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Compliments of
Guy C. Emerson,

Superintendent of Streets.
PLEASE EXCHANGE.

## ANNUAL REPORT

## Street Department

FOR THE

## YEAR 1908



0<br>CITY OF BOSTON<br>PRINTING DEPARTMENT<br>1909

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## ANNUAL REPORT

OF THE

# STREET DEPARTMENT 

FOR THE<br>YEAR ENDING JANUARY 31, 1909.

Boston, February 1, 1909.
Hon. George A. Hibbard,
Mayor of the City of Boston:

Sir,-In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Street Department for the year ending January 31, 1909, is herewith respectfully submitted.

## Organization.

The work of the department has" been carried on during the year according to the reorganization created by chapter 3 of the Ordinances of 1908. The present organization is similar to that established in 1891 and amended in 1895, except that the then existing Lamp Department is now a division of the Street Department. The several divisions of the department are as follows:

Central Office, Bridge Division, Ferry Division, Lamp Division, Paving Division,

Sanitary Division, Sewer Division, Street Cleaning and Watering Division, Boston and Cambridge Bridges.

Note.- The Boston and Cambridge Bridges Division, so called, is not properly a division of the Street Department, as this work is in charge of a commission of two, one member appointed by the Mayor of Boston and the other by the Mayor of Cambridge, under the provisions of chapter 467 of the Acts of 1898 and chapter 412 of the Acts of 1904; but on account of the fact that the present Superintendent of Streets is the Boston member of this commission and also because one-half of the expenses of this commission is defrayed from the appropriation for the Bridge Division of this department, it is here treated as a division of this department.

## Appropriations.

The money assigned for the work of the Street Depar iment during the year was made available from the following sources:

First.- Maintenance appropriation, derived from the income of the city raised by taxation. Before the commencement of each financial year, February 1, the department estimates of the amounts necessary for the proper maintenance of the various divisions are submitted to the Mayor, who makes such recommendation as he may deem proper to the City Council. The maintenance appropriations, as passed by the City Council and approved by the Mayor, were as follows:

| Central Office | ${ }^{*}$ |
| :---: | :---: |
| Bridge Division | \$200,000 00 |
| Ferry Division | 225,000 00 |
| Lamp Division | 800,000 00 |
| Paving Division | 850,000 00 |
| Sanitary Division | 750,000 00 |
| Sewer Division | 350,000 00 |
| Street Cleaning and Watering Division | 570,000 00 |
| Boston and Cambridge Bridgges | $\dagger$ |

Second.-Appropriation from tax levy for permanent street improvements. (Paving Division.)

| Balance February 1, 1908 (loan) | \$5,052 31 |
| :---: | :---: |
| Appropriation (tax levy) . . | 249,000 00 |
| Revenue |  |
| Total | \$254,667 31 |
| Amount expended during year | 177,566 28 |
| Balance February 1, 1909 | \$77,101 03 |

[^0]Third.- Loan inside the debt limit for building new streets assessable on abutting property, authorized by chapters 214 and 393 of the Acts of 1906. (Paving Division.)

Amount expended during the year \$99,412 74

Fourth.- Loans inside the debt limit under the provisions of chapter 426 of the Acts of 1897, as amended by chapter 204 of the Acts of 1908, from which all sewerage works are built, except those in the Charles River Basin watershed. (Sewer Division.)

Balance February 1, 1908 . . . . . $\$ 73,77809$
Loan . . . . . . . . . . 300,000 00
Total . . . . . . . . . $\$ 373,77809$
Expended during the year . . . . . 322,482 32
Balance February 1, 1909
\$51,295 77

Fifth.-Loan under the the provisions of chapter 383 of the Acts of 1903, as amended by chapter 485 of the Acts of 1907 and by chapter 514 of the Acts of 1908, authorizing the expenditure in each of the years from 1908 to 1912, inclusive, of one-twentieth of one per cent of the city's taxable valuation on the separate system of drainage. (Sewer Division.)
Balance February 1, 1908 . . . . . \$176,597 47
Loan ( $\$ 255,000$ inside, $\$ 400,000$ outside, the debt limit)

655,000 00
Total . . . . . . . . . $\$ 831,59747$
Expended during the year . . . . . 599,973 76
Balance February 1, 1909
\$231,623 71

## General Remarks.

The department has been conducted during the year along the lines established during previous years. The policy of doing the work of maintenance and repairs by the day labor force has been continued, and, in general, new construction has been done by contract. Efforts have been made to economize along certain lines, and some reduction has been made in the labor force. Analysis of the work done shows a greater amount of work performed by the smaller force, at a lower price per unit, than by the larger force during the
previous year. The result demonstrates conclusively that the employment of inefficient and incompetent men, with duties insufficient for regular employment, had resulted in a demoralization of the entire force and an expense beyond the actual compensation of the employees in question. It is probably a fact. that the efficiency of the average city laborer is considerably less than that of the average laborer in private employ. In comparing the cost of day labor work with that of contract work, it should be taken into consideration that the city laborer is handicapped in the matter of efficiency by circumstances not altogether of his own making. Some of these are as follows:

The working of the Civil Service law, notwithstanding its merits, places the department at a disadvantage by furnishing, in certain lines, men who, on account of age or lack of previous experience, are incompetent and inefficient. Especially is this true of that part of the law known as the "Veterans' Preference Act"; and it is particularly unfortunate that men furnished under its provisions are usually of the grade of foremen, thereby lessening to a great degree the efficiency of the subordinates under them.
The various executive orders regarding payment to be allowed for holidays reduces the working time of the force by about $10 \frac{1}{2}$ per cent, as compared with contract work, and entail upon the department a yearly expenditure of approximately $\$ 170,000$ for which no service is rendered. The wages of city laborers average about 25 per cent above those paid by contractors for similar work, and entail a further excess cost of about $\$ 320,000$ per year to the four divisions of this department employing a force of common laborers, viz., the Paving, Sanitary, Sewer and Street Cleaning Divisions.

Some extension of the contract system has been made during the year, as follows:

In the matter of hired teams, the petty patronage on this account had approached the condition of a nuisance. During the early part of the year, the department had upward of one thousand applications from persons wishing to furnish teams at the standard price of $\$ 6$ per day. This price was considerably greater than that paid by outside parties, and it was determined to secure teams by open competition, with the result that the bills for teaming for the year have been reduced $\$ 144,035.98$ from the amount paid during the preceding year, and this with a considerable increase in the amount of work done and without increase in the number of teams owned directly by the department. These contracts, which did not include watering carts, took effect between July 22 and

August 12, 1908, so that the saving given is only for the last six months of the year. It is intended to extend the contract system to the street watering service during the ensuing year.

The contract system has also been extended, with considerable success, to the matter of snow removal. It does not appear, however, that it is advisable to undertake the entire work of snow removal by contract. As an auxiliary to the force of city teams the contract system has seemed at present to be desirable.

In accordance with the recommendations of the Finance Commission, all the stone-crushers owned by the city have been sold or their services. otherwise dispensed with, and crushed stone has been secured by advertisement in the open market, resulting in a very material saving.

The matter of cleaning catch-basins and sewers has been undertaken by contract after public competition, and this has resulted in a considerable reduction in the cost of doing the work.

In the Sanitary Division, the contract system has been extended to the collection of ashes in the East Boston and Brighton districts, with a saving of approximately 50 per cent of the cost of doing the work by day labor.

The Lamp Division in all its branches has reverted to the contract system.

An analysis of the figures given above indicates that the Street Department expends in certain ways a very large sum of money for a purpose that, for the need of a better word, may be designated as charity. It is worthy of serious consideration whether steps should not be taken to prevent the extension of the day labor system under present conditions and to allow the money expended under it to be economically used for the benefit of the general public according to contract methods. With this end in view few additions to the labor service have been made during the past year, except in so far as it has been necessary to appoint new men in the clerical and engineering force to perform duties in connection with the day labor force already employed and with the contract work.

The present report is made with the object of giving desirable information in greater detail and with a greater regard to unit costs than has been presented in reports of recent years. While the result has been accomplished to some extent, it has been found impossible to give such information as completely as desired, owing to the fact that the accounts for the early portion of the year were in the same form as in
previous years, and necessary data were therefore not available. It is intended that the report for the ensuing year shall be more satisfactory in this respect.

The following are some of the general details regarding the operation of the divisions constituting the Street Department. The appropriations, as given, include also revenues and, in the case of special appropriations, balances on hand February 1, 1908.

## BRIDGE DIVISION.

Appropriation and revenue

Expenditures . . . . . . | $\$ 200,59500$ |
| ---: |
| 198,79730 |

The appropriation for the Bridge Division has been devoted entirely to the maintenance and necessary general repairs by day labor methods. Many of the bridges are in need of extensive minor repairs, cleaning, painting, etc., and an increase should be made in the appropriation for the ensuing year, to allow this work to be done, after which, the usual appropriation should be ample for their maintenance in satisfactory condition.

## FERRY DIVISION.

| Appropriation and revenue | \$225,044 85 |
| :---: | :---: |
| Expenditures | 249,068 39 |
| Deficit | \$24,023 54 |

In the Ferry Division, the work has been continued along - the lines of former years. Some slight reduction and rearrangement of the force has been made in the interests of economy and efficiency; but, in general, the organization remains the same. Increases of wages by executive order during 1907, coupled with the decreased appropriation for the past year, have rendered a curtailment of service necessary by dispensing with the service of one boat for a portion of the time.

The contract for delivering coal from the coal pockets to the boats was let by public competition, instead of by the former method of giving this contract to a favored contractor without competition. The result has been a saving of $\$ 1,001.08$ for the year.

Slight labor troubles developed early in the year on account of the demands of the engineer force for vacations or increases in salaries, resulting in an incipient strike on the part of the engineers and necessitating the discharge and replacement of the entire force. Since the discharge of this force, the conditions of service on the ferries have materially improved.

## LAMP DIVISION.

| Appropriation and revenue | \$800,023 75 |
| :---: | :---: |
| Expenditures | 809,510 06 |
| Deficit | \$9,486 31 |

The appropriation for this division for the past year was materially reduced from that of the preceding year, and was somewhat exceeded, as shown above.

A new contract for the gas lighting of the city was entered into with the Rising Sun Street Lighting Company for a period of one year, beginning September 15, 1908. Previous to this time, the work of maintenance was done directly by city laborers, the lamps being leased from the Rising Sun Street Lighting Company. This contract has resulted in a considerable economy over the previous method and in much more satisfactory service.

## PAVING DIVISION.

|  | Maintenance. | Street. <br> Improvements. |
| :---: | :---: | :---: |
| Appropriations and revenue | \$863,565 09 | \$254,667 31 |
| Expenditures . | 833,981 43 | 177,566 28 |
| Unexpended balances | \$29,583 66 | \$77,101 03 |

The expenditures for this division, except the expenditures on account of streets laid out under chapter 323 of the Acts of 1891, and amendments thereof, and a balance of about $\$ 5,000$ remaining from the loan of 1907 for Street Improvements, have been entirely from appropriations from the tax levy. As has been the custom, the greater portion of this expenditure has been by day labor methods on account of maintenance and repairs. The remarks regarding the cause of the inefficiency of the city laborer probably apply more directly to this division than to any other division of the Street Department. The same is true of the remarks regard-
ing the excess paid for hired teams. Considerable increase of efficiency has been noted, and conditions are far more satisfactory at the present time.

The percentage of macadam streets in the city is excessive, and the requirements of automobile traffic have made the question of maintenance a serious one. It can be mathematically demonstrated that a great saving could be made by placing suitable permanent pavement upon the greater portion of residential streets; and in the interests of economy steps should be taken as rapidly as possible to reduce the area of macadam pavement.

During the year experiments have been made with various bituminous binders for macadam pavements, and it is anticipated that different forms of bituminous macadam will be extensively laid during the ensuing year, replacing the present macadam pavements.

A reduction has been made in the number of districts and district foremen by the combination of Districts 2 and 3 and of Districts 5 and 11, under one foreman in each case. Otherwise the organization remains the same as for previous years. Further combinations and reductions are anticipated during the ensuing year.

## SANITARY DIVISION.

Appropriation and revenue
Expenditures $\cdot$
Unexpended balance $\quad$.
.

This division has shown the most gratifying increase in efficiency during the year of any division of the Street Department, although the appropriation was somewhat smaller than for the preceding year and the increase in the amount of work done was normal. The cost of doing the work has materially decreased, and the division finishes the year with a substantial surplus remaining from its appropriation. The division was perhaps more greatly overloaded with superfluous employees than any other, and dispensing with the services of such employees, coupled with the increase in the size of the loads hauled and the amount of work done, has been responsible for the decrease in cost. As in the other divisions, the entire economy has been effected during the last eight months of the fiscal year; and conditions are such that during the ensuing year much greater economies will be
accomplished. Additions have been made to the working plant, and improved apparatus and a considerable number of teams purchased during the year.

On account of the expiration of the contract with the City Refuse Utilization Company (which terminated on September 15,1908 ) for the disposal of city waste, and also because of the growing scarcity of inland dumps for the disposal of refuse, extensive investigations have been made during the present year, with the idea of finding in the near future a more acceptable method for the disposal of the city waste. Bids for incinerators for the disposal of a large part of the city refuse were asked for, but the returns were unsatisfactory, indicating a cost beyond an amount that could be reasonably considered by the city at the present time. Investigations are still in progress, and it is hoped that some satisfactory general scheme may be outlined in the near future.

## SEWER DIVISION.



This division has been conducted along the same lines as for previous years. The amount of the force has been somewhat reduced, and the division finished the year within its appropriation and at a considerable reduction from the expenses of the previous year.

## STREET CLEANING AND WATERING DIVISION.

Appropriation and revenue

Expenditures . . . . . . | $\$ 570,05050$ |
| ---: |
| Deficit |

The appropriation for this division was materially reduced from those of previous years, and the division somewhat exceeded it. As the work of this division is more closely under observation by the public than that of any other and most nearly affects the comfort and convenience of the
citizens, it is recommended that an increased appropriation be made for the ensuing year, in order that the work of the division may be extended.

During the year, extensive experiments have been made with various dust-laying compounds, and as a result the use of calcium chloride has been adopted to a considerable extent on suburban streets, and an emulsion of crude petroleum has been found most suitable upon streets where the traffic is considerable. These materials are greatly superior to water as dust preventatives, and although the oil emulsion has some disadvantages, they are more than compensated for by the advantages obtained. It is the intention to extend the use of these materials very greatly during the ensuing year.

Beginning early in December, 1908, the force of the division was placed in uniforms, the regulation government khaki being adopted for the purpose. This change has resulted in greater neatness in the appearance of the force, and seems also to have been productive of increased efficiency.

## BOSTON AND CAMBRIDGE BRIDGES.

$$
\begin{aligned}
& \text { Appropriation } . \\
& \text { Expenditures }
\end{aligned} .^{-} . \quad . \quad . \quad . \quad \$ 18, \overline{524} 29
$$

As has been the custom, the work of the Boston and Cambridge bridges has been directly under the charge of the Cambridge member of the commission, Mr. William H . Joyce, and to him belongs in a great measure the credit for the very excellent work accomplished.

No appropriation was made for this work during the year, and the expenditures given at the head of this paragraph were taken from the general appropriation for the Bridge Division, and are included under the expenditures given for that division.

Following are appendices containing detailed reports and information regarding the conduct of the various divisions.

The expenditures under the several appropriations for the year 1908 were as follows:
Maintenance . . . . . . . . $\$ 3,761,67630$

Street Improvements . . . . . . 177,566 28
Highways, Making of . . . . . . 99,412 74
Separate Systems of Drainage . . . . 599,973 76
Sewerage Works . . . . . . . 322,482 32
Bridge, Specials . . . . . . . 2,66883
Paving, Specials . . . . . . . 7,577 39
Total . . . . . . . . . $\$ 4,971,35762$

## Recapitulation of Expenditures for the Twelve Months ending January 31, 1909.

| Object of Appropriation. | Current Expenses. | Special <br> Appropriations. | Totals. |
| :---: | :---: | :---: | :---: |
| Street Department: |  |  |  |
| Bridge Division | \$198,797 30 | \$2,668 83 | \$201,466 13 |
| Ferry Division. | 249,068 39 |  | 249,068 39 |
| Lamp Division | 809,510 06 |  | 809,510 06 |
| Paving Division. | 833,981 43 | 7,577 39 | 841,558 82 |
| Sanitary Division. | 745.20090 |  | 745,200 90 |
| Sewer Division | 351,162 41 | 922,456 08 | 1,273,618 49 |
| Street Cleaning and Watering Division | 573,955 81 |  | 573,955 81 |
| Street Improvements. |  | 177,566 28 | 177,566 28 |
| Highways, Making of . |  | 99,412 74 | 99,412 74 |
| Totals. | \$3,761,676 30 | \$1,209,681 32 | \$4,971,357 62 |

## Financial Statement of the Street Department Appropriation.

February 1, 1908, to January 31, 1909.
Maintenance.

| Appropriatlon. | Appropriations and Transfers during 1908-09. | Revenue. | Total Credits. | Expenditures for the twelve months ending January $31,1909$. | Balances of Divisions Jan 31, 1909.* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Street Department: |  |  |  |  |  |
| Bridge Division | 1\$198,202 30 | \$595 00 | \$198,797 30 | \$198,797 30 | \$1,797 70 |
| Ferry Division | ${ }^{2} 249,02354$ | 4485 | 249,068 39 | 249,068 39 |  |
| Lamp Division. | ${ }^{3} 809,50000$ | 2375 | 809,523 75 | 809,510 06 | 1369 |
| Paving Division. | ${ }^{4} 820,47668$ | 13,565 09 | 834,041 77 | 833,981 43 | 8366 |
| Sanitary Division | ${ }^{5} 744,87190$ | 32900 | 745,200 90 | 745,200 90 | 5,128 10 |
| Sewer Division. | ${ }^{6} 349,02027$ | 2,142 14 | 351,162 41 | 351,162 41 | 97973 |
| Strest Cleaning and Watering Division. . | ${ }^{7} 573,90531$ | 5050 | 573,955 81 | 573,955 81 |  |
| Totals. | \$3,745,000 00 | \$16,750 33 | \$3,761,750 33 | \$3,761,676 30 | \$8,002 88 |



[^1]Comparative Table Showing Cost of Maintenance of the Street Department since 1899.


* Advertised and awarded to lowest bidder.
A Advertised ahd awarded to second lowest bidder on doubles and third lowest bidder on singles. §Advertised and awarded to lowest bidder on singles and second lowest bidder on doubles.

$$
\text { Previous to award of above, teaming contract prices were: Singles, } \$ 3.50 \text { per day; doubles, } \$ 6 \text { per day; extra men, } \$ 2.25 \text { per day. }
$$

The following tables show the snowfall and rainfall since 1903:

> Snowfall (inches).

| Month. | 1903-04. | 1904-05. | 1905-06. | 1906-07. | 1907-08. | 1908-09. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| November. | 2.2 |  |  | 1.1 |  |  |
| December. | 10.6 | 12.0 | 3.5 | 15.5 | 7.0 | 3.5 |
| January.. | 35.7 | 21.3 | 6.1 | 16.1 | 4.3 | 11.2 |
| February | 16.5 | 8.0 | 6.1 | 25.5 | 9.3 | 2.3 |
| March | 8.9 | 3.6 | 21.9 | 6.6 | 4.8 | 3.1 |
| April . | 1.4 |  |  |  | 0.8 |  |
| Totals | 75.3 | 44.9 | 37.6 | 64.8 | 26.2 | 20.1 |

Rainfall (inches).

|  | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| January. | 3.43 | 4.80 | 4.09 | 2.96 | 2.54 | 2.47 |
| February | 3.90 | 2.49 | 1.59 | 2.66 | 1.88 | 2.96 |
| March | 5.95 | 2.43 | 2.25 | 5.45 | 1.66 | 2.97 |
| April. | 4.43 | 9.14 | 2.14 | 2.15 | 3.31 | 1.70 |
| May. | 0.32 | 3.38 | 1.47 | 4.91 | 3.12 | 3.78 |
| June. | 7.19 | 2.06 | 5.23 | 2.57 | 2.56 | 1.08 |
| July . | 2.99 | 1.23 | 1.00 | 5.38 | 1.09 | 3.17 |
| August | 3.33 | 2.19 | 3.39 | 1.58 | 1.10 | 4.35 |
| September | 2.43 | 5.57 | 5.10 | 2.64 | 7.43 | 0.68 |
| October | 3.95 | 2.13 | 0.82 | 3.88 | 2.54 | 3.70 |
| November | 1.48 | 1.70 | 1.77 | 2.55 | 6.02 | 0.74 |
| December | 2.57 | 2.52 | 3.23 | 3.96 | 4.31 | 2.47 |
| Totals. | 41.97 | 39.64 | 32.08 | 40.60 | 37.56 | 30.07 |

In this rainfall is included the precipitation during the winter months, which equals one-tenth of an inch to one inch of snowfall.

## Nova Scotia Coal.

Importations of Coal from Nova Scotia at the Port During the Year Ending January 31, 1909.

| Months. | Tons. | Value. |
| :---: | :---: | :---: |
| Februaty, 1908 | 57,300 | \$111,735 |
| March......... | 44,600 | 86,972 |
| April. | 33,000 15,100 | 64,350 29,543 |
| June. | 33,300 | 64,935 |
| July . | 23,600 | 46,020 |
| August | 26,750 | 52,162 |
| September. | 21,550 | 42,023 |
| October... | 22,500 | 43,877 |
| November. | 31,950 | 62,304 |
| December | 26,200 | 54,091 |
| January, 1909. | 26,200 | 51,092 |
| Total | 362,050 | \$709,104 |

The Following Table Shows the Area of Pavement in Square Yards by Districts.

| Districts. | Asphalt. | Granite Block. | Wooden | $\begin{gathered} \text { Plank } \\ \text { on } \\ \text { Bridges. } \end{gathered}$ | Brick. | Cobble. | Bitulithic. | Macadam. | Gravel. | Graded. | Totals. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1907, report | 332,024 | 2,158,673 | 44,073 | 43,887 | 4,070 | 2,212 | 115,075 | 6,348,389 | 480,917 | .186,031 | 9,715,351 |
| February 1, 1909. |  |  |  |  |  |  |  |  |  |  |  |
| City Proper. | 246,434 | 950,082 | 44,805 | 15,943 | .3,863 | 1,315 | 71,336 | 609,551 | 1,449 | .... | 1,944,778 |
| Charlestown. | 5,284 | 260,040 |  | 5,473 |  |  |  | 171,313 | 275 |  | 442,385 |
| East Boston. | 1,925 | 135,534 |  | 2,763 | 251 | 897 | 620 | 450,881 | 16,357 | 503 | 609,731 |
| South Boston. | 25,021 | 396,561 |  | 8,579 |  |  | 17,784 | 365,184 | 18,672 | 106,082 | 937,883 |
| Roxbury. | 52,988 | 281,876 | 4,140 | 1,417 |  |  | 25,374 | 1,137,238 | 43,325 | 16,616 | 1,562,974 |
| West Roxbury |  | 14,186 |  | 2,061 |  |  |  | 1,304,683 | 71,951 | 23,828 | 1,416,709 |
| Dorchester. |  | 129,664 | 850 | 4,659 | 493 |  |  | 1,632,537 | 187,554 | 20,360 | 1,976,117 |
| Brighton. | 130 |  |  | 4,094 |  |  |  | 734,859 | 140,586 | 4,815 | 884,484 |
| Totals | ${ }^{1} 331,782$ | ${ }^{2} 2,167,943$ | 49,795 | 44,989 | 4,607 | 2,212 | 115,114 | ${ }^{3}$ 6,406,246 | 480,169 | 172,204 | 9,775,061 |

[^2]The following changes in pavements were made during the year:
0.01 mile or 41 square yards asphalt changed to wood block.
0.01 mile or 187 square yards granite block changed to asphalt.
0.31 mile or 5,181 square yards granite block changed to wood block.
0.00 mile or 40 square yards granite block changed to brick.
0.02 mile or 174 square yards granite block changed to macadam.
0.01 mile or 500 square yards plank on bridge changed to wood block.
0.01 mile or 216 square yards plank on bridge changed to brick.
0.02 mile or 298 square yards plank on bridge changed to macadam.
0.42 mile or 7,076 square yards macadam changed to granite block.
0.03 mile or 448 square yards macadam changed to not graded.
2.89 miles or 46,724 square yards gravel changed to macadam.
0.10 mile or 4,562 square yards not graded changed to granite block.
0.05 mile or 1,766 square yards not graded changed to plank on bridge.
0.04 mile or 2,308 square yards not graded changed to macadam.

Streets laid out or discontinued by the Street Commissioners during the year show:

Plank on bridges increased 0.01 mile or 99 square yards.
Macadam increased 0.17 mile or 2,435 square yards.
Gravel increased 2.58 miles or 41,961 square yards.
Not graded increased 0.05 miles or 1,687 square yards.
Streets laid out and constructed by Massachusetts Highway Commission during the year show:

Washington street, Lagrange street to Dedham line:
Macadam increased 16,194 square yards.
Not graded decreased 8,306 square yards.
Corrections on account of revision and other causes show:
Asphalt decreased 0.01 mile or 388 square yards.
Granite block decreased 0.05 mile and increased 3,214 square yards.
Plank on bridges increased 0.01 mile or 251 square yards.
Brick increased 0.00 mile or 281 square yards.
Bitulithic increased 0.00 mile or 39 square yards.
Macadam decreased 0.09 mile or 2,752 square yards.
Gravel increased 0.01 mile or 4,015 square yards.
Not graded increased 0.00 mile or 980 square yards.
Length of Pavements.
The Following Table Shows Length in Miles and Character of Pavement on Accepted Streets February 1, 1909.

| Districts. | Asphalt. | Granite Block. | Wooden Block. | $\begin{gathered} \text { Plank } \\ \text { on } \\ \text { Bridges. } \end{gathered}$ | Brick. | Cobble. | Bitulithic. | Macadam. | Gravel. | Not Graded. | Totals. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1907, report. | 21.69 | 96.50 | 1.77 | 2.07 | 0.38 | 0.29 | 6.18 | 346.02 | 31.30 | 5.40 | 511.60 |
| February 1, 1909. |  |  |  |  |  |  |  |  |  |  |  |
| City Proper.. | 16.47 | 42.39 | 1.88 | 0.67 | 0.35 | 0.15 | 3.59 | 28.12 | 0.11 |  | 93.73 |
| Charlestown | 0.33 | 11.32 |  | 0.23 |  |  |  | 11.61 | 0.02 |  | 23.51 |
| East Boston. | 0.11 | 6.29 |  | 0.19 |  | 0.14 | 0.03 | 21.23 | 0.79 | 0.03 | 28.81 |
| South Boston. | 1.99 | 17.73 |  | 0.38 | ...... |  | 1.04 | 19.87 | 0.90 | 3.11 | 45.02 |
| Roxbury. | 2.78 | 12.16 | 0.19 | 0.05 |  |  | 1.52 | 65.50 | 3.08 | 0.52 | 85.80 |
| West Roxbury. |  | 0.64 |  | 0.10 |  |  |  | 77.38 | 4.78 | 0.84 | 83.74 |
| Dorchester . |  | 6.10 | 0.03 | 0.22 | 0.04 |  |  | 93.10 | 11.66 | 0.64 | 111.79 |
| Brighton. |  |  |  | 0.26 |  |  |  | 31.81 | 9.66 | 0.15 | 41.88 |
| Total. | *21.68 | $\dagger 96.63$ | 2.10 | 2.10 | 0.39 | 0.29 | 6.18 | $\ddagger 348.62$ | 31.00 | 5.29 | 514.28 |

[^3]Nore.- In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston.
Territory annexed from Brookline is included in city proper.
$\dagger$ Of this amount 17.07 miles equals granite block paving on concrete base. 4.71 miles public alleys, laid out under chapter 298 of the Acts of 1898 , included in this table. 6.80 miles public streets in charge of Park Department included in this table.
In addition to this table there are 0.85 mile accepted foot passageways.

Public streets laid out by the Street Commissioners during the year show pavements increased 2.84 miles or 46,568 square yards; public streets discontinued show pavements decreased 0.03 mile or 386 square yards.

Corrections to previous measurements on account of revision and other causes show pavements decreased 0.13 mile or increased 5,640 square yards.

Total net increase - 2.68 miles or 59,710 square yards pavements on public streets.

The rate of increase, from year to year, is shown in the following table:

|  | Miles. |  | Miles. |  | Miles. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1859. | .111.50 | 1884. | . 374.10 | 1897. | . 459.12 |
| 1871. | . 201.32 | 1885. | . 379.60 | 1898. | 471.19 |
| 1872. | 207.40 | 1886. | . 383.55 | 1899. | 479.47 |
| 1873. | 209.24 | 1887. | . 390.30 | 1900. | 489.55 |
| 1874. | 313.90 | 1888. | . 392.72 | 1901. | . 491.85 |
| 1875. | . 318.58 | 1889. | . 397.84 | 1902. | 496.90 |
| 1876. | 327.50 | 1890. | . 404.60 | 1903. | . 499.85 |
| 1877. | 333.20 | 1891. | . 409.60 | 1904. | . 500.39 |
| 1878. | 340.39 | 1892. | 43459 | 1905. | . 502.20 |
| 1879. | 345.19 | 1893. | 443.34 | 1906. | . 502.80 |
| 1880. | 350.54 | 1894. | . 447.65 | 1907. | . 510.04 |
| 1881. | 355.50 | 1895. | . 452.12 | 1908. | . 511.60 |
| 1882. | 359.85 | 1896. | . 456.11 | 1909 | 14.28 |
| 1883. | 367.99 |  |  |  |  |

> Respectfully submitted, Guy C. EmERson, Superintendent of Streets.

PART II.
APPENDICES.

## APPENDIX A.

## REPORT OF THE DEPUTY SUPERINTENDENT OF BRIDGE DIVISION.

Boston, Mass., February 1, 1909.

## Mr. Guy C. Emerson, Superintendent of Streets:

Dear Sir, - I respectfully submit herewith the annual report of the Bridge Division for the fiscal year ending January 31, 1909.

There are in the City of Boston 163 bridges, not including culverts. Seven of these, namely, Brookline street, Cambridge, Cambridge street, Harvard, North Harvard street, Prison Point, and Western avenue to Cambridge, all connecting Boston and Cambridge, are in charge of two commissioners, one of whom is appointed by the Mayor of the City of Boston and the other by the Mayor of the City of Cambridge. The Charles River dam, on the site of the old Craigie Bridge, is in charge of the Charles River Basin Commission. One hundred and twenty-three bridges are supported wholly or in part by the City of Boston, twenty-seven of these being tide water bridges provided with a draw. Forty bridges are supported wholly by railroad corporations.

There are fourteen important drawbridges maintained by the City of Boston, namely, Broadway, Chelsea (south), Congress street, L street, and Warren, operated by steam, Atlantic avenue, Charlestown, Chelsea (north), Dorchester avenue, Dover street, Malden, Meridian street, and Summer street, operated by electricity; and Northern avenue, operated by compressed air, the compressors run by electricity.

Hearings have been held by the United States engineers regarding the removal of Mt. Washington Avenue Bridge, and it is anticpated that the United States authorities will require the removal of the structure of the old bridge in the near future.

The Chelsea Street Bridge was destroyed in the Chelsea fire of April 12, 1908. A special appropriation has been provided, and a new bridge is now being built, under the supervision of the Engineering Department.

The Northern Avenue Bridge was opened to travel October 26, 1908, and the maintenance of this bridge will entail an expense of about $\$ 15,000$ during the coming year.

The Congress Street Bridge has had extensive repairs both to the approaches and to the draw ; and the machinery operating the draw has been overhauled and put in good order. The bridge is now in good condition, with the exception of the draw pier and fender guard.

The Massachusetts Avenue Bridge over the Boston \& Albany Railroad has been rebuilt during the past year, and the surface of the Everett Street Bridge, Brighton, has been renewed.

Four hundred feet of the southerly end of the Cottage Street Footbridge, East Boston, has been removed, on account of the progress of the filling in of the flats on that end of the bridge.

The sluiceway on the westerly side of the railroad bridge on Southampton street has been filled in solid. The easterly sluiceway is in very bad condition, and the bridge and bulkheads should be rebuilt.

The elimination of grade crossings in East Boston has added the Sumner Street Bridge and the Webster Street Footbridge (both over the Boston \& Albany) to the bridges in charge of this division of which Boston maintains the wearing surface.

The progress of the work on the Stony brook improvement has done away with the Linden Park street, Williams street, Keyes street, and Elmwood śtreet bridges, which have been arched over, and the street built over them.

Many of the bridges are in very bad condition, and must have considerable attention during the coming year in order that they may be kept passable. On the Meridian Street Bridge, the roadway planking, water ways and pier are all in a very bad condition, and should be renewed. A new draw pier and draw landings should be built. As the repairs needed on this bridge are very extensive, a special appropriation should be provided for the purpose.

The Chelsea North Bridge will have to have special attention during the coming year; the sidewalk on the main bridge should be renewed, and also the sidewalk and roadway planking on the draw. The draw should have new machinery; the sides of the water ways and the fender guards should be removed; and the entire bridge should be painted. At least $\$ 5,000$ will be required to put this bridge in any fair kind of condition.

The entire Charlestown Bridge, together with the drawtender's house, should be painted, which will mean an expenditure of about $\$ 8,500$.

The Huntington Avenue Bridge has been considered unsafe for heavy traffic for some time past. A special appropriation has been provided for this work, and the bridge will probably be rebuilt during the coming year.

There is a bill in the Legislature providing for the construction of a new bridge at Neponset. The draw now in use is too heavy to operate by hand, and the bridge is so old that it would not be economy to install operating machinery.

The North Beacon Street Bridge is in bad condition, and should be replaced by a drawless bridge.

Respectfully submitted,
Thomas H. Sexton, Deputy Superintendent.

## STATEMENT OF EXPENDITURES.

## Administration.

Office expenses:
Salaries, superintendent and office force \$5,504 ..... 72
Salaries, supervisors ..... 2,307 79
Telephones ..... 33604
Printing, stationery and postage ..... 90870
Furniture and furnishings ..... 4574
Advertising ..... 2580
Traveling expenses ..... 5310
Medical inspector ..... 900
Total, administration ..... \$9,190 89
Maintenance Expenses.
Administration ..... \$9,190 89On tide-water bridges . . . 141,698 56
On inland bridges ..... 14,999 77

* North Yard and stable ..... 1,686 18
South Yard and stable ..... 12,697 61
Total, Boston yards and bridges, ..... \$180,273 01
Boston and Cambridge bridges ..... 18,524 29
Total, maintenance \$198,797 ..... 30
FINANCIAL STATEMENT.
Appropriation, 1908-09 ..... \$200,000 00
Received from sale of old material ..... 59500
Total, appropriation and revenue ..... \$200,595 00
Exp ended February 1, 1908, to January 31, 1909, ..... \$198,797 30
Balance ..... 1,797 70$\$ 200,59500$
* Combined with South Yard April 25; 1909.

Special Appropriations in Charge of the Bridge Division.

| NAME of Appropriatton. | Appropriation <br> and Balance. | Expended <br> February 1, 1908, <br> to <br> January 31, 1909. |
| :---: | :---: | :---: |
| Chelsea Bridge, South Draw, Reconstruction of.. | $\$ 65675$ | $\$ 65675$ |
| Meridian Street Bridge, Improvement of........ | $\underline{2,01208}$ | $\underline{2,01208}$ |
| $\$ 2,66883$ | $\$ 2,66883$ |  |

Amount expended and charged to maintenance appropriation
\$198,797 30
Amount expended and charged to specials . 2,668 83
Grand total of expenditures from February 1, 1908, to January 31, 1909
$\$ 201,46613$

## Income.

The total amount received by the City Collector on account of the Bridge Division during the fiscal year was $\$ 632.95$, which includes an item of $\$ 1.50$ on account of the Boston and Cambridge bridges. The items are as follows:

| For sale of old material |
| :--- |
| Rent. |$. \quad . \quad . \quad . \quad . \quad . \quad$| $\$ 59795^{*}$ |
| ---: |
| 3500 |
| $\$ 63295$ |

* Includes $\$ 1.50$ on account of Boston and Cambridge bridges.


## Contracts.

The following contracts were made by this division during the year:

| Date. | Contract. | Awarded to. | Progress. | Estimate. | Extras. | Total Paid. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| *June 24.. | Driving piles North Beacon Street Bridge. | W. H. Ellis. . | Finished in 1908. | \$262 23 | \$24 43 | \$287 23 |
| $\dagger$ July 2.. | Planking Everett Street Bridge, Brighton. | Lawler Bros.. | Finished, July 25, '08 | §432 00 | 2428 | 47466 |
| $\ddagger$ Aug. $26 .$. | Rewiring power room, Charlestown Bridge. | Lord Electric Company. | Finished in 1908. | 4000 | . | 4000 |

[^4]The following is a summary of the principal repairs made during the year:

## Tide-Water Bridges.

Broadway. - Patched sheathing three times; sheathed once and put in new headers; repaired latch and center and put in new screw and oak headers; painted gates.
Charlestown.- Repaired waterways; repaired bulkhead four times; built locker; repaired headers twice; patched sheathing; sheathed once.
Chelsea North.- Patched sheathing seven times; repaired gate; repaired deck and motor; repaired float stage; patched sidewalk twice; put in new headers; patched deck twice; repaired latch; repaired draw and rests; put in new truck.
Chelsea South.- Patched sheathing 3 times; patched headers; sheathed downstream side; rebuilt sidewalk; sheathed entire once.
Commercial Point.- Sheathed both roadways.
Congress Street.- Sheathed twice; put in oak headers; patched sheathing twice; patched deck and paving; built fence; repaired headers once.
Chelsea. Street.- Patched sheathing once.
Dorchester Avenue.- Repaired headers; patched sheathing three times; sheathed entire once; patched downstream side; repaired pier and house; bolts in gearing.
Dover Street.- Repaired sidewalk twice; repaired boat; painted gates; patched sheathing; sheathed downstream side.
Granite.- Patched sheathing.
$L$ Street.- Patched sheathing twice; repaired and painted boat; repaired gate and rails; repaired sidewalk; sheathed upstream side.
Malden.- Repaired headers twice; patched deck twice; patched sheathing twice; sheathed once.
Meridian Street.- Repaired sidewalk; sheathed draw; repaired latches; put in new gate, fence and oak headers; put in two gate posts.
Mt. Washington Avenue.-Built fence; stripped draw.
Neponset.- Sheathed draw; repaired gate; painted boat; patched sheathing three times; repaired waterway; patched deck; rebuilt flaps; repaired iron strap.
North Beacon Street.- Repaired flap twice; repaired gear; patched sheathing three times; patched deck four times; sheathed twice.
Northern Avenue.- Built sand box.
Summer Street.- Sheathed both sides twice; patched deck twice; patched sheathing three times; patched oak headers.
Warren.- Patched deck three times; patched sheathing four times; repaired headers four times; repaired latch-block; sheathed upstream side; patched downstream side; sheathed downstream side twice; renewed deck once; fastened tracks
of draw; put in new gate post; sheathed entire once; repaired gate; put in new latches; planked pier.
Western Avenue (to Watertown).- Patched sidewalk; patched deck twice; patched sheathing twice.
Winthrop.- Patched deck four times; patched sheathing four times.

## Inland Bridges.

Albany Street (B. \& A.).- Patched sheathing; sheathed; painted iron fence.
Allston (B. \& A.).- Patched sheathing twice.
Ashland Street Railroad.- Sheathed.
Ashland Street (Stony Brook).- Decked and sheathed.
Athens Street (Plymouth Division).- Repaired fence.
Beacon Street (B. \& A.).- Painted iron beams; rebuilt sidewalk; sheathed uptown side; repaired wheel guard; repaired sidewalk.
Bennington Street (B., R.B. \& L.).-Sheathed downtown side.
Berkeley Street (B. \& A.).—Patched deck twice; patched sheathing twice; sheathed.
Berwick Park (Footbridge).- Cleaned; painted twice; repaired steps; new top walk.
Boston Street (Plymouth Division).- Patched sheathing; repaired sidewalk.
Broadway (B. \& A.).- Sheathed downtown side twice; painted ironwork; painted fence; patched sheathing five times.
Brookline Avenue ( $B . \& A$.).- Sheathed.
Brooks Street.- Painted steps.
Byron Street (B., R.B. \& L.).- Built sidewalk.
Canterbury Street (Stony Brook).- Decked and sheathed.
Central Avenue.-Patched sheathing three times; patched deck twice.
Columbus Avenue.- Patched sheathing once; sheathed once; painted ironwork.
Cottage Street (Footbridge).— Moved house.
Dartmouth Street (B. \& A.).- Patched sheathing.
Dorchester Avenue (Railroad).- Repaired sidewalk.
Everett Street (B. \& A.).-Patched sheathing; repaired fence.
Ferdinand Street.- Patched sheathing; repaired fence; sheathed; rebuilt sidewalk; cleaned and painted iron girders.
Florence Street (Stony Brook).- Patched deck twice; patched sheathing twice; rebuilt.
Gainsboro Street (Footbridge).— Painted ironwork.
Harvard Street (Midland Division). - Sheathed north roadway.
Irvington Street (Footbridge).-Built fences; painted.
Linden Park Street (Stony Brook).- Patched deck; patched sheathing.
Massachusetts Avenue (B. \& A.) --Patched deck three times; patched sheathing four times; rebuilt.
Massachusetts Avenue (B. \& P.).- Sheathed; painted ironwork; repaired sidewalk.

Milton.- Repaired sidewalk.
Norfolk Street (North).- Sheathed.
Norfolk Street (South).- Repaired sidewalk.
Perkins Street (Footbridge).— Painted fence; painted stairs; built new steps.
Rutland Square (Footbridge).- Cleaned and painted.
Southampton Street (E.).- Patched deck twice; patched sheathing twice; braced bulkhead.
Southampton Street (Railroad).-Patched sheathing three times; patched deck twice; sheathed.
Summer Street (over A Street).—Painted.
Summer Street (over B Street). - Painted.
Summer Street (over C Street).- Painted.
West Fourth Street.- Patched sheathing five times; sheathed downtown side; repaired bulkhead.
West Newton Street.- Sheathed.
South Stable.- Built lockers.

Expenditures on Tide=water Bridges from February 1, 1908, to January 31, 1909.

| Bridge | Maintenance. |  | Repairs. |  |  | Totals. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\substack{\text { Salaries } \\ \text { of } \\ \text { Drawtenders. }}$ | Miscellaneous: Light and Power, Fuel, Supplies, etc. | Labor. | Lumber. | Ironwork and General Repairing. |  |
| Atlantic avenue. | \$8,532 08 | \$172 13 | $\$ 925$ |  | \$380 67 | \$9,094 13 |
| Broadway. | 8,571 32 | 33854 | 26971 | \$366 21 | 69115 | 10,236 93 |
| Charlestown . | 11,094 06 | 86748 | 1,489 26 | 72243 | 29819 | 14,471 42 |
| Chelsea North | 8,322 79 | 20919 | 54814 | 20337 | 82037 | 10,103 86 |
| Chelsea South. | 8,189 34 | 48577 | 17251 | 18395 | 48498 | 9,516 55 |
| Chelsea street. | 18975 |  | 68278 |  |  | 87253 |
| Commercial Point | 5000 |  | 2275 | 7890 | 64 | 15229 |
| Congress street. | 7,136 15 | 54380 | 74447 | 97063 | 43419 | 9,829 24 |
| Dorchester avenue. | 8,101 44 | 15545 | 40426 | 23870 | 10065 | 9,000 50 |
| Dover street. | 8,169 39 | 12956 | 17936 | 41807 | 20734 | 9,103 72 |
| Granite . | 24380 | 385 | 3775 | 2769 | 3612 | 34921 |
| L street . | 7,768 68 | 45938 | 30438 | 24478 | 90908 | 9,686 30 |
| Malden | 7,976 68 | 15421 | 10513 | 17119 | 14045 | 8,547 66 |
| Meridian street. | 8,033 64 | 18946 | 29401 | 13836 | 94787 | 9,603 34 |
| Mt. Washington avenue. |  | 12000 | 25176 |  | 600 | 37776 |
| Neponset. . | 40651 | 50 | 24512 | 10783 | 21647 | 97643 |
| North Beacon street. | 20325 |  | 13900 | 15389 | 32803 | 82417 |
| Northern avenue . . . . . . . . . . | 2,345 62 | 39428 | 300 |  |  | 2,742 90 |
| Summer street. | 8,655 04 | 17011 | 48415 | 75665 | 52925 | 10,595 20 |
| Warren. | 8,079 52 | 1,094 29 | 73879 | 1,036 18 | 43027 | 11,379 05 |
| Western avenue to Watertown.. | 20326 | 275 | 19690 | 6880 | 2193 | 49364 |
| Winthrop (care taker). . . . . | 10000 |  | 17723 | 41873 |  | 69596 |
| Public landings. |  |  | 12500 | 1475 | 12.00 | 15175 |
| Sundry bridges. |  | 1,883 96 |  | 1,010 06 |  | 2,894 02 |
| Totals. | \$112,372 32 | \$7,374 71 | \$7,624 71 | \$7,331 17 | \$6,995 65 | \$141,698 56 |

Expenditures on Inland Bridges, from February 1, 1908, to January 31, 1909.
Albany street ..... $\$ 32434$
Allston ..... 13869
Ashland street (over Providence Division) ..... 11584
Athens street ..... 975
Beacon street (over Boston \& Albany Railroad) ..... 82941
Beacon street (water way) ..... 372
Bennington street ..... 10145
Berkeley street (over Boston \& Albany Railroad) ..... 15238
Berwick park (footbridge) ..... 29582
Blue Hill avenue ..... 450
Bolton street ..... 4707
Boston street ..... 1738
Boylston street (over Boston \& Albany Railroad) ..... 53549
Broadway (over Boston \& Albany Railroad) ..... 91447
Brookline avenue ..... 32290
Brooks street ..... 6120
Byron street ..... 11138
Cambridge street (over Boston \& Maine Railroad) ..... 1499
Central avenue ..... 29419
Canterbury street ..... 24871
Columbus avenue (over Boston \& Albany Railroad), ..... 20248
Cottage Farm ..... 300
Cottage street (footbridge) ..... 1,043 35
Dartmouth street (over Boston \& Albany Railroad), ..... 4178
Dorchester avenue (over Plymouth Division) ..... 13442
Everett street (over Boston \& Albany Railroad, Brighton) ..... 3,011 74
Ferdinand street ..... 54650
Florence street ..... 20767
Gainsborough street ..... 6350
Gold street ..... 325
Harvard street (over Midland Division) ..... 6854
Huntington avenue ..... 287
Hyde Park avenue ..... 1285
Irvington street (footbridge) ..... 64064
Leyden street ..... 3450
Linden Park street ..... 14650
Massachusetts avenue (over Boston \& Albany Railroad) ..... 1,140 59
Massachusetts avenue (over Providence Division) ..... 3263
Milton ..... 1187
Norfolk street (north) ..... 22138
Norfolk street (south) ..... 970
Perkins street (footbridge) ..... 10354
Southampton street (east) ..... 56843Carried forward\$12,795 41
Brought forward ..... \$12,795 41
Southampton street (over railroad) ..... 21181
Summer street (over B street) ..... 3450
West Fourth street (over N. Y., N. H. \& H. R.R., Plymouth Division) ..... 95860
West Newton street ..... 14759
Removing snow and dirt, various inland bridges ..... 85186
Total expenditures on inland bridges. ..... \$14,999 77
North and South Yards, Maintenance.
*North Yard and stable
Employees ..... \$1,191 48Repairs4060
Gas ..... 2439
Stable expenses ..... 42971
Total, North Yard ..... \$1,686 ..... 18
South Yard and stable:
Employees ..... \$9,637 67
Repairs ..... 44925
Fuel ..... 13758
Electric light ..... 7447
Stable expenses ..... 2,398 64
Total, South Yard ..... 12,697 61
Total, North and South Yards and stables ..... \$14,383 79

* Combined with the South Yard April 25, 1909.


## Street Department, Bridge Division.

Traffic Account, September 11, 1908.


## LIST OF BOSTON BRIDGES.

## I.- Bridges Wholly Maintained by Boston.

[In the list those marked with an asterisk (*) are over navigable waters, and are each provided with a draw.]

## In Charge of Bridge Division.

Allston, over Boston \& Albany Railroad at Cambridge street, Brighton.
Ashland street, over N. Y., N. H. \& H. Railroad, Providence Division, West Roxbury.
Athens street, over N. Y., N. H. \& H. Railroad, Midland Division.

* Atlantic avenue, over Fort Point channel.

Baker street, at Brook Farm, West Roxbury.
Beacon street, over outlet to Back Bay Fens.
Beacon street, over Boston \& Albany Railroad.
Bennington street, over Boston, Revere Beach \& Lynn Railroad.
Berkeley street, over Boston \& Albany Railroad.
Berwick park (footbridge), over N. Y., N. H. \& H. Railroad, Providence Division.
Blakemore street, over N. Y., N. H. \& H. Railroad, Providence Division.
Bolton street, over N. Y., N. H. \& H. Railroad, Midland Division.
Boylston street, over Boston \& Albany Railroad.

* Broadway, over Fort Point channel.

Broadway, over Boston \& Albany Railroad.
Brookline avenue, over Boston \& Albany Railroad.
Brooks Street Bridge, Brighton.
Byron street, over Boston, Revere Beach \& Lynn Railroad.
Charlesgate, over Ipswich street.

* Charlestown, from Boston to Charlestown.
* Chelsea [South], over south channel, Mystic river.
*.Chelsea street, from East Boston to Chelsea.
Columbus avenue, over Boston \& Albany Railroad.
* Commercial Point, or Tenean, Dorchester.
* Congress street, over Fort Point channel.

Cottage Farm, over Boston \& Albany Railroad, at Commonwealth avenue.
Cottage street (footbridge), over flats, East Boston.
Dartmouth street, over Boston \& Albany Railroad.

* Dorchester avenue (formerly Federal street), over Fort Point channel.
* Dover street, over Fort Point channel.

Ferdinand street, over Boston \& Albany Railroad.
Florence street, over Stony brook, West Roxbury.
Gainsborough street (footbridge), over N. Y., N. H. \& H. Railroad, Providence Division.

Gold street (footbridge), over N. Y., N. H. \& H. Railroad, Midland Division.
Huntington avenue, over Boston \& Albany Railroad.
Hyde Park avenue, over Stony brook, West Roxbury.
Ipswich street, over water way.
Irvington street (footbridge), over N. Y., N. H. \& H. Railroad, Providence Division.

* L street, over reserved channel at junction of Summer and $L$ streets.
* Malden, from Charlestown to Everett.

Massachusetts avenue, over Boston \& Albany Railroad.
Massachusetts avenue, over N. Y., N. H. \& H. Railroad, Providence Division.

* Meridian street, from East Boston to Chelsea.
* Northern avenue, over Fort Point channel.

Shawmut avenue, over Boston \& Albany and N. Y., N. H. \& H. Railroad, Providence Division.
Southampton street, east of N. Y., N. H. \& H. Railroad, Midland Division.
Summer street, over A street.
Summer street, over B street.
Summer street, over C street.

* Summer street, over Fort Point channel.
* Warren, from Boston to Charlestown.

West Newton street, over N. Y., N. H. \& H. Railroad, Providence Division.
West Rutland square (footbridge), over N. Y., N. H. \& H. Railroad, Providence Division.
Winthrop, from Breed's Island to Winthrop.

## In Charge of Bridge Division and Park Department.

Columbia road, over N. Y., N. H. \& H. Railroad, Plymouth Division.
Columbia road, over Shoreham street.

## In Charge of Park Department.

Agassiz, in Fens.
Arborway, in Arborway, over Stony brook.
Audubon, in Riverway, over Boston \& Albany Railroad.
Bernier Street Footbridge, over Muddy river.
Boylston, in Fens, over water way.
Bridle path, in Riverway, over Muddy river.

* Castle Island, in Marine Park, South Boston to Castle Island.

Charlesgate, in Fens, over Boston \& Albany Railroad.
Circuit drive, over Scarboro pond, in Franklin Park.
Commonwealth avenue, in Fens, over water way.
Ellicott Arch, in Franklin Park.
Fens, in Fens.
Forest Hills, in Franklin Park.

Leverett pond (foot), in Leverett Park.
Neptune, in Wood Island Park, over Boston, Revere Beach \& Lynn Railroad.
Scarboro pond (foot), in Franklin Park.
Wood Island (foot), in Wood Island Park.

## In Charge of Public Grounds Department.

Public Garden (footbridge).
II.-Bridges of which Boston Maintains the Part within its Limits.

> In Charge of Bridge Division.

Central avenue, from Dorchester to Milton.

* Chelsea [North], from Charlestown to Chelsea.
* Granite, from Dorchester to Milton.

Milton, from Dorchester to Milton.

* Neponset, from Dorchester to Quincy.
* North Beacon street, from Brighton to Watertown.

Spring street, from West Roxbury to Dedham.

* Western avenue, from Brighton to Watertown.


## In Charge of Park Department.

Bellevue street, in the Riverway, over Muddy river.
Bernier Street Footbridge, over Muddy river.
Brookline avenue, in the Riverway, over Muddy river.
Huntington avenue, in the Riverway, over Muddy river.
Longwood avenue, in the Riverway, over Muddy river.
III.- Bridges of which Boston Pays a Part of the Cost
of Maintenance.

## In Charge of Bridge Division.

Albany street, over Boston \& Albany Railroad (over freight tracks).
Ashmont street, junction Dorchester avenue and Talbot avenue, over N. Y., N. H. \& H. Railroad, Plymouth Division (75 feet south of northerly end).
Harvard street, over N. Y., N. H. \& H. Railroad, Midland Division.
Norfolk street, over N. Y., N. H. \& H. Railroad, Midland Division, near Dorchester station.

In Charge of Commissioners for Cambridge Bridges.
Brookline street, from Brighton to Cambridge.
Cambridge, from Boston to Cambridge.

* Cambridge street, from Brighton to Cambridge.
* Harvard, from Boston to Cambridge.
* North Harvard street, from Brighton to Cambridge.
* Prison Point, from Charlestown to Cambridge.
* Western avenue, from Brighton to Cambridge.
IV.-Bridges of which Boston Maintains the Wearing Surface.


## In Charge of Bridge Division.

Bennington street, over the Boston \& Albany Railroad.
Blue Hill avenue, over N. Y., N. H. \& H. Railroad, Midland Division.
Boston street, over N. Y., N. H. \& H. Railroad, Plymouth Division.
Brookline street, Brighton to Cambridge, portion over the Boston \& Albany Railroad.
Cambridge street, over Boston \& Maine Railroad.
Chelsea Bridge, over Boston \& Maine Railroad.
Curtis street, over the Boston \& Albany Railroad.
Dorchester avenue, over N. Y., N. H. \& H. Railroad, Plymouth Division.
Everett street, over Boston \& Albany Railroad, Brighton.
Maverick street, over Boston \& Albany Railroad.
Norfolk street, over N. Y., N. H. \& H. Railroad, Midland Division, near Mattapan station.
Oakland street, over N. Y., N. H. \& H. Railroad, Midland Division, Mattapan.
Perkins street (footbridge), over Boston \& Maine Railroad.
Porter street, over Boston \& Albany Railroad.
Prescott street, over Boston \& Albany Railroad.
Prison Point, Charlestown to Cambridge, portion over the Boston \& Maine Railroad.
Saratoga street, over Boston \& Albany Railroad.
Silver street, over N. Y., N. H. \& H. Railroad, Midland Division.
Southampton street, over N. Y., N. H. \& H. Railroad, Plymouth Division.
Summer street, over N. Y., N. H. \& H. Railroad, Midland Division.
Sumner street, East Boston, over Boston \& Albany Railroad.
Webster street, East Boston (footbridge), Boston \& Albany Railroad.
West Fourth street, over N. Y., N. H. \& H. Railroad, Plymouth Division.

> V.- Bridge Maintained by Charles River Basin Commission.

Craigie's, Boston to Cambridge.

> VI.- Bridge Maintained by Metropolitan Park Commission.

Mattapan Bridge.

## VII.-Bridges Maintained by Railroad Corporations.

1st.-Boston \& Albany Railroad.
Albany street (over passenger tracks).
Harrison avenue.
Market street, Brighton.
Tremont street.
Washington street.
2d.-Boston \& Maine and Boston \& Albany Railroads.
Main street.
Mystic avenue.
3d.- Boston \& Maine Railroad, Eastern Division.
Wauwatosa avenue, East Boston.
4th. - Boston, Revere Beach \& Lynn Railroad.
Everett street.
5th.- New York, New Haven \& Hartford Railroad, Midland Division.
Dorchester avenue.
Morton street, Dorchester.
Washington street, Dorchester.
West Broadway.
West Fifth street.
West Fourth street.
West Second street.
West Sixth street.
West Third street.
6th.-New York, New Haven \& Hartford Railroad, Plymouth Division.
Adams street.
Cedar Grove Cemetery.
Freeport street.
Medway street.
Savin Hill avenue.
7th. - New York, New Haven \& Hartford Railroad, Providence Division.
Albany street. (New part.)
Baker street, West Roxbury.
Beech street, West Roxbury.
Bellevue street, West Roxbury.
Berkeley street. (New part.)
Broadway. (New part.)
Canterbury street, West Roxbury.
Castle square.
Centre and Mit. Vernon streets, West Roxbury.
Columbus avenue. (New part.)
Dartmouth street. (New part.)
Dudley avenue, West Roxbury.
Gardner street, West Roxbury.
Harrison avenue. (New part.)
Park street, West Roxbury.
Washington street. (New part.)

## Recapitulation of Bridges.

I. Number wholly maintained by Boston:

In charge of Bridge Division . . . . 55
In charge of Bridge and Park Departments 2
In charge of Park Department . . . 17
In charge of Public Grounds Department . 1
II. Number of which Boston maintains the part
within its limits:
In charge of Bridge Division . . . . 8

In charge of Park Department . . . 5
III Number of which Boston pays a part of the 13 cost of maintenance:
In charge of Bridge Division . . . 4
In charge of Commissioners for Boston and
Cambridge Bridges . . . . . 7
IV. Number of which Boston maintains the wear-
ing surface
V. Number maintained by Charles River Basin Commission1
VI. Number maintained by Metropolitan Park Commission ..... 1
VII. Number maintained by railroad corporations:

1. Boston \& Albany ..... 5
2. Boston \& Maine and Boston \& Albany Railroads ..... 2
3. Boston \& Maine, Eastern Division ..... 1
4. Boston, Revere Beach \& Lynn ..... 1
5. New York, New Haven \& Hartford, Midland Division ..... 9
6. New York, New Haven \& Hartford, Plymouth Division ..... 5
7. New York, New Haven \& Hartford, Providence Division ..... 16Total number163

## Public Landing Place.

The following public landing place has been built by the city and is maintained and controlled by the Bridge Division:

Jeffries Point, East Boston.-Size, $20 \times 50$. Moored from Fitzpatrick's wharf; $\$ 250$ per year.

## Cable Houses and Boxes.

The following is a list of cable houses and boxes on bridges in charge of this division:
New England Telephone and Telegraph Company:
Chelsea [North] Bridge, 1 house.
Chelsea [South] Bridge, 3 boxes.
Dorchester Avenue Bridge, 3 houses and 2 boxes.
Dover Street Bridge, 2 boxes.
Malden Bridge, 2 houses and 2 boxes.
Warren Bridge, 4 boxes.
American Telephone and Telegraph Company:
Mt. Washington Avenue Bridge, 2 boxes.

- Neponset Bridge, 1 box.

American District Telegraph Company:
L Street Bridge, 2 boxes.
Postal Telegraph Cable Company:
Chelsea [North] Bridge, 1 box.
Congress Street Bridge, 2 houses.
Granite Bridge, 2 boxes.
Boston Electric Light Company:
Congress Street Bridge, 2 boxes.
Boston \& Northern Street Railway Company:
Chelsea [North] Bridge, 7 boxes.
Chelsea [South] Bridge, 6 boxes.
Boston Elevated Railway Company:
Cambridge Street Bridge, 1 house.
Charlestown Bridge, 2 houses and 9 boxes.
Dover Street Bridge, 2 houses.
Dorchester Avenue Bridge, 1 house and 1 box.
Malden Bridge, 2 houses and 1 box.
Summer Street Bridge, 2 boxes.
Warren Bridge, 2 houses.
Edison Electric Illuminating Company:
Charlestown Bridge, 2 houses.
Chelsea [North] Bridge, 1 box.
Chelsea [South] Bridge, 1 box.
Dover Street Bridge, 3 houses.

Automatic Fire Alarm Company:
Summer Street Bridge, 2 boxes.
Warren Bridge, 1 box.
Old Colony Street Railway Company:
Neponset Bridge, 4 boxes.
Boston Fire Department:
Chelsea [North] Bridge, 1 box.
Chelsea [South] Bridge, 1 box.
Dover Street Bridge, 1 house, 1 box.
Msiden Bridge, 3 boxes.
Warren Bridge, 2 boxes.

## Land and Buildings in Charge of Bridge Division.

South Yard and Stable.- 170 Broadway extension, South Boston - 5,516 feet of land on Broadway extension and Dorchester avenue, on which is a brick building containing an office, workshop and stable.
Atlantic Avenue Bridge. - Draw house and motor house.
Broadway Bridge.- Draw house and one storehouse.
Charlestown Bridge.- Draw house, electrical power room and six storehouses.
Chelsea [North] Bridge.— Draw house.
Chelsea [South] Bridge.- Draw house and engine house.
Congress Street.Bridge.- Draw house, storehouse and two shelter houses.
Cottage Street (footbridge). - Watchman's house.
Dover Street Bridge.-Draw house and two shelter houses.
Dorchester Avenue Bridge. - Draw house, tool shed, two motor houses, one controller house.
$L$ Street Bridge.- Draw house, engine house.
Malden Bridge.- Draw house.
Meridian Street Bridge.- Draw house.
Mt. Washington Avenue Bridge.- Tool house.
Neponset Bridge.-Tool house.
Northern Avenue Bridge.- Draw house, containing a power room and storage room for compressed air.
Summer Street Bridge.- Draw house, controller house, two shelter houses.
Warren Bridge.-Stable, draw house, containing an engine room and boiler room and a tool house.
Western Avenue Bridge to Watertown.- Tool house.
List of Small Bridges or Culverts having Wooden Tops, which are Repaired by Bridge Division.-- Walls Department.

| Location. | Span, Feet. | $\begin{aligned} & \text { Height } \\ & \text { of } \\ & \text { Opening, } \\ & \text { Feet. } \end{aligned}$ | Length, Feet. | Side Walls. | Covering. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ashland and Canterbury streets, near Calvary Cemetery, West Roxbury. | 7.6 | 5.5 | 75 | Stone... | Wood. |
| Beech street, near Anawan avenue, at Central Station, West Roxbury | 4.0 | 4.0 | 50 | Stone . | Wood. |
| Cass street, near Spring Street Station, West Roxbury | 7.0 | 3.0 | 21 | Stone. . . | Wood. |
| Cohasset street, Roslindale | 14.0 | 7.5 | 60 | Stone . . | Wood. |
| Gardner street, near Cow Island, West Roxbury | 5.0 | 5.5 | 33 | Wood. . . | Wood. |
| Jamaica street, Jamaica Plain | 10.0 | 4.0 | 39 | Stone . | Wood. |
| Park street, west of Dorchester avenue, Dorchester | 5.0 | 3.7 | 50 | Stone . . . | Wood. |
| Park street, west of New York, New Haven \& Hartford Railroad, Dorchester. . | 8.5 | 5.0 | 50 | Stone. . . | Wood. |
| Spring street, near Spring Street Station, West Roxbury. | 2.7 | 2.7 | 63 | Stone . . . | Wood. |
| Summer street, near Spring Street Station, West Roxbury | 4.0 | 4.5 | 40 | Stone . . . | Wood. |
| Williams street, at Stony brook, West Roxbury | 5.0 | 5.0 | 50 | Wood. . . | Wood. |
| Woodman street, Jamaica Plain | 6.3 | 4.0 | 65 | Stone . . . | Wood. |

Table Showing Width of Bridges, Kind of Roadways, Sidewalks, etc., on Tide=water Bridges, 1908.

| Name of Bridge. | Width of Bridge. | Roadway. |  | Sidewalks. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 苞 | Kind of Roadway. |  | 荷 | Kind of Walks. |
|  | Ft. In. | Ft. In. |  |  | Ft. In. |  |
| Atlantic avenue. | 580 | 380 | Paved. | 1 | 96 | Granolithic and asphalt. |
| Broadway. | 600 | 400 | Plank | 2 | 100 | Coal-tar concrete. |
| Brookline street | 600 | 250 | " | 1 | 100 | Plank. |
| Cambridge. | 1050 | ${ }_{29}{ }^{\text {each }}$ | Paved | 2 | 100 | Granolithic. |
| Cambridge stree | 400 | 329 | Plank | 1 | 60 | Plank. |
| Craigie's (temporary) | 492 | 400 | " | 1 | 80 | " |
| Charlestown........ | 1000 | 1279 1220 1279 | " | 2 | 100 | Asphalt. |
| Chelsea [North] | 490 | 400 | " | 1 | 80 | Coal-tar concrete and plank. |
| Chelsea [South] | 503 | 412 | " | 1 | 80 | Plank. |
| * Chelsea street. |  |  |  |  |  |  |
| Commercial Point. . . | $\begin{array}{r} \text { about } \\ 340 \end{array}$ | $\begin{array}{r} \text { about } \\ 27 \end{array}$ | " |  |  |  |
| Congress street | 600 | 440 | Paved | 2 | 80 | Coal-tar concrete. |
| Dorchester avenue.. | 690 | 490 | " | 2 | 100 | Asphalt. |
| Dover street (over water). | 600 | 400 | " | 2 | 100 | " |
| Granite | 302 | 244 | Plank | 1 | 50 | Plank. |
| Harvard | 694 | 510 | " | 2 | 92 | " |
| L street. | 600 | 440 | Paved | 2 | 80 | Asphalt. |
| Malden | $\begin{aligned} & 600 \\ & \text { to } \\ & 676 \end{aligned}$ | 440 | " | 2 | 80 | Composition. |
| Meridian street | 500 | 360 | " | 2 | 70 | Coal-tar concrete. |
| Neponset. | 300 | 2310 | Plank | 1 | 55 | Plank. |
| North Beacon street. | 310 | 252 | " | 1 | 50 | " |
| North Harvard street | 282 | 267 | " |  |  |  |
| Northern avenue. . . | 800 | 189 18 18 18 | Paved | 2 | 711 | Asphalt. |
| Prison Point . | 500 | 360 | Plank part. Paved part | 2 | 70 | Coal-tar concrete. |
| Summer street. | 1000 | 760 | Paved. | 2 | 120 | Asphalt. |
| Warren | 800 | 600 | " | 2 | 100 | Coal-tar concrete. |
| Western avenue to Cambridge. | 332 | 263 | Plank. | 1 | 60 | Plank. |
| Western avenue to Watertown. | 330 | 242 | " | 1 | 80 | " |
| Winthrop. | 242 | 1910 | " | 1 | 37 | " |

## Table Showing the Widths of Openings for Vessels in all Bridges Provided with Draws in the City of Boston in January, 1909.

| Name of Bridge. | Location. |  | Width. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Atlantic avenue. | Over Fort Point channel. | 1 | 42 f | eet 6 in | hes. |
| Boston \& Maine Railroad, Eastern Division. | Boston to Charlestown | 1 | 39 | " 8 | " |
| Boston \& Maine Railroad, Eastern Division. | Over Miller's river. | 1 | 35 | " 10 | " |
| Boston \& Maine Railroad, Fitchburg Division. | Boston to Charlestown | 1 | 36 | " 7 | " |
| Boston \& Maine Railroad, Fitchburg Division (for teaming freight) | " " | 1 | 36 | " 7 | " |
| Boston \& Maine Railroad (freight), Southern Division. | Boston to East Cambridge. . | 1 | 39 | " 10 | " |
| Boston \& Maine Railroad (passenger), Southern Division.......... | " | 1 | 39 | " 8 | " |
| Boston \& Maine Railroad, Western Division. | Boston to Charlestown . | 1 | 39 | " 8 | " |
| Boston \& Maine Railroad, Western Division.. | Over Miller's river............ | 1 | 36 | " | " |
| Broadway | Over Fort Point channel | 1 | 42 | " 7 | " |
| Cambridge street | Brighton to Cambridge | 1 | 36 | " 4 | " |
| Charlestown (main channel) | Boston to Charlestown | 2 | 50 | " 0 |  |
| Charlestown (north channel) | " " |  | $49^{\prime}$ | " 9 | " |
| Chelsea (south channel) | Charlestown to Chelsea | 1 | 38 | " 9 | " |
| Chelsea (north channel) . . . . . . . . . | " " | 1 | 60 | " 0 | " |
| Chelsea street (East Boston side).. | East Boston to Chelsea | 1 | 36 | 0 | " |
| Commercial Point (or Tenean) | Dorchester. | 1 | 24 | " 2 | " |
| Congress street. | Over Fort Point channel | 1 | 50 | " 0 | " |
| Craigie's (temporary) | Boston to East Cambridge | 1 | 36 | " 0 | " |
| Dorchester avenue. | Over Fort Point channel | 1 | 41 | " 4 | " |
| Dover street | " " | 1 | 40 | " 0 | " |
| Grand Junction Railroad | Brighton to Cambridge. | 1 | 39 | " 0 | " |
| Grand Junction Railroad | East Boston to Chelsea. | 1 | 60 | " 0 | " |
| Granite | Dorchester to Milton | 1 | 36 | " 0 | " |
| Harvard (Boston side) | Boston to Cambridge | 2 | 36 | " 6 | " |
| Harvard (Cambridge side) | " " |  | 36 | " 10 | " |
| L street. | Over reserved channel, South Boston. | 1 | 39 | " 8 | " |
| Lock. | Charles River dam | 1 | 45 | " 0 | " |
| Malden. | Charlestowu to Everett | 1 | 50 | " 0 | " |

Table Showing Width of Openings, etc.-Concluded.

| Name of Bridge. | Location. |  | Width. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Meridian street (East Boston side) | East Boston to Chelsea. | 2 | 59 |  | 2 | ches. |
| Meridian street (Chelsea side) | " " |  | 59 | " | 0 | " |
|  | Over Fort Point channel. | 2 | 42 | " | 2 | " |
| Mt. Washington avenue (South Boston side) | " |  | 50 | " | 0 | " |
| Neponset. | Dorchester to Quincy | 2 | 36 | ". | 0 | " |
| New York, New Haven \& Hartford Railroad. | Over Fort Point channel. | 1 | 41 | " | 9 | " |
| New York, New Haven \& Hartford Railway, Y-connection. | " " |  | 42 | " | 0 | " |
| New York, New Haven \& Hartford Railroad, Plymouth Division.... | Dorchester to Quincy | 1 | 51 | " | 0 | " |
| North Beacon street | Brighton to Watertown | 1 | 30 | " | 0 | " |
| North Harvard street | Brighton to Cambridge. | 1 | 36 | " | 0 | " |
| Northern avenue | Over Fort Point channel | 2 | 75 | " | 0 | " |
| Prison Point. | Charlestown to Cambridge | 1 | 37 | " | 6 | " |
| Summer street. | Over Fort Point channel | 1 | 50 | " | 0 | " |
| Warren. | Boston to Charlestown | 1 | 36 | " | 0 | " |
| Western avenue. | Brighton to Cambridge. | 1 | 36 | " | 0 | " |
| Western avenue. | Brighton to Watertown | 1 | 35 | " | 10 | " |

## Opening and Closing Hours for the Draws on the Bridges.

With the exceptions given below, all draws in bridges of the City of Boston must be open for the passage of vessels on reasonable signal at all hours.

## Charlestown Bridge.

The revised ordinances of 1906 provide that the drawtender "shall not allow any vessel to pass through the draw of the Charlestown bridge, so called, except such vessels as shall be ready to go through at the following times: $6.30 \mathrm{a} . \mathrm{m} ., 9.30$ a. m., 11 a. m., 12 m., 1.30 p. m., 3 p. m., 8.30 p. m., 11.30 p. m., and from 11.30 p . m. until 6 a. m."

## Congress Street Bridge.

The same ordinances provide, "nor shall any vessel be allowed to pass through the draw of Congress Street Bridge between the hours of 6 a . m., and 8.30 a . m., or between the hours of 4.30 p. m., and 6.30 p. m."

## Malden Bridge.

By authority of the Secretary of War, dated November 4, 1901, the draw in this bridge shall be opened for the passage of vessels at all hours except between the hours of 6.30 to 8.30 a. m., and 5.30 to 7.30 p . m., during which hours it shall be opened only at 7.15 a . m. and $6.30 \mathrm{p} . \mathrm{m}$. to permit the passage of waiting vessels in either direction, and at $7.20 \mathrm{p} . \mathrm{m}$. to permit the passing of waiting vessels going upstream.

## Chelsea Bridge (North Draw).

By authority of the Secretary of War dated April 12, 1906, the draw in this bridge shall be opened at all hours for the passage of vessels of 18 feet or greater draft; for vessels of less draft, on week days, the draw must be opened at all hours except between the hours of 6.30 to $8.30 \mathrm{a} . \mathrm{m}$. and 5.30 to $7.30 \mathrm{p} . \mathrm{m}$. during which period the draw shall be opened only at the following times, 7 a. m., 6 p. m. and 7 p. m. On Sundays the draw must be opened upon customary signal for all vessels, at all hours.

## Chelsea Bridge (South Draw).

Under authority of same date, the same regulations are established for the south draw of Chelsea bridge as the North draw, except that vessels of 13 feet or greater draft may pass at all hours, and an additional opening is provided for waiting vessels at $7.30 \mathrm{a} . \mathrm{m}$.

Street Department - Bridge Division.
Drawtenders' Reports.


|  | Steamers. |  |  | Sailing Vessels. |  |  | Tugs. |  |  | All Others. |  |  | Total Number Vessels. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \mathrm{By} \\ \text { Day. } \end{gathered}$ | $\begin{array}{c\|} \mathrm{By} \\ \text { Night. } \end{array}$ | Total. | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | By Night. | Total. | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | $\begin{gathered} \text { By } \\ \text { Night. } \end{gathered}$ | Total. | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | By Night | Total. | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | $\begin{gathered} \mathrm{By} \\ \text { Night. } \end{gathered}$ | Total. |  |  |
| Atlantic avenue. | 78 | 31 | 109 | 674 | 74 | 748 | 3,490 | 466 | 3,956 | 1,383 | 116 | 1,499 | 5,625 | 687 | 6,312 | 1,159 | 3,044 |
| Broadway. | 77 | 28 | 105 | 666 | 81 | 747 | 3,294 | 412 | 3,706 | 1,574 | 132 | 1,706 | 5,611 | 653 | 6,264 | 1,238 | 2,200 |
| Charlestown |  |  |  | 372 | 104 | 476 | 2,777 | 736 | 3,513 | 1,770 | 459 | 2,229 | 4,919 | 1,299 | 6,218 | 1,259 | 1,409 |
| Chelsea, North. | 254 | 22 | 276 | 705 | 45 | 750 | 6,676 | 541 | 7,217 | 2,874 | 207 | 3,091 | 10,519 | 815 | 11,334 | 1,735 | 5,340 |
| Chelsea, South | 655 | 50 | 705 | 326 | 29 | 355 | 4,131 | 401 | 4,532 | 3,170 | 219 | 3,389 | 8,282 | 699 | 8,981 | 2,069 | 4,306 |
| Chelsea street*. |  |  |  |  |  |  | 16 |  | 16 | 10 |  | 10 | 26 |  | 26 | 6 | 14 |
| Congress street | 164 | 38 | 202 | 777 | 88 | 865 | 5,471 | 585 | 6,056 | 1,880 | 141 | 2,021 | 8,292 | 852 | 9,144 | 1,394 | 3,713 |
| Dorchester avenue. | 77 | 33 | 110 | 675 | 75 | 750 | 3,511 | 469 | 3,980 | 1,568 | 123 | 1,691 | 5,831 | 700 | 6,531 | 1,170 | 3,336 |
| Dover street. | 75 | 21 | 96 | 635 | 74 | 709 | 2,974 | 296 | 3,270 | 1,183 | 89 | 1,272 | 4,867 | 480 | 5,347 | 1,036 | 2,421 |
| Granite |  |  |  | 12 |  | 12 | 210 | 2. | 212 | 78 | $\ldots$ | 78 | 300 | 2 | 302 | 46 | 170 |
| L street |  |  |  | 204 | 44 | 248 | 2,918 | 231 | 3,149 | 2,019 | 333 | 2,352 | 5,141 | 608 | 5,749 | 874 | 3,868 |
| Malden |  |  |  | 63 | 10 | 73 | 1,215 | 81 | 1,296 | 745 | 57 | 802 | 2,023 | 148 | 2,171 | 372 | 1,080 |
| Meridian street | 1,160 | 160 | 1,320 | 429 | 24 | 453 | 10,126 | 1,794 | 11,920 | 4,066 | 759 | 4,825 | 15,781 | 2,737 | 18,518 | 3,237 | 10,042 |
| Neponset. |  |  |  | 26 |  | 26 | 370 |  | 370 | 133 |  | 133 | 529 |  | 529 | 74 | 304 |
| North Beacon street. |  |  |  |  |  |  | 73 | 37 | . 110 | 203 | 116 | 319 | 276 | 153 | 429 | 58 | 112 |
| Northern avenue $\dagger$ | 37 | 22 | 59 | 192 | 33 | 225 | 2,073 | 485 | 2,558 | 961 | 256 | 1,217 | 3,263 | 796 | 4,059 | 604 | 1,768 |
| Summer street. | 158 | . 38 | 196 | 777 | 87 | 864 | 5,463 | 584 | 6,047 | 1,876 | 141 | 2,017 | 8,274 | 850 | 9,124 | 1,397 | 4,660 |
| Warren. | 10 |  | 10 | 377 | 97 | 474 | 2,648 | 661 | 3,309 | 1,609 | 397 | 2,006 | 4,644 | 1,155 | 5,799 | 1,079 | 3,296 |
| Western avenue to Watertown. |  |  |  |  |  |  | 97 |  | 97 | 78 |  | 78 | 175 |  | 175 | 31 | 97 |
| Totals | 2,745 | 443 | 3,188 | 6,910 | 865 | 7,775 | 57,533 | 7,781 | 65,314 | 27,190 | 3,545 | 30,735 | 94,378 | 12,634 | 107,012 | 18,838 | 51,170 |

## APPENDIX B.

## REPORT OF THE DEPUTY SUPERINTENDENT OF FERRY DIVISION.

Boston, February 1, 1909.

## Mr. Guy C. Emerson, Superintendent of Streets:

Dear Sir,-I respectfully submit report of income, expenditures and operation of the Ferry Division for the financial year ending January 31, 1909. The expenditures for this year show a decrease of $\$ 45,289.43$ over last year, despite the additional burden imposed by the one day off in seven law, which necessitates the employment of an extra crew.

This amount includes the payment of bills amounting to $\$ 3,200$ of the previous administration. This has been accomplished by reducing the working force without decreasing the efficiency of the service; also, by having our own mechanical force do the repair work much needed repairs, out of the ordinary wear and tear, have been accomplished during the year.

My recommendation for the coming year is that the south pier, North Ferry, Boston side, be rebuilt, also that the repair dock at South Ferry, East Boston side, be repaired; these items will cost $\$ 10,000$.

The property in charge of this division is as follows:
South Ferry, East Boston Side.- Located at the termination of Lewis street, and covers an area of 58,725 square feet of land and water. On these premises are one head-house, with canopies, one workshop for carpenters, machinists and blacksmith, one storehouse, one new modern coal pocket, three new piers which form the two slips, two drops and tanks, one wharf and dock where boats are laid when not in use or while undergoing repairs.

South Ferry, Boston Side.- Located at the termination of Eastern avenue, and covers an area of 38,135 square feet of land and water, on which are one head-house, with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

North Ferry, Boston Side.- Located at the termination of Battery street, and covers an area of 45,000 square feet of land and water, on which are one head-house, with canopies, one gate room, three piers which form the two slips, and two drops and tanks.

North Ferry, East Boston Side.- Located at the termination of Border street, and covers an area of 62,138 square feet of land and water, on which are one head-house, with canopies, one boiler and oil room, one coal pocket (new), three piers which form the two slips, and two drops and tanks.

The following steam ferryboats are in commission:

| Name. | When Built. | Kind. | Length. |
| :---: | :---: | :---: | :---: |
| Revere | 1875 | Side-wheel. | 148 ft . |
| D. D. Kelly. | 1879 |  | 148 |
| Hugh O'Brien. | 1883 | " | 163 |
| General Hancock | 1887 | " | 148 " |
| Noddle Island | . 1899 | Propeller. | 164 " 3 in |
| Governor Russell | . 1900 |  | 164 " 3 " |
| General Sumner | 1900 | " | 164"3 |

Respectfully submitted, H. P. Christiernin, Deputy Superintendent.

| Consolidated Financial Statement for the Year Ending Jantary 31, 1909. |  |
| :---: | :---: |
| 1. Receipts. |  |
| Total cash receipts during the year | \$104,244 46 |
| Cash in hands of tollmen at beginning of year | 20000 |
|  | \$104,444 46 |
| Cash paid over to City Collector | 104,244 46 |
| Balance of cash on hand at end of year | \$200 00 |
| 2. Appropriations and Expenditures. |  |
| Balance unexpended from previous years (loans), | \$15 60 |
| Received from City Treasurer by transfer | 24,023 54 |
| Received from City Treasurer for revenue during the year | 4485 |
| Received from City Treasurer, annual appropriation for this division for 1908-09 | 225,000 00 |
| Total appropriations of all kinds | \$249,083 99 |
| Total expenditures of all kinds | 249,068 39 |
| Balance unexpended (loans) | \$15 60 |
| 3. Result of Operations for the Year. |  |
|  |  |
| Ordinary expenses | \$249,068 39 |
| Interest on ferry debt | 17,935 00 |
|  | \$267,003 39 |
| Depreciation of boats . . . \$11,807 16 |  |
| Depreciation of machinery and tools . Den 31 |  |
| Decrease in stock of supplies . . 5,662 83 | 17,857 30 |
|  | \$284,860 69 |
| Increase in valuation of real estate by assessors | 28,000 00 |
| Net outgo for the year | \$256,860 69 |
| Net loss for the year | \$152,616 23 |

4. Balance Sheet.
End of Fiscal Year, January 31, 1909.

| Assers. |  | Liabiutims. |  |
| :---: | :---: | :---: | :---: |
| Avallable Assets: $\$ 20000$ |  | Current Liabilities: None. |  |
| Cash on hand.... | \$200 00 |  |  |
| Inventory of supplies, etc., on hand............. <br> Total available assets. | 13,307 77 |  |  |
|  | \$13,507 77 |  |  |
| Contingent Assets: <br> City treasury, balance of appropriations. | 1560 | Contingent Liabilities: Appropriations account | \$15 60 |
| Fixed Assets: <br> Real estate and buildings ${ }^{1}$ <br> Ferryboats <br> Machinery, tools, etc. |  | FIXED LIABPILITIES: |  |
|  | $\begin{array}{r}2606,400 \\ 184,978 \\ \hline\end{array}$ | Capital of the city invested in the ferries, viz.: <br> Total expenditures of all kinds for fifty-one years, including interest on <br>  |  |
|  |  |  |  |
|  | 5,149'45 |  |  |
| Total tangible assets. Avenues, etc., East Boston <br> Deficiency or loss by operation and maintenance of the ferries for fifty-one years to date. | $\begin{array}{r} \$ 810,05160 \\ 315,81568 \end{array}$ |  |  |
|  |  |  | 4,316,850 49 |
|  | 3,190,998 81 |  |  |
|  | \$4,316,866 09 |  | \$4,316,866 09 |
| 1 Original purchase of ferries <br> New buildings, drops, slips, etc., cost to date, Land, Lincoln's Wharf, cost, 1887 |  |  |  |
|  | 8 8847,461 16 |  |  |  |
| ${ }^{2}$ Assessors' figures: <br> ${ }^{3}$ Total cost to date per ferry <br> Less boats sold, depreciated | $\begin{aligned} & \begin{array}{l} 8618,070 \\ 483 \\ 43,091 \\ 80 \end{array} \end{aligned}$ | These expenditures were practically subsidies to the East Boston Ferry Company by the city before the ferries werepurchased by the latter and should properly be added to the deficiency or loss. |  |
|  |  |  |  |  |
|  | $\stackrel{\text { 8184,978 78 }}{ }$ |  |  |  |

Comparison of Receipts, Appropriations and Expenditures for Five Years.

|  |
| :--- |

Expenditures (ORdinary).
Office:
Superintendent's salary......................
Superintendent's salary
Clerks and cashier.....
Stationery
${ }_{1}$ Telephones.
${ }^{1}$ Keeping horse and repairing vehicle.
Advertising, etc. . . . . . . . . . . . Examination of accounts, etc
Traveling expenses..
Premiums, surety co
Premiums, surety companies.
Total office expenditures.
Ferryboats and landings: Ferryboats and landings
Employees.......... Teaming, wheeling coal, etc. Oil, waste and supplies Flectric light Towing by horses. " " electric power
" " buildings and drops Furnishings, electric, etc. Other expenditures....
Total from regular appropriations. Carried forward.

| Efice: Expenditures (Ordinary). |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Office: <br> Superintendent's salary | \$3,000 00 | \$3,000 00 | \$3,000 00 | \$566 67 | \$2,808 79 |
| Clerks and cashier....... | 4,087 50 | 4,000 00 | 3,778 33 | 4,400 00 | 4,199 97 |
| Stationery | 39689 | 25645 | 39479 | 25618 | 30709 |
| Printing. | 86849 | 73442 | 1,116 86 | 1,273 53 | 1,250 05 |
| Telephones . | 38252 | 27426 | 9390 | 23662 | 25390 |
| ${ }^{1}$ Keeping horse and repairing vehicle. | 66256 10 | 620 220 75 | 1,379 34 | 39482 1815 | 22078 40 |
| Advertising, etc . . . . . . . . . | 1050 | 2275 | 20000 | 1815 | , 4031 |
| Traveling expenses.......... |  |  |  | 6000 | 25800 |
| Premiums, surety companies. | 9750 | 10750 | 10000 | 18800 | 17090 |
| Total office expenditures. | \$9,506 96 | \$9,015 98 | \$10,063 22 | \$7,393 97 | \$9,509 79 |
| Ferryboats and landings: |  |  |  |  |  |
| Fuployees. | 164,66642 35,701 | 161,96581 4778867 | 158,244 36,669 13 | 169,097 45,181 4 | 166,105 35042 86 |
| Fuel................... | 35,701 5,648 513 | 47,788 5,572 80 | $\begin{array}{r}\text { 36,669 } \\ 4,963 \\ \hline 80\end{array}$ | $\begin{array}{r}45,181 \\ 4,295 \\ \hline 80\end{array}$ | 35,042 4,969 73 |
| Oil, waste and supplies... | 8,446 14 | 6,972 27 | 9,433 26 | 8,329 97 | 7,329 56 |
| Gas................. | 96794 | 86796 | 45532 | 39244 | 65406 |
| Electric light. | 7,176 04 | 5,593 10 | 5,326 60 | 4,426 24 | 4,255 00 |
| Towing by horses... | $\begin{aligned} & 41825 \\ & 35450 \end{aligned}$ |  | 24340 |  |  |
| Repairs of boats...... | 15,299 12 | 11,022 02 | 21,145 72 | 22,231 94 | 13,199 81 |
| " " buildings and drops | 8,806 41 | 11,576 12 | 13,274 19 | 30,756 60 | 6,742 86 |
| Furnishings, electric, etc. | 94359 | 57997 | 61898 | 43796 | 31621 |
| Damages.. | 1700 |  | 500 |  |  |
| Other expenditures | 17525 | 83380 | ${ }^{2} 5,02098$ | 1,621 20 | 80925 |
| Total from regular appropriations | \$258,126 20 | \$261,995 90 | \$265,463 83 | \$294,357 82 | \$249,068 39 |
| Carried forward. | \$258,126 20 | \$261,995 90 | \$265,463 83 | \$294,357 82 | \$249,068 39 |

5. Comparison of Receipts, etc. - Concluded.

6. Comparative Balance Sheets at the Close of each Year for Five Years.

|  | $\begin{gathered} \text { January } 31, \\ 1905 . \end{gathered}$ | $\begin{gathered} \text { January } 31, \\ 1906 . \end{gathered}$ | $\begin{gathered} \text { January } 31, \\ 1907 . \end{gathered}$ | $\begin{gathered} \text { January } 31, \\ 1908 . \end{gathered}$ | $\begin{gathered} \text { January } 31, \\ 1909 . \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A ssets. <br> Cash in hands of tollmen $\qquad$ <br> Accounts receivable $\qquad$ <br> Fuel and supplies on hand $\qquad$ <br> City Treasurer <br> (balance of appropriations). $\qquad$ |  |  |  |  | , |
|  | \$550 00 | \$550 00 | \$200 00 | \$200 00 | \$200 00 |
|  | 1250 |  |  |  |  |
|  | 4,692 23 | 10,236 93 | 4,295 14 | 18,970 60 | 13,307 77 |
|  | 1560 | 25,015 60 | 1560 | 1560 | 1560 |
| Real estate and buildings (assessors' valuations) ....... | 577,400 00 | 577,400 00 | 573,400 00 | 578,400 00 | 606,400 00 |
| ${ }^{1}$ New buildings. <br> Ferryboats (less depreciation) <br> Machinery and tools........... . <br> Total tangible assets..... . |  |  | 25,000 00 |  |  |
|  | - 236,924 79 | 222,709 30 | 209,346 74 | 196,785 94 | 184,978 78 |
|  | 7,595 00 | 6,835 50 | 6,151 95 | 5,536 76 | 5,149 45 |
|  | \$827,190 12 | \$842,747 33 | \$818,409 43 | \$799,908 90 | \$810,051 60 |
| ${ }^{2}$ Cost of avenues, etc., East Boston (previous to 1870). . | 315,815 68 | 315,815 68 | 315,815 68 | 315,815 68 | 315,815 68 |
| Deficiency of assets (loss) <br> Totals. | 2,428,943 34 | 2,620,543 31 | 2,823,306 28 | 3,038,382 58 | 3,190,998 81 |
|  | \$3,571,949 14 | \$3,779,106 32 | \$3,957,531 39 | \$4,154,107 16 | \$4,316,866 09 |
| Liobilities. |  |  |  |  |  |
| Capital invested by City of Boston to date. | \$3,571,933 54 | \$3,754,090 72 | \$3,957,515 79 | \$4,154,091 56 | \$4,316,850 49 |
| Appropriations account (credit balances) | 1560 | 25,015 60 | 1560 | 1560 | 1560 |
| Total liabilities. | \$3,571,949 14 | \$3,779,106 32 | \$3,957,531 39 | \$4,154,107 16 | \$4,316,866 09 |
|  |  |  |  |  |  |

Detail of Capital Invested by the City of Boston.

| Total expenditures to date, per ferry books. | \$9,252,299 07 | \$9,542,934 34 | \$9,849,968 17 | \$10,152,247 67 | \$10,419,391 06 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Interest on debt for the year (per City Auditor) | 16,920 00 | 16,920 00 | 18,114 18 | 18,075 00 | 17,935 00 |
| Interest previous years, etc. (net debits per Auditor)..... | 279,148 85 | 279,148 85 | 279,148 85 | 279,148 85 | 279,148 85 |
| Total | ${ }^{3} 99,548,367$ 92 | $3 \$ 9,839,00319$ | 3\$10,147,231 20 | ${ }^{3} \$ 10,449,47152$ | ${ }^{3} 10,716,47491$ |
| Deduct total receipts paid to Collector. | ${ }^{3} 5,976,43438$ | ${ }^{3} 6,084,91247$ | ${ }^{3} 6,189,71541$ | ${ }^{3} 6,295,37996$ | ${ }^{3} 6,399,62442$ |
| Excess of expenditure, viz., capital invested by city..... | \$3,571,933 54 | \$3,754,090 72 | \$3,957,515 79 | \$4,154,091 56 | \$4,316,850 49 |

[^5]
## Total Expenditures upon Ferries since 1858-59.

| ${ }^{1}$ Expenditures for avenues, paving, interest, etc., previous to purchase of the ferries by the city | \$444,101 30 |
| :---: | :---: |
| Purchase of ferries, April, 1870 | 276,375 00 |
| ${ }_{2}^{2}$ Expenditures for ferryboats since April, 1870, | 618,070 58 |
| ${ }^{2}$ Expenditures for new buildings, piers, drops, etc. | 555,523 64 |
| ${ }^{2}$ Expenditures for tools and fixtures | 14,752 46 |
| Expenditures for land from Lincoln's Wharf in 1887 | 5,562 52 |
| Expenditures for land from Battery Wharf in 1893 | 10,000 00 |
| Total expenditures on capital account | \$1,924,385 50 |
| ${ }^{2}$ Expenditures for repairs of all kinds | 918,279 37 |
| ${ }^{2}$ Expenditures for fuel | 1,399,567 74 |
| ${ }^{2}$ Expenditures for salaries and wages | 4,880,195 69 |
| Expenditures for all other purposes | 1,654,325 17 |
|  | \$10,776,753 47 |

## Total Receipts from Ferries since 1858-59.

Receipts from rents, etc., previous to purchase of ferries
\$29,588 56
${ }^{2}$ Receipts from ferry tolls since purchase of ferries

6,174,170 87
${ }^{2}$ Receipts from rents since purchase of ferries, 62,24779
${ }^{2}$ Receipts from sales of ferryboats . . . 147,331 21
${ }^{2}$ Receipts from all other sources, per ferry books

16,211 73
Receipts from all other sources, additional, per auditór

30,690 00
$\$ 6,460,240 \quad 16$

| Less rejected money destroyed | . | $\$ 10418$ |
| :--- | :--- | :--- | :--- |
| Less amount counted twice | $\cdot$ | 3300 |
| Less amount in hands of tollmen | $\cdot$ | 20000 |

Regular Annual (Ordinary) and Special Appropriations (Extraordinary) of the Ferry Division of the Street Department for the Year Ending January 31, 1909.
Appropriation for the year ending January 31, 1909
\$225,000 00
Received by transfer 24,068 39

Total amount
\$249,068 39

Amount of expenditures
$\$ 249,06839$

## Special Appropriations.

Appropriation authorized and issued May 27, 1902, for ferry improvements $\$ 100,00000$
Amount expended from May 27, 1902, to
February 1, 1909
99,984 40
Unexpended balance of appropriation January 31, 1909
$\$ 1560$

Statements Showing Receipts at Each Ferry.
North Ferry.

| From Tollmen. | $\begin{gathered} \text { Foot } \\ \text { Passengers. } \end{gathered}$ | $\underset{\text { Tickets. }}{\text { Team }}$ | Total. |
| :---: | :---: | :---: | :---: |
| East Boston side. | \$16,886 71 | \$9,506 00 | \$26,392 71 |
| Boston side. | 17,808 33 | 5,470 50 | 23,278 83 |
|  | \$34,695 04 | \$14,976 50 | \$49,671 54 |

From tollmen
\$49,671 54
From gatemen:
For 82,606 foot passengers at 1 cent, $\$ 82606$
For cash fares for teams . . . 7,37190
8,197 96
Total at North Ferry . . . . . $\$ 57,86950$

South Ferry.

| From Tollmen. | Foot Passengers. | Team Tickets. | Total. |
| :---: | :---: | :---: | :---: |
| East Boston side. | \$13,230 99 | \$3,208 00 | \$16,438 99 |
| Boston side. | 13,755 69 | 5,903 50 | 19,659 19 |
|  | \$26,986 68 | \$9,111 50 | \$36,098 18 |

From tollmen . . . . . . . . .
From gatemen:
For 66,218 foot passengers at 1 cent,
For cash fares for teams $\mathbf{\$ 6 6 2} 18$
$\$ 36,09818$

8,020 47
Total at South Ferry
\$44,118 65
North and South Ferries, as above
\$101,988 15
Tickets paid for at office of City Collector . . 37000
Tickets paid for at office of Ferry Division . . . 82680
Received in lieu of free ferries July 4, 1908
100
Total ferriage receipts . . . . . \$103,185 95
Rents for the year . . . . . . . 41400
Sales of old material . . . . $\$ 325$
Public telephone . . . . . 4126
Head-house privileges . . . . 60000
64451
Total cash receipts, as above
\$104,244 46
Statement Showing the Difference of Travel on the
Ferries from February 1, 1908, to February 1, 1909.

| North Ferry. | South Ferry. |
| ---: | ---: |
| $3,552,110$ | $2,764,886$ |
| 45,716 | 22,945 |
| 20,380 | 4,495 |
| $3,618,206$ | $2,792,366$ |
|  |  |
|  |  |
| 1251,632 | 260,535 |
| 126,411 | 88,161 |
| 5,993 | 2,269 |
| 4,669 | 6,819 |
| 488,705 | 357,784 |



Total Travel on Both Ferries from February 1, 1904, to February 1, 1909.

|  |  | 20 |  | No | O. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| One-horse teams.. | 650,687 | 626,518 | 634,839 | 608,744 | 612,167 |
| Two-horse teams. | 254,726 | 225,361 | 225,024 | 238,911 | 214,572 |
| Three-horse teams | 9,605 | 9,169 | 10,409 | 8,091 | 8,262 |
| Four-horse teams. | 12,931 | 11,678 | 11,547 | 16,897 | 11,488 |
| Two-horse carriages and hacks . | - 19,968 | 21,728 | 18,571 | 26,381 | 30,720 |
| Two-cent tolls for handcarts, etc. | 4,560 | 4,518 | 4,936 | 5,251 | 5,058 |
| Drag-wheels, etc. . . . . . . . . . . | 32 | 88 | 41 | 23 | 29 |
| Total teams at both ferries. . . | 952,509 | 899,060 | 905,367 | 904,298 | 882,296 |
| Total foot passengers. . . . . . | 13,200,033 | 6,708,152 | 6,292,393 | 6,353,101 | 6,385,697 |

Ticket Statement for the Year 1908-09.

| . |  |  |  | - |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Foot passes | 229,157 | 44,030 | 17,250 | 290,437 | 68,701 | 221,736 |
| One-horse team tickets | 89,962 | 324,512 | 1,504 | 415,978 | 321,958 | 94,020 |
| Two-horse team tickets. | 57,465 | 191,648 | 384 | 249,497 | 190,398 | 59,099 |
| Three-horse team tickets | 5,783 | 6,858 | 54 | 12,695 | 6,896 | 5,799 |
| Four-horse team tickets | 7,984 | 10,380 |  | 18,364 | 10,466 | 7,898 |
| One-horse carriage tickets. | 22,739 | 14,200 | 20 | 36,959 | 14,300 | 22,659 |
| Two-horse carriage tickets | 2,477 | 7,820 |  | 10,297 | 7,651 | 2,646 |

## List of Contracts in Ferry Division from February 1, 1908, to January 31, 1909.

| Date. | Awarded to | Contract. | Amount Paid. |
| :---: | :---: | :---: | :---: |
| April 9 | Spring Coal Company.. | 2,314 tons coal. | \$8,275 50 |
| April 21 | William McKie. | Repairing guards and stern posts of ferryboat "General Sumner"...... | 52500 |
| May 1 | Atlantic Works. | Furnishing* four manganese bronze propeller blades, machined, ready to install (four old blades in part payment) $\qquad$ | 32800 |
| May 11 | Patrick J. Griffin . | Hauling coal from sheds to boats. . . . | * 1,514 98 |
| Aug. 16 | Atlantic Works. | Repairing pistons and rods and other machinery on ferryboat "General Sumner' | 32500 |
| Sept. 8 | Isaac Blair \& Co. | Raise up and lower drop at South Ferry, East Boston side. | 9000 |
| Sept. 23 | Atlantic Works | New piping from boiler to radiators and new trap in head-house, North Ferry, Boston side.. | 23700 |
| Nov. 23 | Betts Brothers \& Co... | Raise and float ferryboat "Revere" sunk in dock. | 60000 |
| Dec. 26 | Lawler Brothers....... | Repairing piers at Boston side, North and South ferries. | 23000 |
| Jan. 9 | Frank Ridion Company, | New controller on motor at South Ferry, Boston side. | 19500 |

* 25 cents per ton.


## APPENDIX C.

## REPORT OF THE DEPUTY SUPERINTENDENT OF LAMP DIVISION.

Boston, Mass., February 1, 1909.

Mr. Guy C. Emerson, Superintendent of Streets:
Dear Sir,-The annual report of the Lamp Division for the year 1908 is herewith submitted.

This division has supervision of the lighting, care and maintenance of the various types of electric, gas and naphtha lamps in use by the city for illuminating the streets, alleys, parks and squares, the setting up of all new lamps in the streets and the placing of glass street signs and numbers in the lanterns.

There was appropriated for this division for the financial year ending January 31, 1909, the sum of $\$ 800,000$, and there was received from revenue credited to the division the sum of $\$ 23.75$, but owing to circumstances that were unavoidable this amount was exceeded and a transfer was made from another appropriation to that of this division to the amount of $\$ 9,500$, making a total credit of $\$ 809,523.75$.

The expenditures amounted to $\$ 809,510.06$, thus leaving a balance of $\$ 13.69$ unexpended.

It had been anticipated that a contract for lighting the gas and naphtha lamps would have been made at a much earlier date than that finally decided upon and that a very substantial reduction in prices would also be made, thus allowing the division to live within the sum appropriated.

After experimenting for a year under the system of lighting the gas and naphtha lamps by means of municipal employees, leasing the lanterns and fixtures and paying for repairs and renewals, purchasing gas direct from the gas company and naphtha from the producers at the market rate, it was deemed advisable, it having been demonstrated that the work could be carried on much cheaper, to return to some form of a contract system.

# On June 1, 1908, the following notice was published in various papers and journals throughout the country: 

> CITY OF BOSTON. - Notice to Bidders.-GAS AND NAPHTHA LIGHTING - The Superintendent of Streets of the City of Boston, Office 47, City Hall, invites proposals for lighting with gas and naphtha incandescent mantle burners on such streets, parks and alleys as may from time to time be designated by the Superintendent for five years, from August 1, 1908. The present number of gas lamps is about 10,500 , and the number of naphtha lamps about 1,400 . The city will furnish the posts and service pipes. The bidders must state a price per lamp per annum for each of the following lamps or clusters:
> 1 - For single gas incandescent burners.
> 2 - For single gasolene or naphtha incandescent burners.
> 3 - For a lantern with two gas incandescent burners.
> 4-For a lantern with three gas incandescent burners.
> 5 - For a cluster of two lanterns with one gas incandescent burner each.
> 6 - For a cluster of two lanterns with two gas incandescent burners each. .
> 7 - For a cluster of three lanterns with one gas incandescent burner each.
> 8 - For a cluster of three lanterns with two gas incandescent burners each.
> In the case of the gas lamps, the bids may include the furnishing of the gas as well as the furnishing, maintenance and lighting of the lamps; or, in the alternative, may be confined to the furnishing, maintenance and lighting of the lamps, the city to furnish the gas. Only proposals obtained at said office, filled out, signed by the bidder and left at said office on or before 12 o'clock m . of WEDNESDAY, July 1, 1908, with a certified check for $\$ 5,000$, payable to and to be the property of the city if the proposal is not carried out, will at said hour and place be publicly opened and read. The successful bidder will be required to furnish in the sum of $\$ 100,000$ a bond of a surety company authorized to do business in the State of Massachusetts. Samples of the equipment, including lanterns, burners, etc., must be submitted with the bid. The Superintendent reserves the right to reject any and all proposals should he deem it for the interest of the city so to do, and to give preference to the proposals of bidders agreeing to pay the trades unions' rate of wages.
> GUY C. EMERSON, Superintendent of Streets.

On the opening of the proposals on July 1 it was found that there were three bidders and a canvass of the proposals resulted as follows:
Bids Opened Wednesday,
Naphtha or Gasolene Incandescent Lamps. July 1, 1908, at 12 m .

|  | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Bidder. |  |  |  |  |  |  |  |  | . - |
| The Cleveland Street Lighting Company (with gas). <br> By E. S. Newbold, Vice President, Baltimore, Md. | \$24 90 | \$30 25 | \$37 60 | \$5100 | \$4750 | \$73 20 | \$68 00 | \$105 40 | Fire Alarm Lamps, $\$ 10$ per Year per Lamp. |
| Rising Sun Street Lighting Co. (with gas). By P.J. Fitzgerald, President, Boston, Mass. | 2520 | 2920 | 36 S0 | 4920 | 4800 | 7160 | 6900 | 10680 |  |
| Sunlight Illuminating Company, By S. S. Lesslie, Jr., President, Pittsburgh, Pa. | $* 2700$ +1740 | * 2800 | $* 5400$ +3480 | $\begin{aligned} & * 6080 \\ & \dagger+3600 \end{aligned}$ | $* 5400$ +3480 | $* 10700$ +6860 | $\begin{array}{r} +8100 \\ +5250 \end{array}$ | +16000 +10240 | $\begin{aligned} & \text { FireAlarm } \\ & \text { Lamp, } \$ 25 . * \\ & \text { Fire A } 1 \text { a r m } \\ & \text { Lamp, } \$ 17.40 . \dagger \end{aligned}$ |

Note.- The Sunlight Illuminating Company further agrees to sell the lanterns erected as part of this contract to the City of Boston at the termination of this contract for 50 per cent of the cost price of said lanterns. Invoices and affidavits to be filed as to said cost immediately upon the completion of $\dagger$ Not including gas supply.

|  | 1. | 2. | 4. |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $10,635 .$ <br> Single Mantle Gas. | $1,462 .$ <br> Single Mantle Naphtha. | 199. <br> Three <br> Mantle Gas. | Total. |
| The Cleveland Street Lighting Company, | \$264,811 50 | \$44,225 50 | \$10,149 00 | \$319,186 00* |
| Rising Sun Street Lighting Company... | 268,002 00 | 42,690 40 | 9,790 80 | 320,483 20* |
| Sunlight Illuminating Company . | 287,145 00 | 40,936 00 | 12,099 20 | 340,180 20* |
| Street Department, Lamp Division.... | 303,751 50 | 43,465 26 | 11,127 16 | 358,343 92 $\dagger$ |

* With gas.
$\dagger$ Does not include office or inspection expense.
The bids were taken under advisement and after due consideration were rejected. Later on, in view of the facts that more time was needed to arrange for new specifications, that additional time should be given to the investigation of • any new type of lamp or improvements that might develop along the line of efficiency or economy in street lighting methocls, that the Rising Sun Street Lighting Company had all of its equipment already on the streets and ways of the city and that a saving could be made, a temporary contract was entered upon with the above company under authority of the Mayor, without inviting proposals, for the term of one year from September 15, 1908, deducting the sum of $\$ 9.60$, the price paid per lamp per year for gas by the above company, and which is now furnished by the city at a less price under an arrangement with the gas companies.

The schedule of prices agreed upon under this new arrangement is as follows:

## Schedule of Prices.

| Kind of Lamp. | Price per Annum. |
| :---: | :---: |
| Single gas incandescent burner | \$15 60 |
| Single gasolene or naphtha incandescent burners | $29{ }^{20}$ |
| A lantern with two gas incandescent burners | $1760 \dagger$ |
| A lantern with three gas incandescent burners............ | $2040 \dagger$ |
| A cluster of two lanterns with one gas incandescent burner each | $2880 \dagger$ |
| A cluster of two lanterns with two gas incandescent burners each. | $3320 \dagger$ |
| A cluster of three lanterns with'one gas incandescent burner each. | $4020 \dagger$ |
| A cluster of three lanterns with two gas incandescent burners each. | $4920 \dagger^{\circ}$ |

The above schedule of prices, plus the cost of gas per lamp per year, provided by the city, would make the total cost per lamp as follows:

| Kind of Lamp. | Price per Annum. |  |
| :---: | :---: | :---: |
|  | Boston Gas. | East Boston Gas and Charlestown Gas. |
| A lantern with one burner. | \$24 96 | \$26 40 |
| A lantern with two burners. | 3632 | 3920 |
| A lantern with three burners. | 4848 | 5280 |
| Two lanterns with one burner each. | 4752 | 5040 |
| Two lanterns with two burners each. | 7064 | 7640 |
| Three lanterns with one burner each. | 6828 | 7260 |
| Three lanterns with two burners each | 10536 | 11400 |

By mutual consent the contract for incandescent lighting between the city and the Edison Electric Illuminating Company which was to have continued until June 1, 1909, was canceled, taking effect on and after April 1, 1908, with the written understanding and condition that bills for service provided for in said contract should, during the remainder of the term, be rendered and settled on the regular municipal lighting schedules of the company, a separate bill to be rendered for each meter. A result of the above change of rates has been a reduction in the cost to the city departments as a whole for this class of lighting.

On April 2, 1909, an arrangement went into effect whereby the Edison Company agreed to maintain and repair the electric light cables owned by the city in the different parkways, also the overhead system at Castle Island, without expense to the city; the company to cancel the unpaid bills against the city for maintenance and repair of the said cables and the city agreeing to pay during the life of the contract, concerning the street and park lighting of the city, the rates fixed by the said contract, without the deduction of one cent per lamp per night which had been made under the former arrangement for such lamps as were connected with the city cables.

In September a notice to contractors for street lighting and manufacturers of street lighting apparatus was published, inviting such parties having apparatus adapted to systems other than the present system of low pressure gas mantles to demonstrate therewith, if they so desired, during the continuance of the present contract for street lighting, with a view to the improvement of the present system upon the expiration of the prësent contract on September 15, 1909.

Various types of arc, incandescent electric lamps, vertical mantle and inverted mantle gas lamps and automatic light-. ing devices have been demonstrated with on the streets and are now in process of investigation and being experimented with.

A more brilliant illumination of the important thoroughfares, business streets and public squares is needed, as it is a factor in the improvement in the social, moral and business conditions of the city that should not be overlooked. Considerable correspondence and investigation have been conducted in relation to improved and ornamental posts and fixtures together with other new lighting processes that have been brought to the attention of the division, and a large amount of data has been obtained. A more ornamental lamp-post on certain prominent thoroughfares and squares is desirable. The design of such a post should be the subject of careful study and consideration. A post carefully proportioned and of a decorative but not too ornate design could be used to advantage.

A mast-arm type of post is also needed, or a cross-suspension lamp fixture, at many important street intersections or on such streets where the foliage overhanging both roadway and sidewalk requires a better distribution of light than can be obtained by the use of the ordinary post.

The discontinuance of all of the naphtha street lamps having been determined upon on account of the excessive rate paid per lamp; and in order to obtain a more efficient lighting service in the districts supplied with these lamps, the substitution of either mantle gas lamps, where gas mains were laid, or with the Tungsten series lamps, principally the latter type of lamp, has been in progress. A considerable reduction in the yearly cost of maintenance will be obtained by this change when the work of installation is completed. It has been found that the Tungsten lamp with radial reflector gives a very satisfactory illumination upon those streets in which it has been installed. Tests made on the street to determine the value of the illumination from these lamps have
shown a distinct gain over the former method by an increase in the intensity of the useful light thrown upon the area to be lighted.

In order that the citizens residing in the Germantown District could receive the benefit of gas service, the gas company was prevailed upon to extend its mains throughout that district, including the new state highway. Work was commenced late in the fall on the installation of mantle gas lamps in the above district, and it will be completed this spring.

The work done by the division in the installation of new lamps and repairs and alterations of services and posts has been conducted as follows:
There have been 207 naphtha lamps changed to mantle gas lamps where the gas company have extended their mains. One hundred and eighty-eight new single mantle gas lamps have been set up and one new triple mantle gas lamp installed. Five gas lamps that were out temporarily have been relighted and four have been replaced that were discontinued. Two triple mantle gas have been changed to single mantle gas lamps. One new naphtha lamp has been set up and one replaced. Twelve double mantle naphtha have been changed to single mantle naphtha lamps.

Care has been assumed of four new. fire-alarm signal lamps. Thirteen new are lamps have been installed and temporary arc lamps have been provided during the skating season at Wood Island, North Brighton and Jamaica Pond.

Thirty gas lamps, 74 single mantle and 4 double mantle naphtha lamps and 9 are lamps have been discontinued and removed.

On account of the extension and repair of the Traverse Street Subway eight 16 c. p. lamps were removed and fifteen 16 c. p. lamps were newly installed.

Twelve 40 c. p., twenty 60 c. p. and one 80 c. p. new Tungsten lamps have been installed on the streets, and ten 32 c. p. carbon lamps have been changed to 60 c. p. Tungsten.

The total number of lamps of all types, set up, relighted and replaced during the year is 427 . The total number of lamps discontinued is 287, a total net increase of 140 .

Changes in locations of 16 gas, 46 naphtha and 6 arc lampposts have been made on account of street construction, building operations or grade changes.

Two hundred and twelve lamp-posts have been set for the various types of lamps, and 48 incandescent fixtures have been put up; 1 naphtha and 33 gas lamp-posts that were
broken by teams or other causes have been removed and new posts set; 4 gas and 3 naphtha lamp-posts have been set in place of bracket fixtures.

Fifty-six gas, 36 naphtha and 7 are lamp-posts have been straightened; 77 gas, 11 naphtha and 5 are lamp-posts have been resett to line and grade; 19 gas, 60 naphtha and 2 arc lamp-posts that have been discontinued were removed from the streets; 12 gas brackets have been removed from buildings; 1 lamp-post has had the spindle recalked.

Four hundred and eighteen new service pipes have been laid, and 42 have been removed and cut off from the main pipes; 12 services have been reconnected with new mains, and 159 renewed or relaid that were trapped or otherwise affected by street changes; 56 leaks in services were repaired; 21 risers renewed or shortened; 12 risers were removed, and 501 services were cleared.

The number of glass street signs that have been placed in the lanterns is 796 , and also 270 numbers; glass shades have been placed in the gas lanterns when requested.

Tables showing the expenditures of the division, the total number of lamps of various types installed, the contract prices paid per lamp per annum, the increase or decrease of the lamps, an inventory of property, and copies of the lighting contracts, etc., are annexed.

Respectfully submitted,
Edward C. Wade, Deputy Superintendent.

## Gas Lighting.

There are 11,061 single mantle gas lamps in use, 179 triple mantle gas, 19 triple mantle police lamps in front of stations, and 192 open flame fire-alarm signal lamps.

The city furnishes and provides for the setting of the lampposts, has service pipes laid from the gas main to the top of the post, maintains all such pipes and posts in good condition and repair, furnishes the gas, contracts for lanterns, burners, other necessary equipment and labor for lighting and care.

The division pays for the cost of gas, lighting and care for the fire-alarm lamps, and the cost of repairs and setting up of posts is assumed by the Fire Department.
Gas Lamps.

| Company. | Number of Lamps. | Type of Lamp. | Rated Candle Power | Gas Consumed per Lamp per Hour | Hours of Burning per Annum | Cost of Gas per M. |  | Cost per Lamp for Lighting, Repair per Annum. | Total Cost per Lamp per Annum. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boston Consolidated... | $\begin{array}{r} 10,009 \\ 173 \end{array}$ | Single mantle. <br> Triple mantle. | 60 | 3 feet. <br> 9 feet. | $4,000$ | $\begin{array}{r} \$ 0.78 \\ .78 \end{array}$ | $\begin{aligned} & \$ 936 \\ & 2808 \end{aligned}$ | $\$ 1560$2040 | 4848 |
|  |  |  | 180 |  |  |  |  |  |  |
|  | 167 | Open flame. | ...... | 4 feet. | 3,828 | . 78 | 1236 | 1560 | 2796 |
| Charlestown. | 521 | Single mantle. Open flame. | 60 | 3 feet. | 4,000 | . 90 | 1080 | 1560 | 2640 |
|  | 12 |  | ..... | 3 feet. | 4,000 | . 90 | 1080 | 1560 | 2640 |
| East Boston. | 531 | Single mantle. <br> Triple mantle. | 60 | 3 feet. <br> 9 feet. | 4,000 | . 90 | 1080 | 1560 | 2640 |
|  | ${ }^{6}$ |  | 180 |  | 4,000 | . 90 | 3240 | 2040 | 5280 |
|  |  | Triple mantle. <br> Open flame. |  | 4 feet. | 3,828 | . 90 | 1378 | 1560 | 2938 |

## Naphtha Lighting.

There are 1,179 single mantle naphtha lamps in use.
The city furnishes and provides for the setting of the lamp-posts, contracts for lanterns and necessary equipment, naphtha, and labor for lighting and care.

| Company. | Number <br> of <br> Lamps. | Type <br> Lamp. <br> Lamp. | Rated <br> Candle <br> Power. | Hours <br> Burning <br> per Annum. | Contract Price <br> for Lighting, <br> Care, Repair <br> and Naphtha <br> per Annum. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rising Sun Street Lighting <br> Company.............. | 1,179 | $\left\{\begin{array}{c}\text { Single } \\ \text { mantle. }\end{array}\right.$ | $\} 60$ | 3,828 | $\$ 2920$ |

## Electric Lighting.

There are 3,800 inclosed are lamps in use, 43 Tungsten series lamps, 38 carbon filament lamps.

The companies provide and set the lamp-posts, furnish lamps, wires, cables and all other necessary equipment, and maintain them in good condition and repair.
Arc Lamps.

| Company. | $\begin{gathered} \text { Number } \\ \text { oumps. } \\ \text { Lamp } \end{gathered}$ | Connected. | Type ofLamp. | Type of Cireuit. | $\mathrm{W}_{\text {atrs }}$ |  | ${ }_{\text {Lighting }}^{\text {Hours. }}$ | $\begin{gathered} \text { Cost per } \\ \text { Lamp } \\ \text { per Amnum. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $\stackrel{\text { Terminal. }}{\text { At }}$ | At ${ }_{\text {Arc. }}$ |  |  |
| Edison Electric Illuminating Company. | $\left\{\begin{array}{r} 1,458 \\ 1,728 \\ 15 \\ 3 \\ 3 \end{array} \begin{array}{r} 23 \\ 222 \\ 23 \end{array}\right.$ | Overhead. | Inclosed. | Series 6.6 amp . D. C. | 500 | 483 | 3,828 | \$118 39 |
|  |  | Underground. | Inclosed. | Series 6.6 amp . D. C. | 500 | 483 | 3,828 | 11839 |
|  |  | Underground. | Inclosed. | Multiple 5 amp. D. C. | 550 | 400 | 3,828 | 11839 |
|  |  | Underground. | Inclosed. | Multiple 7.5 amp. A. C. | 550 | 443 | 3,828 | 11839 |
| Boston Consolidated Gas Company... <br> Charlestown Gas and Electric Company |  | Overhead. | Inclosed. | Series 7.5 mmp . A. C. | 500 | 471 | 3,828 | 12410 |
|  |  | Underground. | Inclosed. | Series 7.5 mmp . A. C. | 500 | 471 | 3,828 | 12410 |
|  |  | Overhead. | Inclosed. | Series 6.6 mmp . D. C. | 500 | 483 | 3,828 | 12775 |
|  |  | Underground. | Inclosed. | Series 6.6 amp. D. C. | 500 | 483 | 3,828 | 12775 |

Incandescent Lamps.

| Company. | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { Lamps. } \end{aligned}$ | Lamp. <br> Type of | Type of Circuit. | Watts. | Candle | $\underset{\text { Lighting }}{\text { Hours }}$ | $\begin{gathered} \text { Cost per } \\ \text { Lamp } \\ \text { per Annum. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Edison Electric Illuminating Company. | $\left\{\begin{array}{r} 12 \\ 30 \\ 1 \\ 15 \\ 7 \\ 14 \\ 2 \end{array}\right.$ | Tungsten. <br> Tungsten. <br> Tungsten. <br> Carbon. <br> Carbon. <br> Carbon. <br> Carbon. | Series 6.6 amp . D. C. | 50 | 40 | 3,828 | \$20 37 |
|  |  |  | Series 6.6 amp . D. C. | 75 | 60 | 3,828 | 2348 |
|  |  |  | Series 6.6 amp. D. C. | 100 | 80 | 3,828 | 2971 |
|  |  |  | Mutiple 113 volts. | - | 16 | Meter. | - |
|  |  |  | Series 6.6 amp . D. C. | - | 32 | 3,828 | 2348 |
| Boston Consolidated Gas Company |  |  | Multiple 113 volts. | - | 32 | 3,828 | 3600 |
| Boston \& Albany |  |  | Multiple 113 volts. |  | 32 | Meter. | - |

The following table shows the number of lamps of the various types in use on January 1, 1909, as compared with the number in use in January, 1908:

| - | $\begin{gathered} \text { January, } \\ 1909 . \end{gathered}$ | $\begin{aligned} & \text { January, } \\ & 1908 . \end{aligned}$ | $\begin{gathered} \text { Increase } \\ \text { or } \\ \text { Decrease. } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Mantle gas | 11,061 | 10,685 | +376 |
| Mantle naphtha | 1,179 | 1,446 | -267 |
| Electric are. | 3,800 | 3,796 | +4 |
| Incandescent carbon | 38 | 41 | -3 |
| Incandescent Tungsten | 43 |  | +43 |
| Fire alarm | 192 | 188 | +4 |
| Triple mantle gas. | 179 | 180 | -1 |
| Triple mantle police. ... | 19 | 19 16 | -16 |
|  | 16,511 | 16,371 | +140 |

Lighting Schedule.
The following table shows the time of lighting and extinguishing the gas lamps for the different months of the year:

| , | Date. | $\begin{aligned} & \text { Light at. } \\ & \text { P. M. } \end{aligned}$ | $\begin{gathered} \text { Put Out. - } \\ \text { A. M. } \end{gathered}$ | Number of Hours Burning |
| :---: | :---: | :---: | :---: | :---: |
| January | 10 to 14. | 4.15 | 6.00 | 1313 |
|  | 15 to 21. | 4.30 | 6.00 | $13 \frac{1}{2}$ |
|  | 22 to 31. | 4.45 | 6.00 | $13 \frac{1}{4}$ |
| February | 1 to 4. | 4.45 | 6.00 | $13 \frac{1}{4}$ |
|  | 5 to 9. | 5.00 | 6.00 | 13 |
|  | 10 to 11. | 5.00 | 6.00 | 13 |
|  | 12 to 25. | 5.15 | 5.45 | $12 \frac{1}{2}$ |
|  | 26 to 28. | 5.30 | 5.30 | 12 |
| March | 1 to 9. | 5.30 | 5.30 | 12 |
|  | 10 to 26 . | 6.00 | 5.00 | 11 |
|  | 27 to 31. | 6.15 | 4.30 | $10 \frac{1}{4}$ |
| April | 1 to 9 . | 6.15 | 4.30 | $10 \frac{1}{4}$ |
|  | 10 to 23. | 6.30 | 4.15 | $9{ }^{\text {93 }}$ |
|  | 24 to 30. | 6.45 | 4.00 | $9{ }^{4}$ |
| May | 1 to 6. | 6.45 | 4.00 | $9{ }_{4}^{1}$ |
|  | 7 to 9. | 7.00 | 3.30 | $8 \frac{1}{2}$ |
|  | 10 to 21. | 7.00 | 3.30 | $8 \frac{1}{2}$ |
|  | 22 to 31 | 7.00 | 3.00 | 8 |
| June | 1 to 3. | 7.00 | 3.00 | 8 |
|  | 4 to 9 | 7.15 | 3.00 | $7 \frac{3}{4}$ |
|  | 10 to 30 | 7.15 | 3.00 | $7{ }^{7}$ |
| July | 1 to 9. | 7.15 | 3.00 | $7{ }^{73}$ |
|  | 10 1 to to 9 | 7.15 7.00 | 3.00 3.15 | 73 ${ }^{\frac{1}{4}}$ |
| August | 1 to 9. 10 to 21. | 7.00 7.00 | 3.15 3.15 | 888 |
|  | 22 to 31 . | 6.30 | 3.45 | ${ }_{9}{ }_{4}^{1}$ |

Lighting Schedule.-Concluded.

|  | Date. | Lightat. | Put Out. A. M. | Number of Hours Burning. |
| :---: | :---: | :---: | :---: | :---: |
| September | 1 to 9. | 6.30 | 3.45 | $9 \frac{1}{4}$ |
|  | 10 to 11. | 6.30 | 3.45 | $9 \frac{1}{4}$ |
|  | 12 to 19. | 6.00 | 4.00 | 10 |
|  | 20 to 30. | 5.45 | 4.15 | $10 \frac{1}{2}$ |
| October | 1 to 9. | 5.30 | 4.30 | 11 |
|  | 10 to 22. | 5.15 | 4.45 | $11{ }^{1}$ |
|  | 23 to 31. | 4.45 | 5.00 | $12 \frac{1}{4}$ |
| Noveńber | 1 to 9. | 4.30 | 5.00 | $12 \frac{1}{2}$ |
|  | 10 to 25. | 4.15 | 5.15 | 13 |
|  | 26 to 30. | 4.15 | 5.45 | $13 \frac{1}{2}$ |
| December | 1 to 9. | 4.00 | 5.45 | $13{ }^{3}$ |
|  | 10 to 24. | 4.00 | 5.45 | 133 |
|  | 25 1 to to | 4.15 4.15 | 6.00 6.00 | $13{ }^{13}$ |
| January | 1 to 9. | 4.15 | 6.00 | 13 |

## Outages on Street Lamps.

The number of lamps reported not lighted on schedule time or out before the proper time have been as follows: 4,604 electric lamps; 1,593 gas lamps and 2,034 naphtha lamps - a total of 8,231 lamps.

| Date. | Arc. |  |  | Totals. |
| :---: | :---: | :---: | :---: | :---: |
|  | Edison. | Brookline. | Charlestown. |  |
| February. | \$110 16 | \$11 33 | \$3 38 | \$124 87 |
| March. | 9690 | 310 |  | 10000 |
| April. | 17442 | 236 |  | 17678 |
| May. | 4522 | 144 | 810 | 5476 |
| June. | 4080 | 301 | 790 | 5171 |
| July. | 5440 |  |  | 5440 |
| August.. | 4284 | 89 |  | 4373 |
| September. | 9044 | 75 |  | 9119 |
| October. |  |  |  |  |
| November | 6596 | 83 | 363 | 7042 |
| December. | 2890 |  |  | 2890 |
| January, 1909. | 4012 | 97 | 1478 | 5587 |
| Totals. | \$790 16 | \$24 68 | \$37 79 | \$852 63 |

Underground Work.

|  | Set for $\stackrel{N}{\mathrm{New}}$ Lamps. | Set in Place of Ones. | Set in <br> Place of Brackets | $\begin{aligned} & \text { Shift to } \\ & \text { New } \\ & \text { Location. } \end{aligned}$ | Straight- | Reset to Line and Grade. | Removed. | Repaired. | Laid. | Relaid. | Reconnected. | Cleared. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gas posts. | 192 | 33 | 4 | 16 | 56 | 77 | 19 | 1 | - | - | - | - |
| Naphtha posts. | 2 | 1 | 3 | 46 | 36 | 11 | 60 | - | - | - | - | - |
| Electric posts. | 13 | - | - | 6 | 7 | 5 | 2 | - | - | -- | - | - |
| Gas brackets. . . . . . . | - | - | - | - | - | - | 12 | - | - | - | - | - |
| Incandescent fixtures. . | 48 | - | - | - | - | - | - | - | - | - | - | - |
| Naphtha brackets. . . | - | - | - | - | - | - | - | - | - | - | - | - |
| Fire-alarm posts. | 5 | - | - | - | - | - | - | - | - | - | - | - |
| Services............. | - | - | - | - | - | - | 42 | 56 | 418 | 159 | 12 | 501 |
| Risers. | -- | - | - | - | $\pm$ | - | 12 |  | - | 21 | - | - |

## Employees.

There are eight men employed in the division as follows: Deputy superintendent, clerk, messenger, four inspectors and one watchman.

The lamplighters are all employed by the lighting company having the contract with the city.

Inventory of Property on Hand January 1, 1909.
1 horse.
2 sets of single harness.
1 buggy.
1 democrat wagon.
2 whips.
1 rubber mat.
4 blankets.
5 robes.
1 halter.
1 test meter.
1 lot of small tools.
1100 -foot tape measure.
200 stakes.
5,000 flat glass street signs.
1,137 bent glass street signs for No. 38 lantern.
64 bent glass street signs for No. 37 lantern.
232 bent glass street signs for No. 190 lantern.
736 glass street numbers.
100 lantern shade holders.
300 number holders.
1 typewriter and desk at office.
1 oak roll-top desk at shop.
4 oak chairs at shop.
1 table at shop.
1 umbrella stand at shop.
1 umbrella rack at shop.
1 ice water cooler at shop.
11 settees at shop.
1 stove at shop.
2 coal hods at shop.
1 clock at shop.
11,434 iron lamp-posts on street.
995 iron brackets on street.
10 iron lamp-posts in gas companies' yards.
25 iron brackets in yard.
2 bridge lamp-posts. Street plans, maps and atlases.

## Expenditures for Year 1908-1909.

## Electric Lighting:

Edison Electric Illuminating Company. . . . . . \$375,565 46
Boston Consolidated Gas Com-
pany. . . . . . 41,550
15
Charlestown Gas \& Electric Company.
New York, New Haven \& Hartford Railroad Company. . 3252

## Gas Lighting:

Boston Consolidated Gas Company. . . . . . \$98,036 34
Charlestown Gas \& Electric Company. . . . . . 5,602 97
East Boston Gas Company . . 5,988 81
Total for gas . . . . \$109,628 12
Rising Sun Street Lighting Company:
Rentals, repairs and labor . 120,260 75
Lamplighters:
Seven and one-half months . 70,248 36
Naphtha Lighting:
Naphtha
$\$ 12,03687$
Rising Sun Street Lighting Company:
Rentals, repairs, labor and naphtha . . . . . 18,674 28 Lamplighters:

Seven and one-half months . 9,501 02

## Salaries and Wages:

Superintendent and clerks . . \$4,769 19
Inspectors
4,316 71
Foreman, messenger, watchman and stenographer

2,370 25

## Construction:

Underground work . . . $\$ 3,45162$
Wrought-iron work . . . 3700
Electric changes . . . . 7122
Lamp-posts . . . . . 1,710 50
Painting lamp-posts

40,21217

```
11,456 15
```

5,285 01

Carried forward
\$806,994 50
Brought forward ..... \$806,994 50
Horse keeping, shoeing and repairs ..... 60758
Glass signs and numbers ..... 46573
Printing, stationery and periodicals ..... 50119
Traveling expenses and car fares ..... 20150
Telephones ..... 14956
Advertising ..... 38616
Messenger service ..... 6648
Shop Expenses:
Fuel, water, cleaning and repairs ..... 13736
Total ..... \$809,510 06
Revenue.
Rent of shop ..... $\$ 77500$
Rebate on car tickets ..... 2375
Sale of torches ..... 600Total$\$ 80475$

## CONTRACT FOR LIGHTING WITH GAS AND NAPHTHA INCANDESCENT MANTLE LAMPS CERTAIN STREETS, PARKS AND ALLEYS IN THE CITY OF BOSTON.

The City of Boston having herewith entered into a contract for lighting with gas and naptha incandescent mantle lamps certain streets, parks and alleys in said city upon the conditions set forth in the annexed specifications, the undersigned Rising Sun Street Lighting Company declares that the only persons interested in this contract as principals are named herein; that no official of the city, and no person acting for or employed by the city, is directly or indirectly interested therein or in any contract which may be made thereunder, or in any expected profits to arise therefrom; that he has carefully examined the annexed specifications; and he hereby bids in accordance therewith and agrees to do all the work set forth in said specifications at the following prices, excluding the furnishing of gas:

Schedule of Prices.

| Kind of Lamp. | $\begin{gathered} \text { Price } \\ \text { per Annum. } \end{gathered}$ |
| :---: | :---: |
| Single gas incandescent burners. | \$15 60 |
| Single gasolene or naphtha incandescent burners. | 2920 |
| A lantern with two gas incandescent burners. | 1760 |
| A lantern with three gas incandescent burners. | 2040 |
| A cluster of two lanterns with one gas incandescent burner each. | 2880 |
| A cluster of two lanterns with two gas incandescent burners each. | 3320 |
| A cluster of three lanterns with one gas incandescent burner each. | 4020 |
| A cluster of three lanterns with two gas incandescent burners each. | 4920 |

The full names and residences of all the persons interested in this contract as principals are as follows:
Rising Sun Street Lighting Company, Boston, Mass. Peter J. Fitzgerald, President and General Manager. Robert J. Gove, Treasurer.
.Notice.- Give first and last names in full, and in case of corporations give the names of president, treasurer and manager or local agent, if any.

The corporation is of the State of Maine.
The name and address of the surety company who will sign the bond are:
Massachusetts Bonding and Insurance Company, Boston, Mass.
Signed this twentieth day of August, 1908.
Signature of contractor:

> Rising Sun Street Lighting Company, By Peter J. Fitzgerald, President.

Accepted. City of Boston,
By Guy C. Emerson, Superintendent of Streets.
Form of contract and bond approved:
Thomas M. Babson, Corporation Counsel.
Approved:
George A. Hibbard, Mayor.

## Bond.

The undersigned surety company binds itself, its successors and assigns to pay to the City of Boston the sum of twenty-five thousand $(25,000)$ dollars.

This obligation is upon the condition that if the party to the contract hereto annexed, therein called the contractor, shall faithfully perform the said contract in accordance with the terms thereof, and do everything of him therein required, and shall fully protect the city against any infringements of patents, or any other suits in connection with or growing out of the performance of said contract, then this obligation shall become of no effect. Otherwise, it shall continue in full force.
Signed, sealed and delivered August 20, 1908.

## Massachusetts Bonding and Insurance Company.

T. J. Falvey, President.

William M. Dowling, Assistant Secretary.

The Corporation is of the State of Massachusetts.
The president is T. J. Falvey.
The treasurer is John T. Burnett.
The place of business in Boston is $77-78$ State street.

## Specifications.

1. By the city is meant the City of Boston, acting through the Superintendent of Streets or such subordinate or other officer as may have charge of street lighting in said city. By the contractor is meant the Rising Sun Street Lighting Company.
2. Work to be Done.- The work to ${ }^{-}$be done under this contract shall consist of supplying all the material, labor and equipment necessary and required (except the posts and service pipes) to light with gas, gasolene or naphtha incandescent lamps such streets, parks, alleys and public places as may from time to time be designated by the city during the continuance of this contract, for a period of one year from September 15, 1908. He must also light, extinguish and keep clean such open-flame fire-alarm signal lamps as the city may from time to time establish.
3. Plant to be Furnished by Contractor.-The contractor must furnish his own plant to do the work, and is required to furnish and erect and put in service, at his own cost, to the satisfaction of the city, all lanterns, burners and other appurtenances, contrivances and fixtures which are necessary to operate and maintain the said lamps, and thereupon the contractor shall forthwith proceed to do the lighting. The necessary equipment shall be placed upon such gas posts as may be furnished and from time to time indicated by the city. The said plant and all appurtenances so furnished by the contractor shall remain his property and must be removed by him at the expiration of the contract at his own expense.

If in the opinion of the city the contractor does not exercise due diligence in the erection of said plant, or if the materials furnished therefor are not to the satisfaction of the city, the city may give the contractor notice in writing of such dereliction, and then if the contractor fails within thirty days thereafter to obey any proper order of the city in connection with the work of erecting and furnishing the plant, the said superintendent, with the consent in writing of the Mayor, may declare the contract forfeited.
4. Lamp-posts. - The posts on which the contractor is to place and operate his lanterns will, together with the service
pipes, be furnished by the city free of expense to the contractor. They shall be neatly painted by the contractor such color as the city may designate, and shall be repainted from time to time whenever, in the opinion of the city, it shall be deemed necessary. The posts must be kept free from dirt and must not be used for advertising purposes. The city will set, connect and keep the posts in good repair and plumb.

The contractor must furnish cross-arms on such posts as the city may designate, arranged to take two or three lanterns as may be required by the city.
5. Lanterns.- The lanterns must be of boulevard pattern, and identical in construction with the sample lantern submitted with the bid. The lamps and ventilators must be so constructed that the lights therein will be protected against insects and wind and weather.
6. Burners and Mantles.- The burners to be used must be first-class in material and workmanship, furnishing at all times when in service a steady, clear, white light, free from smoke, of the required canclle power.

If the burners shall not give continuously the required candle power they must be replaced by the contractor with burners that will. No incandescent mantle will be permitted to be used unless composed of the best material and standard weave and of first-class quality in all respects.

No incandescent mantle shall be used by the contractor which will shrink beyond reasonable dimensions from the standard required; and all broken, smoked or blackened, ragged or frayed mantles must be at once replaced with new mantles by the contractor.
7. Time of Lighting. - The lamps must be lighted and extinguished in accordance with a schedule to be furnished by the city, said schedule not to exceed four thousand burning hours per lamp per year. The lamps must be lighted within one hour from the time fixed in the schedule as the time for beginning, and must be extinguished within one hour from the time fixed in the schedule as the time for beginning to extinguish.
-In order that the city may determine whether the gas or naphtha lamps are lighted and extinguished in accordance with the official schedule or time table hereinbefore mentioned, the contractor shall furnish the said official with maps or lists showing the number and geographical location of each lamp in the district of each lamplighter, and designating the particular lamp at which each lamplighter commences to light and also the lamp at which he completes the lighting; and in extinguishing the lamps the lamplighter shall begin
and finish at the same lamps as are designated for beginning and finishing points on any lamp district during the term of contract.

The lamplighters or other employees of the contractor will not be permitted to climb the lamp-posts for the purpose of lighting the lamps, or for any other purpose, except by use of a ladder.

For every light that does not burn continuously at the proper candle power throughout the hours prescribed each night, a sum equal to $\frac{2}{3} \frac{5}{5}$ of the contract price per lamp per year, for each night's failure, will be deducted from the amounts due the contractor and forfeited to the city. These "outs" will be reported by the Police Department at its respective police stations daily, in writing, open to the contractor, and shall be regarded as final and binding upon the contractor, errors proven or admitted excepted.
8. Repairs and Maintenance. - The contractor must at his own expense keep the entire plant in good repair and maintain same to the satisfaction of the city. Upon failure of the contractor to promptly make any and all necessary repairs (including repainting of lanterns and posts) the city may cause same to be done and deduct the cost thereof from any amounts that may become due to the contractor. All glass must be cleaned at least once a week, and oftener if necessary to do so, in order not to retard or diminish the candle power of the lamps. All broken or displaced glass, and all broken or defective mantles, must be replaced forthwith, and all street lamps must be constructed so that present signs may be attached, and shall, after each cleaning, be replaced, with the signs facing the proper street. All broken or displaced glass shall be removed forthwith by the contractor.

The contractor shall report, in writing, at the office of the official in charge of street lighting, on Thursday of each week, the number of each kind of lamps lighted on each of the preceding seven nights, and on the tenth day of each month the number of each kind lighted, as aforesaid, on each night subsequent to the last report, stating in each report the name of each person lighting the lamps, and the locations of any and all lamps added to or removed from the district of each lamplighter, and is to notify said official, in writing, of any damage to or repair needed to the posts or service pipes.

The contractor will be allowed the entire use of the Lamp Department shop, No. 690 Albany street, at a rent of $\$ 100$ per month.
9. Removal of Lamps.- Whenever ordered to do so by the city, the contractor must change the location of lamps,
weather permitting, from one place to another (posts to be furnished by the city ready to receive lamp), at his own cost and expense.
10. New Lamps.- The city may, from time to time, order the erection and maintenance of new or additional lamps, at such locations as it may deem proper, and it shall be the duty of the contractor, at his own cost and expense, to properly erect upon said posts furnished, placed and connected by the city, and put into operation such additional lamps and maintain the same in all respects as called for in these specifications. All additional lamps ordered shall be put in service within ten days after they are ordered and posts set and connected; and notice that the same are in service shall be given by the contractor to the city.
11. Discontinuance of Lamps.- The city shall have the right to increase or diminish the number of lamps furnished under the contract, but it is understood that the total number of gas and naphtha lamps to be furnished under this contract shall not at any time be less than 7,500 .

Naphtha or gasolene lamps may be changed to gas lamps at the discretion of the city when the gas post and service connections are ready therefor. When orders to discontinue lamps are given, in accordance with the above, the contractor must put them out of service within five days, and notify the City of Boston in writing; payment for the same shall cease on such discontinuance, and when the contractor removes a gas lantern without substituting another therefor, he shall properly plug the service pipe so that the gas will not escape therefrom.
12. Candle Power.- All the burners, whether of gas, gasolene or naphtha, must be maintained continuously when in service at not less than 60 actual candle power. The city shall have the right at any time to test the lights in the usual accepted manner by standard photometric tests, and if there is found any deficiency the contractor must proceed at once to remedy the defects and raise the burners to the required candle power.
13. Supply of Gas.- The city shall furnish all the gas required for the lamps, but is not to light it.

The city agrees to furnish at the mouth of the riser pipes in the gas posts the required amount of gas for street lighting, of the quality and at the pressure furnished in said city for residence consumption; and the contractor will be required to produce at all times a sixty (60) candle power light on a consumption of not to exceed 3 feet of gas per lamp per hour. Any excess consumption over and above an average of

3 feet per lamp per hour shall be paid for by the contractor at the rate of eighty (80) cents per thousand cubic feet, which excess shall be determined as hereinafter provided. After the determination, said amount shall become due and payable by the contractor, or on failure of payment may be deducted by the city from any amounts due or thereafter to become due the contractor.
Tests to ascertain such consumption shall be made when requested by either party in the following manner: representatives of the parties hereto shall select at random from various parts of the city not less than thirty (30) and not more than fifty (50) burners, noting the pressure at the particular post from which each burner is taken. Such burners shall then be tested by the representatives of the parties hereto for the consumption under the same conditions of pressure as that obtained at the particular places where the burners were in use.

If by such tests it shall appear that the said burners are consuming gas at a rate greater than 3 cubic feet per hour on an average, then it shall be assumed that all burners in the city are consuming gas at the same rate as such average rate, and the amount of excess gas consumed shall be arrived at by multiplying the number of lighting hours by the excess amount over the rate as shown by the test. The rate of consumption so determined shall govern until another test is made.
14. Naphtha or Gasolene. - The contractor shall furnish all the gasolene or naphtha which may be necessary to supply incandescent mantle gasolene or naphtha street lamps at such locations as the city may from time to time direct, and furnish with posts for the purpose.
The contractor will be required to supply each lamp each night with a sufficient quantity of gasolene or naphtha to insure the standard of light herein contracted for at all times during the hours of burning.

The gasolene or naphtha used in supplying the lamps must be of the very best grade, free from water, gum, glue or other impurities.
15. Payments.- Payment for the work performed under this contract shall be made by the city monthly, in the same manner as other city work is paid for, at the rates specified in the contract and subject to appropriations.
16. Miscellaneous.- The contractor shall allow his employees to lodge, board and trade wheresoever and with whomsoever they may choose, and shall give preference in employment, first, to citizens of the City of Boston, second, to citizens of Massachusetts, and shall save the city and its
agents and employees harmless from any and all claims against them or any of them arising from any act, omission or neglect of the contractor, his agents or employees in carrying on the contract, and no workman, laborer or mechanic employed on this work within the Commonwealth shall be requested or required to labor more than eight hours in any one calendar day.

Any assignment, subletting or otherwise permitting the work herein specified to be done by any one other than the contractor, or encumbering the work or plant by mortgage or in any way, will be sufficient cause for the abrogation of the contract by the city.

## APPENDIX D.

## REPORT OF THE DEPUTY SUPERINTENDENT OF PAVING DIVISION.

Boston, Mass., February 1, 1909.
Mr. Guy C. Emerson, Superintendent of Streets:
Dear Sir,- The annual report of the expenditures and income of the Paving Division of the Street Department for the financial year ending January 31, 1909, is herewith submitted, showing the nature of the work, the number and variety of permits issued and the details of the expenditures involved in paving, macadamizing, regulating and constructing various streets.

The Paving Division has charge of the following work:
The maintenance and rebuilding of street surfaces and sidewalks.

The placing of street signs.
The numbering of buildings.
The issuing of permits to open or occupy the streets, or for such other purpose as may be required under the ordinances.

The removal of snow and ice from the streets, gutters and plankwalks.

The cleaning of streets in the outlying sections of the city not covered by the Street Cleaning Division.
The division is in charge of a deputy superintendent, with a clerical force under the direction of a chief clerk and an engineering force under the direction of a chief engineer.

The important work was the construction of several of the streets in the downtown section and South Boston, as follows:

Granite block paving on a concrete base, with pitch and pebble joints:

Scollay square.
Bromfield street.
Kneeland street.
Eliot street, Tremont to Pleasant street.
A street, Congress street to Mt. Washington avenue.

Wooden blocks on concrete base:
Church street, Boylston to Providence street.
Providence street, Church street to Park square.
West street.
Summer street, Washington to Hawley street.
Washington street, Court avenue to Cornhill.
State street, north and south of old State House.
On the first four streets the contracts were awarded in 1907, the specifications calling for a 3 -inch by $3 \frac{1}{2}$-inch gum block. The 1908 contracts, the last two, called for a 4 -inch by 4 -inch hard pine block.

The asphalt pavement laid this year was confined to the resurfacing of several small areas of old asphalt streets, with the exception of Cooper street, which was awarded last year. The asphalt patching was advertised and awarded to the lowest bidder, the Warren Brothers Company being the successful contractors.

## Crushed Stone.

In previous years the crushed stone used by the division was produced wholly by the city crushers at a cost considerably in excess of what it could be bought for in the open market. This condition having been shown clearly, it was decided to dispense with the city crushing plants located on leased ledges, and five (5) were sold to the highest bidders. There are now three (3) plants which are located on city property and still used by the city, one at Codman street, Dorchester, one at Chestnut Hill avenue, Brighton and one at Dimock street, Roxbury.

## Steam Rollers.

Eleven 15 -ton and one 3 -ton steam rollers constitute the steam roller outfit of the division. These rollers were overhauled during the winter, the necessary-repairs made, painted, etc., and turned out for the season's work in good condition. As these rollers do a great deal of picking in the repair of the macadam, the constant shake and jar loosen the bolts and wear the bearings unevenly, so that after a season's use there is quite an amount of work to be done to put them in proper repair.

## Personal Property.

The personal property of the division, consisting of tools, hardware, appliances, etc., is in fair condition, the report at the end of the year showing a valuation in the neighborhood of $\$ 63,000$.

## Yard and Wharf Room.

Each district is well provided for in the matter of yard room, the North Yard particularly having an excess in two locations, one at Hecht's wharf and one at Burnham's wharf, which are very expensive and could be dispensed with without detriment to the division. The property occupied by the division for yards, stables, etc., is owned by the city, with the exception of the East Boston and South Boston districts, which are leased.

## General Work.

The division force has been employed on the general work of maintenance, such as paving, macadam reconstruction, edgestone and sidewalk construction, new and old, and fence and bulkhead repairs, as follows:

| urfacing |  | 419824 square yard |
| :---: | :---: | :---: |
| Edgestone set (new) |  |  |
| Edgeston reset |  | 隹 |
| Granite block paving, joints joints | gravel base and | 32,6 |
| Granite block paving, joints (new) | gravel base and | ¢ |
| Brickwalks (new) |  | 3,319 square |
| Brickwalks relaid |  | 6,736 squa |
| Crushed stonewalks |  | 1,534 |
| Excavation |  | 2,148 square |

These quantities do not include a great number of small areas patched in the macadam surface and pavement on which exact measurements cannot very readily be obtained, as well as pieces of edgestone reset in different places in connection with gutter paving, etc.

Under the provisions of chapter 323 of the Acts of 1891, and the acts in amendment thereof and addition thereto, twenty-five new streets were constructed.

Respectfully submitted,
James H. Sullivan, Deputy Superintendent.

|  | Old (reset). | New (first setting). |
| :---: | :---: | :---: |
| Edgestones set | 17,489 linear feet. | 23,573 linear feet. |
| Concrete base laid | 10,220 square yards. | 1,043 square yards. |
| Granite block paving laid, on a concrete base, with pitch and pebble joints.. | 1,984 | 11,744 |
| Granite flagging laid, on a concrete base, with pitch and pebble joints | 97 | 491 |
| Granite block paving laid, on a gravel base, with gravel joints. | 14,080 | 7,204 |
| Granite flagging laid, on a gravel base, with gravel joints | 292 | 570 4.549 |
| Wood block pavement laid Asphalt surface laid | 4,441 square yards. | 4,549 |
| Asphalt patching. | 9,050 " |  |
| Brick sidewalks laid | 6,647 | 4,466 |
| Artificial stone sidewalks laid | 1,489 | 21,585 |
| Crushed stone sidewalks laid | 404 | 7,383 |
| Loam furnished and laid |  | 4,323 |
| Telford base laid. . . . | 4,320 square yards. | 30,543 |
| Vitrified brick paving laid on a concrete base (crosswalks) | 4,320 square yards. | 30,58 287 |
| Vitrified brick paving laid on a gravel base (gutters). |  | 3,591 |
| Artificial stone curbing laid. | 100 linear feet. | 8 linear feet. |
| Coal-tar concrete sidewalk laid. | 2,431 square yards. |  |
| Granitoid blocked pavement laid <br> "Tarvia" furnished and applied |  | $946 \text { square yards. }$ |
| Rubble wall built. . |  | 325 cubic yards. |
| Portland cement retaining wall built.. |  | 108 linear feet. |

Total of the Amount of Work Done by the Street Department Forces.

|  | Old, <br> Linear <br> Feet. | New, Linear Feet. | Old, Square Yards. | New, Square Yards. | Square Yards. | Cubic Yards. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Macadam |  |  |  |  | 419,824 |  |
| Edgestone. | 11,216 | 12,818 |  |  |  |  |
| Granite block paving on a gravel base, with gravel joints. |  |  | 32,656 | 943 |  |  |
| Brick sidewalks. |  |  | 6,736 | 3,319 |  |  |
| Crushed stone sidewalks.... |  |  |  |  | 1,534 |  |
| Excavation. |  |  |  |  |  | 2,148 |

The following is a description of the most important work done during the year, under the supervision of the Chief Engineer.

## Paving.

A street, from Congress street to 175 feet south of Binford street, about 1,610 feet in length, was repaved with large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints, by the F. S. \& A. D. Gore Corporation, under contract, who also did the excavating and regulating. The old paving blocks were hauled away by the contractor; some to Lexington street, East Boston; some to the Massachu-
setts avenue lot; some to City square Charlestown; and some were sold to the contractor. The bricks, flagging and edgestone were furnished by the city on the line of the work. The crushed stone for the concrete was furnished by the city at the Columbia road crusher and was hauled by the contractor. The new paving blocks and the cement for the concrete were furnished by the contractor. The former surface was granite blocks on a gravel base, with gravel joints, and was in a very bad condition.

Bromfield street, from Tremont street to Washington street, about 515 feet in length, was repaved with large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints. The work was done under contract by John I. Fitzgerald, who also did the excavating and regulating The crushed stone for the concrete was furnished by the city and hauled by the contractor. The paving bricks were furnished by the city on the line of the work. The new paving blocks, flagging and other materials, necessary for the paving and concrete base, were furnished by the contractor. The old paving blocks and flagging were hauled to the North End Yard and to the Revere Street Yard, by the contractor. The former surface was granite blocks on a gravel base.

Chelsea street, from forty (40) feet south of Scott's court to Chelsea bridge south, about 393 feet in length, was repaved, with the exception of the track location, with the existing granite blocks on a gravel base, with gravel joints, by Cornelius J. Duggan, under contract, who also did the excavating and regulating. This work was necessitated by a general settlement of the street.

Eliot street, from Tremont street to Pleasant street, about 707 feet in length, was repaved with new large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints. The work was done, under contract, by John I. Fitzgerald, who also did the excavating and regulating. The existing concrete base was cleaned off and brought to the proper grade for the new pavement with Portland cement concrete. The old paving blocks were hauled to the Albany Street Yard by the contractor. The crushed stone for the concrete base was furnished at the Columbia road crusher and hauled by the contractor. The new paving blocks and the cement for the concrete base were furnished by the contractor. The edgestone and flagging were furnished by the city at the South End Paving Yard and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The former pavement was granite block on a concrete base, from the rail to the edgestone, with pitch joints. The track location was formerly paved on a gravel base, with gravel joints and was repaved on a concrete base by the Boston Elevated Railway Company.

Kneeland street, from Washington street across Harrison avenue, about 416 feet in length, was repaved with new large granite blocks, on a six (6) inch Portland cement concrete base,
with pitch and pebble joints. The work was done, under contract, by John Donley Company, who also did the excavating and regulating. The old paving blocks were removed and hauled to Lawn street, Roxbury, and to the Massachusetts avenue lot, by the contractor. The new paving blocks and the cement for the concrete base were furnished by the contractor. The edgestone and flagging were furnished by the city at the South Yard and were hauled by the contractor. The crushed stone for the concrete base was furnished by the city at the Columbia road crusher and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The track area was paved by the Boston Elevated Railway Company. The former pavement was granite blocks on a gravel base with gravel joints.

Court street, from Cornhill to Sudbury street, about 530 feet in length, and Hanover street, from Scollay square northeasterly, about 65 feet in length, were repaved with new large granite blocks on a six (6) inch Portland cement concrete base, with pitch and pebble joints. The work was done, under contract, by John I. Fitzgerald, who also did the excavating and regulating. The old paving blocks and flagging were hauled to the South Yard and to the Massachusetts avenue lot by the contractor. The crushed stone for the concrete base was furnished by the city at the Columbia road crusher and hauled by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The new paving blocks and new flagging were furnished by the contractor. The track area was paved by the Boston Elevated Railway Company. The former pavement was granite blocks on a gravel base.

Summer street, from the bridge over A street to the bridge over the N. Y., N. H. \& H. Railroad, about 372 feet in length, was repaved with the existing granite blocks on a gravel base with gravel joints. The work was done, under contract, by James P. Collins, who also did the necessary regulating. This work was necessitated by a settlement of the roadway, which was repaved from the tracks of the elevated company to the edgestone, nothing being done between the tracks. The plank sidewalk was relaid by the Street Department force.

## Asphalt.

Beacon street, from Brimmer street, across Arlington street, about 364 feet in length, was resurfaced by Jones \& Meehan, under a ten (10) year maintenance guarantee, with two (2) inches of American rock asphalt wearing surface and one (1) inch of asphaltic cement binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete or asphaltic cement binder. The contractor also did the regulating required.

Cooper street, from Washington Street North, across Endicott street, about 243 feet in length, was resurfaced by the Barber Asphalt Paving Company, under a ten (10) year maintenance guarantee, with one and one-half ( $1 \frac{1}{2}$ ) inches of Trinidad asphalt wearing surface and one and one-half ( $1 \frac{1}{2}$ ) inches of bituminous concrete binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete. The old base had been badly cut up on account of the many trenches dug in the street and it required considerable new concrete to bring it to the proper grade. The regulating of the edgestone, brick sidewalks and flagging was done by the contractor. The sidewalk bricks were furnished by the city on the line of the work.

Corning street, from Washington street to Shawmut avenue, about 338 feet in length, was resurfaced by the Warren Brothers Company, under a ten (10) year maintenance guarantee, with one and one-half ( $1 \frac{1}{2}$ ) inches of Acme asphalt wearing surface and one and one-half ( $1 \frac{1}{2}$ ) inches of bituminous concrete binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete base. The contractor also did the excavating and regulating. The sidewalk bricks were furnished by the city on the line of the work. The former surface was Trinidad asphalt on a six (6) inch concrete base.

Kilby street, between Central street and Milk street, about 375 feet in length, was resurfaced by Jones \& Meehan, under a ten (10) year maintenance guarantee, with two (2) inches of American rock asphalt wearing surface and one (1) inch of asphaltic cement binder upon the existing concrete base, which was cleaned off and brought to within three (3) inches of the finished surface of the roadway with Portland cement concrete or asphaltic cement binder. The contractor also did the regulating required. The former surface was Trinidad asphalt on a six (6) inch concrete base.

## Wood Block Paving.

Church street, from Boylston street to Providence street, about 160 feet in length, was paved with wood blocks on a six (6) inch Portland cement concrete base, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. The regulating of the edgestones and sidewalks was done by the contractor. The sidewalk bricks were furnished by the city on the line of the work. The old paving blocks were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a gravel base with gravel joints.

Providence street, from the west side of Church street 170 feet easterly, was paved with wood blocks on a six (6) inch Portland cement concrete base, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. The regulating of the edgestones and sidewalks was done by the contractor. In the rear of Hotel Thorndike the brick sidewalk was replaced with flagging laid in cement mortar. The old paving blocks were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a gravel base with gravel joints.

Summer street, between Washington street and Hawley street, about 240 feet in length, was paved with wood blocks on the existing concrete base, which was cleaned off and brought up to the proper grade with Portland cement concrete, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. The contractor also laid a vitrified brick crosswalk at Washington street and the bricks for the same were furnished by the city on the line of the work. The old paving blocks were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a concrete base with grout joints. The sum of six hundred and fifteen dollars (\$615) has been charged to the Transit Commission as its proportionate share of the expense of repaving this street.

Washington street, from Cornhill to about 78 feet south of Court avenue, about 513 feet in length, and State street, on the north side of the Old State House, about 117 feet in length, and State street, on the south side of the Old State House, about 123 feet in length, wele paved with wood blocks, on a six (6) inch Portland cement concrete base, with cement goout bed and joints, by James Doherty, under a ten (10) year maintenance guarantee. The track area was paved by the Boston Elevated Railway Company. This work is a continuation of the work done last year on Washington street, thus completing the laying of the wood block from Beach street to Cornhill, all of which work was necessitated on account of the work done in connection with the building of the Washington Street Tunnel. The regulating was done at the expense and under the supervision of the Transit Commission. The old paving blocks and flagging were hauled by the contractor to the South Yard and to the Massachusetts avenue lot. The former pavement was granite blocks on a concrete base with pitch and pebble joints, but on account of the tunnel operations this pavement was taken up and the roadway was temporarily repaved with granite blocks on a gravel bed. The sum of four thousand eight hundred sixty-seven and eighty one-hundredths
dollars ( $\$ 4,867.80$ ) has been charged to the Transit Commission as its proportionate share of the expense of repaving these streets.

West street, from Washington street to Tremont street, about 470 feet in length, was paved with wood blocks on the existing concrete base, which was cleaned off and brought up to the proper grade with Portland cement concrete, with cement grout bed and joints, by the United States Wood Preserving Company, under a ten (10) year maintenance guarantee. The old paving blocks were hauled by the contractor, some to Lexington street, East Boston; some to the East Boston Paving Yard, and the balance to the Massachusetts avenue lot. A vitrified brick crosswalk was laid by the contractor at Washington street, the bricks for the same being furnished by the city on the line of the work. The former pavement was granite blocks on a concrete base with grout joints.

## Granitoid Concrete Blocked Pavement.

This is a patent pavement composed of crushed stone and Portland cement. It is laid seven (7) inches deep and consists of five and one-quarter ( $5 \frac{1}{4}$ ) inches of concrete and one and three-quarters ( $1 \frac{3}{4}$ ) inches of surface blocking. The concrete is composed of one (1) part Portland cement, three (3) parts sand and four (4) parts of crushed stone. After the concrete has been placed, and before it has begun to set, there is deposited thereon the Granitoid blocking, which is composed of two (2) parts of Portland cement and three (3) parts of fine hard crushed stone. After the initial set this is worked into brick shapes of approximately four and one-half ( $4 \frac{1}{2}$ ) inches by nine (9) inches, having rectangular surface similar to paving blocks. An expansion joint of composition is made across the street at such intervals as may be necessary. This pavement was laid by the Rudolph S. Blome Company, under a five (5) year maintenance guarantee, in Zeigler street, between Washington street and Warren street, about 315 feet in length. The contractor did the excavating and furnished the materials for the pavement. The surplus material was hauled by the contractor to the Dimock street lot. The regulating was done by the city. The former surface of the street was macadam.

## Assessment Streets.

The following streets have been constructed or are in the process of construction under the provisions of chapter " 323 " of the Acts of 1891, and the acts in amendment thereof or in addition thereto. Ashland street, from Mill street to Everdean street, is about 289 feet in length. The contract for constructing the surface of this street was awarded to Philip Doherty November 19, 1907. Work was begun June 1, 1908, and
completed June 18, 1908. It is a thirty-eight (38) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot crushed stone sidewalks. The existing macadam roadway and crushed stone sidewalks were found to be in good condition and required only reshaping to conform with the present construction. The straight edgestones and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone and screenings for reshaping were furnished by the contractor.

Avenue Louis Pasteur, between the Fenway and Longwood avenue, about 1,371 feet in length, is being filled in and graded. The filling is obtained from various sources. William J. Barry, under his contract dated October 2, 1908, is at present delivering filling. A large part of the fill is over low, marshy ground, and on account of the consequent settlement the work proceeds rather slowly.

Bayswater street, from Saratoga street, across Austin avenue, is about 1,120 feet in length. The contract for constructing the surface of this street was awarded to James Doherty October 8, 1907. Work was begun October 15, 1907, and suspended December 6, 1907. It was resumed March 26, 1908, and completed April 2, 1908. It is a fifty (50) foot street with a 6 -inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestones and eight (8) foot crushed stone sidewalks. The work this season consisted principally of completing the macadam roadway and crushed stone sidewalks, the crushed stone for the same being furnished by the contractor.

Bellevue street, from Hamilton street to Kane street, is about 493 feet in length. The contract for constructing the surface of this street was awarded to John McCourt November 23, 1907. Work was begun April 18, 1908, and completed July 16, 1908. The greater part of this street is thirty-five (35) feet in width, with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and six (6) foot crushed stone sidewalks. A small part of the street is forty (40) feet in width, with seven (7) foot sidewalks, and is of the same construction as above. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone and screenings were furnished by the contractor.

Bernard street, from Talbot avenue to the New England Railroad, is about 946 feet in length. The contract for constructing the surface of this street was awarded to William J. Barry June 23, 1908. Work was begun June 30, 1908, and completed September 9, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick crosswalks on a concrete base with grout joints,
granite edgestones and seven (7) foot crushed stone sidewalks. The edgestone, bricks for crosswalks and gutters, sand, cement and crushed stone for the concrete base for crosswalks, paving blocks for brows of crosswalks and the crushed stone for the roadway and sidewalks were furnished by the contractor.

Bruce street, from Dracut street to Wrentham street, is about 135 feet in length. The contract for constructing the surface of this street was awarded to Daniel E. Lynch November 11, 1907. Work was begun November 29, 1907, and suspended December 26, 1907. It was resumed July 23, 1908, and completed September 2, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestones and seven (7) foot crushed stone sidewalks. The work done this season consisted of completing the roadway and the crushed stone sidewalks, the crushed stone for the same being furnished by the city and hauled by the contractor.

Corona street, from Bowdoin street to Geneva avenue, is about 1,001 feet in length. The contract for constructing the surface of this street was awarded to William J. Barry June 23, 1908. Work was begun August 7, 1908, and completed October 14, 1908. It is a thirty-five (35) foot street with a six (6) inch macadam roadway, three (3) foot brick gutters, brick and flagging crosswalks and six (6) foot artificial stone sidewalks. The new edgestone, brick blocks and crushed stone were furnished by the contractor. Such of the existing material on the street as was found suitable was used in the present construction. The contract for constructing the artificial stone sidewalks was awarded to Jeremiah J. Sullivan September 3, 1908. Work was begun October 28, 1908, and suspended December 19, 1908. The sidewalk on the south side was completed for nearly the entire length of the street. The remaining sidewalks were excavated and filled with cinders and left in a passable condition for the winter. Work will be resumed early in the spring.

Cottage street, from Maverick street across Gove street, is about 630 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 14, 1907. Work was begun April 23, 1908, and suspended May 28, 1908. It was resumed July 28, 1908, and completed July 31, 1908. It is a fifty (50) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and granite edgestone. The sidewalks, which are eight (8) feet in width, are of brick except along the playground, where they are of crushed stone. The edgestone, paving blocks and sidewalk bricks were furnished by the city on the line of the work. The flagging was furnished by the city and hauled by the contractor. The crushed stone for the macadam and sidewalks was furnished by the contractor.

Cotton street, from Walter street to Fairview street, is about 721 feet in length. The contract for constructing the surface
of this street, with the exception of the artificial stone sidewalks, was awarded to Peter F. Connolly July 3, 1908. Work was begun July 16, 1908, and suspended August 24, 1908. It was resumed October 2, 1908, and completed October 22, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick and flagging crosswalks and granite edgestone. The sidewalks, seven (7) feet in width, have an artificial stone walk four and one-half (41 2 ) feet wide and a seeded loam space 1 foot 11 inches wide. The edgestone, bricks for crosswalks and gutters, sand, cement and crushed stone for concrete base for brick crosswalks, paving blocks for brows to crosswalks and the crushed stone for the roadway were furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Thomas A. Nolan July 23, 1908. Work was begun August 18, 1908, and completed September 15, 1908. These walks are laid under a ten (10) year maintenance guarantee. Underdrains were laid connecting the cinder foundation of the walks with the catch-basins, the object being to prevent the accumulation of water at the low end of the walks and a consequent upheaval which might be occasioned by the action of frost in the ground.

Dakota street, from Greenbrier street to Geneva avenue, is about 1,453 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to William J. Barry June 23, 1908. Work was begun July 20, 1908, and completed October 15, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick and flagging crosswalks, granite edgestone and seven (7) foot artificial stone sidewalks. The new edgestone, brick blocks and the crushed stone were furnished by the contractor. Such of the existing material on the street as was found suitable was used in the present construction. The contract for constructing the artificial stone sidewalks was awarded to Jeremiah J. Sullivan September 16, 1908. Work was begun October 12, 1908, and completed November 28, 1908. These sidewalks are laid under a ten (10) year maintenance guarantee.

Everdean street, from Ashland street to Green Hill street, is about 397 feet in length. The contract for constructing the surface of this street was awarded to John W. Collins November 29, 1907. Work was begun May 11, 1908, and completed June 20, 1908. It is a forty (40) foot street with a macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and eight (8) foot crushed stone sidewalks. The existing macadam roadway and crushed stone sidewalks were found to be in good condition and were allowed to remain. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and the paving blocks were furnished by the city on the line of the work.

Everdean street, from Green Hill street to Preston street, is about 411 feet in length. The contract for constructing the surface of this street was awarded to Philip Doherty November 19, 1907. Work was begun March 31, 1908, and completed June 20, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and granite edgestone. The sidewalks are nine (9) feet wide on the east side of the street and nine and one-half ( $9 \frac{1}{2}$ ) feet wide on the west side. This arrangement was made in order to preserve several large shade trees. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The paving blocks and circular edgestone were furnished by the city on the line of the work. The crushed stone was furnished by the contractor.

Evergreen street, from South Huntington avenue about 443 feet easterly, is about 456 feet in length. The contract for grading this street was awarded to Mark H. Lynch December 11, 1908. Work was begun December 16, 1908, and at the present time it is about two-thirds ( $\left(\frac{2}{3}\right)$ done. The work consists of cutting through two (2) good sized hills, a large part of which are rock, and filling the low sections of the street, so that when the work is finished the street will have been graded to the proper sub-grade, ready for construction.

Frankfort street, from Maverick street across Gove street, is about 608 feet in length. The contract for constructing the surface of this street was awarded to James Doherty November 14, 1907. Work was begun April 3, 1908, and completed May 29, 1908. It is a fifty (50) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and granite edgestone. The sidewalks, eight (8) feet in width, are of brick except àlong the playground, where they are of crushed stone. The edgestone was furnished by the city, part of which was hauled by the contractor and part delivered on the line of the work by the city. The paving blocks and sidewalk bricks were furnished by the city on the line of the work. The flagging was furnished by the city and hauled by the contractor. The crushed stone for the roadway and sidewalks was furnished by the contractor.

Harlem street, from Glenway street to Greenwood street, is about 582 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks and curbs, was awarded to James Doherty June 22, 1908. Work was begun August 10, 1908, and completed September 19, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick crosswalks on a concrete base with grout joints. Granite edgestone was set at the Greenwood street end of this street. The existing artificial stone sidewalks and curb were allowed to remain. The edgestone, bricks for gutters and crosswalks, cement, sand and crushed stone for the concrete base for the
crosswalks, and the crushed stone for the roadway were furnished by the contractor.

Kilton street, from Harvard street to Park street, is about 842 feet in length. In connection with the work of constructing this street about 105 feet of Athelwold street was rebuilt to conform to the new grade. The contract for constructing the surface of these streets was awarded to Philip Doherty October 8, 1907. Work was begun October 16, 1907, and suspended December 14, 1907. It was resumed May 2, 1908, and completed May 6, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot crushed stone sidewalks. On a part of this street artificial stone sidewalks seven (7) feet in width had been built previous to construction. These were in good condition and were allowed to remain. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone, paving blocks and crushed stone were furnished by the city on the line of the work.

Larchmont street, from Waldeck street to Greenbrier street, is about 1,077 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to the D. E. Coleman Company November 1, 1907. Work was begun April 9, 1908, and suspended May 30, 1908. It was resumed July 14, 1908, and completed July 17, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and a half ( $4 \frac{1}{2}$ ) feet of which is artificial stone and the balance loam space. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and the paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Warren Brothers Company November 29, 1907. Work was begun June 9, 1908, and completed July 14, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Larkin street, from Adams street to Hampden street, is about 313 feet in length. The contract for constructing the surface of this street was awarded to William J. Rafferty \& Co. June 22, 1908. Work was begun June 30, 1908, and completed August 15, 1908. It is a twenty (20) foot street with a six (6) inch macadam roadway with three (3) foot brick block gutters and brick crosswalks. The sidewalks are three and one-half (31) feet in width and are paved with brick. Such of the existing material on the street as was found in good condition was used in the present construction. The new edgestone, brick blocks, sidewalk bricks and crushed stone were furnished by the contractor.

Lincoln street, Brighton, at the corner of Cambridge street, was widened on the southerly corner and a large circle of edge-
stone was put in. The work done consisted in filling, setting the edgestone, extending the crosswalk, paving the gutter and resurfacing the roadway and sidewalks, all of which was done by the Street Department forces.

Mapleton street, from Market street to Murdock street, is about 1,714 feet in length. The contract for constructing the surface of this street was awarded to Coyle \& Clark July 6, 1907. Work was begun August 16, 1907, and suspended January 10, 1908. It was resumed April 28, 1908, and completed June 27,1908 . It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot brick block gutters, brick crosswalks on a concrete base, granite edgestone and seven (7) foot crushed stone sidewalks. The edgestone, bricks for gutters and crosswalks and the crushed stone were furnished by the city and hauled by the contractor.

Mallet street, from Florida street to Adams street, is about 730 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to Timothy F. Bradley September 3, 1907. Work was begun September 17, 1907, and suspended November 15, 1907. It was resumed May 11, 1908, and completed May 19, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and one-half ( $4 \frac{1}{2}$ ) feet of which is artificial stone and the balance loam space. The straight edgestone, flagging and crushed stone were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The contract for constructing the artificial stone sidewalks was awarded to Simpson Brothers Corporation November 14, 1907. Work was begun November 21, 1907, and suspended December 3, 1907. It was resumed April 22,1908 , and finished October 24, 1908. These sidewalks are laid under a ten (10) year maintenance guarantee.

Norwood street, from Tolman street to about 444 feet northwesterly. The contract for constructing the surface of this street was awarded to Philip Doherty November 19, 1907. Work was begun December 4, 1907, and suspended December 12, 1907. It was resumed March 30, 1908, and finished May 19, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot crushed stone sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. A wooden fence was built across the northerly end of the street, the material for which being furnished by the contractor.

Norton street, from Bowdoin street to Speedwell street, is about 530 feet in length. The contract for constructing the
surface of this street, with the exception of the artificial stone sidewalks, was awarded to the D. E. Coleman Company November 1, 1907. Work was begun May 5, 1908, and completed July 20, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot artificial stome sidewalks. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to the W. A. Murtfeldt Company July 15, 1908. Work was begun August 4, 1908, and completed August 31, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Parkview street, from Seaver street to Hutchings street, is about 403 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to R. L. Barrett November 11, 1907. Work was begun November 13, 1907, and suspended December 19, 1907. It was resumed April 13, 1908, and completed April 30, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks and artificial stone sidewalks seven (7) feet in width. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone and paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Robert Eagar, Jr., May 26, 1908. Work was begun June 20, 1908, and completed July 7, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Samoset street, from Welles avenue to Centre street, is about 875 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to D. E. Coleman Company November 1, 1907. Work was begun November 13, 1907, and suspended December 14, 1907. It was resumed April 1, 1908, and completed April 13, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and one-half ( $4 \frac{1}{2}$ ) feet of which is artificial stone and the balance loam space. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The paving blocks were furnished by the city on the line of the work. The crushed stone was furnished by the contractor. The contract for constructing the artificial stone sidewalks was awarded to Jeremiah J. Sullivan May 26, 1908. Work was begun June 2, 1908, and completed June 24, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.

Speedwell street, from Topliff street to Hamilton street, is about 735 feet in length. The contract for constructing the surface of this street, with the exception of the artificial stone sidewalks, was awarded to William Barrett October 9, 1907. Work was begun October 15, 1907, and suspended December 14, 1907. Work was resumed May 11, 1908, and completed May 16, 1908. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, flagging crosswalks, granite edgestone and seven (7) foot sidewalks, four and one-half (421) feet of which is artificial stone and the balance loam space. The straight edgestone and flagging were furnished by the city and hauled by the contractor. The circular edgestone, paving blocks and crushed stone were furnished by the city on the line of the work. The contract for constructing the artificial stone sidewalks was awarded to Warren Brothers Company October 31, 1907. Work was begun November 13, 1907, and suspended December 14, 1907. It was resumed May 5, 1908, and completed May 16, 1908. These sidewalks were laid under a ten (10) year maintenance guarantee.
South Huntington avenue, from Huntington avenue, across Heath street, is about 1,148 feet in length. The contract for constructing the surface of this street was awarded to William J. Barry November 13, 1907. Work was begun March 16, 1908, and completed June 20, 1908. It is an eighty (80) foot street with a six (6) inch macadam roadway on each side of the car tracks, three (3) foot granite block gutters, flagging crosswalks, granite edgestone, and brick, crushed stone and artificial stone sidewalks thirteen (13) feet in width. This street was formerly a part of Heath street and was about fifty (50) feet wide. A widening was made on the westerly side. The circular edgestone, paving blocks and sidewalk bricks were furnished by the city on the line of the work. The flagging was furnished by the city and hauled by the contractor. The crushed stone for the roadway and sidewalks was furnished by the contractor. A contract for artificial stone sidewalks, to complete the existing artificial stone sidewalks on the easterly side, was awarded to the Simpson Brothers Corporation July 17, 1908. Work was begun July 28, 1908, and completed August 3, 1908. This work was necessitated by the widening of the sidewalks on the easterly side of the street, and the sidewalks were laid under a ten (10) year maintenance guarantee.

West Fourth street, South Boston, at the corner of Dorchester avenue, was widened on the northwest corner so as to enable the Boston Elevated Railway Company to lay tracks of a larger radii, in order that larger cars could be used. The work done was to put in a large radius curve of granite edgestone, cut back the street line, thus widening the sidewalk, repave the street corner and rebuild the catch-basin, all of which was done by the Street Department forces.

## General.

Esmond street, from Blue Hill avenue to Bradshaw street, is about 920 feet in length. The contract for resetting the edgestone and relaying the granite block gutters was awarded to Daniel E. Lynch October 20, 1908. Work was begun October 26,1908 , and completed December 17, 1908. Under an extension of this contract the loam spaces were resodded.

Gainsborough street, from St. Stephens street to Hemenway street, is about 714 feet in length. The contract for relaying the artificial stone sidewalks, resetting the edgestones and relaying the granite block gutters, was awarded to Robert Eagar, Jr., June 29, 1908. Work was begun July 13, 1908, and completed August 10, 1908. The sidewalks were laid under a ten (10) year maintenance guarantee. This work was necessitated by the settlement of the street, the existing walks having settled so much that they were broken up and in a dangerous condition.

Kenney street ledge lot. In accordance with the terms of a lease entered into by the city and James W. Kenney, dated June 7, 1902, the city agreed to leave the premises at a level not lower than the land on the northerly side of the lot. On a part of the lot, rock had been quarried to a level somewhat lower. A contract to fill the lot to the required grade was awarded to Patrick F. Donovan February 14, 1908. Work was begun February 19, 1908, and completed August 29, 1908. There were 4,657 cubic yards of filling, furnished and placed by the contractor.
Lawn street, from Heath street to another part of Heath street, is about 1,454 leet in length. The contract for setting the edgestone and paving the gutters was awarded to the Trimount Contracting Company December 10, 1907. Work was begun August 26, 1908, and completed September 26, 1908. A small area of brick sidewalk was laicl. The edgestone, gutter blocks and sidewalk bricks were delivered by the city on the line of the work.

Old Colony avenue (and parts of D and West Ninth streets), from Dorchester avenue to Dorchester street, is about 2,528 feet in length. The contract for constructing the surface of this street was awarded to the Fred S. \& A. D. Gore Corporation October 1, 1908. Work was begun October 14, 1908. When completed it will be an eighty (80) foot street with a six (6) inch macadam roadway, four (4) foot granite block hip gutters, flagging crosswalks and gravel sidewalks, twelve (12) feet in width. With the exception of the widening on the westerly side, this was the former roadbed of the Old Colony Railroad. The work done this season consisted of rough grading, taking down old retaining walls and building dry rubble retaining walls on D street, West Ninth street and on Old Colony avenue near Dorchester street.

Summer street, north side, between Melcher street and A street, is about 276 feet in length. The contract for relaying
artificial stone sidewalk, resetting the edgestone and repaving the street, where necessary, was awarded to Warren Brothers Company November 16, 1908. Work was begun November 28, 1908, and suspended December 17, 1908. The edgestone was reset, the paving done and the cinder foundation laid this fall. The work will be completed early in the spring.

Worthington street, in front of the Normal School. The contract for setting the edgestone, laying the gutters, brick sidewalks and loam spaces was awarded to Charles W. Kinney November 11, 1907. Work was begun November 12, 1907, and suspended December 19, 1907. It was resumed April 6, 1908, and completed May 16, 1908. The edgestone, vitrified bricks for the gutter and sidewalk bricks were furnished by the city on the line of the work.

Roxbury street, at the estate of H. S. Lawrence. An old wall on the street line, with its top about eight (8) inches below the present surface of the brick sidewalk had been covered with planks. These planks having become loose and rotten, the sidewalk was in a dangerous condition. To permanently remedy this, the old covering was removed and a wide bluestone cap was laid on the wall, flush with the brick sidewalk. A part of the brick sidewalk was also relaid. All the work was done by the Street Department forces.

Terrace street retaining wall. The contract for constructing a Portland cement retaining wall, about 108 feet long, at the Park Brewery, was awarded to James Doherty July 24, 1908. Work was begun July 29, 1908, and completed August 10, 1908. The contractor furnished all the materials.

Allston street, from Brighton avenue to Commonwealth avenue, is about 1,842 feet long. The work of constructing this street was done by the Street Department force. It is a forty (40) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters, granite edgestone and crushed stone sidewalks, seven (7) feet in width. In doing the subgrading a considerable amount of rock had to be removed.

Cohasset street, between Corinth street and Albano street, is about 1,014 feet long. This street was constructed by the Street Department force. It is a thirty-five (35) foot street with a six (6) inch macadam roadway, three (3) foot granite block gutters and six (6) foot crushed stone sidewalks. The roadway which was formerly macadam was resurfaced with about four (4) inches of crushed stone.

## FINANCIAL STATEMENT.



[^6]Highways, Making of.Expenditures from February 1, 1908, to Janu-ary 31,1909\$99,412 74
Total Expenditures.
Maintenance appropriation ..... \$833,981 43
Street improvements ..... 177,566 28
Old Colony avenue, construction of, ..... 7,577 39
Highways, making of ..... 99,412 74
———\$1,118,537 ..... 84

## Income.

Statement showing the amount of bills deposited with the City Collector from February 1, 1908, to January 31, 1909, and credited to General Revenue:
On account of edgestone and sidewalk assessments \$614 79
Sale of horses ..... $418 \quad 50$
Sale of junk and removing abutment walls ..... 5873
Return premium on insurance policy ..... 4512
$\$ 1,13714$
Amount paid into the city treasury during the year:
On account of edgestone and side-walk assessments\$6,581 91
Sale of horses ..... 41850
Removing abutment walls ..... 5100
Return premium on insurancepolicy4512
Objects of Expenditures from the Regular Appropriation, Classified by Districts, from February 1, 1908, to January 31, 1909.

| Districts. | Repairs. | Snow. | Edgestone and sidewalk Repairs. | Repairing Fences. | $\begin{array}{\|c} \text { Repairing } \\ \text { Plank } \\ \text { Walks. } \end{array}$ | Schedule A, Miscellaneous. | Schedule B, Street Work. | S'chedule C, in Addition to Amount Charged to Appropriation Improvements. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. South Boston | \$4,336 02 | \$4,574 34 | \$8,135 25 | \$1,169 73 | \$132 25 |  | \$6,912 94 | \$623 41 | \$25,883 94 |
| 2. East Boston | 5,413 91 | 2,487 49 | 7,854 80 | 1,331 88 | 1966 |  | 58188 | 4,289 78 | 21,979 40 |
| 3. Charlestown | 6,768 94 | 3,202 88 | 4,561 73 | 16509 | 9718 |  | 5,752 90 | 28397 | 20,832 69 |
| 4. Brighton. | 5,753 56 | 4,157 60 | 3,373 52 | 10966 | 600 |  | 16,089 02 | 2,278 51 | 31,767 87 |
| 5. West Roxbury | 10,989 34 | 8,257 71 | 2,745 06 | 1,246 27 | 26886 |  | 23,370 03 | 1,637 58 | 48,514 85 |
| 6. Dorchester | 7,715 98 | 3,021 98 | 6,078 18 | 24088 |  |  | 16,474 06 | 3,036 05 | 36,567 13 |
| 7. Roxbury | 6,714 17 | 9,451 07 | 10,369 41 | 70554 | 1,567 80 |  | 13,410 28 | 3,511 30 | 45,729 57 |
| 8. South End. | 13,769 33 | 7,615 75 | 10,268 78 | 1,361 87 |  |  | 17,974 97 | 5,386 36 | 56,377 06 |
| 9. Back Bay | 4,023 89 | 4,213 01 | 8,428 80 | 39981 | 1418 |  | 10,688 98 | 10,816 88 | 38,585 55 |
| 10. North End | 12,850 58 | 9,182 61 | 5,590 09 | 1622 |  |  | 5,022 01 | 8,467 37 | 42,028 88 |
| 12. Ashmont. | 2,905 96 | 1,978 93 | 2,672 44 | 64010 | - 9500 |  | 4,428 08 | 1,208 71 | 13,929 22 |
|  |  |  |  |  |  | \$451,785 27 |  |  | 451,785 27 |
| Totals | \$81,241 68 | \$58,143 37 | \$70,078 06 | \$7,387 05 | \$2,200 93 | \$451,785 27 | \$121,605 15 | \$41,539 92 | \$833,981 43 |

SCHEDULE A.
Central office expense ..... \$12,655 81
Salary of superintendent ..... \$5,354 17
Salaries of office employees ..... 5,277 95
Automobile expense ..... 93103
Printing and stationery ..... 75508
Telephone service ..... 13639
Typewriter ..... 9532
Traveling expense ..... 6247
Furniture ..... 3940
Messenger service ..... 1. 45
Sundries ..... 255
Salary of Superintendent J. H. Doyle ..... 8333
Salary of Acting Superintendent Wm. Jackson ..... 16667
Salary of deputy superintendent ..... 3,486 11
Salaries of office employees ..... 13,378 86
Salary of chief engineer ..... 3,000 00
Salaries of assistant engineers, etc. ..... 8,905 26
Salaries of Permit Office employees ..... 6,874 43
Salaries of inspectors ..... 23,766 78
Salaries of Supply Department employees ..... 55277
Automobile, Superintendent of Streets ..... 1,500 00
Automobile, Deputy Superintendent (net) ..... 71500
Automobile expense, including wages of chauffeur, repairs, etc. ..... 2,802 71
Automobile insurance ..... 12730
Automobile registration ..... 500
Advertising ..... 17394
Asphalt analysis ..... 5000
Derricks, repairing, etc. ..... 31415
Dumping boat service ..... 3475
Expressage and freight charges ..... 1271
Clock repairs ..... 1200
Electrical appliances, labor and stock ..... 79290
Furniture ..... 600
Fuel and oil ..... 3,525 33
Ice ..... 81.14
Electric and gas lighting ..... 94789
Messenger service ..... 2900
Newspapers, magazines, etc. ..... 7033
Oatmeal ..... 10610
Printing and stationery ..... 5,427 99
Rent of towels ..... 10640
Stoves, pipes, grates, etc. ..... 3601
Taxes ..... 2,207 37
Telephone service ..... 1,995 12
Traveling expense ..... 41485
Tallying traffic on bridges ..... 5650Carried forward\$94,420 51
Brought forward . ..... \$94,420 51
Traverse street subway, repairs ..... 24415
Rent of land ..... 10,551 46
Engineering supplies and incidentals ..... 59480
Holidays (not including holidays charged on street accounts) ..... 41,769 53
Pay allowed injured employees ..... 1,199 82
Medical attendance on injured employees ..... 1,553 00
Soap for office ..... 822
Steam roller insurance ..... 2706
Signs and numbers ..... 7,563 18
Removing rubbish, Chelsea fire ..... 3775
Removing rubbish, Cambridge street fire ..... 2056
Ladder for Permit Office ..... 350
Removing night soil ..... 1500
Keys, etc. ..... 545
Testing bricks ..... 3000
Repairing safe ..... 1600
Photographs ..... 3600
Sundries ..... 2075
Tools, new and cost of repairing, etc ..... 17,939 19
Executions of court and damages ..... 1,135 85
Materials sold and work done for other depart- ments and individuals ..... *361 20
Snow dump, Dorchester avenue ..... 43750
Harvard Street Bridge, Dorchester, putting up fence ..... 11000
Roxbury street, retaining wall ..... 1250
Artificial stone sidewalks, rebates allowed and repairs ..... 9,497 66
Asphalt pavements repaired ..... 19,502 26
Crossings, new ..... 2,846 14
Crossings repaired ..... 1,125 54
Bitulithic pavements repaired ..... 10185
Fences and plank walks, new ..... 1,473 20
Edgestones and sidewalks, new ..... 12,091 23
Tar concrete sidewalks ..... 76944
Street cleaning ..... 80,968 35
Repairing offices, stables, sheds, etc. ..... 7,678 88
Repairing shanties ..... 13352
Street watering ..... 49200
Sanding icy streets and sidewalks ..... 2,071 86
Asphalting carriage wash at Child Street Yard ..... 12500
Veterinary services ..... 1,644 69Expenses of yards and stables,including horses and wagons,cost of caring for horses, repairsto carts, harnesses, etc. . . . \$192,585 82Carried forward\$192,585 82
*Paid through Collecting Department $\$ 223.89$.


[^7]Anawan avenue, from Beech street to the railroad.
Roadway resurfaced with 6 -inch macadam.Length, 708 feet. Area, 2,202 square yards.
Labor furnished by the city ..... $\$ 14161$
Teaming furnished by the city ..... 26775
Water cart furnished by the city ..... 3300
Stone furnished by the city ..... 51656
Gravel furnished by the city ..... 1387
Steam roller ..... 10400
$\$ 1,07679$
Appleton street, from Berkeley street to Columbusavenue. Roadway resurfaced with stonepicked from street. Length, 1,146 feet. Area,3,827 square yards.
Labor furnished by the city ..... $\$ 30262$
Teaming furnished by the city ..... 2430
Water cart furnished by the city ..... 3240
Stone dust furnished by the city ..... 7782
Steam roller ..... 13650
\$573 ..... 64
Ashland street, Elm to Park street. Resurfaced with 6 -inch macadam. Length, 355 feet. Area, 790 square yards.
Labor furnished by the city ..... $\$ 5400$
Teaming furnished by the city ..... 10350
Stone furnished by the city . ..... 23328
Steam roller furnished by the city ..... 3900
Beacon street, from Arlington to Brimmer street.Asphalted with American Rock asphalt andregulated. Length, 364 feet. Area, 1,519square yards.
Engineering and inspection ..... \$159 75
Advertising ..... 1475
Incidentals ..... 20
Amount paid to Jones \& Meehan, under contract:95 linear feet edgestone set(a) 25c.$\$ 2375$
1,506 square yards bituminous concrete binder and as- phalt wearing surface furnished and laid @ \$1.90 ..... 2,861 40
12.3 cubic yards extra bitumi-nous binder furnishedand laid @ \$89840
Carried forward ..... $\$ 2,983 \quad 55$

## Brought forward

$\$ 2,98355$
3.3 cubic yards extra cement, concrete base, furnished and laid @ \$6

1980
35 square yards brick sidewalks furnished and laid (a) $\$ 1$

3500
Extra work - Chip concrete base at the intersection of Beacon and Arlington streets:
$78 \frac{1}{2}$ hours labor @ 25 c . .
Plus 15 per cent on
Plus 15 per cent on $\$ 19.63$.

1963

Extra work-Omit granite block paving with gravel joints and substitute granite block paving with pitch and pebble joints:
13 square yards granite block paving laid, pitch and pebble joints, @ \$1.15,

1495
294
$\frac{3,075 \quad 87}{\$ 3,250 \quad 57}$
$\$ 3800$
Beacon street, from Cleveland circle to Brookline line. Roadway resurfaced with 4 -inch macadam. Length, 1,000 feet. Area, 5,333 square yards.
Labor furnished by the city . $\$ 39943$
Teaming furnished by the city . . 31950
Water cart furnished by the city . 6900
Steam roller furnished by the city . 27300
Stone . . . . . . . 1,687 35
$\$ 2,748 \quad 28$
Bellevue street, from Robin street to the railroad bridge. Resurfaced with 4 -inch macadam.
Length, 3,825 feet. Area, 8,925 square yards.
Labor furnished by the city . . $\$ 27014$
Teaming furnished by the city . . 1,020 75
Water cart furnished by the city . . 13500
Steam roller furnished by the city . 37700
Stone furnished by the city . . 1,785 50
Gravel furnished by the city . . 15820
Bigelow street, from 60 feet west of Dunboy toBrooks street, and at the intersection ofCharlesview street. Area, 1,950 square yards.Resurfaced with 4-inch macadam, $133 \frac{1}{2}$ squareyards gutters paved.
Labor furnished by the city ..... $\$ 55176$
Teaming furnished by the city ..... 36188
Stone furnished by the city ..... 43927
Stone strippings furnished by the city, ..... 16559
Gravel furnished by the city ..... 1500
Lumber furnished by the city ..... 191
Steam roller furnished by the city ..... 26975
\$1,805 ..... 16
Blagden street, from Exeter street to Huntington avenue. Roadway resurfaced with 3 -inch macadam and coated with tarvia. Length, 490 feet. Area, 1,457 square yards.
Labor furnished by the city ..... $\$ 16062$
Teaming furnished by the city ..... 8925 ..... 8925
Water cart furnished by the city ..... 1200
Stone furnished by the city ..... 21419
Tarvia furnished by the city ..... 10500
Steam roller furnished by the city ..... 6500
$\$ 64606$
Blue Hill avenue, from Talbot avenue to Mattapan square. Roadway treated with tarvia B .
29,663 square yards roadway treated with tarvia B. \$1,186 52
Bowdoin street, from Hancock to Blakeville street.Roadway top cut down and resurfaced with2 -inch macadam in places. Length, 3,300feet. Area, 9,200 square yards.
Labor furnished by the city ..... $\$ 7363$
Teaming furnished by the city ..... 27000
Stone furnished by the city ..... 23456
Steam roller furnished by the city ..... 4550
Braemore road, from Chiswick road to Common- wealth avenue. Resurfaced with 7 -inch macadam. Length, 450 feet. Area, 1,300 square yards.
Labor furnished by the city ..... $\$ 37776$
Teaming furnished by the city ..... 14315
Stone furnished by the city ..... 30965
Strippings furnished by the city ..... 9513
Lumber furnished by the city ..... 23
Steam roller furnished by the city ..... 20150

## (81,

Bristol street, from Albany street to Harrison avenue. Repaved roadway with old blocks. Length, 575 feet. Area, 680 square yards. Edgestone reset and 372 square yards brick sidewalks relaid.
Labor furnished by the city . . $\$ 34400$
Bricks furnished by the city . . 3212
Gravel and sand furnished by the city . . . . . . . 10350
$\$ 47962$
Brookline avenue, from Boylston street to Jersey street. Resurfaced sidewalks with crushed stone.
Stone furnished by the city
$\$ 13847$
Brookline avenue, Audubon road to Bellevue street. Roadway resurfaced with 4 -inch macadam on the westerly side. Length, 463 feet. Area, 865 square yards. From Bellevue street to the Parkway patched with macadam. From Parkway to Brookline line resurfaced with 4 -inch macadam. Area, 1,400 square yards.
Labor furnished by the city . . $\$ 262-50$
Teaming furnished by the city . . 29285
Water cart furnished by the city . 4470
Stone furnished by the city . . 41375
Gravel furnished by the city . . 393
Lumber furnished by the city . . 75
Steam roller furnished by the city . 18850
$\$ 1,20698$
Brunswick street, from Blue Hill avenue to Warren street. Roadway resurfaced with 4 -inch macadam. Length, 470 feet. Area, 1,044 square yards.
Labor furnished by the city . . $\$ 26763$
Teaming furnished by the city . . 13475
Stone furnished by the city . . 34000
Steam roller furnished by the city . 6500
$\$ 80738$
Cambridge street, Sparhawk street to Washington street, and Harvard avenue to the railroad. Patched with macadam.
Stone furnished by the city . . $\$ 50686$
Gravel furnished by the city 465
Teaming furnished by the city . . 5100
Steam roller furnished by the city . 9100Centre street, from Walden street to Forbes streeton the east side; from Walden street toWyman street on the west side; and fromCreighton street to Hyde square on the westside. Length, 1,797 feet, west side; 1,096feet, east side. Area, 3,819 square yards.Roadway resurfaced with 4 -inch macadam;405 square yards gutters relaid; 27 squareyards crossings relaid; 189 feet edgestonereset; and 152 square yards brick sidewalksrelaid.
Labor furnished by the city ..... $\$ 36175$
Teaming furnished by the city ..... 39765
Stone furnished by the city ..... 78877
Gravel furnished by the city ..... 5590
Sand furnished by the city ..... 1015
Bricks furnished by the city ..... 1914
Steam roller furnished by the city ..... 31850
\$1,951 ..... 86
Centre street, from May street to 500 feet beyondLouder's lane, at Nervine Hospital, WestRoxbury. Length, 1,300 feet. Area, 3,611square yards. Roadway resurfaced with4-inch macadam.
Teaming furnished by the city ..... \$519 00
Stone furnished by the city ..... 46704
Gravel furnished by the city ..... 9870
Steam roller furnished by the city ..... 12350
Chelsea Bridge, Charlestown. Repaired plank walk.
Labor furnished by the city ..... $\$ 5825$
Teaming furnished by the city ..... 1575
Lumber furnished by the city ..... 7582
Nails f.urnished by the city ..... 20
Cherokee street, Roxbury. Plankwalk.
Lumber furnished by the cityChestnut Hill avenue, from Commonwealth avenueto Brookline line. Length, 900 feet. Area,4,800 square yards. Resurfaced with 2.2-inch macadam.
Labor furnished by the city ..... \$128 69
Teaming furnished by the city ..... 17270
Stone furnished by the city ..... 61215
Steam roller furnished by the city ..... 12350
$\$ 4446$
Chestnut avenue, from Paul Gore street to Mozart street. Length, 730 feet. Area, 1,569 square yards. Resurfaced with 5 -inch macadam.
Labor furnished by the city ..... $\$ 15338$
Teaming furnished by the city ..... 8641
Stone furnished by the city ..... 66781
Steam roller furnished by the city ..... 10400
$\$ 1,01160$
Church street, from High street to Winter street, Dorchester (work done in 1907). Gravel furnished by the city ..... $\$ 4800$
Columbia road, from Boston street to Dudleystreet (westerly side). Length, 1,600 feet.Area, 4,444 square yards. Resurfaced with3 -inch macadam.
Labor furnished by the city ..... $\$ 49086$
Teaming furnished by the city ..... 77825
Stone furnished by the city ..... 97472
Gravel furnished by the city ..... 259
Steam roller furnished by the city ..... 60450
$\$ 2,85092$Cross street, from Salem street to Haymarketsquare. Length, 523 feet. Area, 1,223square yards. Repaved roadway, resetedgestones, relaid crosswalks and brick side-walks.
Labor furnished by the city ..... $\$ 41426$
Teaming furnished by the city ..... 9362
Gravel furnished by the city ..... 12450
Brick, sand and lumber furnished by the city ..... 600
Flagging furnished by the city ..... 500
$D$ street, from West Fifth street to West Seventhstreet (work done in 1907).
Teaming furnished by the city ..... $\$ 1750$Final payment to William Higgins,under contract, for work done in
1907 ..... 27002 ..... 1907
Dorchester street, from First street to water line (work done in 1907).
Teaming furnished by the city ..... $\$ 3172$
Gutter blocks furnished by the city . 1,469 ..... 40
Final payment to Suffolk Contract-ing Company, under contract forwork done in 190717776
$\$ 64338$
$\$ 28752$Dorchester avenue, from Adams street to Parkstreet, Dorchester (work done in 1907).
Final payment to Daniel E. Lynch, as per contract, for work done in 1907 ..... \$185 87
Dorchester avenue, from Park street to Ashmont street, Dorchester. Length, 4,600 feet.Area, 11,500 square yards. Top surfacetaken off and resurfaced with 2 -inch mac-adam.
Labor furnished by the city ..... $\$ 7062$
Teaming furnished by the city ..... 15000
Stone furnished by the city ..... 18392
Stone dust furnished by the city ..... 2240
Steam roller furnished by the city ..... 3250
$\$ 45944$
Dover street, from Albany street to Harrison avenue (work done in 1907).
Teaming furnished by the city ..... $\$ 4500$
Dunboy street, from Faneuil street to Bigelow street. Length, 600 feet. Area, 1,330 square yards. Resurfaced with 3 -inch mac- adam.
Labor furnished by the city ..... $\$ 16112$
Teaming furnished by the city ..... 11375
Strippings furnished by the city ..... 9715
Steam roller furnished by the city ..... 9100
Gravel furnished by the city ..... 3600
Stone furnished by the city ..... 2074
East Cottage street, from Pleasant street to Colum- bia road (work done in 1907).
Stone furnished by the city ..... $\$ 1848$
$\$ 51976$
East Cottage street, fiom Dudley street to the rail-road bridge. Length, 1,350 feet. Area,3,190 square yards. Resurfaced with 3 -inchmacadam.
Labor furnished by the city ..... $\$ 40176$
Teaming furnished by the city ..... 15325
Stone furnished by the city ..... 50194
Stone dust furnished by the city ..... 4290
Steam roller furnished by the city ..... 16900
Gravel furnished by the city ..... 1040
Bricks and sand furnished by the city ..... 790East Coltage street, from Edward Everett square tothe railroad bridge. Length, 1,900 feet.Area, 5,911 square yards. Resurfaced with$1 \frac{3}{4}$-inch macadam.
Labor furnished by the city ..... $\$ 31950$
Teaming furnished by the city ..... 64425
Stone furnished by the city ..... 69836
Stone dust furnished by the city ..... 1800
Steam roller furnished by the city ..... 25350
\$1,933 61East Fifth street, from G street to H street (workdone in 1907).
Teaming furnished by the city ..... $\$ 6100$
Gravel furnished by the city ..... 3003

East Sixth street, from O street to P street (work done in 1907).
Teaming furnished by the city . . \$14 00
Gravel furnished by the city 3750
Bricks furnished by the city ..... 5750
Final payment to Peter J. Herr, Jr., as per contract, for work done in190711272$\$ 221 \quad 72$Esmond street, from Blue Hill avenue to Bradshawstreet. Length, 920 feet. Area, 2,960square yards. Reset edgestones, repavedgutters and sodded loam spaces.
Engineering and inspection furnishedby the city$\$ 16154$
Teaming furnished by the city ..... 225
Engineering expense ..... 305
Amount paid to Daniel E. Lynch under contract (final payment not made) ..... 39525
Everett street, from Mill street to Park street,Dorchester. Length, 618 feet. Area, 1,373square yards. Resurfaced with 6 -inch mac-adam.
Labor furnished by the city ..... $\$ 6875$
Teaming furnished by the city ..... 20650
Stone furnished by the city ..... 37580
Steam roller furnished by the city ..... 12350
Everett street, from railroad bridge 650 feet south, Brighton. Length, 1,300 feet. Area, 3,755 square yards. Resurfaced with 4.7 -inch macadam.
Labor furnished by the city . . . $\$ 25037$
Teaming furnished by the city . . 20947
Stone furnished by the city . . . 1,062 17
Steam roller furnished by the city . 21450
Gravel furnished by the city . . 2480
Sand and bricks furnished by the city, 143

## $\$ 1,76274$

Exeter street, from Huntington avenue to Beacon street. Length, 1,599 feet. Area, 5,237 square yards. Resurfaced with $2 \frac{1}{2}$ to $3 \frac{1}{2}$. inch macadam. Coated with tarvia from Huntington avenue to Boylston street.
Labor furnished by the city . . . $\$ 82792$
Teaming furnished by the city . . 60625
Stone furnished by the city . . . 81476
Stone dust furnished by the city . . 5356
Steam roller furnished by the city . 35750
Tarvia furnished by the city . . 7200
$\$ 2,73199$
Fairbanks street, from Washington street to Faneuil street. Length, 1,200 feet. Area, 2,666 square yards. Resurfaced with $3.5-$ inch macadam.
Labor furnished by the city . . . $\$ 22302$
Teaming furnished by the city . . 24300
Stone furnished by the city . . 56422
Steam roller furnished by the city . 21450
\$1,244 74
Faneuil street, from Brooks street to Oakland street. Length, 400 feet. Area, 890 square yards. Resurfaced with 8 -inch macadam, average depth.
Labor furnished by the city . . $\$ 16551$
Teaming furnished by the city . . 10088
Stone furnished by the city . . . 59052
Steam roller, furnished by the city . 9100
Gravel furnished by the city . . 465
Ferry street, from North street to Fulton street. Length, 281 feet. Area, 559 square yards. Repaved with old blocks, relaid crossings and sidewalks and reset edgestone.
Labor furnished by the city ..... $\$ 46894$
Teaming furnished by the city ..... 3587
Bricks furnished by the city ..... 7288
Gravel furnished by the city ..... 6903
Sand and cement furnished by the city ..... 1793
$\$ 664$ ..... 65
Field street, from Ruggles street to 400 feetdistant. Length, 400 feet. Area, 782 squareyards. Resurfaced with 4-inch macadam.
Labor furnished by the city ..... $\$ 17712$
Teaming furnished by the city . ..... 6818
Stone furnished by the city ..... 20584
Steam roller furnished by the city ..... 5850
Gravel furnished by the city ..... 1920
$\$ 52884$
Freeport street, from Tenean street to the bridge.Length, 1,044 feet. Area, 3,248 squareyards. Resurfaced with macadam 7 to 9inches deep.
Labor furnished by the city ..... $\$ 29662$
Teaming furnished by the city ..... 84475
Stone dust furnished by the city ..... 1,580 10
Steam roller furnished by the city ..... 26000
Gravel ..... 2250
$\$ 3,00397$

Fulton street, from Cross street to Clinton street and approaches of John street and Barrett street. Length, 270 feet. Area, 1,020 square yards. Repaved with old blocks, reset edgestones, 167 feet, and relaid crosswalks and sidewalks, 140 square yards.
Labor furnished by the city . . . $\$ 59022$
Teaming furnished by the city . . 18025
Flagging furnished by the city . . 7097
Granite blocks furnished by the city, 2345
Gravel furnished by the city . . 12402
Bricks furniṣhed by the city $\quad$. $\quad 2359$
Sand, cement and lumber furnished by the city 276

Geneva avenue, from Olney street to the railroad (work done in 1907).
Teaming furnished by the city . . $\$ 600$
Stone furnished by the city . . 7552
Geneva avenue, from Bowdoin street to Park street.Length, 2,900 feet. Area, 3,333 square yards.Picked, rolled and coated with screenings.
Labor furnished by the city ..... $\$ 14713$
Teaming furnished by the city ..... 20987
Stone dust furnished by the city ..... 28078
Steam roller furnished by the city ..... $10 \pm 00$
Gravel furnished by the city ..... 2062
$\$ 762$ ..... 40
Greenmount street, from Dorchester avenue to Pleasant street (work done in 1907).
Teaming furnished by the city$\$ 5200$
Hancock street, from Dorchester avenue toBowdoin street. Length, 1,454 feet. Area,5,000 square yards. Top picked off andresurfaced with 2 -inch macadam, 300 feetgutters paved and crossing relaid.
Labor furnished by the city ..... $\$ 24938$
Teaming furnished by the city ..... 15875
Stone dust furnished by the city ..... 5991
Steam roller furnished by the city ..... 11050
Gravel furnished by the city ..... 10000
\$678 54
Hano street, from Braintree street 420 feetsoutherly. Repairing tar concrete sidewalks.Area, 495 square yards.
Amount paid Simpson Brothers Company as per contracts ..... $\$ 61875$
Hanover street, from Friend street to Union street, 140 square yards block paving laid (work done in 1907).
Amount paid James Doherty ..... S219 50
Hawes street, from Congress street to Kilby street (work not done).
Engineering expense ..... $\$ 2125$
High street, from Church street to Hancock street.Length, 560 feet. Area, 1,750 square yards.Resurfaced 8 inches deep, sidewalks built,gutters paved, retaining wall built and fencesrepaired.
Labor furnished by the city ..... $\$ 33721$
Teaming furnished by the city ..... 33137
Carried forward ..... $\$ 56858$
Brought forward ..... $\$ 66858$
Gravel furnished by the city ..... 31000
Steam roller furnished by the city ..... 5200
Lumber and nails furnished by the city ..... 1885
Blocks furnished by the city ..... 400
Paint and cement furnished by the city ..... 593
$\$ 1,05936$
Holton street, corner Athol street at Church, Brighton (work done in 1907).
Bricks furnished by the city . . $\$ 15000$
Sand furnished by the city . : . 3960

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$18960
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Howard avenue, at Cunningham street. 139 feet edgestone set, 163 square yards brick sidewalks laid and 46 square yards gutters laid. Material furnished by owner.
Labor furnished by the city . . $\$ 34711$
Teaming furnished by the city . . 7025
Humphreys street, from East Cottage street to Dudley street. Length, 1,250 feet. Area, 2,361 square yards. Resurfaced with 2-inch macadam.
Labor furnished by the city . . $\$ 7687$
Teaming furnished by the city . . 27150
Stone furnished by the city . . 27048
Steam roller furnished by the city . 13650
$\$ 75535$
Hyde Park avenue, from Tower street to Washington street. Length, 700 feet. Area, 1,867 square yards. Resurfaced with 4-inch macadam.
Labor furnished by the city . . $\$ 10763$
Teaming furnished by the city . . 16500
Stone furnished by the city . . 28444
Steam roller furnished by the city . 9100
$\$ 648 \quad 07$
La Grange street, from Centre street to Newton line (unfinished work from 1907).
Teaming furnished by the city . . $\$ 9100$
Watering furnished by the city . . 3000
Steam roller furnished by the city . 10200
Gravel furnished by the city . . 1022

> Lansing street, from Warren street to Sherman street. Length, 304 feet. Area, 474 square yards. Resurfaced with 4 -inch macadam.
> Labor furnished by the city . . $\$ 12350$
> Teaming furnished by the city . . 2597
> Stone furnished by the city . . 3376
> Stone dust furnished by the city . 10057
> Steam roller furnished by the city . 2600
> Blocks furnished by the city . . . 220

> Linden Park street, filling in brook.
> Labor furnished by the city . . $\$ 24426$
> Filling furnished by the city . . 18960
> Lumber furnished by the city . . 734

$\$ 31200$
$\$ 44120$
$\begin{array}{lll}\text { Main street, from Austin street to Union street } \\ \text { Length, } 275 \text { feet. Area, } 485 \text { square yards. } \\ \text { Repaved roadway. } \\ \text { Labor furnished by the city } & & \\ \text { Teaming furnished by the city } & . & \$ 188 \\ \text { Gravel furnished by the city } & . & 31 \\ \text { Gre } & 34 & 30\end{array}$
$\$ 254$
57
Malcolm street, from Mt. Vernon street 49 feet toward Chestnut street. Length, 49 feet. Area, 41 square yards. Removed paving blocks and resurfaced with tar macadam.
Labor furnished by the city . . $\$ 5550$
Teaming furnished by the city . . 300
Stone furnished by the city . . 3990
Tarvia furnished by the city . . 900
$\$ 10740$
Maple street, from Centre street to Weld street. Length, 2,000 feet. Area, 4,445 square yards. Resurfaced with 6 -inch macadam.
Labor furnished by the city . . $\$ 14051$
Teaming furnished by the city . . 41250
Watering furnished by the city . . 7775
Stone furnished by the city . . 74044
Steam roller furnished by the city . 18850
Gravel furnished by the city . . 12210
$\$ 1,68180$
Marlborough street, from Clarendon street to Charlesgate East (unfinished work from 1907). Length, 721 feet. Area, 2,314 square yards; 2 -inch macadam.
Labor furnished by the city ..... $\$ 14025$
Teaming furnished by the city ..... 30860
Stone furnished by the city ..... 23948
Stone dust furnished by the city ..... 3946
Steam roller furnished by the city ..... 17550
$\$ 90329$
$\$ 90329$Massachusetts avenue, from Edward Everettsquare to Magazine street. Length, 3,250feet. Area, 9,388 square yards. Resur-faced with 2 -inch macadam.
Labor furnished by the city ..... $\$ 34463$
Teaming furnished by the city ..... 80250
Watering furnished by the city ..... 2700
Stone furnished by the city .....  1,160 88
Steam roller furnished by the city ..... 32500
Massachusetts avenue, from Albany street toWashington street, north side. Length,1,293 feet. Area, 3,017 square yards. Resur-faced with 4 -inch macadam taken fromGerard street.
Labor furnished by the city ..... $\$ 29512$
Teaming furnished by the city ..... 14240
Steam roller furnished by the city ..... 21450
Stone furnished by the city ..... 9936
Gravel and dust furnished by the city, ..... 840
$\$ 2,66001$
-
$\$ 759$ ..... 78Medford street, from Mystic street to Main street,Charlestown. Reset 392 feet edgestone,relaid 926 square yards block paving and 269square yards brick paving.
Labor furnished by the city ..... $\$ 83557$
Teaming furnished by the city ..... 5950
Gravel furnished by the city ..... 6825
Bricks furnished by the city ..... 4226
Edgestone furnished by the city ..... 560
Blocks furnished by the city ..... 300
Sand furnished by the city ..... 540
Lumber and cement furnished by the city ..... 157
$\$ 1,021 \quad 15$

1,021
15
Melcher street, from Summer street 484 feet south- easterly (work done in 1907).
Engineering ..... $\$ 2225$
Teaming furnished by the city ..... 2800
Gravel furnished by the city ..... 3861
Final payment to Peter W. Hill undercontract for work done in 190729237
Mercer street, from Telegraph street to East Eighth street. Length, 500 feet. Area,1,032 square yards. Resurfaced with 6 to7 inch macadam.
Labor furnished by the city ..... $\$ 41325$
Horse roller furnished by the city ..... 8850
Stone furnished by the city ..... 34461
$\$ 84636$
Mishawum street, from Main street to Rutherford avenue, northerly side. Length, 273 feet. Area, 215 square yards, sidewalk. New brick sidewalks laid. Macadam roadway laid, 63 square yards; block paving laid, 136 square yards; flagging crosswalks laid and edgestone reset.
Labor furnished by the city ..... $\$ 31359$
Teaming furnished by the city ..... 13575
Stone furnished by the city ..... 1500
Gravel furnished by the city ..... 1620
Sand furnished by the city ..... 1560
Corners (seconds) furnished by the city ..... 1440
Flagging (seconds) furnished by the city ..... 760
Blocks (seconds) furnished by the city, ..... 275
Lumber and cement furnished by thecity362
Morton street, from Canterbury street to ForestHills street, West Roxbury. Length, 4,200feet. Area, 10,267 square yards. Resurfacedwith 2-inch macadam.
Labor furnished by the city ..... $\$ 7924$
Teaming furnished by the city ..... 79800
Watering furnished by the city ..... 9000
Stone furnished by the city ..... 1,108 32
Steam roller furnished by the city ..... 26650
Gravel furnished by the city ..... 5040
\$2,392 46 ..... 2,392 46
$\$ 52451$
Morton street, near Blue Hill avenue. Length,154 feet. Area, 257 square yards. Filled,12.3 cubic yards; macadamized, 257 squareyards roadway; 180 square yards sidewalksbuilt; 133 feet edgestone set and 55 squareyards block gutters laid.
Labor furnished by the city ..... $\$ 11484$
Teaming furnished by the city ..... 6500
Carried forward ..... \$179 84
Brought forward ..... $\$ 17984$
Stone furnished by the city . ..... 12600
Steam roller furnished by the city ..... 5850
Blocks furnished by the city ..... 1250
Lumber furnished by the city ..... 7525
$\$ 45209$Moss Hill road, from Pond street to Woodlandroad. Length, 900 feet. . Area, 2,300 squareyards. Resurfaced with 4 -inch macadam.
Labor furnished by the city ..... $\$ 17550$
Teaming furnished by the city ..... 28875
Stone furnished by the city . ..... 45028
Steam roller furnished by the city ..... 14300
Gravel furnished by the city ..... 4340
Watering furnished by the city ..... 4750
$\$ 1,14843$
Mt. Washington Avenue Bridge. Removing blocks over deck and tearing up deck.
Labor furnished by the city .....  $\$ 1,66277$
Teaming furnished by the city ..... 25375
$\$ 1,91652$
Munroe street, from Humboldt avenue to Warren street. Length, 1,054 feet. Area, 2,467square yards. Resurfaced with 5 -inch mac-adam; 27 square yards gutters paved.
Labor furnished by the city ..... $\$ 47377$
Teaming furnished by the city ..... 7928
Watering furnished by the city ..... 4984
Stone furnished by the city ..... 69668
Steam roller furnished by the city ..... 18200
Brick, gravel and sand furnished by the city ..... 835
North Beacon street, from Dustin street to theCharles river on the southerly side, and fromMarket street to Vineland street on the north-erly side. Length, 5,000 feet. Area, 12,222square yards. Resurfaced with macadam,2.1 inches average depth.
Labor furnished by the city ..... $\$ 35166$
Teaming furnished by the city ..... 33225
Stone furnished by the city . ..... 59
Steam roller furnished by the city ..... 22750
Gravel furnished by the city ..... 9315

Norway street, from Hemenway street to Massachusetts avenue. Length, 720 feet. Area, 1,667 , square yards. Resurfaced with macadam, 3.85 inches average depth.
Labor furnished by the city . . $\$ 24651$
Teaming furnished by the city . . 7540
Stone furnished by the city . . . 38034
Steam roller furnished by the city . 10200
$\$ 80425$
Oakridge street, from Codman street to Morton street. Repaired over sewer trench.
Stone furnished by the city . . . $\$ 4840$
Steam roller furnished by the city . 1300
[
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Old road, from Elmo street to Glenway street. Area, 1,166 square yards. Earth and rock excavation. (Unfinished work of 1907.)
Labor furnished by the city
$\$ 2738$
Teaming furnished by the city . . . . 300
Gravel furnished by the city 222

Final payment to James F. Murphy, as per
contract:

209 cubic yards subgrading earth
excavation @ 50c.

$\$ 10450$

957 cubic yards subgrading rock excavation @ $\$ 3.50$. . 3,349 50
Extra work, haul stone to Codman street crusher:
$1,658.12$ tons stone hauled to Codman street crusher (a) 11 c. 54718
\$4,001 18
Less amount paid in 1907 . 2,405 92
1,595 26
$\$$
$\$ 12800$
Perkins street, from South Huntington avenue to Day street. Length, 519 feet. Area, 1,349 square yards. Resurfaced with $2 \frac{1}{2}$-inch macadam.
Labor furnished by the city . . . $\$ 120 \cdot 50$
Teaming furnished by the city 4075
Carried forward
$\$ 16125$
Brought forward ..... $\$ 16125$
Watering furnished by the city ..... 1200
Stone furnished by the city ..... 25189
Steam roller furnished by the city ..... 8450
\$509 64Peters street, from East Sixth street to EastSeventh street. Length, 451 feet. Area,168 square yards. New edgestones set andgutters paved with old blocks.
Labor furnished by the city ..... $\$ 40051$
Edgestones furnished by the city ..... 14193
Teaming furnished by the city ..... 6565
$\qquad$
$\$ 60809$
Pleasant street, from Savin Hill avenue to Stough-ton street. Length, 750 feet. Area, 1,500square yards. Resurfaced with 2 -inch mac-adam.
Labor furnished by the city ..... $\$ 11550$
Teaming furnished by the city ..... 8338
Stone furnished by the city ..... 10440
Stone dust furnished by the city ..... 2832
Steam roller furnished by the city ..... 11050
$\$ 44210$
Porter street, from Amory street toward Bismarckstreet (work done in 1907).
Teaming furnished by the city ..... $\$ 3800$
Gravel furnished by the city ..... 4350
$\$ 8150$
Prince street, at corner of Hanover street (workdone in 1906). Bitulithic pavement laid.
Final payment to Warren Brothers Company, on contract ..... $\$ 2220$
Quincy street, from Blue Hill avenue to Columbiaroad (work done in 1907).
Teaming furnished by the city ..... $\$ 11950$
Stone furnished by the city ..... 216Robinwood avenue, from Rockview street to Centrestreet. Length, 1,950 feet. Area, 3, 824square yards. Resurfaced with 4 -inch mac-adam.
Teaming furnished by the city ..... $\$ 31975$
Stone furnished by the city ..... 38224
Steam roller furnished by the city ..... 13650
Gravel furnished by the city ..... 70

Gravel furnished by the city
Robinwood avenue, from Rockview street to Centre square yards. Resurfaced with 4-inch macadam.
Rockview street, from Spring Park avenue to Robin-wood avenue. Length, 500 feet. Area, 1,445square yards. Resurfaced with 4 -inchmacadam.
Teaming furnished by the city ..... $\$ 16325$
Stone furnished by the city ..... 18976
Steam roller furnished by the city ..... 6500
$\$ 41801$
Rosseter street, from Eldon street to 400 feet northof Bullard-street. Length, 900 feet. Area,2,500 square yards. Resurfaced with 5 -inchmacadam.
Labor furnished by the city ..... $\$ 22898$
Teaming furnished by the city ..... 47125
Stone furnished by the city ..... 86768
Steam roller furnished by the city ..... 19500
Rutherford avenue, from Essex street to Baldwin street (work done in 1907).
Final payment to James J. Brock on contractfor work done in 1907$\$ 26058$
Ruthven street, from Elm Hill avenue toward Humboldt avenue (work not finished). Resurfaced about 650 square yards with 6-inch macadam.
Labor furnished by the city ..... $\$ 22175$
Teaming furnished by the city ..... 2800
Stone furnished by the city ..... 12176
Steam roller furnished by the city ..... 1950
Rutledge street, West Roxbury. Surface drain filled with old cobbles.
Labor furnished by the city ..... $\$ 5850$
Teaming furnished by the city ..... 6580
Gravel furnished by the city ..... 655
Drain pipe furnished by the city ..... 42
St. Botolph street, from Irvington street to Massa-

St. Botolph street, from Irvington street to Massa-chusetts avenue. Length, 2,240 feet. Area,6,805 square yards. Resurfaced with mac-adam, average depth $1 \frac{3}{4}$ inches.
Labor furnished by the city ..... $\$ 64130$
Teaming furnished by the city ..... 26435
Carried forward ..... \$905 65

> Carried forward

. 90565 chusetts avenue. Length, 2,240 feet. Area, 6,805 square yards. Resurfaced with macadam, average depth $1 \frac{3}{4}$ inches.
Brought forward . ..... $\$ 90565$
Stone furnished by the city ..... 50946
Steam roller furnished by the city ..... 27600
Sand furnished by the city ..... 775
Gravel furnished by the city ..... 745
Watering furnished by the city ..... 5720
$\$ 1,76351$
St. Stephen street, from Massachusetts avenue to Bryant street. Patched with macadam.
Labor furnished by the city ..... $\$ 8988$
Teaming furnished by the city ..... 4280
Stone furnished by the city ..... 14628
Steam roller furnished by the city ..... 6000 ..... $\$ 33896$
Saratoga street, from Boston, Revere Beach \&Lynn Railroad to Winthrop Bridge. Area,11,875 square yards. Treated with tar prep-aration.
Amount paid American Tar Company ..... $\$ 58188$
Savin Hill avenue, from Dorchester avenue to therailroad. Length, 1,200 feet. Area, 3,730square yards. Resurfaced with 4 -inchmacadam.
Labor furnished by the city ..... $\$ 24339$
Teaming furnished by the city ..... 30600
Stone furnished by the city ..... 39836
Steam roller furnished by the city ..... 18850
Gravel furnished by the city .....  5885
South street, from Child street to the Arborway. Length, 1,750 feet. Area, 3,889 square yards.Resurfaced with 4-inch macadam.
Teaming furnished by the city ..... $\$ 31275$
Watering furnished by the city ..... 4800
Stone furnished by the city ..... 65944
Steam roller furnished by the city ..... 13650
\$1,195 ..... 10
$\$ 1,15669$

Southampton street, from Massachusetts avenue to. the bridge (work done in 1907). Cinder sidewalks.
$\begin{array}{lrr}\text { Teaming furnished by the city } & \$ 1,03900 \\ \text { Stone furnished by the city } & . & 7744\end{array}$Stone furnished by the city7744
Stoughton street, from Pleasant street to Columbia road. Length, 1,522 feet. Area, 3,764 square yards. Resurfaced with 4 -inch macadam and repaved gutters in places.
Labor furnished by the city . . $\$ 33388$
Teaming furnished by the city . . 15225
Stone furnished by the city . . . 20712
Stone dust furnished by the city . . 960
Steam roller furnished by the city . 12350
Summer street, from bridge over A street to bridge over New York, New Haven \& Hartford Railroad. Length, 372 feet. Area, 2,476 square yards. Repaved with old blocks on gravel base and 425 feet plankwalk relaid.
Labor furnished by the city relay-
ing plankwalk
Engineering and inspection on con- $\$ 26013$
tract .
Lumber furnished by the city . . 22725
Engineering expense . . . . 205
Advertising furnished by the city . 1485
Blocks furnished by the city . . 1337
Edgestone furnished by the city . 473
Nails furnished by the city . . . 280
Amount paid to James P. Collins
as per contract for repaving
roadway . . . . . . 81040
\$1,500 33
Summer street, south side, from Melcher street to A street. Length, 276 feet. Area, 3,330 square yards. Repairing granolithic sidewalk. Work not finished.
Labor furnished by the city, including engineering and inspection
\$141 67
Advertising 938
Engineering expenses
Amount paid to Warren Brothers Company, under contract:
3,100 square feet artificial stone sidewalk laid @ 7 c. (unfinished)
$\$ 21700$
276 linear feet edgestone reset @
11c. . . . . . 3036
Carried forward . . . . . $\$ 24736$
Brought forward . ..... $\$ 24736$ ..... $\$ 15165$
318 square yards granite block paving relaid @ 38c. ..... 12084
\$368 20
Less 15 per cent retained ..... 552331297
$\$ 46462$
Sutherland road, from Cleveland circle to Orkneyroad. Length, 200 feet. Area, 444 squareyards. Resurfaced with 4.8 -inch macadam.
Labor furnished by the city ..... $\$ 4575$
Teaming furnished by the city ..... 3675
Stone furnished by the city ..... 12896
Talbot avenue, from Washington street to Wellesavenue. Length, 525 feet. Area, 3,033square yards. Repaired with 3 -inch macadam.
Labor furnished by the city ..... \$78 37
Teaming furnished by the city ..... 12300
Watering furnished by the city ..... 3675
Stone furnished by the city ..... 46752
Steam roller furnished by the city ..... 14300
Terrace street, in front of Park Brewery. Length,107 feet 6 inches- 20 -inch wall. Retainingwall and fence built Portland cement concrete.
Inspection and engineering furnishedby the city$\$ 9113$
Advertising furnished by the city ..... 1214
Engineering expense furnished by the city ..... 105
Amount paid to James Doherty, as per contract ..... 44810

Townsend street, from Washington street to Walnut avenue. Length, 1,066 feet. Area, 2,604 square yards. Resurfaced with 6 -inch macadam.
Labor furnished by the city ..... $\$ 35676$
Teaming furnished by the city ..... 88
Stone furnished by the city ..... 74216
Steam roller furnished by the city ..... 12350
$\$ 84864$

84
$\$ 21146$
Train street, from Ashmont street to King street. Length, 1,700 feet. Area, 3,500 square yards. Resurfaced with 3 -inch macadam.
Labor furnished by the city ..... $\$ 7763$
Teaming furnished by the city ..... 20825
Watering furnished by the city ..... 900
Stone furnished by the city ..... 43472
Steam roller furnished by the city ..... 16250
Gravel furnished by the city ..... 900
Vermont street, from Mt. Vernon street to Baker street. Length, 2,463 feet. Area, 6,752 square yards. Resurfaced with 6-inch macadam.
Labor furnished by the city ..... \$300 37
Teaming furnished by the city ..... 52400
Watering furnished by the city ..... 11300
Stone furnished by the city ..... 28600
Gravel furnished by the city ..... 28557
Vernon street, from Cabot street to across Auburnstreet. Asphalting (work done in 1907.)
Engineering furnished by the city ..... $\$ 1050$
Final payment to Barber Asphalt Pav- ing Company, under contract for work in 1907 ..... 1,685 48
\$901 ..... 10
Waldeck street, from Melville avenue to Geneva avenue. Length, 1,793 feet. Area, 5,425 square yards. Resurfaced with 2 -inch macadam and 4-inch gravel.
Labor furnished by the city ..... $\$ 5850$
Teaming furnished by the city ..... 59296
Stone furnished by the city ..... 66447
Gravel furnished by the city ..... 40750
Steam roller furnished by the city ..... 15600
\$2;783 62 .
\$1,695 ..... 98

\$1,879 ..... 43
Walnut avenue, Nos. 179 to 216, Roxbury. Setting edgestones, furnished by owner. ..... $\$ 21388$
Walnut Park, Roxbury. Resetting edgestones,195 feet 8 inches; relaying brick sidewalks,$21 \frac{2}{3}$ square yards; relaying $10 \frac{2}{3}$ yards flaggingand $105 \frac{1}{3}$ square yards cobble gutters.
Labor furnished by the city ..... $\$ 26963$
Gravel furnished by the city ..... 1280
Sand furnished by the city ..... 280
$\$ 285$ ..... 23
Warren avenue, from City square to railroad,Charlestown. Relaid old paving blocks.Area, 253 square yards. 404 feet edgestonereset.
Labor furnished by the city ..... $\$ 28744$
Teaming furnished by the city ..... 1575
Gravel furnished by the city ..... 8550
Old blocks furnished by the city ..... 6536
$\$ 45405$Warren avenue, from Berkeley street to Columbusavenue. Length, 2,250 feet. Area, 12,027square yards. Resurfacing with $1 \frac{1}{2}$-inchmacadam.
Labor furnished by the city ..... $\$ 47525$
Teaming furnished by the city ..... 38650
Stone furnished by the city ..... 53668
Steam roller furnished by the city ..... 49400
\$1,892 43
Warren street, from Pleasant street to Soleystreet, one side, and from Soley street toThompson square, one side, Charlestown.Length, 115 feet. Area, 978 square yards.Block paving relaid and 104 square yardsbrick paving laid. 115 feet new edgestoneset.
Labor furnished by the city ..... $\$ 56477$
Teaming furnished by the city ..... 4463
Gravel furnished by the city ..... 8048
Bricks furnished by the city ..... 935
Washington street, from Elmore street to WestWalnut Park. Length, 1,933 feet, westerlyside, and 2,109 feet, easterly side. Area,4,345 square yards. Repaved gutters inplaces and resurfaced with 4 to 5 inchesmacadam.
Labor furnished by the city ..... $\$ 41463$
Teaming furnished by the city ..... 21450
Stone furnished by the city ..... 64591
Stone dust furnished by the city ..... 13184
Steam roller furnished by the city ..... 25350
Gravel furnished by the city ..... 1079Washington street, from Cambridge street to Par-sons street, northerly side; from ChestnutHill avenue to Foster street, southerly side,Brighton. Length, 2,400 feet. Area, 8,000square yards. Resurfaced with macadam,1.7 inches average depth.
Labor furnished by the city ..... $\$ 36560$
Teaming furnished by the city ..... 8550
Stone furnished by the city ..... 44701
Steam roller furnished by the city ..... 7150
Gravel furnished by the city ..... 15190
Bricks furnished by the city ..... 2145
\$1,142 ..... 96
Washington street, from Walk Hill street to Towerstreet, West Roxbury. Length, 800 feet.Area, 2,422 square yards. Resurfaced with4-inch macadam.
Teaming furnished by the city ..... $\$ 26750$
Stone furnished by the city ..... 32620
Steam roller furnished by the city ..... 9750
Gravel furnished by the city ..... 350
Washington street, from Ashland street to Beech street, West Roxbury. Length, 5,200 feet. Area, 9,603 square yards. Resurfaced with 4 -inch macadam.
Labor furnished by the city ..... $\$ 27900$
Teaming furnished by the city ..... 88000
Watering furnished by the city ..... 13450
Stone furnished by the city ..... 1,259 52
Gravel furnished by the city ..... 15275
Lumber furnished by the city ..... 757
Steam roller furnished by the city ..... 40300
$\$ 3,11634$
Wayland street, between Nos. 49 and 61. Length,186 feet. Area, 62 square yards. Settingnew edgestones and paving gutters. Rockexcavation for trench. Edgestone furnishedby owners.
Labor furnished by the city ..... $\$ 34538$
Stone furnished by the city ..... 2664
Blocks furnished by the city ..... 4520
Gravel furnished by the city ..... 750
West Canton street, from Appleton street to Shaw-mut avenue. Length, 1,500 feet. Area,4,666 square yards. Resurfaced with $1 \frac{7}{8}$-inchmacadam.
Labor furnished by the city ..... $\$ 42500$
Teaming furnished by the city ..... 31547
Watering furnished by the city ..... 6225
Stone furnished by the eity ..... 56319
Steam roller furnished by the city ..... 28600
\$1,651 91
West Cottage street, from Brook avenue to Wood- ville street, Roxbury. Length, 350 feet. Area, 778 square yards. Resurfaced with 4-inch macadam.
Labor furnished by the city ..... $\$ 11712$
Teaming furnished by the city ..... 9765
Stone furnished by the city ..... $26484-$
Steam roller furnished by the city ..... 5850
$\$ 53811$
West Fifth street, from C street to D street. Length, 500 feet. Area, 1,444 squareyards. Resurfaced with 6 -inch macadam.
Labor furnished by the city ..... $\$ 39193$
Horse roller furnished by the city ..... 7045
Stone furnished by the city ..... 37078
Western avenue, from Market street to Telfordstreet. Length, 1,300 feet. Area, 1,444square yards. Patched with 2 -inch mac-adam.
Stone furnished by the city ..... $\$ 21919$
Sand furnished by the city ..... 660
Gravel furnished by the city ..... 310
Worthington street, in front of Normal School.Length, 467 feet. Area, 15.7 square yardsbrick gutter, and 400 square yards sidewalk;part of street resurfaced to back up gutter.(Work begun in 1907.) Edgestones paidfor by Schoolhouse Department.
Labor, including engineering and inspection ..... $\$ 21237$
Teaming ..... 8475
Stone ..... 4846
Mack bricks ..... 23992
Carried forward ..... $\$ 58550$
Brought forward
Edgestone, circular ..... 650
Lumber ..... 4230
Engineering expense ..... 135
Amount paid John Donley Company for pav- ing ..... 9000
Amount paid Charles W. Kinney under con-tract:
1,870 cubic yards subgrading (earth
excavation) @ 60c. ..... $\$ 93500$
467 linear feet edgestone set @11c. ..... 5137
157 square yards brick gutters laid @ 50c. ..... 7850
400 square yards brick sidewalks laid @ 35c. ..... 14000
6 covers reset @ \$3 ..... 1800
400 cubic yards loam furnishedand ptaced @ \$1.45 . . 58000Extra work - Cut sheet pilingabove subgrade:
$7 \frac{1}{2}$ days' labor @ $\$ 2$ ..... 1500
Plus 15 per cent on $\$ 15$ ..... 225
$\$ 1,820 \quad 12$
Less amount paid in 1907 ..... 45050 ..... ,
Wrentham street, from Bruce street to Adams street. Length, 475 feet. Area, 1,373 square yards. Resurfaced with 2 -inch macadam; 447 cubic yards excavation.
Labor furnished by the city . . $\$ 26850$
Teaming furnished by the city . . 16250
Stone furnished by the city . . 26395
Steam roller furnished by the city . 15600
Zeigler street, from Harrison avenue to Washington street. Length, 285 feet. Area, 428 square yards. Resurfaced with 4 -inch macadam.
Labor furnished by the city . . $\$ 8338$
Stone furnished by the city . . 10811
Steam roller furnished by the city . 3900
Watering furnished by the city . . 1050$\$ 58550$
\$2,095 27
$\$ 85095$

## SCHEDULE C.

The following schedule shows the amount charged to the maintenance appropriation of this department for work done on the following streets, the balance of the expense being charged to the appropriation for Street Improvements. The details are shown under Street Improvements:
Beacon street, Raleigh street to St. Mary's street . \$6,088 30
Church street . . . . . . . . 2,21600
Cleveland circle . . . . . . . . 2,27851
Dudley street . . . . . . . . 1,434 33
East Broadway . . . . . . . . 41653
Gainsborough street . . . . . . . 1,975 02
Humboldt avenue . . . . . . . 37701
Huntington avenue . . . . . . . 2,753 56
Kilby street . . . . . . . . . 11333
Lexington street . . . . . . . . 14681
Main street . . . . . . . . . 19035
Meridian street . : . . . . . . 4,142 97
Mt. Everett street . . . . . . . 17001
Park square . . . . . . . . 46529
Parker street . . . . . . . . 32870
Providence street . . . . . . . 2,705 07
Rutherford avenue . . . . . . . 9362
Scollay square and Court street. . . . . 8,354 04
Stanley street . . . . . . . . 27201
Taylor street . . . . . . . . 1,20871
Walk Hill street . . . . . . . . 1,637 58
Walnut avenue . . . . . . . . 1,158 01
Ward street . . . . . . . . . 20688
Washington street . . . . . . . 2,594 03
Waumbeck street
21325
\$41,539 92
Old Colony Avenue, Construction of.

> Work not Finished.

Labor, grading by division force
\$1,875 53
Engineering and inspection . . . . . 1,625 28
Teaming furnished by the city . . . . 27349
Engineering expense . . . . . . 865
Advertising . . . . 3765
Amount paid to Fred S. and A. D. Gore Corporation for constructing macadam roadway between Dorchester avenue and Dorchester street under contract (work uncompleted):
8,450 cubic yards subgrading, earth excavation, @ 33c.
$\$ 2,78850$
Carried forward . . . . $\$ 2,78850$ \$3,820 60
Brought forward $\$ 2,78850 \quad \$ 3,82060$
900 cubic yards filling furnished (a) $\$ 1$ ..... 90000
325 cubic yards existing retaining wall taken down @ 75c. ..... 24375
325 cubic yards rubble wall built @ $\$ 1.50$ 48750
\$4,419 75
Less 15 per cent retained ..... 66296
3,756 79
\$7,577 39
Street Improvements.
A street, from Congress street to 175 feet south of Binford street. Repaved with large granite blocks on a concrete base, with pitch and pebble joints, and regulated. Length, 1,620 feet. Area, 6,120 square yards.
Hauling edgestone furnished by the city ..... \$3 67
Hauling flagging furnished by the city ..... 356
Edgestone furnished by the city, $52 \frac{1}{2}$ feet @ 70 c . ..... 3675
Flagging furnished by the city, 8 feet North River @ 66c. ..... 528
Flagging furnished by the city, 70.9 feet granite @ 80c. ..... 5660
Bricks furnished by the city, 18,450 at $\$ 11$ ..... 20295
Stone (at crusher) furnished by the city, 1,359.65 tons @ $\$ 1.60$ ..... 2,175 44
Advertising furnished by the city ..... 1470
Engineering and inspection furnished by the city ..... 59423
Engineering expense furnished by the city ..... 865
Templets furnished by the city ..... 937
Amount paid under contract to Fred S. \& A. D.Gore Corporation:
6,705 square yards, preparing site,(a) 29c.\$1,944 45
2,811 linear feet existing edgestone reset @ 10c. ..... 28110
6,703 square yards concrete base furnished and laid @ 49c., ..... 3,284 47
359 square yards existing graniteblock paving relaid, graveljoints, @ 35c.12565
6,640 square yards granite blockpaving furnished and laid,pitch joints, @ $\$ 2.55 \quad$. 16,932 00
Carried forward ..... \$22,567 67

Brought forward
$\$ 22,56767 \quad \$ 3,11120$
66 square yards existing flagging crosswalks relaid, pitch joints, @ 90c.

1,918 square yards existing brick
sidewalks relaid

47950

Extra work-Haul 15,000 second-hand blocks to Lexington street, between Putnam and Prescott streets:
198 tons old blocks hauled to Lexington street, one mile overhaul, per half mile, per ton, (a) 11c.

4356
198 tons, ferry tollage per ton @ .0542c.

1073
Extra work-Haul paving blocks as directed to the East Eagle street paving yard:
201 tons paving blocks hauled to East Eagle street paving yard, one and one-half miles overhaul, per half mile, per ton, (a) 11c.
$\begin{array}{cccc}201 \text { tons, ferry tollage per ton @, } \\ .0542 \mathrm{c} . & \cdot & \cdot & \cdot \\ 89\end{array}$
$\begin{array}{cccc}201 \text { tons, ferry tollage per ton @, } \\ .0542 \mathrm{c} . & \cdot & \cdot & \cdot \\ 89\end{array}$
6633

Extra work-Furnish stone-
$\quad$ cutter: .
$\begin{aligned} & \frac{1}{2} \text { day, stonecutter . }\end{aligned}$
Plus 15 per cent on $\$ 1.75$ 26
Extra work - Reset manhole cover to grade at Wormwood street:
$\frac{1}{2}$ day, mason, @ $\$ 5 . \quad$. . 250
$\frac{1}{2}$ day, tender, @ $\$ 2.25$.
Plus 15 per cent on $\$ 3.62$. 54
2 bags cement @ 40c. . . . 80
150 brick @ $\$ 11$ M. . . . . 165
\$23,246 70
Less 4,325 old granite blocks delivered to contractor @ $\$ 25 \mathrm{M}$.

10813

Credit: 159,362 second-hand paving blocks @ \$20 M. $3,187 \quad 24$Allston street, from Brighton avenue to Common-wealth avenue. Constructed, edgestone set,gutters paved, crushed stone sidewalks laid,roadway resurfaced with macadam. Length,1,832 feet. Area, 5,292 square yards. , 1,169cubic yards excavation, 3,248 feet edgestoneset, 1,144 square yards gutter paved, 84square -yards crossing laid, 2,064 squareyards crushed stone sidewalk laid, 4,038square yards macadam laid. Work doneby department force.
Labor, excavation ..... $\$ 1,62846$
Labor, setting edgestone ..... 39451
Labor, paving gutters and crosswalks ..... 54870
Labor, spreading macadam, etc. ..... 53418
Teaming, excavation ..... 33628
Teaming, blocks ..... 31725
Teaming . ..... 76902
Hauling edgestone furnished by the city, ..... 16308
Hauling flagging furnished by the city, ..... 2428
Edgestone, circular, furnished by the city, 39 feet 5 inches @ $\$ 1.30$ ..... 5124
Edgestone, straight, furnished by the city, 2,242 feet 10 inches @ 70c. . 1,569 ..... 97
Edgestone corners, two large, furnishedby the city @ $\$ 7$1400
Flagging, North River, furnished by the city, 326 feet 9 inches @ 66c. ..... 21567
Paving blocks, second-hand, furnished by the city, 33,000 @ \$20 ..... 66000
Stone furnished by the city, 35.6375 tons @ \$1.10 ..... 3920
Stone furnished by the city, 232.4 tons @ $\$ 1.20$ ..... 27888
Stone furnished by the city, $1,093.9375$ tons @ $\$ 1.60$ ..... $1,750 \quad 29$
Gravel furnished by the city, 25 double loads @ \$1.50 ..... 3750
Gravel furnished by the city, $7 \frac{1}{2}$ double loads @ \$1.55 ..... 1163
Gravel furnished by the city, $212 \frac{1}{4}$ double loads @ \$1.35 ..... 28655
Stone dust furnished by the city, 51.9025 tons @ 90 c. ..... 4671
Strippings furnished by the city, 125.34 tons @ 75c. ..... 9401
Engineering expense furnished by the city ..... 370
Steam roller furnished by the city ..... 30550

Ashburton place, from Bowdoin street to a point 50 feet easterly. Area, 118 square yards. Block paving on concrete removed and 10 -inch macadam put in place and coated with tarvia A.,
Labor furnished by the city . . $\$ 5925$
Teaming furnished by the city . . 3627
Stone furnished by the city . . . 17524
Tarvia furnished by the city . . 2200
Steam roller furnished by the city . 1300
$B$ street, from West First street to West Third street. Roadway resurfaced with 4 -inch macadam. Length, 437 feet. Area, 1,500 square yards.
Labor furnished by the city . . $\$ 48339$
Teaming furnished by the city . . 1895
Stone furnished by the city . . 44917
Horse roller furnished by the city . 6955

Batterymarch street, from Milk street to 215 feet easterly. To be asphalted. Work not started.
Advertising . . . . . . $\$ 1590$
Engineering . . . . . . 3086
$\$ 4676$
Beacon street, from Raleigh street to St. Mary's street. Roadway resurfaced with $3 \frac{1}{2}$-inch macadam. Length, 3,291 feet. Area, 17,852 square yards.
Labor furnished by the city . $\$ 2,08551$
Teaming furnished by the city $\cdot \underset{\sim}{1,59205}$
Stone furnished by the city, 60.5375 tons @ $\$ 1.35$. . . . . 8173
Stone furnished by the city, $1,017.2$ tons @ $\$ 1.73$. . . . . 1,759 76
Stone furnished by the city, $1,268.97$ tons @ $\$ 1.60$. . . . . 2,030 35
Steam roller furnished by the city . 98800
$\$ 8,53740$
Amount charged to appropriation for
street improvements
Amount charged to appropriation for Street Department

6,088 30
\$1,021 06

## $\square$

Boylston street, from Chestnut avenue to railroad bridge, West Roxbury. Roadway resurfaced with 6 -inch macadam. Length, 775 feet. Area, 1,944 square yards.
Labor furnished by the city ..... $\$ 16125$
Teaming furnished by the city ..... 30.00
Stone furnished by the city ..... 60874
Steam roller furnished by the city ..... 11700
$\$ 91699$
Boynton street, from South to Call streets, WestRoxbury. Dish gutters laid by George H.Noone, under contract. Length, 850 feet.Area, 742 square yards. Roadway resur-faced with 7 -inch macadam by Paving Divi-sion. Length, 850 feet. Area, 1,889 squareyards.
Labor furnished by the city ..... $\$ 29425$
Teaming furnished by the city ..... 35800
Blocks furnished by the city ..... 300
Lumber furnished by the city ..... 37
Stone furnished by the city ..... 70998
Steam roller furnished by the city ..... 13000
Amount paid to George H. Noone, under contract:
742 square yards preparing site @
50c. ..... $\$ 37100$
742 square yards cobblestones hauled and laid @ 80c ..... 59360

96460
\$2,460 20 \$216 72
Engineering and inspection furnished by the city

Bricks, $1,700 @ \$ 11$ per M., furnished by the city, 1870
Edgestone, 1 large corner furnished by the city!.
Stone, 269.95 tons @ $\$ 1.60$, furnished by the city

43192
Advertising furnished by the city . . . 1456
Engineering expense furnished by the city . 105
Templets furnished by the city
357
Carried forward
Brought forward . ..... $\$ 69608$
Amount paid John I. Fitzgerald under contract:1,303 square yards preparing site(a) 27 c .$\$ 35181$
175 linear feet existing edgestone reset@11c. ..... 1925
1,303 square yards concrete base furnished and laid @ 50c. ..... 65150
1,281 square yards granite block paving, pitch joints, fur- nished and laid @ $\$ 2.50 \quad .3,20250$
20 square yards flagging cross-walks, pitch joints, furnishedand laid @ \$4.41.8820
66 square yards existing brick sidewalks relaid @ 25c. ..... 1650
Extra work-Relay exist-ing granite flagging at Prov-ince street, with pitch joints:4 square yards granite flag-ging relaid @ 90 c .360
4,333 36 ..... $\$ 5,02944$ ..... 87990
$\$ 4,149 \quad 54$
Bunker Hill street, from Main to Sackville streets.Resurfaced with 4 -inch macadam. Length,1,900 feet. Area, 4,140 square yards.
Labor furnished by the city ..... $\$ 27225$
Teaming furnished by the city ..... 17863
Stone furnished by the city ..... 61870
Gravel furnished by the city ..... 15075
Steam roller furnished by the city ..... 31200
\$1,532 33
$C$ street, from West Fifth to and across West Sixthstreets. Repaved and regulated. (Workdone in 1907.) Length, 485 feet. Area,1,161 square yards.
Final payment to Suffolk Contracting Company,$\$ 5178$
$C$ street, from First to Second streets. Roadwayresurfaced with 6 -inch macadam. Length,219 feet. Area, 694 square yards.
Labor furnished by the city ..... $\$ 23613$
Stone furnished by the city ..... 25543
Teaming furnished by the city ..... 525
Horse roller furnished by the city. ..... 5350
Canterbury street, from Angell street to Blue Hill avenue. Length, 725 feet. Area, 4,200 square yards 4 -inch macadam. 688 cubic yards excavated and deposited in fill on street; 114 feet edgestone reset and 55 square yards gutters repaved. Excavated and widened.
Labor furnished by the city ..... $\$ 1,280 \quad 59$
Teaming furnished by the city ..... 48175
Blocks furnished by the city . ..... 3000
Stone furnished by the city ..... 1,697 65
Steam roller furnished by the city ..... 32100
\$3,810 ..... 99
Centre street, from Church to La Grange streets.Resurfaced with 4 -inch macadam. Length,1,350 feet. Area, 6,000 square yards.
Labor furnished by the city ..... $\$ 62076$
Teaming furnished by the city ..... 1,002 00
Lumber furnished by the city ..... 500
Stone furnished by the city ..... 1,628 18
Gravel furnished by the city ..... 10430
Steam roller furnished by the city ..... 42900
-$\$ 3,789 \quad 24$Chandler street, from Berkeley street to Columbusavenue. Resurfaced with 3 -inch macadamtaken from Gerard street. Length, 1,569feet. Area, 4,699 square yards.
Labor furnished by the city ..... $\$ 20550$
Teaming furnished by the city ..... 8685
Stone furnished by the city ..... 4512
Steam roller furnished by the city ..... 12350
Chelsea street, from 40 feet south of Scott's courtto Chelsea bridge south. Roadway regulatedand paved to grade with the old blocks.Length, 393 feet. Area, 1,770 square yards,not including track and dummy.
Labor furnished by the city
Teaming furnished by the city ..... 4712
Advertising furnished by the city . ..... 1385
Engineering expense furnished by the city ..... 175

175
Amount paid to Cornelius J. Duggan, under contract:
438 linear feet edgestone reset @ 6 c . ..... $\$ 2628$
1,791 square yards granite block paving relaid @ 35c ..... 62685
Carried forward ..... $\$ 65313$$\$ 14800$
$\$ 46097$

| Brought forward | \$653 13 | \$210 72 |
| :---: | :---: | :---: |
| 15 square yards flagging crosswalks relaid @ 25c. | 375 |  |
| 360 square yards brick sidewalks relaid @ 12c. | 4320 |  |
|  |  | 70008 |
|  |  | $\overline{\$ 910} 80$ |

Church street, from Boylston to Providence streets. Wood blocks on concrete base, and regulated. Length, 150.1 feet. Area, 532 square yards (includes 88 square yards track area).
Engineering and inspection furnished by the city
$\$ 6887$
Edgestone furnished by the city, 10 feet 7
inches, @ 70 c . . . . . . . .
Edgestone furnished by the city, 2 large corners, @ $\$ 7$
Bricks furnished by the city, 2,000 , @ $\$ 11$. 2200
Engineering expense furnished by the city 75
Templets furnished by the city
448
Amount paid United States Wood Preserving
Company, under contract:
444 square yards preparing site @ 50c.
$\$ 222-00$
226 linear feet edgestone set @ 21c. 4746
444 square yards concrete base laid
@ $\$ 1$. . . . . 44400
444 square yards wood block pave-
ment furnished and laid @
$\$ 3.25$. . . . . 1,443 00
143 square yards brick sidewalks $\quad 5005$
Extra work-Furnish stone-
cutter to dress existing edge-
stone. 15 hours, stonecutter, (a) 55c.

825
Plus 15 per cent on $\$ 8.25$. . 124

| 2,216 |
| ---: |
| $\$ 2,333$ |
| 186 |
| 10 |
| $\$ 2,147$ |

Amount charged to the appropriation for street improvements . . . \$117 51
Amount charged to the appropriation for Street Department . . . 2,216 00 $\$ 2,33351$
Less credit for old paving blocks . 18640
Clarendon street, from Boylston street to the railroad. Resurfaced with 2 -inch macadam and coated with terracolio. Length, 553 feet. Area, 1,693 square yards.
Labor furnished by the city . . $\$ 24613$
Teaming furnished by the city . . 10585
Terracolio furnished by the city . . 1705
Stone furnished by the city . . 26457
Steam roller furnished by the city . 11050
$\$ 74410$

> Cleveland circle, from Beacon street to Chestnut Hill avenue. Resurfaced with 6.4 -inch macadam. Length, 800 feet. Area, 4,266 square yards.
> Labor furnished by the city . . $\$ 70181$
> Teaming furnished by the city . . 43607
> Blocks furnished by the city . . 525
> Stone furnished by the city . . 1,648 35
> Sand furnished by the city . . . 2310
> Gravel furnished by the city . . 1433
> $\begin{aligned} & \text { Engineering expense furnished by the } \\ & \text { city }\end{aligned}$
> Steam roller furnished by the city . 30550
> Drop inlet built by Sewer Division . 23477
> $\begin{aligned} & \text { Amount charged to the appropriation } \\ & \text { for street improvements. } \$ 1,09097\end{aligned}$
> Amount charged to the appropriation
> for Street Department . . . 2,278 51
$\$ 3,36948$

Cohasset street, from Corinth to Albano street. Edgestone set. Gutters paved and roadway surfaced with 6 -inch macadam. Crushed stone sidewalks built. Area, 1,900 square yards macadam, 568 cubic yards excavation. 1,968 feet edgestone set and reset, 826 square yards block paving, 1,104 square yards crushed stone sidewalk.
Labor furnished by the city, excavation
$\$ 72420$
Labor paving gutters . . . . 33040
Labor setting edgestone . . . 29520
Labor laying brick sidewalks . . 575
Labor spreading macadam, etc. . . 38000
Labor spreading crushed stone sidewalks 16560
Brought forward .

$\$ 1,901 \quad 15$
Teaming furnished by the city, exca- vation ..... 25250
Teaming furnished by the city, haul- ing blocks ..... 19150
Water cart furnished by the city ..... 13200
Hauling edgestone furnished by the city ..... 11061
Flagging, granite, furnished by the city, 14 feet 4 inches @ 80c. ..... 1146
Flagging, North River, furnished by the city, 13 feet 6 inches @ 66c. ..... 891
Bricks, 300, furnished by the city, @ $\$ 11$ ..... 330
Blocks, 21,200, furnished by the city, (a) $\$ 20$. ..... 42400
Lumber, 5 cedar posts, furnished by the city, @ 35c. ..... 175
Lumber, 155 feet spruce, furnished by the city, @ \$25 ..... 388
Stone, 642.055 tons, furnished by the city, @ \$1.35 ..... 86677
Gravel, 2481 $\frac{1}{2}$ double loads, furnished by the city, @ $\$ 1.40$ ..... 34790
Cement, $1 \frac{3}{4}$ barrels, furnished by the city, @ $\$ 1.85$ ..... 323
Cement, $2 \frac{1}{2}$ barrels, furnished by the city, @ \$1.75 ..... 437
Edgestone, 23 corners, furnished by the city, @ \$3.60 ..... 8280
Edgestone, circular, furnished by the city, 17 feet 5 inches @ $\$ 1.30$ ..... 2263
Edgestone, straight, furnished by the city, 1,654 feet 8 inches @ 70 c. ..... 1,15825
Steam roller furnished by the city ..... 16900
\$5,696 01Congress street, from State street to Water street.To be paved with wood blocks on a concretebase. Work not started.
Engineering ..... \$40 10
Advertising ..... 1325
Cooper street, from Washington Street North toand across Endicott street. Length, 238.7feet. Area, 726 square yards. Asphaltedand regulated.
Hauling edgestone and flagging ..... $\$ 931$
Edgestone furnished by the city ..... 5070
Carried forward ..... $\$ 6001$

Brought forward . . . . . $\$ 6001$
Flagging furnished by the city . . $\quad 5719$
Bricks furnished by the city, 6,000
(a) $\$ 11$ per M.

Blocks furnished by the city, 400 No. 1
@ $\$ 70$.
6600
2800
Engineering and inspection furnished by the city.

7937
Amount paid Barber Asphalt Paving
Company under contract:
350 feet edgestone set
(a) 21c.
$\$ 7350$
16 square y a rds granite block pavinglaid, gravel joints, @ 50c. . . 800
14 square y a rds granite block pavinglaid, pitch joints, @ \$1.05. . 1470
31 square y a rds flagging crosswalk laid, pitch joints, @ $\$ 1.05$. . 3255
695 square y ards bituminous concrete binder and asphalt wearing surface furnished and laid @ $\$ 2.50$. . 1,737 50
1 cubic yard extra bituminous binder furnished and laid . . . 900
72 cubic y a r d s cement concrete base laid (a) $\$ 5$. 36000

212 square y a r d s brick s i d ewalks laid ( © 35c. . $\quad 7420$
Carried forward . \$2,309 45 \$290 57
Brought forward . $\$ 2,30945 \quad \$ 29057$Extra work-Ex-c a vate andhaul surplusmaterial oversewer trenchto $R \mathrm{e} v \mathrm{ere}$Street Yard:
437 square y a r d ssurplus ma-terial exca-v a t ed andhauled @ 50c. . 21850
$\frac{2,527}{\$ 2,818} \frac{95}{52}$
Credit: 5,391 old paving blocks @ $\$ 20$ per M. ..... 10782
$\$ 2,71070$Corning street, from Washington street to Shaw-mut avenue. Roadway asphalted and regu-lated. Length, 338 feet. Area, 734 squareyards.
Teaming furnished by the city ..... $\$ 875$
Bricks furnished by the city, 6,000
@ $\$ 11$ M. ..... 6600
Engineering and inspection furnished by the city ..... 18648
Engineering expense furnished by the city ..... 245
Advertising furnished by the city ..... 1425
Amount paid Warren Brothers Com-pany under contract:664 linear feet edge-
ston e set(a) 20 c .$\$ 13280$
48.43 cubic yardsconcrete baselaid @ \$6. 29058
36 square yardsgranite blockpaving laid,gravel joints,
@ 50 c ..... 1800
17 square yardsgranite blockpaving laid,pitch joints,@ 75c. $\quad 12 \quad 75$Carried forward . . \$454 13$\$ 27793$
Brought forward . . \$454 13 \$277 9335 square yardsflagging cross-walks laid,gravel joints,(a) 50c.1750$700^{\circ}$ square y ardsbitu minousconcretebinder andasphalt wear-ing surfacefurnishedand 1 a i d@ $\$ 1.84$. 1,288 00
389 square y ardsbrick side-walks laid
(a) 25c. ..... 9725
Extra work-Cut out con-crete basewhere neces-sary on ac-count of theresetting ofedgestones:
$64 \frac{1}{2}$ hours labor @25c.1613Plus 15 per cent
on $\$ 16.13$ ..... 242
-

$$
1,87543
$$

$$
\$ 2,153 \quad 36
$$

Credit: 240 old paving blocks (a) $\$ 20$ per M. ..... 480
$\$ 2,14856$
$D$ street, from Gold street to West Broadway.Repaved and regulated. Length, 412 feet.Area, 1,740 square yards.
Inspection furnished by the city ..... $\$ 6350$
Hauling flagging furnished by the city, ..... 1410
Flagging furnished by the city ..... 8492
Bricks furnished by the city ..... 14300
Amount paid William Higgins undercontract:
788 linear feet edge-
stones set
@ 21c. . $\$ 16548$
Carried forward . . $\overline{\$ 16548} \overline{\$ 305} 52$
Brought forward . $\$ 16548$ ..... $\$ 30552$1,740 square y a r d sgranite blockpaving laid

$$
\text { @ 65c. . . 1,131 } 00
$$671 square y a rdsbrick side-walks laid(a) 35c. . . 2348585

1,531 33
$\$ 1,83685$
Dorchester avenue, from Ashmont to Codman street. Work started and suspended.
Labor furnished by the city ..... $\$ 563$
Teaming furnished by the city ..... 250
Steam roller furnished by the city ..... 1300
Dudley street, from Washington street to Eliot
square and part of Eliot square. Resurfacedwith 3 -inch macadam. Length, 1,360 feet.Area, 1,388 square yards, north side. Length,1,563 feet. Area, 3,505 square yards, southside.
Labor furnished by the city ..... $\$ 38715$
Teaming furnished by the city ..... 11207
Hauling flagging furnished by the city, ..... 2606
Flagging furnished by the city ..... 1694
Crossing blocks furnished by the city, ..... 150
Stone furnished by the city ..... 84391
Gravel furnished by the city ..... 880
Steam roller furnished by the city ..... 22100
$\$ 1,61743$Amount charged to appropriation forstreet improvements$\$ 18310$
Amount charged to appropriation for Street Department ..... 1.43433
$\$ 2113$

$\$ 21 \quad 13$
Amount charged to appropriation for street improvements ..... $\$ 1,28311$
Amount charged to appropriation for Street Department ..... 41653
\$1,699 6
Eliot street, from Pleasant to Tremont street.Repaved with large blocks on a concrete basewith pitch joints and regulated. Length, 717feet. Area, 2,908 square yards.
Engineering and inspection ..... \$359 01
Edgestone furnished by the city, 23 feet 2 inches @ 70c. ..... 1622
Flagging furnished by the city, 495 feet 5 inches @ 80c. ..... 39633
Bricks furnished by the city, 20,000 @ \$11 per M. ..... 22000
Stone furnished by the city, 200.5 tons @ $\$ 1.60$, ..... 32008
Advertising furnished by the city ..... 1300
Engineering expenses furnished by the city ..... 650
Templets furnished by the city ..... 355
Amount paid to John I. Fitzgerald under con- tract:
2,109 square yards, preparing site, (a) 30c. ..... $\$ 63270$
1,211 linear feet edgestone set @13 c.15743
1,241 square yards concrete base furnished and laid @ 55c. ..... 68255
46 square yards existing granite block paving relaid, gravel joints, @ 37c. ..... 1702
2,010 square yards granite block paving furnished and laid, pitch joints, @ $\$ 2.57$. . ..... 5,165 70
1 square yard existing granite block paving relaid, pitch joints ..... 80
99 square yards flagging cross- walks hauled and laid, pitch joints, @ \$1 ..... 9900
871 square yards brick sidewalks laid @ 25c. ..... 21775
Credit: 46,669 old blocks @ $\$ 20$ per M. ..... 933386,972 95\$8,307 64Fuller street, from Dorchester avenue to Washing-ton street. Gravel roadway graded. Length,1,850 feet. Area, 4,713 square yards.
Labor furnished by the city ..... $\$ 26438$
Teaming furnished by the city ..... 11725
Steam roller furnished by the city ..... 23400
$\$ 61563$
Gainsborough street, from Hemenway street to Huntington avenue. Resurfaced with mac- adam, average depth 6.7 inches. Length, 1,038 feet. Area, 3,269 square yards. Arti- ficial stone sidewalks repaired. Length, 715 feet. Area, 5,219 square yards, St. Stephen to Hemenway streets.
Labor furnished by the city ..... $\$ 74075$
Teaming furnished by the city ..... 34645 ..... 34645
Lumber furnished by the city ..... 76
Stone furnished by the city ..... 1,115 13
Gravel furnished by the city ..... 942
Advertising fuınished by the city ..... 1275
Engineering expenses furnished by the city ..... 110
Steam roller furnished by the city ..... 25800
Amount paid Robert Eagar, Jr., under contract:
5,219 square feet artificial stone side- walks laid @ $13 \frac{1}{2} \mathrm{c}$ ..... $\$ 70457$
733 linear feet edgestones set @ 7c., ..... 5131258 square yards granite blockpaving and flagging cross-walks relaid @ 25c.6450
Extra work-Reset catch-basin cover to grade ..... 300
$823 \cdot 38$
$\$ 3,30774$Amount charged to appropriationfor street improvements
$\$ 1,33272$
Amount charged to appropriation for Street Department ..... 1,975 02
${ }^{\text {r }} 3,30774$
Gerard street, from Massachusetts avenue to Kemble street. Excavated macadam and paved roadway with old paving blocks. Edgestones set 407 feet. 4,060 cubic yards roadway excavated; cutting averaged $2 \frac{9}{10}$ feet on roadway and $1 \frac{1}{2}$ feet on sidewalk; 3,860 square yards paving laid and 50 square yards brick paving laid.
Labor furnished by the city, exca-
vation . . . . . . $\$ 3,10220$
Carried forward . . . . $\$ 3,10220$
Brought forward ..... \$3,102 20
Labor furnished by the city paving, 1,055 ..... 08
Teaming blocks furnished by the city, ..... 24340
Teaming excavation ..... 95185
Edgestone furnished by the city, 2 small corners @ $\$ 3.60$ ..... 720
Flagging furnished by the city, 4. feet North River @ 66c. ..... 2706
Blocks furnished by the city, 97,224 old blocks @ \$20 ..... 1,94448
Sand furnished by the city, 13 tons beach @ 75c. ..... 975
Gravel furnished by the city, 191 tons beach @ 75c. ..... 14325
Gravel furnished by the city, 428 double loads @ \$1.60 ..... 68480
Cement furnished by the city, $\frac{1}{4}$ bar- rel @ \$1.75 ..... 44
Steam roller furnished by the city ..... 9750

Harvard avenue, from Commonwealth avenue to Biighton avenue. Resurfaced with 2 -inch macadam. Length, 871 feet. Area, 2,000 square yards.
Labor furnished by the city ..... $\$ 10287$
Teaming furnished by the city ..... 3500
Stone furnished by the city ..... 20556
Gravel furnished by the city ..... 4108
Steam roller furnished by the city ..... 5850
$\$ 44301$
Humboldt avenue, from Walnut avenue to Seaverstreet; Resurfaced with 5 -inch macadamand gutters repaved. Length, 3,485 feet.Area, 3,998 square yards, easterly side.Length, 3,383 feet. Area, 3,593 squareyards, westerly side.
Labor furnished by the city ..... \$1,899 14
Teaming furnished by the city ..... 44573
Brick furnished by the city ..... 358
Stone furnished by the city ..... 1,987 94
Gravel furnished by the city ..... 5280
Sand furnished by the city ..... 1260
Steam roller furnished by the city ..... 45500
Amount charged to the appropriation for Street Department ..... $\$ 37701$
Amount charged to the appropriationfor street improvements . . 4,479 784,479 78
Huntington avenue, from Tremont street to Brook-line line; resurfaced with 3 -inch macadam,north side; from Gainsborough street toTremont street, southerly side, and fromParker street to Brookline line, southerlyside. Resurfaced with 3 -inch macadam.Area, about 26,000 square yards.
Labor furnished by the city ..... \$2,553 87
Teaming furnished by the city ..... 973.70
Watering furnished by the city ..... 14580
Lumber furnished by the city ..... 129
Stone furnished by the city ..... 4,457 41
Sand furnished by the city ..... 392
Steam roller furnished by the city . 1,120 00
Amount charged to the appropriation for Street Department ..... $\$ 2,75356$
Amount charged to the appropriation for street improvements ..... 6,502 43
$\qquad$

Irvington street, from Huntington avenue to railroad. Resurfaced with 4 -inch macadam. Length, 400 feet. Area, 1,333 square yards.
Labor furnished by the city ..... $\$ 23664$
Teaming furnished by the city ..... 18057
Stone furnished by the city ..... 28557
Sand furnished by the city ..... 155
Gravel furnished by the city ..... 1884
Steam roller furnished by the city ..... 7850
Kilby street, from Milk street to Central street.Asphalted. Length, 390 feet. Area, 1,540square yards.
Engineering and inspection furnished by the city ..... $\$ 26473$
Advertising furnished by the city ..... 1510Amount paid Jones \& Meehan for excavatingand removing surplus material3600
Amount paid Jones \& Meehan, under contract:18 square yards granite blockpaving laid, pitch joints,@ $\$ 1$$\$ 1800$
15 square yards flagging cross-walks laid, pitch joints, @
\$1 ..... 1500
Carried forward ..... $\$ 3300$
Street Department - Paving Division. ..... 155
Brought forward ..... $\$ 3300$ ..... $\$ 31583$
1,540 square yards bituminous con-crete binder and asphaltwearing surface furnishedand laid @ \$1.90 . . . 2,926 00
12 cubic yards extra bituminousbinder furnished and laid( $\$ 8$9600
60 cubic yards extra cement concrete base furnished and laid @ \$6 ..... 36000
Extra work - Lower catch-basin and reset edgestoneand relay brick sidewalk atcatch-basin:
$\frac{1}{2}$ day, paver, @ $\$ 5$ ..... 250
$\frac{1}{2}$ day, rammer, @ $\$ 2.50$ ..... 125
3 hours labor @ 25c. ..... 75
5 hours, tender, @ $28 \frac{1}{\mathrm{~s}} \mathrm{c}$. ..... 141
Plus 17 per cent on $\$ 5.91$ ..... 89
50 paving brick @ \$12 ..... 60
3 bags cement @ 50c. ..... 150
Amount charged to appropriation for Street Department
Amount charged to appropriation for street improvements
$\$ 11333$
$\$ 11333$ ..... 3,626 40 ..... 3,626 40
1
$\$ 11333$-
Kneeland street, from Washington street to Harrison avenue. Paved with large blocks on concrete base, with pitch joints and regulated. Length, 382 feet. Area, 1,443 square yards.
Engineering and inspection ..... $\$ 33860$
Edgestone furnished by the city, 2 feet 10 inches, circular, @ \$1.30 ..... 369
Edgestone furnished by the city, 4 feet $3 \frac{1}{2}$ inches, circular, @ \$1.20 ..... 515
Edgestone furnished by the city, 18 feet 7 inches, straight, @ 70c. ..... 1300
Flagging furnished by the city, 204 feet 3 inches @ 80c. ..... 16340
Bricks furnished by the city, 4,000 @ \$11 ..... 4400
Stone furnished by the city, 210.05 tons (a) $\$ 1.60$ ..... 33608
Carried forward ..... $\$ 90392$
Brought forward . ..... $\$ 90392$
Advertising furnished by the city ..... 1590
Engineering expense furnished by the city ..... 245
Templets furnished by the city ..... 437Amount paid John Donley Company undercontract:
1,146 square yards; preparing site,
@) 34c. ..... $\$ 38964$
341 linear feet edgestones set (a) 8c. ..... 27. 28
1,124 square yards concrete base furnished and laid @ 531 c c., 601341,066 square yards granite blockpaving furnished and laid,pitch joints, @ \$2.56 . 2,728 96
27 square yards existing granite block paving relaid @ 50c., ..... 1350
42 square yards flagging cross- walks hauled and laid, pitch joints, @ 75c. ..... 3150
11 square yards existing flagging crosswalks relaid @ 40c. ..... 440
239 square yards brick sidewalks laid @ 42c. ..... 10038
\$3,897 00Less wharfage on 16,500paving blocks delivered onHecht's Wharf @ \$2 perM. . . . . . 3300$\$ 3,86400$$\$ 4,79064$
72784
$\$ 4,06280$Lawn street, from Heath street to Heath street.Roadway excavated and macadamized with6 -inch crushed stone. New edgestone set,gutters paved and crushed stone sidewalksbuilt. Length, 1,470 feet. Area, 3,267square yards. Work done by departmentforce.
Labor furnished by the city, excavation and inspection ..... $\$ 1,04653$
Labor furnished by the city, spreading mac- adam, etc. ..... 47135
Carried forward ..... $\$ 1,51788$
Brought forward\$1,517 88
Labor furnished by the city, spreading stone on sidewalks ..... 8875
Teaming furnished by the city, excavation ..... 17024
Teaming furnished by the city, macadam ..... 7371
Teaming furnished by the city, hauling blocks, ..... 8449
Water cart furnished by the city ..... 5824
Hauling edgestone furnished by the city ..... 18064
Edgestone furnished by the city:
54 feet 10 inches, circular edge, (a) $\$ 1.20$ ..... $\$ 6580$
2 small corners @ $\$ 3.60$ ..... 720
2,588 feet $6 \frac{1}{2}$ inches @ $\$ 70$ ..... 1,811 98
Bricks furnished by the city, 600 @ $\$ 11$ ..... 66088498
Blocks furnished by the city, 31,515 @ $\$ 20$ ..... 63030
Lumber furnished by the city ..... 1569
Stone furnished by the city, 119.225 tons @ $\$ 1.60,1,112.875$ tons @ $\$ 1.35$ ..... 1,693 14
Gravel furnished by the city ..... 480
Engineering expense furnished by the city ..... 320
Steam roller furnished by the city ..... 25675
Amount paid Trimount Contracting Companyunder contract:
526 cubic yards subgrading (earth excavation) @ 75c. $\$ 39450$
2 cubic yards subgrading (rock excavation) @ $\$ 1.75$ ..... 350
2,870 linear feet edgestones set @ 21c. ..... 60270
1,007 square yards granite block paving laid @ 50c. ..... 50350
45 square yards brick sidewalks laid @ 40c. ..... 1800
Extra work-Furnish stone-cutter to cut edgestone fordriveway:
5 hours, stonecutter, @ 62 $\frac{1}{2}$ c. ..... 313
Plus 15 per cent on $\$ 3.13$ ..... 47Lexington street, from Putnam street to 250 feetbeyond Prescott street. Excavated and re-moved macadam 1 foot deep. Paved withsecond-hand blocks on a gravel base. Length,860 feet. Area, 1,916 square yards.
Labor furnished by the city, exca- vating ..... $\$ 45063$
Labor furnished by the city, paving ..... 40040
Carried forward ..... \$851 03
Brought forward . ..... $\$ 85103$
Teaming furnished by the city, exca- vation ..... 33077
Teaming furnished by the city, blocks, etc. ..... 18473
Edgestone furnished by the city ..... 630
Flagging furnished by the city ..... 3036
Blocks furnished by the city, 425 @ \$70, 36,986 @ \$20 ..... 76947
Gravel furnished by the city, 40 tons @ 78c., 214 tons @ 75c., 71 loads (a) $\$ 1.36$ ..... 28826
Steam roller furnished by the city ..... 4875
Amount charged to appropriation for Street Department ..... \$146 81
Amount charged to appropriation for street improvements. ..... 2,362 86
\$2,509 ..... 67
2,509 ..... 67
Main street, from Beach street to Alford street,Repaved with old granite blocks. Length,750 feet. Area, 68 square yards sidewalkpaving and 1,446 square yards block paving;63 feet edgestones reset.
Labor furnished by the city ..... \$688 39
Teaming furnished by the city ..... 5850
Bricks furnished by the city, 1,740 @ $\$ 11$ ..... 1914
Lumber furnished by the city, 70 feet spruce @ \$24 ..... 168
Sand furnished by the city, 3 double loads @ $\$ 1.20$ ..... 360
Gravel furnished by the city, 105
double loads @ \$1.50 ..... 15750-
Amount charged to appropriation for Street Department ..... $\$ 19035$
Amount charged to appropriation for street improvements ..... 73846 ..... 46
Massachusetts avenue, from Magazine street toGerard street and from Shirley street toMagazine street, on the southerly side. Re-surfaced with 6 -inch macadam taken fromGerard street. Length, 2,205 feet. Area,4,993 square yards.
Labor furnished by the city ..... $\$ 43275$
Teaming furnished by the city ..... 42903
Carried forward ..... \$861 78
Brought forward ..... $\$ 86178$
Gravel furnished by the city, $46 \frac{1}{2}$ tons, beach, @ 75c. ..... 3488
Steam roller furnished by the city ..... 30550
Meridian street, from Maverick square to Centralsquare, repaved with new large granite blocks,edgestones reset, sidewalks and crosswalksrelaid. 1,090 feet edgestone reset; 1,815square yards excavation; 1,136 square yardsbrick paving; 2,502 square yards blockpaving.
Labor furnished by the city, excava- tion ..... $\$ 71123$
Labor furnished by the city, setting edgestone ..... 12804
Labor furnished by the city, relaying bricks ..... 16901
Labor furnished by the city, relaying paving and crossings ..... 77183
Teaming furnished by the city, excava- tion ..... 32510
Teaming furnished by the city, edge- stone ..... 1494
Teaming furnished by the city, brick paving ..... 2700
Teaming furnished by the city, block paving and crossings ..... 17161
Edgestone furnished by the city, 54 feet, circular, @ \$1.20 ..... 6480
Edgestone furnished by the city, 62feet 9 inches, straight, @ 70c.4391
Flagging furnished by the city, 25 feet, North River, @ 66c. . ..... 1650
Flagging furnished by the city, 271feet 9 inches, North River, old,@ 33c.8967
Bricks furnished by the city, 23,540 (a) $\$ 11$ per M. ..... 25894
Blocks furnished by the city, 30 old (a) $\$ 20$ per M. ..... 60
Blocks furnished by the city, 64,734 (a) \$64 per M. ..... 4,14297Lumber furnished by the city, 90feet spruce @ $\$ 25$ per M. . . 225Stone furnished by the city, $3 \frac{1}{2}$ tons@ $\$ 1.40$490
Carried forward ..... $\$ 6,94330$
\$1,202 ..... 16

Brought forward . . . . $\$ 6,94330$
Sand furnished by the city, 31 tons (a) $\$ 1$ 3100
Sand furnished by the city, 5 single
loads @ 68c.
Sand furnished by the city, $3 \frac{1}{2}$ double loads @ $\$ 1$ 350

Sand furnished by the city, 6 double
loads @ $\$ 1.36$
816
Gravel furnished by the city, 15 single loads @ 68c. ..... 1020
Gravel furnished by the city, 18 single loads @ 75c. ..... 1350
Gravel furnished by the city, 16 tons @ 75c. ..... 1200
Gravel furnished by the city, 165double loads @ \$1.36. . . . 22440

Cement furnished by the city, 3 bags @ 44 c .

132

$$
\$ 7,25078
$$

Credit: 825 old blocks @ $\$ 20$ per M . 1650 $\$ 7,23428$
$\begin{aligned} & \text { Amount charged to appropriation } \\ & \text { for Street Department }\end{aligned} \quad \$ 4,14297$
Amount charged to appropriation for street improvements . . 3,091 31
Middle street, from Dorchester street to Dorchester avenue. Resurfaced with 4 -inch macadam. Length, 857 feet. Area, 1,333 square yards.
Labor furnished by the city ..... \$389 13
Teaming furnished by the city ..... 670
Horse roller furnished by the city ..... 28986
Stone furnished by the city
Mt. Everett street, from Quincy street to Hamiltonstreet. Patched with macadam.
Labor furnished by the city ..... $\$ 10801$
Teaming furnished by the city ..... 13613
Stone furnished by the city ..... 3189
Gravel furnished by the city ..... 1375
Steam roller furnished by the city ..... 4550
Amount charged to appropriation for Street Department ..... $\$ 17001$
Amount charged to appropriation for street improvement ..... 16527
Neponset avenue, from Adams to Ashmont street.Resurfaced with 3 -inch macadam (workunfinished). Length, 3,368 feet. Area,3,650 square yards.
Labor furnished by the city ..... $\$ 19625$
Teaming furnished by the city ..... 13075
Stone furnished by the city ..... 38688
Steam roller furnished by the city ..... 12350
$\$ 83738$
New Heath street, from Centre to Parker streets.Resurfaced with 5 -inch macadam. Length,563 feet. Area, 1,820 square yards.
Labor furnished by the city ..... $\$ 46088$
Teaming furnished by the city ..... 5908
Blocks furnished by the city ..... 500
Stone furnished by the city ..... 76212
Gravel furnished by the city ..... 240
Steam roller furnished by the city ..... 14300
\$1,432 48
Oak square, at the intersection of Washington,Faneuil and Bigelow streets. Resurfaced withmacadam 6 inches deep. Length, 906 feet.Area, 2,872 square yards.
Labor furnished by the city ..... \$425 94
Teaming furnished by the city ..... 38098
Stone furnished by the city ..... 1,056 93
Gravel furnished by the city ..... 5400
Steam roller furnished by the city ..... 21450
Park square, from Boylston to Eliot streets. Woodblock pavement (work done in 1907).
Engineering furnished by the city
Amount paid United States Wood PreservingCompany, under contract:
4,792 square yards, preparing site, (a) 50c. ..... $\$ 2,39600$
820 linear feet edgestone set @ 21c. ..... 17220
4,792 square yards concrete base laid @ \$1 ..... 4,792 00
98 square yards granite block paving laid, gravel joints, @ 65c. ..... 6370
37 square yards granite block paving laid, pitch joints, @ $\$ 1.20$ ..... 4440
Carried forward ..... \$7,468 30$\$ 2300$
$\$ 2,13235$
$\$ 230$
Brought forward ..... $\$ 7,46830$ ..... $\$ 2300$
55 square yards flagging cross-walks laid, pitch joints, @$\$ 1.20$6600
4,713 square yards wood block pavement laid @ $\$ 3.25$ ..... 15,31725
819 square yards brick sidewalkslaid @ 35c.28665$\$ 23,13820$Less 5,052 old granite blocks de-livered to contractor @ $\$ 25$, 12630

Less amount paid in 1907 . | $\$ 23,01190$ |
| ---: |
| 18,02756 |

4,984 34
$\$ 5,00734$
$\$ 46529$
Amount charged appropriation for Street Department
Amount charged appropriation for

- street improvement

4,542 05
Parker street, from Fisher avenue to Heath street. Resurfaced with $4 \frac{1}{2}$-inch macadam. Length, 359 feet. Area, 1,543 square yards.
Labor furnished by the city . . $\$ 29550$
Teaming furnished by the city . . 5285
Bricks furnished by the city . . 330
Blocks furnished by the city . . 100
Stone furnished by the city . . 31619
Sand furnished by the city . . 140
Steam roller furnished by the city . 6500
Amount charged appropriation for
Street Department .. . . $\$ 32870$
$\begin{array}{cccc}\text { Amount_charged appropriation for } \\ \text { street improvements } & \text {. . . } & 40654\end{array}$
Providence street, from west side of Church street to 170 feet easterly. Wood blocks on concrete base and regulating. Length, 173 feet. Area, 448 square yards; track area 83 square yards extra.
Engineering and inspection . . . $\$ 15162$
Teaming furnished by the city . . $\frac{225}{\text { Carried forward . . . . . } \$ 15387}$
Teaming furnished by the city $\quad . \quad \frac{225}{\$ 15387}$
Carried forward . . . . .
$\$ 73524$

73524
Brought forward ..... $\$ 15387$
Flagging furnished by the city, $16 \frac{1}{2}$ feet @ 80c. ..... 1320
Bricks furnished by the city, 6,400 @ $\$ 11$. ..... 7040
Engineering expenses furnished by the city ..... 115
Amount paid United States WoodPreserving Company, under con-tract:
447 square yards, preparing site, (a) 50c. ..... 22350
530 linear feet edgestone set @ 21 c . ..... 11130
447 square yards concrete base laid @ \$1 ..... 44700
373 square yards granite block paving laid, gravel joints, @ 65c. ..... 24245
4 square yards granite block paving laid, pitch joints, @ \$1.05 ..... 420
12 square yards flagging cross-walks laid, pitch joints, @$\$ 1.05$1260
431 square yards wood block pavement furnished and laid @ \$3.25 . . . . 1,400 75
441 square yards brick sidewalks laid @ 35c. ..... 15435Extra work-Dress old flag-ging and lay same in side-walk in place of brick wheredirected:
15 days, foreman, @ $\$ 3.20$ ..... 520
$28 \frac{1}{2}$ hours, paver, @ 50c. ..... 1425
$8 \frac{1}{2}$ days, stonecutter, @ $\$ 4.40$ ..... 3740
123 days labor @ \$2 ..... 2475
Plus 15 per cent on $\$ 81.60$ ..... 1224
5 barrels Portland cement @ $\$ 1.80$ ..... 900
152 cubic feet sand @ 4 c. ..... 608
\$2,943 69
Credit: 12,835 old blocks @ \$20 . 25670\$2,686 99Amount charged to appropriationfor Street Departmen\$2,705 07
Carried forward ..... $\$ 2,70507$
Brought forward . ..... $\$ 2,70507$
Amount charged to appropriation for street improvements ..... 23862
$\$ 2,94369$
Less for 12,835 old paving blocks ..... 25670
\$2,686 ..... 99
Rutherford avenue, from Baldwin street to Thorn- dike street. Repaved with old blocks and regulated. Length, 400 feet. Area, 2,453 square yards.
Labor furnished by the city ..... $\$ 14350$
Teaming furnished by the city ..... 8744
Bricks furnished by the city ..... 7205
Lumber furnished by the city ..... 325
Gravel furnished by the city ..... 4350
Amount paid James J. Brock under contract:
823 linear feet edgestone set @ 21c. ..... 83
2,453 square yards granite blockpaving laid @ 65c. . . 1,594 45
568 square yards brick sidewalks laid @ 35c. ..... 19880
$\cdots \quad \frac{1,96608}{\$ 2,31582}$

$\$ 9362$
Amount charged to appropriation for Street Department ..... $2,222 \quad 20$
street improvements
-
Rutherford avenue, from Tibbetts Town way toChapman street. Repaved roadway with oldblocks and regulated edgestones and side-walks. Length, 1,550 feet. Area, 6,746 squareyards block paving; 2,132 feet edgestonereset; 1,232 square yards brick paving:
Labor furnished by the city ..... $\$ 3,33801$
Teaming furnished by the city ..... 47021
Hauling flagging furnished by the city, ..... 703
Edgestone furnished by the city ..... 2823
Flagging furnished by the city ..... 16333
Bricks furnished by the city ..... 22175
Blocks furnished by the city ..... 200
Lumber furnished by the city ..... 3125
Sand furnished by the city ..... 9480
Gravel furnished by the city ..... 1,800 75
Nails furnished by the city ..... 267
Cement furnished by the city ..... 919
Stone furnished by the city. ..... 260
Roxbury street, from Eliot square to Columbusavenue. Resurfaced with $4 \frac{1}{2}$-inch macadam.Length, 471 feet. Area, 1,021 square yards,north side. Length, 368 feet. Area, 499square yards, south side.
Labor furnished by the city ..... $\$ 14976$
Teaming furnished by the city ..... 2464
Flagging furnished by the city ..... 1865
Stone furnished by the city ..... 33912
Steam ooller fumished by the city ..... 10400
$\$ 636$ ..... 17
St. James avienue, from Berkeley street to Hunt- ington avenue. Resurfaced with 6 -inch macadam, crossings relaid, coated with terra- colio. Length, 967 feet. Area, 3,038 square yards.
Labor fuinished by the city ..... $\$ 65991$
Teaming furnished by the city ..... 14598
Blocks furnished by the city ..... 50
Stone and dust furnished by the city ..... 99328
Gravel furnished by the city ..... 392
Terracolio furnished by the city, 440 gallons @ 151 c . ..... 6820
Steam roller furnished by the city, ..... 13000
\$2,001 ..... 79
Scollay square and Court street, from Cornhill toSudbury street. Paved with large blockson a concrete base with pitch joints andregulated. Length, 530 feet. Area, 2,635square yards.
Engineering and inspection ..... $\$ 55049$
Teaming furnished by the city ..... 179
Edgestone furnished by the city, 25 feet 7 inches @ 70c. ..... 1791
Bricks furnished by the city, 3,600 @ \$11 ..... 3960
Stone furnished by the city, 510.30 tons @ $\$ 1.60$, ..... 81648
Advertising furnished by the city ..... 1530
Engineering expense furnished by the city ..... 110
Templets furnished by the city ..... 641
Amount paid to John I. Fitzgerald under con- tract:
2,883 square yards, preparing site, @ 28 c . ..... $\$ 80724$
181 linear feet existing edgestone reset @ 11c. ..... 1991
Carried forward ..... $\$ 82715$$\$ 1,44908$
Brought forward ..... $\$ 82715$
$\$ 1,44908$2,864 square yards concrete basefurnished and laid @ 50c., 1,432 00
2,403 square yards granite blockpaving furnished and laid,pitch joints, @ $\$ 2.50$. . 6,007 50
256 square yards existing graniteblock paving relaid, pitchjoints, @ 80c.20480
253 square yards flagging cross- walks furnished and laid, pitch joints, @ \$4.41 ..... 1,11573
4 square yards existing flagging crosswalks relaid, pitch joints, @ 80c. ..... 320
125 square yards existing brick sidewalks relaid @ 25c. ..... 3125
Extra work - Lay sidewalkbrick in cement at the north-erly side of Hanover street:
8 hours, paver, @ $62 \frac{1}{2}$ c. ..... 500
8 hours labor @ 25c. ..... 200
Plus 15 per cent on $\$ 7$ ..... 105
1 barrel Portland cement . ..... 1.75
Credit: 81,215 old paving blocks @ $\$ 20$,
\$11,080 511,624 30
$\$ 9,45621$
Amount charged to appropriation forStreet Department
$\$ 8,35404$
Amount charged to appropriation for
street improvements ..... 1,102 17
$9,456 \quad 21$
$\$ 6104$
Southampton street, from railroad bridge to Hilton street 400 feet easterly. Resurfaced with macadam taken from Gerard street. Length, 700 feet. Area, 3,500 square yards.
Labor furnished by the city . . $\$ 25013$
Teaming furnished by the city . . 25650
Gravel furnished by the city . . 2475
Steam roller furnished by the city . 12350

Stanley street, from Quincy street to Sunset circle.

Stanley street, from Quincy street to Sunset circle.

Stanley street, from Quincy street to Sunset circle.

Stanley street, from Quincy street to Sunset circle.

Stanley street, from Quincy street to Sunset circle.

Stanley street, from Quincy street to Sunset circle.

Stanley street, from Quincy street to Sunset circle.       Roadway patched and sidewalks graveled.       Roadway patched and sidewalks graveled.       Roadway patched and sidewalks graveled.       Roadway patched and sidewalks graveled.       Roadway patched and sidewalks graveled.       Roadway patched and sidewalks graveled.       Roadway patched and sidewalks graveled.       Length, 555 feet. Area, 1,200 square yards.       Length, 555 feet. Area, 1,200 square yards.       Length, 555 feet. Area, 1,200 square yards.       Length, 555 feet. Area, 1,200 square yards.       Length, 555 feet. Area, 1,200 square yards.       Length, 555 feet. Area, 1,200 square yards.       Length, 555 feet. Area, 1,200 square yards.

Labor furnished by the city

Labor furnished by the city

Labor furnished by the city

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Labor furnished by the city

Labor furnished by the city .....  .....  .....  .....  .....  ..... $\$ 25489$ .....  .....  .....  .....  .....  ..... $\$ 25489$ .....  .....  .....  .....  .....  ..... $\$ 25489$ .....  .....  .....  .....  .....  ..... $\$ 25489$ .....  .....  .....  .....  .....  ..... $\$ 25489$ .....  .....  .....  .....  .....  ..... $\$ 25489$ .....  .....  .....  .....  .....  ..... $\$ 25489$

Teaming furnished by the city

Teaming furnished by the city

Teaming furnished by the city

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Teaming furnished by the city

Teaming furnished by the city

Teaming furnished by the city .....  .....  .....  .....  ..... 15187 .....  .....  .....  .....  ..... 15187 .....  .....  .....  .....  ..... 15187 .....  .....  .....  .....  ..... 15187 .....  .....  .....  .....  ..... 15187 .....  .....  .....  .....  ..... 15187 .....  .....  .....  .....  ..... 15187

Stone furnished by the city

Stone furnished by the city

Stone furnished by the city

Stone furnished by the city

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Stone furnished by the city

Stone furnished by the city .....  .....  .....  ..... 762 .....  .....  .....  ..... 762 .....  .....  .....  ..... 762 .....  .....  .....  ..... 762 .....  .....  .....  ..... 762 .....  .....  .....  ..... 762 .....  .....  .....  ..... 762

Gravel furnished by the city

Gravel furnished by the city

Gravel furnished by the city

Gravel furnished by the city

Gravel furnished by the city

Gravel furnished by the city

Gravel furnished by the city .....  .....  ..... 10688 .....  .....  ..... 10688 .....  .....  ..... 10688 .....  .....  ..... 10688 .....  .....  ..... 10688 .....  .....  ..... 10688 .....  .....  ..... 10688

Steam roller furnished by the city

Steam roller furnished by the city

Steam roller furnished by the city

Steam roller furnished by the city

Steam roller furnished by the city

Steam roller furnished by the city

Steam roller furnished by the city .....  ..... 5200 .....  ..... 5200 .....  ..... 5200 .....  ..... 5200 .....  ..... 5200 .....  ..... 5200 .....  ..... 5200
Amount charged to appropriation for
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Amount charged to appropriation for street improvements street improvements street improvements street improvements street improvements street improvements street improvements ..... 30125 ..... 30125 ..... 30125 ..... 30125 ..... 30125 ..... 30125 ..... 30125-
$\$ 57326$

57326
Sudbury street, from Court street to Haymarket square. Paved with old blocks on gravel base, with gravel joints, and regulated edgestone, etc. Length, 901 feet. Area, 2,710 square yards. 1,800 feet edgestone reset, 1,575 square yards brick relaid.
Labor furnished by the city . \$1,137 75
Teaming furnished by the city . . 28787
Edgestone furnished by the city . . 951
Flagging furnished by the city . . 4169
Bricks furnished by the city . . 5198
Blocks furnished by the city . . 1000
Sand furnished' by the city . . 900
Gravel furnished by the city . . 15361
Cement furnished by the city . . 148

Engineering and inspection .
Mack bricks furnished by the city, $300 @$,
$\$ 29.26$,
Vitrified bricks furnished by the city, 551 @ $\$ 29.26$
Templets furnished by the city . . . . 427
Amount paid United States Wood Preserving Company under contract:
719 square yards, preparing site, @ 50c.
$\$ 35950$
708 square yards concrete laid (a) $\$ 1$

70800
5 square yards granite block paving laid, pitch joints, @ \$1.05 525
Carried forward . . . . $\$ 1,07275$
$\$ 1,70289$
$\$ 17275$ 878

1612

Summer street, from Washington street to Hawley street. Wood blocks on concrete base and regulated. Length, 234 feet. Area, 688 square yards.

| $\begin{gathered}\text { Brought forward } \\ 7 \text { square yards flagging cross- }\end{gathered} \$ 1,07275$ |  |
| :---: | :---: |
|  |  |
| walks laid, pitch joints, |  |
| \$1.05 | 35 |
| 688 .square yards wood block |  |
| pavement furnished an | 2,236 00 |
| Extra work - Omit wood |  |
| block for crosswalks at |  |
| Washington street and sub- |  |
|  |  |
| 2 hours, foreman, @ 40c. | 80 |
| 12 hours, paver, @ 50c. | 600 |
| 26 hours labor @ 25c. | 650 |
| Plus 15 per cent on $\$ 13.30$ | 200 |
| 5 hours double team @ 55c. | 275 |
| 3 bags cement @ 40c. | 120 |
| 1 double load sand | 160 |

$$
\text { Credit: 15,171 old paving blocks @ } \$ 20
$$

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\begin{array}{r}
\$ 3,53887 \\
30342 \\
\hline * \$ 3,23545 \\
\hline
\end{array}
$$

Taylor street, from Neponset avenue to railroad. Resurfaced with 9 -inch macadam. Length, 547 feet. Area, 1,256 square yards.
Labor furnished by the city . . $\$ 80549$
Teaming furnished by the city $\dot{-} 60125$
Stone furnished by the city, 383.475 tons @ $\$ 1.46 \frac{2}{3}$

56238
Steam roller furnished by the city . 35100
Amount charged to appropriation for
Street Department $\quad \$ 1,20871$
Amount charged to appropriation for
street improvements . . . 1,111 41
$\$ 2,320 \quad 12$

2,320 12

Vinton street, from Preble street to Dorchester street. Resurfaced with 4-inch macadam. Length, 661 feet. Area, 1,358 square yards.
Labor furnished by the city . . $\$ 34637$
Teaming furnished by the city . . 2450
Horse roller furnished by the city . 6153
Trap rock furnished by the city . . 35912
Walk Hill street, from Blue Hill avenue to Harvard street. New edgestone, gutters and crushed stone sidewalks (work done in 1907).
Labor furnished by the city ..... $\$ 2650$
Teaming furnished by the city ..... 1,529 25
Blocks furnished by the city ..... 8183
Amount paid to Mark H. Lynch, undercontract, for work done in 1907,balance due . . . . . 11000
Amount charged to appropriation for Street Department ..... $\$ 1,63758$
Amount charged to appropriation for street improvements ..... 11000
\$1,747 58
1,74758
Wall street, from Causeway street to Minot street.Repaved with old blocks and regulated.Length 653 feet. Area, 1,573 square yards.580 square yards brick relaid, 1,300 feet edge-stone reset:
Labor furnished by the city ..... $\$ 73502$
Teaming furnished by the city ..... 17025
Flagging furnished by the city ..... 1711
Bricks furnished by the city ..... 7700
Blocks furnished by the city ..... 2100
Sand furnished by the city ..... 1450
Gravel furnished by the city ..... 12075
Cement furnished by the city ..... 70Walnut avenue, from Circuit street to Humboldtavenue. Resurfaced with 4 -inch macadamand westerly side coated with tarvia. Length,1,497 feet. Area, 2,814 square yards.
Labor furnished by the city ..... \$1,521 13
Teaming furnished by the city ..... 30513
Edgestone furnished by the city ..... 968
Flagging furnished by the city ..... 610
Bricks furnished by the city ..... 991
Stone furnished by the city . ..... 80262
Sand furnished by the city ..... 630
Gravel furnished by the city ..... 4480
Steam roller furnished by the city ..... 12350
Tarvia furnished by the city ..... 10755
Amount charged to appropriation for Street Department . . . $\$ 1,15801$
Amount charged to appropriation for street improvements 1,778 71
Ward street, from Dorchester street to Preblestreet. Resurfaced with 6 -inch macadam andregulated. Length, 510 feet. Area, 850square yards.
Labor furnished by the city . . $\$ 51763$
Horse roller furnished by the city ..... 5484
Teaming furnished by, the city ..... 670
Bricks furnished by the city ..... 6600
Stone furnished by the city ..... 17904
Sand furnished by the city ..... 1400
Gravel furnished by the city ..... 1500
Amount charged to appropriation for Street Department ..... $\$ 20688$
Amount charged to appropriation for street improvements. ..... 64633
$\$ 85321$
Warren street, from Kearsarge avenue to Moreland street (work done in 1907).
Amount paid John B. Harlow under contract for work done in 1907 ..... $\$ 28744$
Washington street, from Dudley street to Bartlett street. Repaved with old blocks. Length, 755 feet. Area, 1,666 square yards. Westerly side Cliff street to Bartlett street and Cliff street to Dudley street, easterly side Cliff street to Bartlett street. By Peter Gilligan, contractor:
Inspection furnished by the city ..... $\$ 4800$
Teaming furnished by the city ..... 224
Edgestone furnished by the city ..... 720
Flagging furnished by the city ..... 6193
Bricks furnished by the city ..... 220Amount paid to Peter Gilligan under contract:

8 linear feet edgestone set

8 linear feet edgestone set

8 linear feet edgestone set

8 linear feet edgestone set    (a) 21c.    (a) 21c.    (a) 21c.    (a) 21c. .....  .....  .....  ..... \$1 68 .....  .....  .....  ..... \$1 68 .....  .....  .....  ..... \$1 68 .....  .....  .....  ..... \$1 68

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1,044 square yards granite block
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1,044 square yards granite block paving laid @ 65c. paving laid @ 65c. paving laid @ 65c. paving laid @ 65c. ..... 67860 ..... 67860 ..... 67860 ..... 67860
65 square yards brick sidewalk
65 square yards brick sidewalk
65 square yards brick sidewalk
65 square yards brick sidewalk laid @ 35c. laid @ 35c. laid @ 35c. laid @ 35c. ..... 2275 ..... 2275 ..... 2275 ..... 2275
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Brought forward ..... $\$ 70303$ ..... \$121 57street and Bartlett street onthe east side of Washingtonstreet:
622 square yards granite block pav- ing laid @ 65c. ..... 40430
1,107 ..... 33
\$1,228 90
Washington street, from about 78 feet south of Court avenue to Cornhill; and State street, north and south of Old State House. Wood block paving on concrete base and regulated. Length, 513 feet Washington street. Area, 1,460 square yards; includes 290 feet of track. Length, 117 feet, State street, north. Area, 277 square yards north. Length, 123 feet, State street, south. Area, 327 square yards south.

\$676 36

\$676 36 ..... 355
Engineering and inspection furnished by the
Engineering and inspection furnished by the city city
Edgestone, 50 feet 9 inches, furnished by the city, @ 70c. ..... 3553
Templets furnished by the city ..... 302
Advertising furnished by the city ..... 750Amount paid to James Doherty, under con-tract. Washington street, from Cornhill toabout 78 feet south of Court avenue:
1,297 square yards, preparing site, (a) 29c. ..... $\$ 37613$
1,297 square yards concrete base fur- nished and laid @ 75c. ..... 97275
1,300 square yards wood block pave- ment furnished and laid (a) $\$ 2.66$ ..... 3,45800State street, north side, Washingtonstreet to Devonshire street:
246 square yards, preparing site,(a) 29c.7134246 square yards concrete basefurnished•and laid @ 75c. . 18450246 square yards wood block pave-ment furnished and laid(a) $\$ 2.66$65436State street, south side, Washingtonstreet to Devonshire street:284 square yards, preparing site,(a) 29c.8236
Carried forward ..... \$5,799 44
Brought forward . ..... \$5,799 44284 square yards concrete base fur-nished and laid @ 75c.21300
284 square yards wood block pave-ment furnished and laid @$\$ 2.66$75544
Extra work - (Washington street). Furnish and placecement mortar to fill spacesbetween the outer web ofstreet car rail and woodblocks where directed:
38 hours labor @ 25 c . ${ }^{\circ}$ ..... 950
Plus 15 per cent on $\$ 9.50$ ..... 143
$4 \frac{1}{4}$ barrels Portland cement @ $\$ 1.60$ ..... 680
52 cubic feet sand @ 5c. ..... 260
Extra work - (Washingtonstreet). Break out andreset in cement the edge-stones on east side nearState street, north:
3 hours, edgestone setter, @ $62 \frac{1}{2}$ c. ..... 188
5 hours, stonecutter, @ 60c ..... 300
18 hours labor @ 25c. ..... 450
Plus 15 per cent on $\$ 9.38$ ..... 141
1 barrel Portland cement ..... 160
8 cubic feet sand @ 5c. ..... 40
Extra work - Relay flaggingcrosswalks, gravel joints, atintersections of State street(north and south) andDevonshire street:
5 square yards flagging cross- walks relaid, State street, north, @65c. ..... 325
7 square yards flagging cross- walks relaid, State street; south, @ 65c. ..... 455
Extra work- Relay graniteblock paving, gravel joints,at intersection of Statestreet, south, and Devon-shire street:
15 square yards granite block paving relaid @ 65c. ..... 975
Street Department - Paving Division. ..... 173
Brought forward ..... $\$ 6,81855$ ..... $\$ 72596$
Extra work- (State street, south). Cut out existing concrete base at Old State House where necessary:
4 hours labor @ 25c. ..... 100
5 hours, stonecutter, @ 60c. ..... 300
Plus 15 per cent on $\$ 4$ ..... 60
6,823 15
$\$ 7,54911$
87780
Credit: 43,890 old blocks @ $\$ 20$.* $\$ 6,67131$Washington street, from Blue Hill avenue to Talbotavenue. Surface excavated and resurfacedwith 3 -inch macadam. Length, 7,000 feet.Area, 15,000 square yards.
Labor furnished by the city ..... \$1,876 12
Teaming furnished by the city ..... 61325
Stone furnished by the city ..... 48884
Sand furnished by the city ..... 900
Gravel furnished by the city ..... 592
Steam roller furnished by the city ..... 68250Amount charged to appropriation forStreet Department
mount charged to appropriation for\$2,594 03Street Department
Amount charged to appropriation for
street improvements . ..... 1,081 603,675 63
Waumbeck street, from Wabeno street to Humboldtavenue. Resurfaced with 4 -inch macadam.Length, 300 feet. Area, 700 square yards.
Labor furnished by the city ..... $\$ 13775$
Teaming furnished by the city ..... 1050
Edgestone furnished by the city ..... 1400
Blocks furnished by the city ..... 6250
Stone furnished by the city ..... 25572
Gravel furnished by the city . ..... 960
Steam roller furnished by the city ..... 6500
Amount charged to appropriation for Street Department ..... $\$ 21325$
Amount changed to appropriation for street improvements ..... 34182

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34182
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[^8]West Cedar street, from Mt. Vernon street to Chest-nut street. Reset edgestone, removed cobblegutters and relaid with old blocks, relaid side-walks and crossings and resurfaced with4 -inch macadam. Length, 240 feet. Area,171 square yards block gutter, 605 feet edge-stone reset, 377 square yards macadam re-surfaced, 361 square yards brick sidewalkrelaid.
Labor furnished by the city ..... $\$ 44465$
Teaming furnished by the city ..... 9730
Edgestone furnished by the city ..... 875
Bricks furnished by the city ..... 3025
Blocks furnished by the city ..... 13498
Stone furnished by the city ..... 6560
Sand furnished by the city ..... 675
Gravel furnished by the city ..... 1975
Lumber furnished by the city ..... 145
West street, from Tremont street to Washington street. Paved with wood blocks on a con- crete base. Length, 468 feet. Area, 1,140 square yards.
Engineering and inspection furnished by the city ..... \$304 67
Teaming furnished by the city ..... 500
Mack bricks, 30 @ $\$ 29.26$, furnished by the city ..... 88
Mack bricks, 887 @ $\$ 32$, furnished by the city, ..... 2838
Asphalt repairs; paid Barber Asphalt Paving Company ..... 2718
Engineering expense furnished by the city ..... 150
Templets furnished by the city ..... 360
Amount paid United States Wood PreservingCompany under contract:
1,175 square yards, preparing site, (a) 50c. ..... $\$ 58750$
4 linear feet edgestone set @ 21c. ..... 84
242 cubic yards concrete base laid (a) $\$ 6$ ..... 1,45200
1,156 square yards wood block pave-ment furnished and laid
(a) $\$ 3.25$ ..... 3,757 00
3 square yards brick sidewalks laid @ 35c. ..... 105
Carried forward ..... \$5,798 39 ..... $\$ 37121$
Brought forward .\$5,798 39Extra work-Haul granite

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1 hour, stonecutter .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 55

Plus 15 per cent on 55 c .

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Plus 15 per cent on 55 c . .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08 .....  .....  .....  .....  .....  .....  .....  .....  .....  ..... 08

Extra work - Omit granite

Extra work - Omit granite

Extra work - Omit granite

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5 hours, foreman, @ 40c. .

5 hours, foreman, @ 40c. .

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5 hours, foreman, @ 40c. . .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200 .....  .....  .....  .....  .....  .....  .....  ..... 200

7 hours, paver, @ 50c.

7 hours, paver, @ 50c.

7 hours, paver, @ 50c.

7 hours, paver, @ 50c.

7 hours, paver, @ 50c.

7 hours, paver, @ 50c.

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7 hours, paver, @ 50c. .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350 .....  .....  .....  .....  .....  .....  ..... 350

25 hours labor @ 25c.

25 hours labor @ 25c.

25 hours labor @ 25c.

25 hours labor @ 25c.

25 hours labor @ 25c.

25 hours labor @ 25c.

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25 hours labor @ 25c. .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625 .....  .....  .....  .....  .....  ..... 625

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$

4 days, watchman, @ $\$ 2$ .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800 .....  .....  .....  .....  ..... 800

Plus 15 per cent on $\$ 19.75$

Plus 15 per cent on $\$ 19.75$

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Plus 15 per cent on $\$ 19.75$ .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296 .....  .....  .....  ..... 296

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

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6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

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6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. .

6 hours, single team, @ $43 \frac{3}{4} \mathrm{c}$. . .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263 .....  .....  ..... 263

2 barrels Portland cement @

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2 barrels Portland cement @  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75  \$1.75 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350 .....  ..... 350
$1 \frac{1}{2}$ double loads sand @ $\$ 1.60$.
$1 \frac{1}{2}$ double loads sand @ $\$ 1.60$.
$1 \frac{1}{2}$ double loads sand @ $\$ 1.60$.
$1 \frac{1}{2}$ double loads sand @ $\$ 1.60$.
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$1 \frac{1}{2}$ double loads sand @ $\$ 1.60$. ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240 ..... 240
\$371 215,933 32
$\$ 6,30453$
50410
Credit: 25,205 old blocks @ $\$ 20$
$\$ \longdiv { \$ 5 , 8 0 0 4 3 }$
Woodward street, from Dorchester street to Dor-chester avenue. Resurfaced with 4 -inchmacadam. Length, 672 feet. Area, 785square yards.
Labor furnished by the city ..... $\$ 26900$
Horse roller furnished by the city ..... 5484
Teaming furnished by the city ..... 350
Stone furnished by the city ..... 18541
$\$ 51275$
Zeigler street, from Washington street to Warrenstreet. Granitoid concrete block pavementlaid and regulated. Length, 315 feet. Area,950 square yards.
Engineering and inspection furnished by the city ..... $\$ 12488$
Teaming furnished by the city ..... 1792
Hauling edgestone furnished by the city ..... 212
Edgestone furnished by the city ..... 3849
Engineer's expense furnished by the city ..... 135
Templets furnished by the city ..... 611
Amount paid to R. S. Blome Company, under contract:
946 square yards, preparing site, (a) 12c. ..... $\$ 11352$
946 square yards granitoid concrete blocked pavement furnished and laid @ $\$ 2.55$ ..... 2,412 30
Extra work-Reset manholecover to grade:
1 cover reset ..... 300Credit: 9,295 old blocks18590\$2,533 79

## HIGHWAYS, MAKING OF.

Ashland street, from Mill street to Everdean street. Surfaced with 6 -inch macadam roadway, edgestones set, granite block paving laid, flagging crosswalks laid and crushed stone sidewalks laid. Length, 289 feet. Area, 771 square yards.

Labor, including engineering and in
spection

$\$ 6462$

Edgestone, circular, 9 feet 5 inches,
furnished by the city, @ $\$ 1.20$
Edgestone, straight, 536 feet 8 inches,
furnished by the city, @ 70 c . . 37567
Flagging, 166 feet 11 inches, furnished
1 by the city, @ 66c. . . . . 11017

Engineering expense furnished by the
city . . . . . . . 105
Carried forward . . . . . $\$ 83776$

Brought forward .
$\$ 83776$

Amount paid Philip Doherty, under contract:

Removing trees, bushes, stumps, etc.
$\$ 100$
132 cubic yards subgrading (earth excavation) @ 50c.

6600
574 linear feet edgestone set @ 23c.
217 square yards granite block paving laid @ 50c.

10850
33 square yards flagging crosswalks laid @ 80c.2640

30 square yards crushed
stone sidewalks fur
nished and placed
@ 55c.

Extra work - Roll and shape portions of the macadam roadway and crushed stone sidewalks (where there has been no construction) as directed:
44 hours, foreman, (a) 50c.

2200
240 hours labor @ 25c. Plus 15 per cent on $\$ 82$

1230
40 hours, steam roller, (a) $\$ 1.87 \frac{1}{2}$

7500
8 hours, double team, @ $62 \frac{1}{2} \mathrm{c}$.

500


Avenue Louis Pasteur, from Longwood avenue to the Fenway (work not done). Length, 1,355 feet. Area, 9,800 square yards.
Labor, including engineering and inspection
$\$ 1,34375$
Teaming furnished by the city . . 300
Carried forward
$\$ 1,34675$

Brought forward . . : $\$ 1,34675$
Filling furnished by the city, 643.6 loads of 54 cubic feet @ 50c. . . 32180
Lumber furnished by the city, 120 feet spruce @ $\$ 25$

300
Engineering expense furnished by the city 110
$\$ 1,67265$

Bayswater street, from Saratoga street to the easterly line of Austin avenue extended (unfinished work from 1907). Surfaced with 6 -inch macadam, new edgestone set, block paving laid, flagging crosswalks and crushed stone sidewalks laid. Length, 1,120 feet. Area, 4,622 square yards.
Labor, including engineering and inspection
$\$ 4775$
Teaming, water cart furnished by the city
Flagging, 25 feet North River, furnished by the city, @ $\$ 1.34$

3350
Blocks, 300, furnished by the city, @ \$62

1860
Engineering expense furnished by the city 162
Amount paid James Doherty under contract:
1,163 cubic yards subgrading (earth excavation) at 35 c . . $\$ 40705$
2,203 linear feet edgestone set @ 17c.

37451
867 square yards granite block paving laid @ 50c. . . 43350
181 square yards flagging crosswalks laid @ 85c. . . . 15385
4,166 square yards macadam surface furnished and placed @ 53c. . . 2,207 98
1,724 square yards crushed stone sidewalks furnished and placed @ 49c. . 84476
34 square yards loam furnished and placed @ 53c. . 1802
Carried forward . . \$4,439 67 \$107 47
Brought forward. . . $\$ 4,43967 \quad \$ 10747$
193.4 square yards slopepaving furnishedand placed @ \$2.35, 45449
19 covers reset @ $\$ 3$ ..... 5700
Extra work-Furnish
stonecutter to dress
circular edgestones:
$\frac{1}{2}$ day, stonecutter, @
\$4 . . . . ..... 200
Plus 15 per centon $\$ 2$30
$\$ 4,95346$
Less payments made
in 1907 . . . 4,305 0764839
$\$ 75586$Belfort street, from Sagamore street to Saxton street (work notstarted).Engineering expense$\$ 23 \quad 50$
Bellevue street, from Kane street to Hamilton street. Sur- faced with 6 -inch macadam roadway, edgestones set, block paving laid, flagging crosswalks and crushed stone sidewalks laid. Length, 493 feet. Area, 1,260 square yards.
Engineering and inspection ..... $\$ 39216$
Edgestone furnished by the city, 44 feet 2 inches @ 70c. ..... 3092
Edgestone circles furnished by the city, 270 feet 11 inches @ $\$ 1.30$ ..... 35220
Edgestone furnished by the city, 770feet 3 inches @ $74 \frac{1}{2} \mathrm{c}$.57384
Flagging furnished by the city, 222feet 3 inches at 66c.14674
Blocks furnished by the city, 9,100 @ $\$ 55$ ..... 50050
Engineering expense furnished by the city ..... 315
Amount paid John McCourt, undercontract:Removing trees,bushes, etc. . . $\$ 100$398 cubic yards sub-grading (earth ex-cavation) at $45 \mathrm{c} . \quad$. 17910
Carried forward ..... $\$ 18010 \$ 1,99951$

| Brought forward . | \$180 10 \$1,999 51 |
| :---: | :---: |
| 24 cubic yards sub- |  |
| grading (rock ex- |  |
| cavation) @ \$1.75, | 4200 |
| 106 cubic yards filling |  |
| furnished at 20c | 2120 |
| 1,095 linear feet edgestones set @, 21c. | 22995 |
| 389 square yards granite block paving laid |  |
| @ 47c. . . | 18283 |
| 38 square yards flagging crosswalks laid @ |  |
| 90 c . . . |  |
| 1,093 square yaids macadam surface furnished and placed |  |
| @ 68c. . . | 74324 |
| 644 square yards crushed stone sidewalks |  |
| furnished and placed @ 50c. |  |
| 11 covers reset @ \$ ${ }^{\text {d }}$ |  |
|  | 1,788 52 |
|  | \$3,788 03 |
| Credit: |  |
| 222 feet 3 inches North | - |
| River charged in in 1909 |  |
| (a)66. . ${ }^{\text {a }}$ | \$146 74 |
| 44 feet 1 inch North |  |
| River flagging @ 66c. |  |
| feet 2 inches ed |  |
| stone @ 70c. | 992 |

Bennington street, frōm Chelsea street to Belle Isle inlet (work completed).
Engineering expense . . . . . . $\$ 800$
Benton street, from Tremont street to Columbus avenue (work not started).
Engineering expense . . . . . . \$52 10
Bernard street, from Talbot avenue to the railroad. Subgrading and filling, surfaced with 6 -inch macadam roadway, edgestone set, vitrified brick gutters; crosswalks laid on a
concrete base, with grout joints, and crushed stone sidewalks laid. Length, 946 feet. Area, 2,800 square yards.

$$
\text { Engineering and inspection . . . } \$ 41060
$$

Advertising . . . . . . 5988
Engineering expense . . . . 350
Amount paid William J. Barry, under contract:

Removing trees, bushes, etc. . grading (earth excavation) @ 50c., 31350
5 cubic yards subgrading (rock excavation) @ \$1.75, 875
93 cubic yards filling furnished @ 75c., 6975 1,820 linear feet straight edgestone furnished and set @ 95 c.
108 linear feet circular
edgestone furnished and set @ \$1.50 16200
11 square yards granite
block paving fur-
nished and laid @ $\$ 2$

2200
28 square yards existing
granite block pav-
ing relaid @ 50 c .
1400
646 square yards brick
block paving fur-
nished and laid @
$\$ 1.75$
1,13050
54 square yards brick
crosswalks fur-
nished and laid
(a) $\$ 2.25$

12150
2,199 square yards macadam surface furnished and placed
@ 68c. . . . 1,495 32
1,406 square yards crushed
stone sidewalks
furnished and
placed @ 30c. . 42180
Carried forward . . $\$ 5,48812 \$ 47398$
Brought forward . ..... $\$ 5,488 \quad 12 \$ 47398$
17 covers reset @ \$3 ..... 5100
Extra work-4hours, stonecutter,on gutter mouth,(a) 60 c .240
Plus 15 per cent on $\$ 2.40$ ..... 365,541 88
Boardman street, from Saratoga street to Boston \& Maine Railroad (work not done).
Teaming filling furnished by the city . . . $\$ 22200$
Bruce street, extended to Wrentham street. Surfaced with 6 -inch macadam roadway, subgrading, edgestone set, gutter blocks laid, flagging crosswalks laid and. crushed stone sidewalks laid. Length, 135 feet. Area, 435 square yards.
Labor including engineering and inspection furnished by the city . . \$181 34
Teaming furnished by the city . . 3650
Flagging, 6 feet 4 inches, furnished by the city, @, 66c.
418
Stone, 139.075 tons, furnished by the city, © $\$ 1.60$
22252
Gravel, 26 double loads, furnished by the city, @ $\$ 1.50$
3900
Engineering expense furnished by the city
360
Steam roller furnished by the city . 3900
Amount paid Daniel E. Lynch, under contract:
363 cubic yards subgrading (earth excavation) @ 55c. . $\$ 19965$
370 linear feet edgestones set @ 25 c .
9250
210 square yards granite block paving laid (a) 50c. . . . 10500
81 square yards flagging crosswalks laid @ 90c. 7290
261 square yards macadam surface
placed @ 40c. . 10440
Carried forward . . . $\$ 57445 \$ 52614$
Street Department - Paving Division. ..... 183
Brought forward ..... $\$ 574 \quad 45 \quad \$ 52614$
221 square yards crushedstone sidewalksplaced @ 37c.8177
11 square yards bricksidewalks laid @.
40c. ..... 440
1 manhole cover reset, ..... 300
Extra work - Re-build catch-basinsand manholes:
$3 \frac{1}{2}$ days, foreman, @$\$ 3.25$1225
$14 \frac{1}{4}$ days labor @ $\$ 2.25$, ..... 3206
6 days,. tender, @ $\$ 2.50$ ..... 1500
3 days, mason, @ \$6 ..... 1800
Plus 15 per centon $\$ 77.31$1160
1,650 sewer brick @ $\$ 11$ ..... 1815
4 barrels cement @ \$2, ..... 800
2 double loads sand(a) $\$ 2$400
6 square feet North River flagging @33亲c. .ing crushed stoneand screeningsfrom Columbiaroad crusher in-stead of from Cod-man street crusher:
135.1 tons, two miles over-haul, per half mile,per ton, @ 11c.,5944$\$ 84412$200
Extra work-Haul-
Less three days' use
of city steam roller (a) $\$ 13$ ..... 3900$\$ 80512$Less previous pay-
ment ..... 33623

Carmen street, from Shafter street to Kilton street (work not
started).
Engineering . . . . . . . . . $\$ 9025$
Causeway street,* from near Beverly street to the Charlestown Bridge. Repaved with granite blocks, with pitch joints, on a concrete base, edgestones set, flagging crosswalks and brick sidewalks laid. (Work done in 1907.) Length, 312 feet. Area, 2,410 square yards.

> Engineering Amount paid William H. Cuddy, under contract, being balance from 1907
$\$ 53854$

Claybourne street, from Dakota street to Bowdoin street. Surfaced with 6 -inch macadam roadway, artificial stone sidewalks laid, edgestones set, block paved gutters and flagging crosswalks laid. (Work done in 1907.) Length, 350 feet. Area, 1,011 square yards.
Engineering . . . . . . \$375
Amount paid Sylvester Connolly, under contract, being balance from 1907

20169
$\$ 20544$
Clement avenue, from Meredith street to Stratford street (work done in 1907).
Credit on vitrified bricks in 1907 . . . $\$ 35887$
Corona street, from Bowdoin street to Geneva avenue. Surfaced with 6 -inch macadam roadway and artificial stone sidewalks laid, subgrading, edgestones set, vitrified brick gutter; crosswalks laid on a concrete base, with grout joints. (Work not finished.) Length, 1,001 feet. Area, 2,558 square yards.
Labor, including engineering and inspection . . . . . . $\$ 57025$
Teaming furnished by the city . . 1412
Stone furnished by the city . . 486
Advertising furnished by the city . 11650
Engineering expense furnished by the city

225
Steam roller furnished by the city . 2600
Carried forward . . . . . $\$ 73398$

[^9]Brought forward . ..... $\$ 73398$
Amount paid William J. Barry, undercontract:
734 cubic yards sub- grading (earth ex- cavation) @ 45c., \$330 302 cubic yards sub-grading (rock ex-cavation) @ \$1.75, 350
1,883 linear feet straightedgestone fur-nished and set @
95c. ..... 1,788 85
25 linear feet circularedgestone fur-nished and set @$\$ 1.50$3750
173 linear feet existing edgestone reset @ 20c ..... 3460
53 square yards exist-ing granite blockpaving relaid @50c.2650
696 square yards brickblock paving fur-nished and laid@ $\$ 1.75$. . 1,218 00
33 square yards brickcrosswalks fur-nished and laid@ $\$ 2.25$.7425
1,883 square yards macad- am surface fur-nished and placed(a) 68c. . . . 1,280 44
67 square yards crushedstone sidewalksfurnished andplaced, 1 inch deep,(a) $9 \frac{1}{2} \mathrm{c} . ~ . \quad . \quad 637$
16 covers reset @ $\$ 3$ ..... 4800
Amount paid Jeremiah J. Sullivan, under contract:
4,690 square feet artificial stone sidewalks furnished and laid @ 14.9c. . . $\$ 69881$
Carried forward . . $\overline{\$ 698} 81 \$ 5,58229$

| Brought forward . . . \$698 $81 \$ 5,58229$ |  |
| :---: | :---: |
| 5,500 square feet artificial |  |
| stone sidewalks |  |
| furnished and laid |  |
| (unfinished) @ 6c., | 33000 |
|  | ,028 81 |
| Less 15 per cent |  |
| retained | 15432 | 87449

$\$ 6,45678$

Cottage street, from Maverick street to the northeasterly line of Gove street. Surfaced with 6 -inch macadam roadway, edgestones set, block gutters and flagging crosswalks laid and crushed stone sidewalks laid, subgrading, and brick sidewalks laid. Length, 663 feet. Area, 2,278 square yards.
Labor furnished by the city, including engineering and inspection
$\$ 11225$
Edgestone furnished by the city, 60 feet 5 inches, circular, @ $\$ 1.30$

7854
Edgestone furnished by the city, 261 feet 10 inches @ 74c.

19376
Edgestone furnished by the city, 825 feet 10 inches @ 78c.

64415
Blocks furnished by the city, 10,025 @ $\$ 62$.

62155
Bricks furnished by the city, 5,000 (a) $\$ 11.50$

5750
Bricks furnished by the city, 21,550 (a) $\$ 11$

23705
Flagging furnished by the city, 176 feet 1 inch North River ( $\$ 1.34$

23595
Engineering expense furnished by the city

290
Amount paid James Doherty, under contract:

> Removing trees, $\begin{aligned} & \text { bushes, } \\ & \text { etc. }\end{aligned}$ stumps,

443 cubic yards. subgrading (earth excavation) @ 47c. . 20821
1,238 linear feet edgestone
set @ $20 \mathrm{c} . \quad . \quad . \quad 24760$
Carried forward . . . $\$ 45681 \$ 2,18365$

```
Brought forward .
$456 81 $2,183 65
    446 square yards gran-
            ite block paving
            laid @ 67c.
                                298 }8
    55 square yards flag-
            ging crosswalks
            laid @ 97c.
                5335
1,902 square yards mac-
            adam surface fur-
            nished and placed
            @ 56c. . . 1,065 12
    4 2 4 \text { square yards crushed}
            stone sidewalks
            furnished and
            placed @ 51c.
                21624
522 square yards brick
            sidewalks laid @
            44c.
                22968
    5 covers reset @ $3 . 1500
        Extra work - Fur-
            nish stonecutter to
            dress flagging, 6
            hours @ 50c. .
            Plus 15 per cent
            on $3 . . 45
        Extra work - Haul
            flagging from
            South Boston pav-
            ing yard instead
            of from South End
            paving yard, 19.6
            tons,one mile over-
            haul, per half mile,
            per ton, @ 11c. .431
Overhaul - Section
            1, Article E:
    5 tons surplus mate-
            rial hauled more
            than one mile and
            not more than one
            and one-half miles,
            one-half mile over-
            haul, per half mile,
            per ton, @ 11c.55
    Extra work - Fur-
            nish and place fill-
            ing at approaches


Cottage terrace, from East Cottage street to Marshfield street (work not started).
Engineering . . . . . . . . \(\$ 1000\)
Cotton street, from Walter street to Fairview street. Surfaced with 6 -inch macadam roadway and artificial stone sidewalks laid, subgrading, edgestones set, granite paved gutters laid, vitrified brick block gutters, and crosswalks laid on a concrete base, with grout joints, and loam spaces filled and seeded. Length, 1,435 feet. Area, 2,083 square yards roadway and 6,552 square feet sidewalks.
Labor, including engineering and inspection
\$644 09
Teaming furnished by the city . . \(\quad 8925\)
Stone furnished by the city, 17.975 tons @ \$1.60

2876
Stone furnished by the city, 23.825 tons @ \$1.25

2978
Mack bricks furnished by the city, 530
@ \(\$ 32\).
1696
Carried forward
\$808 84
Brought forward ..... \(\$ 80884\)
Gravel furnished by the city, 1 double load ..... 140
Cement furnished by the city, \(1 \frac{1}{4}\) barrels @ \$1.75 ..... 219
Advertising furnished by the city ..... 14591
Engineering expense furnished by the city ..... 440
Steam roller furnished by the city ..... 9750
Amount paid Thomas A. Nolan, undercontract:6,552 square feet artificialstone sidewalksfurnished andlaid @ 16 \(\frac{1}{4} \mathrm{c}\). \(\$ 1,06470\)Extra work - Builtunderdrains forsidewalks . . 3100
- 1,095 ..... 70
Amount paid Peter F. Connolly, undercontract:Removing trees,bushes, etc. . . \(\$ 100\)
1,073 cubic yards sub-grading (earthexcavation) @39c.41847
26 cubic yards sub-grading (rock ex-cavation) @ \$1.75, 45501,396 linear feet straightedgestone fur-nished and set @98c. . . . 1,368 08
25 linear feet circular edgestone fur- nished and set @ \(\$ 1.80\) ..... 4500
78 linear feet existing edgestone reset @ 60c. ..... 4680
22 square yards granite block paving fur- nished and laid @ \(\$ 1.80\) ..... 3960
64 square yards exist- ing granite block paving relaid @ 40c. ..... 2560
Carried forward ..... \$1,990 \(05 \$ 2,15594\)

Brought forward . . \(\$ 1,99005 \$ 2,15594\)
494 square yards brick
block paving furnished and laid @ \$1.74

85956
12 square yards existing flagging crosswalks relaid @ 60c. .
26 square yards brick crosswalks furnished and laid @ \(\$ 2.35\)

6110
1,675 square yards macadam surface furnished and placed @ 59c. . . . 99663
274 square yards loam furnished, placed and seeded @ 44c., 12056
12 covers reset @ \$3 . 3600
\$4,071 10
Less 500 vitrified brick @ \(\$ 29.26\) M., 1463

Covington street, from East Eighth street to Columbia road (work not started).
Engineering . . . . . . . . \(\$ 8075\)

Dakota street, from Greenbrier street to Geneva avenue. Surfaced with 6 -inch macadam, edgestones set, block gutters laid, vitrified brick crosswalks laid on a concrete base, with grout joints, and artificial stone sidewalks laid. Length, 1,453 feet. Area, 4,240 square yards.
Labor, including engineering and inspection
\(\$ 82937\)
Teaming furnished by the city . . 1450
Stone furnished by the city . . 993
Advertising furnished by the city . 12158
Engineering expense furnished by the city . . . . . . . 570
Steam roller furnished by the city . 1300
Artificial stone sidewalk rebate . . 4266
Carried forward . . . . . \(\$ 1,03674\)
```

    Brought forward .
                $1,036 74
    Amount paid Jeremiah J. Sullivan,
under contract:
16,899 square feet artificial
stone sidewalks
furnished and laid
@ 15c. . .\$2,534 85
Extra work - Re-
moving boulder in
sidewalk:
4 hours, stonecutter, @
60 c. . . . 2 40
Plus }15\mathrm{ per cent on
\$2.40
36
2,53761
Amount paid William J. Barry, under
contract:
Removing trees,
bushes, etc. \$2500
1,117 cubic yards sub-
grading (earth ex-
cavation) @ 45c., 50265
1 cubic yard sub-
grading (rock ex-
cavation)
175
2,629 linear feet straight
edgestone fur-
nished and set
@ 95c. . . 2,497 55
103 linear feet circular
edgestone fur-
nished and set @)\$1.5015450

```
191 linear feet existing
```edgestone reset @20c.3820
```

77 square yards existing

```granite block pav-ing relaid @ 50c., 3850990 square yards brickblock paving fur-nished and laid @\$1.75 . . . 1,732 50
    38 square yards exist-
        ing flagging cross-
        walks relaid @,
        50c.
        1900
    Carried forward
    $5,009 65 $3,574 35
```

```
Brought forward . . . . \(\$ 5,00965 \$ 3,57435\)
    83 square yards brick
        crosswalks fur-
        nished and laid @
        \(\$ 2.25\)
        18675
3,255 square yards mac-
        adam surface fur-
        nished and placed
        (a) 68c. . 2,213 40
        15 covers reset @ \(\$ 3\). 4500
    Extra work - Omit
        crushed stone side-
        walks:
    32 hours labor @ 25c. . 800
        Plus 15 per cent
        on \(\$ 8\)
        120
    Extra work - Relay
    brick gutter \(\cdot\) near
    Greenbrier street:
5 hours labor @ 25c., 125
2 hours, paver, @ 50c., . 100
1 hour, rammer . 28
    Plus 15 per cent
        on \(\$ 2.53\). . 38
                        7,466 91
                    \(\$ 11,04126\)
```

Dayton street, from Nixon street southwesterly to the railroad (work not started).
Engineering
$\$ 400$
Everdean street, from Green Hill street to Ashland street (unfinished work fiom 1907). Length, 397 feet. Area, 1,147 square yards. Subgraded, edgestones set, block gutters laid, flagging crosswalks laid and crushed stone sidewalks laid.
Labor, including engineering and inspection
Edgestone furnished by the city,
2
dgestone furnished by the city, 2
small corners @ $\$ 3.60$. . 720
Edgestone furnished by the city, 18 feet 10 inches, circular, @ $\$ 1.30$

2449
Edgestone furnished by the city, 37 feet 4 inches, circular, @ $\$ 1.20$ 4480
Edgestone furnished by the city, 165 feet, straight, @ $74 \frac{1}{2} \mathrm{c}$. . . . 12293
Edgestone furnished by the city, 566 feet, straight, @ 70c. . . . 39620
Carried forward . . . . . $\$ 71106$
Brought forward . ..... $\$ 71106$
Flagging furnished by the city, 166 feet 8 inches North River @ 66c. ..... 11000
Blocks furnished by the city, 7,275 @ $\$ 55$ ..... 40012
Engineering expense furnished by the city ..... 65
Amount paid John W. Collins, undercontract:
Removing trees, bushes, stumps, etc., ..... $\$ 100$
295 cubic yards subgrad- ing (earth excava- tion) @ 50 c ..... 14750825 linear feet edgestonesset @ $22 \frac{1}{2} \mathrm{c}$.18563
291 square yards .granite block paving laid(a) 50c.14550
37 square yards flagging crosswalks laid @ 70c. . ..... 2590
655 square yards crushedstone sidewalks fur-nished and placed(a) 50c.

$$
32750
$$

83303

Everdean street, from Green Hill street to Preston street (unfinished work from 1907). Surfaced with macadam. Subgrading, edgestones set, block gutters laid, flagging crosswalks laid and crushed stone sidewalks placed. Length, 411 feet. Area, 982 square yards.
Engineering and inspection . . . $\$ 22626$
Edgestone furnished by the city, 37 feet 9 inches, circular, @ $\$ 1.30$. 4908
Edgestone furnished by the city, 759 feet 6 inches, straight, @ $74 \frac{1}{2} \mathrm{c}$. . 56583
Flagging furnished by the city, 105 feet 2 inches @ 66c. . . . . 6941
Flagging furnished by the city, 84 feet 11 inches @ $\$ 1.35$. . . 11464
Blocks furnished by the city, 8,351 @ $\$ 55$

45931
$\begin{aligned} & \begin{array}{l}\text { Engineering expense furnished by the } \\ \text { city }\end{array} \\ & \text { Carried forward } \cdot\end{aligned}+\quad . \quad . \quad \frac{250}{\$ 1,48703}$

```
    Brought forward . . $1,487 03
Amount paid Philip Doherty, under
    contract:
        Removing trees,
        bushes, stumps,etc., 100
    485 cubic yards subgrad-
        ing (earth excava-
        tion) @ 50c.
        24250
    85 linear feet edgestones
        set @ 23c. . . 198 95
    327 square yards granite
        block paving laid @
        50c.
        16350
        41 square yards flagging
        crosswalks laid @
        80c. .
        3280
    809 square yards macadam
        surface furnished
        and placed @ 63c. .
        50967
    805 square yards crushed
        stone sidewalks fur-
        nished and placed
        @ 57c.
        458 85
        2 covers reset @ $3 . 600
    471 tons surplus material
        hauled to Norwood
        street, one-half mile
        overhaul, per half
        mile,perton,@ 11c., 51 81
        - $1,665 08
```

    \(\$ 3,15211\)
    Evergreen street, from South Huntington avenue about 443 feet easterly. Grading (uncompleted).
Engineering and inspection : . . $\$ 34328$
Advertising . . . . . 4200
Amount paid Mark H. Lynch, under
contract:
450 cubic yards earth excavation @ 60c. . \$270 00
435 cubic yards rock excavation @ 60c. . 26100
$\overline{\$ 53100}$

Less 15 per cent retained . . . 7965

45135
$\$ 83663$
Farquhar strect, from South street to Selwyn street (work not started).
Engineering . . . . . . . . $\$ 11725$
Fletcher street, from Centre street to South street (work notstarted).
Engineering ..... $\$ 220 \quad 00$
Fottler road, from Walk Hill street to Tileston avenue (workdone in 1907).
Engineering expense ..... $\$ 180$
Final payment to Fred L. Williams, under contract ..... 34973
$\$ 35153$
Frankfort street, from Maverick street to Gove street. Surfaced with 6 -inch macadam, edgestones set, block gutters laid, flagging crosswalks laid, brick sidewalks laid and crushed stone sidewalks laid. Length, 608 feet. Area, 2,297 square yards.
Engineering and inspection ..... $\$ 11600$
Edgestone furnished by the city, 8small corners @ $\$ 3.60$2880
Edgestone furnished by the city, 47 feet 3 inches, circular, @ $\$ 1.30$ ..... 6142
Edgestone furnished by the city, 515 feet 2 inches, straight, @ 74c. ..... 38122
Edgestone fumished by the city, 571 feet 11 inches, straight, @ 70 c. ..... 40034
Flagging furnished by the city, 165 feet 5 inches granite @ 85 c. ..... 14060
Flagging furnished by the city, 183feet 4 inches @ \$1.3424566
Bricks furnished by the city, 25,000 (a) $\$ 11$ ..... 27500
Blocks furnished by the city, 11,433 (a) $\$ 62$ ..... 70885
Engineering expense furnished by the city ..... 389
Amount paid James Doherty, undercontract:
Removing trees, bushes, stumps, etc. ..... $\$ 200$
787 cubic yards sub-grading (earth ex-cavation) @ 48c., 37776
1,228 linear feet edgestonesset @ 21c.25788
481 square yards gianiteblock paving laid
@ 68c. ..... 32708
Carried forward ..... $\$ 96472 \$ 2,36178$

Brought forward
59 square yards flagging crosswalks laid @ 98 c .
1,895 square yards macadam surface furnished and laid @ 57 c .

1,08015
326 square yards crushed
stone sidewalks furnished and laid
(a) 52c.

169 5?
602 square yards brick
sidewalks laid @
45 c .
27090
10 covers reset @ \$3 . 3000
Extra work-Fur-
nish stonecutter
to dress flagging:
$16 \frac{1}{2}$ hours, stonecutter,
@ 50 c .
825
Plus 15 per cent on $\$ 8.25$.

124
Extra work-Hauling flagging from South Boston paving yard instead of from South End paving yard:
28 tons, one mile overhaul, per half mile,
per ton, @ 11c.
Overhaul-Section 1, Article E:
12 tons surplus material hauled more than one mile and not more than one and one-half miles, one-half mile overhaul, per half mile, per ton, @ 11c.

616
$\$ 4,96166$

Harlem street, from Glenway street to Glenwood street. Subgrading, surfaced with 6 -inch macadam, edgestones set, block gutters laid, vitrified brick block gutters, and cross-
walks laid on a concrete base, with grout joints. Length, 582 feet. Area, 1,681 square yards.
Engineering and inspection . . . $\$ 25350$
Advertising 5880
Engineering expense . . . . 165
Amount paid James Doherty, under contract:

Removing trees, bushes, etc.
$\$ 100$
185 cubic yards subgrading (earth excavation) @ 43c. . 7955
6 linear feet straight edgestones furnished and set @ \$1 . . . 600
21.5 linear feet circular edgestones furnished and set @ \$1.50

3225
26 square yards existing granite block paving relaid @ 50c., 1300
393 square yards brick block paving furnished and laid @ \$1.79

70347
37 square yards brick crosswalks furnished and laid @ $\$ 2.50$

9250
1,310 square yards macadam surface furnished and placed @ 65c.

85150
5 square yards crushed stone sidewalks furnished and placed @ 50c. . 250
6 covers reset @ $\$ 3$. 1800

$$
\text { ——1,799 } 77
$$

\$2,113 72
Hobson street, from Faneuil street to Hobart street (work done in 1907).
Engineering . . . . . . $\$ 2100$
Final payment to Thomas J. Young Company, under contract, for work done in 1907.

Kerwin street, from Talbot avenue to Bernard street (work
done in 1907).
Engineering expense . . . . . . $\$ 180$

Kilton street, from Harvard street to Park street. Subgrading and filling. Surfaced with 6 -inch macadam, edgestones set, block gutters laid, flagging crosswalks laid and crushed stone sidewalks placed. Length, 842 feet. Area, 2,432 square yards. Work begun in 1907.
Engineering and inspection
$\$ 2075$
Teaming furnished by the city . . 2450
Blocks furnished by the city, 5,538 @ $\$ 55$

30459
Stone furnished by the city, 22.525
tons @ $\$ 1.60$. . . . . 3604
Engineering expense . . . . 75
Amount paid Philip Doherty, under contract:

$$
\begin{aligned}
& 294 \begin{array}{l}
\text { cubic yards sub- } \\
\text { grading (earth ex- } \\
\text { cavation) @ } 47 \text { c., }
\end{array} 138 \text { is }
\end{aligned}
$$

95 cubic yards filling @ 90c. . . . 8550
1,545 linear feet edgestones
set @ 24c. . . 37080
662 square yards granite block paving laid (a) 50 c .

33100
45 square yards flagging crosswalks laid @ 80c.

3600
2,109 square yards macadam surface placed @ 30c. . 63270
1,135 square yards crushed stone sidewalks placed @ 23c. . 26105

$$
7 \text { covers reset @ } \$ 3 \text {. } 2100
$$

Extra work-Repave gutter and reset edgestones on account of settlement caused by water trenches:
$5 \frac{1}{2}$ hours, paver, @ $62 \frac{1}{2} \mathrm{c}$.
Brought forward . ..... \$1,879 67 \$386 63
$5 \frac{1}{2}$ hours labor @25c. . . . 137Plus 15 per centon $\$ 4.81$. . 72
Extra work-Raise
and lower man-hole covers over 6inches:
12 hours, bricklayer, @55c.660
$27 \frac{1}{2}$ hours labor @
25c. ..... 688
Plus 15 per cent on $\$ 13.48$ ..... 202
1,100 bricks @ \$12 M. ..... 1320
3 barrels cement @$\$ 1.25$375
1 double load sand ..... 200
$\$ 1,91621$
Omit hauling ofcrushed stone andscreenings for mac-adam and crushedstone sidewalks:
Less 1,108 tons of crushed stone de- livered on site of work by city @ 34c. per ton . . 37672 ..... ——— 1,539 . 49
$\$ 1,92612$Larchmont street, from Waldeck street to Greenbrier street. Sub-grading, surfacing with 6 -inch macadam, edgestones set,block gutters laid, flagging crosswalks laid, loam furnishedand placed and artificial stone sidewalks laid. Length,1,077 feet. Area, 3,343 square yards.
Engineering and inspection ..... $\$ 43777$
Edgestone furnished by the city, 219
feet 3 inches @ $74 \frac{1}{2} \mathrm{c}$. ..... 16334
Edgestone furnished by the city, 1,370 feet 4 inches @ 75 c. . . . 1,027 75
Blocks furnished by the city, 16,835@ $\$ 55$92593
Engineering expense furnished by the city ..... 325
Carried forward ..... $\$ 2,55804$
Brought forward . . $\$ 2,55804$
Amount paid D. E. Coleman Company,
under contract:
Removing trees, bushes, etc. . . 3000
901 cubic yards subgrading (earth excavation) @ 45c., 40545
2,110 linear feet edgestone set @ 23c.
48530

> 710 square yards granite block paving laid @ 45 c. . . 31950
17 square yards flagging
crosswalks laid @
75 c.
2,417 square yards macadam surface furnished and placed (a) 58c. . . . 1,401 86
397 square yards loam furnished and placed @ 45c. . 17865 11 covers reset @ $\$ 3$. 3300
$\$ 2,86651$
Amount paid Warren Brothers Com-
pany, under contract:
10,741 square feet artificial stone
sidewalks furnished and
laid@ 20 c . . . . . 2,14820
$\$ 7,57275$
Larkin street, from Hampden street to Adams street. Subgrading, surfacing with 6 -inch macadam, edgestones set, block gutters laid, vitrified brick block gutters laid, and vitrified brick crosswalks laid on a concrete base, with grout joints, and brick sidewalks laid; preliminary plankwalks built by city force. (Work begun in 1907.) Length, 313 feet. Area, 453 square yards.
Labor, including engineering and inspection
$\$ 24263$
Teaming furnished by the city 3125
Advertising furnished by the city . 5300
Engineering expense furnished by the city 255
Amount paid William J. Rafferty \& Co., under contract:
229 cubic yards subgrading (earth excavation) @ 50c., \$114 50

Carried forward . . . \$114 $50 \$ 32943$
Brought forward . . •. $\$ 11450 \$ 32943$

375 linear feet straight edgestone fur-

- nished and set @ 93c.

34875
26 linear feet circular edgestone furnished and set @ \$1.50

3900
294 linear feet existing edgestone reset @ 18c.

5292
48 square yards granite block paving relaid @ 55c.

2640
183 square yards brick block paving furnished and laid @ $\$ 1.80$

32940
15 square yards brick crosswalks furnished and laid (a) $\$ 2.60$ 3900
273 square yards macadam surface furnished and placed @ 72c. 19656
181 square yards brick sidewalks furnished and laid @ $\$ 1.10$
90 square yards existing brick sidewalks relaid @ 30c.

2700
 - 1,396 71

Lincoln street, southerly side at junction with Cambridge street.
Widened.
Labor furnished by the city . . $\$ 25097$
Teaming furnished by the city 21433

Carried forward $\$ 76530$
Brought forward ..... $\$ 76530$
Edgestone furnished by the city, 57feet 2 inches, circular, @ $\$ 1.30$7431
Lumber furnished by the city, 5 cedar posts @ 55c. ..... 275
Lumber furnished by the city, 104 feet spruce @ $\$ 25$ ..... 260
Stone furnished by the city, 195.5875 tons @ \$1.60 ..... 31294
Nails furnished by the city, 4 pounds (a) $2 \frac{1}{2} \mathrm{c}$. ..... 10
Gravel furnished by the city, $40 \frac{1}{2}$ double loads @ \$1.55 ..... 6278
Advertising furnished by the city ..... 3100
Engineering expense furnished bythe city60
Steam roller furnished by the city ..... 9750
\$1,049 88Mallet street, from Florida street to Adams street. Subgrading,surfaced with 6 -inch macadam, edgestones set, block gutterslaid, flagging crosswalks laid, loam furnished and placedand artificial stone sidewalks laid. (Work begun in 1907.)Length, 730 feet. Area, 2,115 square yards.
Engineering and inspection ..... $\$ 4663$
Engineering expense ..... 70
Amount paid Timothy F. Bradley,
under contract:
Removing trees,bushes, stumps,etc. .$\$ 2500$
455 cubic yards subgrad- ing (earth excava- tion) @ 60c. ..... 27300
9 cubic yards subgrad-ing (rock excava-tion) @ \$1.75 . 1575
1,439 linear feet edgestone set @ 24c. ..... 34536
553 square yards granite block paving laid (a) 50c. ..... 27650
48 square yards flaggingcrosswalks laid @50 c .2400
1,640 square yards mac-adam surfaceplaced @ 40c. . 65600
Carried forward \$1,615 61 ..... $\$ 4733$
Brought forward ..... $\$ 1,61561 \quad \$ 4733$5 covers reset @ $\$ 3$. 1500Extra work - Fur-nish, place andseed loam for theloam spaces:275 square yards loamfurnished, placedand seeded @ 50c., 13750Extra work- Haulcrushed stone dustfrom Columbiaroad crusherinstead of fromCodman streetcrusher, 87 tonscrushed stonehauled one anda half miles, over-haul per half mile,per ton, @ 11c.2871Extra work - Haulflagging fromSouth End pavingyard:
$1_{\frac{1}{2}}$ days, double team, @ \$6 ..... 900$\$ 1,80582$
Less previous pay-
ments . . . 1,475 1733065Amount paid Simpson Brothers Cor-poration, under contract:
5,925 square feet artificialstone sidewalksfurnished and laid@ 20c. . . $\$ 1,18500$Less previous pay-ment . . . 4190576595
\$1,143 93

Mapleton street, from Murdock street to Market street. Subgrading, surfaced with 6 -inch macadam, granite block paving laid, edgestones set, vitrified brick gutters, and crosswalks laid on a concrete base, with grout joints, and crushed stone sidewalks laid. (Work begun in 1907.) Length, 1,714 feet. Area, 3,319 square yards.


```Street Department - Paving Division.205
```

Brought forward ..... $\$ 2,613 \quad 24 \$ 1,57359$

```Extra work - Resetedgestone on ac-count of settle-ment caused bydelay in receivingstock:
```

2 days, edgestone set- ter, @ \$5 ..... 1000
$1 \frac{1}{2}$ days, rammer, @

```\(\$ 2.25\). . . 338
```

$4 \frac{1}{4}$ days, helper, @ \$2, ..... 850
1 day labor @ \$2 ..... 200

```Plus 15 per cent on\(\$ 23.88\)358
```

Extra work - Omit

```brick paving forcrosswalks andsubstitute flag-ging:
```

23 square yards flagging

```crosswalks laid @50c.1150\(\$ 2,65220\)
```

Less $5 \frac{1}{4}$ days' use of

```city steam roller(a) \(\$ 13\)6825
\[
\$ 2,583 \quad 95
\]
```

Less previous pay-

```ments . . . 1,489 62
\[
1,09433
\]
\[
\$ 2,66792
\]
```

Credit: 721 Míack bricks @ $\$ 33.50$ ..... 2415
Marmion street, from Cornwall street 306 feet northeasterly (work done in 1907).
Edgestone, 18 feet 9 inches, circular, furnished by the city, @ $\$ 1.30$ ..... $\$ 2438$
Engineering expense furnished by the city ..... 10
$\$ 2448$
Maybrook street, from Glenway street to Greenwood street (work not started).
Engineering ..... $\$ 1200$
Montfern avenue, from Washington street to Faneuil street (work not started).
Engineering . . . . . . . . $\$ 1400$
Mountain avenue, from Lauriat avenue to Ballou avenue (work not started).
Engineering . . . . . . . . $\$ 2500$
Newcastle road, from Faneuil street to Hobson street (work not started).
Engineering
$\$ 8500$

Norton street, from Bowdoin street to Speedwell street (work started in 1907). Subgrading, surfaced with 6 -inch macadam, edgestones set, block gutters laid, flagging crosswalks laid and artificial stone sidewalks laid. Length, 530 feet. Area, 1,530 square yards.
Engineering and inspection . . . \$416 79
Edgestone, 2 small corners, furnished by the city, @ $\$ 3.60$

720
Edgestone, 19 feet 4 inches, straight, furnished by the city, @ 70c. . . 1353
Edgestone, 69 feet 11 inches, circular, furnished by the city, @ $\$ 1.30$

90-90
Edgestone, 84 feet 7 inches, circular, furnished by the city, @ $\$ 1.20$. 10150
Edgestone, 845 feet, straight, furnished by the city, @ $74 \frac{1}{2}$ c.

62953
Flagging, 80 feet 9 inches, furnished by the city, @ 66c.

5330
Flagging, 84 feet 4 inches, furnished by the city, @ $\$ 1.34$

11300
Blocks, 11,252 , furnished by the city, @ $\$ 55$

61886
Advertising . . . . . . 5800
Engineering expense - . . 200
Amount paid W. A. Murtfeldt Company, under contract:
6,054 square feet artificial stone sidewalks furnished and laid @ 16.65 c . . . . . . 1,007 99

Amount paid D. E. Coleman Company, under contract:

Removing tiees, bushes, etc.
$\$ 100$ 395 cubic yards subgrading (earth excavation). @ 45c. . . . 17775
Carried forward . . $\$ 17875 \$ 3,11260$
Brought forward . ..... $\$ 17875$ \$3,112 6027 cubic yards sub-gıading (rockexcavation) @
\$1.75 ..... 4725
1,024 linear feet edge- stone set @ 22c. ..... 22528
413 square yards gran- ite block paving laid @ 45c. ..... $185 \cdot 85$
98 square yards flag-ging crosswalkslaid @ 75c.7350
1,157 square yards mac- adam surfacefurnished andplaced @ 58c. . 67106
8 covers reset @\$3 . . . 2400

- 1,405 69$\$ 4,518 \quad 29$

Norwood street, from Tolman street northwesterly about 400 feet. Constructed with 6 -inch macadam, edgestones set, granite block gutters laid, flagging crosswalks hauled and laid and crushed stone sidewalks laid. Length, 447 feet. Area, 1,291 square yards.
Engineering and inspection . . . $\$ 22162$
18 feet 8 inches edgestone, furnished by the city, @ $74 \frac{1}{2}$ c.1390

10 feet 11 inches circular edgestone, furnished by the city, @ \$1.30 1420
449 feet 6 inches edgestone, furnished by the city, @ 75c.

33713
52 feet 3 inches flagging, furnished by
the city, @ $\$ 1.35$
7,500 blocks, furnished by the city, (a) $\$ 55$ per M.

41250
Engineering expense . . . 120
Amount paid Philip Doherty, under contract:
Removing trees, bushes, etc. . . $\$ 100$
112 cubic yards subgrading (earth excavation) @ 50c. . . . . 5600

Carried forward . . $\$ 5700 \$ 1,07109$
Brought forward . $\$ 5700$ $\$ 1,07109$196 cubic yards filling(a) 80c.15680
913 linear feet edgestone set @ 23c. ..... 20999
315 square yards gran-ite block pavinging laid @, 50c.15750
11 square yards flag- ging crosswalks laid @ 90c. ..... 990
981 square yards mac-adam surface fur-nished and placed(a) 65c.63765
646 square y a r d s crushed stone sidewalks furnished and placed (a) 55c. 35530
5 covers reset @ $\$ 3$. ..... 1500
40 linear feet wooden
fence furnished and built @ 50c., ..... 2000

- 1,619 . 14
\$2,69023
Parkview street, Hutchings street to Seaver street. Con-structed with 6 -inch macadam, edgestones set, graniteblock paving laid and flagging crosswalks laid. Arti-ficial stone sidewalks laid. Length, 403 feet. Area, 1,182square yards. (Unfinished work fiom 1907.)
Engineering and inspection ..... $\$ 16150$
78 feet $9 \frac{3}{4}$ inches circular edgestone, furnishedby the city, @ $\$ 1.30$10245
Advertising ..... 5860
Engineering expense ..... 190
Steam roller furnished by the city ..... 1300Amount paid to R. L. Barrett, under contract:
Removing trees, bushes, etc. ..... $\$ 000$
438 cubic yards subgrading (earthexcavation) @58c.25404
6 cubic yards subgrading (rock excavation) @ $\$ 1.75$ ..... 1050
819 linear feet edgestone set @ 18c., ..... 14742
294 square yards granite block pav- ing laid @ 50 c . ..... 14700
Carried forward ..... \$558 96 ..... $\$ 33745$
Brought forward ..... $\$ 55896$
$\$ 33745$
25 square yards flagging crosswalks laid @ 70c. ..... 1750
904 square yards macadam surface furnished and placed @ 68c., 61472 ..... 9003 covers reset @ $\$ 3$$\$ 1,20018$
Less 1 day's use of city steamroller1300
Less amount paid in 1907 ..... \$1,187 18 ..... 33697
Amount paid to Robert Eagar, Jr., under con- tract:
4,763 square feet artificial stone sidewalks furnished and laid @ $17 \frac{1}{2} \mathrm{c}$. ..... 83353
$\$$
Pequot street, Wait street to Calumet street (work not started).Engineering$\$ 2900$
Pontiac street, Hillside street to Tremont street (unfinished). Plankwalk built.
Labor ..... $\$ 2237$
Lumber ..... 5585
$\$ 7822$
Prescott street, from another part of Prescott street to Boston,Revere Beach \& Lynn Railroad (work not started).
Engineering ..... $\$ 10345$
Radcliffe street, Howard street to Faxon street (work not started).Engineering$\$ 1500$
Rexford street, Blue Hill avenue to Oakland street (work not started).
Engineering ..... $\$ 1600$
Rockledge street, Lambert avenue to Thornton street (workdone in 1907).
Amount paid to Robert Eagar, under contract:163 cubic yards subgrading (earthexcavation) @ 50c.$\$ 8150$
Carried forward ..... $\$ 8150$
Brought forward ..... $\$ 8150$
19 cubic yards subgrading (rock excavation) @ \$1.75 ..... 3325
209 cubic yards 'filling furnished @ 75 c . ..... 15675
878 linear feet edgestone set @ 17c., ..... 14926
300 square yards granite block par- ing laid @ 50c. ..... 15000
17 square yards flagging crosswalks laid @ 60c. ..... 1020
637 square yards macadam surface placed @ 25c. ..... 15925
436 square yards brick sidewalks laid @ 25c. ..... 10900
2 catch-basins and manhole cov- ers reset @ $\$ 3$ ..... 600
Extra work under contract:
29.7 tons stone dust hauled one and one-half miles overhaul @ 11c. per half mile per ton . ..... 980

Less amount paid in 1907 . | $\$ 86501$ |
| ---: |
| 65372 |

Roseland street, Dorchester avenue to Samoset street (work done in 1907).
Engineering ..... $\$ 400$
Samoset street, Centre street to Welles avenue. Constructed with6 -inch macadam, granite block paving laid, edgestone setand flagging crosswalks laid. Artificial stone sidewalkslaid. Length, 875 feet. Area, 2,525 square yards.
Engineering and inspection ..... \$191 98
Teaming furnished by the city ..... 1125
13 feet North River flagging, furnished by the city, @ \$1.34 ..... 1742
280 paving blocks, furnished by the city, @ $\$ 70$ per M. ..... 1960
1,580 paving blocks, furnished by the city, @ $\$ 55$ per M. ..... 8690
Advertising ..... 5860
Engineering expense ..... 155
$\$ 38730$Carried forward\$387 30

Brought forward . . . . $\$ 38730$
Less 13 feet edgestone returned @ 75c. $\$ 975$
2 small corners returned (a) $\$ 3.60$

720
$\$ 37035$
Amount paid to D. E. Coleman Company, under contract:

Removing trees, bushes, etc., $\quad \$ 100$
1,730 linear feet edgestone set @ 20c. . . . . . 34600
541 cubic yards subgrading (earth excavation) @ 45c., 24345
621 square yards granite block paving laid @ 45c. . . 27945
47 square yards flagging crosswalks laid @ 75c.

3525
1,898 square yards macadam surface furnished and placed @ 60 c .

1,138 80
19 square yards brick sidewalks
8 covers reset @ $\$ 3$. . . 2400
336 square yards loam furnished and placed @ 50c. . . 16800
Extra work:
200 bricks furnished @ $\$ 11$. 220
7 tons surplus material overhaul two and one-half miles @ 11c. per half mile per ton

385
Less $1007 \quad \$ 2,25150$
Less amount paid in 1907 . 1,000 87
Amount paid to Jeremiah J. Sullivan, under contract:
7,648 square feet artificial stone sidewalks furnished and placed @ $17 \frac{1}{2} \mathrm{c}$.

$$
\text { 1,338 } 40
$$

\$2,959 38

South Huntington avenue, from another part of South Huntington avenue to Huntington avenue. Constructed with 6 -inch macadam, granite block paving laid, edgestone set and flagging crosswalks laid, and brick, crushed stone and artificial stone sidewalks built. Length, 1,148 feet. Area, 6,888 square yards.

Engineering and inspection
84 feet 11 inches circular edgestone, furnished
by the city, @ $\$ 1.30$ 11040
80 feet North River flagging, furnished by the city, @ 66c.

5280
48 feet 5 inches North River flagging, furnished
by the city, $@ \$ 1.35$.
91 feet 2 inches North River flagging, furnished by the city, @ $\$ 1.34$

12216
115,000 paving bricks, furnished by the city, @ \$11. . . . . . . . . 1,265 00
16,320 paving blocks, furnished by the city, @ $\$ 62$

1,011 84

Advertising . . . . . . . . 5440
Engineering expense
860
Amount paid Simpson Brothers Corporation, under contract:
1,749 square feet artificial stone sidewalks furnished and laid @ 16.75c.

29296
Amount paid William J. Barry, under contract:
Removing trees, bushes, stumps, etc. $\$ 000$
1,447 cubic yards subgrading
(earth excavation) @ 40 c. , 57880 2,005 cubic yards filling furnished (a) 75c.

1,503 75
2,796 linear feet edgestone set @ 18 c . 50328
1,051 square yards granite block paving laid @ 50c. . . 52550
113 square yards flagging crossings 8475
4,733 square yards macadam surface furnished and placed (a) 48c.

2,27184

> 17 square yards crushed stone sidewalks fuınished and placed @ $\$ 1$

2,839 square yards brick sidewalks 79492
23 covers reset @ $\$ 3$. . 6900
Extra work as ordered:
593 square yards macadam surface, furnished and placed on Huntington avenue to conform to grade of South Huntington avenue, @48c., 28464


Speedwell street, from Topliff street to Hamilton street (work started in 1907). Subgrading, constructed with 6 -inch macadam, granite block paving laid, edgestones set, flagging crosswalks laid and artificial stone sidewalks laid, with loam spaces. Length, 735 feet. Area, 2,129 square yards.

Engineering and inspection
$\$ 5651$
Teaming furnished by the city 600
Stone furnished by the city, 14.95 tons (a) $\$ 1.60$ 2392

Engineering expense furnished by the
city
40
Amount paid William Barrett, undercontract:

661 cubic yards subgrading (earth excavation) @ 50c., $\$ 33050$
1,475 linear feet edgestone set @ 19c. . . 28025

> 527 square yards granite block paving laid @ 50c.

49 square yards flagging crosswalks laid @ 75 c .

$$
3675
$$

1,621 square yards macadam surface placed @ 30c. . 48630 13 covers reset @ $\$ 3$. 3900 Carried forward . $\quad \$ 1,436 \quad 30 \quad \$ 8683$
Brought forward ..... $\$ 1,43630 \quad \$ 8683$Extra work - Fur-nish, place andseed loam for loamspaces:232 square yards loam,furnished andplaced @ 50c. . 11600

$$
\$ 1,55230
$$

Omission of work: Omit hauling of crushed stone and screenings for macadam:
Less 652 tons crushed stone and screenings delivered on the line of the work by the city @ 30c. . . . 19560
$\$ 1,35670$
Less previous p a y -
ments . .
.
42085
Amount paid Warren Brothers Company, under contract:
6,575 square feet artificial stone sidewalks fuınished and laid @ 20c. . $\$ 1,31500$
Less previous payments . . . 54400
77100
$\$ 1,27868$
Credit: 1,612 blocks @ \$55 M. . 8866
$\$ 1,19002$
Stonehurst street, from Topliff street to Hamilton street (work not started).
Engineering
$\$ 11460$
Upham avenue, from Hancock street to Cushing avenue (work not started).
Engineering . . . . . . . . $\$ 7150$
Walworth street, from Belgrade avenue to South street (worknot started). Plankwalk built.
Labor, including engineering, furnishedby the city$\$ 11325$
Teaming furnished by the city ..... 11025
Lumber, 3,000 feet spruce, furnishedby the city, @ $\$ 27$8100
Gravel, 1 single load, furnished by the city ..... 70
$\$ 305$ ..... 20
Welles avenue, from Argyle street to Dorchester avenue (work not started).
Engineering ..... $\$ 8325$
Advertising ..... 580
$\$ 8905$
Wellesley park, from Park street to Melville avenue (worknot started).
Engineering ..... $\$ 21928$
West Fourth street, at northwest corner of Dorchester avenue.Street widened, work done by department force.
Labor, including engineering, fur- nished by the city ..... $\$ 28100$
Teaming furnished by the city ..... 5495
Edgestone, 38 feet 7 inches, circular,furnished by the city, @ $\$ 1.20$4630
Engineering expense furnished by thecity55
$\$ 38280$
Willowwood street, from Lauriat avenue to Norfolk street. Subgrading, constructed with 6 -inch macadam, granite block paving laid, filling furnished, edgestones set, flagging crosswalks hauled and laid and crushed stone sidewalks laid. (Work done in 1907.) Length, 1,490 feet. Area, 4,316 square yards.
Blocks furnished by the city, 2,317 @ $\$ 55 \mathrm{M}$.
$\$ 12744$
Amount paid to Joseph J. Comfrey, under contract:
822 cubic yards subgrading (earth excavation) @ 50c. . . $\$ 41100$
58 cubic yards subgrading (rock excavation)
(a) $\$ 1.75$
10150
Carried forward . . $\$ 51250 \$ 12744$

```
    Brought forward .. . $512 50 $127 44
    205 cubic yards filling fur-
        nished @ $1.25
    256 25
3,046 linear feet edgestone
    set @ 26c.
    79196
1,045 square yards granite
    block paving laid @
    50c.
    522 50
3,496 square yards macadam
    surface placed @ 35c. 1,22360
2,001 square yards crushed
        stone sidewalks laid
        (a)23c.
            4 6 0 2 3
    21 covers reset @ $3 . 6300
    Extra work-Omit
        brick crosswalks and
        substitute flagging
        crosswalks and haul
        flagging for same
        from South End pav-
        ing yard:
    123 square yards flagging
        crosswalks hauled
        and laid @ $1
            1 2 3 0 0
        Extra work-Haul
        crushed stone dust
        from Columbia road
        crusher instead of
        from Codman street
        crusher:
    250 tons crushed stone
        dust one mile over-
        haul, per half mile,
        per ton, @ 11c.
    Extra work - Furnish
        stonecutter to dress
        edgestone:
    3 days, stonecutter, @
        $4.50 .
        13 50
        Plus }15\mathrm{ per cent on
        $13.50
        203
        Extra work - Spread
        filling furnished by
        the city:
    3\frac{1}{2}}\mathrm{ days labor @ $2 . 700
        Plus 15 per cent on
            $7
        105
Carried forward . $4,031 62 $127 44
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28479
$\$ 41223$

RECAPITULATION OF STREET WORK.
Charged to Appropriation for Street Department.
Albany street, Randolph to Bristol street
$\$ 37600$
Alford street, Everett line to drawbridge . . 2,388 79
Anawan avenue, Beech street to the railroad . 1,076 79
Appleton street, Berkeley street to Columbus avenue

57364
A shland street, Elm to Park street . . . . 42978
Beacon street, Arlington to Brimmer street . . 3,250 57
Beacon street, Hereford street to Massachusetts
avenue . . .
Beacon street, Brookline line to Cleveland circle . 2,748 28
Bellevue street, Robin street to the railroad . . 3,746 59
Bigelow street, Brooks to 60 feet beyond Dunboy
street and at intersection of Charlesview street,
1,805 16
Blagden street, Exeter street to Huntington avenue, $\quad 64606$
Blue Hill avenue, Talbot avenue to Mattapan
square . . . . . . . . . 1,18652
Bowdoin street, Hancock to Blakeville street . 62369
Braemore road, Chiswick road to Commonwealth
avenue . .
Bristol street, Albany street to Harrison avenue . 47962
Brookline avenue, Boylston to Jersey street . . 13847
Brookline avenue, Audubon road to Brookline line, 1,206 98
Brunswick street, Blue Hill avenue to Warren street, 80738
Cambridge street, Sparhawk to Washington street
and Harvard avenue to the railroad . . . 65351
Centre street, Roxbury . . . . . . 1,951 86
Centre street, May street to 500 feet beyond
Louder's lane ${ }^{2} 20824$
Chelsea Bridge . . . . . . . . 15002
Cherokee street . . . . . . . . 4446
Chestnut Hill avenue, Commonwealth avenue to Brookline line

1,037 04
Carried forward . . . . . .. $\$ 27,69487$
Brought forward ..... \$27,694 87
Chestnut avenue, Paul Gore to Mozart street ..... 1,011 60
Church street, High to Winter street ..... 4800
Columbia road, Boston to Dudley street ..... 2,850 92
Cross street, Salem street to Haymarket square ..... 64338
$D$ street, West Fifth to West Sixth street ..... 28752
Dorchester street, West First street to water line ..... 1,678 88
Dorchester avenue, Adams to Park street ..... 18587
Dorchester avenue, Park to Ashmont street ..... 45944
Dover street, Albany street to Harrison avenue ..... 4500
Dunboy street, Faneuil to Bigelow street ..... 51976
East Cottage street, Pleasant street to Columbia road ..... 1848
East Cottage street, Dudley street to railroad bridge, ..... 1,287 15
East Cottage street, Edward Everett square to rail- road bridge ..... 1,933 61
East Fifth street, G to H street ..... 9103
East Sixth street, O to P street ..... 22172
Esmond street, Blue Hill avenue to Bradshaw street ..... 56209
Everett street, Mill to Park street ..... 77455
Everett street, railroad bridge 650 feet south ..... 1,762 74
Exeter street, Huntington avenue to Beacon street, ..... 2,731 99
Fairbanks street, Washington to Faneuil street ..... 1,244 74
Faneuil street, Brooks to Oakland street ..... 95256
Ferry street, North to Fulton street ..... 66465
Field street, Ruggles street to 400 feet beyond ..... 52884
Freeport street, Tenean street to the bridge ..... 3,003 97
Fulton street, Cross to Clinton street ..... 1,015 26
Geneva avenue, Olney street to the railroad ..... 8152
Geneva-avenue, Bowdoin to Park street ..... 76240
Greenmount street, Dorchester avenue to Pleasant street ..... 5200
Hancock street, Dorchester avenue to Bowdoin street ..... 67854
Hano street, Braintree street 400 feet distant ..... 61875
Hanover street, Friend to Union street ..... 21950
Hawes street ..... 2125
High street, Church to Hancock street ..... 1,059 36
Holton street, at corner Athol street ..... 18960
Howard avenue, at Cunningham street ..... 41736
Humphreys street, East Cottage to Dudley street ..... 75535
Hyde Park avenue, Tower to Washington street ..... 64807
Lagrange street, Centre street to Newton line ..... 23322
Lansing street, Warren to Sherman street ..... 31200
Linden Park street, Roxbury ..... 44120
Main street, Austin to Union street ..... 25457
Malcolm street, from Mt. Vernon street 49 feet ..... 10740
Brought forward ..... \$59,070 71
Maple street, Centre to Weld street ..... 1,681 80
Marlborough street, Clarendon street to Charlesgate, ..... 90329
Massachusetts avenue, Edward Everett square to Magazine street ..... 2,660 01
Massachusetts avenue, Albany to Washington street ..... 75978
Medford street, Mystic to Main street ..... 1,021 15
Melcher street, Summer street 484 feet southeast, ..... 38123
Mercer street, Telegraph to East Eignth street ..... 84636
Mishawum street, Main to Rutherford avenue ..... 52451
Morton street, Canterbury to Forest Hills street ..... 2,392 46
Morton street, near Blue Hill avenue ..... 45209
Moss Hill road, Pond street to Woodland road ..... 1,148 43
Mount Washington avenue ..... 1,916 52
Munroe street, Humboldt avenue to Warren street, ..... 1,489 92
North Beacon street, Dustin street to the river and Market to Vineland street ..... 1,846 15
Norway street, Hemenway street to Massachusetts avenue ..... 80425
Oakridge street, Codman to Morton street ..... 6140
Old road, Elmo to Glenway street ..... 1,627 86
Olney street, Bowdoin to Everton street ..... 12800
Perkins street, South Huntington avenue to Day street ..... 50964
Peters street, East Sixth to East Seventh street ..... 60809
Pleasant street, Savin Hill avenue to Stoughton street ..... 44210
Porter street, Amory street towards Bismarck street ..... 8150
Prince street, corner Hanover street ..... 2220
Quincy street, Blue Hill avenue to Columbia road ..... 12166
Robinwood avenue, Rockview to Centre street ..... 83919
Rockview street, Spring Park avenue to Robinwood avenue ..... 41801
Rosseter street, Eldon street to 400 feet north of Bullard street ..... 1,762 91
Rutherford avenue, Essex to Baldwin street ..... 26058
Ruthven street, Elm Hill avenue towards Hum- boldt avenue ..... 39101
Rutledge street, West Roxbury ..... 19252
St. Botolph street, Irvington street to Massachu- setts avenue ..... 1,763 51
St. Stephen street, Massachusetts avenue to Bryant street ..... 33896
Saratoga street, East Boston ..... 58188
Savin Hill avenue, Dorchester avenue to the-rail- road ..... 1,195 10
Carried forward ..... $\$ 89,24478$
Brought forward ..... \$89,244 78
South street, Child street to Arborway ..... 1,15669
Southampton street, Massachusetts avenue to the bridge ..... 1,116 44
Stoughton street, Pleasant street to Columbia road, ..... 82635
Summer street, bridge over A street to bridge over N. Y., N. H. \& H. R. R. ..... 1,500 33
Summer street, Melcher to A street ..... 46462
Sutherland road, Cleveland circle to Orkney road ..... 21146
Talbot avenue, Washington street to Welles avenue ..... 84864
Terrace street at Park Brewery ..... 55242
Townsend street, Washington street to Walnut avenue ..... 1,389 30
Train street, Ashmont to King street ..... 90110
Vermont street, Mt. Vernon to Baker street ..... 2,783 62
Vernon street, Cabot to Auburn stieet ..... 1,695 98
Waldeck street, Melville avenue to Geneva avenue, ..... 1,879 43
Walnut avenue, 179 to 216 ..... 21388
Walnut park, Roxbury ..... 28523
Warren avenue, City square to the railroad ..... 45405
Warren avenue, Berkeley street to Columbus avenue ..... 1,892 43
Warren street, Pleasant to Thompson square ..... 69923
Washington street, Elmore street to West Walnut park ..... $1,671 \quad 17$
Washington street, Cambridge to Parsons street, north side, and Chestnut Hill avenue to Foster street, south side ..... 1,142 96
Washington street, Walk Hill to Tower street ..... 69470
Washington street, Ashland to Beech street ..... 3,116 34
Wayland street, 49 to 61 ..... 42472
West Canton street, Appleton street to Shawmut avenue ..... 1,651 91
West Cottage street, Brook avenue to Woodville street ..... 53811
West Fifth street, C to D street ..... 83316
Western avenue, Market to Telford street ..... 22889
Worthington street at Normal School ..... 2,095 27
Wrentham street, Bruce to Adams street ..... 85095Zeigler street, Harrison avenue to Washingtonstreet24099Charged to Special Appropriations.

## Charged to Appropriation for Street Improvements.

A street, Congress street to 175 feet south of Binford street ..... \$23,062 53
Allston street, Brighton to Commonwealth avenue, ..... 10,080 61
Ashburton place, Bowdoin street 50 feet easterly ..... 30576
$B$ street, West First to West Third street ..... 1,021 06
Batterymarch street, Milk street 215 feet easterly, ..... 4676
Beacon street, Raleigh to St. Mary's street ..... 8,537 40
Boylston street, Chestnut avenue to railroad ..... 91699
Boynton street, South to Call street. ..... 2,460 20
Bromfield street, Tremont to Washington street ..... 4,149 54
Bunker Hill street, Main to Sackville street ..... 1,532 33
5178 $C$ street, West Fifth across West Sixth street
55031
55031
$C$ street, West First to West Second street
3,810 99
Canterbury street, Angell street to Blue Hill avenue
3,789 24
3,789 24
Centre street, Church to Lagrange street
Centre street, Church to Lagrange street
46097
46097 avenue avenue ..... 91080
Chelsea street, Scott's court to Chelsea Bridge
2,147 11
Clarendon street, Boylston street to railroad ..... 74410
Cleveland circle, Beacon street to Chestnut Hill avenue ..... 3,369 48
Cohasset street, Corinth to Albano street ..... 5,696 01
Congress street, State to Water street ..... 5335
Cooper street, Washington across Endicott street ..... 2,710 70
Corning street, Washington street to Shawmut avenue 2,148 56
$D$ street, Gold street to West Broadway ..... 1,836 85
Dorchester avenue, Ashmont to Codman street ..... 2113
Dudley street, Washington street to Eliot square, ..... 1,617 43
East Broadway, P to Q street ..... 1,699 64
Eliot street, Pleasant to Tremont street ..... 7,374 26
Fuller street, Dorchester avenue to Washington street ..... 61563
Gainsborough street, Hemenway street to Hunting- ton avenue ..... 3,307 74
Gerard street, Massachusetts avenue to Kemble street ..... 8,267 01
Harvard avenue, Commonwealth to Brighton avenue ..... 44301
Humboldt avenue, Walnut avenue to Seaver street, ..... 4,856 79
Huntington avenue, Tremont street to Brookline line ..... 9,255 99
Irvington street, Huntington avenue to the rail- road ..... 80167
Kilby street, Milk to Central street ..... 3,739 73
Carried forward ..... \$122,393 46
Brought forward ..... \$122,393 46
Kneeland street, Washington street to Harrison avenue ..... 4,062 80
Lawn street, Heath to Heath street ..... 8,195 21
Lexington street, Putnam street to 250 feet beyond Prescott street ..... 2,509 67
Main street, Beach to Alford street ..... 92881
Massachusetts avenue, Shirley to Gerard street ..... 1,202 16
Meridian street, Maverick square to Central square ..... 7,234 28
Middle street, Dorchester street to Dorchester avenue ..... 72314
Mt. Everett street, Quincy to Hamilton street ..... 33528
Neponset avenue, Adams to Ashmont street ..... 83738
New Heath street, Centre to Parker street ..... 1,432 48
Oak square, Brighton ..... 2,132 35
Park square, Boylston to Eliot street ..... 5,007 34
Parker street, Fisher avenue to Heath street ..... 73524
Providence street, Church street 170 feet easterly, ..... 2,686 99
Rutherford avenue, Baldwin to Thorndike street, ..... 2,315 82Rutherford avenue, Tibbetts Town way to Chap-man street
6,171 82
Roxbury street, Eliot square to Columbus avenue, ..... 63617
St. James avenue, Berkeley street to Huntington avenue ..... 2,001 79
Scollay square and Court street, Cornhill to Sud- bury street 9,456 21
Shawmut avenue, Lenox to Sawyer street ..... 6104
Southampton street, railroad to Hilton street ..... 65488
Stanley street, Quincy street to Sunset circle ..... 57326
State street, north and south of Old State House (see Washington street).
Sudbury street, Court street to Haymarket square, Summer street, Washington to Hawley street ..... 1,702 89 ..... 3,235 45Taylor street, Neponset avenue to the railroad
Vinton street, Preble street to Dorchester avenue, ..... 791522,320 12
$W$ alk Hill street, Blue Hill avenue to Harvard street, ..... 1,747 58
Wall street, Causeway to Minot street ..... 1,156 33
W alnut avenue, Circuit street to Humboldt avenue, ..... 2,936 72
W ard street, Dorchester avenue to Preble street, ..... 85321Warren street, Kearsarge avenue to Morelandstreet
28744
Washington street, Dudley to Bartlett street ..... 1,228 90
Washington street, Court avenue to Cornhill and State street, north and south of Old State House ..... 6,671 31
Washington street, Blue Hill to Talbot avenue ..... 3,675 63
Waumbeck street, Wabeno street to Humboldt avenue ..... 55507
Carried forward ..... $\$ 209,44975$
Brought forward ..... \$209,449 75
West Cedar streeit, Mt. Vernon to Chestnut street, ..... 80948
West street, Tremont to Washington streetWoodward street, Dorchester street to Dorchester5,800 43
avenue ..... 51275
Zeigler street, Washington to Warren street . ..... 2,533 79
$\$ 219,10620$
Less amount paid out of appropriation for Street Department ..... 41,539 92
\$177,566 ..... 28
Charged to Appropriation for Highways, Making of.
Ashland street, Mill to Everdean street ..... \$1,369 73
Avenue Louis Pasteur, Longwood avenue to the Fenway ..... 1,672 65
Bayswater street, Saratoga street to Austin avenue, ..... 75586
Belfort street, Sagamore to Saxton street ..... 2350
Bellevue street, Kane to Hamilton street ..... 3,602 27
Bennington street, Chelsea street to Belle Isle inlet ..... 800
Benton street, Tremont street to Columbus avenue, ..... 5210
Bernard street, Talbot avenue to the railroad ..... 6,015 86
Boardman street, Saratoga street to Boston \& Maine Railroad ..... 22200
Bruce street, extended to Wrentham street ..... 98403
Carmen street, Shafter to Kilton street ..... 9025
Causeway street, Beverly street to Charlestown Bridge ..... 53854
Cloybourne street, Dakota to Bowdoin street ..... 20544
Clement avenue, Meredith to Stratford street (credit, \$358.87)
Corona street, Bowdoin street to Geneva avenue ..... 6,456 78
Cottage street, Maverick to Gove street ..... 4,504 11
Cottage terrace, East Cottage to Marshfield street, ..... 1000
Cotton street, Walter to Fairview street . ..... 6,212 41
Covington street, East Eighth street to Columbia road. ..... 8075
Dakota street, Greenbrier street to Geneva avenue, ..... 11,041 26
Dayton street, Nixon street to the railroad ..... 400
Everdean street, Green Hill to Ashland street ..... 2,054 86
Everdean street, Green Hill to Preston street ..... 3,152 11
Evergreen street, from South Huntington avenue, ..... 83663
Farquhar street, South to Selwyn street ..... 11725
Fletcher street, Centre to South street ..... 22000
Fottler road, Walk Hill street to Tileston avenue, ..... 35153
Carried forward ..... $\$ 50,58192$
Brought forward ..... \$50,581 92
Frankfort street, Maverick to Gove street ..... 4,961 66
Harlem street, Glenway to Greenwood street ..... 2,113 72
Hobson street, Faneuil to Hobart street ..... 10884
Kerwin street, Talbot, avenue to Brenard street ..... 180
Kilton street, Harvard to Park street ..... 1,926 12
Larchmont street, Waldeck to Greenbrier street, ..... 7,572 75
Larkin street, Hampden to Adams street ..... 1,726 14
Lincoln street, at junction of Cambridge street ..... 1,049 88Mallet street, Florida to Adams street
Mapleton street, Murdock to Market street1,143 93Marmion street, from Cornwall street 306 feetnortheasterly2448
Maybrook street, Glenway to Greenwood street ..... 1200
Montfern avenue, Washington to Faneuil street ..... 1400
Mountain avenue, Lauriat to Ballou avenue ..... 2500
Newcastle road, Faneuil to Hobson street ..... 8500
Norton street, Bowdoin to Speedwell street ..... 4,518 29
Norwood street, from Tolman street 444 feet north- easterly ..... 2,690 23
Parkview street, Hutchings to Seaver street ..... 2,021 19
Pequot street, Wait to Calumet street ..... 2900
Pontiac street, Hillside to Tremont street ..... 7822
Prescott street, Boston, Revere Beach \& Lynn Rail- road to Prescott street . ..... 10345
Radcliffe street, Harvard to Faxon street ..... 1500
Rexford street, Blue Hill avenue to Oakland street, ..... 1600
Rockledge street, Lambert avenue to Thornton street ..... 21129
Roseland street, Dorchester avenue to Samoset street ..... 400
Samoset street, Centre street to Welles avenue ..... 2,959 38
Seaver street, at northerly corner Walnut avenue, ..... 5410
South Huntington avenue, Huntington to South Huntington avenue ..... 10,295 77
Speedwell street, Tópliff to Hamilton street ..... 1,190 02
Stonehurst street, Topliff to Hamilton street ..... 11460
7150
Upham avenue, Hancock street to Cushing avenue,
30520
30520
Walworth street, Belgrade avenue to South street;
8905
8905
WIll ..... 21928
West Fourth street, northwest corner Dorchester avenue ..... 38280
Willowwood street, Lauriat avenue to Norfolk street ..... 41223
\$99,771 61
Less credit on Clement avenue ..... 35887
STREET DEPARTMENT—PAVING DIVISION
Maintenance of Macadam Streets.
Schedule of Amounts Resurfaced and Cost of Same for Year e
Schedule of Amounts Resurfaced and Cost of Same for Year ending January 31, 1909.

|  | 1905. | 1906. | 1907. | 1908. |
| :---: | :---: | :---: | :---: | :---: |
| Length of macadam in miles | 337.10 | 341.22 | 346.02 | 348.62 |
| Total area of macadam in square yards. | 6,155,668 | 6,269,208 | 6,348,389 | 6,406,246 |
| Total cost of maintenance of macadam * | \$673,884 55 | \$700,401 56 | \$480,607 27 | \$340,822 36 |
| Cost per mile over entire mileage. | \$2,000 00 | \$2,041 00 | \$1,389 00 | \$977 62 |
| Cost per square yard over entire area * | \$0 11 | \$0 11 | \$0.08 | \$0.053 |
| Length of macadam resurfaced yearly in miles. | 32.3 | 27.6 | 20.9 | 22.2 |
| Cost per mile of macadam resurfaced yearly. | \$18,300 00 | \$22,017 00 | \$17,742 00 | \$11,705 13 |
| Area of macadam resurfaced yearly in square yards | 552,146 | 507,689 | 392,670 | 406,438 |
| Cost per square yard of resurfacing over yearly area | \$1 07 | \$1 19 | \$0 95 | \$0.639 |
| Cost per square yard of street cleaning over entire macadam area. | \$0.0135 | \$0.0148 | \$0.0173 | \$0.01264 |
| Percentage of maintenance and street improvements appropriations used for maintenance of macadam *. | 41\% | 43.9\% | 36.5\% | 33.7\% |

* Including street cleaning by Paving Division.

New Edgestones. (Not including " 323 " and " 393 " streets.)
First Setting. Linear Feet.

| Year. | South Boston. |  |  |  |  |  | 容 |  | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1900 | 729 | 616 | 100 |  | 614 | 9,633 | 8,882 | 1,544 | 22,118 |
| 1901 | 1,925 | 1,184 |  | 4,627 | 7,936 | 22,574 | 13,942 | 2,480 | 54,668 |
| 1902 | 1,957 | 1,121 |  | 688 | 990 | 10,428 | 3,842 | 2,082 | 21,108 |
| 1903 | 1,578 | 1,581 |  | 5,838 | 912 | 10,959 | 10,164 | 4,131 | 35,163 |
| 1904 | 1,391 | 1,124 | 569 | 457 | 2,677 | 3,912 | 3,661 | 2,092 | 15,883 |
| 1905. | 2,049 | 1,494 |  | 1,867 | 6,056 | 13,548 | 1,814 | 4,705 | 31,533 |
| 1906 | 2,078 | 628 |  | 261 | 4,203 | 15,119 | 2,307 |  | 24,596 |
| 1907 | 414 | 1,263 | 250 | 908 | 349 | 4,781 | 1,663 | 534 | 10,162 |
| 1908 | 656 | 798 |  | 2,405 | 2,399 | 3,654 | 4,811 | 813 | 15,236 |
| Totals. | 12,777 | 9,809 | 919 | 17,051 | 26,136 | 94,608 | 50,786 | 18,381 | 230,467 |

New Brick Sidewalks. (Not including " 323 " and " 393 " Streets.) First Laying. Square Yards.

| Year. |  |  |  |  |  |  |  | 淢 | Wi |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1900. | 1,069 | 1,476 | 477 | 873 | 1,583 | 4,033 | .4,999 | 2,858 | 17,368 |
| 1901 | 4,617 | 1,14.2 | 323 | 100 | 3,825 | 5,613 | 4,920 | 549 | 21,089 |
| 1902. | 1,319 | 1,425 |  | 288 | 342 | 2,537 | 1,668 | 190 | 7,769 |
| 1903 | 1,161 | 635 |  |  | 182 | 700 | 2,342 | 186 | 5,206 |
| 1904. | 1,529 | 817 | 429 | 940 | 432 | 1,915 | 2,136 | 923 | 9,121 |
| 1905 | 1,186 | 1,980 |  | 202 | 103 | 4,140 | 790 | 400 | 8,801 |
| 1906 | 934 | 699 |  | 106 | 278 | 1,758 | 899 |  | 4,674 |
| 1907. | 455 | 1,157 | 223 | 250 | 400 | 856 | 296 | 328 | 3,965 |
| 1908. | 217 | 836 |  |  | 156 | 958 | 884 | 313 | 3,364 |
| Totals. | 12,487 | 10,167 | 1,452 | 2,759 | 7,301 | 22,510 | 18,934 | 5,747 | 81,357 |


|  | Edgestones. <br> Linear Feet. | Brick. Square Yards. |
| :---: | :---: | :---: |
| South Boston Paving District, No. 1. | 656 | 217 |
| East Boston Paving District, No. 2. | 798 | 836 |
| Brighton Paving District, No. 4. | 2,405 |  |
| West Roxbury Paving District, Nos. 5 and 11, | 2,399 | 156 |
| Dorchester Paving District, Nos. 6 and 12. | 3,654 | 958 |
| Roxbury Paving District, No. 7. | 4,511 | 884 |
| City Proper Paving District, Nos. 8, 9, $10 . \ldots$ | 813 | 313 |
| Totals. | 15,236 | 3,364 |

Loads of Dirt and Street Cleanings Removed from February 1, 1908, to January 31, 1909.

By Paving Division.

| Districts. | Single. | Double. | Cubic Yards. |
| :---: | :---: | :---: | :---: |
| South Boston | 959 |  | 959 |
| East Boston. | 214 | 232 | 678 |
| Charlestown. | 186 |  | 186 |
| Brighton. | 2,828 | 2,431 | 7,690 |
| West Roxbury | 7,773 | 1,962 | 11,692 |
| Dorchester. | 3,304 | 714 | 4,732 |
| Roxbury. | 3,761 |  | 3,761 |
| South End | 3,480 | 486 | 4,452 |
| Back Bay. | 1.567 | 305 | 2,177 |
| North End. | 320 |  | 320 |
| Ashmont. | 2,505 | 1,492 | 5,489 |
| Totals. | 26,897 | 7,622 | 42,136 |

## Loads of Snow Removed from February 1, 1908, to January 31, 1909.

By Paving Division.

| Districts. | Single. | Double.- | ${ }_{\text {Cubic }}^{\text {Curds. }}$ |
| :---: | :---: | :---: | :---: |
| South Boston. | 568 | 51 | 670 |
| East Boston. | 6 | 5 | 16 |
| Charlestown. | 112 | 11 | 134 |
| Brighton. | 39 | 35 | 109 |
| West Roxbury. | 282 | 299 | 880 |
| Dorchester. | 92 | 54 | 200 |
| Roxbury. | 270 |  | 270 |
| South End | 1,283 | 52 | 1,387 |
| Back Bay. | 42 | 150 | 342 |
| North End. | 900 | 25 | 950 |
| Ashmont. | 34 | 137 | 308 |
| Totals. | 3,628 | - 819 | 5,266 |

By Contract.

| Snow District No. 1. |  | 953 | 2,929 |
| :---: | :---: | :---: | :---: |
| Snow District No. 2. |  | 603 | 1,811 |
| Snow District No. 3. |  | 686 | 2,040 |
| Snow District No. 4. |  | 588 | 1,761 |
| Snow District No. 5. |  | 130 | 385 |
| Totals. |  | 2,960 | 8,926 |

## By Street Cleaning Division.

|  | - |  |  |
| :---: | :---: | :---: | :---: |
| South Boston. | 2,288 |  | 3,763 |
| East Boston. | 3,430 | 220 | 6,737 |
| Charlestown. | 2,388 |  | 4,199 |
| Dorchester. | 98 |  | 196 |
| Roxbury. | 1,460 |  | 2,642 |
| South End | 12,485 | 226 | 22,785 |
| Back Bay | 3,292 |  | 5,912 |
| North End. | 7,644 |  | 12,806 |
| Patrol System. | 4,456 |  | 7,825 |
| Totals. | 37,541 | 446 | 66,865 |
| Grand totals. | 41,169 | 4,225 | 81,057 |

## Crushed Stone.

Output of Stone from City Crushers and Cost of Operating and Maintaining.

|  | Crushed Stone. Tons. | Cost of Operating and Maintenance for Fiscal Year. | Cost of Operating and Maintenance for Calendar Year. |
| :---: | :---: | :---: | :---: |
| Centre street crusher | 167 | \$2,791 82 | \$2,374 77 |
| Chestnut Hill avenue crusher | 9,448 | 20,277 20 | 13,567 40 |
| Codman street crusher | 1,359 | 3,216 91 | 2,967 03 |
| Columbia road crusher. | 984 | 15,154 84 | 7,566 75 |
| Dimock street crusher | 4,300 | 10,934 39 | 9,137 25 |
| Rosseter street crusher | 1,394 | 5,950 38 | 4,585 69 |
| Grove street crusher |  | 1,211 50 | 92450 |
| Bleiler crusher |  | 1,108 36 | 1,105 28 |
| Kenney crusher |  | 3,072 60 | 2,657 14 |
| Totals. | 17,652 | \$63,718 00 | \$44,885 81 |

## Street Openings.

Permits for making openings in the public streets have been issued from the Permit Office during the year ending January 31, 1909, as follows:

|  | Permits. | Feet. |
| :---: | :---: | :---: |
| Auxiliary Fire Alarm Company. | 1 | 75 |
| Boston Fire Department. | 30 | 1,099 |
| Boston Lamp Division. | 112 | 1,740 |
| Boston Park Department | 1 | 60 |
| Boston Police Department | 12 | 482 |
| Boston Sewer Division. | 282 | 17,659 |
| Boston Transit Commission. | 5 | 121 |
| Boston Water Department. | 3,392 | 82,993 |
| Boston Consolidated Gas Company | 1,965 | 99,351 |
| Boston Elevated Railway Company. | 175 | 331,283 |
| Boston Low Tension Wire Association | 13 | 3,651 |
| Boston Pneumatic Transit Company. | 10 | 120 |
| Boston, Revere Beach \& Lynn Railroad Company | 3 | 85 |
| Boston \& Albany Railroad Company. | 1 | 100 |
| Boston \& Maine Railroad Company. | 6 | 274 |
| Charlestown Gas and Electric Company . | 96 | 3,380 |
| Coleman Brothers Company. | 1 | 50 |
| Columbia Counter Company. | 2 | 24 |
| East Boston Gas Company . | 302 | 25,258 |
| Eastern Cold Storage Company | 3 | 76 |
| Edison Electric Illuminating Company | 1,371 | 55,397 |
| Hind, Thomas J. | 50 | 4,663 |
| Lynn \& Boston Railroad Company | 6 | 13,186 |
| Carried forward. | 7,839 | 641,127 |

Street Openings.-Concluded.

|  | Permits. | Feet. |
| :---: | :---: | :---: |
| Brought forward | 7,839 | 641,127 |
| Metropolitan Water and Sewerage Board |  | 15 |
| Murtfeldt, W. A., Company | 129 | 9,178 |
| New England Telephone and Telegraph Company.. | 183 | 11,292 |
| New York, New Haven \& Hartford Railroad Co... . | 6 | 274 |
| Old Colony Street Railway Company. | 2 | 1,901 |
| Postal Telegraph Cable Company. | 2 | 55 |
| Quincy Market Cold Storage Company | 34 | 718 |
| Schoolhouse Commissioners.. | 4 | 1,180 |
| Simpson Brothers Corporation. | 69 | 6,756 |
| Standard Oil Company. | ${ }_{2}$ | 79 |
| Union Freight Railway Company. | 2 | 105 |
| Warren Brothers Company. | 47 | 4,917 |
| Western Union Telegraph Company | 11 | 821 |
| Miscellaneous | 2,556 | 139,696 |
| Emergency, Class A. | 1,177 |  |
| Emergency, Class A, returned as used 868, estimated length. |  | 21,700 |
| Totals. | 12,071 | 839,814 |

Making a total length of openings about 159.053 miles.

Permits other than for street openings have been issued as follows:
Advertising by man wearing hat and coat lettered ..... 19
Cleaning snow from roofs ..... 121
Driving cattle ..... 25
Dumping snow in public alleys ..... 45
Erecting and repairing awnings ..... 3,617
Erecting and repairing buildings ..... 7,487
Emergency permits, Class B ..... 606
Feeding horses on streets ..... 1,671
Loading and unloading goods ..... 50
Moving buildings ..... 5
Painting signs or notices on obstruction fences ..... 7
Placing signs flat on buildings ..... 2,872
Projecting signs and lamps ..... 147
Raising and lowering safes, machinery, etc. ..... 434
Special permits for other purposes ..... 155
Extensions of permits already issued ..... 588
Totals as above ..... 17,829
Totals for street openings ..... 12,071
Totals for all permits ..... 29,900

## Bonds for Permits.

There are on file in the Permit Office 1,458 one thousand $(1,000)$ dollar bonds which are guaranteed by some one of the surety companies authorized to do business in the State of Massachusetts. There are sixty-one (61) twenty thousand $(20,000)$ dollar bonds on file in the office of the City Auditor under which permits are granted by the Permit Office.

## Coal Vaults or Areas Beneath Sidewalks.

There have been twenty (20) permits issued for the construction of areas and coal vaults during the year, as per order of the Board of Aldermen.

There have been sixteen (16) permits issued for sidewalk covers of various kinds over areas.

## Emergency Permits.

The system of handling emergency permits - the purpose of which is to allow the interested parties to do work, in the night or at times when it is impossible for them to obtain regular permits, necessary for the safety of life and property has been improved from year to year and is now in very good shape.

Some difficulty has been experienced by the district foremen in locating openings made by corporations owning underground structures, at street intersections, and in the event of several openings having been made in locating a leak on one permit. This has been obviated by requiring the corporations to give exact locations, by means of ties to permanent bounds in the case of street intersections, and by securing the exact location of each hole made in locating a leak.

## Notices.

There have been 14,628 notices sent to district foremen, corporations, departments and private individuals, directing them to make repairs to defects in the public streets.

There have been 318 notices sent to departments and corporations to perform work under the direction of the Chief Engineer of this department.

Each morning a statement is forwarded to each district foreman giving the locations of all openings for which permits were issued during the previous day.

An inspector is assigned to oversee the construction of all artificial sidewalks, and another is detailed to the examination of places where defects are alleged to exist which have caused. accidents.

The inspectors detailed to serve with the corporations making openings in the streets send a daily report to the Permit Office of all openings and backfillings inspected during the previous twenty-four hours. The salaries of these men are met by the corporations whose work they inspect.

## Electric Poles.

Permits have been issued during the year for the placing of forty-two (42) new poles as per plans on file in the Permit Office and in accordance with orders of the Board of Aldermen.

Permits have been issued for the resetting of one thousand two hundred and seven $(1,207)$ poles which were defective or dangerous.

Permits have been issued for the removal of three hundred and eighteen (318) poles as per order of the Board of Aldermen and Wire Commissioner.

## Plans.

Plans of electric pole locations and locations for electric conduits, gas mains, railway tracks and a large number of miscellaneous matters, such as steam pipes, areas, etc., are kept on file and indexed as follows:


## Sidewalk Defects.

During nine months of this year two inspectors have been examining the sidewalks of the public streets for defects liable to cause accidents to pedestrians. Their inspection covered open areas needing guard rails; area covers smooth or with bull's-eyes out; bulkhead covers and edges; coal-hole
covers, rims or stones smooth or otherwise defective; depressions and stub-toes of various kinds, etc.

The inspectors made 14,741 inspections and under chapter 38 , sections 12,18 and 19 , and chapter 47 , section 54 , of the Revised Ordinances of 1898, and chapter 5, section 3, of the Revised Regulations of 1898, they found 4,156 defective properties.

Notices to the number of 3,756 were mailed to the owners or lessees of the property at which each defect was found and in addition 400 verbal notices were given by the inspectors to the interested parties at the time of inspection. Subsequent inspection shows that in 2,900 cases satisfactory repairs were made and in 1,256 cases they are yet to be made.

During the past two months the work of these inspectors has been so arranged that in each defect reported it becomes the duty of the inspector to follow up the responsible party until repairs are effected.

As a rule more than one defect was reported on each notice, thus making it apparent that at the lowest estimate the inspection has resulted in the repair of 4,000 defects. Probably there have not been such a number of sidewalk defects removed in an equal period during any ten previous years in the history of the city.

Street Numbering.

| , | Whole Streets Num- bered. | Whole Streets Renumbered. | Part Streets Num- <br> bered. | Part <br> Streets Renum- | Estates <br> Num- <br> bered. | Estates Changed | Metallic <br> Figures Supplied |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East Boston . |  | 1 | 3 | 4 | 105 | 47 | 402 |
| Charlestown. |  | 3 | 1 |  | 16 | 59 | 152 |
| City ${ }^{\text {PProper }}$. | 1 | 14 | 1 | 7 | 111 | 161 | 630 |
| South Boston |  |  |  |  | 68 | 4 | 249 |
| Dorchester. | 3 | 3 | 15 | 2 | 684 | 49 | 2,027 |
| Roxbury . |  | 2 | 2 | 1 | 127 | 21 | 389 |
| West Roxbury |  |  | 2 | 2 | 154 | 13 | 475 |
| Brighton | 1 |  | 2 | 1 | 112 | 15 | 326 |
| Totals. | 5 | 23 | 26 | 17 | 1,377 | 369 | 4,650 |

Table Showing the Cost of Asphalt Repairs per Square Yard of Street Surface

| Street. | Limits. | Year | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Albany street. | 80 feet north of Broadway, across Way st. | 1899 |  |  |  |  | * |  |  | 40.009 |  |
| Albany street. | East Concord street to 225 feet north of Massachusetts avenue | 1884 | \$0.117 | \$0.029. | \$0.019 | \$0.090 | \%0.029 | \$0.082 | \$0.055 | . 086 | \$0.124 |
| Arch street. | Franklin street to Milk street | 1893 | . 075 |  | . 065 | . 069 | . 091 | . 057 | . 062 | $\ddagger .082$ |  |
| Arch street. | 200 feet south of Milk street to Franklin st | 1893 |  |  |  |  |  |  |  |  | . 329 |
| Ash street. | Bennet street to Nassau street | 1887 | . 028 | . 128 | . 064 | . 018 | . 033 | $\dagger$ |  |  |  |
| Barton court. | Barton street to Brighton street | 1894 | . 222 | 113 |  |  | $\dagger$ |  |  |  |  |
| Batterymarch street. | Milk street to Liberty square | 1896 |  | * |  |  | 247 | . 004 | . 008 | . 070 | . 030 |
| Beacon street. | Charles street, across Arlington stree | 1891 | . 086 | . 075 | . 024 | . 047 | . 043 | . 048 | . 049 | . 107 | \$. 062 |
| Beacon street. | Charles street to Brimmer street | 1891 |  |  |  |  |  |  |  |  | . 109 |
| Beacon street. | Easterly side of Dartmouth st. to within 150 feet of westerly line of Gloucester street. . | 1892 | . 127 | . 04.9 | . 020 | . 033 | . 060 | . 013 | . 036 | . 063 | . 084 |
| Beacon street. | 150 feet from westerly line of Gloucester street to 78 feet beyond westerly line of Gloucester street | 1898 |  |  |  | * | . 004 | . 006 | . 014 |  | . 010 |
| Beacon street. | 78 feet west of Gloucester street to Massachusetts avenue. | 1893 | . 116 | . 105 | . 016 | . 056 | . 011 | . 093 | . 028 | \$. 001 |  |
| Beacon street. | 78 feet west of Gloucester street to Hereford street. | 1893 |  |  |  |  |  |  |  |  | . 042 |
| Beanet street | 90 feet west of Harrison avenue to 162 feet east of Washington street. | 1887 | . 043 | . 065 | . 030 | . 162 | . 019 | $\dagger$ |  |  |  |


| Bond street... | Hanson street to Milford street... | 1895 |  |  |  |  |  |  |  |  | 037 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boylston street | Easterly side of Berkeley street, across Clarendonstreet | 1897 |  |  | * | . 080 | . 033 | . 070 | . 130 | $\ddagger .157$ | ${ }^{226}$ |
| Brattle square. | Brattle street to Elm street. | 1888 | . 082 |  | . 038 | . 068 |  | . 072 | . 03 | . 037 | 103 |
| Brighton street | Leverett street to Allen str | 1892 | . 230 | . 090 | . 094 | . 136 | 63 | . 127 | . 143 | 324 | . 744 |
| Brimmer street | Beacon street to Pinckney street | 1895 |  | . 030 | . 037 | . 072 | . 060 | . 093 | § |  |  |
| Brimmer street | Beacon street to Byron street | 1895 |  |  |  |  |  |  |  | . 163 | 397 |
| Brimmer street. | Chestrut street to Pinckney street | 1895 |  |  |  |  |  |  | ${ }^{07}$ | . 064 | 211 |
| Broadway | Albany street to 105 feet west of Albany st. | 1899 |  |  |  |  | * | . 359 | . 037 |  |  |
| Castle street | Castle square, ea | 1899 |  |  |  |  | * |  | . 025 |  |  |
| Cazenove street. | Columbus ave. to 45 feet south of Columbus ave., also Columbus ave. intersection... | 1899 |  |  |  |  | * |  |  | 028 |  |
| Central street. | Broad street to Kilby | 1887 | . 003 | . 063 | . 048 | . 239 | . 141 | . 169 | 029 | . 065 | 191 |
| Chambers street | Green street, across Poplar stree | 1894 | . 173 | . 175 | $\dagger$ |  |  |  |  |  |  |
| Chambers street | Brighton street to Charles stre | 1895 |  |  | . 003 | . 063 | . 011 | . 025 | . 062 | . 073 | . 272 |
| Chandler street. | At Castle square | 1899 |  |  |  |  | * |  |  |  |  |
| Charter street | Hanover street, across Unity street | 1894 |  | . 107 | 031 | . 146 | . 159 | . 192 | 148 | 386 | . 616 |
| Cherry street. | Washington street to Shawmut ave | 1892 |  |  | . 029 | . 025 |  | . 047 | . 027 | 108 | 2 |
| Clark street | Hanover street to North street. | 1892 | . 070 | . 035 | . 025 | . 102 | . 033 | . 027 | 064 | . 136 | . 3 |
| Columbus avenue. | Boston \& Albany Railroad Bridge, across Massachusetts avenue. | 1884-99 | . 176 | . 102 | . 125 | . 178 | . 126 | . 169 | $\dagger$ | $\dagger$ |  |
| Columbus avenue. | Massachusetts avenue to 301 feet south of Camden street | 1896 |  | * | . 020 | . 037 | . 123 | . 193 | + |  |  |
| Congress square | Congress square to Congress street |  |  |  |  |  |  |  |  | . 127 | . 007 |

Cost of Trinidad Asphalt Repairs, 1900=1908.-Continued.

| Street. | Limits. | Year | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cooper street | North Margin street, across Endicott street. . | 1887 | \$0.064 | \$0.076 | \$0.030 | \$0.152 | \$0.128 | \$0.051 | \$0.123 | \$0.340 | \$0.339 |
| Cooper street. | Endicott street to Washington Street North, | 1897 |  |  | * | . 189 | . 065 | . 158 | . 226 |  | $\dagger$ |
| Corning street. | Washington street to Shawmut avenue. | 1883-96 |  | * | . 235 | . 237 | . 056 | . 204 | . 202 | . 487 | $\dagger .061$ |
| Court street | Washington street to Court square | 1891-1904 | . 121 | . 238 | . 334 | . 027 | $\dagger$ |  |  |  |  |
| Court squar | Court street to Court street | 1881 | . 021 | . 178 | . 034 | . 063 | $\ddagger .115$ |  |  |  |  |
| Court square | Easterly and southerly side | 1881-94 | . 031 | . 176 | . 074 | . 118 | . 171 | . 107 | . 036 | . 097 | . 191 |
| Dartmouth street | Boylston street to Newbury street | 1894 | . 039 |  | . 007 | §.089 |  |  |  | . 026 | . 067 |
| Dartmouth street. | Buckingham street to 127 feet south of Stuart street. | 1899 |  |  |  |  |  | * | 019 |  |  |
| Davis street. | Washington street to Harrison avenue | 1892 | . 015 |  | . 054 | . 072 | . 010 | . 082 | . 060 | . 081 | . 100 |
| Doa | Kilby street to Broad stre | 1881 | . 040 | . 032 | . 080 | . 198 | . 103 | . 043 |  | . 058 | . 307 |
| Edinboro street. | Essex street to Beach stree | 1895 |  |  | . 010 | . 089 | . 021 | . 113 | . 086 | . 061 | . 068 |
| Exchange place. | Congress street to Kilby street | 1887 | . 026 | . 123 | . 036 | $\dagger$ |  |  |  |  |  |
| Ferdinand street | At Castle square. | 1889 |  |  |  |  |  |  |  |  |  |
| roton street | Washington street to Shawmut avenu | 1892 | . 032 |  | . 040 | . 045 | . 028 |  | . 031 | . 022 | . 045 |
| Hanover avenue | Hanover street to North street | 1892 | . 060 |  | . 016 | . 301 | . 006 | . 060 | . 059 | . 028 | 237 |
| Harrison avenue | East Newton street to East Springfield st | 1888-95 | . 090 | . 043 | . 080 | . 118 | . 017 | . 068 | . 115 | 221 | . 369 |
| Harrison avenue.. | ast Springfield street to 90 feet souther | 1888 |  | . . 043 | . 080 | . 118 | . 017 |  |  | . 195 | . 880 |
| Hollis street. | Tremont street, towards Washington street. | 1891 | . 031 | . 130 | . 036 | . 164 | . 150 | . 051 | . 071 | . 173 | . 092 |

Hanavar atra
Stillman street to Thacher street.
Beach street to Essex street..

$$
\begin{aligned}
& \text { Hanover street to Salem street } \\
& \text { Charles street, across Brimmer }
\end{aligned}
$$

Washington street to Harrison a venue.
Tremont street to Sha wmut avenue.
Chambers street to Charles street.

| Hudson street.. | Beach street to 90 feet north of Curve street (minus Kneeland and Harvard streets intersection). | 1891 | . 155 | . 046 | . 064 | . 101 | . 037 | . 068 | . 132 | . 149 | . 175 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kilby street. | Liberty square. | 1881 | . 006 | . 037 | . 038 | . 028 |  |  |  |  |  |
| Kilby street..... <br> - | Central street to Milk street (including Liberty square) | 1881-98 |  |  |  | * | . 030 | . 056 | .224 | . 149 | §. 010 |
| Laconia street. | Washington street to Harrison avenue | 1896 |  | * | . 042 | . 083 |  | . 027 | . 054 | . 056 | 157 |
| La Grange stre | Tremont street, towards Washington street, | 1897 |  |  | * |  | . 100 | . 068 | . 132 | . 110 | . 180 |
| Lincoln place. | Worcester street to Springfield street...... | 1897 |  |  | * |  |  |  | . 024 |  | 037 |
| Malcolm street. | Mt. Vernon street to Chestnut stree | 1892 |  |  | . 010 | . 019 |  | . 065 |  | . 101 | . 128 |
| Massachusetts avenue. . | Columbus avenue to Tremont street (southerly, roadway) | 1892 | . 045 | . 053 | . 033 | . 058 | . 031 | . 034 | . 019 | . 073 | . 088 |
| Massachusetts avenue.. | Tremont street to Shawmut avenue (southerly roadway) | 1892 | . 045 | . 053 | . 033 | . 058 | . 031 | . 017 | . 015 | . 019 | . 063 |
| Massachusetts avenue.. | Shawmut avenue to Washington street (southerly roadway). | 1892 | . 045 | . 053 | . 033 | . 058 | . 031 | . 013 | . 048 | . 043 | . 200 |
| Moon street. | North square to Lewis | 1891 | . 034 | . 017 | . 010 | . 098 |  | . 000 | . 096 | . 035 | . 150 |
| North Bennet stree | Hanover street to Salem | 1883 | . 140 | . 127 | . 132 | . 044 | $\dagger$ |  |  |  |  |
| North Margin st | Stillman street to Thacher street | 1895 |  |  | . 015 | . 097 | . 015 | . 029 | . 032 | . 008 | . 114 |
| Oxford street. | Beach street to Essex street | 1895 |  | . 010 |  | . 048 | . 006 | . 096 | . 049 | . 076 | . 159 |
| Parkman street | North Anderson st., across Blossom | 1898 |  |  |  | * |  |  | . 007 | . 034 | . 020 |
| Parmenter street | Hanover street to Salem stree | 1893 | . 184 |  | $\dagger$ |  |  |  |  |  |  |
| Pinckney street | Charles street, across Brimmer stre | 1895 |  |  | . 002 | . 113 | . 032 | . 015 | . 089 | . 096 | . 248 |
| Pine street. | Washington street to Harrison avenue | 1896 |  | * |  | . 052 |  | . 081 | . 015 | . 032 | . 037 |
| Pleasant street | Tremont street to Shawmut avenue | 1900 |  |  |  |  |  | , | . 648 | 1.717 | . 314 |
| Poplar street. | Chambers street to Charles street. | 1887-92 | . 097 | . 068 | . 054 | . 128 | . 032 | . 057 | . 050 | . 101 | . 217 |

North square to Lewis street. .

City Document No. 38.
Cost of Trinidad Asphalt Repairs, 1900=1908.- Concluded.



| \% | \% ${ }^{\infty}$ |
| :---: | :---: |
| , | \% \% |
| 융 | 뮹 |
| $\vdots$ |  |
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| $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ |
| :---: | :---: | :---: | :---: |
| $\vdots$ |  |  |  |
| $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ |
| $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ |
| $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ |

1897
 Easterly side of Corey street to Vine street. Vine street to Bunker Hill street. .

Bunker Hill street, 141 feet northerly. Bunker Hill street, across Moulton street.

South Boston.

| D stre | West | 1889 | \$0.016 | 80.048 | \$0.056 | 80.221 | \$0. 032 | \$0.051 | s0. 165 | 80. 137 | 80. 302 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E st | West Third street to Bolton street | 1892 |  |  |  |  | . 053 | . 035 | . 026 |  | 213 |
| Roge | Dorchester street to Preble st | 1891 |  |  |  | . 047 |  |  |  |  | . 074 |
| West Sixth stre | 160 feet east of C street, towards D str | 18 | . 019 |  | 154 | . 178 | 032 | . 073 |  |  |  |
| est Third str | 153 feet west of E street, across E stree | 1892 |  |  | . 031 |  | 054 |  | . 032 | 027 |  |

Roxbury.

| Cabot st | Tremo | 1891 | 80.046 | \$0.022 | 80.027 | 80. 023 | \$0.002 | \$0.019 | \$0.025 | \$0.069 | \$0.078 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cabot street. | sterl | 1892 | . 012 |  | . 010 | . 012 | 006 | . 020 | . 034 |  | . 100 |
| Cabot street. | Easterly side of Vernon street to Linden Park street | 1897 |  |  | * |  | 001 |  | 08 | 013 | 161 |
| Jumbus avenue. | 301 feet south of Cainden st., across Terry st. | 1896 |  |  | . 020 | . 037 | . 123 | . 060 | $\dagger$ |  |  |

Cost of Sicilian Rock Asphalt Repairs, 1900=1908.

| Street. | Limits. | Year Laid. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Acton street. | Washington street to Bradford street | 1896 |  | * | \$0.054 |  | \$0.008 | \$0.010 | \$0.051 | \$0.018 | \$0.129 |
| Albany street. | Easterly side of Stoughton street, across East Concord street. | $1897$ |  |  | * | \$0.185 | . 205 | $\dagger .048$ |  |  |  |
| Ash street. | Oak street, across Nassau street | 1895 | \$0.115 |  | . 196 |  | . 183 | . 029 |  | . 070 |  |
| Avery street. | Washington street to Mason street | 1897 |  |  | * | . 175 |  | $\pm$ | . 099 |  | . 096 |
| Barton street. | Leverett street to Milton street. | 1895 |  | \$0.101 | . 015 |  | . 052 | . 019 | . 035 | . 035 | . 101 |
| Bradford street. | Waltham street to Shawmut avenue | 1897 |  |  | * |  | . 021 | . 001 | . 011 | . 018 | :010 |
| Cobb street. | Washington street to Shawmut avenue | 1897 |  |  | * |  |  | . 042 | . 019 | . 006 | . 008 |
| Decatur street. | Washington street to Harrison avenue | 1892 | . 080 |  | . 098 | . 174 | . 052 | 126 | . 119 | . 187 | . 460 |
| Dwight street. | Shawmut avenue to Tremont street | 1893 | . 015 |  | . 030 |  | . 013 | . 022 | . 005 | . 041 | . 005 |
| Exeter place. | Chauncy street to Harrison avenue | 1897 |  |  | * |  |  | . 046 | . 032 | . 105 | . 008 |
| Fabin street. | Newland street to Ivanhoe street | 1895 |  |  |  |  |  | . 067 |  |  | . 008 |
| Fay street. | Dover street to Harrison avenue | 1894 |  |  | . 099 | 296 | . 048 |  | . 014 | . 020 | . 084 |
| Hämburg street. | Mystic street to Harrison avenue | 1896 |  |  |  | . 035 | . 022 | . 006 | . 023 | . 020 | . 010 |
| Hanover street. . | Tileston street, across Charter street | 1896 |  |  | . 105 | . 179 | . 065 | . 144 | . 146 | . 122 | . 234 |
| Huntington avenue | Boston \& Albany Railroad to Massachusetts avenue. | 1896 |  | * | . 008 | . 013 | . 012 | . 017 | . 015 | . 035 | . 039 |


| Mason street | 213 feet south of West street to 444 | 1894 | . 191 | . 300 | . 099 | . 533 | . 198 | . 256 | . 325 | $\dagger$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tassachusetts avenue. | Washington street to (southerly roadway).................... | 1894 | . 010 |  | . 014 | 19 | . 011 | . 013 | . 035 | 002 | 029 |
| Massachusetts avenue | Harrison avenue to Albany street (southerly roadway) | 1894 | . 010 |  | 014 | . 019 | . 011 | . 034 | . 003 | . 010 | . 055 |
| Mayo street | Castle street to Cobb street | 1897 |  |  | * |  |  | . 065 | . 011 |  |  |
| Meander stree | East Dedham street to Malden street. | 1896 |  |  | . 182 | 014 |  | . 002 |  |  | 015 |
| Motte street. | Washington street to Harrison avenue. | 1892-99 |  | 161 |  |  | . 025 |  |  | 147 | 065 |
| Mystic street | Malden street to East Brookline stree | 1896 |  | * |  | . 046 | . 012 | . 036 | . 016 | 15 |  |
| rth Margin street. | Thacher street, towards Endicott street. | 18 |  |  | * | . 095 | . 027 | . 095 | 015 | 077 | 105 |
| Norwieh st | Mystic street to Meander stree | 1896 |  |  |  | . 027 |  | . 029 | . 015 |  | , |
| street | Washington street to Shawmut avenue | 1896 |  | * | . 043 |  | . 077 | . 040 | . 021 | 030 |  |
| Pemberton square | Front of Suffolk Courthouse | 1894 |  |  |  |  | . 030 | . 008 | 012 | . 002 | . 13 |
| Prince street. | Hanover street to Bennet avenue | 1895 |  |  |  | . 052 | . 190 | . 007 | . 035 | . 038 | . 13 |
| ven | 132 feet south of Castle st., across Cherry | 1898 |  |  |  | * | . 057 | . 069 | 081 | 150 | 198 |
| Taylor street. | Dwight street to Milford street | 1896 |  | * | . 014 |  |  | . 048 | . 020 |  | . 020 |
| more stre | Kne | 1895 |  |  | . 023 |  |  | . 063 | . 030 |  | 026 |

* Guarantee expired in this year.
$\ddagger$ From Washlington street to 79 feet west of Haymarket place repaved with wran bitulithic in this year.
Cost of Sicilian Rock Asphalt Repairs, 1900=1908.-Concluded.

Cost of Seyssel Rock Asphalt Repairs, 1900-1908.

| Stremi. | Limits. | ${ }_{\text {L }}^{\text {Year }}$ Laid. | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Genesee street | Harrison avenue to Albany street. | 1899 |  |  |  |  | * | 80.039 | \$0.007 | 80.016 | \$0.010 |
| son stree | 444 feet south of West street to Avery s | 1899 |  |  |  |  | * |  | 045 | . 097 | . 086 |
| Oswego street. | Harrison avenue to Albany | 1899 |  |  |  |  | * | . 006 | 008 | 009 | :022 |
| street. | Emerald street to Village street | 1897-99 |  |  | * |  |  |  |  | . 023 | . 077 |
| Paul street. | Village street to Tremont street | 1897-99 |  |  | * |  |  | . 015 |  | . 028 | . 094 |
| Pelham street | Washington street to Shawmut avenue | 1897 |  |  | * |  | so. 091 |  | 016 | 013 | . 042 |
| Wateriord street. | Washington street to Shawmut avenue | 1897 |  |  | * |  | . 149 | . 021 | . 089 | . 085 | . 093 |


| Other Asphalt. |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Street. | Limits. | Year | 1900. | 1901. | 1902. | 1903. | 1904. | 1905. | 1906. | 1907. | 1908. |
| Harris street.. | Hanover street to North street (coal tar).... |  | \$0.051 |  | \$0.076 |  | $\dagger$ |  |  |  |  |
| I street. . | East Broadway to East Fourth st. (coal tar). |  | . 264 |  | . 108 | \$0.282 |  | \$0.180 | \$0.049 | \$0.052 | \$0.108 |
| Massachusetts avenue. | Columbus avenue to Tremont street northerly roadway (asphaltina) | 1897 |  |  | * | . 092 | \$0.104 | . 093 | . 151 | $\ddagger$ |  |
| Mt. Vernon street.... | Archway under State House (Limmer rock asphalt) | 1897 |  |  |  |  |  |  |  |  |  |

$\ddagger$ Repaved with bitulithic in this year.
List of Streets Paved with Trinidad Asphalt, January 31, 1909.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Albany street | 80 feet north of Broadway, across Way street. | 105 | 397 | 1899 |  |
| Albany street. | East Concord street to 225 feet north of Massachusetts avenue | 446 | 2,676 | 1.884 |  |
| Andrews street. | East Dedham street to East Canton street. | 216 | 312 | 1899 | Oct. 22, 1909. |
| Arch street. | Milk street to 200 feet south of Milk street. | 200 | 580 | 1907 | July 27, 1917. |
| Arch street. | 200 feet south of Milk street to Franklin street | 226 | 687 | 1893 |  |
| Arlington street | Boylston street to Beacon street | 1,324 | 7,355 | 1901 | June 16, 1911. |
| Ash street. | Bennet street to Nassau street | 232 | 452 | 1905 | Oct. 5, 1915. |
| A von street. | Washington street to Chauncy street | 428 | 1,061 | 1901 | Oct. 29, 1911. |
| Barton court. | Barton street to Brighton street. | 134 | 182 | 1904 | Sept. 7, 1914. |
| Batterymarch street. | Milk street to Liberty square | 150 | 466 | 1896 |  |
| Beacon street. | Charles street to southerly side of Brimmer street. | 508 | 2,288 | 1891 |  |
| Beacon street. | Charles street, across Arlington street, southerly roadwa |  | 2,171 | 1901 | June 29, 1911. |
| Beacon street. | Easterly side of Dartmouth street to within 150 feet of the westerly line of Gloucester street. | 1,733 | 9,219 | 1892 |  |
| Beacon street . | 150 feet east of the westerly line of Gloucester street to 78 feet beyond the westerly line of Gloucester street. | 228 | 1,236 | 1898 |  |
| Beacon street. | 78 feet west of Gloucester street to Hereford street | 316 | 1,641 | 1893 |  |
| Beacon street. | Hereford street to Massachusetts | 706 | 3,766 | 1907 | Sept. 16, 1917 |


| Ash street to Harrison a | 248 | 469 | 1905 | Aug. |
| :---: | :---: | :---: | :---: | :---: |
| Boylston street to St. James avenue | 273 | 678 | 02 | Aug. |
| Easterly roadway, Boylston street to Providence street. |  | 329 | 1906 | Dec. 31, 1916. |
| At Columbus avenue (crosswalk) | 9 | 34 | 1907 | Jan. 8, 1917. |
| Hanson street to Milford street. | 192 | ${ }^{423}$ | 5 |  |
| At Tremont street | 13 | 28 | 1900 | Dec. 2, 1910. |
| Tremont street, across Boylston place. | 357 | 1,395 | 1901 | Oct. |
| Charles street to Arlington street | 868 | 4,792 | 1901 | Cct. 9, 191 |
| Easterly side of Berkeley street, a aross Clarendon street, southerly side. | 50 | 1,285 | 1897 |  |
| Easterly side of Berkeley street, across Clarendon street, northerly side. |  | 1,379 | 1907 | June |
| Clarendon street, across Dartmouth street. | 649 | 2,332 | 1901 | Oct. |
| Brattle street to Elm street | 281 | 670 | 1885 |  |
| Leverett street to Allen street (cobble base) | S45 | 1,865 | 1892 |  |
| Beacon street to the center of Byron street | 116 | 322 | 1895 |  |
| Center of Byron street to Chestnut str | 180 | 536 | 1906 | Nov. 10, 1916. |
| Chestnut street to Pinckney street | 791 | 2,442 | 5 |  |
| Albany street to 105 feet west of Albany street | 105 | 467 | 18 |  |
| At Tremont street. | 12 | 31 | 00 | Dec. 2, 1910 |
| Castle square, easterly |  | 427 | 1899 |  |
| Columbus avenue to 45 feet south of Columbus avenue, also intersection of Columbus avenue. | 45 | 134 | 1899 |  |
| Broad street to Kilby street. | 313 | 869 | 1887 |  |
| Green street, across Poplar street | 460 | 1,022 | 1902 | Oct. 25, 1912. |

Bennet street. .
Berkeley street. Berkeley street. Berwick park. . Bond street. Bosworth street... Boylston street. Boylston street... Boylston street. Boylston ştreet. Boylston street. Brattle square. . Brighton street. Brimmer street. Brimmer street. Brimner street. Broadway Bromfield street. Castle street.. Cazenove street. Central street... Chambers street.
List of Streets Paved with Trinidad Asphalt.- Continued.

| Name. | Location. | Length in Feet | Area. | $\begin{aligned} & \text { Year } \\ & \text { Laid. } \end{aligned}$ | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Chambers street. | Brighton street, across Auburn street. | 152 | 337 | 1895 |  |
| Chambers street. | Auburn street to Charles street (cobble base). | 120 | 267 | 1895 |  |
| Chandler street. | At Castle square |  | 51 | 1899 |  |
| Charles street. | Southerly side of Fruit street, across Allen street. | 706 | 1,804 | 1899 | Oct. 31, 1909. |
| Charter street. | Hanover street, across Unity street (cobble base) | 304 | 586 | 1894 |  |
| Cherry street. | Washington street to Shawmut avenue | 334 | 594 | 1892 |  |
| Claremont park. | At Columbus avenue (crosswalk) | 9 | 34 | 1907 | Jan. 8, 1917. |
| Clark street. | Hanover street to North street (cobble base) | 301 | 579 | 1892 |  |
| Columbus avenue | 134 feet south of Ferdinand street to Boston \& Albany R. R. Bridge | 912 | 3,570 | 1904 | Nov. 25, 1914. |
| Columbus avenue. | Boston \& Albany R. R. Bridge to northerly side of Camden street | 4,083 | 15,742 | 1907 | Jan. 8, 1917. |
| Concord square | At Columbus avenue (crosswalk). | 9 | 41 | 1907 | Jan. 8, 1917. |
| Congress square. | From Congress square to Congress stree | 209 | 400 | 1900 |  |
| Cooper street. | North Margin street to Endicott street. | 163 | 504 | 1887 |  |
| Cooper street. | East side of Endicott street to Washington Street North | 241 | 709 | 1908 | Sept. 16, 1918. |
| Court street | Washington street to westerly side of Old Court House | 296 | 823 | 1904 | July 6, 1914. |
| Court square. | From Court street to 20 feet south on the easterly side. | 20 | 50 | 1904 | July 6, 1914. |
| Court square. | From 20 feet south of Court street on the easterly and southerly sides to the westerly side. | 348 | 1,050 | 1894 |  |
| Court square | From Court street 291 feet on the westerly side of the Old Court House, | 291 | 703 | 1904 | Sept. 26, 1914. |


List of Streets Paved with Trinidad Asphalt.- Continued.

| Name. | Location. | Length in Feet. | Area. | Year <br> Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Harrison a venue. | East Newton street to East Springfield street | 922 | 2,664 | 1888-95 | 7 |
| Harrison avenue | East Springfield street to 97 feet southerly. |  | 140 | 1888 |  |
| Hawes street. | Congress street to Kilby street. | 258 | 254 | 1904 | Nov. 6, 1914. |
| Hayward place. | 9 feet east of Washington street to 85 feet east of Washington street | 76 | 1.72 | 1906 | Sept. 1, 1916. |
| Hayward place. | 85 feet east of Washington street to Harrison a venue | 175 | 395 | 1905 | Aug. 21, 1915. |
| Hollis street. | Tremont street toward Washington street (block base). | 261 | 493 | 1891 |  |
| Holyoke street. | At Columbus avenue (crosswalk) | 9 | 34 | 1907 | Jan. 8, 1917 |
| Hudson street. | Beach street to 90 feet north of Curve street, minus Kneeland street and Harvard street intersections. | 1,407 | 3,938 | 1891 |  |
| Huntington avenue. | Boylston street, across Darimouth street. | 624 | 5,527 | 1901 | Oct. 23, 1911 |
| Huntington avenue, westerly road- | From 685 feet north of West Newton street to 38 feet north of West Newton street. |  | 1,831 | 1907 | Oct. 24, 1917. |
| Kilby street. | Milk street to Central street. | 400 | 1,342 | 1898 | . |
| Kilby street. | Liberty square. |  | 505 | 1881 |  |
| Kilby street. | Central street to State street. | 240 | 672 | 1904 | May 21, 1914. |
| Laconia street. | Washington street to Harrison a venue | 330 | 727 | 1896 |  |
| La Grange street. | Tremont street, towards Washington street. | 181 | 355 | 1897 |  |
| Lincoln place. | Worcester street to West Springfield street. | 217 | 313 | 1897 |  |
| Lynn street | Cooper street to Thacher stree | 294 | 457 | 1906 | Aug. 21, 1916. |


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54 feet south of Mt. Vernon street to Chestnut street (cobble base).
Washington street to Harrison avenue.
Avery street to Tremont street.
Columbus avenue to Tremont street, southerly roadway..
Tremont street to Shawmut avenue, southerly roadway.
Shawmut avenue to Washington street, southerly roadway North square to Lewis street (cobble base) Groen street to South Margin street.. Hanover street to Salem street. Washington street to Shawmut avenue. . At Columbus avenue (crosswalk). Stillman street to Thacher street. Beach street to Essex street (macadam). North Anderson street, across Blossom street. Hanover street to Salem street. Lenox street to Sawyer street. Charles street, across Brimmer street. Washington street to Harrison avenue. Bridge over Boston Elevated Railway. Chambers street to Charles street (cobble base) At Pleasant street (crossing).

List of Streets Paved with Trinidad Asphalt.-Continued.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\dagger$ Public Alley No. 401. | Between Huntington avenue and St. Botolph street, from Irvington street to Garrison street. | 350 | 362 | 1899 | Oct. 2, 1909. |
| $\dagger$ Public Alley No. 402 | Between Huntington avenue and St. Botolph street, from Garrison street to West Newton street. | 358 | 374 | 1899 | Sept. 30, 1909. |
| $\dagger$ Public Alley No. 403 | Between Huntington avenue and St. Botolph street, from West Newton street to Cumberland street | 355 | 370 | 1899 | Sept. 29, 1909. |
| Public Alley No. 414 | Between Beacon street and Marlborough street, from 53 feet east of Massachusetts avenue to Hereford street | 614 | 574 | 1901 | Oct. 24, 1911. |
| Public Alley No. 415 | Between Beacon street and Marlborough street, from Hereford street to Gloucester street. | 398 | 382 | 1901 | Oct. 12, 1911. |
| Public Alley No. 416. | Between Beacon street and Marlborough street, from Gloucester street to Fairfield street. | 524 | 494 | 1901 | Nov. 14, 1911. |
| Public Alley No. 417. | Between Beacon street and Marlborough street, from Fairfield street to Exeter street | 624 | 583 | 1901 | Nov. 29, 1911. |
| $\dagger$ Public Alley No. 419 | Between Beacon street and Marlborough street, from Dartmouth street to Clarendon street. | 575 | 511 | 1899 | Sept. 28, 1909. |
| $\dagger$ Public Alley No. 420 | Between Beacon street and Marlborough street, from Clarendon street to Berkeley street. | 580 | 515 | 1897 | , |
| Public Alley No. 422. | Between Commonwealth avenue and Marlborough street, from Arlington street to Berkeley street. | 631 | 589 | 1902 | Sept. 18, 1912. |
| Public Alley No. 423. | Between Commonwealth avenue and Marlborough street, from Berkeley street to Clarendon street. | 580 | 544 | 1902 | Aug. 26, 1912. |
| Public Alley No. 424. | Between Commonwealth avenue and Marlborough street, from Clarendon street to Dartmouth street. | $575{ }^{\text {' }}$ | 539 | 1902 | April 22, 1912. |


| 1901 | Oct. | $16,1911$. |
| :--- | :--- | ---: |
| 1901 | Oct. | $23,1911$. |
| 1899 | Sept. | $25,1909$. |
| 1898 |  |  |
| 1899 | Nov. | $8,1909$. |
| 1907 | Jan. | $8,1917$. |
| 1901 | Oct. | $23,1911$. |
| 1905 | Sept. | $5,1915$. |
| 1905 | Aug. | $12,1915$. |
| 1895 |  |  |
| 1897 |  |  |
| 1892 |  |  |
| 1892 |  |  |
| 1891 |  |  |
| 1906 | Oct. | $1,1910$. |
| 1900 | Oct. | $1,1910$. |
| 1892 |  |  |
| 1905 | Nov. | $23,1915$. |
| 1895 |  |  |




Between Union Park street and Upton street, from 130 feet east of Tre-
mont street to Shawmut avenue At Columbus avenue (erosswalk)
At Huntington avenue.
Hanover street to Commercial street.
Staniford street, across Norman street.
Poplar street to Leverett street (cobble base)
Lincoln place, towards Shawmut avenue, . Howard street to Court street (cobble base) North street to Moon street (cobble base)..
Washington street to 95 feet westerly
95 feet west of Washington street to Tremont street Washington Street North to Endicott street
Hanover street, across Unity street

Public Alley No. 426 .
Public Alley No. 428 ..
$\dagger$ Public Alley No. 431
Public Alley No. 437.
Public Alley No. 701.
Rutland square. St. James avenue. Salutation street. South Margin street. Spring street... Stevens street.. Stillman stréet. Stoddard street . Sun-court street. Temple place. . $\ddagger$ Temple place. Thacher street. Tileston street . Tileston street.

City Document No. 38.
List of Streets Paved with Trinidad Asphalt.-Continued.

| Name. | Location. | Length in Feet. | Area. | $\begin{aligned} & \text { Year } \\ & \text { Laid. } \end{aligned}$ | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Tremont street. | Scollay square to 23 feet north of Beacon street | 460 | 1,586 | 1900 | Dec. 2, 1910. |
| Tremont stre | 21 feet south of Beacon street to Boylston street. | 2,317 | 8,784 | 1900 | Dec. 2, 1910. |
| Tremont street. | At Castle square | 67 | 774 | 1899 |  |
| Trinity place. | St. James avenue, across Stuart street | 391 | 1,130 | 1899 | Sept. 18, 1909 |
| Trinity place, | Stuart street, across Stanhope street. | 262 | 349 | 1900 | Dec. 1, 1910 |
| Trinity places. | Stuart street, across Stanhope street, northerly side. |  | 408 | 1907 | June 18, 1917 |
| Union Park street. | Washington street to Harrison avenue | 475 | 1,063 | 1902 | Aug. 2, 1912 |
| Unity street. | Charter street to Tileston street | 330 | 500 | 1897 |  |
| Warrenton street. | Eliot street to 380 feet south of Eliot street | 380 | 1,055 | 1891 |  |
| Warrenton street. | 380 feet south of Eliot street to Tremont street (cobble base) | 290 | 730 | 1884 |  |
| Warrenton street. | Shawmut avenue to Washington street (cobble base) | 468 | 910 | 1891 |  |
| Water street | Congress street to Kilby street | 256 | 711 | 1902 | Sept. 16, 1912 |
| Water street. | Liberty square to Broad street | 252 | 682 | 1896 |  |
| Wellington street. | At Columbus avenue (crosswalk) | 9 | 34 | 1907 | Jan. 8, 1917 |
| West street. | At Tremont street (crosswalk) | 22 | 64 | 1900 | Dec. 2, 1910 |
| West Canton street. | At Columbus avenue (crosswalk) | 9 | 34 | 1907 | Jan. 8, 1917 |
| West Rutland square | At Columbus avenue (crosswalk) | 9 | 34 | 1907 | Jan. 8, 1917 |
| West Springfield street | At Columbus avenue (crosswalk) | 9 | 34 | 1907 | Jan. 8, 1917 |
| Wiget street. | Salem street to North Margin street | 259 | 240 | 1897 |  |
| Wigrin street. | Tileston street to North Bennet street... | 108 | 120 | 1905 | Nov, 23, 1915 |

1900 Dec．2， 1910.
1900 Dec．2， 1910.

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$\approx \infty$

## At＇Tremont street（crosswalk）． At Columbus a venue（crosswalk） At Columbus avenue（crosswalk）

East Boston

| Bennington street | Bridge over Boston \＆Albany Railroad | 60 | 507 | 1906 | July 15， 1916. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ＊Curtis street | Bridge over Boston \＆Albany Railroad | 41 | 139 | 1906 | Nov．21， 1916. |
| ＊Maverick street． | Bridge over Boston \＆Albany Railroad． | 38 | 59 | 1907 | Jan．23， 1917. |

Charlestown．

| Austin street． | Seminary place to Lawrence street． | 156 | 451 | 1891 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bunker Hill street． | At Tufts street． |  | 150 | 1897 |  |
| $\dagger$ Charlestown Bridge | Over Fitchburg Railroad． | 61 | 543 | 1899 |  |
| Corey street． | 124 feet north of Moulton street to Moulton street． | 124 | 276 | 1897 |  |
| Joiner street． | Park street to Chelsea street | 175 | 447 | 1906 | Sept．23， 1916 |
| Moulton street． | Easterly side of Corey street to Vine street | 81 | 243 | 1897 |  |
| Moulton street． | Vine street to Bunker Hill street． | 130 | 390 | 1897 |  |
| Tufts street． | Bunker Hill street， 141 feet northerly． | 141 | 415 | 1897 |  |
| Vine street | Bunker Hill street，across Moulton street． | 165 | 670 | 1897 |  |

List of Streets Paved with Trinidad Asphalt.- Concluded.

| Name. | Location. | Length in Feet | Area. | $\begin{aligned} & \text { Year } \\ & \text { Laid. } \end{aligned}$ | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bolton street. | C street to D street. | 517 | 747 | 1905 | Oct. 12, 1915 |
| D street. | West Fifth street to Gold street. | 140 | 513 | 1889 |  |
| Dorchester street. | Easterly side of Vinton street, in front of Methodist Church. |  | 190 | 1904 | Oct. 18, 1914 |
| E street | West Third street to Bolton street. | 111 | 410 | 1892 |  |
| E street. | West Seventh street to West Eighth street | 325 | 542 | 1904 | Oct. 24, 1914 |
| Rogers street. | Dorchester street to Preble street (cobble base) | 365 | 496 | 1891 |  |
| West Sixth street. | C street to D street | 516 | 1,490 | 1905 | Oct. 14, 1915 |
| West Third street. | 150 feet west of E street, across E street | 185 | 769 | 1892 |  |




Easterly side of Guild row to Washington street. .

$$
80 \text { feet east of Cabot street, across Auburn street. . }
$$

$$
22 \text { feet north of Marvin street, across Zeigler street.. }
$$

List of Streets Paved with Sicilian Rock Asphalt, January 31, 1909.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Acton street. | Washington street to Bradford street | 259 | 352 | 1896 |  |
| Arch street. | Summer street to Franklin street | 403 | 1,522 | 1901 | Oct. 12, 1911. |
| Ash street. | Oak street, across Nassau street (cobble base). | 220 | 391 | 1895 |  |
| Avery street. | 79 feet west of Haymarket place to Mason street. | 68 | 60 | 1897 |  |
| Barton street | Leverett street to Milton street | 403 | 683 | 1895 |  |
| Beacon street. | Arlington street to Dartmouth street. | 1,862 | 9,965 | 1901 | June 14, 1911. |
| Boyiston street. | Easterly side of Arlington street to Berkeley street. | 681 | 2,508 | 1900 | Nov. 28, 1910. |
| Bradford street | Waltham street to Shawmut avenue | 600 | 1,270 | 1897 |  |
| Charter street. | Hanover street, across Unity street | 14 | 50 | 1896 |  |
| Clark street. | Hanover street to North street | 18 | 35 | 1896 |  |
| Cobb street. | Washington street to Shawmut avenue. | 347 | 1,041 | 1897 |  |
| Decatur street. | Washington street to Harrison avenue | 370 | 781 | 1892 |  |
| Dwight street. | Shawmut avenue to Tremont street | 716 | 2,075 | 1893 |  |
| East Concord street. | From Albany street 12 feet westerly | 12 | 45 | 1897 |  |
| Essex place. | Tufts street to Essex street | 202 | 348 | 1901 | Oct. 3, 1911 |
| Exeter place. | Chauncy street to Harrison avenue. | 170 | 387 | . 1897 |  |
| Fabin street. | Newland street to Ivanhoe street | 421 | 615 | 1895 |  |
| Fay street. | Dover street to Harrison avenue (cobble base) | 318 | 560 | 1894 |  |


| 1896 |  |
| :---: | :---: |
| 1896 |  |
| 1903 | May 29， 1913. |
| 1896 |  |
| 1901 | Nov．9， 1911. |
| 1899 | Aug．9， 1909. |
| 1901 | Aug．8， 1911. |
| 1901 | Aug．15， 1911. |
| 1894 |  |
| 1894 |  |
| 1901 | Nov．20， 1911. |
| 1897 |  |
| 1896 |  |
| 1901 | Dee．16， 1911. |
| 1899 |  |
| 1896 |  |
| 1896 |  |
| 1896 |  |
| 1902 | Oct．15， 1912. |
| 1897 |  |
| 1896 |  |
| 1896 |  |

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 융合管 응菉沓吕 ส్สํ
List of Streets Paved with Sicilian Rock Asphalt.-Continued.

| Name. | Location. | ${ }_{\text {in }}^{\text {in }}$ Lengtht. | Area. | ${ }_{\text {Year }}^{\text {Year }}$ | Guarantee |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Otter street. | Beacon street to 168 feet north of Beacon street | 168 | 523 | 1901 | Sept. 19, 191 |
| Pemberton square | Front of Suffiolk County Courthouse | 323 | 1,365 | 1894 |  |
| Prince street | Hanover street to 293 feet west of Hanover str | 293 | 654 | 1895 |  |
| * Prince street. | 293 feet west of Hanover street to Salem stree | 213 | 497 | 190 | Dec. 7, 191 |
| Public Alley No. 12. | Poplar street to Public Alley No. 14 | 77 | 68 | 1903 | Sept. 22, |
| Public Alley No. 434.. | Between Commonwealth avenue and Newbury street, from Exeter stree to Dartmouth street. | 555 | 483 | 190 | Oct. 29, 1911. |
| Public Alley No. 436 | Between Commonwealth avenue and Newbury street, from Clarendon street to Berkeley street. | 580 | 544 | 1901 | Oct. 19, 19 |
| Public Alley No. 438. | Between Newbury and Boylston streets, from Arlington street to Berkeley street. | 631 | 589 | 1901 | Oct. 22, 19 |
| Public Alley No. 440 | Between Newbury and Boylston streets, from Dartmouth street to Exete street. | 555 | 529 | 1901 | 5, 1 |
| Public Alley No. 441 | Between Newbury and Boylston streets, from Exeter street to Fairfield street. | 622 | 553 | 1903 | May 25, 19 |
| Public Alley No. 442. | Between Newbury and Boylston streets, from 59 feet west of Fairfield street to 110 feet east of Gloucester street. | 351 | 312 | 1901 | Nov. 29, 1911. |
| Salem street. | Endicott street, across Prince st | 1,142 | 2,235 | 1901 | Nov. 22, 19 |
| Shawmutav | 132 feet south of Castle street, across Cherry street | 327 | 945 | 1898 |  |
| Stoughton street | At Albany stree | 12 | 45 | 1897 |  |
| Taylor street. | Dwight street to Milford street | 196 | 274 | 1896 |  |
| Tufts street. | Kingston street to South street | 485 | 985 | 1901 | Sept. 13, 1911. |
| Tyler street. | Oak street to Harvard street. | 530 | 1,413 | 1901 | Nov. 1, 1911. |
| hitmore str | Kneeland street | 249 | 445 | 1895 |  |

Street Department - Paving Division.
East Boston.


City Document No. 38.
List of Streets Paved with Sicilian Rock Asphalt.- Concluded.

| Name. | Location. | Length in Feet. | Area. | Year <br> Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| * Silver street. | B street to C street. | 522 | 754 | 1901 | Aug. 7, 1911. |
| * Silver street. | C street to D street. | 520 | 751 | 1901 | Aug. 7, 1911. |
| * Tudor street. | C street to D street | 515 | 744 | 1901 | Oct. 12, 1911. |
| West Broadway. . | From 196 feet east of easterly line of Dorchester avenue to A street | 352 | 1,278 | 1892 |  |
| West Broadway. | New England Railroad Bridge, across Gardner place (4-foot gutter). |  | 341 | 1897 |  |
| West Broadway. | Gardner place to 150 feet easterly. | 150 | 648 | 1893 |  |
| West Broadway. | 150 feet east of Gardner place to E street (4-foot gutter). |  | 1,109 | 1897 |  |
| West Broadway | 150 feet west of F street to 267 feet east of F street | 448 | 1,544 | 1897 |  |
| West Broadway.. | 267 feet east of F street to 28 feet west of Dorchester street. | 410 | 1,818 | 1898 |  |


| Commonwealth avenue. | Easterly side of Massachusetts avenue to westerly side of Massachusetts avenue. | 43 | 936 | 1901 | Nov. 20, 1911. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Dudley street. | Easterly side, between Dunmore street and Magazine street |  | 350 | 1902 | Nov. 1, 1912. |
| Huntington avenue | Northerly side of Cumberland street to Massachusetts avenue | 747 | 4,150 | 1896 |  |
| Huntington avenue | Massachusetts avenue to Gainsborough stree | 587 | 3,372 | 1896 |  |
| Ipswich street | Bridge over waterway | 61 | 267 | 1898 |  |
| Massachusetts avenue | Huntington avenue to south side of Commonwealth avenue | 2,336 | 10,869 | 1901 | Nov. 20, 1911. |
| Massachusetts avenue | North side of Commonwealth avenue to 27 feet south of Marlborough street. | 253 | 1,195 | 1901 | Nov. 20, 1911. |
| Public Alley No. 901. | Hemenway to Hemenway street, between Hemenway street and the Fenway. | 573 | 550 | . 1902 | Nov. 6, 1912. |

Brighton.

| Brooks street. | Bridge (over center roadway). |  | 130 | 1902 | May 17, 1912. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Commonwealth avenue.. | Cottage Farm Bridge (over Boston \& Albany Railroad) | 140 | 1,556 | 1896 |  |

## Sicilian Rock Asphalt.

| District. | Under Guarantee. |  | Not Under Guarantee. |  | District Totals. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Length. Feet. | Area. Sq. Yds | Length. Feet. | Area. <br> Sq. Yds. | Length. <br> Feet. | Area. <br> Sq. Yds. |
| City Proper | 12,988 | 35,917 | 10,928 | 27,343 | 23,916 | 63,260 |
| East Boston | 235 | 600 |  |  | 235 | 600 |
| Charlestown | 716 | 1,699 |  |  | 716 | 1,699 |
| South Boston | 4,163 | 6,004 | 3,315 | 10,720 | 7,478 | 16,724 |
| Roxbury | 3,205 | 13,900 | 1,395 | 7,789 | 4,600 | 21,689 |
| Brighton |  | 130 | 140 | 1,556 | 140 | 1,686 |
| Totals. | 21,307 | 58,250 | 15,778 | 47,408 | 37,085 | 105,658 |

List of Streets Payed with Seyssel Rock Asphalt, January 31, 1909.

| Name. | Location. | Length. in Feet. | Area. | Year <br> Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Genesee street. | Harrison avenue to Albany street. | 505 | 1,122 | 1899 |  |
| Mason street. | 449 feet south of West street to Avery street. | 118 | 255 | 1899 |  |
| Milton street. | Brighton street to Spring stree | 308 | 274 | 1899 | Sept. 8, 1909. |
| Oswego street. | Harrison avenue to Albany street | 506 | 1,068 | 1899 |  |
| Paul street. | Emerald street to Village street | 133 | 236 | 1897 |  |
| Paul street. | Village street to Tremont street | 276 | 456 | 1897-99 |  |
| Pelham street. | Washington street to Shawmut avenue | 320 | 693 | 1897 |  |
| Public Alley No. 102 | 23 feet south of Marshall street to Creek square | 182 | 184 | 1899 | Nov. 11, 1909. |
| Public Alley No. 702. | Worcester street to West Springfield street | 222 | 222 | 1899 | Nov. 9, 1909. |
| Public Alley No. 703. | Newland street and Public Alley No. 702 | 116 | 103 | 1899 | Nov. 9, 1909. |
| Waterford street | Washington street to Shawmut avenue | 316 | 544 | 1897 |  |
| Note. - Seyssel rock asphalt guaranteed by Jones \& Meehan. All Seyssel rock asphalt is laid on a cement concret <br> List of Streets Paved with Bermudez Asphalt, January 31, 1909. City Proper. |  |  |  |  |  |
|  |  |  |  |  |  |
| Name. | Location. | Length in Feet. | Area. | Year <br> Laid. | Guarantee Expires. |
| Camden strect. | At Columbus avenue (crosswalk) east and west | 18 | 68 | 1907 | Jan. 4, 1917. |
| Columbus avenue. | Northerly side of Camden street to 301 feet south of Camden street | 335 | 1,340 | 1907 | Jan. 4, 1917. |

Roxbury.

| 26 | 66 | 1907 | Jan. | $4,1917$. |
| ---: | ---: | ---: | ---: | ---: |
| 3,511 | 14,239 | 1907 | Jan. | $4,1917$. |
| 16 | 60 | 1907 | Jan. | $4,1917$. |
| 26 | 66 | 1907 | Jan. | $4,1917$. |
| 9 | 21 | 1907 | Jan. | $4,1917$. |
| 18 | 40 | 1907 | Jan. | $4,1917$. |
| 18 | 46 | 1907 | Jan. | $4,1917$. |
| 9 | 20 | 1907 | Jan. | $4,1917$. |


| .List of Streets Paved with Acme Asphalt, January 31, 1909. City Proper. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Name. | Location. | $\begin{aligned} & \text { Lengeth } \\ & \text { in Feet. } \end{aligned}$ | Area. | Year Laid. | ${ }_{\text {Guarantee }}^{\text {Exices }}$ |
| Corring street. | Shawmut avenue to Washington stree | 338 | 734 | 1908 | Nov. 25, 1918 |
| East Boston. |  |  |  |  |  |
| * Porter street, | Bridge over Boston \& Albany Railroad. | 37 | 128 | 1907 | Oct. 19, 1917 |
| * Prescott street. | Bridge over Boston \& Albany Railroad.. | 36 | 125 | 1907 | Oct. 19, 1917 |
| * Saratoga street. | Bridge over Boston \& Albany Railroad. | 95 | 180 | 1907 | Sept. 16, 1917 |

Note. - Acme asphalt marked thus * guaranteed by W, A. Murtfeldt Company, otherwise by the Warren Brothers Company.
List of Streets Paved with American Rock Asphalt, January 31, 1909.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Beacon street (City Proper). | Northerly side of Brimmer street, across Arlington street. | 358 | 1,486 | 1908 | July - 3, 1918. |
| K street (South Boston) | East Fourth street, across East Sixth street | 600 | 2,113 | 1906 | Sept. 14, 1916. |
| Kilby street (City Proper) | East side from Milk street, across Central street |  | 1,540 | 1908 | Aug. 31, 1918. |

Note.- American rock asphalt guaranteed by Jones \& Meehan.
List of Streets Paved with Limmer Rock Asphalt.

| - Name. | Location. | Length in Feet. | Area. | Year <br> Laid | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mt. Vernon street (City Proper). | Archway under State House | 164 | 455 | 1897 |  |
| Sumner street (East Boston).. | Bridge over Boston \& Albany Railroad. | 38 | 187 | 1908 |  |

> Note. - Limmer rock asphalt guaranteed by W. A. Murtfeldt Company.
List of Streets Paved with Coal Tar Composition.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ashburton place (City Proper) | 55 feet east of Bowdoin street to Bowdoin street | 55 | 128 | 1908 |  |
| I street (South Boston) | East Broadway to East Fourth street | 272 | 1,027 | 1889 |  |
| Ivanhoe street (City Proper). | West Dedham street to West Canton street | 216 | 312 | 1906 |  |
| Malcolm street (City Proper). | Mt. Vernon street to 54 feet south of Mt. Vernon street | 54 | 46 | 1908 |  |

Summary of all Asphalts.

| Kind. | Under Guarantee. |  | Not Under Guarantee. |  | Totals. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Length. Feet. | Area. <br> $S q . Y d s$. | Length. <br> Feet. | Area. <br> $S q . Y d s$. | Length. <br> Feet. | Area. <br> $S q . Y d s$. | Length. Miles. |
| Trinidad. | 38,800 | 114,063 | 29,106 | 81,926 | 67,906 | 195,989 | 12.86 |
| Sicilian rock. | 21,307 | 58,250 | 15,778 | 47,408 | 37,085 | 105,658 | 7.02 |
| Seyssel rock. | 828 | 783 | 2,174 | 4,374 | 3,002 | 5,157 | 0.57 |
| Bermudez. | 3,986 | 15,966 |  |  | 3,986 | 15,966 | 0.76 |
| Acme. | 506 | 1,167 |  |  | 506 | 1,167 | 0.10 |
| American rock | 958 | 5,139 |  |  | 958 | 5,139 | 0.18 |
| Limmer rock. | 38 | 187 | 164 | 455 | 202 | 642 | 0.04 |
| Coal tar. |  |  | 597 | 1,513 | 597 | 1,513 | 0.11 |
| Totals. | 66,423 | 195,555 | 47,819 | 135,676 | 114,242 | 331,231 | 21.64 |


City Proper.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Albany street. | Northerly side of Stoughton street, across East Concord street (laid on existing concrete base) | 309 | 1,854 | 1905 | Dec. 2, 1915. |
| Albany street. | 225 feet north of Massachusetts avenue to Massachusetts avenue | 225 | 1,350 | 1905 | Nov. 3, 1915. |
| Allen street. | Charles street to Chambers str | 1,297 | 3,556 | 1905 | Sept. 9, 1915. |
| Ashburton place | Somerset street to 55 feet east of Bowdoin street | 285 | 682 | 1904 | Aug. 17, 1914. |
| Belvidere street | West Newton street to 195 feet west of Falmouth street | 317 | 1,116 | 1903 | April 25, 1913. |
| Berkeley street. | Boylston street to Commonwealth avenue | 582 | 2,587 | 1903 | May 22, 1913. |
| Berkeley street. | Commonwealth avenue to Marlborough street | 280 | 1,245 | 1903 | May 22, 1913. |
| Berkeley street. | Marlborough street to Beacon street | 264 | 1,173 | 1903 | May 22, 1913. |
| Berkeley street. | Tremont street to Columbus avenu | 1,195 | 4,663 | 1906 | Dec. 14, 1916. |
| Bowdoin street. | Ashburton place to Cambridge street. | 854 | 2,259 | 1902 | Oct. 23, 1912. |
| Boylston street. | Dartmouth street to 205 feet east of Hereford street | 1,999 | 7,152 | 1904 | Nov. 18, 1914 |
| Clarendon street. | Boylston street to Commonwealth avenue. | 582 | 2,336 | 1905 | Aug. 21, 1915. |
| Clarendon street | Commonwealth avenue to Beacon street. | 580 | 2,320 | 1905 | Aug. 21, 1915 |
| Dartmouth street. | Southerly side of Newbury street to Commonwealth avenue | 326 | 2,536 | 1903 | July 13, 1913. |
| Dartmouth street. | Commonwealth avenue to Beacon street. | 579 | 4,503 | 1903 | July 13, 1913 |
| Emerald street | Castle street to Dover stre | 912 | 2,639 | 1904 | July 27, 1914 |
| Florence street | Washington street to Harrison a venue | 352 ' | 704 | 1906 | Sept. 8, 1916 |
|  |  | 233 | 377 | 1906 | Oct. 23, |

July 17， 1912.













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898 $\stackrel{\circ}{8} \stackrel{5}{-1}$ $\stackrel{H}{\dot{F}}$ $\stackrel{8}{\circ} \stackrel{8}{\circ}$
 $\vdots$

 Columbus avenue to Providence Division，N．Y．，N．H．\＆H．R．R． 213 feet south of West street to 449 feet south of West street．．．．．．．．．．．
Southerly side of Beacon street to Harvard bridge．．．．．．．．．．．．．．．．．．．．． 213 feet south of West street to 449 feet south of West street．．．．．．．．．．．． North side of East Springfield street to Northampton street． 9 feet south of Dartmouth street to bridge over B．\＆A．R．R． Chambers street to Blossom street． Lewis street to Fleet street． North street to Moon street． Harrison avenue to Albany street．．．．
Garden Court street to Hanover street． Beach street to Kneeland street Kneeland street to Harvard street．． Oak street to Curve street． Columbus avenue to Huntington avenue ． Huntington avenue across Belvidere street Tremont street to Columbus avenue． East Boston．


Hancock street．． Hancock street． Harrison avenue． Huntington avenue．． Mason street．． Massachusetts avenue． Massachusetts avenue Massachusetts avenue McLean street Moon street． ． North square． Oneida street． Prince street． Tyler street． Tyler street． Tyler street． West Newton street West Newton street West Newton street
List of Streets Paved with Bitulithic.- Concluded.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bowen street. | E street to F street. | 515 | 744 | 1903 | May 22, 1913. |
| Dorchester street.. | Broadway to Eighth street (minus intersection at Fourth street, Fifth street and Eighth street). | 1,324 | 5,865 | 1905 | Sept. 20, 1915. |
| E street. | South side of West Fourth to West Broadway | 333 | 1,221 | 1903 | June 2, 1913. |
| G street. | 110 feet north of East Sixth street to 178 feet north of East Seventh street. | 230 | 828 | 1905 | July 3, 1915. |
| Silver street. | A street to B street | 500 | - 750 | 1903 | June 4, 1913. |
| Silver street | 225 feet west of E street to E street | 225 | 325 | 1903 | June 2, 1913. |
| Thomas park. | Around Telegraph hill | 2,056 | 7,042 | 1905 | July 3, 1915. |
| West Broadway. | Intersection at Dorchester street | 87 | 250 | 1905 | Sept. 20, 1915. |
| West Fourth street. | E street to 207 feet west of E street | 207 | 759 | 1903 | June 2, 1913. |



2, 1916.
 $\stackrel{\oplus}{\stackrel{\circ}{-}}$






Note. - Bitulithic is guaranteed by Warren Brothers Company.

| District. | Length. <br> Feet. | Area. <br> Square Yards |
| :---: | :---: | :---: |
| City Proper. | 18,976 | 71,336 |
| East Boston. | 180 | 620 |
| South Boston. | 5,477 | 17,784 |
| Roxbury.. | 8,037 | 25,374 |
| Totals. | 32,670 | 115,114 |

City Document No. 38.
List of Streets Paved with Wood Blocks, January 31, 1909.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Atlantic avenue | 811 feet south of Kneeland street to 1,263 feet south of Kneeland street (bridge) | 452 | 1,996 | 1906 |  |
| Avery street. | At Washington street (crossing). | 12 | 8 | 1906 | Nov. 23, 1916. |
| Avon street. | At Washington street (crossing) | 9 | 20 | 1906 | Nov. 23, 1916. |
| Beacon street. | Massachusetts avenue to Raleigh street | 1,527 | 8,145 | 1901 | Oct. 7, 1911. |
| Boylston street | Boylston place across Charles street | 433 | 1,690 | 1901 |  |
| Charles street. | At Boylston street | 30 | 243 | 1901 |  |
| Church street. | Boylston street to Providence street | 153 | 542 | 1908 | Nov. 9, 1918. |
| $\dagger$ Court street. | At Washington street (crossing) | 9 | 27 | 1908 | Nov. 21, 1918. |
| $\dagger$ Court avenue | At Washington street (crossing) | 7 | 8 | 1908 | Nov. 21, 1918. |
| $\dagger$ Cornhill court. | At Washington street (crossing) | 9 | 8 | 1908 | Nov. 21, 1918. |
| Eliot street. | East side Pleasant street to Columbus a veriue | 163 | 800 | 1907 | Nov. 30, 1917. |
| Harvard Bridgè. | Southerly abutment to center of draw (plank base) | 978 | 5,542 | 1901 | Dec. 1, 1911. |
| Hayward place. | Washington street to 9 feet easterly (crossing) | 9 | 20 | 1906 | Nov. 23, 1916. |
| Masou street | At West street (crossing). | 6 | 14 | 1908 | Sept. 19, 1918. |
| Newbury street | Fairfield street to 205 feet | 750 | 3,000 | 1901 | Nov. 2, 1911. |


| Park square | Boylston street to south side of Eliot street | 482 | 4,100 | 1907 | Nov. 30, 1917. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pleasant street. | Eliot street to Park square. | 93 | 425 | 1907 | Nov. 30, 1917. |
| Providence street. | 134 feet east of Church street to Park square | 141 | 725 | 1907 | Nov. 30, 1917. |
| Providence street. | 134 feet east of Church street, across Church street | 165 | 512 | 1908 | Nov. 10, 1918. |
| * Public Alley No. 442. | Between Newbury street and Boylston street, from Gloucester street to 110 feet east of Gloucester street. | 110 | 98 | 1901 | Nov. 29, 1911. |
| $\dagger$ State street. | Washington street to Devonshire street | 115 | 530 | 1908 | Dec. 4, 1918. |
| Summer street. | Washington street to Hawley street | 234 | 990 | 1908 | Oct. 17, 1918. |
| Tremont street. | 23 feet north of Beacon street to 21 feet south of Beacon street | 65 | 231 | 1900 | Dec. 2, 1910. |
| Tremont street. | 18 feet north of Park street to southerly street line of Temple place (on the westerly side) |  | 1,064 | 1900 | Dec. 2, 1910. |
| Washington street | Milk street to Beach street | 2,279 | 8,660 | 1906 | Nov. 23, 1916. |
| $\dagger$ Washington street | Cornhill to 78 feet south of Court avenue | 509 | 1,475 | 1908 | Nov. 21, 1918. |
| Washington street. | South side Milk street to 78 feet south of Court aven | 538 | 1,860 | 1907 | June 26, 1917. |
| Water street. | Devonshire street to Congress street | 213 | 956 | 1907 | July 12, 1917. |
| West street. | Washington street to Tremont | 463 | 1,126 | 1908 | Sept. 19. 1918. |

Dorchester.

| Washington street | Moultrie street to Centre street. | 182 | 850 | 1907 | Aug. 15, 1917. |
| :---: | :---: | :---: | :---: | :---: | :---: |

List of Streets Paved with Wood Blocks.—Concluded.

| Name. | Location. | Length in Feet. | Area. | Year Laid. | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Massachusetts avenue. | Bridge over Boston \& Albany Railroad. | 75 | 500 | 1908 |  |
| Newbury street. | 205 feet east of Hereford street to Hereford street | 205 | 820 | 1901 | Nov. 12, 1911. |
| $\ddagger$ Newbury street | Easterly side of Hereford street to Massachusetts avenue. | 705 | 2,820 | 1903 | Oct. 7, 1913. |


| Summary of Wood Block. |  |  |
| :---: | :---: | :---: |
| District. | Length. Feet. | Area. <br> Square Yards. |
| City Proper. | 9,954 | 44,815 |
| Roxbury. | 985 | 4,140 |
| Dorchester. | 182 | 850 |
| Totals. | 11,121 | +9,805 |

List of Streets with Cement Pavement, Janúary 31, 1909.

| Name. | Location. | Length in Feet | Area. | Year | Guarantee Expires. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| * Main street (Charlestown). | Bridge over Boston \& Maine Railroad to Somerville line. | 139 | 672 | 1906 | Dec. 8, 1911. |
| * Rochester street (City Proper) | Harrison avenue to Albany street. | 508 | 1,129 | 1907 | Nov. 23, 1912 |
| $\dagger$ Zeigler street (Roxbury)..... | Washington street to Warren street. | 315 | 946 | 1908 | Nov. 18, 1913. |

Cement pavement marked thus * guaranteed by Simpson Brothers Corporation; thus $\dagger$ guaranteed by R. S. Blome Company.
Summary of all Smooth Pavements.

| Kınd. | Length <br> Feet. | Length. <br> Miles. | Area. <br> Square Yards |
| :---: | :---: | :---: | :---: |
| Asphalt. | 114,242 | 21.64 | 331,231 |
| Bitulithic. | 32,670 | 6.19 | 115,114 |
| Wood block. | 11,121 | 2.10 | 49,805 |
| Cement. | 962 | 0.18 | 2,747 |
| Totals. | 158,995 | 30.11 | 498,897 |

## PROPERTY IN CHARGE OF THE PAVING DIVISION.

## South Boston.

Columbia road, corner H street, stable, carriage house, shed, tool house and office, built by the city on land containing 12,017 square feet, rented from William H. Hart.

Columbia road, corner of Hamlin street, lot of land used for storage purposes, containing 6,710 square feet, rented from Charles P. Mooney, agent.

## East Boston.

Chelsea street, Nos. 492 and 494, wharf property, containing 118,584 square feet (L 3,117), purchased in 1897 from Francis S. Lally. This property is at present not in use.

East Eagle street, corner Glendon street, sheds, stable and office building, erected by the city on wharf property containing 326,700 square feet, leased in 1900 from Blodgett \& Whidden for a term of ten years. This property is used jointly with the Sewer, Sanitary and Street Cleaning and Watering Divisions.

## Charlestown.

Medford street, foot of Elm street, wharf property, containing 44,194 square feet (Sur. Prog. 968), owned by the city. Upon this lot are a shed, stable and office building.

## Brighton.

Union street, opposite Shepard street, lot of land containing 37,000 square feet, owned by the city. This lot is at present not in use.

Chestnut Hill avenue, ledge lot containing 569,776 square feet (L 1,630), purchased in 1882 by the city. Upon this lot are stone crusher, stable, shed and office building.

## West Roxbury.

Child street, lot of land containing 43,024 square feet, owned by the city. Upon this lot are sheds, stable and office building.

Mt. Vernon street, near Pleasant street, lot of land containing 16,275 square feet, belonging to the Schoolhouse Commission. Upon this lot is a stable and office building.

Morton street, near Canterbury street, lot of land containing 14,484 square feet, owned by the city and used for storage purposes.

Rosemary street, lot of land used for storage purposes, containing 3,780 square feet, rented from Edward Cook.

## Dorchester.

Hancock street, opposite Bowdoin street, lot of land known as the almshouse lot, containing 104,132 square feet, which belonged to the town of Dorchester at the time of annexation. Upon this land are two stables, office, shed and tool house.

Downer avenue, lot of land containing 35,300 square feet, was purchased in 1871 to protect the almshouse lot.

Codman street, ledge lot containing 299,000 square feet, was purchased in 1870. Upon this lot is a shed containing steam engine and stone crusher, also a stable and tool house - 111,423 square feet additional bought in 1907 by the city.

Brush Hill road, Milton, lot of land containing 64,523 square feet, leased May 13, 1843, by the town of Dorchester for a term of 999 years.

Lot of land adjoining above, containing 30,000 square feet, owned by the City of Boston. These lots are not now in use.

Magnolia street, near Bird street, lot of land containing 81,068 square feet, was purchased by the town of Dorchester in 1867. This lot is not now in use.

## Roxbury.

Highland street, lot of land containing about 72,000 square feet, owned by the city. Upon this lot is a large brick stable erected in 1873-74 and used by the Sanitary and Paving Divisions; also a brick building used as a blacksmith shop and a shed for storage purposes.

Washington street, corner Dimock street, lot containing 134,671 square feet, owned by the city. Upon this lot are buildings containing steam engine, stone crusher and scales.

## South End.

Albany street, opposite Sharon street, wharf lot, containing 89,224 square feet. Upon this lot are stables, office, blacksmith and carpenter shops. Wharf lot adjoining above, containing 39,511 square feet, used for storage purposes. Both these wharves are owned by the city.

Massachusetts avenue, near Magazine street, lot of land containing 317,322 square feet, rented from the New York, New Haven \& Hartford Railroad Company and used for storage purposes.

## Back Bay.

Hereford street, near Boylston street, lot of land containing 28,020 square feet, owned by the city. Upon this lot are a stable, shed and office building.

## North End.

Commercial street, No. 521, wharf lot, containing 22,555 square feet, owned by the city. Upon this lot are a stable, shed and office building.

Atlantic avenue, opposite Oliver street, wharf lot, containing 21.054 square feet, placed in charge of the Paving Division

- May 18, 1874. This property is now used by the Sanitary Division.

Atlantic avenue, opposite Oliver street, wharf property, containing 36,460 square feet, leased from J. H. Hecht on February 19, 1898, for ten years. This lease is held by the Sanitary Division, to which the Paving Division pays for storage purposes the sum of $\$ 5,200$ per year.

Revere street, wharf lot, containing 20,013 square feet, leased from J. J. Costello on July 20, 1899, for a term of ten years, for storage purposes. Portion of this lot is used by the Sewer Division.
List of Contracts from February 1, 1908, to January 1, 1909, Made by the Street Department. Paving with Wood Blocks.


[^10]Explanation of Letters.
Furnishing and laying wood block paving and guaranteeing the same for a period of ten (10) years after completion. Concrete base for wood block paving and crosswalks and brows.
Granite block paving with pitch joints.
Preparing site.
Preparing site.
Excavating and setting edgestonos.
Excavating and laying brick sidewa
Granite block paving with gravel joints.
(H) Flagging crosswalks with pitch joints.
Paving with Asphalt.


| ${ }^{1}$ Corning street, between Washington street and Shawmut a venue. | Warren Brothers Company . | Oct. 14, 1908 | Completed Nov. 26, 1908. |  | $\$ 1,875 \quad 43$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{1}$ Advertised <br> (AA) Furnishing and layi <br> (A) Furnishing and lay years after3comple <br> (B) Laying granite bloc <br> (D) Furnishing and lay <br> (E) Excavating and set <br> (F) Excavating and lay <br> (G) Laying granite blo <br> (H) Laying flagging cro <br> (I) Furnishing and lay years after comp | ad a warded to lowest bidder. <br> g a 2 -inch wearing surface on g a 2 -inch wearing surface a ion. <br> paving and crosswalk flaggi <br> g extra cement concrete bas <br> $g$ extra bituminous binder. <br> ing edgestones. <br> ng brick sidewalks. <br> paving with gravel joints. <br> swalks with gravel joints. <br> g a $1 \frac{1}{2}$-inch wearing surface <br> tion. | Explanation existing granite 1 -inch binder with pitch join <br> a a $1 \frac{1}{2}$-inch bind airing Aspha | merican rock a <br> Letters. <br> ocks and guara existing concr , including pav on existing co Pavement | $\dagger$ Acme asphalt. <br> teeing same for a period of five (5) years after e base and guaranteeing same for a period g blocks barred up. <br> crete base and guaranteeing same for a pcrio | ompletion. of ten (10) <br> of ten (10) |
| Contract. | A warded to | Dated. | Progress of Work. | Estimated Cost. | Amount <br> Expender in 1908. |
| ${ }^{1}$ Repairing asphalt pavement.... | Warren Brothers Company. | Feb. 14, 1908 | Completed. | $\$ 15,000$; wearing surface and bituminous binder, $\$ 1.73$ per square yard; extra bituminous binder, $\$ 7.50$ per cubic yard; concrete base, $\$ 0.75$ per square yard | \$15,793 81 |

${ }^{1}$ These repairs are guaranteed for a period of three (3) years after completion.
Street Construction under Chapter 323 of Acts of 1891, or Special Acts or Amendments Thereto.

| Contract. | Awarded to | Dated. | Progress of Work. | Estimated Cost. | Amount Expended in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{1}$ Harlem street, between Glenway and Greenwood streets. | James Doherty | June 22, 1908 | Completed Sept. 19, 1908... | \$1,788 60 | \$1,799 77 |
| ${ }^{1}$ Larkin street, between Hampden and Adams streets | Wm. J. Rafferty Company.. | June 22, 1908 | Completed Aug. 15, 1908.... | 1,332 70 | 1,396 71 |
| ${ }^{1}$ Bernard street, between Talbot avenue and New England Railroad. | William J. Barry | June 23, 1908 | Completed Sept. 9, 1908.... | 5,868 65 | 5,541 88 |
| ${ }^{1}$ Corona street, between Bowdoin street and Geneva avenue. | William J. Barry . . . . . . . . . | June 23, 1908 | Completed Oct. 14, 1908.... | 5,095 15 | 4,848 31 |
| ${ }^{1}$ Dakota street, between Geneva avenue and Greenbrier street | William J. Barry | June 23, 1908 | Completed Oct. 15, 1908.... | 8,064 35 | 7,466 91 |
| ${ }^{1}$ Cotton street, between Walter and Fairview streets | Peter F. Connolly | July 3, 1908 | Completed Oct. 22, 1908. | 4,355 10 | 4,081 47 |
| ${ }^{1}$ Evergreen street, grading from South Huntington avenue about 443 feet easterly <br> ${ }_{2}^{2}$ Avenue Louis Pasteur. | Mark H. Lynch <br> William J. Barry | Dec. 9,1908 <br> Oct. 12,1908 | Unfinished <br> Unfinished | $\begin{array}{rl} 1,200 & 00 \\ 750 & 00 \end{array}$ | $45135$ <br> Nothing. |
| ${ }^{1}$ Old Colony avenue and part of D and West Ninth streets, between Dorchester avenue and Dorchester street. | Fred S. \& A. D. Gore Corporation. | Oct. '1, 1908 | Unfinished. | 21,109 20 | 3,756 79 |

[^11]* Artificial Stone Sidewalks.

${ }^{1}$ In vitation bids and awarded to lowest bidder.
Furnishing and Laying Artificial Stone Sidewalks. $\ddagger$

| Contract. | Awarded to | Dated. | Progress of Work. | Estimated Cost. | Amount <br> Expended <br> in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| *1 Samoset street, between Centre street and Welles avenue. | Jeremiah J. Sullivan. | May 26, 1908 | Completed June 24, 1908 | 7,650 square feet @ \$0.175....\$1,3,38 75. | \$1,338 40 |
| *1 Park View street. between streets Hutchings and Seaver streets............ | Robert Eagar, Jr. | May 26, 1908 | Completed July 7, 1908. | 3,470 square feet (0) $0.175 \ldots \ldots 6{ }^{\text {a }}$ 25.. | 83353 |
| ${ }^{2}$ Bay State road at No. 191, | Simpson Bros. Corporation | May 1, 1908 | Completed. | 7700 | 7700 |
| $\dagger^{1}$ Gainsborough street, between St. Stephen and Hemenway streets. | Robert Eagar, Jr. | June 29, 1908 | $\begin{aligned} & \text { Completed } \\ & \text { Aug. } 10,1908 . \end{aligned}$ | 5,370 square feet @ $0.135 \ldots . .72495$. | 70457 |
| ${ }^{* 1} \begin{gathered}\left.\text { Norton street, } \begin{array}{rl}\text { between } \\ \text { Bowdoin and Speedwell }\end{array}\right]\end{gathered}$ streets. | W. A. Murtfeldt Company.... | July 15, 1908 | $\begin{gathered} \text { Completed } \\ \text { Aug. 31, } 1908 . \end{gathered}$ | 6,020 square feet @ $0.1665 \ldots 1,00233$. | 1,007 99 |
| *1 South Huntington avenue, between Huntington avenue and Heath street, | Simpson Bros. Corporation | July 17, 1908 | $\begin{aligned} & \text { Completed } \\ & \text { Aug. } 3,1908 \end{aligned}$ | 1,735 square feet (1) 0.1675 ... $29061 .$. | 29296 |
| Walter and Fairview sts. <br> *1 Cotton street. between | Thomas A. Nolan . | July 23, 1908 | $\begin{gathered} \text { Completed } \\ \text { Sept. 24, } 1908 . \end{gathered}$ | 6,460 square feet @ $0.16 \ldots \ldots .1,03360 .$. | 1,095 70 |
| *1 Corona street, between Geneva avenue. . ....... | Jeremiah J. Sullivan | Sept. 3, 1908 | Unfinished. | 10,600 square feet © $0.149 \ldots \ldots 1,579$ 40.. | 87449 |
| *1 Dakota street, between Greenbrier street and Geneva avenue...... | Jeremiah J. Sullivan | Sept. 16, 1908 | Completed Nov. 28, 1908 | 17,900 square feet @ $0.15 \ldots \ldots .2,68500$. | 2,537 61 |
| ${ }^{2}$ Homestead street at No. | W. A. Murtfeldt Company . | Nov. 3, 1908 | Completed. | 7500. | 750 |
| $\dagger^{1}$ Summer street. south side, between Melcher and A streets. . . . . . . . . . . . | Warren Bros. Company . . . | Nov. 16, 1908 | Unfinished. | 3,330 square feet @ 0.175.... 58275. | 21700 |

[^12]For additional items in this contract see Pa Ping and Regulating.
T These walks are guaranteed by a surety company bond for ten
2
Paving and Regulating.

| Contract. | A warded to | Dated. | Progress of Work. | Estimated Cost as per Estimated Quantities, not Including Materials Furnished by the City. | Amount Expended in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\dagger^{1}$ Gainsborough $\begin{gathered}\text { street, } \text { between } \\ \text { Stephen and } \\ \text { Hemenway streets } . . .\end{gathered}$ | Robert Eagar, Jr. | June 29, 1908 | Completed Aug. 10, 1908. | \$113 32 | \$11881 |
| ${ }^{1}$ Summer street, from bridge over A H. R. R street to bridge over N. Y., N. H. \& | James P. Collins | July 14, 1908 | Completed Aug. 14, 1908.. | 81280 | 81040 |
| ${ }^{1} \begin{gathered}\text { Eliot street, between Tremont street and } \\ \text { Pleasant street. . . . . . . . . . . . . . . . . }\end{gathered}$ | John I. Fitzgerald. | Aug. 6, 1908 | Completed Oct. 17, 1908. | 8,908 05 | 6,972 95 |
| ${ }^{1}$ Kueeland street, between Washington street and Harrison avenue. | John Donley Company | Aug. 6, 1908 | Completed Oct. 14, 1908. | 5,009 65 | 3,864 00 |
| ${ }^{1}$ A street, from Congress street to about 175 feet south of Binford street. | Fred S. \& A. D. Gore Corp. . . . | Aug. 6, 1908 | Completed Oct. 9, 1908.. | 22,755 30 | 23,138 57 |
| ${ }^{1}$ Scollay square and Court street, between Cornhill and Sudbury street.......... | John I. Fitzgerald. | Oct. ${ }_{0}^{13,1908}$ | Completed Dec. 19, 1908. | 11,171 70 | 9,631 43 |
| $\left.{ }^{1} \begin{array}{c}\text { Bromfield street, between Tremont and } \\ \text { Washington streets................... }\end{array}\right]$ | John I. Fitzgerald | Oct. 14, 1908 | Completed Nov. 9, 1908.. | 4,321 35 | 4,333 36 |
| ${ }^{2}$ Esmond street, between Blue Hill avenue and Bradshaw street | Daniel E. Lynch | Oct. 20, 1908 | Completed Dec. 17, 1908.. | 52850 | *395 25 |
| ${ }^{2}$ Broad street, between Custom House street and India square. . | Daniel E. Lynch | Nov. 3, 1908 | Completed Dec. 7, 1908. | 60500 | * Nothing. |
| ${ }^{1}$ Chelsea street, from 40 feet south of Scott's court to Chelsea Bridge South. | Cornelius J. Duggan | Nov. 9, 1908 | Completed Dec. 4,1908.. | 74840 | 70008 |
| $\dagger^{1}$ Summer street, south side, between Melcher and A streets. | Warren Bros. Corporation.... | Nov. 16, 1908 | Unfinished | 14425 | 15120 |
| ${ }^{2}$ Zeigler street, between Washington and Warren streets. | Rudolph S. Blome Company. | Oct. 12, 1908 | Completed Nov. 18, $1908 .$. | 2,469 75 | 2,538 82 |

[^13]Sale of City Crushers.

| Contract. | A warded to | Dated. | Amount to be Paid to the City. |
| :---: | :---: | :---: | :---: |
| ${ }^{1}$ Exchange of crushed stone for all property owned by city at ledge lot, corner Grove and Centre streets, West Roxbury . | Thomas F. Welch . . . . . . | June 2, 1908 | *1,000 tons of crushed stone delivered in West Roxbury District. |
| ${ }^{1}$ Rosseter street crusher. | P. F. Donovan. . . . . . . . . | June 2, 1908 | *\$1,550 00 |
| ${ }^{1}$ Day street crusher. | Frederick Bleiler . | June 2, 1908 | *2,000 00 |
| ${ }^{1}$ Centre street crusher. | Thomas F. Minton. | June 2, 1908 | *1,500 00 |
| ${ }^{1}$ Columbia road crusher | J. W. Mason. . . . . . . . . | June 2, 1908 | *3,815 00 |

${ }^{1}$ Advertised and awarded to highest bidder. $\quad$ * Paid to the City of Boston.
Miscellaneous Agreements.

| Contract. | Awarded to | Dated. | Progress of Work. | Estimated Cost. | Amount Expended in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{2}$ Six (6) gum-vending machines at ferry head-houses | Gum and Sweetmeat Co. | Feb. 6, 1908 | Completed. | *\$250 | *\$250 00 |
| ${ }^{2}$ Four (4) weighing machines at ferry head-houses. | Nat. Automatic Machine Co. | Feb. 8, 1908 | Completed. | *\$250 | *250 00 |
| ${ }^{1}$ Kenney ledge lot, furnishing filling, | Patrick F. Donovan | Feb. 14, 1908 | Completed <br> Aug. 29, 1908. | \$1,947 | 1,536 81 |
| ${ }^{2}$ Repairing $\underset{\text { Sumner"" ferryboat }}{ }$ ". . . . . . . . . . . . . . . | William McKie............ | April 21, 1908 | Completed. | \$525 | 52500 |
| ${ }^{2}$ Retubing boiler, road roller, Child street yard | Daniel Russell Boiler Works, Inc. | April 21, 1908 | Completed. | \$80. | 8000 |

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| ${ }^{2}$ Repairing double tipcart, East Boston yard. . | Healy Wagon Company.... | April 29, 1908 | Completed. | \$49.50 | 4950 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{1}$ Teaming edgestone and flagging from the South End yard... | S. \& R. J. Lombard . | May 1, 1908 | Completed. | \$0.07 per linear foot | 1,125 91 |
| ${ }^{1}$ Removing abutments and wing walls, D Street Bridge . | William L. Miller | May 20, 1908 | Completed. | *\$51 | *51 00 |
| ${ }^{2}$ Blagden street, tarvia treatment. . | Barrett Manufacturing Co. . | June 19, 1908 | Completed. | $\$ 105$ and crushed stone required at $\$ 1.55$ per ton | 10500 |
| ${ }^{2}$ Exeter street, between Newbury street and Commonwealth avenue, tarvia treatment. | Barrett Manufacturing Co. . | June 19, 1908 | Completed. | $\$ 63$ for 900 square yards or under and 14 tons crushed stone at $\$ 1.55$ per ton. ... | Nothing. |
| ${ }^{2}$ Exeter street, between Boylston street and Huntington avenue, tarvia treatment. | Barrett Manufacturing Co. . | June 19, 1908 | Completed. | \$72 .......................... | \$72 00 |
| ${ }^{2}$ Blue Hill ave., east side, from Franklin Field to Mattapan, tarvia treatment. | Barrett Manufacturing Co. . | June 18, 1908 | Completed. | At \$0.04 per square yard. | 1,186 52 |
| ${ }^{2}$ Brewer street, relaying tar concrete sidewalks at No. 4..... | Simpson Bros. Corporation.. | June 20, 1908 | Completed. | \$35. | 3500 |
| ${ }^{2}$ Hyde square, relaying tar concrete around grass plot. ..... | Simpson Bros. Corporation. . | June 20, 1908 | Completed. | \$190. | 19000 |
| ${ }^{1}$ Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 7, Roxbury.............. | Mrs. Mary Doyle | June 19, 1908 | Completed, | Single team, $\$ 3.15$, double team, $\$ 4.48$, extra men, $\$ 2$. | $\dagger 1,98862$ |
| ${ }^{2}$ Waldeck street, between Geneva avenue and Park street, repairing tar concrete sidewalk..... | Simpson Bros. Corporation. | July 20, 1908 | Completed. | \$478. | 84700 |
| ${ }^{1}$ Furnishing single and double teams and extra men in the Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 10, North and West Ends.. | Bernard E. Grant. | July 22, 1908 | Completed. | Single team, $\$ 3$, double team, $\$ 4.85$, extra men, \$2. | + $\$ 1,52263$ |
| ${ }^{1}$ Furnishing single and double teams and extra men in Paving, sanitary, Sewer and Distect No. 9, Back Bay | John A. Janse | July 22, 1908 | Completed. | Single team, $\$ 3$, double team, $\$ 4.90$, extra men, \$2. | $+3,73250$ |

Miscellaneous Agreements.-Conclud $d$ d.

| Contract. | A warded to | Dated. | Progress of Work. | Estimated Cost. | Amount <br> Expended <br> in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{1}$ Furnishing single and double teams and extra men in PavCleaning Divisions in District No. 5, West Roxbury | James E. Noble | July 22, 1908 | Completed. | Single team, $\$^{3} .50$, double team, $\$ 5.50$, |  |
| ${ }^{1}$ Building retaining wall in Terrace street, Roxbury . . . . . . . . . . . . | James Doherty | July 24, 1908 | Completed <br> Aug. 10, 1908 |  | 5 |
| ${ }^{1}$ Furnishing single and double teams and extra men in Paving, Sanitary, Street Cleaning and Sewer Divisions in District No. 1, South Boston. | David D. McDermott | July 28, 1908 | Aug. 10, 1808. Completed. | Single team, $\$ 3.20$, double team, $\$ 5.35$, |  |
| ${ }^{2}$ Repairing stone crushing screen at Pa ving Division yard, Brighton, | Daniel Russell Boiler Works, | July 25, 1908 | Completed. |  | 3648 9500 |
| ${ }^{2}$ Saratoga street, between Boston, Revere Beach \& Lynn Rairroad and the with "Rotar"............ | American Tar Company .... | July 27, 1908 | Completed. | \$0.049 per square yard. | 58188 |
| ${ }^{1}$ Furnishing double and single teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in District No. 8, South End........... | John Collins | Aug. 12, 1908 | Completed. | Single team, $\$ 3.15$, double team, $\$ 4.50$, extra men, | *3,086 10 |
| ${ }^{1}$ Furnishing single and double teams and extra mer ind Pav ing, Sanitary, Sewer and Street Nos. 2 and 3, East Boston and Charlestown | J. P. O'Riorden | July 28, 1908 | Completed. |  |  |
| ${ }^{1}$ Furnishing single and double teams and extra men in Paving, Sanitary, Sewer and Street Cleaning Divisions in Districts Nos. 6 and 12, Dorchester..... | John T. Keogh \& Bros | July 30, 1908 | Completed. | extra men $\$ 2.25$ <br> Single team, $\$ 3.25$, double team, $\$ 5$, extra men, $\$ 2$ per day. | $* 1,41412$ $* 3,51588$ |


| $* 4,181$ | 96 |
| ---: | ---: | ---: |
| 1 | 50 |
|  |  |
| 162 | 00 |
| 25 | 00 |
|  |  |
| 37 | 50 |
|  |  |
| 1,949 | 28 |
|  |  |
|  |  |
| 162 | 65 |
| 92 | 80 |
|  |  |

Contracts in Force Made in Previous Years.


[^14]Paving with Wood Blocks.

${ }^{1}$ Awarded without competition.
Paving with Wood Blocks - Concluded.

| Contract. | Awarded to | Dated. | Progress of Work. |  | Estimated Cost. | Amount Expended in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Providence street, from the west side of Church street 170 feet easterly. | U. S. Wood Preserving Co. . | Nov. 19, 1907 | Completed Nov. 25, 1908. | (A) ( ${ }^{\text {( }}$ ( (C) (D) (E) (F) (G) |  |  |
|  |  |  |  |  | \$2,208 30 | \$2,705 07 |

[^15]${ }^{1}$ Awarded without competition.
2 Not advertised, invited bids .awarded to lowest bidder.
${ }^{2}$ Advertised and awarded to lowest bidder.

| Contract. | Awarded to | Dated. | Progress of Work. | Cost of Contract, as per Estimated Quantities, not Including Materials Furnished by the City. | Amount <br> Expended in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mapleton street, between Market and Murdock streets. | Coyle \& Clark. . . . . . . . . | July 6, 1907 | Completed June 27, 1908. | \$2,800 00 | \$1,094 33 |
| 2 Willowwood street, between Norfolk street and Lauriat avenue. | Joseph J. Comfrey. | July 27, 1907 | Completed Nov. ${ }^{\text {a }} 30,1907$. | 4,202 60 | 28479 |
| *2 Claybourne street, between Bowdoin and Dakota streets. | S. Connolly | Aug. 1, 1907 | Completed Nov. 26, 1907. | 1,021 00 | 20169 |
| *2 Fottler road, between Walk Hill street and Tileston a venue. | Fred L. Williams. | Sept. 3, 1907 | Completed Nov. 27, 1907. | 1,326 50 | 34973 |
| ${ }^{1}$ Mallet street, between Florida and Adams streets | Timothy F. Bradley. | Sept. 3, 1907 | Completed May 19, 1908. | 2,100 00 | 33065 |
| ${ }^{1}$ Causeway street, between Medford street and Washington Street North. | William H. Cuddy. | Sept. 12, 1907 | Completed Dec. 5, 1907.. | 5,300 00 | 53504 |
| ${ }^{1}$ Hobson street, between Faneuil and Hobart streets. | Thomas J. Young Co..... | Sept. 14, 1907 | Completed Dec. 13, 1907. | 3,200 00 | 8784 |
| ${ }^{3}$ Bayswater street, between Saratoga street and Austin avenue. | James Doherty.. | Oct. 8,1907 | Completed April 2,1908.. | ${ }^{8} 4,65287$ | 64839 |
| ${ }^{3}$ Kilton street, between Harvard and Park streets | Philip Doherty.....-. | Oct. 8, 1907 | Completed May 6, 1908. | 1,868 10 | 1,539 49 |
| ${ }^{3}$ Rockledge street, between Lambert avenue and Thornton street. | Robert Eagar, Jr. | Oct. 8,1907 | Completed Dec. 2, 1907. | 84150 | 21129 |

* Fottler road was awarded to second lowest bidder at modified prices.
Claybourne street was awarded to fifth lowest bidder at modified prices.
Street Construction.-Concluded.

| Contract. | Awarded to | Dated. | Progress of Work. | Cost of Contract, as per Estimated Quantities, not Including | Amount in 1908 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{1}$ Speedwell street, between Topliff and Hamilton streets | William Barrett | Oct. 9, 1907 | Completed May 26, 1908. | \$1,579 10 | 842085 |
| ${ }^{1}$ Larchmont street, between Waldeck and Greenbrier streets.. | D. E. Coleman Company . | Nov. 1, 1907 | Completed July 17, 1908. | 2,919 25 | 2,866 51 |
| ${ }^{1}$ Norton street, between Bowdoin and Speedwell streets. | D. E. Coleman Company | Nov. 1, 1907 | Completed July 20, 1908. | 1,726 40 | 1,405 69 |
| ${ }^{1}$ Samoset street, between Centre street and | D. E. Coleman Company | Nov. 1, 1907 | Completed June 29, 1908.. | 2,193 50 | 1,250 63 |
| ${ }^{1}$ Parkview street, between Seaver and Hutchings streets. | Robert L. Barrett. | Nov. 11, 1907 | Completed July 14, 1908.. | 1,414 80 | 85021 |
| ${ }^{1}$ Bruce street, between Dracut and Wrentham streets | Daniel E. Lynch. | Nov. 11, 1907 | Completed Sept. 2, 1908.. | 51790 | 46889 |
| ${ }^{1}$ South Huntington avenue, between Huntington avenue and Heath street. | William J. Ba | Nov. 13, 1907 | Completed June 20, 1908.. | 5,223 60 | 6,687 86 |
| ${ }^{1}$ Cottage street, between Maverick and Gove streets. | James Doherty | Nov. 14, 1907 | Completed May 28, 1908. | 2,297 00 | 2,363 57 |
| ${ }^{1}$ Frankfort street, between Maverick and Gove streets. | James Doherty | Nov. 14, 1907 | Completed May 29, 1908.. | 2,507 60 | 2,599 88 |
| ${ }^{1}$ Ashland street, between Mill and Everdean streets | Philip Doherty | Nov. . 19, 1907 | Completed June 18, 1908.. | 98300 | 53197 |
| ${ }^{1}$ Everdean street, between Green Hill and Preston streets. | Philip Doherty | Nov. 19, 1907 | Completed June 20, 1908.. | 1,454 20 | 1,665 08 |
| ${ }^{1}$ Norwood street, from Tolman street 444 feet northwesterly | Philip Doherty | Nov. 19, 1907 | Completed May 22, 1908.. | 1,740 60 | 1,619 14 |
| 1 Bellevue street, between Hamilton and Kane streets. | John McCourt | Nov. 23, 1907 | Completed July 16, 1908.. | 1,729 60 | 1,788 52 |
| ${ }^{1}$ Everdean street, between Ashland and Green Hill streets. | J. W. Collins. | Nov. 29, 1907 | Completed June 20, 1908.. | 1,370 50 | 83303 |

${ }^{1}$ Advertised and awarded to lowest bidder.
Furnishing and Laying Artificial Stone Sidewalks. $\dagger$

Quarrying and Cutting Stone, etc.

| Contract. | Awarded to | Dated. | Expires. | Estimated Cost. | Amount <br> Expended <br> in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{1}$ Quarrying stone from ledge on Centre street, between Allandale and Walter streets..... <br> ${ }^{1}$ Quarrying and crushing stone from ledge on | Thomas F. Minton. | Sept. 4, 1906 | Canceled December 3, 1906, | Over \$2,000; 70 cents per ton for stone or strippings delivered; labor, standard rate; reates. $\qquad$ | Nothing. |
|  | Thomas F. Welch | Oct. 2, 1906 | Canceled December 27, 1907, | Over $\$ 2,000 ; \$ 1.25$ per ton for stone crushed; labor, standard rate; teams, established rates.. | Nothing. |
| West Roxbury. | Thomas F. Welch. | April 2, 1907 | Canceled December 27, 1907, | Crushing, $\$ 1.25$ per ton; strippings delivered, 70 cents per lished rates.. ....... | Nothing. |
| ${ }^{1}$ Quarrying and cutting stone at the ledge on Columbia road. | James A. Mahan. | Sept. 3, 1907 | Canceled January 3, 1908, | Over $\$ 2,000$; stone or strippings delivered, 70 cents per ton; labor, $\$ 2 \underset{\text { per day; }}{\text { teams, }}$ established rates. $\qquad$ | \$5,749 89 |
| Quarrying and cutting stone at the Chestnut Hill avenue ledge. | Coyle \& Clark | Oct. 11, 1907 | Canceled January 6, 1908, | Over $\$ 2,000$; stone or strippings delivered, 70 cents per ton; labor, $\$ 2$ per day; teams, established rates................. | 5,816 47 |

${ }^{1}$ Awarded without competition.
Paving and Regulating.

| Contract. | Awarded to | Dated. | Progress of Work. | Cost of Contract, as per Estimated <br> Quantities, not Including Material Furnished by the City. | Amount Expended in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 Walk Hill street, between Blue Hill avenue and Almont street | Mark H. Lynch | Sept. 19, 1907 | Completed Nov. 21, 1907.. | \$1,125 00 | \$180 06 |
| ${ }^{1}$ Dorchester avenue, between Adams and Park streets. | Daniel E. Lynch | Oct. 19, 1907 | Completed Dec. 4, 1907... | 1,750 00 | 18587 |
| ${ }^{1}$ D street, between West Fifth and West Seventh streets. | William Higgins | Oct. 30, 1907 | Completed Dec. 30, 1907... | 1,550 00 | 27002 |
| ${ }^{1}$ Shawmut avenue, between Lenox and Sawyer streets. | Daniel H. Shea | Nov. 1, 1907 | Completed Nov. 27, 1907... | 1,050 00 | 6104 |
| ${ }^{1}$ Rutherford avenue, from Essex street to about 25 feet east of Baldwin street. | James J. Brock. | Nov. 7, 1907 | Completed Dec. 3, 1907... | 1,975 00 | 26058 |
| ${ }^{1}$ Worthington street, in front of Normal School. | Charles W. Kinney | Nov. 11, 1907 | Completed May 16, 1908... | 1,900 00 | 1,369 62 |
| ${ }^{1}$ Melcher street, from Summer street 484 feet southeasterly. | Peter W. Hill | Nov. 22, 1907 | Completed Dec. 9, 1907... | 1,650 00 | 29237 |
| ${ }^{1}$ East Sixth street, south side, between $O$ and P streets. | Peter J. Herr, Jr. . . . . . . | Nov. 23, 1907 | Completed Dec. 28, 1907... | 87500 | 11272 |
| ${ }^{1}$ Dorchester street, from West First street 240 feet northerly. | Suffolk Contracting Co... | Nov. 27, 1907 | Completed Dec. 26, 1907... | 85000 | 47274 |
| ${ }^{1} \begin{gathered}\text { Boynton street, between South and Call } \\ \text { streets....................................... }\end{gathered}$ | George H. Noone. | Nov. 30, 1907 | Completed Sept. 21, 1908... | 1,050 00 | 96460 |
| ${ }^{1}$ D street, between Gold street and Broad way.. | William Higgins. | Dec. 2, 1907 | Completed Aug. 21, 1908.. | 1,900 00 | 1,531 33 |
| ${ }^{1}$ Washington street, west side, between Cliff and Bartlett streets. | Peter Gilligan | Dec. 2, 1907 | Completed Aug. 24, 1908.. | 1,275 00 | 1,107 33 |
| ${ }^{1}$ Rutherford avenue, between Baldwin and Thorndike streets. | James J. Brock | Dec. 5, 1907 | Completed Sept. 23, 1908... | 2,024 00 | 1,966 08 |
| ${ }^{1}$ Lawn street, from Heath street to another part of Heath street. | Trimount Contracting Co. | Dec. 10, 1907 | Completed Sept. 26, 1908... | 1,625 00 | 1,525 80 |

${ }^{1}$ Awarded without competition.
Leasing Ledge Lots.

| Contract. |  | Lessor. |  | Dated. |  | Expires. | Esti | ed Cost. | Amount Expended in 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| * ${ }^{1} \underset{\text { Lease of land on Kenney street, near }}{\text { Day street.......................... }}$ | Jamcs W. Kenney |  | Sept. 5, 1906 |  | Jan. 31, 1908 |  | $\$ 200$ per month rent; 17 cents per ton for stone removed. |  | \$1,000 00 |
| Allandale and Walter streets........ <br> ' Lease of ledge on Centre street, between | Thomas Minton. |  |  |  | Feb. 1, 1908 |  | $\begin{aligned} & \text { for stone rem } \\ & \$ 7,500 ; 18 \text { cer } \end{aligned}$ | \$7,500; 18 cents per ton for stone removed. |  |
| Brunswick street. <br> ${ }^{1}$ Lease of ledge on Columbia road, near | W. J. Wilcox et al. |  | Dec. 29, 1906 |  | March 22, 1908 |  | $\$ 6,250$; $12 \frac{1}{2}$ cents per ton for stone removed |  | 3016 65613 |
| * \$200 per month from February 1, 1906. . ${ }^{1}$ Awarded without competition. |  |  |  |  |  |  |  |  |  |
| Miscellaneous Agreements. |  |  |  |  |  |  |  |  |  |
| Contract. |  | A warded to |  | Dated. |  | Progress of Work. |  | Estimated Cost | Amount <br> Expended <br> in 1908. |
| ${ }^{1}$ Old Road, Dorchester, earth and rock excavation. |  | James F. Murphy |  | Oct. 19, 1907 |  | Completed Feb. 1, 1908.. |  | \$2,850 00 | \$1,595 26 |
| ${ }^{1}$ Hano street, Braintree street 420 feet southerly, relaying tar concrete walks. |  | Simpson Bros. Corp... |  | Nov. 21, 1907 |  | Completed Dec. 19, 1907.. |  | 57500 | 57500 |
| ${ }^{1}$ Harvard street, Dorchester, erecting wood fence at bridge. |  | P. J. Dinn \& Co...... |  | Dec. 23, 1907 |  | Completed Jan. 7, 1908.. |  | 11000 | 11000 |
| ${ }^{1}$ Asphalting carriage wash in stable at Jamaica Plain yard. |  | Simpson Bros. Corp..... |  | Dec. 31, 1907 |  | Completed Jan. 18, 1908... |  | 12500 | 12500 |

${ }^{1}$ A warded without competition.

## APPENDIX E.

## REPORT OF THE DEPUTY SUPERINTENDENT OF THE SANITARY DIVISION.

Rooms Nos. 917-920, Tremont Building, Boston, Mass., February 1, 1909.

Mr. Guy C. Emerson, Superintendent of Streets:
Dear Sir, - I hereby respectfully submit the annual report of the expenditures, income and operation of the Sanitary Division of the Street Department for the financial year ending January 31, 1909.

Respectfully submitted, George H. Foss, Deputy Superintendent.

On July 1, 1908, the collection of ashes in the East Boston district was let by contract. On July 15 the collection of ashes in the Brighton district was let by contract.

On July 15, 1908, the carrying capacity of the ash carts was increased from fifty-four cubic feet to sixty-three cubic feet.

The City Ordinances of 1892 , chapter 36 , require that house dirt and ashes and house offal shall be kept in an easily accessible place for their removal, the men being obliged to enter the yards and remove the receptacles to the sidewalk, where their contents are dumped into the carts. The receptacles are then placed in their original position.

Ordinance of 1907, chapter 4. The Sanitary Division shall remove-house offal, house dirt and such ashes as are the product of burning materials for heating habitations, cooking and other domestic purposes and all other noxious and refuse substances from yards and areas when so placed as to be easily removed.

During the year six (6) new winged carts were built by the Sanitary Division, having a carrying capacity of eighty-seven cubic feet each.

The scarcity of low land available for dumping purposes has greatly increased the cost of collection. The division is now paying for dumping privileges at the rate of ten (10) cents per load in East Boston, Charlestown, Roxbury, the South End and Cambridge.

The division also has charge of the construction and repairs of carriages, carts, wagons and harnesses, etc., for this and other divisions and departments.

## FINANCIAL STATEMENT.



| Transferred to Street Cleaning and |  |  |
| :--- | ---: | ---: | ---: |
| Watering Division. |  |  |
| Transferred to Ferry Division. | $\$ 3,905$ | 31 |
| . | 1,272 | 79 |

Total amount of appropriation .
$\$ 750,32900$
transferred to Ferry Division . . 1,272 79
5,128 10
*\$745,200 90
Total expenditures of the Sanitary Division,
including work done for other divisions and
departments and paid by them . $\$ 786,08978$
Less amounts paid by other divisions and departments

40,888 88
Net cost of maintenance, Sanitary Division, . $\$ 745,20090$
Total Cost on House Dirt, Ashes, Waste and Rubbish
and House Offal.
Salaries: Deputy superintendent and office force, $\$ 10,06705$
Office supplies and expenses
5,448 04
Ashes, waste and rubbish account . . . . 494,254 20
House offal account . . . . . . . 227,431 91
\$737,201 20

## Construction, Repair and Horseshoeing Account.

Foremen . . . . . . $\$ 1,35784$

Expended for labor . . . . 32,005 48
Expended for stock . . . . 15,525 26
48,888 58
Total expenditures of the Sanitary Division for
the fiscal year ending January 31, 1909
\$786,089 78

[^16]| Revenue Received from | Outside |
| :--- | :--- | :--- | :--- | ---: |
| for Divisions |  |

Net cost of maintenance to Sanitary Division ..... \$745,200 90

Amount of money deposited and bills presented to the City Collector during the year ending January 31, 1909, for general revenue :
Money Deposited.
From letting of scow privileges ..... $\$ 4,44854$
Bills Presented.
For the collection of engine ashes ..... $\$ 12,67565$
Less bills withdrawn . ..... 11850
$\$ 12,557 \quad 15$
For rents, Fort Hill and Hecht's wharves

$$
1,10400
$$

For sale of manure ..... 11993
For repair work for Fire Depart-ment*329 00
14,110 08
\$18,558 62

[^17]
## Items of Expenditure for the Year.

| Items. | Total Amount Expended. |
| :---: | :---: |
| Salaries of deputy superintendent and office force | \$10,067 05 |
| Salaries of foremen. | 11,298 54 |
| Labor - collection and disposition of house dirt and ashes, | 226,672 30 |
| Labor - collection and disposition of waste and rubbish. | 37,407 00 |
| Labor - collection and disposition of house offal. | 149,473 04 |
| Labor and stock in stables and yards | 46,051 03 |
| Hired teams on ashes, waste and rubbish and house offal | 45,529 00 |
| Contracts on ashes - East Boston, Brighton, West Roxbury, North Dorchester and South Dorchester. | 42,418 57 |
| Contracts on offal - East Boston, Brighton, West Roxbury and Dorchester. | 33,563 35 |
| Ash and offal stock. | 50597 |
| Allowed time and holidays | 23,759 45 |
| Grain. | 33,503 03 |
| Hay and straw | 23,538 31 |
| Medical attendance and allowed time on account of injured men. | 16500 |
| Horses. | 5,415 00 |
| Veterinary services and medicine | 3,162 29 |
| Hired horses. | 4,275 00 |
| Outside board and care of horses | 3,055 29 |
| Outside horseshoeing, blacksmith, wheelwright, harness and painting. | 4,576 68 |
| Labor, stock, etc. - wheelwright, blacksmith, paint, harness and horseshoeing shops. | 44,261 20 |
| Dumping boats, stock, etc. | 12119 |
| Repairs on stables, sheds, wharves and boats | 7,628 95 |
| Fuel. | 1,252 54 |
| Gas. | 1,053 41 |
| Electric lighting and power | 1,169 63 |
| Printing, stationery, office items and incidentals | 6,981 36 |
| Advertising. | 50114 |
| Rents. | 12,539 04 |
| Tolls and fares. | 5349 |
| Telephones. | 1,042 08 |
| Damages caused by teams | 5200 |
| Taxes on Hecht's estate, as per leas | 4,997 85 |
| Total. | \$786,089 78 |
| Amounts paid by other departments and divisions | 40,888 88 |
| Amount charged to the Sanitary Division. | \$745,200 90 |

Amount of House Dirt and Ashes Removed.

| Years. | Number of Loads at 54 Cubic Feet. | Cubic Yards. | $\begin{gathered} \text { Tons. } \\ (2,000 \text { liss.) } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| 1904 | 325,955 | 651,910 | 260,764 |
| 1905 | 321,545 | 643,090 | 257,236 |
| 1906 | 352,124 | 704,248 | 281,699 |
| 1907 | 377,058 | 754,116 | 301,647 |
| 1908 | *339,913 | 745,918 | 311,586 |

* Loads increased to sixty-three cubic feet July 15, 1908.

Force Employed on House Dirt and Ashes January 31， 1909.

| City Force． | $\begin{aligned} & \dot{8} \\ & \text { 茴 } \\ & \text { ¿ } \end{aligned}$ |  | Contractors＇Teams． |  |  |  |  | \％ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \text { 品 } \\ & \text { 品 } \\ & \text { 兑 } \\ & \text { 品 } \end{aligned}$ |  |  |  |  |
| Inspectors | 25 |  |  |  |  |  |  | 25 |
| Teamsters． | 127 | 5 | 4 | 6 | 3 | 11 | 6 | 162 |
| Helpers． | 130 | 5 | 10 | 6 | 5 | 25 | 15 | 196 |
| Dumpers． | 24 |  |  |  |  |  |  | 24 |
| Totals． | 306 | 10 | 14 | 12 | 8 | 36 | 21 | 407 |

Amount of Waste and Rubbish Removed．

| Years． | Number of Loads． |  | Cubic Yards． | Tons． （2，000 lbs．） |
| :---: | :---: | :---: | :---: | :---: |
|  | Paper Carts． | Market <br> Wagons． |  |  |
| 1904 | 7，064 | 9，170 | 101，616 | 11，431 |
| 1905 | 6，569 | 10，540 | 108，596 | 12，387 |
| ． 1906 | 6，271 | 11，133 | 125，281 | 12，836 |
| 1907 | 6，098 | 11，071 | 112，960 | 12，708 |
| 1908 | 5，892 | 10，346 | 123，839 | 13，566 |

Force Employed on Waste and Rubbish January 31， 1909.

| City Force． | Number． |
| :---: | :---: |
| Inspectors． | 2 |
| Teamsters． | 13 |
| Helpers．． | 25 |
| Dumpers | 1 |
| Total．．．． | 41 |

Amount of House Offal Removed．

| Years． | Number of Loads． | Cubic Yards． | $\begin{gathered} \text { Tons. } \\ (2,000 \mathrm{lbs} .) \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 1904 | 64，084 | 128，168 | 64，084 |
| 1905 | 64，803 | 129，606 | 64，803 |
| 1906 | 65，387 | 130，774 | 65，387 |
| 1907 | 64，712 | 129，424 | 64，712 |
| 1908 | 62，892 | 125，784 | 78，615 |

Force Employed on House Offal January 31, 1909.

| City Force. |  | Contractors' Teanis. |  |  |  | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 号 |  |  |  |
| Inspectors. | 13 |  |  |  |  | 13 |
| Teamsters. | 51 | 4 | 5 | 2 | 8 | 70 |
| Helpers. | 50 | 4 | 3 | 2 | 14 | 73 |
| Dumpers. | 4 |  |  |  |  | 4 |
| Totals. | 118 | 8 | 8 | 4 | 22 | 160 |

Capacity of Carts and Wagons in Use by the Sanitary Division. Cubic Feet.

Cubic Feet.

| Single ash carts | . | . | 63 | Single offal wagons . | 55 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Double ash carts . | . | 136 | Double offal wagons . | 85 |  |
| Paper carts | . | . | 106 | Paper wagons. . . | 219 |

## Winter Weights.

Average weight of paper cart loads . . . . . 1,000
Average weight of ash cart loads . . . . . 2,300
Average weight of offal wagon loads . . . . 2,600
Average weight of paper wagon loads . . . . 1,800
Summer Weights.
Average weight of paper cart loads . . . . . 1,100
Average weight of ash cart loads . . . . . 1,800
Average weight of offal wagon loads . . . . 2,500
Average weight of paper wagon loads . . . . 2,000
Number of Loads of Material Collected from February 1, 1904, to January 31, 1909.

| Year. | Waste and Rubbish. | Ashes. | Offal. | Total Loads. | Total Tons. (2,000 b..) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1904. | 16,234 | 325,955 | 64,084 | 406,273 | 336,279 |
| 1905. | 17,109 | 331,545 | 64,803 | 413,457 | 334,426 |
| 1906. | 17,404 | 352,124 | 65,387 | 434,915 | 359,922 |
| 1907. | 17,169 | 377,058 | 64,712 | 458,939 | 379,067 |
| 1908. | 16,238 | 339,913 | 62,892 | *419,043 | 403,767 |

[^18]
## Average Number of Employees and Horses Cared for by the Sanitary Division．

| Average number of employees for 1908. |  | 664 |
| :---: | :---: | :---: |
| Average number of horses，Sanitary Division | 248 |  |
| Average number of hired horses． | 12 |  |
| Average number of all other horses | 29 |  |
| Average number of horses fed by the Sanitary Division． |  | 289 |

Loads Collected by Contractors．

|  | Ash Loads． | Cubic Yards． | Tons． <br> （2，000 lbs．） |
| :---: | :---: | :---: | :---: |
| East Boston． | 8，736 | 17，470 | 8，010 |
| Brighton． | 5，373 | 10，750 | 4，925 |
| West Roxbury． | 8，747 | 17，460 | 8，018 |
| North Dorchester South Dorchester． | $\left.\begin{array}{l} 25,595 \\ 18,803 \end{array}\right\}$ | 89，120 | 40，697 |
| Totals． | 67，254 | 134，800 | 61，650 |
|  | Offal Loads． | Cubic Yards． | $\begin{gathered} \text { Tons. } \\ (2,000 \mathrm{lbs} .) \end{gathered}$ |
| East Boston． | 4，645 | 8，300 | 5，806 |
| Brighton． | 2，500 | 4，470 | 3，125－ |
| West Roxbury | 1，784 | 3，200 | 2，230 |
| Dorchester． | 8，725 | 15，630 | 10，909 |
| Totals． | 17，654 | 31，600 | 22，070 |

－

## Loads of Material Collected by Districts．

|  |  |  |  |  |  |  | 号 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| House dirt and ashes． | 25，505 | 17，987 | 18，570 | 12，508 | 24，054 | 44，398 | 45，530 | 80，190 | 71，171 | 339，913 | 311，586 |
| Waste and rub－ bish． | 370 |  |  |  |  |  | 602 | 8，872 | 6，394 | 16，238 | 13，566 |
| House offal． | 3，937 | 4，645 | 2，654 | 2，500 | 4，327 | 8，725 | 8，445 | 18，395 | 9，264 | 62，892 | 78，615 |
| Totals． | 29，812 | 22，632 | 21，224 | 15，008 | 28，381 | 53，123 | 54，577 | 107，457 | 86，829 | 419，043 | 403，767 |



Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year 1908-09.

| District add Population. | Character of Refuse. | $\begin{aligned} & \text { Toos. } \\ & \left(\begin{array}{c} (2,000 \\ \text { libs. } \end{array}\right. \end{aligned}$ | Total | Cost per Ton hy ${ }^{\text {a }}$ Dietricts. |  |  | Cost my Districts. |  |  |  |  |  | Where Disposet of. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | To Collect. | $\underset{\text { Disposal. }}{\text { For }}$ | Total Collection and Disposal. | To Collect. | Total Cost to Collect. | $\underset{\text { Disposal. }}{\text { For }}$ | Total Cost of Disposal. | Total Cost of Collection and Disposal | Total Cost per Capita, and Disposal |  |
| $\frac{1}{72.000)}$ | Mixed refuse, principally ashes (no kitcheo refuse). Store refuse, principally paper.. Garbage, principally kitchen wastes. | 23,374 315 4,920 | ...... | 81 3697 <br> 16143  <br> 3 1567 | $\begin{array}{r}804735 \\ 22005 \\ 11633 \\ \hline\end{array}$ | $\begin{array}{\|rr\|}\$ 1 & 8432 \\ 3 & 8148 \\ +3200\end{array}$ | $\$ 32,021$ <br> 00 <br> 508 <br> 50 <br> 15,531$\|$ |  | $\begin{array}{r}811,069 ~ 97 \\ 69316 \\ 5.723 \quad 25 \\ \hline\end{array}$ |  |  |  | Inland dumps. <br> City Refuse Utilization Company.* |
| $\underset{(56,000)}{2}$ |  | 8,480 | 8,490 | Av. 816796 | $\begin{array}{r} \hline \text { Av. } 806111 \\ 02057 \end{array}$ | $\begin{array}{r} \text { Av. } 82 \quad 2907 \\ 20814 \end{array}$ | \$15,906 40 | 15,906 40 | 81,744 16 | 17,456 1,74 1,744 | 865,547 17 17,650 | 809104 +3152 | New England Sanitary Product Company.* Inland dumps. |
| $\begin{gathered} 3 \\ (40,000) \end{gathered}$ |  |  |  | $\begin{array}{ll}1 & 4833 \\ 3 & 1840\end{array}$ | $\begin{array}{ll} 0 & 1498 \\ 1 & 1247 \end{array}$ | $\begin{aligned} & 16331 \\ & +3057 \end{aligned}$ | $\begin{array}{rr} \$ 25,253 & 59 \\ 10,561 & 34 \end{array}$ |  | 82,550 3,780 |  |  |  | Ioland dumps. |
| $\underset{(24.000)}{4})$ |  | 6.5410 | 6,540 | Av. 817606 | $\begin{array}{r} \text { Av. so } 30 \times 5 \\ 00045 \end{array}$ | $\begin{array}{r} \text { Av. } 820694 \\ 1345 \end{array}$ | 88, 20125 | $5,51+93$ 8,20125 | 861765 | 6,28098 61768 | 42,09591 8,81893 | 10524 $\ddagger 3675$ | New England Sanitary Product Company.* Inland dumps. |
| $\begin{gathered} \mathbf{S} \text { (part) } \\ \text { and } \\ (135.000 ; \end{gathered}$ |  | $\begin{array}{r}55,766 \\ 550 \\ 13,735 \\ \hline\end{array}$ |  | $\begin{array}{ll}14450 \\ 2 & 6054 \\ 20462\end{array}$ | $\begin{array}{ll}0 & 16.4 \\ \ldots \\ 1 & 144 \\ 1\end{array}$ | 16164 $\cdots$ +0909 | $\begin{array}{r}880,748 \\ 1,511 \\ \hline 10 \\ 40,466 \\ \hline 10\end{array}$ |  | 89,39124 <br> $\cdots$ <br> 15,723 <br> 00 |  |  |  | Inland dumps. <br> Inland dumps. |
| $\begin{gathered} 8 \text { and } 9 \\ (103,000) \end{gathered}$ |  | $\begin{array}{r}73,516 \\ 7.103 \\ 22,993 \\ \hline\end{array}$ |  | Av. 81 7512 <br> 1 4950 <br> 3 1126 <br> 1 9439 |  | $\begin{array}{cc} \text { Av. } 82 & 1096 \\ 1 & 5152 \\ 5 & 2966 \\ 5 & 0678 \end{array},$ | $\left.\begin{array}{\|r\|} \hline 8110,109 \\ \hline 26 \\ 23,042 \\ 81 \\ 44,696 \\ \hline 69 \end{array} \right\rvert\,$ | 122,226 | - <br> 81,495 <br> 16,163 <br> 184 <br> 25,840 | 25,114 24 | 147,840 26 | 10951 | New England Sacitary Product Company.* <br> 62.95 per cent inlad dumps; 37.05 per cent dumped at sea. <br> s\% 36 per cent City Refuse Utilization Company; 1264 per cent inland dumps.* |
| ${ }_{(77,000)}^{10}$ | (Mixed refuse, principally ashes (no kitchen refuse) Store refuse, principally paper <br> (Garbage, principally kitchea wastes | $\begin{gathered} 65_{+} 240 \\ 5,265 \\ 11,550 \\ \hline \end{gathered}$ |  | Av. 81 7117 <br> 1 1716 <br> 2 $7 \times 31$ <br> 1 5283 |  |  | $\begin{array}{r}876,424 \\ 14,661 \\ 59 \\ 17,697 \\ \hline\end{array}$ | 172.849 06 | $\begin{array}{r}812,305 \\ 11,451 \\ 136 \\ 13,02+ \\ \hline\end{array}$ | 43.48872 | 221,337 78 | 19950 | New England Sanitary Product Compaoy.* <br> Dumped at sea. <br> City Refuse Ltilization Company:* |
|  |  |  |  | Av. \$1 32.53 | Av. 804181 | Av. 817734 |  | 29399 |  | 36.88047 | 145.574 46 | 16570 | New England Saaitary Product Company |
| 307,000 | Totals | $320,0+7$ | 320,047 | Av. \$1 6165 | Av. 804109 | Av. 820274 | 8517.35308 | 8517,353 08 | \$131.512 63 | \$131.512 63 | 864,865 71 | § 812798 |  |
|  | * Contract for disposal. <br> $\dagger$ Proportional total co |  |  | ost per capita for See also | or entire year table, page | \$0.7577. <br> 305, and map, | $\begin{array}{r} \quad \pm \text { Propor } \\ \S \\ \text { proport } \\ \text { page } 304, \text { base } \end{array}$ | tional total tional total ed on these | per capit <br> per capita <br> tables. | a for entire $y$ <br> for entire $y$ | $\begin{aligned} & \text { ear, } 80.8094 . \\ & \text { earr } 81.3+96 \text {. } \end{aligned}$ |  |  |

Cost of Collection and Disposal of Refuse by Contract in the City of Boston for the Year 1908-09.

| Contract Districts and Population. | Character of Refuse. | Tons. <br> (2,00) lbs.) | Total Tons. | Cost per Ton by Districts; Collection and Disposal. | Cost by Districts. |  |  | Where Disposed of. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Cost. | 'Total Cost. | Total Cost per capita. |  |
| $2 \ddot{(56,000)}$ |  | $\begin{aligned} & 8,010 \\ & 5,806 \end{aligned}$ | $13,816$ | $\begin{array}{r} \$ 09465 \\ 1.4379 \end{array}$ | $\begin{array}{rr} \$ 7,581 & 84 \\ 8,348 & 19 \end{array}$ |  |  | Inland dumps. <br> Inland dumps.* |
| $4 \times 30000{ }^{4}$ |  | 4,925 3,125 |  | $\text { A.v. } \begin{array}{rl} \$ 1 & 1530 \\ 1 & 1625 \\ 1 & 6450 \end{array}$ | \$5,725 5 |  |  | Inland dumps. <br> Inland dumps.* |
| 5. (part) |  |  |  |  | $\begin{array}{r}\text { \$6,400 } \\ 3,394 \\ \hline 1\end{array}$ |  |  | Inland dumps. <br> 「New England Sanitary Product Company. |
| $(103,000)$ | (Mixed refuse, principally ashes (no kitchen wastes) <br> Garbage, principally kitchen wastes. | 40,697 10,909 |  | $\text { Av. } \begin{array}{r} \$ 09558 \\ 07788 \\ 22095 \end{array}$ | $\begin{array}{r} \$ 31,69617 \\ 24,102 \quad 80 \end{array}$ |  |  | Inland dumps. <br> SNew England Sanitary Product Company. |
|  |  |  |  | Av. $\$ 10812$ |  |  |  |  |
| 203,000 | Totals. | 83,720 | 83,720 | Av. \$1 1036 | \$92,389 23 | \$92,389 23 | \$0 4551 |  |

[^19]Amount Expended for the Collection and Disposition of House Dirt, Ashes, Waste and Rubbish and House Offal, by

| Districts. | lation. <br> Popu- | Waste and Rubbish. |  | Ashes. |  | Offal. |  | Total Cost. | Total Cost per Capita. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Cost. | Cost per Capita. | Cost. | Cost per Capita. | Cost. | Cost per Capita. |  |  |
| 1. South Boston | 72,000 | \$508 50 | \$00071 | \$31,939 97 | \$0 4436 | \$14.674 74 | \$0 2038 | \$47,123 21 | \$0 6545 |
| 2. East Boston. | 56,000 |  |  | 22,606 44 | 4037 | 7,920 04 | 1414 | 30,526 48 | 5451 |
| 3. Charlestown | 40,000 |  |  | 27,946 53 | 6987 | 11,377 33 | 2844 | 39,323 86 | 9831 |
| 4. Brigthton | 24,000 |  |  | 13,334 83 | 5556 | 4,712 49 | 1964 | 18,047 32 | 7520 |
| 5. West Roxbury | 39,000 |  |  | 22,336 69 | 5727 | 9,975 47 | 2558 | 32,312 16 | 8285 |
| 6. Dorchester. | 103,000 |  |  | 30,724 18 | 2983 | 24,627 72 | 2391 | 55,351 90 | 5374 |
| 7. Roxbury. | 116,000 | 1,511 10 | 0130 | 70,666 56 | 6092 | 32,591 72 | 2809 | 104,769 38 | 9031 |
| 8-9. South End and Back Bay . | 103,000 | 22,134 50 | 2149 | 109,535 92 | 10634 | 45,267 55 | 4395 | 176,937 97 | 17178 |
| 10. North and West Ends | 77,000 | 14,283 63 | 1855 | 76,456 94 | 9930 | 17,130 56 | 2225 | 107,871 13 | 14010 |
| 11. Dumping boats |  | 26,328 28 |  | 23,940 13 |  | 59,154 29 |  | 109,422 70 |  |
| Totals | 630,000 | \$64,766 01 |  | \$429,488 19 |  | \$227,431 91 |  | \$721,686 11 | \$1 1455 |

Comparative Table Showing the Cost of Collecting Ashes, Offal, Waste and Rubbish and Delivering the same at Various Dumps.

Cost per ton ( $2,000 \mathrm{lbs}$.), including administrative
expenses

$\$ 185$

Cost per ton, labor on ashes; hired teams and contractor, 141
Cost per ton, labor on offal; hived teams and contractor, 298
Cost per ton, labor on waste and rubbish . . . . 502
Cost per load, transportation to sea . . . . . 22
Cost per dumping boat load to transport to sea . . 7405
The total cost is divided by the total number of tons.
Final Disposition of all Material Collected by the Sanitary Division from February 1, 1908, to January 31, 1909.

| Material. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| House dirt and ashes | 177,737 | 94,922 |  |  | 67,254 | 339,913 |
| Waste and rubbish | 2,062 | *3,969 |  | 14,176 |  | 20,207 |
| House offal. |  |  | 53,963 | ...... | 8,929 | 62,892 |
| Cesspool dirt. . |  | 3,970 |  |  |  | 3,970 |
| Street sweepings |  | 37,159 |  |  |  | 37,159 |
| Totals. | 179,799 | 140,020 | 53,963 | 14,176 | 76,183 | 464,141 |

*.The above includes 3,969 loads of barrel refuse delivered at dumping boats.
Maintenance of Fort Hill Wharf and Dumping Boats.
For towing by division towboat . . \$8,190 14
For towing by hired towboats . . 1,362 50
For repairs on wharves and boats . $\quad \$ 5,843 \quad 50$
For dumping boat stock and supplies, $\quad 2,66176$
For labor, crew and dumpers . . 12,134 13
For allowed time, holidays, etc. . . 46582
$\$ 9,55264$
$\begin{array}{cc}\begin{array}{c}\text { Total cost for maintenance of Fort Hill Wharf } \\ \text { and dumping boats }\end{array} & \begin{array}{l}\text { 21,105 } 21 \\ \$ 30,65785\end{array}\end{array}$
Number of trips to sea by division towboat . 380
Number of trips to sea by hired towboats . 33
Number of scows to sea . . . . . . 414
Cost per cart load . . . . . . . $\$ 0.22$
Cost per boat load . . . . . . . $\$ 74.05$
Contracts.

| Оbject. | Name. | Price per Month. | Commence. | End. |
| :---: | :---: | :---: | :---: | :---: |
| Removal of house dirt and ashes: |  |  |  |  |
| East Boston * | Charles Berman. | \$1,041 66 ${ }^{\frac{2}{3}}$ | July 1, 1908 | July 1, 1910 |
| Brighton*. | John H. Carter | $60166 \frac{2}{3}$ | July '15, 1908 | July 15, 1910 |
| Part of West Roxbury | John J. Moore | $45833 \frac{1}{3}$ | April 10, 1907 | April 10, 1909 |
| North Dorchester | Dennis Flynn | 1,454 16知 | Sept. 1, 1907 | Sept. 1, 1908 |
| North Dorchester | Arthur C. Mullen | 1,275 00 | Sept. 1, 1908 | Sept. 1, 1910 |
| South Dorchester | John D. Lyons | 77500 | Aug. 1, 1907 | Aug. 1, 1908 |
| South Dorchester | Martin F. Gaddis. | $74583 \frac{1}{3}$ | Aug. 1, 1903 | Aug. 1, 1910 |
| Removal of house offal: |  |  |  |  |
| East Boston. | Thomas Mulligan | 70000 | April 1, 1906 | July 15, 1908 |
| East Boston | John T. Lane. | 416 663 | July 15, 1908 | July 15, 1910 |
| Brighton. | John Newbury | 216 662 | June 20, 1908 | June 20, 1910 |
| Part of West Roxbury | William H. Kennelly | 20750 | June 15, 1908 | June 15, 1910 |
| Dorchester.. | Timothy F. Bradley | 1,666 663 | April 11, 1907 | April 11, 1909 |
| Lease of wharf, Atlantic avenue $\dagger$ | Middlesex Trust. . . . . . . . . . . | 958 33족 | March 1, 1903 | Dec. 1, 1908 |
| Disposal of house offal. | New England Sanitary Product Company | 4,366 66 ${ }^{\text {z }}$ | Nov. 7, 1901 | Jan. 1, 1912 |
| Disposal of waste and rubbish | City Refuse Utilization Company | 458 33 ${ }^{\frac{1}{3}}$ | Dec. 1, 1898 | Dec. 1, 1908 |
| Removal of dead animals. | N. Ward Company. | No charge | Nov. 9, 1901 | Jan. 1, 1912 |

[^20]Amounts Paid to Contractors.- Year of 1908.

| Districts. | Ashrs. |  | $\mathrm{Distrrcts}^{\text {a }}$ | Offal. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Name. | Per .Year. |  | Name. | Per Year. |
| 2. East Boston. | Charles Berman | \$6,250 04 | 2. East Boston. | Thomas Mulligan. | \$4,526 66 |
| 4. Brighton.. | John H. Carter. | 3,329 19 | 2. East Boston | John T. Lane | 2,053 30 |
| 5. Part West Roxbury, | John J. Moore ${ }_{\text {\% }}$ De | $\begin{array}{r}5,500 \\ 13,087 \\ \hline 14\end{array}$ |  | John Newbury W. H. Kennelly | 2,600 2,494 51 |
| 6. North Dorchester | Arthur C. Mullen | 5,100 00 | 6. Dorchester. ....... | Timothy F. Bradley* | 21,666 66 |
| 6. South Dorchester. | John D. Lyons. | 5,42500 | Disposition. | New England Sanitary |  |
| 6. South Dorchester. Disposition. | Martin F. Gaddis. . . . . . City Refuse Utilization Com- | 3,729 15 |  |  | 56,767 00 |
| Disposition.......... | pany. | 5,500 00 |  |  |  |

## Construction and Repair Shops.

For work done and material furnished for other divisions the different shops received as follows:

| Wheelwright shop | \$2,645 68 |
| :---: | :---: |
| Blacksmith shop, South End | 4,696 87 |
| Blacksmith shop, West End | 57873 |
| Paint shop | 2,250 80 |
| Harness shop | 1,918 51 |
| Horseshoeing shop, South End | 2,153 25 |
| Horseshoeing shop, West End | 2,008 |

\$16,252 09
For work done and material furnished for the Sanitary Division the following amounts were expended by the different shops:

| Wheel wright shop | \$6,688 93 |
| :---: | :---: |
| Blacksmith shop, South End | 7,426 75 |
| Blacksmith shop, West End | 1,315 00 |
| Paint shop | 3,759 11 |
| Harness shop | 5,303 69 |
| Horseshoeing shop, South End | 2,200 91 |
| Horseshoeing shop, West End | 1,314 72 |

Total amount paid out, stock and labor, all divisions
$\$ 44,26120$
Foreman in charge . . . . $\$ 1,357 \$ 4$
Allowed time, holidays . . . 2,734 69
Allowed time, medical attendance . 300
Expended for electric power, print-
ing and incidentals
53185
4,627 38
Total of maintenance of shops
\$48,888 58
Income from other divisions
16,252 09
Net cost to Sanitary Division
\$32,636 49

Detailed Account of Amounts Paid to the Sanitary Division During the Year Ending January 31, 1909.
For repair and construction work . . . . \$12,090 59
For horseshoeing . . . . . . . 4,161 50
For use of dumping boats . . . . . 10,441 75
Carried forward
\$16,593 84
Brought forward

\$16,593 84

For hay, straw and grain, board and care of horses, $\quad 5,72678$
For feeders, stablemen and watchmen
1,231 60
For fuel, light, etc.
For board and care of sick horses at veterinary hospital

88100
For rent of wharf, Atlantic avenue
For labor, removing snow for Street Cleaning and
Watering Division 5,200 00

20025
For horse loaned to County of Suffoik 14300
For furnishings for prison vans
$\$ 40,88888$
Horseshoeing by Divisions.

| Kinds and Styles. |  |  |  |  |  |  |  | ¢ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plain shoes. | 6,968 | 3,748 | 890 | 172 | 68 | 14 | 103 | 11,963 |
| Bar shoes | 121 | 144 | 142 |  |  |  | 45 | 452 |
| Leathers. | 4,064 | 2,647 | 406 | 10 | 28 | 8 | 73 | 7,236 |
| Resets. | 1,121 | 515 | 109 | 12 | 6 |  | 38 | 1,801 |
| Pads. | 211 | 152 | 74 | 114 | 2 |  | 12 | 565 |
| Springs . | 3 | 12 | 4 | .... |  |  |  | 19 |

Average cost per shoe, 41 cents.

## Cost of Horseshoeing.

|  | Division Shops. | Outside Shops.* |
| :---: | :---: | :---: |
| Stock | \$2,740 07 | \$4,086 38 |
| Labor. | 4,937 06 |  |
| Totals. | \$7,677 13 | \$4,086 38 |

* Average charge per shoe, 50 cents.


## Hay and Grain.

Amount of hay, grain, straw, oats, shorts and corn used by the Sanitary Division for the year of 1908:

| Hay | . | . | . | . | . | . | . | $2,454,223$ | pounds. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | :--- |
| Straw | . | . | . | . | . | . | . | 173,085 | pounds. |
| Cob corn | . | . | . | . | . | . | . | 26,480 | pounds. |
| Oats | . | . | . | . | . | . | . | 53,904 | bushels. |
| Shorts | . | . | . | . | . | . | . | $30 \frac{1}{4}$ tons. |  |

Highest price paid for hay . . . $\$ 2300$ per ton.
Lowest price paid for hay
1500 perton.
Highest price paid for straw
2000 perton.
Lowest price paid for straw
1500 perton.
Highest price paid for oats
65 per bushel.
Lowest piice paid for oats
$56 \frac{1}{2}$ per bushel.
Highest price paid fol shorts
3100 perton.
Lowest price paid for shorts . . . 2700 perton.
Highest price paid for cob corn . . 164 per 100.
Lowest price paid for cob corn . . 135 per 100.
Repairs and Insurance, Year Ending January 31, 1909.

| Object. | Contractor. | Amount Paid. | Date of Contract. |
| :---: | :---: | :---: | :---: |
| Repairs to dumper No. 4. | Benjamin Rose | \$960 00 | June 9, 1908. |
| Repairs to dumper No. 3. | D. D. Kelly \& Son. | 76500 | July 17, 1908. |
| Repairs to dumper No. 2. | D. D. Kelly \& Son. | 51500 | Sept. 3, 1908. |
| Dredging wharf, Atlantic avenue. | Bay State Dredging Company ( 15 hours at $\$ 20$ ).... . | 30000 | Dec. 29, 1908. |
| Insurance on automobile.... | G. R. Griffin \& Co | 8800 | Jan. 29, 1909. |

Street Department－Sanitary Division． 313
Number of Carts，Wagons and Sleds used by the Sanitary Division for the Collection of House Dirt and Ashes，Waste and Rubbish and Offal During the Year Ending January 31， 1909.

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{3}{*}{Districts．} \& \multicolumn{2}{|l|}{\multirow[t]{2}{*}{\[
\begin{aligned}
\& \text { Ash Carts. } \\
\& \hline \text { all wood. }
\end{aligned}
\]}} \& \multicolumn{4}{|l|}{Offal．} \& \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Paper．}} \& \multirow[t]{3}{*}{Sleds．} \& \multirow[t]{3}{*}{Name of Contractor．} \\
\hline \& \& \& \multicolumn{2}{|l|}{iron．} \& \multicolumn{2}{|l|}{wood．} \& \& \& \& \\
\hline \&  \& \[
\begin{aligned}
\& \text { 导 } \\
\& \text { O} \\
\& 0
\end{aligned}
\] \& \[
\begin{aligned}
\& \text { 品 } \\
\& \text { 品 }
\end{aligned}
\] \& ¢ \&  \& ¢
¢
¢ \& Carts． \& Wagons． \& \& \\
\hline \begin{tabular}{l}
1．South Boston \\
3．Charlestown \\
5 and 7．Roxbury ． \\
8．South End shop \\
8 and 9．South End and Back Bay \\
10．North and West Ends ．
\end{tabular} \& \[
\begin{array}{r}
17 \\
11 \\
46 \\
6 \\
73 \\
44
\end{array}
\] \& \[
\begin{aligned}
\& 5 \\
\& 1 \\
\& 1
\end{aligned}
\] \& \[
\begin{array}{r}
5 \\
10 \\
\ldots \\
23 \\
9
\end{array}
\] \& 1
2
1 \& \[
\begin{array}{r}
8 \\
1 \\
14 \\
4 \\
4 \\
15
\end{array}
\] \& 1 \& \[
\begin{array}{r}
1 \\
1 \\
3 \\
\ldots \\
19 \\
9
\end{array}
\] \& 1
\(\ldots \ldots\)
2
\(\ldots \ldots\)
10
7 \& \[
\begin{array}{r}
12 \\
15 \\
41 \\
5 \\
39 \\
5
\end{array}
\] \& \\
\hline \begin{tabular}{l}
Total number used by Sanitary Division． \\
In Use by Contractors． \\
2．East Boston \\
2．East Boston \\
4．Brighton． \\
4．Brighton \\
5．West Roxbury \\
5．West Roxbury \\
6．North Dorchester \\
6．South Dorchester \\
6．Dorchester
\end{tabular} \& 197 \& \begin{tabular}{c} 
\\
4 \\
\(\ldots\) \\
3 \\
\(\ldots\) \\
2 \\
\(\ldots\) \\
\hline 8 \\
6
\end{tabular} \& 47 \& 4

6 \& 42
$\ldots$
$\ldots$
$\ldots$
2
$\ldots$
$\ldots$
$\ldots$
$\ldots$

2 \& | 4 |
| :---: |
| $\cdots$ |
| 5 |
| $\cdots$ |
| 3 |
|  | \& 33 \& 20 \& \[

$$
\begin{gathered}
117 \\
\ldots \\
\ldots \\
\ldots \\
\ldots \\
1 \\
\ldots
\end{gathered}
$$

\] \& | Charles Berman．＊ |
| :--- |
| John T．Lane．＊ |
| John H．Carter．＊ |
| John Newbury． |
| John J．Moore．＊ |
| William H．Kennelly． |
| Arthur C．Mullen． |
| Martin F．Gaddis |
| Timothy F．Bradley． | <br>

\hline Totals of all carts，sleds and wagons used． \& 202 \& 30 \& 47 \& 10 \& 46 \& 16 \& 33 \& 20 \& 128 \& <br>
\hline
\end{tabular}

# Lands and Buildings in Charge of the Sanitary Division. 

South Boston Stable. (Leased.)
Stables and sheds, with accommodations for nineteen horses, located at 317 and 319 First street, South Boston.

East Boston Stable. (Leased.)
Stables and shed, with accommodations for fifteen horses, located at 324 East Eagle street and occupied jointly by Paving, Sewer, Street Cleaning and Sanitary Divisions.

## Charlestown Stable.

With accommodations for twenty-five horses, situated on Rutherford avenue; lot contains 17,300 square feet of land; stable built in 1875 , cost $\$ 5,083.07$; sheds and outbuildings built in 1879.

## Brighton.

Accommodation was provided by the Sewer Division at its stable on Western avenue for two horses of the Sanitary Division. Discontinued July 15, 1908.

## Highland Stable.

With accommodations for seventy-two horses on the old almshouse lot, Highland street, containing 81,082 square feet. A part of this stable and adjoining lot is used by the Paving Division. There is on this lot a brick stable, built in 1878 , which cost $\$ 88,594.13$. On this lot is an offal shed, erected in 1875 at a cost of $\$ 1,160.12$. This offal shed was abandoned on April 1, 1897, and in 1900 part of it was remodeled and is now used as a carriage house and wash room.

## - South City Stables, Shops and Sheds.

Situated on Albany street, opposite Newton street. The lot belonged to the city before being used for this purpose, and contains 90,780 square feet of land.

The stables and buildings connected therewith are of brick. There are also on the premises five wooden sheds, used for storing wagons, etc. The stable is two stories high, with

French roof, and has accommodations for 100 horses. Twentythree horses are kept in sheds. Total original cost, exclusive of land, $\$ 79,089.23$. In 1899 a veterinary hospital was built and equipped for the purpose of caring for sick and disabled horses.

Connected with stables are blacksmith, wheelwright, paint and harnessmaker's shops, in which wagons, carts, harnesses, etc., used by this and other departments are constructed and kept in repair, also a horseshoeing shop for shoeing the horses of the division located in this section of the city.

## West Stables and Sheds.

The stable is a brick building, a story and a half high, 128 feet by 50 feet, located on North Grove street; built in 1860 without buildings attached to same. It has accommodations for ninety horses in stables and sheds. The lot contains about 45,152 square feet. On May 11, 1896, a horseshoeing shop was established for the purpose of shoeing horses of the division stabled in this section of the city.

## Fort Hill Wharf.

Containing 21,054 square feet, placed in charge of the Sanitary Division; used as a dumping station for the city's garbage and refuse and as a mooring place for dumping boats and scows, which convey this material to sea and to the plant of the New England Sanitary Product Company. Cost of constructing platform and dredging dock, $\$ 6,219.33$. There are five Barney dumping boats which are in continual use and are towed to sea by the tugboat "Cormorant."

A portion of this wharf is used by the Street Cleaning Division as a locker for patrol push-carts, etc., and a part is in use by the Paving Division.

## Litchfield's Wharf. (Leased.)

Situated at 466 to 470 Atlantic avenue, containing about 35,460 square feet. Leased from Jacob H. Hecht March 1, 1898, for a period of ten years. This wharf adjoins Fort Hill Wharf and is occupied in part by the New England Sanitary Product Company as a berth for their scows, and also by the buildings of the City Refuse Utilization Company for the disposal of waste and rubbish. This property is now owned by the Middlesex Trust. Lease extended from March 1, 1908, to December 1, 1908, and now running at will.

## Weighing Shed. (Hired.)

Situated at the corner of Massachusetts avenue and Southampton street. Rented from the Boston Consolidated Gas Company. Lot contains about 2,300 square feet of land.

Wharf Property on Freeport Street, Dorchester.
On Freeport street, Dorchester, wharf property containing 160,745 square feet, bought by the city for the Sanitary Division but never used.

## APPENDIX F.

## REPORT OF THE DEPUTY SUPERINTENDENT OF THE SEWER DIVISION.

Boston, Mass., February 1, 1909.
Mr. Guy C. Emerson, Superintendent of Streets:
Dear Sir, - I submit herewith report of the Sewer Division for the year ending January 31, 1909.

Yours respectfully,

> C. R. Cutter, Acting Deputy Superintendent.

The work of the division is carried on under chapter 3, City Ordinances, 1908, and chapter 47, Revised Ordinances, 1898, and the following statutes:

Chapter 426-1897, as amended by 450-1899 and 268 - 1903 .

Chapter 383-1903, as amended by 464-1907.
Chapter 485-1907.
Chapter 550-1907.
Chapter 204-1908.
Chapter 514-1908.

## The Duties of the Sewer Division.

Charge of the entire sewerage system of the city.
The care and maintenance of the pumping station, reservoirs, etc.

The designing and building of all sewers and surface drains and catch-basins and the maintenance of same after construction.

The collection of all entrance fees against such estates as have not paid any sewer assessment.

Making all plans for the assessments of betterment on account of sewer construction, as determined by the Street Commissioners.

The granting of permits to licensed drain layers to connect with common sewers and the inspection, plotting and recording of all such connections.

Total number of employees on pay roll February

$$
1,1908
$$857

Total number of employees on pay roll February 1, 1909

608
Total amount of weekly pay roll February 1, 1908, $\$ 12,608.11$
Total amount of weekly pay roll February 1, 1909, $\$ 10,173.50$
Total amount of monthly pay roll February 1, 1908
\$1,123.32
Total amount of monthly pay roll February 1, 1909
$\$ 617.00$
Average weekly pay roll, including monthly roll, for fiscal year amounted to
\$12,107.54
Charged as follows:

* Maintenance . . . . . \$4,409 53

Sewerage works . . . . . 3,093 20
Separate systems of drainage . . 4,604 81
\$12,107 54
Average number of men employed $\cdot \quad . \quad . \quad 730$
Average number of horses maintained by the division during the year60

The rate of wages per day paid to common laborers
$\$ 2.25$
Financial Statement from February 1, 1908, to January 31, 1909.

| Овject. | Balances on Hand Feb. 1, 1908. | Appropriations, Transfers. Loans and | Revenue Received During the Year. | Total Credits. | Expenditures During the Year. | $\begin{gathered} \text { Balances } \\ \text { on Hand } \\ \text { Jan. } 31,1909 . \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sewer Division |  | \$350,000 00 | \$2,142 14 | \$352,142 14 | \$351,162 41 | * \$979 73 |
| Sewerage Works | \$73,778 09 | 300,00000 |  | 373,778 09 | 322,482 32 | 51,295 77 |
| Separate Systems of Drainage | 176,597 47 | 655,000 00 |  | 831,597 47 | 599,973 76 | 231,623 71 |
| Totals | \$250,375 56 | \$1,305,000 00 | \$2,142 14 | \$1,557,517 70 | \$1,273,618 49 | * \$282,919 48 |

* Balance transferred to Ferry Division, \$979.73.


## MAINTENANCE EXPENDITURES, FEBRUARY 1, 1908, TO JANUARY 31, 1909.

## Sewer Division.

Improved Sewerage.


[^21]Brought forward ..... \$338,257 10
Hardware, tools, etc. ..... 1,930 75
Sundries ..... 38116
Damages, claims and medical attendance ..... 2,851 70
Telephones not included elsewhere ..... 1,717 99
Examining and locating ..... 50438
House connections ..... 5,807 17
Rubber goods ..... 45750
Gatehouse, Fenway ..... 16391
Corporation inspection ..... 74100
Miscellaneous Charges.
Boston Consolidated Gas Company ..... 98504
Transit Commission ..... 22340 ..... 22340
Water Department ..... 5823
Boston Elevated Railway Company ..... 20711
Edison Electric Illuminating Company ..... 1,201 67
Sanitary Division ..... 11035
Finance Commission ..... 23334
Boston \& Maine Railroad ..... 13622
Old Colony Street Railway ..... 7336
City Hospital ..... 3889
Boylston Market Association ..... 648
Suffolk County Courthouse ..... 918
Schoolhouse Commission ..... 1810
Consumptives' Hospital ..... 15197
\$356,266 00Credit.
Decrease of stock in yards \$1,736 75
Amount earned by division engines ..... 2,670 32
Northern avenue and Sleeper street, paid by
Engineering Department ..... 696525,103 59\$351,162 41
Amount Collected by City Collector and Credited to Appropriation for Sewer Division Maintenance, February 1, 1908, to January 31, 1909.
New York, New Haven \& Hartford Railroad ..... \$1 87
Old Colony Street Railway Company ..... 7811
Boston Consolidated Gas Company ..... 75425
Edison Electric Illuminating Company ..... 47142
Boston Elevated Railway Company ..... 32792
Transit Commission ..... 17467
Coughlan \& Sheils Company ..... 1400
Boston \& Maine Railroad ..... 13622
Schoolhouse Department ..... 1810
City Hospital ..... 3889
Courthouse ..... 1082
Consumptives' Hospital ..... 11587

| Appropriation for 1908-1909 <br> Collections for $1908-1909$ |
| :--- |
|  |
| Transfer by auditor to Ferry Division |$\quad . \quad . \quad . \quad .$| $\$ 350,00000$ |
| ---: |
| 2,14214 |


| Sewerage Works. <br> February 1, 1908, to January 31, 1909. |  |  |  |
| :---: | :---: | :---: | :---: |
| Office salaries |  | \$8,322 61 |  |
| Engineers' salaries |  | 53,750 10 |  |
| Engineers' expenses |  | 4,681 35 |  |
| Engineers' salaries and expense improvernent | Stony brook | 2,291 52 |  |
| Miscellaneous, Stony brook |  | 19142 |  |
| Land takings |  | 16,432 35 |  |
| Manholes, construction |  | 1,995 93 |  |
| Automatic gage, Hereford street |  | 50594 |  |
| Sundries . |  | 1,061 75 |  |
| Tickets |  | 40000 |  |
| Stock |  | 63092 |  |
| Improved Sewerage - Construction. |  |  |  |
| Pumping station |  | \$28,951. 00 |  |
| Main and intercepting sewers |  | 2,803 93 |  |
| Moon Island | . . . | 77832 |  |
| Sewerage Works - Sewer Construction. South Boston. (Day Labor.) |  |  |  |
|  |  |  |  |
| A street, West First street to Mt.   <br> Washington avenue <br> West First street, Dorchester ave- <br> nue to A street . $\$ 25,984$ 83 |  |  |  |
|  |  |  |  |
| Contract. |  |  |  |
| Gold street, existing sewer to E street | \$452 23 |  |  |
| Washburn street, Dorchester avenue to Boston street | 2,273 30 |  |  |
|  |  | 2,725 53 | 59,72670 |
| East Boston. (Day Labor.) |  |  |  |
| Bennington street, Walley and Gladstone streets, connections, $\quad \$ 2,09120$ |  |  |  |
| Bennington street, Leverett street to Revere line . . . . 13627 |  |  |  |
| Condor street, Putnam street to |  |  |  |
| Cottage street, outlet . . . . 1,06440 |  |  |  |
| East Boston low level sewer, private land and streets, Austin |  |  |  |
| Glendon street, Condor street to |  |  |  |
| East Eagle street . . . 1,213 99 Glendon and Putnam streets, in- |  |  |  |
| Glendon and Putnam streets, intercepter, Section 2 . | 20,398 85 |  |  |
| Putnam street, Condor street to |  |  |  |
| White street | 2,347 81 | 43,28691 |  |
| Carried forward |  | \$43,286 91 | \$182,523 84 |

$\$ 43,28691 \quad \$ 182,52384$
Contract:
Ashley street, Bennington street to Breed street
\$1,618 11
Border street, Central square to 170 feet north

26839
Border street, Eutaw street to 160 feet southeast

14598
Breed street, Leyden street to Gladstone street

7388
Cleveland street, Prescott street to 200 feet east

35983
Walley street, Leyden street to Orient avenue

96215
3,428 34
46,71525
Charlestown. (Contract.)
Charles street place, off Charles street to end of place 41279

Brighton. (Contract.)
Western avenue, Rena street to North Harvard street
95184

|  | West Roxbury. (Day Labor.) |  |
| :---: | :---: | :---: |
| Canterbury street, | at | Calder |

Contract.
Canterbury street, Talbot avenue
high levelsewer to Paine street,
Canterbury street, Calder street to Angell street
Canterbury street, Angell street to 140 feet west
Centre street, Spring street to 100 feet northeast of Cottage avenue
Hawthorne street, Sycamore street to Heathcote street .
Heathcote street, Hawthorne street to Poplar street
Kittredge street, Mayo street to 175 feet southwest
Mendum street, Walter street to 340 feet southeast
Neponset avenue, 60 feet west of Stony brook to 160 feet east
Poplar street outlet, Section 1
Poplar street outlet, Section 2
Poplar street outlet, Section 3
Wachusett street, Weld Hill street to 630 feet southwest
Westover street, Dunbar street to existing sewer
\$1,807 77
15947
4130

47079
1,792 34
28361
58893
\$1,664 32

7158
18898
1,583 83
3,594 17
3944
2,094 87
58783

## Brought forward

Dorchester. (Day Labor.)

Dakota street, Greenbrier street to Geneva avenue
Oakland brook, Rockdale street to railroad
Oakland brook, private land, Edgewater drive to River street
Freeport street brook, private land, from Bowdoin street to 265 feet east
Morton street, Lucerne street to Blue Hill avenue
\$1,193 73
7162

3256

5746
2,373 48
$\$ 3,72885$
Contract.
Bellevue street, Hamilton street to Kane street
$\$ 1,10715$
Bowdoin street, Draper street to Hamilton street

27074
Codman street, Dorchester avenue to Washington street

1,284 75
Elmo street, existing sewer to Erie street

23258
Favre street, Oakland street to 350 feet northeast

2,399 10
Hamilton street, existing sewer to Mt. Everett street

1,120 87
Harvard street, Hansborough street to Randolph avenue 50618
Howard avenue, Cunningham street to Dalkeith street 40019
Malta street, River street to Edgewater drive

1,501 96
North Munroe terrace, Neponset avenue to Train street

1,090 00
Payson avenue, Glendale street to 335 feet north

2,184 91
Randolph road, Rosewood street to Hollingsworth street

1,000 93
South Munroe terrace, Neponset avenue to Train street

1,132 60
Randolph road, Rosewood street to River street

22451
Tokio street, River street to Edgewater drive

1,169 47
Train street, King street to South Munroe terrace

94407
Wayland street, Hartford street to 170 feet northwest

54957
Whitney park, existing sewer to 80 feet northeast

33705
17,456 63
21,18548

## Roxbury. (Day Labor.)

Hoffman street, overflow in private land over Stony brook, southeast of Lamartine street,
$\$ 37869$
Carried forward
$\$ 37869$

Contract.
Ellis street, Fulda street to Hawthorne street
$\$ 54911$
Larkin street, Hampden street to Adams street

17804
Seaver street, Harold street to Parkview street

2,631 23
Sherwood street, from Norfolk avenue to end of street . . 66262
$4,021 \quad 00$
City Proper. (Day Labor.)
Beacon street, Spruce street to Hancock avenue
\$2,298 48
Brighton street, Chambers street to Leverett street

99498
Central street, India street to Broad street

10,736 98
Franklin and Broad streets
16,555 42
Morton street, Endicott street to Salem street

71461
Myrtle street, Revere street to 100 feet south

38282
Oak street, Harrison avenue to May place

1,837 26
Prince street and North End Playground

1,063 18
$\$ 34,58373$
Contract.
Broad street, Custom House street to India square (paving) . $\$ 76016$
Congress street, Franklin street to Milk street (paving) . . 94500
Cooper street, Washington Street North to Endicott street . . 9758

1,802 74
36,38647

## Stony Brook Conduit.

Contract.
Section 2 . . . . . . . . . $\$ 78129$
Section 4 . . . . . . . . 60155
New Catch-basins.

| South Boston | . | . | . | . | . | . | . | $\$ 49124$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| East Boston | . | . | . | . | . | . | . | 946 |
| 64 |  |  |  |  |  |  |  |  |
| Charlestown | . | . | . | . | . | . | . | 120 |
| 83 |  |  |  |  |  |  |  |  |
| Brighton | . | . | . | . | . | . | . | 862 |
| West Roxbury | . | . | . | . | . | . | . | 1,46018 |
| Dorchester | . | . | . | . | . | . | . | 3,41284 |
| Roxbury | . | 4,729 | 27 |  |  |  |  |  |
| City Proper | . | . | . | . | . | . | . | 22289 |

# SEPARATE SYSTEMS OF DRAINAGE, FEBRUARY 1, 1908, TO JANUARY 31, 1909. 



Old Stony Brook Channels, Between Back Bay Fens and Elmwood Street.

Day Labor.

| Back Bay Fens to Bryant street, at Hemenway street, Section |  |
| :---: | :---: |
| No. 1 | \$31,822 |
| Across Huntington avenue | 19,480 18 |
| Rogers avenue, between Huntington avenue and Ruggles street (test-pits) | 548 |
| Downing street, Old Whittier street to Vernon street. | 4,752 |
| Vernon street to Linden Park street | 31,002 96 |
| Linden Park street to Elmwood street | 23,280 8 |

## Contract.

Bryant street, Section 2 . . \$26,521 32
Huntington avenue at Bryant street connection
Rogers avenue, Section 3 and part of Section 4 Part of Section 4
Section 5

2,953 73
57,983 39
17,444 55
52,611 82

Stony Brook.
Day Labor.
Canterbury branch, 630 feet south of Neponset avenue to Harvard street $\$ 23,96356$

Roslindale Branch.

Railroad and Corey streets
Bellevue avenue to Belgrade avenue and extension to railroad
Private land and Fresno street,
One hundred and fifty feet northeast of Ashland street to Poplar street
$\$ 7,93870$

44,878 35
2,802 53

16,044 42

Contract.
Stony brook conduit in Meehan street and private land Williams street to 150 feet south of Lotus place
55,68120

| Brought forward . . . . . . . . . \$446,703 02 |  |  |  |
| :---: | :---: | :---: | :---: |
| Avenue Louis Pasteur, day labor |  |  | 2,166 02 |
| Shepard brook, day laborTalbot avenue high level sewer, between . . . 39,86821 |  |  |  |
|  |  |  |  |
| Lyons street pumping station and Talbot |  |  |  |
| avenue |  | \$47,695 56 |  |
| Between Helen and Bernard streets |  | 15,539 00 | 63.234 |
| East Boston. Day Labor. |  |  |  |
| East Boston low level sewer . . . . |  |  | 3,717 74 |
| Charlestown. |  |  |  |
| Miller and Lawrence streets |  |  | 52470 |
| Contract. |  |  |  |
| Corey road (balance contract 1905) ${ }^{\text {- }}$. . $\$ 6905$ |  |  |  |
| Commonwealth terrace, from Allston street to |  |  |  |
| Market street, Spring street to Wicklow street, |  | 1,015 10 |  |
| West Roxbury. Day Labor. |  |  |  |
| Cotton street, Walter street to Fairview street <br> South street, Guernsey street to Centre street |  |  |  |
|  |  |  |  |
| Contract. |  |  |  |
| Arden street, Belgrade avenue <br> to Colberg avenue . . . $\$ 49845$ |  |  |  |
| Hewlett street brook, in private land between Robert street |  |  |  |
| Mendum street, between Walter and Fairview streets and out- |  |  |  |
| Neponset avenue brook, Mt. 29250 |  |  |  |
| Perkins street, Canterbury street <br> to Grew avenue $78915$ |  |  |  |
| Poplar street, Metropolitan avenue, etc. . . . . . 12,54136 |  |  |  |
| Richards avenue Hyde Park avenue to Hyde Park line . 1,256 56 |  |  |  |
| Sycamore street, Florence street |  |  |  |
| West street, Orange street to |  |  |  |
| Bellevue avenue . . | 53422 |  |  |
| Williams street, Meehan street |  |  |  |
| to Stedman street . . . 6,808 35 |  |  |  |
|  |  | 29,818 31 | 33,401 98 |
| Carried forward |  |  | \$592,070_99 |

Brought forward . . . . . . . . . \$592,070 99

| Dorchester. Day Labor. |  |  |
| :---: | :---: | :---: |
| Harlem street, Greenwood street to Glenway street | \$1,964 85 |  |
| Contract. |  |  |
| Adams street, Minot street to Oak avenue . . . . $\$ 4550$ |  |  |
| Geneva avenue . . . 16822 |  |  |
| Fremont street, River street toNorfolk street . . . . 2,05164 |  |  |
| Sheridan street . . . 47602 |  |  |
|  | 2,780 38 |  |
| Roxbury. |  |  |
| Whittier street, 20 feet northwest of Tremont street (testpit) |  |  |
| Wyoming street, Wabeno street <br> to Humboldt avenue . . 77447 | \$777 39 |  |
| Contract. |  |  |
| Centre street, Amory street to Oakview terrace | 1,890 05 | 2,667 |
| City Proper. |  |  |
| Beacon street, Spruce street to Hancock avenue . . . . . . . . $\$ 43991$ |  |  |
| Contract. |  |  |
| Beacon street, Hereford street to Massa chusetts avenue |  | 49010 |
| Total |  | \$599,973 76 |

[^22]Catch=basins Cleaned by Day Labor, 1908=09.

| Districts. | Number Basins. | Cubic Yards Ex cavated. | Cubic Yards per Basin. | Labor. | Teams. | Excavating and Locating. | Miscellaneous | Dumping. | Total. | $\underset{\text { per }}{\text { Cost }}$ <br> Basin. | Cost per Cubic Yard. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. South Boston. | 747 | 1,447 | 1.94 | \$1,671 82 | * \$863 50 | \$30 00 |  |  | \$2,565 32 | \$3 42 | \$1 77 |
| 2. East Boston. | 106 | 289 | 2.72 | 80551 | 28520 | 1400 | \$12 50 |  | 1,117 21 | 1054 | 387 |
| 3. Charlestown.. | 562 | 1,404 | 2.50 | 1,877 13 | 95550 | 1600 | 1887 |  | 2,867 50 | 510 | 204 |
| 4. Brighton. | 147 | 421 | 2.86 | 77917 | 33950 |  | 954 |  | 1,128 21 | 767 | 268 |
| 5. West Roxbury. | 226 | 572 | 2.53 | 96867 | † 53450 |  | 1357 |  | 1,516 74 | 651 | 257 |
| 6. Dorchester. | 584 | 1,720 | 2.94 | 2,062 96 | 1,410 90 |  |  |  | 3,473 86 | 595 | 202 |
| 7-8. Roxbury and city, | 674 | 1,722 | 2.56 | 2,377 55 | 1,326 72 | 25213 | 2590 | \$58 75 | 4,041 05 | 600 | 235 |
| 9-10. City Proper. | 707 | 2,181 | 3.08 | 2,510 70 | $\ddagger 1,29225$ | 19225 | 3050 | § 40500 | 4,430 70 | 619 | 200 |
| Totals. | 3,753 | 9,756 | 2.60 | \$13,053 51 | \$7,008 07 | $\$ 50438$ | \$110 88 | \$463 75 | \$21,140 59 | \$5 63 | \$2 17 |

City Document No. 38.
Catch=basins Cleaned by Contract, 1908=09.


Sewerage Works.
Expenditures, February 1, 1908, to January 31, 1909.

| Accounts. | Labor. | Teaming. | Materials. | Contracts. | Miscellaneous. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Engineers' salaries. | \$53,750 10 |  |  |  |  | \$53,750 10 |
| Engineers' expense. | 1,520 53 | \$138 88 | \$155 23 |  | \$2,866 71 | 4,881 35 |
| Tickets, Boston Elevated Railway Company |  |  |  |  | 40000 | 40000 |
| Office salaries. | 8,322 61 |  |  |  |  | 8,322 61 |
| Stock. | 63092 |  |  |  |  | 63092 |
| Pumping station. | 6,238 26 |  |  | \$21,502 74 | 1,210 00 | 28,951 00 |
| Sundries. |  |  |  |  | 1,061 75 | 1,061 75 |
| Main and intercepting sewers. |  |  | 2,803 93 |  |  | 2,803 93 |
| Moon Island. | 75082 |  | 2750 |  |  | 77832 |
| Land takings and court executions. |  |  |  |  | 16,432 35 | 1.6,432 35 |
| New manholes, entire city. | 1,093 66 | 31339 | 58888 |  |  | 1,995 93 |
| New catch-basins, South Boston | 11686 | 5675 | 15942 | 15821 |  | 49124 |
| New catch-basins, East Boston. | 7820 | 8675 | 21575 | 56594 |  | 94664 |
| New catch-basins, Charlestown. |  |  | 4733 | 7350 |  | 12083 |
| New catch-basins, Brighton. | 37874 | 11040 | 37309 |  |  | 86223 |
| New catch-basins, West Roxbury | 62118 | 11400 | 51350 | 21150 |  | 1,460 18 |
| New catch-basins, Dorchester. | 82777 | 24775 | 1,292 91 | 1,044 41 |  | 3,412 84 |
| New catch-basins, Roxbury. | 1,333 82 | 50357 | 1,203 14 | 1,688 74 |  | 4,72927 |
| New catch-basins, City Proper. | 10657 | 2800 | 8782 |  |  | 22239 |
| Automatic gage, Hereford street. | 43593 | 1050 | 5951 |  |  | 50594 |
| Carried forward. | \$76,205. 97 | \$1,609 99 | \$7,528 01 | \$25,245 04 | \$21,970 81 | \$132,559 82 |

Sewerage Works．
Expenditures，February 1，1908，to January 31，1509．—Concluded．

| Accounts． | Labor． | ＇Teaming． | Materials． | Contracts． | Miscellaneous． | Total． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carried forward． | \＄76，205 97 | \＄1，609 99 | \＄7，528 01 | \＄ 25,24504 | \＄21，970 81 | \＄132，559 82 |
| Stony brook： |  |  |  |  |  |  |
| Engineers＇salaries． | 1，880 32 |  |  |  |  | 1，880 32 |
| Engineers＇expense． |  |  |  |  | 41120 | 41120 |
| Miscellaneous．．． | 875 |  |  |  | 18267 | 19142 |
| Stony brook conduit，Section 2 ． |  |  |  | 77767 | 362 | 78129 |
| Stony brook conduit，Section 4. |  | 2450 | 1950 | 55755 |  | 60155 |
| Sewers built in entire city | 85，844 56 | 11，135 78 | 55，855 93 | 33，220 45 |  | 186，056 72 |
| Totals． | \＄163，939 60 | \＄12，770 27 | \＄63，403 44 | \＄59，800 71 | \＄22，568 30 | \＄322，482 32 |

## Separate Systems of Drainage．

Expenditures，February 1，1908，to January 31， 1909.

| 92 \＆ $26^{\prime} 6698$ | If 800＇18 | 68 102＇LIzs |  | 88 \＆LL＇\＆z\％ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $06786{ }^{\prime} \mathrm{z}$ 9 |  | 78 10」゙2İ\％ |  | 16 そセて＇8\％ | 61 6LL＇8I\％ |  |
|  | 89068 |  |  | 66 \％8 |  | upuns |
| 97825 |  |  | z\％zsi | 0988 | ¢ 2488 |  |
| 98 $886{ }^{\text {＇}}$ |  |  | 05688 | 828 ¢ $\square^{\text {¢ }}$ |  |  |
| 20986 | $88^{\text {z }}$ 2198 |  |  | 92 9is | 68 L08 |  |
| 09 ャ90＇888 |  |  |  |  | 09 ¢90＇8 8 \％ |  |
| ${ }^{[187}{ }^{1} \mathrm{~L}$ |  |  |  | －supureal | ${ }_{\text {roqe }}{ }^{\text {T }}$ | sannoosy |

Catch=basins Built, 1908=09.

| Districts. | Contract. | Day Labor. | Rebuilut. |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Contract. | Day Labor. |
| City Proper... |  | 2* |  |  |
| Roxbury.. | 7 | 17 | 2 | 2 |
| Dorchester. |  | 16 |  |  |
| West Roxbury... | 5 | 11 |  |  |
| Brighton... |  | $8 \dagger$ |  |  |
| Charlestown.... |  |  |  |  |
| East Boston.... |  | 1 |  |  |
| South Boston. |  | $5 \ddagger$ |  | $2 \S$ |

Total catch-basins built, 78.

* One charged to Boston \& Maine Railroad. $\ddagger$ Two charged to Edison Company. $\dagger$ One paid by Paving Division.
$\ddagger$ Two charged to Edison Company.
$\S$ Charged with West First street sewer.

Land=takings.

| M. A. \& C. J. Arthur et als. | \$10,000 00 | Relocation Stony brook, Washington street to Green street, Street Commissioners' award. |
| :---: | :---: | :---: |
| E. J. Lane | 1,937 94 | Foster street, Brighton, court execution. |
| W. C. Burt | 37200 | River street, Street Commissioners' award. |
| N. M. Neil. | 17500 | Freeport street brook, court execution. |
| A. Brennan. | 15000 | Clifford street, Street Commissioners' a ward. |
| R. F. Scannell Company | 2,559 96 | Oakland brook, court execution. |
| Margaret Brooks. | 10720 | Canterbury branch, Stony brook, Street Commissioners' award. |
| Town of Brookline. | 75000 | Addington road. |
| James H. Morton. | 5000 | Neponset avenue, Street Commissioners' award. |
| L. Karle. | 33025 | Avondale place, Street Commissioners' a ward. |
| Total | \$16,432 35 |  |

Sewerage Works Loan.


$\ddagger$ Built by contract.
New Manholes Built, February 1, 1908, to January 31, 1909. (Day Labor.)

| Location | Built by | Number. | Teaming. | Cost. |  | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Labor. | Material. |  |
| Boylston and Church streets. | A. Pitts. | 1 | \$5 25 | \$30 85 | \$6140 | $\$ 9750$ |
| Eaton and North Russell streets. | Thomas Clougherty. | 1 | 2625 | 3110 | 2838 | 8573 |
| No. 3 Bishop street, West Roxbury. | John Kelly. | 1 | 2100 | 7412 | 3472 | 12984 |
| Florence street, West Roxbury. | John Kelly | 1 | 1750 | 9225 | 4215 | 15190 |
| Riverside street, near Tremont'street. | A. Pitts. | 1 | 3350 | 5887 | 3169 | 12406 |
| Grosvenor road, at Centre street . | John Kelly | 1 | 700 | 2665 | 3542 | 6907 |
| Fixeter street, corner Boylston street. | F. E. McCarthy. | 1 | 1825 | 6358 | 3355 | 11538 |
| Whittier street. | P. F. Kelley | 1 | 1650 | 9007 | 2253 | 12910 |
| Passageway, near Greenwich park. . | P. F. Kelley | 1 | 266 | 1834 | 2207 | 4307 |
| Albany street, at Ambulance station.. | P. F. Kelley | 1 | 1050 | 3313 | 3560 | 7923 |
| East Fifth street, between L and M streets | W. F. Lowe | 1 | 2975 | 9185 | 3773 | 15933 |
| Orchard street, near Eustis street. | P. F. Kelley | 1 | 2184 | 3883 | 3144 | 9211 |
| Groton street.. | P. F. Kelley | 2 | 7\88 | 4290 | 8068 | 13146 |
| Shawmut avenue. | P. F. Kelley | 1 | 588 | 5987 | 2481 | 9056 |
| Leedsville street. | William Park | 1 | 875 | 1682 | 1680 | 4237 |
| Lime street. | F. E. McCarthy | *2 | 1200 | 5738 |  | 6938 |
| Dudley and Dana streets. | P. F. Kelley | 1 | 5925 | 12355 | 5054 | 23334 |
| Prescott street, 50 feet north of Lexington street. | John Conry. | *1 |  | 11725 |  | 11725 |
| Cabot street.................................. | P. F. Kelley. | *1 |  | 2625 |  | 2625 |
|  |  |  | $\dagger 900$ |  |  | 900 |
| Totals, |  | 21 | \$31? 76 | \$1,093 66 | \$589 51 | \$1,995 93 |

sewers and sleface drains blilt by the city，february 1，19ns，To january 31， 1909 City Proper

| Luctanes． | Bualt ly |  |  | Number Exdiders | Wersu． | Minabed． | Cost，inisect |  |  |  | Touncme | Dateremmen． | Kıud． |  | thitaster if Moll | tun |
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|  |  |  |  |  |  |  | L．min．e．t． | T．atal． |  |  |  |  |  |  |  |  |
| Dave Latare |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | P．F Kelley | 82，531 22 |  |  | Jubs 22.1906 ， | Soont．2n smux | 1，4，30 00\％ | 726 | 5 |  | 51，37 20 |  | Coserete | if leer． | Hy | verac． |
| Cenreal teet，ifom Jasta streel tu Browi street． | I E Matartuy | （sill os |  |  | Suly＋4 taxis ${ }^{\text {a }}$ | Sul 5.10 | B，2．2m 81 | 10.736 59 | 76515 |  | 10.736 in |  | ${ }_{\text {Bra }} \times$ k | 15 feet | 2，Hunk and feat | Sentrase nurit－ |
| Franhlua and Mrumb etreto | FE MrCarth | 13,4357 |  |  | Narr an，1913 ${ }^{\text {a }}$ | Angr，27，wems | 9，4475 | ${ }^{10.555512}$ | 1，3，36 30 |  | 10.535542 | 7ushy ft 30 in．bv 38 io． | Breck． | 114 teet | char and filmice | －－xectase wiri－ |
|  | Thuman Ciousherty |  |  |  | 1080，6， 1917 | Toib．17，1909 | 66\％ 95 | 为为 | 11025 | 3，05， 11 | －5．7un up | ${ }^{5}$ | Prse | ${ }_{3} 14$ feet | Clay and gravel |  |
|  | 150 men |  |  |  | Sin 1．19015 3 | 3nu．¢，\sul |  | Nat 9 | －3：5 | 4.6311 | 5.25412 | Bumben mant． |  |  |  | Smeneratre miakt |
|  | Thomas efrustertv |  |  |  |  | Wee s． $\mathrm{S}^{1907}$ |  | 21461 | 42 w | ＋，664．841 | 5.8010 | Bunit mivis |  |  |  | －Momuge mirto． |
| trure stret and Sustll End flibyround | Timmay tomulurrly |  |  |  | Suly 24，103\％｜ond |  |  | 104．4 |  | 10．n70 13 | 11，1338 61 | Bunt in tari． |  |  |  | सriveras |
|  | F E Mrematioy | 129810 |  |  | April | Nay 8 ，yun | 236605 | $3 \times 4 \times 2$ | 354 |  | 32 |  | ${ }^{\text {Plow }}$ | ${ }^{3} \mathrm{f}$ feet |  | Noneraze wish |
| Contrech． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Conurais sireet，frume Franhtio stleet tw．M｜l｜s．street | J L Burros Compana | ＋ |  |  | July 0.11004 ＇ 5 | July 18,1808 |  | 95 no |  |  |  |  |  |  |  | sewerse werth |
|  | D E Lsmeth | ＋ |  |  | Now．3，1904｜D |  |  | 78018 |  |  | ¢ |  |  |  |  | ge |
| Conjer streel，from Wuabhngton Street Nurtio to Eath－ cott atret | M 11．Lyach |  |  |  | Ave 11． 1997 | bet 9，9007 |  | 975 |  | 4，794 51 | 4.582 nus | Buale in 190\％． |  |  |  |  |
| Totelas． |  |  |  |  |  |  | 17，ith 17 | suse mio |  |  |  |  |  |  |  |  |



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|  | W，Humata Path |  |  |  | Sue 30， 29.96 |  |  |  |  | \％ | 51.127 | Rume minam |  |  |  | vemersies wurh |
|  | Whilum Pasth |  |  |  | ＂1 3． 1917 | tan 1.191913 |  | 716 |  | 5.66937 |  | Bual in y90\％． |  |  |  | Twerrase wirks |
|  | Willumi Path | 81， 3 H2 31 |  |  | Mar is tumb | May $7 . \tan$ | 31.9204 | 2．ヶпа 4 | Stic |  | 2378 小 | athit 12 in | Pppe | 251 eet | Cluy，rectiont gracil | Sturscee wather |
|  | Willum Park | 72285 |  |  | Alue 2，，17w | Sulv＂，tum | －9391 | 1.14378 | 78 |  | 1，123 7 73 |  |  |  | 1，7aselel and and | ruen |
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|  | 31 cmatrey |  |  |  | 1，ee 23,1 y／7 | Amol 7.1919 | 154 （1） | 1.704 wh | 113 | 10 $\quad \cdots$ | 1．5） | 237111112 ia | Pipe | 19 feet | Wry ，wet sod an I | －werree nut |
|  | 11 Muridy |  |  |  | Hee 30，1905 | Soril 25,1 vns | 2913 | 2,29491 | 13131 | 7923） | 3 c 264 |  | ${ }_{\text {Pipe }}$ | to feet |  | Mrrave wi． |
|  |  |  |  |  | Fwe 1：9 194\％ | Felb ter tim | $\pm 3$ | 1，469 | 86.3 | 14210 | 1,314 |  |  |  |  | 188 |
|  | प H |  |  |  | Jum it inm | Tobe | 115 | 1.104143 | 4 3s | II | 1 143 93 | 12in！th 12 in | Prpe． | 10 feet． |  | n－care |
|  | If cimun Company |  |  |  | Septe 19．140） | Ween 24 man |  | 224 |  | 2．95676 | 2．24127 | Bulte in 990 |  |  |  | venersem Wash． |
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|  | B T Bames |  |  |  | 1 Herer atisami | Eat | on | 4．107 15 | 11 So | 53932 | 1．366 47 | ${ }^{4 \times 6}$ | Frof | $\frac{115}{45 \text { freet }}$ | 1 Travel，sand aut ruth | Yseraze nurh， |
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|  | ¢ F Man | $323 \times 1$ | S174 40 | 13 |  | Nuv 24，1909 | 450 | 23254 |  |  | 132 54 | － 114140 10 | Pipe | 8 leet | Gravel． | －wpersee with） |
|  | limuge 1 fegan | 1．，45 51 | 2 | 13 | June 11． 1 Ins | Julv 2lly | ${ }_{1} 36.85$ | 18 | 175 |  | ¢ ${ }^{\prime}$ | 75.410 in | P．pe． | 10.1 cet | Ledg． | Enerise wori |
|  | Deorre 3 Resan | an | 11 | ${ }^{18}$ | W．ay 12． 12008 | May 20， | บe | sut 19 |  |  | 964 15 | 2tiut 12 | P4， | 92 feet | Sund amil mavel． | Stwersge norks． |
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|  | Dimares Rogan | 529 0x | 2 H 31 | 12 | Muy 13，mem | June 3． 1905 | 2025 | ${ }^{357} 05$ |  |  |  | Thert 12 | Pipe | 10．3 feet． | Ssold mink | Anernise works |
|  | Altac Cuartur |  | $1 \mathrm{ni}^{\text {a }}$ | 10 |  | Dem．33，1916 | 50 |  |  |  | 044110 |  | Pupe． | 9 leent | Kus） tan | Neneruse |
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|  | 11 Ciarmull | ${ }^{3} 10$ | 3050， 01 | 1 |  | 12， 1 in | 12900 | ，4， 57 | 800 |  |  |  | Pripe | sis reel | Sorul und mock | nweriser auths |
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| Totas |  |  |  |  |  |  | 31，99066 | \＄21，205 40 |  |  |  |  |  |  |  |  |



SEWERS AND SLRFACE DRAINS BUILT BY TIIE CITY; FEBRUARY 1, 190s, TO JANUARY 31, 1909.
city Proper.

Dorchester.

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## East Boston



Charlestown.
Sewers Bulut by Private Parties, February 1, 1908, to January 31, 1909.

| Street. | Between | Length in Feet. | Dimensions and Materials. | Average Cut. | Character of Material. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Scott street... | East Eighth street and East Seventh street. | 198.65 | 12-inch pipe sewer. |  |  |

Brighton.


Sewers Built by Private Parties. - Concluded.

| Street. | Between | Length in Feet. | Dimensions and Materials. | Average Cut. | Character of Material. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bentham road. <br> Intervale street <br> Pleasant terrace. <br> Rowell street. <br> Vaughan avenue extension and Wales court. <br> Whittemore terrace $\qquad$ $\qquad$ $\qquad$ | Draper street and Robinson avenue <br> Normandy street, westerly <br> Off Pleasant street. <br> Hancock street and Cushing avenue <br> Devon street and Wales place. <br> Hancock street ${ }^{-}$and end of terrace $\qquad$ $\qquad$ $\qquad$ $\qquad$ $\qquad$ $\qquad$ | 233.35 226.70 178.25 510.20 337.00 234.70 | 12-inch pipe. <br> 10-inch pipe. <br> 10-inch pipe. <br> 10-inch pipe. <br> 10 -inch pipe. <br> 10-inch pipe. |  |  |
| South Dorchester. |  |  |  |  |  |
| Assabet street. <br> Deering road <br> Randolph road | Neponset avenue and Train street <br> Blue Hill avenue and 433 feet northwesterly.. <br> Harvard street and 425 feet easterly . $\qquad$ $\qquad$ | $\begin{aligned} & 409.97 \\ & 444.08 \\ & 425.00 \end{aligned}$ | 12-inch pipe. 12 -inch pipe. 12-inch pipe. |  |  |
| City Proper. |  |  |  |  |  |
| City Hospital grounds <br> City Hospital grounds $\qquad$ | Massachusetts avenue and Burnham Building, Massachusetts avenue and Burnham Building, | $\begin{array}{r} 221.60 \\ 81.25 \\ 43.68 \end{array}$ | 12-inch pipe sewer. <br> 10 -inch pipe surface drain. <br> 8 -inch pipe surface drain. |  |  |

Sewer Contracts Awarded, 1908-09.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount Paid to Contractor. | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Washburn street, between Boston street and Dorchester avenue. | Mark H. Lynch . . . . . . <br> (12 bidders.) | Feb. 26, 1908. | 100 cubic yards earth excavation, below grade, at $\$ 1$ cubic yard. <br> 5 cubic yards earth excavation, outside trench, at $\$ 1$ cubic yard. <br> 1 cubic yard rock excavation at $10 \mathrm{c} . \mathrm{cu} . \mathrm{yd}$. <br> 6 M . feet, board measure, spruce sheeting at $\$ 22 \mathrm{M}$. feet. <br> 4 M . feet, board measure, spruce platforms at $\$ 22 \mathrm{M}$. feet. <br> 2 cubic yards concrete at $\$ 3$ cubic yard, <br> 476 linear feet 12 -inch pipe sewer at $\$ 1.50$ linear foot. <br> 20 linear feet 10 -inch pipe catch-basin drain at $\$ 1.05$ linear foot. <br> 285 linear feet house sewer removed at 50 c . linear foot. <br> 40 linear feet house drains to be laid at 75 c . linear foot. <br> 90 linear feet old house drain rebuilt at 75 c . linear foot. <br> 3 manholes built at $\$ 48$ each. <br> 50 cubic yards sand or gravel refill at $\$ 1$ cubic yard. <br> 476 linear feet 6 -inch pipe underdrain at 20 c . linear foot. <br> 1 manhole rebuilt and connected with sewer at $\$ 12$. <br> 25 square yards pavement taken up and relaid at 50 c . square yard. | \$2,070 46 | $\$ 2,04700$ |

The bids include the furnishing by the contractor of all materials except ironwork.
Sewer Contracts Awarded, 1908-09.-Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount Paid to Contractor. | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Williams street, between Meehan street and Stedman street, West Roxbury. | Coughlan \& Sheils Company... <br> ( 7 bidders.) | April 13, 1908. | 390 linear feet earth excavation for 4 -foot 3 -inch by 4 -foot 9 -inch brick conduit at $\$ 4.50$ linear foot. <br> 10 cubic yards earth excavation, below grade, at $\$ 1.50$ cubic yard. <br> 5 cubic yards extra earth excavation at $\$ 1.50$ cubic yard. <br> 10 cubic yards rock excavation at $\$ 5$ cubic yard. <br> 153 cubic yards brick masonry in Portland cement at $\$ 6$ cubic yard. <br> 5 cubic yards concrete of Portland cement at $\$ 5$ cubic yard. <br> 15.6 M. feet, board measure, spruce sheeting at $\$ 23 \mathrm{M}$. feet. <br> 1 M . feet, board measure, spruce platforms, etc., at $\$ 40 \mathrm{M}$, feet. <br> 24 linear feet 10 -inch pipe surface drain at $\$ 1$ linear foot. <br> 10 linear feet 18 -inch pipe surface drain at $\$ 1$ linear foot. <br> 390 linear feet 6 -inch pipe underdrain at 15 c . linear foot. <br> 34 pipe connections with brick conduit at 25 c . each. <br> 10 cubic yards gravel refill at $\$ 1$ cubic yard. <br> 2 catch-basins built at $\$ 30$ each. <br> 1 manhole built on brick surface drain at $\$ 30$. <br> 44 linear feet of old brook on Williams street filled and surfaced at 60c. linear foot. <br> 8 linear feet old 4 -foot by 3 -inch brick surface drain removed at $\$ 1.50$ linear foot. <br> 18 linear feet old 30 -inch pipe surface drain removed at $\$ 1$ linear foot. | \$4,349 89 | §5,34100 |

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18
12

| Ellis street, between Fulda street and Hawthorne street, Roxbury. <br> Elmo street, from existing sewer northwesterly to Erie street, Dorchester. | George J. Regan . <br> (11 bidders.) <br> Thomas F . Mahan. <br> (13 bidders.) | May 9, 1908. | 56 cubic yards earth excavation, above grade, at 70c. cubic yard. <br> 1 cubic yard earth excavation, outside trenches, at $\$ 2$ cubic yard. <br> 114 cubic yards rock excavation at $\$ 3$ cubic yard. <br> 200 feet, board measure, spruce sheeting at 1c. foot. <br> 1 cubic yard concrete at 1 c . cubic yard. <br> 160 linear fect 10 -inch pipe sewer at 40 c . linear foot. <br> 4 linear feet 6-inch pipe house drain at $\$ 1$ linear foot. <br> 6 linear feet old house drain rebuilt at $\$ 1$ linear foot. <br> 3 manholes built at \$49 each. <br> 1 cubic yard brick masonry at $\$ 7$ cubic yard. <br> 50 linear feet 6 -inch pipe underdrain at 10 c . linear foot. <br> 1 old lamp hole to be removed at $\$ 5$. <br> 1 cubic yard earth excavation, below grade, at 1c. cubic yard. <br> 1 cubic yard earth excavation, outside trenches, at 1c. cubic yard. <br> 10 cubic yards rock excavation at $\$ 1$ cubjc yard. <br> 200 feet, board measure, spruce sheeting at $1 c$. subic yard. <br> 1 cubic yard Portland cement concrete at 1 c . cubic yard. <br> 86 linear feet 10 -inch pipe sewer at $\$ 1.50$ linear foot. <br> 1 manhole built at $\$ 32$. <br> 1 cubic yard brick masonry at 1c. cubic yard. <br> 5 cubic yards gravel and sand refill at 25 c . cubic yard. <br> 50 linear feet 6 -inch pipe underdrain at 1 c . linear foot. <br> 1 old manhole rebuilt at $\$ 2$. |
| :---: | :---: | :---: | :---: |

[^23]Sewer Contracts Awarded, 1908-09.-Continued.

| Contract. | A warded to | Dated. | Amount Paid per Item. | $\begin{gathered} \text { Amount } \\ \text { Paid to } \\ \text { Contractor. } \end{gathered}$ | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Hamilton street from existing sewer westerly to Mt. Everett street, Dorchester. | George J. Reagan.. . ........ (18 bidders.) | May 9, 1908. | 65 cubic yards earth excavation, above grade, at 65c. cubic yard. <br> 1 cubic yard earth excavation, outside trenches, at $\$ 1.50$ cubic yard. <br> 130 cubic yards rock excavation at $\$ 3$ cubic yard. <br> 200 feet, board measure, spruce sheeting at 1c. foot. <br> 1 cubic yard concrete at 1 c . cubic yard. <br> 175 linear feet 10 -inch pipe sewer at 45 c . linear foot. <br> 25 linear feet house sewer removed and handling sewage at 25 c . linear foot. <br> 4 linear feet old drain rebuilt at $\$ 1$ linear foot. 1 manhole built at $\$ 50$. <br> 1 cubic yard brick masonry at 1c. cubic yard. linear foot. <br> linear foot. 6 -inch pipe underdrain at 1 c . | $\$ 77325$ <br> Includes extra work amounting to: $\$ 92.28$. | \$1,015 00 |
| Gold street, from existing sewer southeasterly to E street, South Boston. | William J. Rafferty \& Co..... <br> ( 9 bidders.) | May 9, 1908. | 1 cubic yard earth excavation, below grade, nothing. <br> cubic yard earth excavation, outside trenches, nothing. <br> cubic yard rock excavation at $\$ 5$ cubic yard. <br> 3M.feet, board measure, spruce sheeting nothing 1 cubic yard concrete at $\$ 5$ cubic yard. <br> 165 linear feet 12 -inch pipe sewer at $\$ 1.36$ linear foot. <br> 60 linear feet house sewer removed, including handling sewage, at 25 c . linear foot. <br> 0 linear feet 6 -inch pipe house drain at 75 c . linear foot. <br> 2 manholes built at $\$ 56$ each. <br> 1 cubic yard brick masonry at $\$ 5$ cubic yard. <br> 1 cubic yard gravel and sand refill, nothing. <br> 100 linear feet 6 -inch pipe underdrain, nothing. | 39569 | 64500 |


| Harvard street, between Hansborough street and Randolph, avenue, Dorchester. | George J. Regan. . . . . . . . . . . . . . (16 bidders.) | May 9, 1908. | 10 cubic yards earth excavation, below grade, at $\$ 1$ cubic yard. <br> 10 cubic yards earth excavation, outside trenches, at Ic. cubic yard. <br> 25 cubic yards rock excavation at $\$ 3$ cubic yard. <br> 1 M . feet, board measure, spruce sheeting at $\$ 15 \mathrm{M}$. feet. <br> 1 M . feet, board measure, spruce platforms at 1c. M. feet. <br> 5 cubic yards concrete at $\$ 7$ cubic yard. <br> 250 linear feet 15 -inch pipe sewer at $\$ 1.50$ linear foot. <br> 1 manhole built at $\$ 45$. <br> 10 cubic yards gravel and sand refill at $\$ 1$ cubic yard. <br> 250 linear feet 6 -inch pipe underdrain at 20 c . linear foot. | 46330 | 81500 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Howard avenue, between Cunningham street and Dalkeith street, Dorchester. | George J. Regan. (20 bidders.) | May 9, 1908. | 1 cubic yard earth excavation, below grade, at 1c. cubic yard. <br> 1 cubic yard earth excavation, outside trenches, at $\$ 2$ cubic yard. <br> 1 cubic yard rock excavation at $\$ 5$ cubic yard. <br> 200 feet, board measure, spruce sheeting at 1c. per foot. <br> 1 M . feet, board measure, spruce platforms at 1c. M. feet. <br> 1 cubic yard concrete at $\$ 5$ cubic yard. <br> 239 linear feet 12 -inch pipe sewer at 95 c . linear foot. <br> 2 manholes built at $\$ 40$ each. <br> 1 cubic yard brick masonry at $\$ 6$ cubic yard. <br> 30 cubic yards gravel and sand refill at 1c. cubic yard. <br> 200 linear feet 6 -inch pipe underdrain at 1 c. cubic yard. <br> 1 old manhole, rebuilt and connected with sewer at $\$ 10$. | 36053 | 64500 |

Sewer Contracts Awarded, 1908-09.- Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount Paid to Contractor. | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Whitney park, between existing sewer and 80 feet northeasterly, Dorchester. | George J. Regan. <br> (12 bidders.) | May 9, 1908. | 10 cubic yards earth excavation, above grade, at 65 c . cubic yard. <br> 5 cubic yards earth excavation, outside trenches, at 1c. cubic yard. <br> 70 cubic yards rock excavation at $\$ 3.45$ cubic yard. <br> 1 M . feet, board measure. spruce sheeting at 1 c . <br> M. feet. <br> 1 M . feet, board measure, spruce platforms at 1c. M. feet. <br> $J$ cubic yard concrete at 1 c . cubic yard. <br> 80 linear feet 12 -inch pipe sewer at 45 c . linear foot. <br> 8 linear feet old house drain rebuilt at 1 c . linear foot. <br> 5 cubic yards gravel and sand refill at 1 c . cubic yard. <br> 10 linear feet 6 -inch pipe underdrain at 1 c . linear foot. <br> 1 old manhole rebuilt at $\$ 5$. <br> 18 -inch pipe chimney built at $\$ 5$. | \$301 50 | $\$ 520 \quad 00$ |
| Charles street place, between Charles street and end of place, Charlestown. | Thomas A. Nolan. ...... . <br> (12 bidders.) | June 27, 1908. | 1 cubic yard earth excavation, below grade, at 47c. cubic yard. <br> 10 cubic yards earth excavation, outside trenches, at 39 c . cubic yard. <br> 10 cubic yards rock excavation at $\$ 3.75$ cubic yard. <br> 5 M. feet, board measure, spruce sheeting at 1c. M. feet. <br> 10 cubic yards concrete at $\$ 7.90$ cubic yard. <br> 310 linear feet 10 -inch pipe sewer at 66c. linear foot. <br> 12 linear feet 6 -inch pipe chimneys at 16 c. linear foot. | 31439 | 1,240 00 |


$\infty$


60 linear feet old drain rebuilt at 98 e.linear foot.
2 manholes built at $\$ 43$ each.
10 cubic yards gravel and sand refill at 1 c .
cubic yard.
50 linear feet 6 -inch pipe underdrain at 18 c .
linear foot.
1 old manholeinvert rebuilt at 1 c .
1 cubic yard earth excavation, below grade,
1 cubic yard earth excavation, below grade,
at $\$ 1$ cubic yard.
5 cubic yards earth excavation, outside
10 cubic yards rock excavation at $\$ 2$ cubic 2 M . feet, board measure, spruce sheeting at
100 feet, board measure, spruce platforms at
2 cubic yards concrete at $\$ 6$ cubic yard. $\$ 1.24$ 18 linear feet 6 -inch pipe chimney at 40 c .
18 linear foot.
$\frac{1}{5}$ manhole built at $\$ 29$.
5 cubic yards gravel and sand at $\$ 1$ cubic
25 linear feet 6 -inch pipe underdrain at 22 c .
1 invert to be rebuilt in old manhole at $\$ 15$.
1,100 linear feet, more or less, earth excavation inches by 10 feet 6 inches, including removal 100 cubic yards, more or less, earth excavation,
 vation at $\$ 2$ cubic yard. less, rock at $\$ 5$
10 cubic yar
cubic yard.
237 cubic yar
237 cubic yards, more or less, brick masonry
in Portland cement at $\$ 12$ cubic yard.
June 27, 1908.

Andrew M. Cusack...
(5 bidders.)
2 bidders.)
The bids include the furnishing by the contractor of all materials except ironwork.
Cleveland street, between Prescott street
and point 200 feet easterly, East Boston.
Rebuilding old Stony brook channel,
part of Sections 3 and 4, in Rogers
part of Sections 3 and 4, in Rogers
avenue, Roxbury, from Huntington
avenue 1,100 feet south.
Sewer Contracts Awarded, 1908=09. - Coniinued.

| Contract. | A warded to | Dated. | Amount Paid per Item. | $\begin{gathered} \text { Amount } \\ \text { Paid to } \\ \text { Contractor. } \end{gathered}$ | Engineer's Preliminary Estimate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rebuilding old Stony brook channel, part of Sections 3 and 4, in Rogers avenue, Roxbury, from avenue 1,100 feet south. | Peter W. Hill........ <br> (12 bidders.) | Aug. 4, 1908. | 1,100 linear feet, more or less, Portland cement <br> reinfored concrete, double channel conduit: (a.) Arches reinforced with Monolith steel <br> (a.) Arches reinforced with Monolith steel steel bars, at $\$ 30$ linear foot. <br> (b.) Arches reinforced with I-beams, Kahn wails and inverts and wire lathing, side wails and inverts to correspond, reinforced with steel bars, at $\$ 33$ linear foot. with steel bars, at $\$ 33$ linear foot. <br> side walls and inverts to correspond and side walls and inverts to correspond, rein forced with steel bars, at $\$ 33$ linear foot. <br> 14 cubic yards, more or less, plain concrete at $\$ 8$ cubic yard. <br> 1 M . feet, board measure, more or less, 5 -inch tongued and grooved Georgia pine sheeting, left in place, at $\$ 60 \mathrm{M}$. feet. <br> 1 M . feet, board measure, more or less, 2 -inch tongued and grooved spruce sheeting, left <br> in place, at $\$ 50 \mathrm{M}$. feet. <br> 3 M . feet, board measure, more or less, spruce <br> sheeting, left in place, at $\$ 25 \mathrm{M}$. feet. <br> for permanent use, other than sheeting and for permanent use, othe shoring, at $\$ 30 \mathrm{M}$. feet. <br> 22 M . feet, board measure, more or less, spruce <br> for posting arches at $\$ 35 \mathrm{M}$. feet. 2,200 linear feet, more or less, 8 - <br> , underdrain at 25 c . linear foot, 8 -inch pipe <br> 100 , more or less, pipe connections at $\$ 1$ each. <br> 100 cubic yards, more or less, gravel refill at <br> $\$ 2$ cubic yard. <br> 1,000 linear feet, more or less, spruce piles <br> 2,200 linear feet, more or less, 12 -inch pipe <br> house sewer at 25 c . linear foot. each. <br> 10 manholes, more or less, to be built at $\$ 60$ |  | * |

$\$ 36,000 \quad 00$

| Rebuilding old Stony brook channel, part of Section 4, in Rogers avenue, private land, Ruggles and Whittier streets, Roxbury. | William J. Barry.... <br> (4 bidders.) | Sept. 9, 1908. | 50 linear feet, more or less, old drain relaid at <br>  <br> For furnishing Akron or Portland pipe, 70 per cent discount from list prices. <br> 2,750 square yards, more or less, of waterproofing at 40c. square yard. <br> 314 linear feet, more or less, earth excavation and refilling for double channels 8 feet 3 inches by 10 feet 6 inches, including removal of present channeis, at $\$ 22.50$ linear foot. <br> 183 linear feet, more or less, earth excavation and refiliing 11 -foot by 9 -foot conduit and 2 -foot by 3 -foot brick sewer, siphon and two manholes, at $\$ 18.50$ linear foot. <br> Excavating and refilling flushing machine chamber attached to 11 -foot by 9 -foot conduit, sum of $\$ 50$. <br> Excavating and refilling in Whittier street, at connection of 11 -foot by 9 -foot conduit with present channels and with Section 5 for attached and adjacent 12 -inch pipe sewer, etc., sum of $\$ 100$. <br> 100 cubic yards, more or less, earth excavation, below grade, at $\$ 2.50$ cubic yard. <br> 10 cubic yards, more or less, earth excavation, outside trenches, at $\$ 5$ cubic yard. <br> 10 cubic yards, more or less, rock at $\$ 2$ cubic yard. <br> 106 cubic yards, more or less, brick masonry at $\$ 13.50$ cubic yard. <br> 1,640 cubic yards, more or less, Class A concrete at $\$ 7$ cubic yard. <br> 5 cubic yards, more or less, Class $B$ concrete at $\$ 10$ cubic yard. <br> 1 M. feet, board measure, more or less, 5 -inch tongued and grooved Georgia pine sheeting, left in place, at $\$ 25 \mathrm{M}$. feet. <br> 1 M . feet, board measure, more or less, 2 -inch tongued and grooved spruce sheeting, left in place, at $\$ 25 \mathrm{M}$. feet. <br> 21 M. feet, board measure, more or less, spruce sheeting, left in place, at $\$ 22 \mathrm{M}$. feet. | Final payment not made. |
| :---: | :---: | :---: | :---: | :---: |

The bids include the furnishing by the contractor of all materials except ironwork
Sewer Contracts Awarded, 1908=09.-Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount Paid to Contractor. | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rebuilding old Stony brook channel, part of Section 4, in Rogers avenue, private land, Ruggles and Whittier streets, Roxbury. | William J. Barry. . . . (4 bidders.) | Sept. 9, 1908. | 1 M. feet, board measure, more or less, spruce for permancnt use, other than sheeting, etc., at $\$ 25 \mathrm{M}$. feet. <br> 830 linear feet, more or less, 8 -inch and $10-$ inch pipe underdrain at 15 c . linear foot. <br> 40 pipe connections, more or less, at 50c. each. <br> 50 linear feet, more or less, old drains relaid at 50 c . linear foot. <br> 490 linear feet, more or less, 12 -inch house sewer at 30 c . linear foot. <br> 20 linear feet, more or less, 12 -inch and 16 -inch double iron pipe siphon at $\$ 1.50$ linear foot. <br> 33 linear feet, more or less, 12 -inch house sewer at $\$ 1.50$ linear foot. <br> 47 linear feet, more or less, pipe house drain at $\$ 1.50$ linear foot. <br> For placing flushing gate frames in chamber in Rogers avenue, sum of $\$ 50$. <br> 6 manholes, more or less, built on pipe sewers at $\$ 45$ each. <br> 2 manholes, more or less, built on siphon at $\$ 45$ each. <br> 50 cubic yards, more or less, gravel refill at 50 c . cubic yard. <br> 1,000 linear feet, more or less, spruce piles driven and cut at 10 c . linear foot. <br> 1,200 square yards, more or less, waterproofing at 20c. square yard. <br> For furnishing A kron or Portland pipe, 70 per cent discount from list prices. <br> 68 tons, more or less, steel I-beams at $\$ 40$ ton of 2,000 pounds. <br> 51 tons, more or less, steel rods or bars at $\$ 40$ per ton of 2,200 pounds. <br> 5,520 square feet, more or less, Kahn No. 2 rib metal at 9 c . square foot. <br> 430 square yards, more or less, Kahn No. 2 rib |  |  |

870,025 00
Final

693 linear feet, more or less, earth excavation and backfilling for double channeled rein-
forced concrete conduit, 8 feet 3 inches by 228 linear feet, more or less, earth excavation and backfilling for reinforced concrete con-
duit, 8 feet by 6 feet, at $\$ 10.25$ linear foot. 42 linear feet earth exa vation and back fiilby 7 feet 6 inches. at $\$ 16.75$ linear foot.
25 cubic yards, more or less, earth excavation, 200 cubic yards, more or less, extra earth exca10 cubic yards, more or less, rock excavation 200 cubic yards, more or less, brick masonry in 2,848 cubie yards, more or less, Class A concrete at $\$ 7.75$ cubic yard.
350 cubic yards, more or less, Class B concrete
78 tons, more or less, steel rods or bars at
$\$ \$ 37.50$ ton.
41 tons, more or less, I-beams at $\$ 40$ ton.
11,200 scuare feet, more or less, Kahn rib
metal No. 2 at 8 c. square foots.
metal No. 2 at sc. square foot.
280 square yards, more or less, Kahn rib lath-
ing No. 2 at 15 c . square yard. ${ }_{1} \mathrm{Mg}$. feet, board measure, more or less, 3 -inch
75 M . feet, board measure, more or less, spruce
3 sheeting at M . feet, board measure, more or less, spruce, 1,650 linear feet, more or less, 8 -inch or 10 -inch pipe underdrain at 15 c . linear foot. ${ }^{2}$ pipe connections, more or less, at 25 c . each.
 at $\$ 1.25$ linear foot.
Sewer Contracts Awarded, 1908=09. - Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount Paid to Contractor. | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rebuilding old Stony brook channel, Section 5, in Whittier street, Roxbury, between Ruggles street and Downing street. | Thomas J. Young Company... (S bidders.) | Aug. 26, 1908. | 1,288 linear feet, more or less, 12 -inch or 10inch pipe house sewer in main trench attached to or between conduit at 25 c . linear foot. <br> 34 linear feet, more or less, double iron pipe, 30 -inch by 12 -inch siphon, at $\$ 1.50$ linear foot. <br> 100 linear feet, more or less, old drains relaid at 50c. linear foot. <br> 50 cubic yards, more or less, gravel refill at $\$ 1.50$ cubic yard. <br> 28,500 linear feet, more or less, spruce piles at 15 c . linear foot. <br> 17 manholes, more or less, on house sewer at $\$ 40$ each. <br> 2 manholes, more or less, on siphon at $\$ 300$ each. <br> 1 old catch-basin, or more, rebuilt at $\$ 15$ each. <br> Pipe furnished, Akron or Portland pipe, 72 per cent discount from list price. <br> 2,140 square yards, more or less, waterproofing at 75 c . square yard. <br> 3 connections, more or less, with old sewer at $\$ 10$ each. |  | - |
| Building Stony brook conduit in Meehan street and private land, Section-5, West Roxbury. | Coughlan \& Sheils Company. . <br> ( 10 bidders.) | Aug. 11, 1908. | 908 linear feet, more or less, earth excavation and refilling for 20 -foot by 16 -foot concrete conduit and 2 -foot 8 -inch by 4 -foot brick sewer, including removal of existing stonework of present channel, at $\$ 27.30$ linear foot. 600 cubic yards, more or less, earth excavation, below grade, at $\$ 1.50$ cubic yard. <br> 48 linear feet, more or less, excavation and refill for 9 -foot conduit, above grade, at $\$ 13.42$ linear foot. | $\begin{gathered} \text { Final } \\ \text { payment } \\ \text { not made. } \end{gathered}$ | \$120,000 00 |


75 cubic yards, more or less, extra earth ex-
cavation at 75 c . cubic yard
50 cubic yards, more or less
50 cubic yards, more or less, rock at $\$ 4$
cubic yard.

in Portiand cement at $\$ 14$ cubic yard.
Portland yards, more or less, concrete, of
Por arches at $\$ 7$ cubic
士ี่ 3,277 cubic yards, more or less, concrete, of
Portland cement for arches at $\$ 7$ cubic
yard.
3,535 cubic yards, more or less, concrete of
Portland cement for invert and side walls
at $\$ 7$ cubic yard.
52.5 M . feet, board measure, 5 -inch tongued
and grooved Georgia pine sheeting, left in
place, at $\$ 60 \mathrm{M}$. feet.
47.88 M . feet, board measure, 3-inch tongued
and grooved Georgia pine sheeting, left in
place, at $\$ 60 \mathrm{M}$. feet.
33.52 M. feet, board measure, 2 -inch tongued
and grooved spruce sheeting, left in place,
 23.52 M. feet, board measure, 2 -inch tongued
and grooved spruce sheeting, left in place,
at $\$ 45 \mathrm{M}$. feet.
54.70 M . feet, board measure, more or less, 54.70 M. feet, board measure, more or less,
spruce sheeting, left in place, at $\$ 30 \mathrm{M}$ f feet.
1 M . feet, board measure, more or less, spruce M. feet, board measure, more or less, spruce
other than sheeting and shoring, at $\$ 60$
$M$ feet
 100 linear fect, more or less, 6 -inch pipe under40 drain at 30 c . linear foot. less, 10 -inch pipe
 removed at $\$ 1$ linear foot.
10 linear foet, more or less, 6 -inch house sewer 10 linear feet, more or les
laid at $\$ 1$ linear foot.
30 linear feet, more or 30 linear feet, more or less, 12 -inch spiral
riveted steel pipe at $\$ 3$ linear foot. connect 50 linear feet, more or less, pipe to connect existing drains at $\$ 1$ linear foot.
4 catch-basins, more or less, at $\$ 60$ each.
 600 cubic yards, more or less, gravel refill at

The bids include the furnishing by the contractor of all materials except ironwork.
Sewer Contracts Awarded, 1908=09. - Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount Paid to Contractor | Engineer's <br> Preliminary <br> Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Building Stony brook conduit in Meehan street and private land, Section 5, West Roxbury. | Coughlan \& Sheils Company (10 bidders.) | Aug. 11, 1908. | 945 linear feet, more or less, wooden flume at $\$ 8$ linear foot. <br> For underpinning, supporting and protecting the buildings on the line of the work, sum of $\$ 100$. <br> 60 square yards, more or less, macadam to a depth of 6 inches at 75 c . square yard. <br> 90 cubic yards, more or less, of riprap at $\$ 1.50$ cubic yard. <br> For removing the wooden bridge covering the channel on Keyes street, sum of $\$ 50$. <br> 67 cubic yards, more or less, old concrete removed at $\$ 4$ cubic yard. <br> 35 cubic yards, more or less, old riprap removed at 50 c . cubic yard. <br> For removing wooden screen, wooden bulkhead, 46 linear feet of 15 -inch spiral riveted pipe and 10 cubic yards, more or less, of concrete around pipe, sum of $\$ 50$. <br> 18 cubic yards, more or less, old brick bulkhead and piers removed at $\$ 2.50$ cubic yard |  |  |
| Commonwealth terrace, between Allston street and point about 300 feet west, Brighton. | John McCourt $\qquad$ (8 bidders.) | Aug. 31, 1908. | 1 cubic yard, more or less, earth excavation, below grade, at 60c. cubic yard. <br> 5 cubic yards, more or less, earth excavation, outside trenches, at $\$ 1.25$ cubic yard. <br> 230 cubic yards, more or less, rock excavation at $\$ 3.85$ cubic yard. <br> 1 M . feet, board measure, more or less, spruce sheeting at $\$ 10 \mathrm{M}$. feet. <br> 1 cubic yard, more or less, concrete at $\$ 6$ cubic yard. <br> 300 linear feet 10 -inch pipe sewer at 50 c . linear foot. <br> 12 linear feet 6 -inch pipe chimney at 27 c . linear foot. <br> 2 manholes built at $\$ 45$ each. <br> 1 cubic yard, more or less, gravel and sand refill at $\$ 2$ cubic yard. <br> 1 old manhole invert rebuilt at $\$ 5$. | \$1,144 35 | \$1,158 00 |

2,588 00

1,11556
2 cubic yards, more or less, earth excavation,
10 cubic yards, more or less, earth excavation,
230 cubic yards, more or less, rock excavation
2 at $\$ 3.40$ cubic yard. 2 cubic yards, more or less, concrete at $\$ 2$

575 linear feet 10 -inch pipe sewer at 92 c . 20 linear feet 6 -inch pipe chimney at 20 c . 10 linear feet old drain rebuilt at 50 c . linear 2 manholes built at $\$ 39$ each. 5 cubic yards, more or less, gravel or sand 50 linear feet 6 -inch pipe underdrain at 15 c . 1 special inlet built at $\$ 10$.
 2 cubic yards, more or less, earth excavation, outside trenches, at 1c. cubic yard.
10 cubic yards, more or less, rock excava1 M . feet, board measure, more or less, spruce 1 sheeting at 1c. M. feet. 2 cubic yards, more or less, concrete at 5 c . cubic yard.
800 linear feet 12 -inch pipe sewer at 80 c . 10 linear feet old drain rebuilt at $\$ 1$ linear 4 manholes built at $\$ 35$ each. 2 cubic yards, more or less, gravel or sand 100 linear feet 6 -inch pipe underdrain at 1c. 1 manhole invert rebuilt at $\$ 5$. Sept. 21, 1908. Andrew M. Cusack............. (11 bidders.)

## ( 10 bidders.)

John
$\qquad$ The bid
Sewer Contracts Awarded, 1908=09.--Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | $\begin{gathered} \text { Amount } \\ \text { Paid to } \\ \text { Contractor. } \end{gathered}$ | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Arden street, between Belgrade avenue and Colberg avenue. West Roxbury. | Andrew M. Cusack. . . . . . . . . . <br> (7 bidders.) | Sept. 28, 1908. | cubic yard, m.re or less, earth excavation, below grade, at 25 c . cubic yard. <br> 5 cubic yards, more or less, earth excavation, outside trenches, at 25 c . cubic yard. <br> cubic yards, more or less, rock excavation at $\$ 3.90$ cubic yard. <br> M . feet, board measure, more or less, spruce sheeting at $\$ 1 \mathrm{M}$. feet. <br> 2 cubic yards, more or less, concrete at $\$ 1$ cubic yard. <br> 290 linear feet 10 -inch pipe sewer at 84 c. linear foot. <br> 10-inch slant to be placed in old brick sewer at $\$ 3$. <br> 2 manholes built at $\$ 38$ each. <br> 1 cubic yard, more or less, gravel or sand refill at 50 c. cubic yard. <br> 60 linear feet 6 -inch pipe underdrain at 25 c . linear feet. | §360 29 | $\$ 79800$ |
| Ashley street, between Bennington street and Breed street, East Boston. | G. M. Bryne Company*...... ( 6 bidders.) | Sept. 29, 1908. | 250 cubic yards, more or less, earth excavation, below grade, at $\$ 1$ cubic yard. <br> 10 cubic yards, more or less, earth excavation, outside trenches, at $\$ 1$ cubic yard. <br> 5 cubic yards, more or less, rock excavation at $\$ 5$ cubic yard. <br> 6 M . feet, board measure, more or less, spruce sheeting at $\$ 25 \mathrm{M}$. feet. <br> 2 M . feet, board measure, more or less, spruce platform at $\$ 35 \mathrm{M}$. feet <br> 20 cubic yards, more or less, concrete at $\$ 8$ cubic yard. <br> 700 linear feet 10 -inch pipe sewer at $\$ 1.15$ linear foot. <br> 120 linear feet old drain rebuilt at 60c. linear foot. <br> 4 manholes built at $\$ 35$ each. <br> 250 cubic yards gravel or sand refill at $\$ 1.25$ cubic yard. <br> 200 linear feet 6 -inch pipe underdrain at 35 c . linear foot. <br> 1 manhole invert rebuilt at $\$ 10$. | 1,641 34 Inclucing extra work amounting to $\$ 110.81$. | 3,625 00 |

1,95000
8
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8
$\stackrel{\infty}{\infty}$
$\stackrel{\infty}{\circ}$


| Perkins street, between Canterbury street |
| :---: | :---: |
| and Grew avenue, West Roxbury. |$| \begin{aligned} & \text { DeMarco \& Cartullo. }\end{aligned}$

(11 bidders.)

West street, between Orange street and
Bellevue avenue, West Roxbury.
The bids include the furnishing by the contractor of all materials except ironwork.
*The bids of Kennelly $\&$ Gaddis $(\$ 1,071)$ and James P. Collins $(\$ 1,764.50)$ rejecte awarded to G. M. Bryne Company, third lowest bidder.
Sewer Contracts Awarded, 1908=09.- Continued.

1,720 00
9
$\stackrel{0}{8}$

Sherwood street, between Norfolk avenue John Guarino....................
and end of street, Roxbury.
( 5 bidders.)
Sewer Contracts Awarded, 1908=09.-Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount Paid to Contractor | $\begin{aligned} & \text { Engineer's } \\ & \text { Preliminary } \\ & \text { Estimate. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sherwood street, between Norfolk avenue and end of street, Roxbury. | John Guarino $\qquad$ <br> (5 bidders.) | Oct. 22, 1908. | 3 manholes built at $\$ 45$ each. <br> 68 cubic yards gravel or sand refill at 25 c . cubic yard. <br> 305 linear feet 6 -inch pipe underdrain at 15 c . linear foot. <br> 12 square yards pavement taken up and relaid at 25 c . square yard. <br> 400 cubic yards earth excavation in main trench, price to include the necessary back10c. cubic yard. filling and removal of surplus material, at 10 c cubic yard. |  |  |
| Codman street, between Dorchester avenue and Washington street, Dorchester. | John Donley. <br> (11 bidders.) | Oct. 21, 1908. | 5 cubic yards earth excavation, below grade, at $\$ 1$ cubic yard. <br> 10 cubic yards earth excavation, outside trenches, at 75 c . cubic yard. <br> 50 cubic yards rock excavation at $\$ 3.50$ cubic yard. <br> M . feet, board measure, spruce sheeting at <br> $\$ 18 \mathrm{M}$. feet. <br> M. feet, board measure, spruce platform at $\$ 18 \mathrm{M}$. feet. <br> 2 cubic yards concrete at $\$ 5$ cubic yard. <br> 10 linear feet 12 -inch pipe sewer at 98c. linear foot. <br> 120 linear feet 6 -inch pipe chimney at 25 c. <br> linear foot. <br> 10 linear feet old house drain rebuilt and con- <br> nected at 15 c each. <br> 0 linear feet old drain rebuilt at 10c. linear foot. <br> 5 manholes built at $\$ 38$ each. <br> cubic yards gravel or sand refill at $\$ 1$ cubic yard. <br> 910 linear feet 6 -inch pipe underdrain at 28 c . linear foot. <br> 400 square yards old stone block pavement removed and piled up at 20 c . square yard. <br> 1 connection new sewer with old sewer, $\$ 10$. | \$1,277,00 | 93,185 00 |

73600

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Sewer Contracts Awarded, 1908=09. - Concluded.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | $\begin{gathered} \text { Amount } \\ \text { Paid to } \\ \text { Contractor. } \end{gathered}$ | Engineer's <br> Preliminary <br> Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| North Munroe terrace, between Neponset avenue and Train street, Dorchester. | Timothy McCarthy <br> (11 bidder3.) | Nov. 10, 1908. | 112 -inch by 12 -inch $Y$ placed in old pipe sewer at $\$ 2.50$. <br> ${ }_{2}$ manholes built at $\$ 31$ each. <br> 2 cubic yards gravel or sand refill at 1 c. cubic yard. <br> 100 linear feet 6 -inch pipe underdrain at 1c. linear foot. <br> 1 old manhole- rebuilt at $\$ 25$. <br> 10 square yards paving taken up and relaid at 50 c . square yard. |  |  |
| South Munroe terrace, between Neponset a venue and Train street, Dorchester. | Timothy McCarthy . . <br> (11 bidders.) | Nov. 12, 1908. | 2 cubic yards earth excavation, below grade, at $\$ 1$ cubic yard. <br> 2 cubic yards earth excavation, outside trenches, at 75 c . cubic yard. <br> 5 cubic yards rock excavation at $\$ 4.50$ cubic yard. <br> M. feet, board measure, spruce sheeting at $\$ 18$ M. feet. <br> M. feet, board measure, spruce platforms at <br> 1c. M. feet. <br> 2 cubic yards Portland cement concrete at $\$ 5$ cubic yard. <br> 970 linear feet 12 -inch pipe sewer at 93 c. linear foot. <br> 100 linear feet house sewer removed and re- <br> connected, handling sewage, at 75 c . linear foot. <br> 20 linear feet old house drain rebuilt at 30 c . linear foot. <br> 4 manholes built at $\$ 31$ each. cubic yard. <br> cubic yards gravel or sand refill at 1 c . <br> 100 linear feet 6 -inch pipe underdrain at <br> 1c. linear foot. <br> 1 old manhole rebuilt at $\$ 25$. <br> 10 square yards paving taken up and relaid at 50c. square yard. <br> 1 connection with manhole at $\$ 5$. | Final payment not made. | \$2,328 00 |

6,745 00
Final
puyment
not made.

The bids include the furnishing by the contractor of all materials except iron work.
Mendum street, between Fairview street

Pile=driving Contracts Awarded During 1908.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | $\left\lvert\, \begin{gathered} \text { Amount } \\ \text { Paid to } \\ \text { Contractor. } \end{gathered}\right.$ | Engineer's Preliminary Estimate. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Putnam and Glendon streets, intercepter Section 2, sewer in private land between outlet and Glendon street, East Boston. | Rendle and Stoddard.......... <br> (8 bidders.) | June 29, 1908. | Furnishing and driving 200 spruce piles, 15 to 20 feet long, at $14 \frac{1}{2} \mathrm{c}$. linear foot. <br> Furnishing and driving 10 spruce piles, 20 to 30 feet long, at $14 \frac{1}{2} \mathrm{c}$. linear foot. | \$354 40 | \$471 25 |
| A street sewer, between West First street and Mt. Washington avenue extension, South Boston. | W. A. Norton Company ....... (5 bidders.) | Aug. 4, 1908. | Furnishing and driving 624 spruce piles, average length not over 15 feet long, at $11 \frac{1}{2} \mathrm{c}$. linear foot. <br> Furnishing and drving 210 spruce piles, from 20 to 30 feet long, at 111 c . linear foot. <br> Furnishing and driving 10 spruce piles, from 30 to 40 feet long, at $11 \frac{1}{2} \mathrm{c}$. linear foot. <br> Furnishing and driving 5 spruce piles, over 40 feet long, at $11^{\frac{1}{2}} \mathrm{c}$. hnear feet. | $\begin{gathered} \text { Final } \\ \text { payment } \\ \text { not made. } \end{gathered}$ | 1,743 98 |
| Avenue Louis Pasteur, southeasterly side, between Board of Survey stations 219 and 220, Roxbury. | John T. Scully Foundation and Transportation Company. | Jan. 19, 1909. | Furnishing and driving 230 spruce piles less than 25 feet long, with an average length of 18 feet, equals 4,140 linear feet at 11 cents per foot. | Nothing paid. | 82800 |

Contracts for Cleaning Catch=basins Awarded During 1908.

| Contract. | Awarded to | Dated. | Estimated Number Basins. | Estimated Number $\mathrm{Cu} . \mathrm{Yds}$. | Price per Cu. Yd. | Amount Paid to Contractor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| City Proper, Districts 9 and 10 | Mark H. Lynch. | June 4, 1908. | 1,000 | 2,000 | \$125 | \$3,951 39 |
| Roxbury and City Proper, Districts 7 and 8. | M. Doyle \& Co. | June 22, 1908. | 2,000 | 5,000 | 100 | 4,818 70 |
| South Boston, District 1 | M. F. Gaddis. | June 30, 1908. | 700 | 1,400 | 149 | 3,248 20 |
| East Boston, District 2. | James H. Ferguson | June 30, 1908. | 400 | 800 | 168 | 1,930 19 |
| Charlestown, District 3 | James F. Nyhan | June 30, 1908. | 200 | 400 | 133 | 74985 |
| Brighton and West Roxbury, Districts 4 and 5. | Mark H. Lynch | June 30, 1908. | $\begin{aligned} & 300^{*} \\ & 600 \dagger \end{aligned}$ | $\underset{\text { 1,800 }}{60}{ }^{\text {¢ }}$ | 125 | 1,143 <br> 2,387 <br> 88 |
| Dorchester, District 6. | James F. Murphy | June 30, 1908. | 800 | 2,400 | 120 | 3,063 48 |

Contracts for Cleaning Sewers Awarded During 1908.

| Contract. | Awarded to | Dated. | Price per Linear Foot. | Amount Paid to Contractor |
| :---: | :---: | :---: | :---: | :---: |
| Marginal street, between Jeffries street and Boston, Revere Beach \& Lynn Railroad | Richard A. Nagle. | March 30, 1908. | 35 cents per linear foot. | \$255 50 |

Contracts for Repaving and Regulating Awarded During 1908.

| Contract. | Awarded to | Dated. | Amount Paid per Item. | Amount <br> Paid to Contractor. |
| :---: | :---: | :---: | :---: | :---: |
| Congress street, between Milk and Franklin streets, City Proper. | John E. Burns \& Co. | July 9, 1908. | About 290 square yards of granite block paving to ber relaid, including concrete hase, with pitch join ts, at $\$ 2.50$ square yard. <br> About 10 square yards of existing flagging crosswalks to be relaid, including concrete base, with pitch joints, at $\$ 2.50$ square yard. | $\$ 94500$ |
| Broad street, between Custom House street and India square, City Proper. | Daniel E. Lynch. | Nov. 3, 1908. | About 300 square yards of granite block paving to be taken up and relaid, including concrete base, with pitch joints, at $\$ 1.90$ square yard. <br> About 25 square yards of existing crosswalks to be taken up and relaid, including concrete bast, with pitch joints, at $\$ 1.40$ square yard. | Final payment not made. |

Contracts for Material Awarded During 1908.

| Material. |  | Awarded to |  | Dated. |  | Price per Barrel in Paper Bags. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3,213 barrels Portland cement, more or less, to be delivered at Stony brook channe |  | J. P. O'Connell \& Co. |  | March 27, 1908. |  | 8145 |  |  |  |
| Coal from January 1, 1909, to April 1, 1909. |  | Batchelder Bros |  | Jan. 1, 1909. |  | Price per Ton. |  |  |  |
|  |  | Broken. | Egg. |  |  | Stove. | Soft. |
|  |  | \&5 50 | \$6 10 |  |  | 8610 | ${ }^{84} 25$ |
| The above contracts were made by the Supply Department. <br> Miscellaneous Contracts Awarded, 1908=09. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Contract. | A warded to |  | Dated. | Number Fect of Centers. | Size. | Shape. |  | Rental. |  |
| Rental for collapsible steel centers for period of nine months. | Blaw Collapsible Steel Centering Company . |  | Sept. 1, 1908. | 50 feet50 feet 20 feet | 42 inches 24 inches | Half round |  | $\begin{aligned} & 88000 \\ & 6000 \\ & 6000 \\ & 17500 \end{aligned}$ |  |
| Rental for collapsible steel centers for period of nine months. | Blaw Collapsible Steel Centering Company.. |  | Sept. 1, 1908. |  | 96 inches |  |  |  |  |
| Stony brook channel. <br> Locks for flushing gates for old | Gibby Foundry Company.. |  | Jan. 29, 1909. |  |  |  |  |  | \$155 00 |

Miscellaneous Contracts Awarded, 1908=09.-Continued.

| Contract. | Awarded to | Dated. | Amount to be Paid. |
| :---: | :---: | :---: | :---: |
| Keeping the east shaft at Moon Island, Squantum, free from grease for a term of five years from August 5, 1908, and for a further period if the contractor shall so elect by a notice to the superintendent before the termination of the first five years, for the sum of $\$ 75$ per month. | Walter J. Tavender | Aug. 4, 1908. | \$75 per mo. |
| Improved plastic slate roofing on garage, Childs street. | Improved Plastic Slate Roofing Company | July 6, 1908. | \$50 00 |
| Removing stable and shed from the land of Alice F. Cahill and settlement of claim for damages for taking of said land for the improvement of Stony brook channel. | Alice F. Cahill. | Oct. 10, 1908. | 60000 |
| For the removal of stable of Lawrence Norton and settlement of claim for damages for taking of said land for the improvement of Stony brook channel. | Lawrence Nortor | Nov. 24, 1908. | 7500 |
| Automobile insurance from September 10, 1908, to September 10, 1909 | Federal Insurance Company | Sept. 11, 1908. | $\begin{array}{r} 16200 \\ +\quad 5250 \\ +52 \end{array}$ |
| Hot water heater for garage, Childs street | J. F. Houghton \& Son | Nov. 11, 1908. | 16500 |
| Agreement relative to the building of Stony brook channel, between Linden Park, Vernon and Lamont streets, as to rights in bed or channel of said brook; and settlement of suit for damages, already instituted, occasioned by flooding the premises of A. J. Tower Company on or about December 9, 1907, during construction of conduit below their premises. | A .J. Tower Company | Sept. 21, 1908. | 4,000 00 |
| Compensation for right to erect derricks on the premises of A. J. Tower Company, and to have access across the same during the construction of said works. |  |  | 50000 |

Miscellaneous Contracts Awarded, 1908=09. - Continued.

| Contract. | Awarded to | Dated. | Amount Paid per Item. |  |
| :---: | :---: | :---: | :---: | :---: |
| Repairs on pumping engines Nos. 3 and 4, pumping station, Calf Pasture. | Lockwood Manufacturing Company. | July 31, 1908. | Item 1. Lump sum of $\$ 23,750$. <br> Extra work at the following rates under Item 2. Materials: <br> Composition metal, 37e. pound. <br> Machine steel, 42 ${ }^{\frac{1}{2}} \mathrm{c}$. pourd. <br> Wrought iron, $4 \frac{1}{2} \mathrm{c}$. pound. <br> Steel forgings, 6 to 18c. pound. <br> Cast iron, $4 \frac{1}{2} \mathrm{c}$. pound. <br> Tobin bronze, 30c. pound. <br> Brass tubing (American Tube Works), seamless drawn, 27c. pound. <br> Item 2. Labor: <br> Machinists at pumping station or shop, per day, per man, \$4.50. <br> Patternmakers at pumping station or shop, per day, per man, $\$ 5$. <br> Carpenters at pumping station or shop, per day, per man, $\$ 4$. <br> Riggers at pumping station, per day, per man, $\$ 4$. <br> Steamfitter and helper at pumping station or shop, per day, per man, $\$ 8$. <br> Foreman at pumping station, per day, $\$ 6$. <br> Machinist in shop with small tools, per day, $\$ 5$. <br> Machinist in shop with large tools, per day, $\$ 7$. <br> Boilermaker in shop with small tools, per day, $\$ 4.50$, <br> Blacksmith with one helper and forge, per day, $\$ 9$. <br> Blacksmith with one helper and steam hammer, per day, $\$ 12$. <br> Blacksmith with two helpers and steam hammer, per day, $\$ 15$. | Final payment not made. |

Miscellaneous Contracts Awarded, 1908=09.-Concluded.

| Contract. | Awarded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Making change in existing condenser piping layout at the pumping station, Calf Pasture. | The Lumsden and Van Stone Company | May 20, 1908. | \$170 00 |
| Building two flushing pontoons for deposit sewer at the pumping station, Calf Pasture. | Richard F. Keough | May 20, 1908. | 96800 |
| Remodeling ten operating stands at the pumping station, Calf Pasture. | Coffin Valve Company | May 6, 1908. | 3,710 00 |
| Calking sludge scow, pumping station, Calf Pasture | C. A. Borden \& Son | Sept. 8, 1908. | 10000 |
| Repairing roofs of buildings at the pumping station, Calf Pastur | William Martin | Oct. 29, 1908. | 15000 |
| Forty bucket and forty delivery valves at the pumping station, Calf Pasture,* | Gibby Foundry Com | Sept. 28, 1908. | 48000 |
| Furnishing two lathes at the pumping station, Calf Pasture *. | Prentiss Tool and Supply Company | Oct. 5, 1908. | 2,836 00 |
| Furnishing and installing two 7 -inch expansion bends, pumping station, Calf Pasture. | Lumsden and Van Stone Company | July 31, 1908. | 14700 |

Schedule of Sewers Built to Date in the City of Boston, February 1, 1909.


## Summary of Sewer Construction for the Year Ending January 31, 1909.

| District. | Built by the City by Contract or Day Labor. | Built by Private Parties. | Total Length Built. |
| :---: | :---: | :---: | :---: |
|  | Linear Feet. | Linear Feet. | Linear Feet. |
| City Proper. | 1,234.33 | 346.53 | 1,580.86 |
| East Boston | 5,114.55 |  | 5,114.55 |
| Charlestown. | 309.78 |  | 309.78 |
| South Boston. | 3,090. 53 | 198.65 | 3,289.18 |
| Roxbury. | 11,670.72 |  | 11,670.72 |
| West Roxbury. | 18,468.98 | 2,426. 23 | 20,895.21 |
| Dorchester. | 9,859.22 | 2,999.25 | 12,858.47 |
| Brighton. | 4,055.67 | 1,773.64 | 5,829.31 |
| Totals. | 53,803.78 | 7,744.30 | 61,548.08 |

## Summary of Sewer Construction for Five Years Previous to February 1, 1909.

|  | 1904. | 1905. | 1906. | 1907. | 1908. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Linear Feet. | Linear F'eet. | Linear Feet. | Linear Feet. | Linear Feet. |
| Built by the city by contract or day labor. | 157,077. 28 | 160,715.87 | 103,823.72 | 79,340.46 | 53,803.78 |
| Built by private parties. | 6,758.47 | 17,919.17 | 9,641.49 | 11,590.87 | 7,744.30 |
| Totals. | 163,835.75 | 178,635.04 | 113,465.21 | 90,931.33 | 61,548.08 |

## ENTRANCE FEES, PERMITS AND ASSESSMENTS.

Entrance fees to the amount of $\$ 4,135.16$ have been collected from estates upon which no sewer assessment was ever paid, in accordance with the Ordinances of 1908, chapter 3, section 11.

Bills for sewer assessments amounting to $\$ 1,214.28$ have been deposited for collection, representing those estates assessed under chapter 456 of the Acts of 1889, and amendments thereto, which have been connected during the year with the sewers for which they were assessed.

Permits covering 363 connections have been issued to district foremen and fifty-eight to contractors; licensed drainlayers have received permits to lay or repair 1,856 house drains. The work done under these permits has been inspected and a record of the same made on the plans of this division, in accordance with the provisions of the Ordinances of 1908, chapter 3 .

Plans for the assessments of estates for sewer construction have been furnished the Street Commissioners, representing 36,667.80 feet of sewers and appurtenances, costing $\$ 406,887.69$.

## Amount of Sludge Received and Removed from Deposit Sewers from February 1, 1908, to January 31, 1909, Inclusive.

| Month. | $\mathrm{Cu} . \mathrm{Y}^{\prime} \mathrm{ds}$. Received. | Cu. Yds. Removed. | - |
| :---: | :---: | :---: | :---: |
| 1908. | . |  |  |
| February | 340 | 425 | Sludge in sewers February 1, 1908 1,180 cubic yards. |
| March | 325 | 340 |  |
| April . | 356 | 340 |  |
| May. | 549 | 255 |  |
| June . | 358 | 425 |  |
| July . | 572 | 425 |  |
| August. | 701 | 340 |  |
| September. | 332 | 170 |  |
| October . | 490 | 425 |  |
| November | 322 | 340 |  |
| December | 345 | 340 |  |
| January . . | 343 | 425 | Sludge in sewers February 1, 1909, 1,963 cubic yards. |
|  | 5,033 | 4,250 |  |

Amount of Refuse Removed from Filth=hoist from February 1, 1908, to January 31, 1909, Inclusive.

| Month. | Pounds. |
| :---: | :---: |
| 1908. |  |
| February.... | 95,700 |
| March. | 111,900 |
| April. | 111,000 |
| May. | 103,800 |
| June. | 96,000 |
| July . | 98,400 |
| August. . | 88,800 |
| September. | 118,500 |
| October.. . | 90,600 |
| November. | 103,200 |
| December. | 99,300 |
| January............ | 93,000 |
|  | 1,210,200 $=605$ tons 200 pounds. |

Number of gates, regulators, sumps and overflows to be cleaned and cared for. These are under constant inspection and are cleaned after every storm or heavy rise of sewage due to other causes:

| District. | Gates. | Regulators. | Sumps. | Overflows. |
| :---: | :---: | :---: | :---: | :---: |
| Brighton. | 42 | 15 | 17 | 23 |
| Charlestown. | 24 | 9 | 11 | 12 |
| East Boston. | 47 | 18 | 19 | 20 |
| City Proper. | 84 | 15 | 41 | 41 |
| Dorchester. | 62 | 3 | 11 | 19 |
| South Boston. | 49 | 4 | 22 | 21 |
| Roxbury.. | 44 | 2 | 11 | 25 |

Number of penstock and flushing gates. ..... 19
Regulators repaired ..... 46
Tide gates repaired
Manholes repaired. ..... 208
54
Manhole steps put in ..... 362
Tide gates cleaned. ..... 6,450
Regulators cleaned ..... 2,520
Overflows cleaned ..... 292
Sumps cleaned ..... 3,050
40
Penstock and flushing gates cleaned, oiled and repaired ..... 40
Average Daily Amount of Sewage Received at Moon Island Reservoir.

## Real Estate in Charge of the Sewer Division.



## APPENDIX G.

## REPORT OF THE DEPUTY SUPERINTENDENT OF STREET CLEANING AND WATERING DIVISION.

Boston, Mass., February 1, 1909.
Mr. Guy C. Emerson, Superintendent of Streets:
Dear Sir,- I respectfully submit the following report of the expenditures of the Street Cleaning and Watering Division for the financial year ending January 31, 1909.

Respectfully submitted,

C. B. Pratt,<br>Deputy Superintendent.

The work of the Street Cleaning and Watering Division consists in the machine sweeping and hand sweeping of all streets within certain district lines, and the watering of all streets throughout the city under Ordinance of 1908 , chapter 3, section 1.

The district lines of the division comprise the entire city excepting part of Dorchester, Jamaica Plain, Brighton and West Roxbury:

District 1, South Boston.
District 2, East Boston.
District 3, Charlestown.
District 6, part of Dorchester under charge of District 1.
District 7, Roxbury.
District 8, South End, uptown.
District 8, South End, downtown.
District 9, Back Bay.
District 10, West End.
District 11, Patrol System.
The work of the street cleaning branch has been of the same general character as in past years. During the last few
months of the year a new type of flushing machine was used known as the Kindling Street Washing Machine. This machine consists of a steel tank of about 400 gallons capacity, mounted on four wheels. The tank feeds four sprinklers between the front and rear wheels, all operated with valves by the driver. Geared to the left hind wheel is a cleaning roller or squeegee. This is a heavy steel cylinder with twenty-four rubber fins. As the cylinder revolves the rubbers remove the dust, mud and slime from the pavement.

During the season a contract was made with the Calcide Process Company to treat about 268,000 square yards of macadam roadway with calcium chloride for laying dust. The price paid for five months was four cents ( $\$ 0.04$ ) per square yard. The material is brought to the roadway in carts of about 600 gallons capacity, filled with a concentrated solution of 40 per cent calcium chloride, specific gravity 1.4. A nest of five 110 -gallon galvanized-iron cans is carried on a rack on the rear of the cart. The cart is driven to a standpipe on the roadway where a can is placed and filled with the solution. The remaining cans are left at other standpipes and filled. By means of a siphon arrangement the cart is filled with water from the standpipe and with the 110 gallons of the 40 per cent solution by one operation. The empty can is placed on the rack and the operation is repeated. One load, or about 600 gallons, covers about 1,900 square yards of roadway, or about ten loads to the mile of 32 -foot roadway. In order to fill the surface thoroughly with the chloride two applications are made the first week. The following applications serve on an average twenty-one days. In shady areas the salt retains the moisture for a longer period than in areas exposed to the direct rays of the sun. It is usually: necessary to feed the salt by the ordinary application of water, varying from one to three times per week, according to the condition of the weather and the road treated. The calcium chloride treatment by this method gives very satisfactory results. It leaves no odor, it is clean and, though not a road builder, it leaves the surface of the road in much better condition at the end of the season's treatment.

About twenty-five miles of roadway were also treated with an oil emulsion, mechanically prepared by the use of a soap solution to emulsify a residuum asphaltic base oil of twentyfive to thirty-five per cent asphalt. The emulsion is prepared as follows: The soap solution, consisting of twenty-five pounds of cotton seed oil soap to fifty gallons of steam-heated water, is prepared. This solution is mixed with 100 gallons of crude oil. Three hundred gallons of this mixture is
agitated about twenty minutes in a 600 -gallon water cart until the emulsion is complete. An ordinary watering cart of 600 gallons capacity is filled with this preparation and driven to the roadway. One hundred gallons of the emulsion is drawn into a cart, filled with water from the standpipe and spread. Two applications are applied during the first four days. The following applications serve from eight to twenty-one days according to the weather conditions, locations and surface conditions of the road.

This treatment gives very satisfactory results. The roads are dustless, they become coated with a smooth, hard surface which is not washed into the gutters, thus adding life to the wearing surface of the roadway. There is the disadvantage of a slight odor and a wet, oily surface for three or four hours until complete penetration. These conditions are more than offset, however, by the results gained in laying the dust and in the protection and prolongation of the life of the roadway.

FINANCIAL STATEMENT, 1908-1909.
Amount of appropriation ..... $\$ 570,00000$
Transferred from Sanitary Division ..... 3,905 31Received from Boston Elevated Railway Com-pany for tickets5050
Received by sale of automobile to Sewer Di- vision ..... 30000
Total amount of appropriation ..... $\$ 574,255.81$
Expenditures of Street Cleaning Division . . . . . . \$419,575 91
Expenditures of Street Watering Division ..... 154,679 90
574,255 81
Items of Expenditure for the Year.
Salary of deputy and office pay rolls, ..... $\$ 6,55522$
Stationery, printing, postage and office incidentals ..... 81194
Board of horses ..... 43842
Maintenance of automobile ..... 18616
Advertising . ..... 10346
Carried forward . ..... $\$ 8,09520$
Brought forward ..... \$8,095 20Telephone service53481
Foremen and sub-foremen on street work, snow and patrolling ..... 33,085 66
Labor, paved streets, gutters and patrolling ..... 132,100 88
Maintenance of dumps ..... 6,142 98
Hired teams, paved streets, gutters and patrolling ..... 27,687 72
Labor on snow work ..... 29,923 75
Hired teams on snow work ..... 5,998 64
Sanding streets ..... 41135
Flushing streets ..... 34185
Cleaning public alleys ..... 32148
Work performed for Sewer Division on catch-basins ..... 72010
Work performed for Sanitary Divi- sion on ashes ..... 1,569 25
Stable and yard labor, rent, fuel and light.

$$
30,32676
$$

Hay, straw and grain ..... 23,246 73
Yard and stable repars and furnish- ings ..... 92292
Cart and carriage repairs and fur- nishings ..... 3,435 71
Harness repairs ..... 1,440 68
Sweeping machine repairs ..... 1,591 77
Tool repairs ..... 14937
Horseshoeing ..... 4,794 50
Veterinary services and medicine ..... 1,659 40
Traveling expenses12920
Broom stock purchased. ..... 1,392 27
Refilling machine brooms. ..... 3,174 00
Harnesses and horse furnishings pur- chased ..... 64735
Tools purchased. ..... 65817
Street washing machine purchased, ..... 1,291 00
Holidays, allowed time, medical attendance ..... 10,360 33
Scow (cost of disposal at sea of 37,006 loads of street dirt) ..... 9,303 55
Annuity (see chapter 569, Acts of 1898)

## Patrol System.

Foremen, inspectors, labor and teaming on push carts
Labor and teaming, paper patrol ..... 2,406 30
Carried forward
Brought forward ..... $\$ 410,83422$
Yard and office repairs and furnish- ings ..... 45445
Cart and barrel repairs ..... 1,901 77
Yard and dump labor, rent, fuel and light ..... 3,075 82
Holidays, allowed time and medical attendance ..... 2,613 09
Horse furnishings and harness re- pairs. ..... 1651
Shoeing ..... 10475
Sand ..... 57530
\$419,575 ..... 91
Bills Deposited with City Collector.
For cleaning farmers' market ..... $\$ 84525$
For damages done to division carts, ..... 875
For removing gravel left by con- tractors in streets ..... 6750
Expenditures of the Street Watering Division.
Superintendence ..... $\$ 83967$
Office pay rolls ..... 1,299 09
Telephone ..... 19038
Printing ..... 11713
Stationery ..... 2132
Board of horses ..... 10457
Horseshoeing ..... 1400
Veterinary services and medicine ..... 400
Tools ..... 299
Cart and bicycle repairs ..... 36112
Harness repairs ..... 276
Horse furnishings ..... 225
Standpipes, maintenance and repairs ..... 2,531 50
Sundries ..... 675
Teaming ..... 120,017 19
Labor, water cart chasers ..... 9,218 13
Installation of oil plants ..... 1,261 14
Maintenance of oil plants. ..... 7,695 39
Repairs on oil plant ..... 6424
Calcide process ..... 10.92628
Total ..... \$154,679 90

## Street Cleaning and Watering Division. 379

## Distribution of Force February 1, 1909, Street Cleaning and Watering Division.

Office Force.


6
Street Watering Force.
1 inspector at . . . . . . $\$ 1,40000$ per year.
1 steam engineer at . . . . 325 per day.
2 laborers at
225
4

Table Showing Amount Expended by Districts, Including Superintendence, Labor and Hired Teams, for Cleaning Paved Streets, Gutters, etc.


Miles and Areas of Streets Cared for.

| $\begin{gathered} \text { District } \\ \text { No. } \end{gathered}$ | Location. | Mrles of Streets Cared for. |  | Square Yards Cared for. |  | Total Square Yards. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Paved. | Macadam. | Paved Streets. | $\begin{gathered} \text { Two } \\ \text { Gutters, } \\ \text { each } 4^{\prime} 6^{\prime \prime} \\ \text { Wide. } \end{gathered}$ |  |
| 1. | South Boston. | 20.19 | 17.82 | 424,000 | 94,090 | 518,090 |
| 2. | East Boston. | 7.21 | 19.23 | 154,000 | 101,535 | 255,535 |
| 3 | Charlestown. | 12.91 | 11.60 | 293,000 | 61,250 | 354,250 |
| 6. | Dorchester, part. | 5.29 | 24.32 | 109,000 | 128,410 | 237,410 |
| 7. | Roxbury. | 17.32 | 9.29 | 383,000 | 49,050 | 432,050 |
| 8. | South End, uptown. | 11.16 | 12.01 | 225,000 | 63,415 | 288,415 |
| 8. | South End, downtowr | 28.20 | 1.22 | 570,000 | 6,440 | 576,440 |
| 9. | Back Bay | 12.46 | 18.00 | 252,000 | 95,040 | 347,040 |
|  | North End. | 9.35 | . 94 | 189,000 | 4,965 | 193,965 |
| 10. | West End. | 11.48 |  | 232,000 |  | 232,000 |
| Totals.. |  | 135.57 | 114.43 | 2,831,000 | 604,195 | 3,435,195 |

Summary.

|  | Street Cleaning. |  | Street Watering. |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1907-08. | 1908-09. | 1907-08. | 1908-09. |
| Labor. | \$358,111 80 | \$312,614 94 | \$18,839 24 | \$13,989 09 |
| Teaming. | . 61,333 25 | 40,808 39 | 127,801 50 | 120,550 70 |
| Division bills.. | -31,342 37 | 29,828 88 | 3,832 20 | 2,608 50 |
| Sundry bills..... | 50,901 25 | 36,323 70 | 1,762 51 | 58679 |
| Sundry bills, oil and calcium chloride. |  |  |  | 16,944 82 |
| Totals....... | \$501,688 67 | \$419,575 91 | \$152,235 45 | \$154,679 90 |

Property Occupied by the Street Cleaning and Watering Division.
South Boston.- Lease of stable No. 162 West Second street.
East Boston.- Part of stable on East Eagle street (leased by Paving Division).

Charlestown.- Part of stable on Rutherford avenue, city stable (in charge of Sanitary Division).

Charlestown.- Office building, Rutherford avenue, city stable.

Roxbury.- Part of stable on Highland street, city stable (in charge of Sanitary Division).

South End.- Part of stable No. 650 Albany street, city stable (in charge of Sanitary Division).

West End.- Part of stable on North Grove street, city stable (in charge of Sanitary Division).

Back Bay.- Lease of building at No. 95 Columbus avenue.

## Amount of Hay, Straw, Oats and Shorts Used by the Street Cleaning and Watering Division for the Year 1908.

| Hay | . | . | . | . | . | . | . | . | . | . |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Snow Work for all Districts.
Crossing and Gutter Work and Snow Removal.

| Labor and <br> Superintending <br> Crossings and <br> Gutters. | Snow Removal, <br> Superintending <br> Labor and <br> Teaming. | Loads <br> of Snow <br> Removed. | Cubic Yds. <br> of Snow <br> Removed. | Cost per <br> Lemod <br> Lemoved. | Cost per <br> Cubic Yd. <br> Removed. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 7,865 \quad 12$ | $\$ 33,71169$ | 33,387 <br> $* 368$ | 58,021 | $\$ 0998$ | $\$ 0581$ |

Capacity of teams, February, 1908, to July, 1908, 42 cubic feet.
Capacity of teams, July, 1908, to January 28, 1909, 54 cubic feet.

* Double loads.

Distribution of Horses and Rolling Stock.

| Items. | 1. | 2. | 3. | 7. | South Stable. | West Stable. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cart horses. | 15 | 9 | 8 | 5 | 38 | 31 | 106 |
| Driving horses. | ${ }^{2}$ | 1 | 1 | * 3 | 5 | 1 | 13 |
| Single carts. | 18 | 8 | 10 | 9 | 65 | 24 | 134 |
| Watering carts | 2 | 1 | 1 | 1 | 5 | 2 | 12 |
| Single machines. |  |  | 1 | 4 | ${ }_{20}{ }^{\text {- }}$ |  | 9 |
| Roud machines. . | 4 | 2 | 2 | 4 | 4 | 7 | 39 4 |
| Express wagons. | 1 | 1 | 1 | 1 | 1 |  | 5 |
| Concord.... |  |  |  |  | 1 |  | 1 |
| Snow plows. |  | 1 | 1 |  | 2 | 1 | 6 |
| Buggies... | 1 | 2 | 1 | *3 | 6 | 1 | 14 |

* Includes two of the deputy superintendent.

Push=cart Patrol, by Districts.

| Districte. | Superintending Labor and Hired Teams. | Barrel Loads Removed. | Cubic - <br> Yards <br> Removed | Cost per Cubic Yard. | Cost per Barrel. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | \$2,713 46 | 7,044 | 913 | \$2 97 | \$0 385 |
| 2. | 54852 | 1,276 | 165 | 332 | 430 |
| 3 | 1,874 40 | 3,063 | 397 | 472 | 612 |
| 7. | 4,873 59 | 11,957 | 1,550 | 314 | 407 |
| 8. Downtown | 4304 |  |  |  |  |
| 10. Paving (Patrol). | 7,050 81 | 12,163 | 1,651 | 427 | 579 |
| 11......... . . . . . . . . | 48,988 23 | 87,857 | 11,389 | 430 | 557 |
| Totals | \$66,092 05 | 123,360 | 16,065 | * \$4 11 | * \$0 536 |

Capacity of barrels
Waste barrels emptied $3 \frac{1}{2}$ cubic feet.

Subway barrels emptied
15,749
2,706
Total
18,455

Street Cleaning and Watering Division. 383
Cost of Maintaining Horses.
Push=cart Patrol System - Total Cost, Including Superintendence, Labor, Hired Teams and Maintenance.

| Superintending Labor and Hired Teams. | Cart and Barrel Repairs. | Yard and Plant Repairs and Furnishing. | Horse Furnishings and Shoeing. | Sand. | Holidays, Allowed Time, etc. | Rent, Fuel, Light, Yard Labor. | Total Cost. | Cost per Barrel. | Cost per Cubic §ard. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$66,092 05 | \$1,901 77 | \$1,032 94 | \$121 26 | \$575 30 | \$2,613 09 | \$3,075 82 | \$75,412 23 | \$0 611 | \$4 69 |

Cost of Maintaining Horses
Cost per Horse on a Basis of 365 Days per

| Districts. | south boston. |  | east boston. |  | Charlestown.: |  | ROXBURY. |  | south stable. |  | west stable. |  | Total. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Number of Horses Kept. | 17.4 |  | 10.4 |  | 10.5 |  | 10.1 |  | 43 |  | 32.3 |  | 123.7 |  |
| Items. | Total Cost per Year. | $\begin{gathered} \text { Cost } \\ \text { per } \\ \text { Day } \\ \text { per } \\ \text { Horse. } \end{gathered}$ | Total <br> Cost per Year. | Cost per Day per Horse. | $\begin{aligned} & \text { Total } \\ & \text { Cost per } \\ & \text { Year. } \end{aligned}$ | Cost per Day Horse. | Total Cost per Year. | Cost per Day per Horse. | Total Cost per Year. | Cost per Day per Horse. | Total Cost per Year. | Cost per Day per Horse. | Total Cost per Year. | Average. |
| Superintendence. | \$181 52 | \$0 029 | \$367 27 | \$0 097 | \$155 89 | \$0 041 | $\$ 9779$ | \$0 027 | \$73141 | \&0 046 | \$773 75 | \$0 065 | \$22,307 63 | \$0 051 |
| Labor. | 3,968 67 | 624 | 2,446 98 | 644 | 2,281 10 | 592 | 1,759 82 | 477 | 6,972 50 | 444 | 7,143 07 | 606 | 24,572 14 | 544 |
| Hay and grain. | 2,715 88 | 427 | 2,061 41 | 543 | 2,166 30 | 565 | 2,266 76 | 515 | 7,528 13 | 479 | 6,508 25 | 552 | 23,246 73 | 514 |
| Fuel, light and rent, | 1,320 02 | 208 | 1,065 76 | 280 | 10567 | 027 | 10482 | 028 | 30772 | 019 | 23604 | 020 | 3,140 03 | 069 |
| Shoeing | 69875 | 10 | 44575 | 117 | 36375 | 095 | 38600 | 104 | 1,602 00 | 102 | 1,360 50 | 115 | 4,856 75 | 108 |
| Stable repairs. | 30448 | - 048 | 8094 | 021 | 12613 | 033 | 690 | 002 | 8398 | 005 | 4795 | 004 | 65038 | 014 |
| Veterinary services and medicine. . | 21513 | 034 | 11738 | 031 | 11800 | 031 | 12234 | 033 | 77990 | 049 | 30215 | 025 | 1,654 90 | 036 |
| Totals. | \$9,404 45 | \$1 480 | \$6,585 49 | \$1733 | \$5,316 84 | \$1 384 | \$4,744 43 | \$1 186 | \$18,005 64 | \$1 144 | \$16,371 71 | \$1 387 | 880,428 56 | \$1 336 |

[^24]Street Watering.

| Districts. | Number of Carts. | Cost of Teaming per Year. | Cost of Labor per Year. | Total Cost. | Miles Cared For. | Cost per Mile. | Average <br> Thousand Square Yards per Mile. | Square Yards Cared For. | Cost per Square Yard per Year. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. South Boston. | 15 | \$9,331 13 | \$571 50 | \$9,902 63 | 30 | \$330 08 | 21.0 | 630,000 | \$0 0157 |
| 2. East Boston | 11 | 7,145 00 | 57375 | 7,718 75 | 25 | 30875 | 21.3 | 532,500 | 0144 |
| 3. Charlestown | 8 | 4,751 63 | 54000 | 5,291 63 | 16 | 33071 | 22.7 | 363,200 | 0145 |
| 4. Brighton | 16 | 10,173 00 | 60300 | 10,776 00 | 31 | 34761 | 20.5 | 635,500 | 0169 |
| 5. West Roxbury | 26 | 17,328 00 | 1,116 00 | 18,444 00 | 60 | 30740 | 20.2 | 1,212,000 | 0152 |
| 6. Dorchester. | 35 | 22,937 00 | 2,066 50 | 25,003 50 | 83 | 30124 | 20.6 | 1,709,800 | 0146 |
| 7. Roxbury | 33 | 21,512 27 | 1,100 25 | 22,612 52 | 72 | 31406 | 22.1 | 1,591,200 | 0142 |
| 8. South End. | 16 | 10,063 50 | 1,053 00 | 11,116 50 | 22 | 50529 | 20.2 . | 444,400 | 0250 |
| 9. Back Bay | 12 | 6,454 75 | 55013 | 7,004 88 | 16 | 43780 | 20.2 | 323,200 | 0216 |
| 10. City Proper. | 18 | 10,320 91 | 1,044 00 | 11,364 91 | 25 | 45459 | 20.2 | 505,000 | 0225 |
| Totals. | 190 | \$120,017 19 | \$9,218 13 | \$129,235 32 | 380 | \$3,637 53 |  | 7,946,800 | \$0 1746 |
| Average. |  |  |  |  |  | 36375 | 20.9 |  | 0175 |

Note.- Cost of teaming includes Street Cleaning work performed for Street Watering, $\$ 216.69$; office and Deputy Superintendent's salary not
included in labor cost. included in labor cost.
Days Out, Cart=Days Worked, Number of Carts Out, Cost of Teaming and Labor, by Months.

| Months. | Days Out. | Cart-days Worked. | Average Cart-days Worked. | Number of Carts Out. | Average Carts Out. | Cost of Teaming. | Average Cost per Cart. | Cost of Labor. | Total Cost, Labor and Teaming. | Average Cost per Cart, <br> Labor and Teaming. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| March. | 3 | 13.5 | 4.5 | 23 | 7.0 | \$161 42 |  | \$1,104 75 |  |  |
| April. | 22 | 1,049.0 | 48.0 | 1,324 | 60.0 | 6,272 75 | $\$ 10455$ | 1,385 75 | \$7,658 50 | \$127 64 |
| May. | 22 | 2,644.5 | 120.0 | 2,893 | 132.0 | 15,888 25 | $120 \quad 37$ | 1,078 00 | 16,966 25 | 12861. |
| June | 26 | 4,420.5 | 170.0 | 4,717 | 181.0 | 26,660 00 | 14729 | 1,079 13 | 27,739 13 | 15325 |
| July | 25 | 3,806.5 | 152.0 | 4,354 | 174.0 | 23,017 75 | 13228 | 1,338 50 | 24,356 25 | 13998 |
| August. | 20 | 3,181.5 | 159.0 | 3,375 | 169.0 | 19,274 25 | 11405 | 1,078 00 | 20,352 25 | 12043 |
| September. | 24 | 3,353.0 | 140.0 | 3,464 | 144.0 | 20,305 50 | 14104 | 1,347 50 | 21,653 00 | 15037 |
| October. | 19 | 1,104.0 | 58.0 | 1,328 | 70.0 | 6,678 75 | 9541 | 75400 | 7,432 75 | 10618 |
| November | 10 | 284.0 | 28.0 | 331 | 33.0 | 1,703 25 | 5240 | 5250 | 1,755 75 | 5320 |
| Street cleaning | 25 | 37.5 | 1.5 | 47 | 1.6 | 5527 |  |  |  |  |
| Totals. . | 196 | 19,894.0 | 881.0 | 21,856 | 971.6 | \$120,017 19 |  | \$9,218 13 | . . . . . . . . |  |
| Less March and November. . . . . | $158$ | 19,549.0 | 847.0 | 21,455 | 930.0 | \$118,097 25 | \$854 99 | \$8,060 88 | \$126,158 13 | $\$ 92646$ |
| Averages April to October, incl... . | 22.5 | 2,792.7 | 121.0 | 3,065 | 132.8 |  | \$122 14 |  |  | \$132 35 |

Nore. - During March only watering carts of the Street Cleaning Division were used. During the remaining months an occasional street cleaning cart
was put out to cover particular territory or under extraordinary conditions. The average is given for April to October, inclusive, as that period covers the
regular watering season. regular watering season.
Calcide Process. Calcium Chloride Treatment.

| Districts. | Cared For. <br> Square Yards |  | Cost per Square Yard. | Total Cost July to November Inclusive. | Average Number of Treatments. |  | Average Days Served by One Treatment. |  | Miles Cared For. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Back Bay.......................... | .... 36 | 36,777 | \$0 04 | \$1,471 08 | 7.30 |  |  | 5.74 | 1.84 |
| West Roxbury..................... . |  | 152,050 | 04 | 6,082 00 | 7.64 |  |  | . 53 | 10.83 |
| Dorchester. |  | 79,305 | 04 | 3,172 20 | 5.62 |  |  | 0.22 | 4.95 |
| Totals. <br> Averages | 268,132 |  | . . | \$10,725 28 | $\begin{array}{r} 20.56 \\ 6.85 \end{array}$ |  | $\begin{aligned} & 55.49 \\ & 18.49 \end{aligned}$ |  | 17.62 |
|  |  |  |  |  |  |  |  |
| Previous to contract $\$ 198$ was paid for applying two coats to 23,000 square yards. $\$ 3$ was paid for Oil Application. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Districts. | Square Yards | $\begin{aligned} & \text { Miles } \\ & \text { Cared For. } \end{aligned}$ | Total Gallons of Oil Used. | Average Gallons per Yard | Average Cost per Gallon. | Average Cost per Square Yard |  | Estimated Cost for Six Months | d Average <br> ays Served <br> by Sone <br> Oiling. |
| Dorchester. | 62,135 | 3.11 | 7,316.6 | 0.102 | \$0 109 |  | 0100 | \$0 0299 | 12.21 |
| Roxbury. | 123,350 | 7.33 | 8,059.2 | . 065 | 108 |  | 0080 | 0502 | 9.08 |
| South End. | 86,671 | 4.34 | 8,252.0 | . 095 | 107 |  | 0091 | 0286 | 11.48 |
| Back Bay. | 207,534 | 11.00 | 24,391.7 | . 117 | 101 |  | 0119 | 0267 | 12.73 |
| Totals...Averages. |  | 25.78 | 48,019.5 | 0.379 | 425 |  | 0390 | 135 | 45.50 |
|  | 479,690 |  |  | 0.095 | 106 |  | 0098 | 0339 | 11.375 |
| Park Department. | 149,668 | 7.5 | 23,405.0 | 0.16 | 097 |  | 0155 | 0335 | 8.98 |

## Street Cleaning.

Machine Sweeping of Paved Streets and Gutters.

$\dagger$ Loads: 42 cubic feet up to July $1 ; 54$ cubic feet from July 1 to January 2 2., 1909.
Street Cleaning and Watering.
Contracts, Year Ending January 31, 1909.

| Nature of Contract. | With Whom. | Amount. | Date. |
| :---: | :---: | :---: | :---: |
| Five years' lease of stable (Street Cleaning) | R. S. Brine Transportation Company . | \$1,000 00 | September 1, 1908. |
| Calcium chloride on streets (Street Watering) | Calcium Chloride Company. | 10,923 28 | February 1, 1908, to January 31, 1909. |

## APPENDIX H.

## REPORT OF THE CIVIL SERVICE CLERK.

Boston, February 1, 1909.
Mr. Guy C. Emerson,
Superintendent of Streets:

Dear Sir,--I submit herewith a report of the work performed in connection with the Civil Service Commission for the year ending January 31, 1909 :
Requisitions made . . . . . . . . . 71
Requisitions canceled . . . . . . . . 3
Certificates returned, no selection being made . . . 26
Number of men called for . . . . . . . 208
Number of men certified . . . . . . . . 364
Number of men selected, including veterans . . . 80
Number of veterans appointed . . . . . . 5
Number of men appointed provisionally . . . . 7
Applications made for promotion . . . . . . 39
Promotions allowed . . . . . . .. . . 5
Promotions allowed provisionally . . . . . . 34
Requests for permission to reinstate . . . . . 16
Requests for permission to reinstate allowed . . . . 9
Requests for permission to reinstate not allowed . . . 7
Number of men resigned through absence . . . . 63
Number of men resigned through absence reinstated . . 24
Number of men reported to Civil Service Commission as not
having worked for more than six months
Number of men reported to Civil Service Commission as
having resigned
Number of men reported to Civil Service Commission dead . 89
Number of discharges forwarded to Civil Service Commissioners253

Number of transfers made from other city and state departments to the Street Department, as follows:
From Bath Department . . . . . . . 1
From Charles River Basin Commission . . . . 2
From Metropolitan Park Department . . . . 2
From Metropolitan Water and Sewerage Board . . 1

Number of transfers from the Street Department to other city and state departments, as follows:
To Charles River Basin Commission ..... 1
To Fire Department ..... 1
To Metropolitan Water and Sewerage Board ..... 3
To Police Department ..... 3
To Schoolhouse Department ..... 19Grade and Number of Employees.


Grade and Number of Employees. - Continued.


Grade and Number of Employees．－Concluded．

| Title． | Divisions． |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | －${ }_{\text {® }}^{\text {gix }}$ | 菏 |  |  |  | 菷 | 突 | 袍 | ¢ |
| Brought forward． | 6 | 584 | 520 | 570 | 347 | 134 | 156 | 7 | 2，324 |
| Powdernen．．．．． |  | 6 |  |  |  |  |  |  |  |
| Quartermasters．．． |  |  |  |  |  | 11 |  |  | 11 |
| Rigger．． |  |  |  |  |  | 1 |  |  | 1 |
| Rammers． |  | 6 |  |  |  |  |  |  | $6$ |
| Supervisor of construction． |  |  |  |  |  |  | 1 |  | 1 |
| Sailors． |  |  | 2 |  |  | $\cdots$ |  |  | 2 |
| Steam drillers．． |  | 4 |  |  |  |  |  |  | 5 |
| Sanitary engineer． |  |  |  | 1 |  |  |  |  | 1 |
| Stenographers． |  | 1 | 2 |  |  |  | 1 |  | 4 |
| Sign painters． |  |  |  | 2 |  |  |  |  | 2 |
| Stonecutters． |  | 6 |  |  |  |  |  |  | 8 |
| Superintendent main drainage． |  |  | 1 |  |  |  |  |  | 1 |
| Storekeepers． |  |  | 1 |  |  | 1 |  |  | 2 |
| Scowmen． |  |  |  | 3 |  | ． |  |  | 3 |
| Stablemen． |  | 14 |  | 29 | 17 |  | 1 |  | 61 |
| Sweeping machine drivers． |  |  |  |  | 24 |  |  |  | 24 |
| Teamsters． |  | 76 | 29 |  |  |  | 3 |  | 108 |
| Tollmen． |  |  |  |  |  | 12 |  |  | 12 |
| Watchmen． |  |  |  | 6 | $5$ | 3 | 5 | 1 | 73 |
| Weighers and assistants． |  | 6 |  | 1 |  |  |  |  | 7 |
| Wharfingers and assistants． |  | 2 |  | 1 |  |  |  |  | 3 |
| Wheelwrights and assistants． |  |  |  | 3 |  |  |  |  | 3 |
| Yardmen． |  | 2 |  | 12 | 3 |  |  |  | 23 |
| Totals． |  | 729 | 595 | 628 | 396 | 162 | 167 | 8 | 2，691 |

Comparative Table Showing the Number of Employees February 1，1908，and February 1， 1909.

|  |  | 品 | 芴 | 朢 | ． |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| February 1，1908．． |  | 168 | 193 | 153 | 886 | 731 | 855 | 500 | 3，486 |
| February 1，1909．． | 6 | 167 | 162 | 8 | 729 | 628 | 595 | 396 | 2，691 |

Respectfully submitted，
Daniel R．Murray， Civil Service Clerk．

## APPENDIX I.

## REPORT OF THE COMMISSIONERS OF BOSTON AND CAMBRIDGE BRIDGES.

Appropriation . . . . . . None
Expenditures . . . . . . $\$ 18,52429$

The commission is composed of two members, one appointed by the Mayor of the City of Boston and the other appointed by the Mayor of the City of Cambridge. They have charge of the care and maintenance of the following seven bridges connecting Boston and Cambridge: Brookline Street, Cambridge, Cambridge Street, Harvard, North Harvard Street, Prison Point and Western Avenue to Cambridge.

As no specific appropriation was made for the work of the past year, the Boston share of the expenses was paid directly from the appropriation for Bridge Division, Street Department.

The bridges under the charge of the commission are, in general, in need of considerable repairs in the lines of renewal of woodwork and painting. This is particularly true of Harvard, Cambridge Street, North Harvard Street and Western Avenue bridges.

As usual, the greater portion of the executive work of the Commission has been performed by the Cambridge member.
Boston and Cambridge Bridges.

|  | Cambridge Street. |  | Harvard. |  | Prison Point. |  | North Harvard Street. |  | Western Avenue. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| February . |  |  | 4 | 4 | 56 | 166 |  |  |  |  |
| March. |  |  | 18 | 27 | 68 | 120 | . |  |  |  |
| April. | 29 | 90 | 57 | 90 | 23 | 46 | 22 | 79 | 24 | 82 |
| May. | 93 | 348 | 81 | 136 | 26 | 49 | 85 | 336 | 86 | 337 |
| June. | 36 | 93 | 102 | 102 | 20 | 94 | 28 | 77 | 28 | 77 |
| July. | 20 | 34 | 71 | 119 | 29 | 56 | 12 | 18 | 12 | 18 |
| August. | 8 | 13 | 79 | 131 | 21 | 39 | 2 | 3 | 8 | 15 |
| September. | 32 | 35 | 273 | 475 | 33 | 67 | 12 | 19 | 22 | 35 |
| October. | 72 | 121 | 98 | 129, | 19 | 37 | 4 | 6 | 15 | 21 |
| November . | 29 | 42 | 69 | 136 | 21 | 44 | 10 | 16 | 17 | 23 |
| December. | 6 | 11 | 56 | 86 | 17 | 36 |  |  |  |  |
| January, 1909. |  |  |  |  | 12 | 19 |  |  |  |  |
| Totals. | 325 | 787 | 908 | 1,435 | 345 | 773 | 175 | 554 | 212 | 608 |

Boston and Cambridge Bridges - Concluded.
Expenditures by the City of Boston, February 1, 1908, to January 31, 1909, Being One-half of Cost of These Bridges,


APPENDIX J.

|  | Bridge. | Ferry. | Lamp. | Paving. | Sanitary. | Sewer. | $\begin{aligned} & \text { Street } \\ & \text { Cleaning and } \\ & \text { Watering. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Auto supplies |  |  |  | \$2,482 87 | \$2,119 29 | \$1,029 43 | \$27 00 |
| Bags. | ...... |  |  |  |  | 42012 | 1149 |
| Badges. | ...... |  |  | 375 | 2016 | 375 |  |
| Blankets | \$23 00 |  | \$3 75 | 13600 | 5675 | 13600 | 6000 |
| Bricks, paving | 126 | \$400 |  | 8,067 72 |  |  |  |
| Bricks, sewer. |  |  |  |  |  | 16,236 97 |  |
| Brooms. | 10410 | 19298 |  | 10544 | 24923 | 9485 | 1,374 47 |
| Carriage supplies. | 5060 |  |  | 28081 | 2,132 '57 | 6043 | 3295 |
| Castings. | 1001 | 16487 |  | 30844 | . 29505 | 3,712 97 | 500 |
| Cement (Natural).. |  |  |  | 1785 |  | 52350 |  |
| Cement (Portland). |  | 1960 |  | 25010 |  | 30,547 96 |  |
| Chemicals | 600 | 2134 |  | 22303 |  | 713 | 8000 |
| Clocks. | 650 |  |  | 935 | 900 | 6215 |  |
| Coal (bituminous) |  | 31,536 48 |  | 1,455 85 | 19855 | 27,554 53 |  |

23779
2600
$30{ }^{\prime} 00$
$42 \quad 25$


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筑
8. 810263




Purchases Made for Street Department Divisions by the Supply Department. - Continued.

|  | Bridge. | Ferry. | Lamp. | 'Paving. | Sanitary. | Sewer. | Street Cleaning and Watering. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Brought forvard. | \$6,202 49 | \$33,402 24 | \$181 53 | \$57,731 62 | \$9,592 07 | 997,013 33 | \$3,064 65 |
| Hay | 68989 |  |  | 10,152 83 | 18,519 77 | 4,439 66 | 5,331 55 |
| Horses. |  |  |  |  | 4,515 00 |  |  |
| Horse supplies | 5173 |  |  | 63092 | 2,221 58 | 10862 | 8738 |
| Hose. | 1400 | 39645 |  | 14287 | 14353 | 1,618 45 | 30027 |
| Hospital supplies. |  |  |  |  |  | 1200 |  |
| Iron. |  | 6726 |  | 6508 | 1,200 13 | 16956 | 1030 |
| Lead, white. | 3900 | 25810 |  |  | 20175 |  |  |
| Lighting supplies | 5448 | 15617 |  | 33580 | 297 | 21946 | 592 |
| Lime. |  |  |  | 125 | 340 | 500 | 125 |
| Lumber, spruce . | 10,461 21 | 2.80052 |  | 4,810 64 | 1,743 84 | 19,687 07 | 7144 |
| Lumber, hard pine. | 1,735 13 | 1,380 11 |  | 35930 | 15443 | 75552 | 1255 |
| Lumber, hard wood. | 1,084 29 | 2,349 32 |  | 659, 71 | 1,916 44 | 37476 |  |
| Oats. | 59686 |  |  | 10,643 17 | 31,883 54 | 4,543 71 | 9,877 94 |
| Oatmeal. |  |  |  | 10610 |  | 11689 |  |
| Office supplies. |  | 2850 |  | 2175 | 2401 | 31173 | 150 |
| Oil, cylinder. | 87515 | 79613 |  | 22016 | 1550 | 69111 | 1180 |
| Oil, engine. | 7757 | 61183 |  | 11253 |  |  | 8754 |


| Oil, illuminating. | 7079 | 30022 |  | 70190 | 6896 | 80357 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Oil, road. |  |  |  |  |  |  | 2,381 16 |
| Oil, linseed. | 2343 | 12860 |  | 905 | 7006 | 2960 | 330 |
| Machinery.... |  |  |  | 24500 |  | 2,836 00 | 1,551 71 |
| Manhole covers. |  |  |  |  |  | 5,547 29 |  |
| Manhole steps... |  |  |  |  |  | 98738 |  |
| Packing. | 1030 | 49161 |  | 7736 |  | 3,925 75 | 500 |
| Paints. | 11425 | 27141 |  | 12443 | 53696 | 14218 | 7281 |
| Paving blocks. |  |  |  | 10,429 91 |  | 17050 |  |
| Pipe, iron. |  | 2944 |  |  | 2623 | 95155 | 2888 |
| Pipe, sewer. |  |  |  |  | 2800 | 6,613 57 |  |
| Plumbers' supplies. |  | 1800 |  |  | 549 | 873 S3 |  |
| Polish, metal. |  | 5583 |  | 1575 | 1000 | 15730 | 610 |
| Rugs.. |  |  |  |  | 3250 | 3273 |  |
| Rubber goods. | 1306 |  |  | 1913 | 2281 | 2,337 00 | 7133 |
| Salt. | 1940 |  |  | 1118 | 3191 | 8846 |  |
| Sand, bank. |  |  |  | 4,665 00 |  | 5,783 08 | 4000 |
| Sand, beach. | 5000 |  |  | 1,975 85 |  | 5345 | 23965 |
| Seeds. |  |  |  |  |  | 1411 |  |
| Sewer traps |  |  |  |  |  | 4,103 84 |  |
| Ship chandlery. | 17820 | 71512 |  | 2379 | 1,050 82 | 1,167 44 | 668 |
| Carricd forward | \$22,361 23 | \$44,256 86 | \$181 53 | \$104,292 08 | 874,021 70 | \$167,451 76 | \& 23,28436 |

Purchases Made for Street Department Divisions by the Supply Department-Concluded.


## APPENDIX K.

## FORMER SUPERINTENDENTS AND DOCUMENT NUMBERS OF ANNUAL REPORTS.

Bridge Department before 1891.
Previous to 1886 under charge of City Engineer.

| Name. | Year. |
| :---: | :---: |
| Bartholomew M. Young | 1886 to 1889 |
| James H. Nugent. | 1889 to 1891 |

Bridge Department before 1891.

| Name of Documént. | $\begin{aligned} & \text { For } \\ & \text { Year. } \end{aligned}$ | Pub. <br> Year. | No. of Doc. |
| :---: | :---: | :---: | :---: |
| Annual report | 1886 | 1887 | 29 |
| " ${ }^{\text {a }}$ | 1887 | 1888 | 26 |
| " " | 1888 | 1889 | 29 |
| " " | 1889 | 1890 | 22 |
| " | 1890 | 1891 | * |

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Lamp Department before April 6, 1908.

| Superintendents. | From | To |
| :---: | :---: | :---: |
| William Barnicoat | 1854 | Feb. 18, 1867 |
| George H. Allen, Acting Superintendent.. | Feb. 19, 1867 | April 1, 1867 |
| George H. Allen | April 1, 1868 | April 2, 1883 |
| Hugh J. Toland | April 2, 1883 | April 18, 1884 |
| John T. Manson | April 18, 1884 | April 6, 1885 |
| Hugh J. Toland | April 6, 1885 | May 1,1889 |
| George H. Allen | May 1, 1889 | June 1, 1891 |
| Patrick O'Shea | June 1, 1891 | May 1, 1895 |
| James Buckner | May 1,1895 | Oct. 1, 1896 |
| James Donovan | Oct. 1, 1896 | Mar. 1, 1900 |
| Bertrand T. Wheeler, Acting Superintendent | Mar. 1, 1900 | Mar. 10, 1900 |
| William D. Lang | Mar. 10, 1900 | July 28, 1901 |
| William Jackson, Acting Superintendent. | July 28, 1901 | Jan. 30, 1902 |
| John Drohan. | Jan. 30, 1902 | Aug. 10, 1902 |
| James Donovan, Acting Superintendent | Aug. 10, 1902 | Jan. 3, 1906 |
| Charles Logue, Acting Superintendent. | Jan. 3, 1906 | Feb. 28, 1906 |
| Dennis J. Hern. | Feb. 28, 1906 | April 5, 1908 |
| Edward C. Wade, Acting Superintendent. | April 5, 1908 | April 6, 1908 |

Paving Department before 1891.


Paving Department before 1891.


Paving Department before 1891.-Concluded.

| Name of Document. | $\begin{aligned} & \text { For } \\ & \text { Year. } \end{aligned}$ | Pub. <br> Year. | No. of Doc. |
| :---: | :---: | :---: | :---: |
| Annual report. | 1884 | 1885 | 97 |
|  | 1885 | 1886 | 30 |
| " " | 1886 | 1887 | 16 |
| " " | 1887 | 1888 | 23 |
| " " | 1888 | 1889 | 30 |
| " " | 1889 | 1890 | 19 |
| " * | 1890 | 1891 | * |

[^25]
## Sewer Department before 1891.

| Name. |  |  |
| :---: | :---: | :---: |
| Enoch Patterson, Su | intendent | 1825 to 1831 |
| Zephaniah Sampson, |  | 1831 to 1837 |
| Charles B. Wells, | " | 1837 to 1856 |
| Simeon B. Smith, | " | 1856 to 1863 |
| William H. Bradley, | " | 1863 to 1883 |
| Horace A. Moses, | " | 1883 to 1885 |
| Thomas J Young, | " | 1885 to 1887 |
| Seth Perkins, | " | 1887 to 1889 |
| Charles Morton. | " . | 1889 to 1891 |

Sewer Department before 1891.

| Name of Document. | $\underset{\text { For }}{\text { Year }}$ | Pub. | No. of |
| :---: | :---: | :---: | :---: |
| Annual report. | 1859 | 1861 | 11 |
|  | 1860 | 1861 | 12 |
| " " | 1861 | 1862 | 12 |
| " " | 1862 | 1863 | 13 |
| " " | 1863 | 1864 | 11 |
| ". " | 1864 | 1865 | 5 |
| " " ${ }^{\text {" }}$ | 1865 | 1866 | 6 |
| " " | 1866 | 1867 | 8 |
| " " | 1867 | 1868 | 13 |
| " " | 1868 | 1869 | 11 |
| " " | 1870 | 1871 | 3 |
| " " | 1871 | 1872 | 10 |
| " " | 1872 | 1873 | 13 |
| " " | 1873 | 1874 | 12 |
| " " | 1874 | 1875 | 17 |
| " " ${ }^{\text {" }}$ | 1875 | 1876 | 11 |
| " " | 1876 | 1877 | 13 |
| " " | 1877 | 1878 | 15 |
| * | 1878 | 1879 | 11 |
| " - | 1879 | - 1880 | 16 |

Sewer Department before 1891.-Concluded.


[^26]> Health Department before 1891.
> Sanitary.

| Name. | Year. |
| :---: | :---: |
| Ezra Forristall, Superintendent. | 1853 to 1854 |
| Joseph W. Coburn, " | 1854 to 1855 |
| Ezra Forristall, | 1855 to 1869 |
| George W. Forristall, | 1869 to 1890 |

## Health Department before 1891.

Sanitary.

| Name of Document. | Year. | Pub. | No. of Doc. |
| :---: | :---: | :---: | :---: |
| Annual report. | 1853 | 1854 | 7 |
|  | 1854 | 1855 | 6 |
| " | 1855 | 1856 | 4 |
| " " | 1856 | 1857 | 4 |
| " " | 1857 | 1858 | 4 |
| " ${ }_{\text {" }}$ | 1858 | 1859 | 4 |
| " " ${ }^{\text {" }}$ | 1859 | 1860 | 5 |
| " " ${ }^{\text {" }}$ | 1860 | 1861 |  |
| " | 1861 | 1862 | 5 |
| " | 1863 | 1864 | 4 |
| " " | 1864 | 1865 | 4 |
| " | 1865 | 1866 | 8 |
| " " | 1866 | 1867 | 7 |
| " " | 1867 | 1868 | 8 |
| " " | 1868 | 1869 | 12 |
| " " ........ | 1869 | 1870 | 4 |

Health Department before 1891.--Concluded.

| Name of Document. | Ycar. | Pub. <br> Year. | No. of Doc. |
| :---: | :---: | :---: | :---: |
| Annual report. | 1870 | 1871 | 10 |
| " ، | 1871 | 1872 | 17 |
| " " ................... | 1872 | 1873 | 40 |
| Annual reports from 1873 to 1884, inclusive; the Superintendent's report was embodied in the report of the Board of Health. | 1885 | 1886 | 45 |
| Annual report. | 1886 | 1887 | 22 |
| ". " | 1887 | 1888 | 16 |
| " " | 1888 | 1889 | 23 |
| " " . .................... . | 1889 | 1890 | 21 |
| " | 1890 | 1891 | * |

[^27]
## Commissioners of Cambridge Bridges before 1891.

(West Boston, Canal and Prison Point.)

| Name. | Year. |
| :---: | :---: |
| Frederick W. Lincoln, Commissioner for Boston ... . | May 22, 1871, to March, 1901. |
| Ezra Parmenter, Commissioner for Cambridge. . . . \{ | June 14, 1871, to Jan. 31, 1883. |
| William J. Marvin, Commissioner for Cambridge. . . | March 28, 1883, to July 22, 1904. |
| George M. Clukas, Commissioner for Cambridge. . . \{ | July 26, 1904, to present time. |

[^28]Commissioners of Cambridge Bridges before 1891.
(West Boston, Canal and Prison Point.)

| Name of Document. | $\underset{\text { Fear }}{\text { For }}$ | Pub. | No. of Doc. |
| :---: | :---: | :---: | :---: |
| Annual report. | 1871 | 1872 | 19 |
|  | 1872 | 1873 | 12 |
| " " " | 1873 | 1874 | 16 |
| " " | 1874 | 1875 | 23 |
| " " | 1875 | 1876 | 20 |
| " " | 1876 | 1877 | 12 |
| " " | 1877 | 1878 | 10 |
| " " | 1878 | 1879 | 8 |
| " | 1879 | 1880 | 12 |
|  |  |  |  |

Commissioners of Cambridge Bridges before 1891.-Concluded.

| Name of Document. | $\begin{aligned} & \text { For } \\ & \text { Year. } \end{aligned}$ | Pub. <br> Year. | No. of Doc. |
| :---: | :---: | :---: | :---: |
| Annual report. | 1881 | 1882 | 15. |
| " " | 1882 | 1883 | 15 |
| " | 1883 | 1884 | 19 |
| " " | 1884 | 1885 | 8 |
| " | 1885 | 1886 | 12 |
| " | 1886 | 1887 | 19 |
| " " | 1887 | 1888 | 25 |
| " " | 1888 | 1889 | 22 |
| " | 1889 | 1890 | 20 |
| " " | 1890 | 1891 | * |

[^29]Ferry Department before 1895.

| Name. | Year. |  |
| :---: | :---: | :---: |
| Board of Ferry Directors | 1870 | 1891 |
| William J. Burke, Superintendent | 1891 | May 1, 1895 |
| Thomas Kellough. . . . . . . . . . . . | -May 1, 1895 | July 1, 1895 |

Ferry Department before 1895.

| Name of Document. | $\stackrel{\text { For }}{\text { Year. }}$ | $\stackrel{\text { Pub. }}{\text { Year. }}$ | No. of Doc. |
| :---: | :---: | :---: | :---: |
| Annual report | 1870 | 1871 | 41 |
|  | 1871 | 1872 | 55 |
| " " | 1872 | 1873 | 81 |
| " . ${ }^{\text {c }}$ | 1873 | 1874 | 42 |
| " " | 1874 | 1875 | 65 |
| " " | 1875 | 1876 | 51 |
| " " | 1876 | 1877 | 53 |
| " " | 1877 . | 1878 | 49 |
| " " | 1878 | 1879 | 60 |
| " " | 1879 | 1880 | 74 |
| " " | 1880 | 1881 | 77 |
| " " | 1881 | 1882 | 72 |
| " | 1882" | 1883 | 93 |
| " " | 1883 | 1884 | 76 |
| " " | 1884 | 1885 | 72 |
| " " ${ }^{\text {" }}$ | 1885 | 1886 | 28 |
| " " | 1886 | 1887 | 12 |
| " " | 1887 | 1888 | 10 |
| " " ${ }^{\text {" }}$ | - 1888 | 1889 | 3 |
| " " ${ }^{\text {" }}$ | 1889 | 1890 |  |
| " " | 1890 | 1891 | * |
| " " | 1891 | 1892 | 12 |
| " " | 1892 | 1893 | 11 |
| " " | 1893 | 1894 | 11 |
| " | 1894 | 1895 | 11 |

[^30]
## Street Department since 1891.

Superintendent.
Henry H. Carter, Member of American Society Civil Engineers.
Resigned December 8, 1894.
Charles R. Cutter, Acting Superintendent from December 8, 1894, to January 14, 1895. Member of the Boston Society Civil Engineers.
Bertrand T. Wheeler, Superintendent from January 14, 1895, to February 4, 1896. Member of the Boston Society Civil Engineers.
Benjamin W. Wells, Superintendent from February 4, 1896, to February 1, 1900.
Bertrand T. Wheeler, Superintendent from February 2, 1900, to November 25, 1901. Member of the Boston Society Civil Engineers.

Resigned November 25, 1901.
William Jackson, Acting Superintendent from November 25, 1901, to January 14, 1902. Member of American Society Civil Engineers.

Guy C. Emerson, Deputy Superintendent in charge of the department from November 25, 1901, tò January 14, 1902. Member of American Society Civil Engineers. Member of the Boston Society Civil Engineers.
James Donovan, Superintendent from January 14, 1902, to January 2, 1906. Resigned January 2, 1906.

Charles Logue, Acting Superintendent from January 2, 1906, to February 28, 1906.
James H. Doyle, Superintendent from March 1, 1906, to January 6, 1908.
Resigned January 6, 1908.
William Jackson, Acting Superintendent from January 6, 1908, to April 18, 1908. Member of American Society Civil Engineers.

James H. Sullivan, Executive Engineer in charge of the department from January 6, 1908, to April 13, 1908.

Guy C. Emerson, Superintendent from April 14, 1908, to the present time. Member of American Society Civil Engineers. Member of the Boston Society Civil Engineers.

Bridge Drvision.-John A. McLaughlin, Deputy Superintendent until June 1, 1895.
Bridge Division.- John P. Wise, Deputy Superintendent from June 1, 1895, to February $14,1896$.
Bridge Division.-William K. Carberry, Deputy Superintendent from February 14, 1896, to February 3, 1900.

Bridge Division.- Walter Reed, Deputy Superintendent from February 3, 1900, to January 22, 1902.

Bridge Division.-Joseph P. Lomasney, Deputy Superintendent from January 22, 1902, to December 30, 1905. Resigned December 30, 1905.

Bridge Division.- Peter O'Neil, Acting Deputy Superintendent from December 30, 1905, to January 3, 1906.
Bridge Division.- Daniel J. Byrne, Acting Deputy Superintendent from January 3, 1906, to February 28, 1906.
Bridge Department.- Patrick F. McDonald, Superintendent from March 1, 1906, to April 5, 1908.

Bridge Department.- Thomas H. Sexton, Acting Superintendent from April 5, 1908, to April 6, 1908.

Bridge Division.- Thomas H. Sexton, Acting Deputy Superintendent from April 6, 1908, to July 17, 1908.

Bridge Division.- Thomas H. Sexton, Deputy Superintendent from July 17, 1908, to the present time.

Ferry Division.- Thomas Kellough, Deputy Superintendent from July 1, 1895, to February 14, 1896.

Ferry Division.- William F. McClellan, Deputy Superintendent from February 14 , 1896, to February 3, 1900.

Ferry Division.- Joseph J. Dennison, Deputy Superintendent from February 3, 1900, to January 22, 1902.

Ferry Division.- William J. Donovan, Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 8, 1906, to February 1, 1906.

Ferry Division.-Joseph F. Low, Acting Deputy Superintendent from February 1, 1906, to May 14, 1906.

Ferry Division.- John J. Douglass, Deputy Superintendent from May 14, 1906, to March 9, 1907.
Ferry Division.- James H. Sullivan, Executive Engineer in charge of division from March 9, 1907, to January 20, 1908.
Ferry Division.-Henry P. Christiernin, Deputy Superintendent from January 20, 1908, to the present time.

Lamp Division. -Edward C. Wade, Acting Deputy Superintendent from April 6, 1908, to July, 17, 1908.

Lamp Division.- Edward C. Wade, Deputy Superintendent from July 17, 1908, to the present time.
Paving Division.- Charles R. Cutter, Deputy Superintendent until January 24, 1895.
Paving Division.-Darius N. Payson, Deputy Superintendeñt from January 24, 1895, to March 1, 1896.

Paving Division.- John L. Kelly, Deputy Superintendent from March 1, 1896, to February 3, 1900.

Paving Division.- Darius N. Payson, Deputy Superintendent from February 3, 1900, to January 24, 1902.
Paving Division.-Joshua Atwood, 3d, Acting Deputy Superinterdent from January 24, 1902, to March 26, 1902.
Paving Division.- Henry V. Macksey, Deputy Superintendent from March 26, 1902, to December 2, 1905. Resigned December 2, 1905.

* Paving Division.- James H. Sullivan, Acting Deputy Superintendent from December 2, 1905, to February 28, 1900 .

Paving Division.-James H. Sullivan, Acting Deputy Superintendent from April 6, 1908, to July 17, 1908.

Paving Division.-James H. Sullivan, Deputy Superintendent from July 17, 1908, to the present time.
Sanitary Division.-George W. Forristall, $\dagger$ Deputy Superintendent.
Sanitary Division.- Philip A. Jackson, Acting Deputy Superintendent from January 16, 1894, to February 1, 1895.
Sanitary Division.- Charles A. Young, Deputy Superintendent from February 1, 1895, to March 1, 1896.

Sanitary Division.- Patrick O'Shea, Deputy Superintendent from March 1, 1896, to February 3, 1900.

[^31]Santtary Division.- Charles A. Young, Deputy Superintendent from February 3, 1900, to January 22, 1902.

Sanitary Division.- Daniel P. Sullivan, Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.

Santary Department.- Daniel H. Gillespie, Superintendent from March 1, 1906, to A pril 6, 1908.

Sanitary Division. - Daniel H. Gillespie, Acting Deputy Superintendent from April 6, 1908, to May 8, 1908.
Sanitary Division.-George H. Foss, Acting Deputy Superintendent from May 8 to May 25, 1908.

Sanitary Division.-George H. Foss, Deputy Superintendent from May 25, 1908, to the present time.
Sewer Division.- Henry W. Sanborn, Deputy Superintendent until July 10, 1890. Member of Philadelphia Society Civil Engineers.
Sewer Division.- Charles R. Cutter, Deputy Superintendent from July 10, 1896, to February 3, 1900.
Member of the Boston Society Civil Engineers.
Sewer Division.- Guy C. Emerson, Deputy Superintendent from February 3, 1900, to November 25, 1901, and from January 14 to January 22, 1902.

Member of American Society Civil Engineers.
Member of the Boston Society Civil Engineers.
Sewer Drvision.- Henry W. Sanborn, Acting Deputy Superintendent from November 25, 1901, to January 14, 1902.
Member of Philadelphia Society Civil Engineers.
Sewer Division.-George Phillips, Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned.

Sewer Drvision.- George Phillips, Acting Deputy Superintendent from January 3, 1906, to January 18, 1906.

Sewer Division.- Edgar S. Dorr, Acting Deputy Superintendent from January 18, 1906, to March 1, 1906.
Sewer Department. - John J. Leahy, Superintendent from March 1, 1906, to January 10, 1908.
Semer Department.- Charles R. Cutter, Acting Superintendent from January 10, 1908, to April 6, 1908.
Sewer Division.- Charles R. Cutter, Acting Deputy Superintendent from April 6, 1908, to the present time.

Street Cleaning Division.- Philip A. Jackson, Deputy Superintendent until March 22, 1895.
Street Cleaning Division. - Benjamin M. Cram, Deputy Superintendent from March 22, 1895, to March 1, 1906.
Street Cleaning Division.- Joshua Atwood, 3d, Deputy Superintendent from March 1, 1896, to February 3, 1900. Member of the Boston Society Civil Engineers.
Street Cleaning Divisron.- Frank H. Haynes, Deputy Superintendent from February 3, 1900, to April 16, 1901. Resigned April 16, 1901.
Street Cleaning Division.-Frank C. Shepard, Deputy Superintendent from A pril 16, 1901, to January 22, 1902.
Street Cleaning Division.- Joseph J. Norton, Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.
> * Street Cleaning and Watering Department.- Matthew Cummings, Superintend_ ent from March 1, 1906, to January 16, 1908.
> Daniel H. Gillespie, Acting Superintendent from January 16, 1908, to April 6, 1908. Acting Deputy Superintendent from April 6, 1908, to A pril 15, 1908.

Street Cleaning and Watering Division.- C. Barton Pratt, Deputy Superintendent from April 15, 1908, to the present time.

Street Watering Division.- M. Edward Libby, Deputy Superintendent from March 6, 1895, to March 1, 1896.

Street Watering Division.- Thomas J. Finneran, Deputy Superintendent from March 1, 1896, to February 3, 1900.

Street Watering Division.- Frederick Hammond, Deputy Superintendent from February 3, 1900, to January 22, 1902.
*Street Watering Division.-Ambrose Woods, Deputy Superintendent from January 22, 1902, to January 3, 1906. Resigned. Acting Deputy Superintendent from January 3, 1906, to March 1, 1906.
Boston and Cambridge Bridges.- Henry H. Carter, ex officio, Commissioner for Boston, until December 8, 1894.
Charles R. Cutter, ex officio, Acting from December 8, 1894, to January 14, 1895.
Bertrand T. Wheeler, ex officio, from January 14, 1895, to February 4, 1896.
Benjamin W. Wells, from February 4, 1896, to February 2, 1900; ex officio, to May 26, $1898 . \dagger$
Bertrand T. Wheeler, from February 2, 1900, to November 25, 1901.
Guy C. Emerson, from November 25, 1901, to January 14, 1902:
James Donovan, from January 14, 1902, to October 28, 1904.
Joseph P. Lomasney, from October 28, 1904, to December 30, 1905.
Peter O'Neil, December 30, 1905, to January 3, 1906.

Charles Logue, from January 3, 1906, to March 1, 1906.
Patrick F. McDonald, from March 1, 1906, to April 5, 1908.
Thomas H. Sexton, from April 5, 1908, to May 1, 1908.
Guy C. Emerson, from May 1 1908, to the present time.
William J. Marvin, Commissioner for Cambridge. $\ddagger$
George M. Clukas, July 26, 1904, to December 19, 1907.
William H. Joyce, from December 19, 1907, to the present time.

[^32]Street Department.

| Name of Document. |  |  |  |  | $\begin{aligned} & \text { For } \\ & \text { Year. } \end{aligned}$ | Pub. | No. of Doc. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Annual report, Executive Dept., Part II |  |  |  |  | 1891 | 1892 | 36 |
| " | " | " | " | " | 1892 | 1893 | 34 |
| " | " | " | " | " | 1893 | 1894 | 34 |
| " | " | " | " | " | 1894 | 1895 | 34 |
| " | " | " | " | " | 1895 | 1896 | 29 |
| " | " | " | " | " | 1896 | 1897 | 29 |
| " | " | " | " | " | 1897 | 1898 | 34 |
| " | " | " | " | " | 1898 | 1899 | 35 |
| " | " | " | " | " | 1899 | 1900 | 38 |
| " | " | " | " | " | 1900 | 1901 | 38 |
| " | " | " | " | " | 1901 | 1902 | 38 |
| " | " | " | " | " | 1902 | 1903 | 40 |
| " | " | " | " | " | 1903 | 1904 | 40 |
| " | " | " | " | " | 1904 | 1905 | 40 |
| " | " | " | " | " | 1905 | 1906 | 40 |
| " | " | " | " | " | 1906 | 1907 | 42 |
| " | " | " | " | " | 1907 | 1908 | 42 |
| " | " | " | " | " | 1908 | 1909 | 38 |





[^0]:    * Paid from appropriations for Paving and Sewer Divisions.
    $\dagger$ Paid from appropriation for Bridge Division.

[^1]:    * For detail of distribution see foot of table.

[^2]:    Total area of pavements on public streets, $9,775,061$ square yards. Territory annexed from Brookline is included in city proper.
    2. Of this amount 471,716 square yards equal granite block paving on concrete base. 24,341 square yards public alleys laid out under chapter 298 of the Acts of 1898 included in this table. 286,743 square yards public streets in charge of Park Department included in this table.

[^3]:    Total Length of Pavements on Public Streets, 514.28 Miles.

[^4]:    * Not advertised, bids invited; awarded to lower of two bidders furnishing new piles.
    $\dagger$ Not advertised, bids invited; a warded to lowest of six bidders.
    $\ddagger$ Not advertised, bids invited; three bidders; a warded to one of two lowest who bid the same.
    § Approximate; paid $\$ 450.28$.

[^5]:    ${ }^{1}$ Included in real estate and buildings by assessors.
    ${ }_{2}$ See footnote 4 under Table 4.
    ${ }^{3}$ Auditor's figures for total expenditures and receipts are $\$ 60,278.56$ more than above, the difference (capital invested) being the same; $\$ 3,542.50$ for additional interest and $\$ 33$ counted twice on total of ferry books have also been included in these figures.

[^6]:    * Does not include sale of Grove street crushing plant in exchange for 1,000 tons of crushed stone delivered on streets in West Roxbury.

[^7]:    * Includes credit of $\$ 1,250$ for sale of Grove street crushing plant in exchange for 1,000 tons of crushed stone furnished in West Roxbury.

[^8]:    * $\$ 4,867.80$ paid by Boston Transit Commission February 12, 1909.

[^9]:    * $\$ 1,189.78$ paid by Boston Elevated Railway Company.

[^10]:    ${ }^{2}$ Contract extended to include State street, north and south of Old State House.

[^11]:    ${ }^{1}$ Advertised and awarded to lowest bidder. ${ }^{2}$ Without competition.

[^12]:    * Laid in connection with the construction of the street, under chapter 323 of the Acts of 1891 and amendments.

[^13]:    ${ }^{2}$ Without competition. For additional items in this contract see Furnishing and Laying Artificial Stone Sidewalks.

[^14]:    ${ }^{1}$ Awarded without competition.
    Explanation of Letters.
    Furnishing and laying a 6 -inch Portland cement concrete base, a $1 \frac{1}{2}$-inch wearing surface and a $1 \frac{1}{2}$-inch binder, and guaranteeing the same for a Furnishing and laying a $1 \frac{1}{2}$-inch wearing surface and a $1 \frac{1}{2}$-inch binder on existing concrete base and guaranteeing the same for a period of ten (10) vears after completion.

    Excavating for sub-grading, including paving blocks barred up.
    Excavating and laying brick sidewalks.
    Laying granite block paving and crosswalk flagging, gravel joints, on a gravel base.
    Laying a 6 -inch Portland cement concrete base for paving.
    $\leftrightarrows$
    

[^15]:    ${ }^{1}$ A warded without competition.
    Explanation of Letters.
    Furnishing and laying wood block paving and guaranteeing the same for a period of ten (10) years after completion.
    Granite block paving and crosswalks with pitch joints on a concrete base.
    Exeavating for subgrade, including paving blocks barred up.
    Excavating and setting edgestones.
    Excavating and laying brickstonew.
    

[^16]:    * Of this sum, $\$ 3,945.96$, for miscellaneous credits, is not carried into tables, page 304 and facing the same.

[^17]:    * This amount was added to the appropriation.

[^18]:    The above includes the loads collected by the contractors on ashes and offal.

    * Decrease in number of loads carried due to the increase in the carrying capacity of the carts.

[^19]:    *Removed beyond city limits and presumably fed to swine.
    See also table, facing this page, and map, page 304, based on these two tables

[^20]:    * Collected by city teams before July,

[^21]:    * Includes cleaning Stony brook, \$1,528.85.

[^22]:    * Total amount of engineers' salaries charged to this appropriation, \$38,739.17. As follows: General account. . . . . . . . . . . . . . . . . $\$ 23,06460^{\circ}$ To jobs
    $\$ 38,73917$

[^23]:    The bids include the furnishing by the contractor of all materials except ironwork.

[^24]:    The stable in South Boston is leased, and all expenditures are made directly by this division.
    In East Boston the division occupies the stable as a tenant of the Paving Division, paying its share, per horse, of all expenses.
    In Charlestown and Roxbury the division occupies the stables as a tenant of the Sanitary Division, paying a fixed rate per horse, per day, for feed, fuel,
    light and help.
    In the South and West stables the division furnishes feed and help, but pays a fixed rate per day, per horse, for light and fuel.
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    light and help.
    In the South and West stables the division furnishes feed and help, but pays a fixed rate per day, per horse, for light and fuel.
    别

[^25]:    * Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

[^26]:    * Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

[^27]:    * Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

[^28]:    Note.- Harvard Bridge added in 1892. Essex Street, Cambridge Street, North Harvard Street, and Western Avenue bridges to Cambridge were transferred from Street Department July 1, 1898.

[^29]:    * Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

[^30]:    * Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

[^31]:    * For period from February 28, 1906, to April 6, 1908, see Street Department since 1891, page 407.
    $\dagger$ Died January 12, 1894.

[^32]:    * March 1, 1906, Street Watering Division consolidated with the Street Cleaning Division under title of Street Cleaning and Watering Department. $\dagger$ See chapter 467, Acts of 1898.
    $\ddagger$ Died July 22, 1904.

