. Russell * .....	6,862 00
John W. Gulliver .....	18,700 00
Fred T. Ley & Co.....	7,500 00

Contract was awarded to the Fred T. Ley Company for a three-span reinforced concrete arch bridge. The work has been completed and paid for. A good strong job was done but one which might have been improved upon in workmanship and appearance.

The town bore the expense of advertising, engineering and supervision.

RESOLVE IN FAVOR OF THE TOWN OF WHITNEYVILLE.

Appropriation two thousand dollars (\$2,000.00) to aid the inhabitants of Whitneyville in repairing the bridge that crosses the Machias river.

A careful examination of this structure showed that the wooden abutment under the north end of the bridge was the weakest part of the structure. Plans and specifications were made for replacing this wooden abutment with one of masonry. In response to advertisements the following bids were received:

NAME.	2nd class granite mas'y.	1-3-6 concrete.	Excavation under water
Wm. H. Sawyer, Bangor.....	\$9 00	\$9 00	\$1 50
C. M. Willey, Bar Harbor.....	6 95	7 35	1 50
S. M. Holway, Machias.....	5 78	5 90	75
Wm. McKeague, Whitneyville..		7 95	90
Grady & McCarthy, Bangor....	8 45	7 40	1 40
New England Contracting Com- pany, Worcester, Mass.....	8 75	7 42	1 50

The work was awarded to S. M. Holway of Machias for second-class masonry. After the masonry was well under way a further inspection of the bridge showed that some of the wooden trusses were in poor condition and it was decided to

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\* Submitted in accordance with his own specifications for concrete and bid was thrown out.

replace several of them; also to replank the bridge and put up new railings. The complete expenditure on this work was as follows:

Oct. 2, Bangor Daily News (advertising).....	\$7 67
“ 11, J. P. Bass Pub. Co. (advertising).....	3 37
“ 30, Geo. McQuesten Co., yellow pine.....	178 73
Nov. 6, Bailey & Field, soil pipe.....	1 45
“ 12, Machias Lumber Co., plank for floor.....	198 63
Dec. 8, W. A. Sanborn, freight on yellow pine....	13 25
“ 16, Mrs. I. S. Albee, board of inspector.....	36 00
“ 17, Isaac Pennell, blacksmith work on truss rods .....	6 87
“ “ B. D. & B. F. Whitney, engineering and superintendence .....	213 50
“ “ William McKeague, labor on trusses and floor .....	19 50
“ “ Chas. McKeague, labor on trusses and floor	10 40
“ “ W. E. Ackley, labor on trusses and floor ..	10 40
“ “ Newell P. Albee, labor on trusses and floor	15 20
“ “ John Nash, labor on trusses and floor ....	17 50
“ 18, S. M. Holway, contract for masonry.....	1,648 59
	\$2,381 06

Of the above amount the State paid two thousand dollars (\$2,000.00) and the town three hundred eighty-one dollars and six cents (\$381.06). In order to meet this payment the town had to negotiate a loan and will probably ask the next legislature to reimburse it for the amount of its expenditure in connection with this work.

# STATE ROAD LAW.

PUBLIC LAWS OF 1907,

CHAPTER 112,

AS AMENDED BY CHAPTER 69, P. L. 1909.

An Act to provide for State Aid, and for the expenditure of other public moneys, in the permanent improvement of main highways or State Roads.

*Be it enacted by the Senate and House of Representatives in Legislature assembled, as follows:*

Section 1. The objects of this act are to obtain a more uniform system for the permanent improvement of main highways or state roads throughout the state, to secure the co-operation of the municipalities and the State in providing means therefor, and to provide for more efficient and economical expenditure of moneys appropriated for highway construction and repairs.

Objects of this act.

Section 2. The following described roads shall be considered main highways or state roads within the meaning of this act; in towns which have already availed themselves of the provisions of sections ninety-nine to one hundred and five of chapter twenty-three, revised statutes, nineteen hundred and three, and acts amendatory thereof and additional thereto, such roads as have heretofore been designated state roads by the county commissioners; in towns which have not heretofore availed themselves of said provisions, but which vote to accept the provisions of this act, such roads as may hereafter be designated as state roads. When notified by the state commissioner of highways that any town has voted to accept the provisions of this act, it shall be the duty of the

What roads shall be considered main highways or state roads.

-duty of county commissioners.



county commissioners of the county in which such town is located, on or before June first of the year of such notification to determine the main traveled thoroughfare of said town and to designate the same as the state road. Said county commissioners shall forthwith return to the state commissioner of highways a record of their proceedings in each town and an accurate, minute, and careful description of each road so designated.

Upon petition to state commissioner of highways and hearing thereon, location of state road by county commissioners may be changed.

—board to hear petition and parties, how constituted.

—pay of county commissioners.

Provided, however, that upon petition of a majority of the legal voters in any town or a majority of the municipal officers of any city presented to the state commissioner of highways stating that in the judgment of the petitioners the road as designated by the county commissioners is not the main traveled thoroughfare in that town and that public convenience would be better served by the designation of some other road as the state road, which other road must be described in the petition, it shall be the duty of the state commissioner of highways, after such notice as he may order, to give a public hearing upon said petition at some convenient place where all parties interested may be heard. The state commissioner of highways, the mayor, or street commissioner or city engineer, if designated by the mayor to act in his stead, in the case of cities; the chairman of the selectmen or one member of the board whom the chairman shall designate, in the case of towns; the chairman of the board of assessors, or one member of the board of assessors who shall be designated by the chairman, in the case of plantations; and a county commissioner from an adjoining county to be chosen jointly by the state commissioner and the representative of the city, town or plantation as provided herein, shall constitute a board to hear said petitions and parties interested and designate the state road, which designation shall be final. County commissioners when hearing said petitions shall receive three dollars per day and expenses, to be paid together with advertising and incidental expenses from the treasury of the county in which the town

is located. In case the decision is against the petitioners said board shall order in their decision that the petitioners repay to the county within a fixed time all said costs in connection with the hearing of the petition. In case such payment shall not be made within the time so fixed then the treasurer of the county within which the petition was heard shall commence an action of debt against said petitioners or any of them in the name of the county for the recovery of said costs and expenses.

Provided, further, that when the state road in any town has been reconstructed in a permanent manner within the meaning of this act it shall be the duty of the county commissioners to designate the next important main thoroughfare as state road. Municipal officers may notify the state commissioner of highways when in their opinion the state road is entirely reconstructed as above, but such notification must be made immediately upon the completion of the road. It shall then be the duty of the state commissioner of highways, together with the county commissioners of the county in which the road is located to make an inspection of the road and to determine whether or not it is complete. If they find the road to be not complete they shall specify to the municipal officers in what particulars, and the municipal officers shall, in their next proposal for expenditure of joint funds, specify that it is desired to use said joint funds in completing said road according to said specifications returned by the state commissioner of highways and the county commissioners. If the road is complete the county commissioners shall designate another state road as provided in this section.

County commissioners to designate next important main thoroughfare.

—inspection of road.

Section 3. To carry out the provisions of this act there is hereby created and established a state highway department whose chief officer shall be called the state commissioner of highways. Said commissioner shall be a civil engineer and shall be appointed by the governor with the advice and consent of the council, within ten days after this act takes effect.

State highway department.

—appointment of commissioner.

--term of office.

--salary.

--expenses.

--may appoint one assistant.

--salary of assistant.

--may appoint clerk.

--stenographer.

May employ necessary help.

Salaries and expenses, how charged.

Town shall provide for permanent improvement of highways.

Amount towns may

The term of office of said commissioner shall be four years and until his successor is appointed and qualified. He shall receive an annual salary of two thousand five hundred dollars, and in addition thereto such actual expenses, not exceeding fifteen hundred dollars annually, as he may personally incur in the execution of the duties of his office, the same to be approved by the governor and council. Said commissioner shall be furnished with suitable offices at the seat of government properly provided with all necessary furniture, equipment and stationery, and he shall personally superintend the work of the department. Said commissioner may appoint, if the work of the department requires it, subject to the approval of the governor and council, one assistant commissioner who shall be a civil engineer and experienced in road building. Said assistant commissioner shall receive an annual salary not to exceed fifteen hundred dollars and actual expenses incurred when on official business within the State, the same to be approved by the governor and council. He may also appoint one clerk and bookkeeper at a salary not to exceed thirteen hundred dollars and one stenographer at such salary as may be determined upon and approved by the governor and council.

He may also employ such other help as the execution of this act shall make necessary upon terms to be approved by the governor and council.

All salaries and expenses called for in this section shall be charged against administration except as hereinafter provided.

Section 4. If any city or town or organized plantation or the county commissioners for any unincorporated township desire state aid as contemplated by this act, for the permanent improvement of its state road, such city or town or organized plantation may raise and appropriate in addition to the amounts regularly raised and appropriated for the care of ways, highways and bridges the following amounts, on account of which aid shall be paid.

Towns having a valuation of two hundred thou-

sand dollars or less may appropriate any amount not exceeding two hundred dollars; towns having a valuation over two hundred thousand dollars and not over eight hundred thousand dollars may appropriate any amount not exceeding four hundred dollars; towns having a valuation over eight hundred thousand dollars and less than one million dollars may appropriate any amount not exceeding four hundred fifty dollars; and towns having a valuation over one million dollars and not exceeding three million dollars may appropriate an additional fifty dollars for each two hundred thousand dollars additional valuation or fraction thereof; towns having a valuation of three million dollars and less than four million dollars, may appropriate one thousand dollars; and towns having a valuation over four million dollars may appropriate an additional one hundred dollars for each one million dollars additional valuation or fraction thereof.

And the commissioners of each county within which are located unincorporated townships, if they desire state aid for the permanent improvement of the main thoroughfare or state road of any of said townships, shall raise and appropriate in addition to the amounts regularly raised and appropriated for the care of highways and bridges, in each of said townships, fifty cents for each thousand of valuation of each of said townships for which state aid is desired.

And it shall be lawful for any city government to make appropriation in order to secure state aid at any meeting of said city government held between the date of its inauguration and April fifteenth.

Section 5. Application for such state aid in any year, and notice of the raising and appropriation of such additional amount called for in the preceding section by any city, town or organized plantation or by the commissioners of such counties as have unincorporated townships entitled to state aid, shall on or before April fifteenth of such year, be made and given to the state commissioner of highways by the

appropriate.

County commissioners shall set apart funds in unincorporated townships.

Cities may make appropriation at any meeting.

—application for state aid.

—notice to commissioner of highways.

clerks of such cities, towns, plantations or boards of county commissioners; except that in the case of cities the time may be extended to June fifteenth. Otherwise they shall not be entitled to such aid for such year.

Duty of selectmen.

It shall be the duty of the selectmen of each town to insert in the warrant for each annual town meeting an article calling upon the voters to vote 'yes' or 'no' on the adoption of the provisions of this act relating to the appropriation of money necessary to entitle the town to state aid for highways, for the year in which such meeting is to be held.

Commissioner of highways shall apportion money.

Apportionment.

Section 6. The state commissioner of highways shall apportion from the amount appropriated under the provisions of this act, to each city, town and organized plantation which has applied for state aid and has appropriated the additional amount provided for in section four, for each dollar so appropriated, the following amounts: To towns having a valuation of two hundred thousand dollars or less, two dollars for each dollar appropriated by said town; to towns having a valuation over two hundred thousand dollars and less than one million dollars, one dollar for each dollar appropriated by said town; to towns having a valuation of one million dollars and less than one million two hundred thousand dollars, ninety-two cents; to towns having a valuation of one million two hundred thousand dollars and not exceeding one million four hundred thousand dollars, eighty-five cents; to towns having a valuation of one million four hundred thousand dollars and not exceeding one million six hundred thousand dollars, eighty cents; and to towns having a valuation of one million six hundred thousand dollars and over, seventy-five cents for each dollar so appropriated under section four. And to unincorporated townships for which the county commissioners have applied and have appropriated the additional amount provided for in section four, there shall be apportioned one dollar for each dollar so appropriated.

Joint fund for improve-

Section 7. The amount of money appropriated

by such city, town, organized plantation, or for such incorporated township as applies for state aid, as provided for in section four with the amount apportioned by the state commissioner of highways, as provided for in section six, shall constitute a joint fund for the permanent improvement of the state road in each of said cities, towns, organized plantations or unincorporated townships. And on or before May fifteenth of each year it shall be the duty of the officers having jurisdiction over highways in said cities, towns, organized plantations and unincorporated townships to file with the state commissioner of highways a proposal setting forth the location on the state road and nature of the permanent improvements desired to be made; except that in the case of cities the time may be extended to July fifteenth. The state commissioner of highways shall upon receipt of this proposal notify the said officers whether or not the proposed location and the proposed work meets with his approval, and if not, his reasons therefor. No work shall be commenced or prosecuted until the state commissioner of highways has approved the same and issued specifications by which the work must be done. No state aid shall be paid until all work undertaken has been constructed to his satisfaction.

ment of state road.

—duty of officers having charge of highways.

—shall file proposal with commissioner of highways.

—approval of proposal.

He may also, upon request of the officers of any city not employing a city engineer, or town or organized plantation or unincorporated township, furnish to such city, town, organized plantation or unincorporated township, free of charge, the services of any engineer or inspector in the employ of the State under this act for the purpose of consultation and advice concerning the construction, improvement and repair of the highways in such city, town, organized plantation or unincorporated township. And any special expenses incurred in providing such engineers or inspectors shall be charged against administration and shall be paid for out of the general appropriation made under this act. A certificate of the cost of every road constructed under the pro-

—may furnish service of engineer or inspector to towns, free of charge.

—special expenses, how charged.

-officers shall file statement with commissioner of highways.

Survey notes shall be filed.

Expenditure of joint fund.

Commissioner of highways to make surveys, plans and estimates.

-changes of grade.

-selectmen shall advertise for bids.

visions of this act not upon a contract shall be filed with the state commissioner of highways, by the selectmen or authorized authority over the work of the town in which such road shall have been constructed, on or before November first. Survey notes, copies of all plans and contracts together with all other records pertaining to the expenditure of any State moneys under this act or any subsequent act for the improvement of highways shall be filed and remain of record in the office of the state commissioner of highways.

Any part of said joint fund not expended during the year for which it is set apart and apportioned, may be expended during the succeeding year. If, in the opinion of the state commissioner of highways, said joint fund or any part thereof, for any year cannot be advantageously expended, the same may be expended the succeeding year.

Section 8. As soon as the location and general character of the proposed work has been determined upon in towns where one thousand dollars or more of joint fund is to be expended under the provisions of this act, it shall be the duty of the state commissioner of highways to make surveys, plans, estimates and specifications for the proposed improvement. These plans and specifications shall conform substantially to the proposal filed under the preceding section and agreed upon between the state commissioner of highways and the selectmen or other officers having jurisdiction over highways. Changes of grade and alignment may be made when the road will be benefited thereby and authority is hereby given to make such changes. Said plans and specifications shall, upon completion, be forwarded to the selectmen or other officers having jurisdiction over highways in the said town in which the particular work is located, whose duty it shall be to immediately advertise for bids for doing said work according to said plans and specifications in two or more public newspapers, printed or circulated in the county, for three weeks successively, at least once in each

week. This advertisement shall state the place where bidders may examine said plans and specifications, and the time and place where the bids for said work will be received by the board of selectmen or other local officers having jurisdiction. Each bidder must accompany his bid with a certified check payable to the treasurer of the city, town, plantation or county as the case may be, for ten per cent of the amount of his bid as a guarantee that if the work is awarded to him, he will enter into a contract with said board for the same. All bids so submitted shall be immediately and publicly read at the time for opening the same, as stated in said advertisement, and referred to the state commissioner of highways for his approval. The selectmen or other local officers having jurisdiction and the state commissioner of highways shall have the right to reject any or all bids, if in their opinion good cause exists therefor, but otherwise they shall award the contract to the lowest responsible bidder. The successful bidder shall give satisfactory evidence of his ability to perform the contract, and shall within fifteen days from the awarding of the contract also furnish bonds in the penal sum of at least one-half of the amount of the contract with two or more sureties, owners of real estate in the county, or a surety or trust company, authorized to transact business within the State to be approved by both the board receiving the bids and by the state commissioner of highways, conditional for the faithful performance of said work in strict conformity with the contract, plans and specifications for the same. The contract, plans and specifications shall be executed in triplicate, one copy going to the contractor, one to the local board of officers having jurisdiction and one to the state commissioner of highways. Whenever the mayor and city council or such other board as has jurisdiction over highways in a city, or the selectmen of any town, or the assessors of any organized plantation, or the county commissioners for unincorporated townships,

-guarantee of bidder.

-all bids made public.

-right to reject all bids.

Bond shall be furnished.

-contract shall be in triplicate.

-bids in behalf of towns.



shall desire in behalf of such city, town, plantation or unincorporated township to bid upon work located within said city, town, plantation or unincorporated township, they shall submit their bids to the state commissioner of highways at least one day prior to the time specified for the opening of the other bids as stated in the advertisement for bids, and all bids submitted in behalf of town shall be subject to the requirements made and provided for in this section, except that no certified check or bond shall be required of any town or city making bids or accepting contracts for construction.

Bids in  
behalf of  
towns,  
when to be  
opened.

-contract  
shall go  
to town,  
if lowest  
bidder.

No bids in behalf of towns shall be opened by the state commissioner of highways until after the other bids for the same work shall have been publicly opened and read by the board receiving them, as required by this section, and forwarded to the state commissioner of highways. If the state commissioner of highways shall find from the bids so submitted that the bid in behalf of the town is the lowest, the state commissioner of highways shall thereupon award the contract to such town, whereupon the board of local officers having jurisdiction over highways in such town shall forthwith execute a contract in behalf of such town with the state commissioner of highways in behalf of the State, to fulfil all the requirements and terms of the specifications and plans for said work, under which their bid was submitted, provided, however, that the municipal officers of any city or town may enter into a contract with the state commissioner of highways for the construction of the section of state road within said city or town immediately upon completion of plans and specifications at the estimated cost of construction made by said state commissioner of highways. The state commissioner of highways, on all work executed by contract, shall make such inspection from time to time as he may deem necessary and all material furnished and labor performed shall be to his satisfaction.

Commis-  
sioner of  
highways  
may appoint  
inspectors.

The state commissioner of highways may appoint inspectors if he deems it necessary to supervise the

construction of all roads built by contract under the provisions of this act. He shall prescribe their salaries, which shall be satisfactory to the governor and council; said salaries, however, and any special expense incurred in making surveys, plans and layouts for contract work shall be charged against the joint fund for the particular work in question.

The inspector shall require all provisions of the contract and specifications to be strictly adhered to by the contractors and immediately after the completion of each contract and before final payment is made the inspector shall make oath that all work has been completed according to contract, plans and specifications.

Specifications to be strictly adhered to.

Section 9. When the municipal officers of any city, town or plantation or the county commissioners for any unincorporated township, which has complied with the foregoing sections shall certify under oath to the state commissioner of highways that the section of state road in said town has been completed it shall be the duty of the state commissioner of highways, either personally or by his agent to inspect said road and to determine the amount of aid due thereon. The amount of aid found to be due shall be certified to the state auditor, who if he finds said amount correct will certify the same to the governor and council for payment. Work performed by individuals or corporations, not towns, under contract shall be paid for as follows: At or near the end of each calendar month during the progress of the work the state commissioner of highways shall certify to the selectmen of each town in which such contract work is being performed, the amount and value of the work done on such contract during the month, together with a statement of eighty-five per cent of the value of such work, which shall be the amount due the contractor and payable to him by the town treasurer not later than the fifteenth of the month succeeding the month in which the work was done; provided, however, that thirty days after the state commissioner of highways shall certify to the

-certificate of cost and completion to be filed.

Payments for contract work not done by towns.

selectmen that all work in connection with any such contract has been completed, inspected and accepted, the full unpaid balance of said contract as shown in said certificate shall be payable to the contractor by the town and not before.

Highways to be maintained satisfactory to commissioner of highways

Section 10. Any highway within any city or town improved by the expenditure of said joint fund shall thereafter be maintained, as are other highways, within the city, town, plantation or township within which it is located, and to the satisfaction of the state commissioner of highways.

State not liable for damages.

-damages, how assessed.

Section 11. The State shall not be liable to any person or corporation for damages arising from the construction, rebuilding, improvement or maintenance of any highway under this act. In case any person or persons or corporation shall sustain damage by any change in grade or by taking of land to alter the location of any highway which may be improved under this act the person or persons or corporation injured thereby shall be entitled to compensation to be assessed by the officers having jurisdiction where the road lies, said damage to be assessed and paid according to provisions of statute. In case the award of damages is not satisfactory, parties aggrieved shall have the same right of appeal as is provided by law in the case of damages for altering highways.

-right of appeal.

Assessment to provide funds.

-unexpended balance.

Section 12. To provide funds for the purposes of this act, there shall be assessed annually on all property in the State a tax of three-fourths of one mill on each dollar of valuation and the money derived from said tax shall be for the exclusive uses and purposes set forth in this act. Any unexpended balance at the end of any year shall be added to the fund for the next year. From this fund shall be paid all state aid for road improvement as provided for under this act.

Trunk lines may be built

Section 13. After providing for the payment of State aid applied for, the balance of the fund or any part thereof may be expended by the state commissioner of highways in rebuilding and improving the main thoroughfares of through travel in the State,

with the object of establishing a complete system of continuous main highways throughout the State. The location of roads to be improved under this section and the apportionment of funds for the same shall be determined by the state commissioner of highways subject to the approval of the governor and council. The same general provisions made for the construction and maintenance of other state roads under this act shall apply to roads constructed under authority of this section, except that the whole cost of construction may be paid by the State. <sup>-proviso</sup>

Section 14. The fiscal year for the purposes of this act shall end December thirty-one. Wherever the word 'valuation' is used in this act it shall mean the valuation last made by the state board of assessors. Wherever the word city, town or organized plantation or unincorporated township is used singly in this act and the phrase or clause in which it is used could as well apply to all four classes of political subdivisions or to any other one class it shall be understood to so apply. <sup>fiscal year.</sup> <sup>-definition of the word valuation.</sup>

Section 15. In connection with the foregoing duties the state commissioner of highways, having first regard for the performance of those duties, shall also compile statistics relating to the public ways in the cities and towns of the State, and make such investigation relating thereto as he shall deem expedient, in order to secure better and more improved highways in the State. He shall also by means of maps, charts, cuts, drawings, prints, publications, printed or written articles, lectures, or otherwise, disseminate knowledge throughout the State concerning the best known economical methods for the building and maintaining of highways, including bridges in the cities and towns of the State, and particularly to impart such information, in manner as aforesaid, to the county commissioners of counties, the street commissioners of cities, the selectmen of towns and other municipal officers whose duties it may be to have the care and management of the expenditure of money and the building and keeping in repair of the high- <sup>shall compile statistics.</sup> <sup>-disseminate knowledge.</sup>

—hold  
meetings.

ways in the State. Said commissioner shall hold each year under the auspices of the county commissioners, a meeting in each county for the open discussion of questions relating to the building and maintaining of public ways, of which due notice shall be given to the towns and cities in each county by the said county commissioners.

Shall make  
an annual  
report.

Section 16. The state commissioner of highways shall make an annual report to the governor and council of the operations of the state highway department. This report shall show the number of miles, cost and character of the roads built under its direction, together with a statement of expenses of the department and such other information concerning the condition of public roads of the State and the progress of their improvement as may be proper. He shall also make recommendations for any legislation which to him seem expedient and necessary.

Report  
shall be  
transmitted  
to secretary  
of state

His report shall be transmitted to the secretary of state as soon after the first Wednesday of January of each year as possible.

County com-  
missioners  
and city  
and town  
officers shall  
furnish  
information.

Section 17. County commissioners and city and town officers having the care of and authority over public ways and bridges throughout the State shall, on request, furnish said commissioner any information which they may possess and required by him, concerning ways and bridges within their jurisdiction.

Sections 99  
to 105, inclu-  
sive, chapter  
23, R. S.,  
and chapter  
146, public  
laws 1905,  
repealed.

Section 18. Sections ninety-nine to one hundred and five inclusive of chapter twenty-three, revised statutes of nineteen hundred and three and acts amendatory thereof, and chapter one hundred and forty-six of the public laws of nineteen hundred and five are hereby repealed when this act takes effect.

When act  
takes effect.

Section 19. This act shall take effect January first, nineteen hundred and eight.

Approved March 26, 1907.

FINANCIAL STATEMENT

SHOWING APPLICATION OF AMENDED STATE ROAD LAW.

VALUATION OF TOWN.		Towns may raise.	Rate of state aid per dollar appropriated by town.	State will pay.	Joint fund.	No. of towns.	Total state aid.
Under	\$200,000	\$200	(\$2.00)	\$400	\$600	193	\$77,200
\$200,000	to 800,000	400	( 1.00)	400	800	203	81,200
800,000	to 1,000,000	450	( 1.00)	450	900	21	9,450
1,000,000	to 1,200,000	500	( .92)	460	960	13	5,980
1,200,000	to 1,400,000	550	( .85)	467	1,017	11	5,137
1,400,000	to 1,600,000	600	( .80)	480	1,080	9	4,320
1,600,000	to 1,800,000	650	( .75)	488	1,138	3	1,464
1,800,000	to 2,000,000	700	.....	525	1,225	4	2,100
2,000,000	to 2,200,000	750	.....	562	1,312	2	1,124
2,200,000	to 2,400,000	800	.....	600	1,400	2	1,200
2,400,000	to 2,600,000	850	.....	637	1,487	5	3,185
2,600,000	to 2,800,000	900	.....	675	1,575	3	2,025
2,800,000	to 3,000,000	950	.....	712	1,662	1	712
3,000,000	to 4,000,000	1,000	.....	750	1,750	7	5,250
4,000,000	to 5,000,000	1,100	.....	825	1,925	2	1,750
5,000,000	to 6,000,000	1,200	.....	900	2,100	1	900
6,000,000	to 7,000,000	1,300	.....	975	2,275	2	1,950
7,000,000	to 8,000,000	1,400	.....	1,050	2,450	3	3,150
8,600,000	to 9,000,000	1,500	.....	1,125	2,625	1	1,125
9,000,000	to 10,000,000	1,600	.....	1,200	2,800	.....	.....
10,000,000	to 11,000,000	1,700	.....	1,275	2,975	.....	.....
11,000,000	to 12,000,000	1,800	.....	1,350	3,150	.....	.....
12,000,000	to 13,000,000	1,900	.....	1,425	3,225	.....	.....
13,000,000	to 14,000,000	2,000	.....	1,500	3,500	.....	.....
14,000,000	to 15,000,000	2,100	.....	1,575	3,675	.....	.....
15,000,000	to 17,000,000	2,300	.....	1,725	4,025	1	1,725
17,000,000	to 19,000,000	2,500	.....	1,875	4,375	.....	.....
19,000,000	to 21,000,000	2,700	.....	2,025	4,725	.....	.....
21,000,000	to 23,000,000	2,900	.....	2,175	5,075	1	2,175
23,000,000	to 25,000,000	3,100	.....	2,325	5,425	.....	.....
25,000,000	to 27,000,000	3,300	.....	2,475	5,775	.....	.....
27,000,000	to 29,000,000	3,500	.....	2,625	6,125	.....	.....
29,000,000	to 31,000,000	3,700	.....	2,775	6,475	.....	.....
31,000,000	to 33,000,000	3,900	.....	2,925	6,825	.....	.....
33,000,000	to 35,000,000	4,100	.....	3,075	7,175	.....	.....
35,000,000	to 37,000,000	4,300	.....	3,225	7,525	.....	.....
37,000,000	to 39,000,000	4,500	.....	3,375	7,875	.....	.....
39,000,000	to 41,000,000	4,700	.....	3,525	8,225	.....	.....
41,000,000	to 43,000,000	4,900	.....	3,675	8,575	.....	.....
43,000,000	to 45,000,000	5,100	.....	3,825	8,925	.....	.....
45,000,000	to 47,000,000	5,300	.....	3,975	9,275	.....	.....
47,000,000	to 49,000,000	5,500	.....	4,125	9,625	.....	.....
49,000,000	to 51,000,000	5,700	.....	4,275	9,975	.....	.....
51,000,000	to 53,000,000	5,900	.....	4,425	10,325	.....	.....
53,000,000	to 55,000,000	6,100	.....	4,575	10,675	.....	.....
55,000,000	to 57,000,000	6,300	.....	4,725	11,025	.....	.....
57,000,000	to 59,000,000	6,500	.....	4,875	11,375	.....	.....
59,000,000	to 61,000,000	6,700	.....	5,025	11,725	1	5,025
Unincorp'ted townships	.....	.....	.....	.....	.....	89	8,000
Total	.....	.....	.....	.....	.....	578	\$228,150

Under this amendment each of the 396 towns with a valuation less than \$800,000 may receive an increased amount of state aid.



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