## ANNUAL REPORT

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STREET DEPARTMENT


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## CITY OF BOSTON. 1895.


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## ANNUAL REPORT

## STREET DEPARTMENT

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路enj. © 0 .<br>Superintendent of Streets.



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BOSTON:

ROCKWELL AND CHURCHILL, CITY PRINTERS.
1896.
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Hon. Josiah Quincy, 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 1895 is herewith respectfully submitted.

## Organization.

The work of the department during the past year has heen carried on under the same organization that was effected when the consolidated department was created in 1891, with the exception that, as recommended in the last report of the department, a Street-Watering Division has been established, and the work of street watering, formerly carried on by the Paving Division, with a foreman in charge, now devolves upon the Deputy Superintendent of this division.

By the provisions of Chapter 449 of the Acts of 1895 , the Ferry Department, on July 1, 1895, became a part of the Street Department, and was on that date organized as the Ferry Division.

The several divisions of the department are as follows:
The Central Office.
Bridge Division.
Boston and Cambridge Bridges.
Ferry Division.
Paving Division.
Sanitary Division.
Sewer Division.
Street-Cleaning Division.
Street-W atering Division.
Each of the above divisions, with the exception of the Central Office Division and the Boston and Cambridge Bridges, is in charge of a Deputy Superintendent.

The Boston and Cambridge Bridges are managed by two commissioners, the Superintendent of Streets being the commissioner for the city of Boston, the other commissioner being appointed by the Mayor of the city of Cambridge.

Much confusion has in past years resulted from the fact that the district lines were differently drawn in the several divisions, while the work of one division in a district often required the coöperation of another ; the openings made by a foreman of the Sewer Division, in a district, require the attention of the paving foreman, and in the central portion of the city, the district foreman of paving assists the district foreman of the street cleaning in times of storm. Formerly the district of one division overlapped and included portions of several districts of another division.

The organization has been much improved, the work simplified, and coöperation made more easy by the rearrangement of the city into new Street Department districts which are the same for all divisions, the order for which was issued as follows:

## CITY OF BOSTON - STREET DEPARTMENT.

Description of Districts, 1895.
The city of Boston is hereby divided into Street Department districts, ten in number, described and bonnded as follows:

District No. 1. South Boston. - Bounded southerly upon District No. 6, Dorchester; namely, from a point on the N. Y. \& N. E. R.R., north of Massachusetts avenue, in the line of the extension of Willow court; thence by and including Willow court and Mt. Vernon street, to the N. Y., N. H., \& H. R.R.; thence by the line of Carson street extended to the harbor.

District No. 2. East Boston and Breed's Island.
District No. 3. Charlestown.
District No. 4. Brighton.-Bounded easterly upon District No. 9, Back Bay; namely, from the Charles river by and including St. Mary's street.

District No. 5. West Roxbury. - Bounded northerly upon District No. 7, Roxbury ; namely, from Brookline line by and including Chestnut street to Perkins, Perkins street to Centre, Centre street to Paul Gore, Paul Gore street to Lamartine, Lamartine street to Boylston, Boylston street to Washington, Washington street to Seaver, Seaver street to Blue Hill avenue; bounded easterly upon District No. 6, Dor-
chester; namely, by and not including Blue Hill avenue to Back street, by and including Back street to Hyde Park line.

District No. 6. Dorchester. - Bounded westerly upon Districts Nos. 5 and 7, West Roxbury and Roxbury ; namely, from Hyde Park line by and not including Back street to Blue Hill avenue, by and including Blue Hill avenue to Brookford street, Brookford street to Martford, Hartford street to Robin Hood, Robin Hood street to Magnolia, Magnolia street to Dudley, by and not including Dudley street to N. Y. \& N. E. R.R., N. Y. \& N. E. R.R. to South Bay, North of Massachusetts avemue; thence bounded northerly by District No. 1, South Boston ; namely, by and including Willow court and Mt. Vernon street to the N. Y., N. H., \& H. R.R.; thence by the line of Carson street extended to the harbor.

District No. 7. Roxbury. - Bounded sontherly upon District No. 5, West Roxbury; namely, from the Brookline line by and not including Chestnut street to Perkins, Perkins street to Centre, Centre street to Panl Gore, Paul Gore street to Lamartine, Lamartine street to Boylston, Boylston street to Washington, Washington street to Seaver, Seaver street to Blue Hill avenne; bounded easterly by District No. 6, Dorchester; namely, by and not including Blue Hill avenue to Brookford street, Brookford street to Hartford, Hartford street to Robin Hood, Robin Hood street to Magnolia, Magnolia street to Dudley, by and including Dudley street to N. Y. \& N. E. R.R., N. Y. \& N. E. R.R. to Norfolk avenue; bounded northerly by District No. 8, South End; namely, by and not including Norfolk avenue to Hampden street, Hampden street to line of East Lenox produced, by this line and not including East Lenox street to Lenox, Lenox street to Tremont, Tremont street to Camden, Camden street to N. Y., N. H., \& H. K.R.; bounded northerly and westerly by District No. 9, Back Bay; namely, from N. Y., N. H., \& H. R.R. by and not including Gainsborough street to Huntington avenue, Huntington avenue to Tremont street, Tremont street to the Brookline line.

District No. 8. South End. - Bounded southerly by District No. 7, Roxbury; namely, from N. Y. \& N. E. R.R. by and including Norfolk avenue to Hampden street, Hampden street to line of East Lenox produced, East Lenox street to Lenox, Lenox street to Tremont, Tremont street to Camden, Camden street to N. Y., N. H., \& H. R.R. ; bounded westerly by District No. 9, Back Bay; namely, by N. Y., N. H., \& H. R.R. to Church street, by and including Church street to Boylston; bounded northerly by District No. 10, West End and North End; namely, by and including Boylston street to Tremont, Tremont street to Court, Court street to State, State street to Kilby, Kilby street to Oliver, Oliver street to Fort Point Channel.

District No. 9. Back Bay.-Bounded southerly upon District No. 7, Roxbury; namely, from the Brookline line by and including Tremont street to Huntington avenue, Huntington avenue to Gainsborough street, Gainsborough street to N. Y., N. H., \& H. R.R.; bounded easterly by District No. 8, South End; namely, by the N. Y., N. H., \& H. R.R. to Church street, by and not including Church street to Boylston; bounded northerly by District No. 10, West End and North End; namely, by and including Boylston street to Arlington, Arlington street to Beacon, Beacon street to Otter, Otter street to Charles River; bounded westerly by District No. 4, Brighton; namely, from Charles river by and not including St Mary's street to the Brookline line.

District No. 10. West End and North End. - Bounded southerly by Districts Nos. 9 and 8, Back Bay and South End; namely, from Charles river by and not including Otter street to Beacon, Beacon street
to Arlington, Arlington street to Boylston, Boylston street to Tremont, Tremont street to Court, Court street to State, State street to Kilby, Kilby street to Oliver, Oliver street to Fort Point Channel.
(Signed)
B. T. Wheeler,

Superintendent of Streets.
The result anticipated has been fully realized, and especially has this been demonstrated in the Street-Cleaning Division, whose district lines most sadly needed alteration, having been practically unchanged since their first establishment by Superintendent Forristall, of the old Health Department. Economy of operation and increased efficiency resulted from the change, and the consequent reorganization, as is shown in the report of the Deputy Superintendent (Appendix F) ; the average cost of cleaning streets per mile, exclusive of supervision, last year, under old system, was $\$ 12.57$; this year, under new organization, $\$ 11.80$; the average cost, inclusive of supervision, yard and stable expenses, etc., last year, $\$ 15.61$; this year, after reorganization, $\$ 14.40$, showing saving of $\$ 0.77$ per mile in actual work of cleaning, and an additional saving of $\$ 0.44$ per mile in supervision.

Increased efficiency of the administrative force of the Sewer Division has been obtained by the removal of the offices to the Probate Building, Court square. Previous to this the Deputy Superintendent, clerks, and permit office of the Sewer Division were in City Hall, Room 44, the chief engineer, district engineers, and draughtsmen in six small dimly lighted rooms in a wooden addition in the rear of No. 14 Beacon street; here all the working and many record plans were necessarily kept, and much time consumed in travel over nearly one-quarter of a mile iutervening between these offices and City Hall, plans for immediate reference being required by the Superintendent many times daily. Had fire swept these offices, the loss to the city would have been immeasurable. The office of the Street-Watering Division and of the Permit Office of the Paring Division were in the Old Court-House, and this separation of the two permit offices of the department in different buildings made needless confusion and annoyance for the public. By the occupancy of the Probate Building, a fire-proof structure of four stories, which was entirely renovated, the entire Sewer Division offices were consolidated upon the three upper floors, much-needed room and light acquired for draughting, and proper fire-proof storage given for plans. Upon the lower floor were located the permit office of the

Paving Division and the Street-Watering Division, and this building being entirely occupied by offices of the Street Department, was connected with the general office of the Superintendent of Streets in City Hall by an iron covered bridge, bringing them, to all intents and purposes, under the roof of City Hall and within the personal reach of the Superintendent. Events have proved that had it not been for this consolidation of forces and increased working space, it would have been impossible to have carried on the engineering and administration of the vast amount of sewer construction undertaken this year.

## Purchasing.

Early in the year a change was inaugurated in the methods and forms of purchasing supplies for the departments, the office of Purchasing Agent was abolished and the Superintendent became personally responsible, as he should be, in all matters of expense charged to the appropriation of this department; these methods resulted in reducing the amounts purchased by deputies, foremen, and others to a minimum. New forms of duplicate bills were introduced; before a bill is now passed for payment the signature has been obtained of the foreman who received the goods, of the chief clerk of the division ordering, of the Deputy Superintendent, the purchasing clerk, and the Superintendent of Streets.

Responsibility for the order, receipt, quality, and price is therefore fully fixed. The results obtained are made apparent by a comparison of the percentages of the total annual expenditure paid for bills and for labor last year and this, showing a saving of some $6 \frac{1}{2}$ per cent. in bills, which consequently gave opportunity for an increased percentage of expenditure in labor upon the streets: a part of this saving has been so expended and the balance of the appropriation, $\$ 24,822.37$, has been returned to the city treasury.

## Yards and Stables.

In South Boston, the stables, yards, and offices of the Paving, Stréet-Cleaning, and Sanitary divisions are upon leased property, the Sewer Division yard and Paving wharf are upon city property included in the limits of the Strandway, which must soon be racated, and the Bridge Division is obliged to rent a stable and has no fit accommodations for office and storehouse. A piece of land with wharf privileges should be purchased and buildings for the use of these four divisions erected upon it.

In East Boston, the quarters of the Paving and Sewer
divisions on city land are inadequate and unsatisfactory and the buildings must soon be rebuilt ; the city owns no wharf privilege, although in the district all supplies of paving and crushed stone must reach it by water ; there is no yard for the Sanitary and Street-Cleaning divisions; the collection of ashes and offal therefore must be done ly contract, and the Charlestown street-cleaning force journeys to East Boston in order to give it an aspect of clemliness twice a week. These conditions should be changed and a location provided on the water-front for these four divisions, with suitable buildings for each.

The Back Bay district has in its yard no stable accommodations except for the driving-horse of the foreman, and consequently all teams here employed are hired; sufficient room should be provided to give stabling to the minimum number of horses required.

Attention is also called to the entirely inadequate quarters at the Main and Intercepting Sewer yard on Massachusetts avenne, near Albany street. Negotiations were opened during the year for the purchase of the buildings of the New England Construction Company, on the city land at Gibson street, Dorchester, for this purpose, but were not satisfactorily terminated.

The city should and could economically maintain a sufficient force of horses to do its entire work at the periods of ordinary demand, and the hiring of teams should be eliminated as far as possible, and a certain and considerable saving would then accrue to the city.

But the accommodations are at present insufficient, and no money is arailable for additions either to stable or stock; the maintenance appropriation, which is the only one available, being severely taxed to replace with sufficient rapidity the horses who outlive their usefulness or become injured in the city's employ. Additional stables and stock of 75 horses in the different divisions are required, and would result in an annal saving of about $\$ 150$ per single team (horse and man), besides giving employment to an equal number of citizens. A better service would be obtained than of the under-paid alien in charge of the hired horse of none too active character.

## Stony Brook.

The question of the relation of Stony brook to the extension of Columbus avenue and the raising of the tracks of the Providence Division of the N. Y., N. H., \& H. R.R. Co. was quite fully discussed in last year's report; and as the result of the studies made at that time it was decided, for


LY END OF LOW-GRADE COVERED CHANNEL, SHOWING NECESSITY OF
THE CONTINUATION OF THE IMPROVEMENT.
the reasons therein set forth, to locate the channel proposed by the Stony Brook Commission of 1886 within the lines of the avenue, and to build it between the existing portion of the same channel which now ends at the Inlet Chamber and the section of improved channel built during the year by the N. Y., N. H., \& H. R.R. Co. from near Ritchie street to 400 feet south of Boylston street, as a part of the construction of the avenue, and it has been so ordered by the Street Commissioners in their order of construction of the avenue.

The necessity for extending the Commissioner's chaunel down to meet that now ending at the Inlet Chamber is clearly shown by the photograph inserted in this report, showing the arch of the channel nearly submerged, and the channel entirely inaccessible for cleaning out or the removal of obstructions, accumulations of lumber, rubbish, etc.

The scheme discussed for building a low level sewer, in connection with this channel, for those portions of West Roxbury which cannot be sewered by extensions of the existing system of sewers has also been adopted, and a portion of it $2,092.5$ feet long has been built on the haunch of the arch of the channel built last season by the N. Y., N. H., \& H. R.R. Co., and the bill for the same has been paid by the city. Another portion of the low level sewer has been built in Tremont street, between the Roxbury Crossing and Texas street, the sewer being built inside of the existing 7 feet $\times 7$ feet channel of Stony brook, and paid for by the abutter, as a part of the cost of diverting the brook around his premises. Plans are in progress for the construction of those sections of Columbus avenue between the Roxbury Crossing and Ritchic street, in which the Stony-brook channel and the West Roxbury low level sewer form a part of the system.

This channel, carrying the sewer, should be built in advance of any other work of construction on this part of the avenue, becanse it requires the deepest excavation; its construction should certainly precede the laying of any large water-mains.

As a portion of, or possibly the entire present course of, the brook between the Inlet Chamber and the land of the Highland Foundry Company will probably have to be followed in building the new channel, and as this location is parallel and adjoining that of the Providence Division, this portion of the channel should be built before the railroad company begins to build its retaining-wall for raising its tracks, which will be begun by midsummer.

The discussion in last year's report upon the route to be followed in building the new channel from the corner of Pynchon street (or Columbus avenue) and Centre street to Amory
street, and thence to connect with the northerly end of the new channel just built by the N. Y., N. H., \& H. R.R. Co., proceeded upon the assumption that the present location of the brook would be followed, and the cost of building the connecting link between the last-mentioned portion of the new channel and the portion to be built in Colmmbus avenue, ending near Ritchie street, was included in the estimate of cost, but this portion was not included in the order of construction by the Board of Street Commissioners. But now, on account of the removal of huildings and additional takings made by the railroad company at the corner of Centre and Amory streets, a shorter route may be found by following Centre street from its present intersection with Pynchon street to the casterly side of the railroad location, thence along the easterly side of this location to the northerly endof the channel, as already built by the railroad company. This route is about 250 feet shorter than the present route of the brook, which would represent a saving of about $\$ 20,000$, based upon the figures of the Commission of 1886 , and would probably result in a larger saving, as a large amount of ledge, and also the handling of the water of the brook during construction, would be aroided ; this last consideration is one which would be highly appreciated by contractors. This portion of the channel should not be built until the grade of Centre street has been lowered by the railroad company in order to carry it under their proposed bridge, but should be done immediately after and before Centre street is resurfaced.

An additional reason for promptness is that the old channel between Centre and Ritchie streets cannot be filled in (and Columbus avenue cannot therefore be finished) until the new channel is completed.

The question as presented in last year's discussion is still an open one as to the adoption of means by which water shall be furnished to the Boston Belting Company, if a settlement of their claim to the water of the brook is not made. Such a settlement scemed probable in the latter part of the year, the Mayor being authorized by the City Council to make such arrangements as it was hoped would relieve the city of one complication of the Stony-brook problem, which has vexed it for so many years ; but no agreement seems to have been reached.

The building of an auxiliary channel from the farthest point up stream of the low-grade channel as improved, has, however, been abandoned, and the water of the brook must be furnished, if at all, either by the erecting of a movable dam or the setting up of a pumping plant at the present Inlet Chamber.

The question of the treatment of Stony brook at one other point has arisen during the year; namely, at the Washingtonstreet crossing of the N. Y., N. H., \& H. R.R. near Forest Hills Station, occasioned by the proposed construction of the bridge abutments at this point necessary for the raising of the tracks of this railroad.

Two alternatives presented themselves: either to construct a section of the improved low-grade channel at this point, forming another pocket and settling basin, which a continuation of the improvement would not reach for many years, or to abandon this location, since after the construction of the abutments no excavation for such a purpose could safely be made between them. It was found that the construction of the section would be rery expensive and difficult even at this time, and it was therefore decided that a preferable expedient would be to construct the conduit when future needs required, by extending it upon the easterly side of the railroad upon a taking to be made for that purpose, either within or without the railroad location, to a point at which it might cross under the proposed embankment of the railroad to join the existing channel upon the other side. This arrangement not only obviated the necessity of present outlay, for no immediate advantage, but the new location will undoubtedly avoid a pocket of quicksand existing near the present crossing, and result in far more economical construction without material increase in the length.

The consent of the railroad by its chief engineer has been obtained to the crossing of its right of way with this channel, "provided the city will agree to bear all the expense, when the conduit is constructed, in protecting the company's tracks," etc. - a usual and satisfactory condition.

## "The Boulevards."

The four avenues, Blue Hill, Columbus, Huntington, and Commonwealth extension, which have come to be popularly known as "The Boulevards," have required a large amount of engineering, draughting, and supervision, aud that portion upon which construction has been ordered by the Street Commissioners has been divided for purposes of reference and contract into 38 sections; these include the whole of the proposed avenues except that portion of Blue Hill avenue, from Walk Hill street to Milton line, which crosses the N. Y. \& N. E. R.R., and upon which construction will not be ordered until the grade-crossing problem is solved at this point.

Contracts, forty-two in number, have been let as required
by law, and work commenced either upon sewer construction or grading, in some cases both, upon every one of these 38 sections, except four on Columbus avenue lying between Roxbury Crossing and Centre-street bridge, for which distance the avenue is laid ont over the existing Pynchon street.

Because of the fact that the operations of the N. Y., N. H., \& H. R.R. in raising its tracks between these points might inconvenience public travel, it seemed unwise to disturb the paved surface of the street and thus increase the burden upon heavy traffie in this vicinity, while either end of the avenue required such extensive work and was so far from completion. It is in these four sections, moreover, that Stony brook must go, and much additional time was required for the completion of the plans and the working out of details. There seems to be now no good reason why operations should not commence in the early spring upon the important work of these sections, which includes the provision for Stony brook before referred to.

In connection with the construction of these arenues, the West End Street Railroad Company has agreed, because of the privilege of location, to loam the entire width of all the reserved spaces to a depth of eight inches, at its sole cost and expense.

## Commonwealith Avenue.

Work upon that portion of Commonwealth avenue which many years ago was laid out under the general law, has been continued during the year. Early in the season the short portion of the southerly roadway between Beacon street and Cottage Farm at the bridge remaining uncompleted was graded, and the roadway opened to travel.

The widening of the bridge has been commenced. From the bridge to Brighton avenue the southerly roadway will be used as a speedway, and this is entirely subgraded, edgestones set, and gutters paved and partly gravelled with loose material for this purpose; a few days only of good weather will serve to complete it. The portion of the northerly roadway between the bridge and St. Paul street has been graded, eurbing set, and gutters paved and constructed of Telford macadam, completing this section of the work.

Beyond the intersection of Brighton avenue the character of the avenue changes, having no loamed reservation for street railway, but a wide central roadway instead, with winding side-roads on either hand. The westerly roadway has been graded, and a Telford road, with paved barrel-gutters, has been constructed to Warren street; a portion of it requires binding and rolling only. The easterly roadway

blue hill avenue,- LOoking south.
(Blue Hill scarcely discernible in the middle distance.)
has been subgraded to Warren street, and constructed from Brighton avenue to Harvard avenue, with Telford macadam and paved barrel-gutters.

A balance of $\$ 87,227.88$ remains unexpended of an appropriation of $\$ 170,000$, which it was estimated would complete the avenue to Warren street, and which appears to be more than amply sufficient. The surplus may be used to coutinue the work beyond Warren street.

The principal features of the work of the year may be summarized as follows:

Paving with granite blocks, and regulating 35 streets, or parts of streets, in various districts.

Construction of Telford macadam roadways on Commonwealth avenue, from Cottage-Farm bridge to Warren street; on Talbot avenue, from Wells avenue to Washington street, and on Harvard avenue, Norway street, Parker street, and St. Germain street.

Construction of sewers and grading upon Blue Hill, Columbus, Commonwealth extension, Huntington, and Brighton avenues.

Constructing three other macadam streets, under Chapter 323 of the Acts of 1891, and commencing eight others.

Setting 51,669 linear feet of new edgestone, and laying 20,632 square yards of new brick sidewalks, and 12,295 square yards of new granolithic sidewalks, besides resetting and regulating 113,806 linear feet of edgestone, and relaying 72,360 square yards of brick sidewalk.

Increasing our asphalt pavements by 17,933 square yards.
The completion of Chelsea-street bridge ; the rebuilding of Chelsea, north, with new steel retractile draw ; the extension of the pier and widening of Cottago-Farm bridge, and the construction of Gold-strcet bridge.

Building over 33 miles of sewers and 570 catch-basins and drop inlets, repairing 561 and cleaning 6,509 catch-basins, removing therefrom about 18,264 cubic yards of filthy material.

Cleaning about 11,419 miles of streets, removing 122,544 loads of dirt.

Sprinkling 338.13 miles of streets during the season.
Collecting and removing 336,886 loads of house-dirt and ashes.

Collecting and removing 51,327 loads of house-offal.
During the year, work has been completed upon streets, five in number, previously laid out and commenced under Chapter 323 of 1891 , etc., and work has been commenced and prosecuted upon eleven others, upon which construction
has been ordered; one only, Audubon road, has not been begun, as the date of the order (Nov. 7, 1895) made it impracticable.

The work begun last year upon Boylston-street extension has also been prosecuted.

The report of the Executive Engineer, which follows, alludes to the work of the Central Office, and includes a statement of the general finances of the department, with appropriations and expenditure from loans for special work, together with a valuable table of prices that obtained upon a contract basis.

Attention is also called to the general work of the divisions, under the special division headings following.

In addition to this report, seven appendices are herewith submitted, in which will be found the reports of the several Deputy Superintendents; showing the expenditures of each division in detail. They are as follows:

> Appendix A - Bridge Division.
> " B-Ferry Division.
> ". C-Paring Division.
> ". D - Sanitary Division.
> " E-Sewer Division.
> " F - Strect-Cleaning Department.
> ، G - Street-Watering Division.
> " H - Former Superintendents and Document Numbers.

Respectfully submitted,

> B. T. Wheeler, Superintendent of Streets.

Boston, February 1, 1896.

Mr. B. T. Wheeler, Superintendent of Streets:
Dear Sir: I herewith respectfully submit the annual report of the operations and expenses of the Street Department, the same being a full statement thereof for the year 1895.

## CENTRAL OFFICE DIVISION.

Expenses of the Central Office.
For the current expenses of the Central Office the City Council appropriated the sum of twenty thousand dollars $(\$ 20,000)$, which was expended as follows:

leaving a balance of sixteen hundred firty-four dollars and twenty-one cents ( $\$ 1,654.21$ ), which was transferred to the city treasury.
FINANCIAL STATEMENT OF THE STREET DEPARTMENT APPROPRIATION. From February 1, 1895, to January 31, 1896.

Comparative Table showing Cost of Maintenance of the Street Department since Organization.

| Division. | 1891-2. (13 months.) | 1892-3. | 1893-4. | 1894-5. | 1895-6. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Central Office | ${ }^{1} \$ 16,05000$ | \$18,793 60 | \$20,805 96 | \$20,884 29 | \$18,315 79 |
| Bridge . . . . . . . . . . . . . . . . . . . | 123,010 63 | 128,954 37 | 133,159 24 | 130,137 21 | 119,716 00 |
| Boston and Cambridge Bridges . . . . . . | 11,866 42 | 11,079 76 | 11,493 16 | 11,986 85 | 12,537 33 |
| Ferry |  |  |  |  | 209,911 30 |
| Paving . | 872,936 40 | 915,460 99 | 745,681 52 | 715,608 62 | 683,899 42 |
| Sanitary . . | ${ }^{2} 509,34224$ | 469,370 74 | 481,300 63 | 467,459 02 | 432,778 52 |
| Sewer . | 446,222 69 | 560,608 19 | 373,517 38 | 304,133 40 | 280,596 07 |
| Street Cleaning . | ${ }^{3} 215,92933$ | 288,320 42 | 308,707 30 | 301,477 44 | 305,998 50 |
| Street Watering . . . . . . . . . . . . . . | 104,263 62 | 94,507 80 | 99,430 16 | 87,169 08 | 76,42470 |
| Totals . | \$2,299,621 33 | \$2,487,095 87 | \$2,174,095 35 | \$2,038,855 91 | ${ }^{4} \$ 2,140,17763$ |

[^0]
## Bridge Division Specials.

| Orjeet of Appropriation. | Appropriations, Balances, and Transfers. | Expended from Feb'y 1, 1895, to Jan. 31, 1896. | $\begin{aligned} & \text { Balances on } \\ & \text { hand } \\ & \text { Jan. } 31,1896 \text {. } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Charles-river Bridge, draw | \$8,100 00 | \$5,175 84 | \$2,924 16 |
| Chelsea Bridge North, rebuilding, etc. | 40,000 00 | 26,738 36 | 13,261 64 |
| Chelsea-street Bridge, rebuilding, etc. | 18,414 92 | 14,154 44 | 4,260 48 |
| Gold-street Bridge | 25,000 00 | 6,402 42 | 18,597 58 |
| Totals . | \$91,514 92 | \$52,471 06 | \$39,043 86 |

Ferry Division Specials.


Paving Division Specials.

| Object of Appropriation. | Appropriations, <br> Balances, and Transfers. | Expended from Feb'y 1, 1895, to Jan. 31, 1896. | $\begin{gathered} \text { Balances on } \\ \text { hand } \\ \text { Jan. } 31,1896 . \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Arklow st. | \$800 00 | - . . . . . - | \$800 00 |
| Bellllower st. | 93431 | \$934 31 |  |
| Bond st. | 1,091 18 | 1,091 18 |  |
| Bunker Hill st. | 1,527 85 | 1,161 66 | 36619 |
| Charter st. | 4,790 80 | 4,790 80 |  |
| Columbus ave. | 7,100 00 | . . . . . . . | 7,100 00 |
| Commonwealth ave. . | 175,641 99 | 88,414 11 | 187,227 88 |
| Congress and L sts. | 14,142 00 | 3,575 22 | 10,566 78 |
| Dartmouth st. . | 36035 | 36035 |  |
| Hanover st. | 3,827 66 | . . . . . . . | 3,827 66 |
| Henchman st. . . | 2,136 32 | 2,136 32 |  |
| Lewis-st. extension . | 450 | 450 |  |
| McLellan st. | 7,090 00 | 1,243 60 | 5,756 40 |

Paving Division Specials. - Concluded.

${ }^{1}$ Draft of $\$ 5,450.91$ retained.

Street Improvements.

| Object of Appropimation. | Appropriations, Balance and Tranfers. | Expended from Feb. 1, 1895, to Jan. 31, 1896. | Balances on hand Jan. 31, 1595. |
| :---: | :---: | :---: | :---: |
| Street Improvements, Aldermanic District No. 6 | \$13,480 66 | \$13,480 66 |  |
| Street Improvements, Wards 1 and 2 | 51,971 57 | 29,474 62 | \$22,496 95 |
| Street Improvements, Ward 3 | 20,784 09 | 7,77\% 28 | 13,006 81 |
| Street Improvements, Ward 4 | 23,333 67 | 21,690 51 | 1,643 16 |
| Street Improvements, Ward 5 | 18,118 35 | 12,992 50 | 5,125 85 |
| Street Improvements, Ward $6 .$. . . ${ }^{\circ}$ | 2,150 98 | 2,150 98 |  |
| Street Improvements, Ward 6, 7, and 8 | 43,211 36 | 43,211 36 |  |
| Street Improvements, Wards 7 and 8 | 7,551 92 | 7,551 92 |  |
| Street Improvements, Ward 9. - ${ }^{\text {a }}$ | 5,000 00 | 5,000 00 |  |
| Street Improvements, Wards 9 and 10 | 50,00000 | 44,14976 | 5,850 24 |
| Street Improvements, Ward 11 | 25,00000 | 25,000 00 |  |
| Street Improvements, Ward 12 | 36,758 62 | 14,249 30 | 22,509 32 |
| Street Improvements, Ward 13 | 25,00000 | 4,065 05 | 20,937 95 |
| Street Improvements, Ward 14 | 3,196 55 | 3,196 55 |  |
| Street Improvements, Wards 14 and | 50,000 00 | 22,679 13 | 27,320 87 |
| Street Improvements, Ward 15 | 4,132 80 | 3,241 41 | 89139 |
| Street Improvements, Ward 16 . . is | 25,000 00 | 10,381 92 | 14,618 08 |
| Street Improvements, Wards 17 and 18 | 67,658 06 | 62,571 07 | 5,086 99 |
| Street Improvements, Wards 19 and 22 | 50,00000 | 34,142 78 | 15,857 22 |
| Street Improvements, Ward 20 | 25,636 81 | 12,747 45 | 12,889 36 |
| Street Improvements, Ward 21 | 25,000 00 | 25,000 00 |  |
| Street Improvements, Ward 23.8. | 25,000 00 | 25.00000 |  |
| Street Improvements, Wards 23 and 25 | 4,999 77 | 4,999 77 |  |
| Street Improvements, Ward 24 | 50,000 00 | 49,469 40 | 53060 |
| Street Improvements, Ward 25 | 25,000 00 | 20,590 89 | 4,409 11 |
| Totals. | \$677,985 21 | \$504,811 31 | \$173,173 90 |

Sewer Division Specials.

| ObJECT OF APPropriaton. | Appropriations, Balances, and Transfers. | Expended from Feb. 1, 1895, to Jan. 31, 1896. | Balances on band Jan. 31, 1896. |
| :---: | :---: | :---: | :---: |
| Forest avenue Section, Temporary Sewer Outlet, etc | \$19,400 00 | \$2,283 35 | \$17,116 65 |
| Stony Brook, Damages. . . . . . . . . . . . . . | 5,050 00 | 5,025 00 | 2500 |
| Sewer Outlet, Low Level, West Roxbury District, | 21,000 00 | 13,175 36 | 7,824 64 |
| Sewers, South Boston . | 1,266 25 | 38874 | 87751 |
| Totals . | \$46,716 25 | \$20,872 45 | \$25,843 80 |

Laying Out and Construction of Highways.
Expenditures.
Sewer construction . . . . . \$404, 162 78
Street construction . . . . . 85,453 81
Totals . . . . . . $\$ 489,616 \quad 59$

## Blue Hill and other Avenues.

Expenditures.

| Object of Appropriation. | Street Construction. | Sewer Construction. | Totals. |
| :---: | :---: | :---: | :---: |
| Blue Hill ave. . | \$19,994 95 | 844,865 80 | \$64,860 75 |
| Columbus ave. | 4,516 83 | 36,546 68 | 41,063 51 |
| Commonwealth ave. . | 15,920 19 | 19,886 64 | 35,806 83 |
| Huntington ave. . | 24,910 12 | 50,271 32 | 75,181 44 |
| Totals | \$65,342 09 | \$151,570 44 | \$216,912 53 |

## Recapitulation of Expenditures for the Twelve Months ending January 31, 1896.

| Object of Appropriation. | Current Ex. penses for the twelve months ending Jan. 31, 1596. | Special Appropriations. | Totals. |
| :---: | :---: | :---: | :---: |
| Street Department: |  |  |  |
| Central Office . | \$18;315 79 | - • • . . - | \$18,315 79 |
| Bridge Division . | 119,716 00 | \$52,471 06 | 172,187 06 |
| Boston and Cambridge Bridges . | 12,537 33 |  | 12,537 33 |
| Ferry Division | 209,911 30 | 11,902 64 | 221,813 94 |
| Paving Division . | 683,899 42 | 165,181 38 | 849,080 80 |
| Sanitary Division | 432,778 52 | - . . . . . . | 432,778 52 |
| Sewer Division | 280,596 07 | 20,872 45 | 301,468 52 |
| Street Cleaning Division | 305,998 50 |  | 305,998 50 |
| Street Watering Division | 76,424 70 |  | 76,424 70 |
| Street Improvements |  | 504,811 31 | 504,811 31 |
| Laying Out and Construction of Highwaye |  | 489,616 59 | 489,616 59 |
| Blue Hill and other Avenues |  | 216,912 53 | 216,912 53 |
| Totals | \$2,140,177 63 | \$1,461,767 96 | \$3,601,945 59 |

Street-building under Chap. 323 of the Acts of 1891, as amended by Chap. 418 of the Acts of 1892.

| Street. | Paving. | Sewer. | Totals. |
| :---: | :---: | :---: | :---: |
| Abbotsford st., Walnut ave. to Harold st. | -•••• | \$1,472 81 | \$1,472 81 |
| Arundel st., Mountfort st. to Beacon st. | \$92 17 | 1376 | 10593 |
| Bay State road, Sherborn st. to Granby st. | 5890 | 3,680 32 | 3,739 22 |
| Boylston st., Boylston road to Brookline ave. | 40,665 11 | 16,290 97 | 56,956 08 |
| Brighton ave., Ccmmonwealth ave. to Cambridge st. . | 3,341 49 | 7,060 78 | 10,402 27 |
| Geneva are., Westville st. to Dorchester ave. | 300 | 2,190 71 | 2,193 71 |
| Granby st., Commonwealth ave. to Charles river . . . | 7250 | 60764 | 68014 |
| Greenbrier st., Bowdoin st. to Bloomfield |  | 1,560 27 | 1,560 27 |
| Harvard ave., Commonwealth ave. to Brookline line. | 5,195 64 | 4,494 55 | 9,690 19 |
| Ivy st., St. Mary's st. to Mountfort st. | 2,149 42 | 9840 | 2,247 82 |
| Josephine st., Geneva ave. to Ditson st. | -••• | 1,798 54 | 1,798 54 |
| Kenmore st., Commonwealth ave. to Newbury st. . . | 1,906 86 | 35812 | 2,264 98 |
| Lauriat ave., Blue Hill ave. to Tucker st. | -•••• | 6,787 18 | 6,787 18 |
| Mountfort st., Jvy st. to Audubon road | 12750 | 4201 | 16951 |
| Newbury st., Charlesgate West to Brookline ave. . | 60265 | -••• | 60265 |

Street-building under Chap. 323, etc.-Concluded.

| Street. | Paving. | Sewer. | Totals. |
| :---: | :---: | :---: | :---: |
| Norway st., Falmouth st. to W. Chester park, now Massachusetts ave. | \$5,442 89 | \$104 67 | \$5,547 56 |
| Parker st., Westland ave. to Huntington ave. | 12,595 12 | 66709 | 13,262 21 |
| Sherborn st., Commonwealth ave. to Charles river | 6,780 92 | 46598 | 7,246 90 |
| St. Alphonsus st., Tremont st. to Calumet st. |  | 3,088 25 | 3,088 25 |
| St. Germain st., Massachusetts ave. to Dalton st. . | 6,419 64 | 9735 | 6,516 99 |
| Totals . | \$85,453 81 | \$50,879 40 | \$136,333 21 |

For Boylston street, see also Chap. 402 of the Aets of 1892, and Chap. 439 of the Acts of 1894.

For Brighton avenue, see also Chap. 268 of the Acts of 1895.

## Income.

Statement showing the amount of bills and cash deposited with City Collector, less bills withdrawn, for the year ending January 31, 1896, by the several divisions of the Street Department:
Central Office . . . . . . \$8500
Bridge Division . . . . . . 1,753 97
Boston and Cambridge Bridges . . . 1,151 85
Ferry Division . . . . . . 169,584 85
Paving Division . . . . . . 8,61454
Sanitary Division . . . . . . 42,985 53
Sewer Division . . . . . . 237,235 79
Street-Cleaning Division . . . . 6,465 26
Street-Watering . . . . . . 97210
$\$ 468,848 \quad 89$
Statement showing the amount paid into the city treasury during the same period on account of the several divisions of the Street Department :
Central Office . . . . . . $\$ 8500$
Bridge Division . . . . . . 1,630 40
Boston and Cambridge Bridges . . . 1,151 85
Ferry Division . . . . . . 169,584 85
Paving Division . . . . . . 29,668 82
Sanitary Division . . . . . 43,629 80
Serrer Division . . . . . . 142,232 30
Street-Cleaning Division . . . . 2,135 51
Street-Watering . . . . . . 1,576 62
$\$ 391,695 \quad 15$

## List of Contracts from February 1, 1895, to January 31, 1896, made by the Street Department.

## Paving-Blocks.

| Contract. | Awarded to | Dated | Price per M. |
| :---: | :---: | :---: | :---: |
| Large paving-blocks, 300,000 | Rockport Granite Co., | March 5, 1895. | \$5790 |

Spruce Lumber.

| - District. | Awarded to | Dated | Price per M. ft. B. M. | Price for Planing per M ft. |
| :---: | :---: | :---: | :---: | :---: |
| Brighton . . | G. Fuller \& Son, | February 26. | \$15 25 | \$1 00 |
| South Boston . . | Curtis \& PopeLumber Co. |  | 1495 | 095 |
| East Boston . | " " | ${ }_{6}$ | 1595 | 095 |
| Cbarlestown . . . . . | 6 ${ }^{6}$ | 6 | 1595 | 095 |
| West Roxbury .... | 6 6 | 6 | 1600 | 095 |
| Dorchester . . . | "6 "6 | 6 | 1588 | 095 |
| Roxbury . . . . . . . | 46 | 6 | 1545 | 095 |
| City Proper . . . . | " 6 | ، | 1495 | 095 |
| Harvard Bridge, 170 | Geo. W. Gale Lumber Co. | July 8. | 1518 |  |

## Beach Gravel.

| District. | A warded to | Dated | Price per ton. |
| :---: | :---: | :---: | :---: |
| City . . . . . . . . . . . . . . . . | James Brown, Agent. | Feb. 27, 1895. | $\$ 057$ delivered on wharves. |

Coal.

| Contract. | Awarded to | Dated | Price per ton, 2,240 lbs. |
| :---: | :---: | :---: | :---: |
| 1,500 tons, Pumping Station, Dorchester $\ldots \ldots$ | Garfield \& Proctor Coal Co. . | Feb. 27, 1895. | \$3 36 |
| 2,000 tons, Pumping Station, Dorchester | " | Sept. 4, 1895. | $298 \frac{1}{2}$ |

Iron Castings.

| Contract. | Awarded to | Dated. | Price per <br> 100 lbs. |
| :---: | :---: | :---: | :---: |
| Iron Castings . . . . . | Osgood \& Hart. . . . . . . . . | March 2, 1895. | $\$ 130$ |

Bank Gravel and Sand.

| Contract. | Awarded to | Dated. | Price. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Gravel. A. | $\begin{gathered} \text { Gravel. } \\ \text { B. } \end{gathered}$ | Sand. | Sand. B. |
| Brighton, Distriet 4 | W. Scollans | March 15, 1895 | \$1.70 | \$0.35 | \$1.80 | \$0.90 |
| City Proper, Districts 8, 9, and 10 | W. Scollans, gravel only | March 15, 1895 | 1.55 | 0.80 |  |  |
| City Proper, Districts 8, 9, and 10 | Owen Nawn, sand only | March 15, 1895 |  |  | 1.80 | 0.70 |
| West Roxbury, District 5 . | James Doonan | March 15, 1895 | 1.00 | 0.50 | 1.00 | 0.50 |
| Dorchester, District 6. | J. J. Nawn | March 15, 1895 | 1.40 | 0.70 | 1.65 | 0.80 |
| Roxbury, District 7. | O. Nawn. | March 15, 1895 | 1.60 | 0.80 | 1.80 | 0.85 |
| South Boston, District 1. | R. S. Brine \& Co. | March 26, 1895 | 1.59 | 0.792 | 1.59 | 0.7912 |
| East Boston, District 2 | L. F. Leary | March 26, 1895 | 1.58 | 0.79 | 1.58 | 0.79 |
| Charlestown, District 3 | P. O'Riorden | March 26, 1895 | 1.78 | 0.89 | 1.60 | 0.80 |

Paving Bricks (Sidewalks).

| Awarded to | Dated. | District. | Price per 1,000. |
| :---: | :---: | :---: | :---: |
| Parry Bros. | May 8, 1845 | No. 1 | \$9.85 |
| Parry Bros. . | May 8, 1895 | No. 4 | 10.40 |
| Parry Bros. | May 8, 1895 | No. 8 | 9.45 |
| Parry Bros. . | May 8, 1895 | No. 9 . . . . . | 9.45 |
| Parry Bros. | May 8, 1895 | No | 9.45 |
| A. Gove \& Co. | May 8, 1895 | No. | 9.75 |
| O. S. Foster | May 8, 1895 | No. | 10.00 |
| Curtis \& Pope Lumber Co. | May 8, 1895 |  | 11.00 |
| F. A. Merriam \& Co. | May 8, 1895 | No. 6 | 9.70 |
| F. A. Merriam \& Co. | May 8, 1895 | No. | 10.20 |

North River and Granite Flagging.

| Contract. | Dated. |  | Pricr per Sq. Ft. |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | On wharves. | On streets. |
| J. Cuddihy | Feb. 28, 1895 | North River | \$0.31年 | \$0.333 |
| Rockport Granite Co. | Feb. 28, 1895 | Granite | $0.32{ }^{\frac{1}{2}}$ | 0.35 ${ }^{\frac{1}{2}}$ |

Lease of Land, etc.

| Contract. | Lessor. | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Crusher lot, Washington street, West Roxbury . . . <br> Flats and docks for public landing, East Boston | M. Keegan . . . . . . . . . . East Boston Dry Dock Co. . . | April 16, $1895 .$. Jnly 10, $1895 .$. | $\$ 50$ per year. <br> \$250 per year, payable quarterly. |
| Lease of Stable. |  |  |  |
| Contract. | Lessor. | Dated. | Price. |
| Stable on Vale street, South Boston <br> Stable on Vale street | Cboate Burnham Est., by C. <br> T. Gallagher, Trustee . . <br> Choate Burnham Est., by C. <br> T. Gallagher, Trustee . . | June 19, 1895 . . . <br> Oct. 29, 1895 . . . | \$600 per year, payable monthly. <br> \$600 per year, payable monthly. |
| Lease of Ledge Lots, Quarrying Stone, etc. |  |  |  |
| Contract. | Lessor. | Dated. | Terms. |
| Lease of ledge lot for quarrying and removing stone from Kenney street, near Day ${ }^{1}$. . . . . . . . . . . | J. W. Kenney . . | March 12, 1895 . | \$0.15 per ton. |
| Lease of ledge lot for quarrying and removing stone from Rossetter street ${ }^{2}$ | W. J. Emersou | March 12, 1895 . . | \$0.25 per ton. |
| Furnishing and delivering stone to Dimock-street crusher | P. F. Lonergan | March 28, 1895 . . | \$0.79 per ton. |
| Furnishing and delivering stone to Washington-street crusher, West Roxbury | J. A. Whittemore's Sons . | April 1, 1895 . . . | \$0.60 per ton. |
| Quarrying and furnishing stone from Commonwealth avenue | A. McMurtry . . | Dec. 2, 1895 | \$1.35 per cu. yd. at ledge. |

Collecting and Removing House-Offal.

Collecting and Removing Ashes.

| Contract. | Awarded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Dorchester District | J. McShane | April 10, 1895. | \$3,885 per year for two years. |
| West Roxbury District | M. E. Nawn | April 10, 1895 | \$1,700 per year for two years. |

Bridge Strengthening, New Bridges, etc.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Rebuilding Draw Foundation, Chelsea bridge (North) | A. Bellevue \& Co. | May 23, 1895 . | \$19,260 00 |
| Steel Draw, Chelsea bridge (North) . . | Penn Bridge Co. . . . . . . | May 27, 1895 . . | \$6,000 00 |
| Draw Trucks, Chelsea bridge (North) . . . | Atlantic Works . . . . . | May 25, 1895 . . | \$1,674 00 |
| Wheels, Chelsea brldge (North) . | Swett CarWheel \& Foundry Co. | June 12, 1895 . . . | \$0 03 per lb., and \$100 for threading. |
| Repairing Charles-river bridge | J. N. Hayes \& Co. | June 14, 1895.. | \$2,213 00 |
| Middle Pier, Cottage Farm bridge . | D. S. Crockett \& Co. . . | July 25, 1895. | \$8,800 00 |
| Steel Beams, Cottage Farm brldge . | Page, Newell, \& Co. | Aug. 7, 1895 . . | \$0.02125 per lb. |
| Steel Superstructure, Cottage Farm bridge | Boston Bridge Works . . . | Aug. 14, 1895 . . . | \$2,600 00 |
| Granite for Bridge Seats and Parapet, Cottage Farm bridge | Cape Ann Granlte Co. . . . . | Aug. 28, 1895 . . | \$1,839 00 |
| Parapet, Cottage Farm bridge . | D. S. Crockett | Sept. 23, 1895 . . | \$500 00 |
| Rebuilding 53 feet, Chelsea bridge (North) | A. Bellevue \& Co. | Oct. 5, 1895. | \$1,200 00 |
| Electric Motor and Apparatus for Draw, Chelsea bridge (North) | Gen. Elec. Co. | Nov. 5, 1895 | \$565 00, plus $\frac{1}{5}$ of $1 \%$ ineurance. |
| Foot-bridge, Roxbury Crossing | Josiah Shaw . | June 10, 1895. | \$975 00 |
| Bridge Abutments, Gold-street bridge . | F. H. Blaisdell . | June 10, 1895 . . . | \$1,850 00 |
| Superstructure, Gold-street bridge . | Boston Bridge Works . . | June 11, 1895 . . . | \$1,570 00 |
| Raising buildings and building foundations, Goldstreet bridge | F. H. Blaisdell . | Aug. 19, 1895. | \$1,950 00 |
| Replanking, Harvard bridge . | W. L. Miller | Sept. 3, 1895 | \$54600 |

Artificial Stone Sidewalk.

Artificial Stone Sidewalk.-Continued.

Artificial Stone Sidewalk. - Continued.

| Contract. | Awarded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| 12-28 Chandler st. . | Simpson Bros. | July 18, 1895. | 6 ets. per square foot. |
| 80 Gardner st. | W. A. Murtfeldt . | July 31, 1895. | 6 cts. per square foot. |
| 36 and 38 Washington st., W. Roxbury | W. A. Murtfeldt | July 31, 1895. | 6 cts . per square foot. |
| 424 Washington st., Dorchester | W. A. Murtfeld | July 31, 1895. | 6 cts . per square foot. |
| 27 Howland st. | W. A. Murtfeldt. | July 31, 1895. | 6 cte. per square foot. |
| 34 Sagamore st. | W. H. Jenkins Company . | July 31, 1895. | 6 cts. per square foot. |
| 41-51 Holborn st. | W. H. Jenkins Company . | July 31, 1895. | 6 cts. per square foot. |
| Glenway st. . | Simpson Bros. | July 31, 1895. | 6 cts. per square foot. |
| 367 Walnut ave. | Simpson Bros. | July 31, 1895. | 6 cts. per square foot. |
| 22-30 Egleston st. | J. Ufheil \& Co. | Aug. 5, 1895. | $6 \mathrm{cts}$. per square foot. |
| 36 Homestead st. | J. Ufheil \& Co. | Aug. 5, 1895. | 6 cts . per square foot. |
| ${ }^{7}-13$ Bay State road | Simpson Bros. | Aug. 13, 1895. | 6 cts. per square foot. |
| 270 Blue Hill ave. | Simpson Bros. | Aug. 13, 1895. | 6 cts. per square foot. |
| Milk and Kilby sts. | W. A. Murtfeldt | Aug. 15, 1895. | 6 cts. per square foot. |
| Bowdoin st. | W. A. Murtfeldt | Aug. 15, 1895. | 6 cts. per square foot. |
| Bradlee st. | W. A. Murtfeldt | Aug. 15, 1895. | 6 ets . per square foot. |
| Faneuil Hall sq. | Simpson Bros. | Aug. 22, 1895. | 6 cts. per square foot. |
| Bicknell st. | W. H. Jenkins Company | Aug. 26, 1895. | 6 ets . per square foot. |
| Welles | W. H. Jenkins Company | Aug. 26, 1895. | 6 cts. per square foot. |

Artificial Stone Sidewalk. - Continued.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| 37-39 Holburn st. | W. A. Murtfeldt . | Aug. 26, 1895. | 6 cts. per square foot. |
| 90 Gardner st. . | Simpson Bros. | Aug. 28, 1895. | 6 cts . per square foot. |
| Dennis, cor. Winthrop st. . . | Simpson Bros. . | Aug. 28, 1895. | 6 cts. per square foot. |
| Mayfield st. . | W. H. Jenkins Company | Aug. 29, 1895 . - | 6 cts. per square foot. |
| Mayfield st. . | Simpson Bros. . | Aug. 29, 1895. | 6 cts . per square foot. |
| 60-66 Reed st. . | Simpson Bros.. | Sept. 3, 1895. | 6 cts . per square foot. |
| 58 Pinckney st. | Simpson Bros.. | Sept. 3, 1895 . . | 6 cts. per square foot. |
| 42 Mather st. | W. A. Murtfeldt | Sept. 3, 1895 . . | 6 cts. per square foot. |
| 68-78 Brent st. | W. A. Murtfeldt | Sept. 3, 1895. | 6 cts. per square foot. |
| Warren and Brunswick sts. | W. H. Jenkins Company | Sept. 30, 1895. | 6 cts . per square foot. |
| 12 Gaston st. | W. A. Murtfeldt | Sept. 20, 1895. | 6 cts. per square foot. |
| 29 Cobden st. | W. A. Murtfeldt | Sept. 20, 1895. | 6 cts. per square foot- |
| Humboldt ave. | W. A. Murtfeldt | Sept. 20, 1895. . | 6 cts. per square foot. |
| Walnut ave. | Simpson Bros. | Oct. 1, 1895. | 6 cts. per square foot. |
| 668-678 Dudley st. | Simpson Bros. | Oct. 1,1895. | 6 cts. per square foot. |
| 98 Magnolia st. | Simpson Bros. . | Oct. 1,1895. | 6 cts. per square foot. |
| 14 and 66 Brent st. | Simpsou Bros. | Oct. 1, 1895 | 6 cts. per square foot. |
| 71-75 Bowdoin ave. . | Simpaon Bros. | Oct. 1,1895. | 6 cts. per square foot. |
| 62 Hartford st. | Simpson Bros. | Oct. 1, 1895 | 6 cts . per square foot. |

Artificial Stone Sidewalk. - Continued.

| Contract. | Awarded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| 35-51 Gardner st. . . | Simpson Bros. . . | Oct. 1, 1895. | 6 cts . per square foot. |
| Kenwood st. | Simpson Bros. . | Oct. 1,1895.. | 6 cts . per square foot. |
| 67-83 Gardner st. | W. A. Murtfeldt | Oct. 8,1895. . | 6 cts. per square foot. |
| 43 Ocean st. . | W. A. Murtfeldt | Oct. 8, 1895. . | 6 cts . per square foot. |
| Crawford st. | W. A. Murtfeldt . | Oct. 8,1895.. | 6 cts . per square foot. |
| 46-50 Gardner st. | Simpson Bros. | Oct. 9, 1895. . | 6 cts . per square foot. |
| 3175 Washington st. . | Simpson Bros. | Oct. 9, 1895 . . | 6 cts . per square foot. |
| Meridian and Paris st. . | Simpson Bros. | Oct. 9, 1895. . | 6 cts . per square foot. |
| 35-39 H st. | Aberthaw Cons. Co | June 25, 1895 . . . | 6 cts. per square foot. |
| Howard ave. | Aberthaw Cons. Co. | July 10, 1895. | 6 cts . per square foot. |
| Gardner st. . | Simpson Bros. | Oct. 14, 1895. | 6 cts. per square foot. |
| Cushing ave. aud Upham st. | Simpson Bros. | Oct. 18. 1895. | 6 cts . per equare foot. |
| Dudley st. | Simpson Bros. | Oct. 18, 1895 . . | 6 cts . per square foot. |
| 4 Sydney st. . | Simpson Bros. . | Oct. 18, 1895. | 6 cts . per square foot. |
| Bradlee st. | Thomas J. Hind | Oct. 22, 1895. | 6 cts. per square foot. |
| 10-12 Dalmatia st. . | T. J. Hind | Oct. 29, 1895. | 6 cts . per square foot. |
| Washington st., near Harvard | T. J. Hind | Oct. 22, 1895. | 6 cts. per square foot. |
| 5-7 Deron st. | T. J. Hind | Oct. 11, 1895 | 6 cts . per square foot. |
| Harvard st. | W. H. Jenkins Co. | Oct. 24, 1895 | 6 cts . per square foot. |

Artificial Stone Sidewalk. - Concluded.

| Contract. | Awarded to. ${ }^{\text {a }}$ Dated. | Price. |
| :---: | :---: | :---: |
| 7 Romsey st. <br> 877 Beacon st. <br> 41-43 Algonquin st. <br> 10-12 Dalmatia st. <br> Devon st. <br> Bradlee st. <br> 121 and 126 Crawford st. <br> 120-122 Howard ave. <br> Mather st., cor. Allston* <br> Mather, No. 42. | W. H. Jenkins Co. . . . . . . Oct. 24, 1895 . . . <br> Simpson Bros. . . . . . . . . Oct. 1, 1895 . . . <br> M. Taylor, Jr. . . . . . . . . Oct. 28, 1895 . . . <br> T. J. Hind . . . . . . . . . . Oct. 22, 1895 . . . <br> T. J. Hind . . . . . . . . . . Oct. 29, 1895 . . . <br> W. A. Murtfeldt . . . . . . . Oct. 31, 1895 . . . <br> W. A. Murtfeldt . . . . . . . Oct. 31, 1896 . . . <br> W. H. Jenkins Co. . . . . . . Nov. 26, 1895 . . . <br> Simpson Bros. . . . . . . . . May 1, 1895 . . . <br> W. A. Murtfeldt . . . . . . . Sept. 3, 1895 . . . | 6 cts . per square foot. 6 cts . per square foot. 6 cts. per square foot. 6 cts. per square foot. 6 cts. per square foot. 6 cts. per square foot. 6 cts. per square foot. 6 cts. per square foot. 6 cts. pes square foot. 6 cts. per square foot. |

Paving with Trinidad Asphalt.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Spring st., Poplar to Leverett | Barber Asphalt Paving Co. . | May 20, 1895 | (A) $\$ 2.65$ per square yard. |
| Chambers st., Brighton to Charles | Barber Asphalt Paving Co. . | May 20, 1895 | (A) \$2.65 per square yard. |
| Bond st. | Barber Asphalt Paving Co. . | May 20, 1895 | (A) \$2.65 per square yard. |
| Tileston st., Salem to Wiggiu | Barber A sphalt Paving Co. | Aug. 14, 1895. | (B) $\$ 3.00$ per square yard. |
| Edinboro' st., Essex to Beach | Barber Asphalt Paving Co. . | Aug. 14, 1895. | (B) $\$ 3.00$ per square yard. |
| Brimmer st., Beacon to Piuckney | Barber Asphalt Paving Co. . | Aug. 31, 1895 | (B) $\$ 3.00$ per square yard. |
| Piuckuey st., Charles through Brimmer . | Barber Asphalt Paving Co. | Aug. 31, 1595. | (B) $\$ 3.00$ per square yard. |
| N. Margin st., Cooper to Thacher | Barber Asphalt Paving Co. . | Sept. 10, 1895 | (B) $\$ 3.00$ per square yard. |
| Harrison ave., from 85 ft . south of East Newten to 100 ft . east of Springfield. | Barber Asphalt Paving Co . | Oct. 17. 1895. | (B) $\$ 3.00$ per square yard. |
| Harrison-ave. Ext. of abo | $\left\{\begin{array}{l} \text { Relaying old asphalt . . . . } \\ \text { Barber Asphalt Paving Co.. } \end{array}\right.$ | Nov. 7, 1895. | (B) $\$ 3.00$ per square yard. |
| Chambers st., Brighton to Auburn | Barber Asphalt Paving Co. | July 1, 1895. | (B) $\$ 3.00$ per square yard. |
| Chambers st., Anburn to Charles | Barber Asphalt Paving Co. | July 1,1895. | (A) $\$ 2.65$ per square yard. |
| Oxford st. | Barber Asphalt Paving Co. | April 26. 1895. | (C) $\$ 0.40$ per square yard. |

[^1](B) Concrete base and wearing surface.
(A) Wearing surface on existing base and binder course.
Paving with Sicilian Rock Asphalt.

Paving and Regulating. - Continued.

| Contract. | A warded to | Dated. | Priees. |
| :---: | :---: | :---: | :---: |
| Castle st., paving with granite blocks, Portland cement, grout joints | James Grant \& Co. | Ang. 9, 1895 . . | \$0.42 per sq. yd. |
| Otis st., barring stone, sub-grading, paving with granite bloeks, and grouting joints | James Grant \& Co. . | Aug. 9, 1895 . | \$0.58 " " " |
| D st., between Second and Eighth sts., exeavating material, and sub-grading furnishing bed ; all material removed to be delivered on Bellilower st. . | Collins \& Ham . | Sept. 23, 1895 . . | Paving with granite bloeks, gront joints, $\$ 0.60$; resetting edgestone, $\$ 0.20$; relaying brick sidewalk, $\$ 0.38$. |
| Commonwealth ave., between Harvard ave. and Warren st., excavating material and sub-grading . . . . | Joseph F. Wilson . | Sept. $25,1895$. | Paving gutters with granite blocks, $\$ 0.35$; sub-grading for Telford, \$0.20. |
| Commonwealth ave., bet. Brighton and Harvard ave., excavating material and sub grading . . . . . . . . | Joseph F. Wilson . | Sept. 19, 1895 . . . | Paving gutters with granite bloeks, $\$ 0.35$; sub-grading for Telford, $\$ 0.20$. |
| Charles st., west side, Pinekney to Cambridge st. | H. Gore \& Co. | Sept. 17, 1895. | Con. base, $\$ 0.75$ per sq. yd.; paving with granite blks. and grouting joints, $\$ 0.42$; resetting edgestones, 0.08 ; relaying briek sidewalk, 0.18 ; relaying old gran. blk. pav. and flag, 0.25. |
| Merehants row, State to North st. . | A. A. Libby \& Co. . . | Sept. 19,1895 . . . | Con. base, $\$ 0.75$; paving with gran. blks. and gronting joints, $\$ 0.42$; resetting edgestones, 0.08 ; relaying briek sidewalk 0.18 ; relaying old gran. blks. and flag, 0.25 . |
| Devonshire st., Franklin to Milk st. | J. Grant \& Co. . . | Sept. 19, 1895 . . . | Con. hase, $\$ 0.75$; barring and loading old bloeks, ete., paving with gran. blks.and gouting joints, $\$ 0.67$; resetting edgestones, $\$ 0.08$; relaying old gran. blks. and flag., $\$ 0.25$; relaying brick sidewalk, $\$ 0.18$. |
| Columbus ave., Park sq. to Ferdinand st. | H. Gore \& Co. | Oct. 5. 1895. | (A) $\$ 2.25$; (B) \$1.00; (E) \$0.25; (F) \$0.43; (G) \$2.25. |
| West st., Tremont to Washington st. | H. Gore \& Co. | Oct. 5, 1895 | (A) $\$ 2.25$; (E) \$0.25; (F) \$0.43; (G) \$2.25. |
| Summer st., Washington to Devonshire st. . . . . . | J. Grant \& Cu. . . . . . . . | Nov. 7, 1895 . | Con. base, $\$ 0.75$; paving with cement grout joints, $\$ 0.42$; relaying erosswalks, etc., $\$ 0.25$. |

Paving and Regulating. - Concluded.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Summer st., Devonshire to Federal st. . . . | J. Grant \& Co.. . . . . . . . | Nov. 21, 1895. . | Con. base, $\$ 0.75$; paving with large blks. and grouting joints, $\$ 0.42$; resetting edgestones, $\$ 0.08$; relaying sidewalks, $\$ 0.08$; relaying flag. crosswalks, $\$ 0.25$. |
| Huntington ave., opposite Mechanic Building | J. B. O’Rourke \& Co. . . . . | Sept. 23, 1895 . . | (a) Exeavating and rem. of loam and trees, $\$ 90.00$. <br> (b) Excavating and setting edgestone, $\$ 0.18$ per lin. ft. <br> (c) Excavating and paving gutters, $\$ 0.35$ per sq. yd. <br> (d) Excavating and paving brick sidewalk, $\$ 0-28$ per sq. yd. |
| Hnntington ave., from Blagdon to Gainsborough st., west side | J. B. O'Rourise \& Co. . . . . | Oct. 14, 1893. . . | (a) Excavaling and rem. of loam and trees, $\$ 350.00$. <br> (b) Excavating aud setting edgestone, $\$ 0.21$ per lin. ft. <br> (c) Excavating and paving gutters, $\$ 0.33$ per $\mathrm{sq} . \mathrm{yd}$. <br> (d) Excavating and paving brick sidewalk, $\$ 0.23$ per sq. yd. |
| Summer st., repaving . . . . . . . | Work done by City and paid for by W. E. St. Ry. Co. and Edison Electric Ill. Co . | Nov. 5, 1895 . | \$0.38 per sq. yd. |
| Colnmbus ave., repaving . . . | Work done by the City and paid for by the W. E. Ry Co. | Oct. 5, 1895. . | Granite blocks, $\$ 40$ per M. Concrete base, $\$ 5.00$ per cu. yd. Furnishing and preparing bed, $\$ 0.15$ per sq. yd. Paving with cement, grout joiat, $\$ 0.75$ per sq. yd. |

[^2]Excavating and Removing Material, Grading, etc. Under Chap. 323 of Acts of 1891, as amended, and Chap. 334, Act of 1895 .

| Contract. | Awarded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Commonweath ave., Sects. 5 and 7 | W. T. \& R. A. Davis | July 30, 1895 | (A) $\$ 0.22$ per cubic yard ; (B) \$0.30; (C) \$0.17; (D) \$10 |
| Commonweath ave., Sects. 2 and 3 | H. | July 30, 1895 | (A) $\$ 0.37$ per cubic yard; (B) $\$ 0.15$; (C) $\$ 0.20$; (D) $\$ 50.00$ |
| Blue 1lill ave., Sect. 1 | H. P. Nawn | Aug. 2, 1895 | (A, \$0.34 per cubic yard; (B) \$0.15; (C) \$0.15; (D) \$50 |
| Blue Hill ave., Sects. 7, 8, and 9 | Davern \& Cronin | Aug. 2, 1895 | (A) $\$ 0.30$ per cubic yard; (B) $\$ 0.26$; (C) $\$ 0.30$; (D) $\$ 100$ |
| Blue Hill ave., Sects. 14, and 15 | H. P. Nawı | Aug. 2, 1895 | (A) $\$ 0.34$ per cubic yard; (B) $\$ 0.20$; (C) $\$ 0.15$; (D) |
| Blue Hill ave., Sects. 3, 4, and 5 . | Collins \& Ham | Oct. 11, 1895 | (A) $\$ 0.37 \frac{1}{2}$ per cubic yard; (B) $\$ 0.20$; (C) $\$ 0.44$; (D) $\$ 100$ |
| Commonwealth ave., Sects. 1 and 2 | J. D. Gennaro | Oct. 11, 1895 | (A) $\$ 0.29$ per cubic yard; (B) $\$ 0.20$; (C) $\$ 0.20$; (D) $\$ 50.00$ (E) \$0.44. |
| Commouwealth ave. extension, Sects. 4 to 8 included . | N. McBride | Nov. 26, 1895 | (A) $\$ 0.33$ per cubic yard; (B) $\$ 0.33$; (D) ledge, $\$ 1.29$ per cubic yard; (E) $\$ 50.00$. |
| Blue Hill ave., Sect. 1, rock | J. MeDonald | Nov. 9, 1895 | \$1.35 per cubic yard. |
| Blue Hill ave., Sects. 6 and 7, and parts of 5 and 8 | Collins \& Ham | Dec. 6, 1895 | (A) $\$ 0.42$ per cubic yard; (B) $\$ 0.15$; (C) $\$ 0.75$ (haulin stone) ; (D) ledge, $\$ 0.90$; cutting trees, $\$ 75.00$. |
| Blue Hill ave., Sects. 9 and 10, and parts of 8 and 11 . | J. D. Geunaro | Dec. 13, 1895 | (A) $\$ 0.33 \frac{1}{2}$ per cubic yard; (B) $\$ 0.25$; (D) ledge, $\$ 1.10$ cutting trees, $\$ 25.00$. |
| Blue Hill ave., part of Sects. 11, and Sects. 12 and 13 | H. P. Nawn | Dec. 13, 1895 | (A) $\$ 0.34$ per cubic yard; (B) $\$ 0.10$; (D) ledge, $\$ 1.30$; ( E cutting trees, $\$ 50.00$. |
| Blue Hill ave., Sects. 14 and 15 | Davern \& Cronin | Dec. 31, 1895 | (A) $\$ 0.44$ per cubic yard; (B) $\$ 0.20$; (C) $\$ 0.30$; (D) ledge <br> $\$ 1.00$; ( E ) cutting trees, $\$ 25.00$; ( F ) havling stone, $\$ 0.60$ |
| Huntington ave., removing surplus material . | D. F. O'Connell | May 18, 1895 | \$0.36 per lin. ft. of trench. |
| Heath st., removing surplus material . | D. F. O'Connell | July 10, 1895 | \$0.30 per lin. ft. of trench. |
| Huntington ave., Sects., 2 and 3 , furvishing filling | W. Scollans | Jan. 3, 1896 | \$0.793 per cubic yard. |

Excavating and Removing Material, Grading, etc. - Concluded.

| Contract. | Awarded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Commouwealth ave., between St. Paul st. and Cottage Farm Bridge, furnishing filling . . . . . . . . . . | Wm. Scollans . | Aug. 9, 1895 | \$0.90 per double load of 40 cubic ft. |
| Commonwealth ave., Sect. 2 and 3, rock excavation, etc. | H. P. Nawn . . . . . . . . | Dec. 12, 1895 | \$1.75 per cubic yard. |
| (A) - Excavating. | - Extra haul. | C) - Hauling loam. | (D) - Cutting down trees. |
| Street Construction under Chap. | 323, Acts of 1891 Acts referrin | as amende thereto. | d by Chap. 418, Acts of 1892, and |
| Contract. | Awarded to | Dated. | Prices. |
| Norway st., Ward 11, Tel. macadam road . . . . . | Quimby \& Ferguson . . . . | May 6, 1895.. | $\begin{aligned} & \text { (A) } \$ 0.30 \text {; (B) } \$ 0.11 \text {; (C) } \$ 0.20 \text {; (D) } \$ 2.00 \text {; (F) } \$ 0.18 \text {; } \\ & \text { (G) } \$ 1.00 \text {; (J) } \$ 4.50 ; \text { (M) } \$ 0.82 . \end{aligned}$ |
| Harvard ave., Ward 25, Tel. macadam road | W. Scollans | Oct. 1, 1895. | (A) $\$ 0.28$; (B) $\$ 0.14$; (C) $\$ 0.20$; (D) $\$ 2.25$; (F) $\$ 0.18$; (H) $\$ 0.80$; (J) $\$ 4.75$; (M) $\$ 0.80$. |
| Brighton ave., Sect. 2, Tel. macadam road . . . . . . | Doherty \& Connors | Nov. 4, 1895. | (A) $\$ 0.35$; <br> (H) $\$ 0.35$; <br> (B) $\$ 0.41$; <br> (J) $\$ 4.65$; (C) $\$ 0.35$; <br> (N) $\$ 150$. <br> (D) $\$ 2.05$; (F) $\$ 0.33$; |
| Brighton ave., Sect. 1, Tel. macadam road. . | Doherty \& Connors . | Nov. 4, 1895. | (A) $\$ 0.31$. ; (B) $\$ 0.39$; (C) $\$ 0.33$; (D) $\$ 2.00$; (F) $\$ 0.31$; <br> (H) $\$ 0.31$; (J) $\$ 4.50$; (N) $\$ 450.00$. |
| Blue Hill ave., Sects. 2 and 3, Tel. macadam road . | Davern \& Cronin . . | Nov. 18, 1895. | (A) $\$ 0.44$; (B) $\$ 0.20$; (C) $\$ 0.06$; (D) $\$ 2.50$; (E) $\$ 0.30$; <br> (F) $\$ 1.75$; (H) $\$ 0.15$; <br> (J) $\$ 5.00$; <br> (L) \$2.00; (N) \$10.00. |
| Kenmore st., Ward 22, macadam road . . | Doherty \& Connors . | July 15, 1895 . . | $\begin{aligned} & \text { (A) } \$ 0.29 ;(\mathrm{C}) \$ 0.14 ; \text { (D) } \$ 2.00 ; \text { (F) } \$ 0.29 ; \text { (G) } \$ 0.95 ;(\mathrm{J}) \\ & \$ 4.35 ;(\mathrm{M}) \$ 0.77 . \end{aligned}$ |
| Sherborn st., Ward 22, macadam road . | Doherty \& Connors . . . . . . | July 15, 1895 . . . | $\begin{aligned} & \text { (A) } \$ 0.25 ;(\mathrm{C}) \$ 0.19 ; \text { (D) } \$ 2.01 \text {; (F) } \$ 0.27 \text {; (H) } \$ 0.15 ;(\mathrm{J}) \\ & \$ 4.25 ;(\mathrm{M}) \$ 0.79 . \end{aligned}$ |

[^3]Sewer Construction under Chap. 323, Acts of 1891 , as amended by Chaps. 418 and 402 , Acts of 1892 ,

| Contract. | Awarded to | Dated. | Prices. |
| :---: | :---: | :---: | :---: |
| Sewer and connections, Blue Hill ave., Section $\mathbf{1}$. | D. E. Lynch . . . . . . . . . | Nov. 22, 1895. | (A) $\$ 0.60$ per lin. ft. earth excavation and refill in trench for 24 -in. pipe; (B) $\$ 0.20$ per lin. ft. for laying 24 -in. Akron pipe, double thick culvert, laying only; (C) $\$ 0.93$ per lin. ft. for laying 24 -in. double thick Akron pipe, excavation and refill included; (D) $\$ 0.82$ per lin. ft . for laying 18.in. Akron pipe, excavation and refill included; (E) $\$ 0.85$ per lin. ft. for laying 15 -inch Akron pipe, excavation and refill included; ( F ) $\$ 0.59$ per lin. ft. for laying 12 -in. Akron pipe, excavation and refill included; (G) $\$ 0.61$ per lin. ft. for laying 6 -in. Akron pipe house-drain, excavation and refill included; ( H ) $\$ 0.48$ per lin. ft. for laying 15 -in. Akron pipe, excavation and refill included; (I) $\$ 0.34$ per lin, ft. for laying $12-\mathrm{in}$. Akron pipe catchbasin drain, excavation and refill included; (J) $\$ 0.28$ per lin. ft. for laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (K) $\$ 36.00$ each for building manholes; (L) $\$ 3.50$ per cu. yard for rock excavation; (N) $\$ 6.50$ per cu. yard, for all Portland cement concrete in place; (O) $\$ 4.50$ per cu. yard for all American cement concrete in place; (P) $\$ 4.00$ per cu. yard. for ali rubble-stone masonry laid in mortar; (V) \$0.16 per lin. ft. for all 6 -in. drain-pipe; (Y) $\$ 0.50$ each for laying plpe connections in existing brick sewer; (AA) $\$ 40$ each for building catch-basin, excavation and refill included; (ZZ) $\$ 15.00$ each for building drop inlets, excavations and refill iveluded. |

Sewer Construction under Chap. 323, Acts of 1891, etc. - Continued.

laying 12 in. Akron pipe catch-basin drain, excavation and refill included; (H) $\$ 0.30$ per lin. ft . for laying 10 -in. cluded; (K) $\$ 33.00$ each for manholes; (L) $\$ 5.00$ per $\mathrm{cu} . \mathrm{yd}$. for all rock excavation; (M) $\$ 15.00$ per cu. yd. for all brick masonry laid in American cement mortar;
 per cu. yd. for all rubble-stone masonry laid in mortar;
 $00^{\circ} 28 \$$ ( (V) each for all catch.basins, excavation and refill included;
(ZZ) $\$ 15.00$ each for all drop inlets, excavation and refill
included.
(A) $\$ 2.50$ per lin. ft . earth excavation and refill for $8 \mathrm{ft} . \times$ pipe, excavation and refill included; (E) $\$ 0.38$ per lin. ft. and refill included; (F) $\$ 0.38$ per lin. ft. laying 15 -in Akron pipe catch-basin drain, excavation and refill included; ( C ) $\$ 0.25$ per lin. ft. laying 12 -in. Akron pipe


 pu. yard all American cement concrete; (O) \$t.00 per cu. yard all rubble-stone masonry; (V) $\$ 0.16$ per lin. ft . basins; (ZZ) $\$ 15.00$ each building drop inlets.
Sewer Construction under Chap. 323, Acts of 1891, etc. - Continued.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Sewer and eonnections, Blue Hill ave., Sect. 11 . . . | D. O'Connell . . . . . . | Sept. 12, 1895. . | (D) $\$ 0.70$ per lin. ft. laying $15-\mathrm{in}$. Akron pipe, exeavation and refill inelnded; (E) $\$ 0.47$ per lin. ft. laying 12-in. Akron pipe, exeavation and refill included; ( F ) $\$ 0.32 \mathrm{per}$ lin. ft. laying 15 -in. Akron pipe catch-basin drain, excavation and refill included; (G) $\$ 0.22$ per lin. ft. laying 12 -in. Akron catch-basin drain, excavation and refill included; (H) $\$ 0.25$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe, excavation and refill included; (K) $\$ 35.00$ each building manholes; (L) $\$ 5.00$ per cu. yd. all rock excavation; (V) $\$ 0.16$ per lin. ft. all 6-in. drain-pipe; (AA) $\$ 40.00$ each building catch-basins, exeavation and refill included; (ZZ) $\$ 15.00$ each building drop inlets, excavation and refill included. |
| Sewer and eonnections, Blue IIill ave., Sect. 12. . . . | D. E. Lynch . . . . . . . . . | Sept. 4, 1895 . . | (D) \$0.45 per lin. ft. laying 12 -in. Akron pipe, excavation and refill included; (E) $\$ 0.51 \mathrm{lin}$. ft. laying $30-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (F) $\$ 0.24$ per lin. ft. laying $20-\mathrm{in}$. Akron pipe cateh-basin drain, excavation and refill inclnded; $(G) \$ 0.24$ per lin. ft. laying 18 -in. Akron pipe catch-basin drain, excavation and refill included; $(H) \$ 0.24$ per lin. ft . laying $15-\mathrm{in}$. Akron pipe eatcb-basin drain, excavation and refill included; (I) $\$ 0.22$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; ( K ) $\$ 35.00$ each building manholes; (L) $\$ 6.00$ per en. yd. all rock excavation; (V) $\$ 0.16$ per lin. ft. $6-\mathrm{in}$. drainpipe; ( 1 A ) $\$ 36.00$ each building catch-basins; (ZZ) $\$ 15.00$ each building drop inlets. |
| Sewer and conneetions, Columbus ave., Sect. 1 . . | Quimby \& Furgusou . . . . . | Aug. 20, 1895 . | (A) $\$ 1.98$ per lin. ft . earth excavation, $3 \mathrm{fft} .6 \mathrm{in} . \times 3 \mathrm{ft} .8 \frac{1}{2}$ in. treneh; (D) $\$ 0.95$ per lin. ft. laying 18 -in. Akron pipe, excavation and refill included; (E) $\$ 0.43$ per lin. ft. laying $18-\mathrm{in}$. Akron pipe catch-basin drain, excavation and relill included; ( F ) $\$ 0.38$ per lin. ft. laying $15-\mathrm{in}$. Akron pipe catch-basin, excavation and refill included; (G) $\$ 0.42$ per lin. ft. laying 12 in . Akron pipe catchlin. ft. laying $10-\mathrm{in}$. Akron pipe eatch-basin drain, excabasin drain, excavation and refill included; (H) $\$ 0.30$ per |


(A) $\$ 1.85$ per 1 lin . ft. earth excavation, $3 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft} .8 \frac{1}{2}$ in.
 3 ft. trench; (D) 0.55 per lin. ft. laying
pipe atith-basin drain, excavation and refill included; (E) $\$ 0.85$ per lin. ft. laying 18 -in. Alron pipe, exceavation
and refill included; (F) 80.50 . per lin fte laving 18 .in Akron pipe catch-basin drain, excavation and refill in cluded; (G) $\$ 0.40$ per lin.ft. laying 15.in.A kron pipe eatch.
basin drain, excavation and refill included; (H) \$0.40 per lin. ft. laying 10-in. Akron pipe catch- basin drain, excava tion and refill included; (K) $\$ 13.50$ each, building man-
holes; (L) $\$ 5.00$ per cu.yd.all rock excavation; (II) 85.25 per ci. yd, all brick masonry in American cement mortar (N) $\$ 5.25$ per cu. yd. all brick masonry in Porland
 $\$ 0.20$ per lin. it. all.-.in. drain-pipe spiad. (W) (W) $\$ 0.2$ per
lin. ft of pile driven below eutting-otf grade; (AA) $\$ 20.00$ each building catch-basins, excavation and refil included; (VV) $\$ 0.16$ per lin. ft. all 6 .in. drain-pipe haid,
$(Z Z) \$ 12.50$ each building drop-inlets, excavation and
refil included Quimby \& Ferguson . . . . . Oct. 22, 1895 . . .
Sewer Construction under Chap. 323, Acts of 1891, etc. - Continued.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Sewer and connections, Columbus ave., Sect. 3 . . | J. P. O'Connell | Dec. 23, 1895. | (A) $\$ 1.35$ per lin. ft. earth excavation, 2 ft .6 in. $\times 3 \mathrm{ft}$. in. trench; (B) $\$ 1.25$ per lin. ft. earth excavation, $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$. trench; (C) $\$ 0.48$ per lin. ft. laying 24-in. Akron pipe catch-basin drain, excavation aud refill included; (D) $\$ 0.70$ per lin. ft. laying I 8 -in. Akron pipe, excavation and refill included; (E) $\$ 0.75$ per lin. ft. laying $15 \cdot \mathrm{in}$. Akron pipe, excavation and refill included; (F) $\$ 0.35$ per liu. ft. laying 15 -in. A kron pipe catch-basin drain, excavation and refill included; $(G)$ \$0.7o per lin. ft . laying $12 . \mathrm{in}$. Akron pipe, excavation and refill included; (GG) $\$ 2.50$ per lin. ft. laying 12 in . iron pipe, exeavation and refill included; (H) $\$ 0.30$ per lin. ft . layiug 12 -in. Akron pipe catch-basin drain, excavation and refill ineluded; (I) $\$ 0.30$ per lin. ft. laying 10 -in. Akron pipe catch-basin drain, extavation and refill included; (J) $\$ 0.75$ per lin ft. layiug 8 -in. Akron pipe house drain, excavation and refill included; (JJ) $\$ 0.75$ per lin. ft. laying 6-in. Akron pipe house drain, excavation aud refill; (K) $\$ 15.00$ each building manholes; ( L ) $\$ 5.00$ per cn. yard all rock excavation; (M) $\$ 4.60$ per eu. yard all brick masonry in American cement mortar; (N) $\$ 4.60$ per cu. yard all brick masonry in Portland cement mortar; (O) $\$ 4.00$ per cu. yard all concrete in place; (P) $\$ 0.75$ per lin ft . laying $18-\mathrm{in}$. Akron pipe in Terry st., excavation and refill included; ( $R$ ) $\$ 26.00$ per M ft. B. M. all spruce lumber; (V) $\$ 0.15$ per liu. ft. all 8 -iu. drain-ppe; (W) $\$ 0.16$ per lineal foot of pile driven below cutting-off grade; (Y) $\$ 0.10$ each laying pipe connections; (AA) \$20.00 each building catch-basins, excavation and refill included; (VV) \$0.16 per lin. ft. all 6-in. vation and refill included. drain-pipe; (ZZ) $\$ 7.00$ each building drop inlets, exca- |
| Sewer and connections, Columbus ave., Sect. 9 | J. P. O'Connell | Nov. 4, 1895. | (D) $\$ 0.60$ per lin. ft. laying $12-\mathrm{in}$. Akron pipe, excavation and refill included; (E) $\$ 0.50$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe eatch-basin drain, excavation and refill ineluded; (F) $\$ 0.55$ per lin. ft. laying 8 -in. Akron pipe house drain, excavation and refill included; (G) \$0.65 per lin. ft. laying 6-in. Akron pipe house drain, excavation and refill included; (K) $\$ 35,00$ each building man- |

holes；（L）$\$ 4.50$ per cu．yd．all rock excavation；（AA）
$\$+0.00$ each building catch－nasins，excavation and refill included；（KK）$\$ 10.00$ for buildiug flushing．pipe．
D）$\$ 0.60$ per lin．ft．laying 10 in．Akron pipe，excavation
（D）$\$ 0.60$ per lin．ft．laying 10 in ．Akrou pipe，excavation Akron pipe catch－basin drain，excavation and refill in－ cluded；${ }^{( } ⿴ 囗 大$ ）$\$ 0.50$ per lin．ft．laying 18 in．Akron pipe catch bafin drain，excavation and refil pipcluded，（G） drain，excavation and refill iucluded；（K）$\$ 29.00$ each excavation；（ R ）$\$ 30.00$ per M ft ．B．M．spruce lumber；

（D）$\$ 0.55$ per lin．ft．laying $10-\mathrm{in}$ ．Akron pipe，excavation D）refill included；（E）\＄0．40 per lin．ft．laying 10 －in Akron pipe，catch－basin drain．excavation and refill in－ cluded；（ K ）$\$ 30.00$ each building manboles；（ L ）$\$ 0.25$
per cubic yard all rock excavation；（ K ）$\$ 30.00$ per M per cubic yard all rock excavation；（R）$\$ 30.00$ per
ft．B．M．spruce lumber；（AA）$\$ 35.00$ each building
catch－basins；（ZZ）$\$ 12.00$ each building drop inlets．
（D）$\$ 0.45$ per lin．ft．laying $10-\mathrm{in}$ ．Akron pipe，excavation and refill included；（E）$\$ 0.25$ per lin．ft．laying $10-\mathrm{in}$ ． cluded；$\left.{ }^{( }\right)(\mathcal{F}) \$ 0.45$ per lin．ft．laying 18 ．in．Akron pipe catch－basin drain，excavatiou and refill included；（K） all rock excavation；（K）$\$ 30.00$ per $\mathrm{M} \mathbf{f t}$ ．B．M．spruce $\$ 11.00$ each building drop inlets．

D）$\$ 0.37$ per lin．ft．laying 10 －in．Akron pipe，excavation
and refill included；$(\mathrm{K}) \$ 30.00$ each manhole；（L）$\$ 4.00$ per cubic yard all rock excavation．
（D）$\$ 0.65$ per lin．ft．laying 10 －in Akron pipe，excavation
and refill included：（E）$\$ 0.35$ per lin．ft．laying 12 －in． and refill included：（ $E$ ）$\$ 0.35$ per lin． ft laying $12-\mathrm{in}$ ． Akron pipe catech（F）$\$ 0.35$ per lin．fi．laying $10 . \mathrm{in}$ ．A kron pipe catch－ basin drain，excavation and refil incinded；（ K ）$\$ 37.00$
each building manholes；（L）$\$ 5.00$ per cubic yard all

Sewer Construction under Chap. 323, Acts of 1891, etc. - Continued.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Sewer and connections, Commonwealth ave., Scet. 6, | D. O'Connell . . . . . . . . . | July 30, 1895 . . . | (D) $\$ 0.30$ per lin. ft. laying 10 -in. Akron pipe, excavation and refill included; (K) $\$ 30.00$ each building manholes; (L) $\$ 5.00$ per. cubic yard all rock excavation. |
| Sewer and connections, Commonwealth ave., Sect. S, | D. O'Counell . . . . . . . . . | July 30, 1895 . . | (D) $\$ 0.68$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe, excavation and refill included; (E) $\$ 0.45$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain excavation and refill included; (K) $\$ 30.00$ each building manholes; (L) $\$ 5.00$ per cubic yard all rock excavation; (AA) $\$ 40.00$ each building catch-basins; (ZZ) $\$ 15.90$ each building drop inlets. |
| Sewer and connections, Huntington ave., Sect. 1 . . | D. F. O'Connell . | Aug. 5, 1895. . | (D) $\$ 0.75$ per lin. ft. laying 12 -in. Akron pipe, excavation and refill included; (E) $\$ 0.60$ per lin. ft. laying $12-\mathrm{in}$. Akron pipe catch-basiu drain, excavation and refill included; (F) $\$ 0.57$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (G) \$0.60 per lin. ft. laying 8 -in. Akron pipe house drain, excavation and refill included; (H) $\$ 0.60$ per lin. ft. laying 6 -in. A kron pipe house drain, excavation and refill included; (K) $\$ 36.00$ each building manholes; (AA) $\$ 47.00$ each building catch-basins; (ZZ) $\$ 18.00$ each building drop inlets. |
| Sewer and conuections, Huntington ave., Sect. 2. . . | H. P. Nawn . . . . . . . . . | Aug. 9, $1895 . .$. | (A) $\$ 3.90$ per lin. ft . earth excavation, $3 \mathrm{ft} . \times 4 \mathrm{ft}$, trench, excavation and refill included; (B) $\$ 3.30$ per lin. ft. earth excavation, $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$. trench, excavation and refill included; (C) $\$ 1.00$ per lin. ft. laying $12-\mathrm{in}$. Akron pipe, excavating and refill iucluded; (D) $\$ 3.00$ per lin. ft. laying 12 -in. iron pipe; (E) $\$ 1.00$ per lin. ft. laying $12-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (F) $\$ 0.75$ per liu. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill inclưded; (G) $\$ 0.75$ per lin. ft. laying $8 . i n$ Akron pipe house drain, excavation and refill included; (H) \$637.00 for building the regulator and sump, manbole, and pipe connections at Bryant st.; (K) $\$ 30.00$ each building manhole; (L) $\$ 5.00$ per cu. yd. all rock excavation; (M) $\$ 6.75$ per cu. yd., all brick masonry laid in Am. cem. mortar; (N) $\$ 7.00$ per cu. yd. all brick masonry laid in Portland |


Sewer Construction under Chap. 323 , Acts of 1891 , etc. - Continued.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Sewer and connections, Huntington ave., Sect. 6 . . | I. F. O’Connell . . . . . . . | Nov. 11, 1890̇. . | (A) $\$ 1.11$ per lin. ft . earth excavation, in $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$. trench, excavation and refill included; (D) $\$ 0.45$ per lin. ft. laying 24 -in Akron pipe catch-basin drain, excavation and refill included; (E) $\$ 0.67$ per lin. ft. laying $12 \cdot \mathrm{in}$. Akron pipe, excavation and refill included; (F) $\$ 0.67$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; $(\mathbb{G})$ \$0.72 per lin. ft . lay, ing 8 in. Akron pipe house-drain, excavation and refill included; (K) $\$ 33.00$ each building manholes; (M) $\$ 11.50$ per cu. yd. all brick masonry laid in American cement mortar; (N) $\$ 12.75$ per cu. yd. all brick masonry laid in Portland cement mortar; (AA) $\$ 43.00$ each building catch-basins, excavation and refill included; (KK) $\$ 10.00$ each taking down and drawing over old manboles. |
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| Sewer, Chestnut Hill ave., outlet for Commonwealth ave., Ward 25 . | F. A. Snow . | Nov. 29, $1895 .$. | (D) $\$ 0.50$ per lin. ft. laying 12 -in. A kron pipe, excaration and refill included; (E) $\$ 0.15$ per lin. ft. laying 10 in . Akron pipe, excavation and refill included; (F) $\$ 0.15$ per lin. ft. laying 18 -in. Akron pipe catch-basin drain, excavation and refill included; ( K ) $\$ 10.00$ each bnilding manholes; (L) $\$ 4.00$ per cu. yd. all rock excavation. |
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| Sewer and connections, Harvard ave., Ward 25. | F. A. Snow . . . . . . . | June 1, 1895... | (A) $\$ 1.75$ per lin. ft . earth excavalion $5 \mathrm{ft} . \times 6 \mathrm{ft}$. cuivert excavation and refill included; (D) $\$ 0.90$ per lin. ft . laying $18-\mathrm{in}$. Akron pipe, excavation and refill included; (E) $\$ 1.00$ per lin. ft. laying $15 . \mathrm{in}$. Akron pipe, excavation and refill included; (F) 80.60 per lin. ft. laying 20 -in. Akron pipe catch-basin drain, excavation and refil included; (G) $\$ 0.70$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excaration and refill included (1i) $\$ 0.70$ per lin. ft. laying 8 in. Akron pipe house drain, excavation and retill included; (K) $\$ 35,00$ each building manholes; (M) $\$ 12.00$ per cu. yd. all brick masonry laid in A merican cement; (N) $\$ 5.00$ per cu. yd. all American cement concrete in place; (O) $\$ 6.00$ per cu. yd all Portland cement concrete in place; ( P ) $\$ 5.00$ per cu. yd. all rubble-stone masonry; (A A) $\$ 25.00$ each building manholes; (ZZ) \$1500 each building drop inlets |
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(E) $\$ 0.49 \frac{1}{2}$ per lin. ft. building $12-\mathrm{in}$. Akron pipe catchbuilding 6 -in. Akron pipe house-drain, ex cavating and refill included; (K) $\$ 34.00$ each building manholes; (L)
$\$ 5.00$ per cu. yd. all rock excavation.
(E) $\$ 0.49 \frac{1}{2}$ per lin. ft. building $12-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (F) $\$ 0.49 \frac{1}{2}$ per lin. ft. building $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (O) \$3.50 per cu. yd. all concrete $\$ 14.00$ each building drop inlets.
(A) $\$ 4.00$ per lin. ft. earth exeavation, $2 \mathrm{ft} .8 \mathrm{in} . \times 3 \mathrm{ft} .6 \mathrm{in}$. trench, excavation and refill included; (E) $\$ 102.00$ fol \$240.00 for laying $16-\mathrm{in}$. iron pipe and building one manhole; (G) $\$ 50.00$ for building tide-gate manhole; (M) cement mortar; (N) $\$ 6.00$ per cu. yard all brick masonry laid in Portland cement mortar; (O) $\$ 4.00$ per cz . pard all
concrete in place; ( R ) $\$ 30.00$ per M ft . B. M. spruce lumber; (V) $\$ 0.15$ per lin. ft all. 8 -in. drain-pipe, excavation and refill included; (IV) $\$ 0.22$ per lin. ft. for piles driven
belo cutting-off grade. (D) $\$ 0.81$ per lin. ft. laying $12-\mathrm{in}$. Akron pipe, excavation and refill included; (E) $\$ 0.79$ per lin. ft. laying $10-\mathrm{in}$. eluded; $;(\mathrm{F}) \$ 0.72$ per lin. ft. laying 8 in. Akron pipe house drain, excavation and refill included; (G) $\$ 2.00$ branches; (H) \$1.00 each inserting slants into old brick sewer; (AA) $\$ 43.00$ each building eatch-basins, excava-
tion and refill included; $(Z Z) \$ 18.00$ each building drops inlets, exeavation and refill included.
(D) $\$ 1.10$ per lin. ft. laying $12-\mathrm{in}$. Akron pipe, excavation and refill included; (E) $\$ 0.50$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe cated-basin drain, excavaion (F) $\$ 0.75$ perlin. ft. laying 8 -in. Akron pipe house drain, excavation and refill included; (H) $\$ 0.30$ each in-
 (AA) $\$ 42.00$ each building catch-basins; (ZZ) $\$ 15.00$
each building drop inlcts.
Sewer connections, Kenmore st., Ward 22 . . . . . J. Is. O'Rourke \& Co
J. B. O'Rourlie \& Co.
Aug. 22, 1895

H. P. Nawn . . . . . . .
Sept. 10, 1895
Sept. 10, 1995
-
J. B. OiRourke Co.
D. F. O'Connell
D. O'Connell
June 11, 1895

$\qquad$
Sewer Construction under Chap. 323, Acts of 1891, etc. - Continued.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Sewer and connections, Granby st., Ward 22 . . . | D. O'Connell . . . . . . . . | Sept. 11, 1895 . . . | (D) $\$ 0.60$ per lin. ft. laying $18-i n$. Akron pipe catch-basin drain, cxcavation and retill included; (E) $\$ 0.45$ per lin. ft , laying 12 in . Akron pipe cateh-basin drain, excavation and refill included; (F) $\$ 0.40$ per lin ft. laying 10 -in. Akron pipe catch-basiu drain, excavation and refill included; ( $O$ ) $\$ 4.00 \mathrm{cu} . \mathrm{yd}$. all concrete in place; (R) $\$ 30,00$ per M ft. B. M. all spruce lumber; (A A) $\$ 4+.00$ each building catch basins, excavation and refill included; (ZZ) $\$ 15.00$ each building drop iulets. |
| Sewer and connections, Bay State road, Ward 22. . | Collins \& Ham | Sept. 11, 1895. . | (D) \$0.75 per lin. ft. laying 18.in. Akron pipe, excavation and refill included; (E) 80.34 per lin. ft. laying 1is-in. Akron pipe catch-basin drain, excavation and refill included; (F) $\$ 0.30$ per lin. ft. laying $12 . \mathrm{jn}$. A kron pipe catch basin drain, excavation and refill included; (G) $\$ 0.25$ per lin. ft. laying 8 -in. Akron pipe house drain excavation and retill included; ( K ) $\$ 29.00$ each build ing manholes; ( 0 ) $\$ 5.00$ per eu. $y \mathrm{~d}$. all concrete in place (K) $\$ 30.00$ per M ft. B. M. all spruce lumber; (AA) $\$ 38.00$ each building eatch-baxins, excavation and refill included; (ZZ) $\$ 15.000$ each building drop inlets, excavation and refill included. |
| Sewer and connections, Lauriat ave., Ward 24 . . | II. P. Nawn. . . . | Sept. 26, 1895 . . . | (A) $\$ 2.50$ per lin. ft . earth excavation $8 \mathrm{ft} . \times 8 \mathrm{ft}$. culvert, excavation and refill included; (B) \$2.00 per lin. ft. carth excavation $8 \mathrm{ft} . \times 6 \mathrm{ft} .8 \mathrm{in}$. culvert, excavation and refill included; (C) $\$ 1.75$ per lin. ft. earth excavation 4 ft . $\times 4 \mathrm{ft}$. eulsert, excavation and refill included; D) 80.95 per lin. ft. laying 18 in. Akron pipe, excavation and refill included; (E) 80.70 per lin. ft. laying 15 in . Akron pipe, excaration and retill included; (F) $\$ 0.80$ per lin. ft. lasing $12-i n$. Akron pipe, excavation and refil included; ( $(\dot{i}) \$ 075$ per lin. ft. laying $15-\mathrm{in}$. Akron pipe eatch-basin drain, exeavation and refill included: (1I) $\$ 0.50$ per lin. ft. laying 12 -in. Akron pipe catch.basin drain, exeavation and refill included: (I) $\$ 0.50$ per lin. ft . laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (K) \$35.00 each building manholes; |

(L) $\$ 2.50$ per cu. yd. all rock excavation; (M) $\$ 10.00$ per cu. yd. all brick masonry laid in American cement
mortar $;(N) \$ 4.00$ per cu. yd. all brick masonry laid in mortar; (N) $\$ 4.00$ per cu. yd. all brick masonry laid in American cement conerete in place; ( P ) $\$ 4.00$ per cu . yd. all rubble-stone masonry laid in mortar; (Q) $\$ 1.00$
per sq. yd. all rubble-stone paving in $4 \mathrm{ft} . \times 4 \mathrm{ft}$. cnlvert; (R) $\$ 6.60$ per cu. yd. granite covering-stone; (AA) $\$ 40.00$ each building catch barins; ( $B B$ ) $\$ 0.50$ per lin. ft.
laying 6 in. Akron house drain; (ZZ) $\$ 15.00$ each buildlaying 6-m. Ak
ing drop inlets.

| Sewer and connections, Abbotsford st., Ward 21 . . . | D. O'Connell | Oct. 4,1895. | (E) $\$ 0.60$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refilt included; (F) \$". 60 per lin. ft. laying 8 -in. Akron pipe bouse drain, excavation and refill included; ( L ) $\$ 4.50$ per cu . yard all rock excavation; (AA) \$ 80.00 each building catch basins, excavation and refill included. |
| :---: | :---: | :---: | :---: |
| Sewer and connections, St. Alphonsus st. . . . . . . | J. C. Coleman . . . . . . | Oct. 15, 1895 . . . | (A) $\$ 0.55$ per cu. yd. earth excavation in trench; (D) $\$ 0.10$ per lin. ft. laying $12-\mathrm{in}$. plpe sewer; (E) $\$ 0.45$ per lin. ft. laying 10 in . Akrou pipe catch-basin draiu, excavation and refill included; (P) $\$ 0.10$ per lin. foot laying 8 -in. and 6-in. Akron pipe house drain, excavation aud refill included; ( K ) 843.00 each building manholes; (L) \$3.44 per cu. yd. all rock excavation; (AA) $\$ 44.00$ each building catch-basins; ( BB ) $\$ 0.50$ each for taking out lengths of pipe and replacing. |
| Sewer and connections, Josephine st., Ward 24 | D. E. Lynch ${ }^{-}$ | Oct. 28, 1895 . . . | (A) $\$ 2.70$ per lin. ft. earth excavation, $5 \mathrm{ft} . \times 4 \mathrm{ft} .6 \mathrm{in}$. culvert, excavation and refill included; (D) $\$ 0.70$ per lin. ft. laying 12 -in. Akrou pipe, excavation and refill included; (E) $\$ 0.72$ per lin. ft. laying $6 . i n$. Akron pipe house drain, excavation and refill included; (F) $\$ 0.65$ per liu. ft. laying $3-\mathrm{in}$. A kron pipe catch-basin drain, excavation and refill included; (G) $\$ 0.45$ per lin. ft. laying 10 in. Akron pipe catch basin drain, excavation and refill included; (K) $\$ .50 .00$ each building manholes; (L) $\$ 5.00$ per cu. yd. all rock excaration; (M) $\$ 7.00$ per cu. yd. all brick masonry; ( P ) \$+.00 per cu. yd.all rubble-stone masonry; (Q) Sl.45 per sq. yd, all rubble-stone paring; (R) \$5.50 per cu. yd. granite covering-stone; ( $\mathrm{A} A$ ) $\$ 50.00$ each, building catch-basins; (ZZ) $\$ 25.00$ each building drop inlets. |

Sewer Construction under Chap. 323, Acts of 1891 , etc. - Concluded.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Sewer and connections, Greenbriar street, Ward 24. | Collins \& Ham . . . . . . | Nov. 4, 1895. . | (A) $\$ 0.75$ per lin. ft. laying $12-\mathrm{in}$. Akron pipe, excavation and refill included; ( E ) $\$ 0.30$ per lin. ft. laying $6 . \mathrm{in}$ Akron pipe house drain, excavation and refill included; (F) $\$ 0.60$ per lin. ft. laying $18-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (G) $\$ 0.45$ per lin. ft . laying 15 -in. Akron pipe catch-basin drain, excavation and refill included; (H) $\$ 0.40$ per lin. ft. laying $10-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (K) $\$ 27.00$ each building manholes; (L) $\$ 4.75$ per cu, yd. all rock excavation; (AA) $\$ 37.00$ each building catch-basins. |
| Sewer and connections, Geneva avenue, Ward 24 | D. F. O'Connell | Nov. 15, $1895 .$. | (A) $\$ 1.20$ per lin. ft. earth excavation in culvert, excavation and refill included; (B) $\$ 1.34$ per lin. ft . earth excavation in culvert, excavation and refill included; (C) $\$ 1.40$ per lin. ft. laying $30-\mathrm{in}$. Akron pipe culvert, excavation and refill included; (D) $\$ 0.40$ per lin. ft. laying $15-\mathrm{in}$. Akron pipe catch-basin drain, excavation and refill included; (E) $\$ 0.27$ per lin. ft. laying 12.in. 4 kron pipe eatch-basin drain, excavation and refill included; (F) $\$ 0.33$ per lin. ft. laying $10-i n$. Akron pipe catch-basin drain, excavation and refill included; (G) $\$ 0.38$ per lin. ft . laying $6-\mathrm{in}$. Akron pipe house drain; (L) $\$ 4.00$ per cu. yard all rock excavation; (M) \$5.25 per cu. yard all brick masonry; (P) $\$ 4.75$ per cu. yard all rubble-stone masonry; (Q) $\$ 1.50$ per sq. yard all rubble-stone paving; (R) $\$ 10.00$ per cu. yard granite covering-stone; (Y) $\$ 2.00$ each laying pipe connections; (A A) $\$ 43.00$ each building catch-basins; ( $Z Z$ ) $\$ 13.00$ each, building drop inlets. |

Sewer Construction under the General Law. Cbap. 402 of 1892.

| Contract. | A warded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Willow st., Ward 23 | D. $0^{\prime}$ Conuell | June 18, 1895. | (E) $\$ 0.69$ per lin. ft.; (K) $\$ 28.00$ each; (L) $\$ 4.80$ per cu. yd.; (V) \$0.16 per lin. ft. |
| Milton st., Ward 24. | D. $O^{\prime}$ Connell | April 29, 1895. | (E) $\$ 1.08$ per lin. ft. |
| Jamaicaway, Ward 23. | F. X . Saucier | Aug. 22, 1895. | (D) $\$ 1.10$ per lin. ft. ; (E) $\$ 1.00$ per lin. ft.; (K) $\$ 33.00$ each; (L) 84.0 per cu. yd. |
| Elmira st, Ward 25 | T. J. Young \& Co. | Nov. 15, 1895. | For laying 12 -in. Akron pipe, $\$ 0.80$ per lin. ft.; for building manhole, $\$ 40.00$ each; for all rock excavation, $\$ 5.00$ per cu. yd.; for all spruce lumber, $\$ 30.00$ per M, B.M.; for al $6 . \mathrm{in}$. drain-pipe, $\$ 0.16$ per lin. ft. |
| Elmira st, Ward 25. | T. J. Young \& Co. | Dec. 7, 1895. | For laying 12-in. Akron pipe, $\$ 0.80$ per lin. ft.; for build ing manholes, $\$ 0.00$ each; for all rock excavation, $\$ 5.00$ for all 6 -in. drain pipe, $\$ 0.25$ per lin. ft. |

(V) 6 -in. drain-pipe.
(L) Rock excavation.
EXPLANATION OF LETTERS.
(E) 12-in. Akron drain-pipe.

Miscellaneous Agreements.

| Agreement. | Awarded to | Dated. | Price. |
| :---: | :---: | :---: | :---: |
| Sale of tug "William Woolley" . . . . . . . . . . | E. J. Dickers . . | April 15, 1895 | \$1,000. |
| Removing old cement house on Sect. 1, Blue Hill avenue | H. P. Nawn | Sept. 19, 1895 | \$300. |
| Removing wooden house on Sect. 14, Blue Hill ave. . | H. P. Nawn | Sept. 19, 1895 | \$100. |
| Alterations of Huntington-ave. bridge . | Boston Bridge Works . . | Nov. 7, 1895 | $\$ 0.03 \frac{1}{2}$ per lb. Oct. 24, 1895, the Water Department agreed to pay one-half cost of the work. |
| West Roxbnry low-level sewer | N.Y., N.H., \& H. R.R. Co. . | May 1,1895 | $\$ 12.45$ per cu. yard all invert and sewer arch masonry; $\$ 11.3 \overline{5}$ tor all brick masonry supporting walls, and $\$ 5.00$ per cu. yaid for concrete. |
| Furnishing and driving piles, Breed st., East Boston . | A. A. Hersey | Jan. 6, 1895 | \$1.94 per pile. |
| Retaining-walls, Gold st., South Boston . | F. H. Blaisdell . . . . . . . | Nov. 5, 1895 | $\$ 7.00$ per cu. yard; $\$ 0.30$ per cu. yard, excavation handled once. |
| Raising buildings and building walls, ete., Gold st. | F. H. Blaisdell . . . . . . . | Ang. 19, 1895 | \$1,950. |
| Repairing sidewalk, Winthrop bridge . | J. N. Hayes \& Co. . . . . | Jan. 15, 1895 | Foreman, $\$ 4.00$ per day; engineer, $\$ 17.00$ per week; Mr. llayes, $\$ 3.50$ per day; men, 83.00 per day, plus $15 \%$; pile-driver, $\$ 10.00$ per day. S. H. hard pine, $\$ 20.00$ per M ft. |
| Removing channel of Stony Brook from lands of Thos. Sproules, and on lands of Boston Belting Co. | - . . . . . . . . . . . | Nov. 14, 1895 . . . | Boston Belting Company and T. Sproules agree to pay the City of Boston the entire cost of this work. |
| Removing channel of Stony Brook from lands of Samuel Emmes | - . . . . . . . . . . . | Aug. 12, 1895 . . . | Samuel Emmes agrees to pay the City of Boston the entire cost of this work. |
| Iron fence at foot of Sherborn street. . | P. J. Dinn | Oct. 7, 1895 . | \$118.00. |

$\$ 0.62$ per lin. ft.
$\$ 10.00$ per M.
$\$ 300.00$.
$\$ 17.50$ per broom.
Public Buildings Department agrees to pay the actual cost
The City of Boston agrees to pay the cost of this work, pro-
vide a contract, satisfactory in plan; and price bid is submitted to tbe Superintendent of Streets for approval,
8c. per lb.; 7c. per lb. allowed for old composition wheel. $\$ 235.00$. $\$ 250.00$. $\$ 250.00$. $\$ 344.00$. March 30, 1895 Boston Fire Proofing Co. . . . Aug. 22, 1895. Boston Electric Light Co. . . Oct. 25, 1895. Hickory Broom Fiber Co. . . April 12, 1895 . Nov. 15, 1895 : Oct. 28,1895
Dec. 17,1895
 Sept. 5, 1895
Aug. 30,1895
Sept. 9,1895
Oct. 3,1895 Oct. 3,1895
Ang. 10, 1895 Aug. 10, 1895 J. H. Lally . . . . . . . . . . Furnishing fire-proof brick at Cottage Farm Bridge Electric light at South Ferry . . . . . . . . . . . . . Hickory Brooms . . . . . . . . . . . . . . . . . . Constructing Regulator, Tank, and Sewer for North Removing wooden buiding, Blue 1 lill ave., cor. Morton street . . . . . . . . . . . . . . . . . . . . . . . North pier, South Herry . . . . . . . . . . . . . . Building Abutments and Bridge under N. Y., N. H., $\&$
H. for Geneva avenue
-••••

## ت゙

 Co., J. H. Lally . . . . . . . . . August Bellevue \& Co. . . . . Painting Ferry-boat "East Boston ". . . . . . . . .Painting Ferry boat "Revere" . . . . . . . . . . .

Employment of Labor.
During the year ending February 1, 1896, 122 applications were made upon the Civil Service Commission for 428 employees of rarious grades, and 671 names were submitted by them, of which number 442 were given employment in the several divisions; of the 442 persons employed, 36 were appointed provisionally (Civil Service, Rule 36), 5 were given non-competitive examinations, 2 promoted, and 93 were veterans.

During the year 131 persons were transferred to this department from other city departments : making a total of 573 persons employed during the year.

Notices of 319 discharges from the department rolls were sent to the Commission.

The department records show that there are 3,044 persons eligible for employment in the varions divisions, and of that number 2,531 were upon the pay rolls on the week ending January 23, 1896.

On July 1, 1895, the list of Ferry Division employees (195) was added to the department register.

The following table shows the classification of all employees of the Street Department on the rolls January 23, 1896, as recorded by the Civil Service Clerk of the department:

## Grade and Number of Employees in the Street Department.

| Title. | Divsions. |  |  |  |  |  |  |  | ¢ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | - | 定 | $\tilde{E}_{i n}^{3}$ |  | $\underset{ \pm}{ \pm}$ |  |  |  |
| Superintendent | 1 |  |  |  |  | $\therefore$ |  |  | 1 |
| Deputy . |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| Executive engineer . | 1 |  |  |  |  |  |  |  | 1 |
| Clerks | 2 | 1 | 2 | 6 | 4 | 8 | 4 |  | 27 |
| Foremen | . | 2 | 1 | 10 | 5 | 10 | 7 |  | 35 |
| Sub-foremen |  | 3 | . . | 27 | 6 | 15 | 18 |  | 69 |
| Inspectors |  |  |  | 21 | 13 | 31 | - . ${ }^{\text {. }}$ |  | 65 |
| Civil engineers |  |  |  | 1 |  | 5 |  |  | 6 |
| Carried forward | 4 | 7 | 4 | 66 | 29 | 70 | 30 | 1 | 211 |

Grade and Number of Employees, etc. - Continued!

| Title. | Divisions. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \dot{8} \\ & \dot{\sim} \\ & \dot{E} \end{aligned}$ | 苞 |  |  | $\dot{\text { ® }}$ ¢ Un |  |  | ज |
| Brought forward | 4 | 7 | 4 | 66 | 29 | 70 | 30 | 1 | 211 |
| Draughtsmen . |  |  |  |  | . | 13 |  |  | 13 |
| Transitmen . |  |  |  | 2 |  | 5 | $\cdots$ | - . | 7 |
| Levelmen |  |  |  | 4 |  | 9 | . . |  | 13 |
| Rodmen |  |  |  | 7 |  | 25 |  |  | 32 |
| Aid or tallymen |  |  |  | 1 | 2 |  |  |  | 3 |
| Blacksmiths and assistants |  |  | 2 | 19 | 5 | 2 | 2 |  | 30 |
| Boiler-maker |  |  | 1 |  |  |  |  |  | 1 |
| Bracers . |  |  | - . | . |  | 12 |  |  | 12 |
| Brick-slingers |  |  |  |  |  | 2 | $\cdots$ | - | 2 |
| Boys |  | 7 |  | 2 |  | 13 |  | 1 | 23 |
| Broom-makers |  |  |  | . |  |  | 6 |  | 6 |
| Captain |  |  | 11 |  | 1 |  |  |  | 12 |
| Carpenter and assistants |  | 8 | 7 | 20 |  | 8 | 2 |  | 45 |
| Coal-passers |  |  |  |  |  | 4 |  |  | 4 |
| Chief of draw-bridges |  | 1 |  | . |  |  |  |  | 1 |
| Draw-teoders |  | 20 |  | . . |  |  |  |  | 20 |
| Assistant draw-tenders . |  | 33 |  | . | . |  | . |  | 33 |
| Deck-hands |  |  | 24 |  |  | 2 |  |  | 26 |
| Dumpers |  |  |  |  | 18 |  | 7 |  | 25 |
| Chief engineers . |  |  | 1 |  |  | 1 |  |  | 2 |
| Engineers and assistants |  | 15 | 14 | 15 |  | 15 |  |  | 59 |
| Feeders. |  |  |  |  | 5 |  |  |  | 5 |
| Firemen |  |  | 15 |  | . | - 5 |  |  | 20 |
| Flushers |  |  | . |  |  | 3 |  |  | 3 |
| Gatemeb |  |  | 16 |  |  | 4 |  |  | 20 |
| Harness-makers |  |  |  | 3 | 4 |  |  |  | 7 |
| Helpers |  |  |  |  | 174 |  | 62 |  | 236 |
| Horse-shoers |  |  |  |  | 3 |  |  |  | 3 |
| Hostlers |  | 1 |  |  |  | 5 |  |  | 6 |
| Iron-worker |  |  |  |  |  | 1 |  |  | 1 |
| Jabitors |  |  | 8 |  |  | 1 |  |  | 9 |
| Carried forward. . | 4 | 92 | 103 | 139 | 241 | 200 | 109 | 2 | 890 |

Grade and Number of Employees, etc. - Concluded.


The table of former superintendents and document number's of the annual reports at the end (Appendix H) will be found of convenient reference for general use in connection with the history of department work in past years.

Respectfully submitted,
Henry B. Wood,
Executive Engineer.

## BRIDGE DIVISION.

The total number of bridges in Boston in the care of the Bridge Division, not including culverts, is one hundred and thirteen. Thirty-four of these are wholly supported by railroad corporations. Four-Harvard, Canal, Prison-Point, and West Boston bridges - all connecting Cambridge, are in the care of two commissioners, one appointed by the City of Cambridge, the Superintendent of Streets being the Boston Commissioner, ex-officio. The remainder, seventy-five in number, are supported, wholly or in part, by the City of Boston, and are in the care of this division, including twenty-three tide-water bridges, with draws, alone requiring for their operation seventy draw-tenders, assistant drawtenders, and engineers. A complete and systematic record of the openings of the draw bridges, giving numbers and time of openings and other data, appears in Appendix A.

The following table shows the amounts expended from the maintenance appropriation of the Bridge Division for the past five (5) years:


There has not been an accident or a break-down inconveniencing public travel during the year. Charles-river bridge was closed to public travel from June 19 to Ang. 1, while extensive repairs, under the direction of the City Engineer, were made, and Mystic-river bridge, over that river and the B. \& M. R.R. tracks, which has been closed to public travel during all of the year previons to Jan. 1, '96, while in process of building, has been reopened to the public. Something has been done toward modifying the smoke and hotcinder nuisance, so very disagreeable to pedestrians, and often so disastrous to horses and vehicles on Broadway and the Dartmouth-street bridges, by the erection of a shield on either side of both these bridges, which has thus far given most satisfactory results. Broadmay bridge, because of its very large span, has always been very dark at night until
this year. In coöperation with the Lamp Department, a large electric light has been placed in the exact centre of the draw by a device which works perfectly, permitting the opening of the draw without disconnecting the electric current, lighting up not only the roadway, but the waterway as well, and proving a great convenience to navigation.

Attention is again called to the necessity of proper headquarters for the South District of this division, which is still located on Foundry street, in a small building which has to suffice as an office and storehonse, the stable and storehonse of the district having been entirely destroyed by the strengthening of Broadway Bridge nearly two years ago. A portion of a stable, situated some distance away, was leased as temporary quarters and has been occupied ever since. Proper accommodations are badly needed in order that supplies may be purchased in quantity and arrangement made to properly protect them and check their delivery, as well as for stable purposes.

Of the bridges of greater importance but two are now operated by band-power-Malden and Mount Washingtonavenue - and one, Meridian-street, by horse-power; rather primitive methods for these advanced times, and it is expedient that these be added to the list of those now operated by electric motors, of which there are three - Chelsea North, Dover, and Federal street bridges. The others use steam, but experience indicates electricity to be the best from every standpoint. The cost of coal for engines is a very considerable item in the expense of the division, while the cost of electricity is very tritling; the cost of repairs on engines far exceeds that on motors. There is the further consideration of space and clemliness, all favorable to the motor. After making some inquiries, and investigation with reference to Warren bridge, it appears that complete electric power could be installed there for about $\$ 2,000$. The hoilers and engines could be sold, and a saving of ahout $\$ 700$ per annum made on coal, and something additional saved on repairs, indicating a mistaken economy in retaining the engines.

One hridge has been added to those in the care of the division - a temporary foot-bridge over the N. Y., N. H., \& II. R.R. at Roxbury Crossing, erected during the year at a cost of $\$ 981$, charged to the maintenance account.

Constructive work in the Bridge Division, for which money is provided by loan, has been of unusual proportions during the past year. The rebuilding of Chelsea-street bridge, commenced last year, has been completed, and in addition to the work done by the B. \& M. R.R., at Chelsea lridge, the draw over the North channel has heen entirely rebuilt. Charles
river-bridge draw pier has been remodelled and rebuilt. Gold-street bridge abutments and iron superstruction have been completed, and Cottage Farm bridge is in process of construction.

The amount of expenditures for permanent improvements from loans provided, has been as follows during the last five (5) years:


The following statement of the City Engineer contains the main features of the special work of construction assigned to him by this department for engineering supervision :

> City of Boston, Engineering Department, 50 City Hall, January $31,1896$.

Mr. B. T. Wheeler, Superintendent of Streets:
SIR: I herewith submit the following report of the work done under my direction for the Bridge Division of the Street Department during the year 1895.

The following are the principal items of work clone :
Chorles-river Bridge. - A contract was made June 14, 1895, with J. N. Hayes \& Co., for repairing the draw and draw foundation. The cost of the entire work was $\$ 4,259.51$.

Chelsea Bridge North. - May 23, 1895, a contract was made with Augustus Bellevue \& Co. to rebuild the draw foundation, about fifty-four feet of bridge, and the wharf, and to lengthen the up-stream pier fifty feet, and the dommstream pier sixty feet; under another contract the same firm rebuilt the wood-work of the bridge above the piles for a length of fifty-three feet. The draw has been replaced by a new steel draw of the retractile style, built by the Penn Bridge Company of Beaver Falls, Penn. ; it is operated by electricity, the motor being furnished by the General Electric Company ; the draw has been in use since December 28, 1895. The total cost of the work charged to this appopriation to February 1, 1896 , was $\$ 33,827.91$.

Chelsea-street Bridge. - As mentioned in the last annual report, the pile structure was rebuilt by B. F. Nay \& Co., and the steel draw was built by the Boston Bridge Works. The bridge was opened to team-travel February 26, 1895. The cost of the contract-work on the pile bridge was
$\$ 15,241.53$; on the steel draw, $\$ 8,450$. The sheathing of the bridge and draw was done by the Bridge Division.

Cottage Farm Bridge (over the Boston \& Albany Railroad). - During the past year the following work has been done on the northerly section of the bridge: The middle pier has been extended 210 feet 6 inches, and the parapets on the abutments set by David S. Crockett \& Co., the stone for the parapets being furnished by the Cape Ann Granite Company; two steel girders have been built and set in position by the Boston Bridge Works; 20 -inch steel beams have been furnished by Page, Newell, \& Co., but are not yet in place; and hollow hricks and skewhacks have been furnished by the Boston Fire Proof Company.

Gold-street Bridge. - Under an order from the Street Department, dated May 13, 1895, plans and specifications were prepared for a bridge over the tracks of the New York \& New England Railroad at Gold street.

A contract for the abutments was made with Frank H. Blaisdell, dated June 11, 1895, for the sum of $\$ 1,850$, and subsequently an agreement was made with him for building two short return-walls at the ends of the west abutment. Work was begun July 1 and completed about Jannary 1. The total amount paid under these two agreements was \$2,333.45.

A contract was made with the Boston Bridge Works, dated June 11, 1895, for the superstructure of the bridge, for the sum of $\$ 1,570$, and the work was completed January 20, 1896.

This department was also requested to see that the work of raising the building on the northerly side of Gold street, adjoining the east abutment, was carried out in accordance with an agreement made by the Street Department with F. H. Blaisdell, dated September 18, 1895. This work was finished early in January, satisfactory to the Building Department, and a final estimate made January 24, 1896, for the sum of \$2,082.37.

West Newton-street Bulkhead. - A timber bulkhead was built across the end of West Newton street abutting on the line of the Boston \& Albany Railroad, under a contract with A. Bellerue \& Co., for the sum of $\$ 344$.

Temporary Foot-bridge at Roxbury Crossing. - A wooden foot-bridge was built over the tracks of the New York, New Haven, \& Hartford Railroad at Roxbury Crossing, on Tremont street, under a contract with Josiah Shaw, dated June 11, 1895, at a cost of $\$ 981$.

Yours respectfully,
[Signed]
William Jackson, City Engineer.

Details of expenditures, income, and operations will be found in Appendix $A$.

Comparative Table showing net cost of the maintenance of the
Bridge Division to the City of Boston.

|  | Expenditures. | Income. | Net Cost. |
| :---: | :---: | :---: | :---: |
| 1891 (13 months) | \$123,010 63 | \$1,183 40 | \$121,827 13 |
| 1892 | 128,954 37 | 51661 | 128,437 76 |
| 1893 | 33,159 24 | 1,687 00 | 131,472 24 |
| 1894 | 130,137 21 | 1,598 62 | 128,538 59 |
| 1895 | 119,716 00 | 1,753 97 | 117,962 03 |

## BOSTON AND CAMBRIDGE BRIDGES.

## Canal or Craigie's Bridge.

The sidewalk' on the south side of the Cambridge end should have been rebuilt this year; but not having sufficient appropriation to do the work in a thorongh manner, it has been temporarily repaired. It will be necessary to rebuild it next year.

The piles on the Cambridge end have been in place about 100 years. They are now very much decayed on the upper part where the salt water does not reach them. The piles in four bents have been pieced out and new hard-pine girders and trusses have been firmly bolted to them.

The current repairs have been made, such as painting and sheathing the draw, cleaning roadway and sidewalks; and repairs on boiler and machinery to move the draw.

The above work has been attended to by the men on the bridge. The roadway of the bridge has been watered with salt water.,

## Harvard Bridge.

The roadway has been replanked for the entire length of the bridge with 2 -inch spruce plank, costing $\$ 1,519.41$ for each city.

It will be necessary to do this work every year.
The West End Street Railway Company replanked the space between their tracks with 3 -inch spruce, which makes a much smoother surface for travel than the 2 -inch plank did which was formerly there.

The asphalt sidewaliks are in poor coudition and are to be relaid next summer by the contractors, at their expense, in accordance with the terms of the contracts, which require them to keep the sidewalks in good repair for five years.

The iron-work on this bridge is in bad condition from rust. It will have to be painted in 1896.

The men employed on the bridge have done all the cleaning without extra cost to the two cities. They also clean all the lamps and make all small repairs.

## Prison-Point Bridge.

The draw on this bridge is in very bad condition. It is almost impossible to raise it. It is not proposed to expend
much money on the bridge at the present time, as the grade crossing of the Boston \& Maine Railroad at this point is to be abolished. A commission has been appointed, and the proposed changes include a new highway hridge and draw built at a higher grade. It is expected that the work will be completed within three years.

Current repairs have been attended to, such as planking and sheathing draw, etc.

## West Boston Bridge.

In October a portion of the bridge near the draw on the Cambridge side commenced settling. It was found that the piles in three bents, or sections, had settled about five inches and were still going down. Twelve new piles were driven : five in one section, four in another, and three in another. The work was done from the top of the bridge, taking one side at a time, by placing a scow on the outside of the bridge with an engine on it with the pile-driver on the bridge. The work was done withont interruption to travel, and without frightening horses, as would have been done if the engine had been placed on the bridge in the usual manner.

After driving the piles from above, the work was finished under the bridge by bolting extra girder caps to the piles that were driven. Sixty-six braces, $3 \times 12$ spruce, 20 and 25 feet long, were firmly secured to piles distributed in different bents.

The wheel-guard on both sides of the draw, the entire length, has been renewed with hard pine-timber. On the side of the wheel-guard, an iron plate 4 inches wide $\frac{5}{8}$ inches thick, has been bolted to the timber for the whole length of the draw to protect the wood-work and to keep teams from injuring the draw.

The bridge is very weak in places. It has to bear a great strain when the ice is breaking up in the spring. Next year it will need a thorough repairing, and possibly more piles will have to be driven.

When this lridge was rebuilt it was not expected there would be such an amount of travel over it as there is at the present time, especially such heavy teaming and such heavy electric cars. The spaces between bents of piles are 18 and 19 feet, and they should be not more than 16 feet.

The men on the bridge do the ordinary repairs, looking after the cleaning, keep the machinery for moving the draw in good condition, their engine-house clean, and do all painting of wood and iron work on the draw and house.

The roadway of the bridge has been watered with salt water.

The West End Street Railway Company relaid their track the entire length of the bridge in October, and, in so doing, relaid the paving on the sides of the rails in a satisfactory manner.

## In General.

The usual statement is appended of the number of draw openings and the number of vessels which passed throngh, also table showing the traffic over bridges in September.

The amount of revenne receised for rents, dockage, repairs to West End Street Railway Company's tracks, etc., during the year, has been $\$ 2,303.70$, one-half, $\$ 1,151.85$, has been paid to each city.

Number of Times the Draws in Canal, Harvard, PrisonPoint, and West Boston Britges have been opened, and the number of Vessels which have passed through, for the year ending January 31, 1896.

| Date. | Canal or Craigie's. |  | Harvard. |  | Prison.Point. |  | West Boston. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { February } 1,1895, \\ \text { to } \\ \text { January } 31,1896 . \end{gathered}$ |  | $\begin{aligned} & \text { Number of Vessels } \\ & \text { Passed Through. } \end{aligned}$ |  |  |  |  |  |  |
| February, 1895. | 32 | 48 | 6 | 6 | 2 | 3 | 11 | 13. |
| March . | 108 | 217 | 32 | 49 | 14 | 19 | 60 | 88 |
| April | 445 | 417 | 110 | 148 | 24 | 36 | 132 | 210 |
| May | 394 | 476 | 81 | 120 | 23 | 31 | 119 | 178 |
| June. | 406 | 558 | 122 | $176{ }^{-}$ | 27 | 37 | 207 | 372 |
| July . | 443 | 539 | 207 | 262 | 41 | 53 | 262 | 388 |
| August | 410 | 440 | 208 | 270 | 10 | 10 | 287 | 441 |
| September . | 387 | 425 | 136 | 167 | 26 | 36 | 230 | 321 |
| October | 421 | 421 | 257 | 298 | 52 | 73 | 242 | 355 |
| November | 337 | 459 | 153 | 37 | 37 | 55 | 175 | 298 |
| December | 304 | 317 | 119 | 148 | 36 | 52 | 113 | 168 |
| January, 1896 . | 142 | 215 | 23 | 34 | 17 | 23 | 31 | 55 |
| Total | 3,829 | 4,532 | 1,454 | 1,715 | 309 | 428 | 1,879 | 2,887 |

Statement showing Traffic on Bridges.

| $1895 .$ | Bridge. | Pedestrians. | Teams. | Car <br> Passengers. ${ }^{1}$ | Bicycles. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Sept. 17, } \\ 6 \text { A.M. } \\ \text { to } 8 \text { P.M. } \end{gathered}$ | Canal <br> Harvard <br> Prison-Point <br> West Boston | 5,816 | 6,036 | 13,949 | 141 |
|  |  | 2,140 | 2,818 | 12,491 | 2,005 |
|  |  | 1,946 | 1,952 | - . . . . - |  |
|  |  | 4,837 | 3,558 | 21,510 | 162 |
|  | Totals . . . . . . | 14,739 | 14,364 | 47,950 | 2,308 |

${ }^{1} 6$ A.M. to 12 midnight.
The following is a statement of the payments made by the City of Boston on account of the Canal, Harvard, PrisonPoint, and Wrest Boston Bridges, fiom February 1, J895, to January 31, 1896 :

Amount of appropriation for financial year of 1895-96
$\$ 15,00000$
November 29, 1895, transferred to Sanitary Division

$$
2,000 \bigcirc 0
$$

Amount expended to January 31, 1896
$\$ 13,00000$
12,537 33
Balance January 31, 1896
$\$ 462 \quad 67$

## Classification of Expenses.

| February 1, 1895, to <br> January 31, 1896. |  | 品 |  |  |  | n ¢ - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Salaries draw-teuders and others. | \$1,247 50 | \$1,27200 | \$235 71 | \$1,250 00 | \$250 00 | \$ 4,25521 |
| Lumber | 36175 | 1,388 94 | 6810 | 26152 | -••• | 2,080 31 |
| Electric lighting . | 28752 | 1,144 03 | - . . . | 51749 | -••• | 1,949 04 |
| General repairs . | 26936 | 48546 | 11676 | 62147 | - . . . | 1,493 05 |
| Inspection . | 11250 | $\geq 3500$ | 5000 | 19500 | - • . . | 49250 |
| Cleaning bridges | 19620 | 3020 | - . . . | 26025 | - . . . | 48665 |
| Waterirg " | 17500 | $\cdots \cdots$ | . . . . | 17500 | . . . . - | 35000 |
| Paving " | 8122 | -•••• | - - . - | 20070 | . . . . | 28192 |
| Ironwork | 8563 | 920 | 3378 | 14431 | -•••• | 27292 |
| Fuel | 11792 | 1333 | . . . . . | 8673 | - . . | 21798 |
| Tools and hardware . | 2665 | 8750 | 741 | 2970 | - . . . | 15126 |
| Electric current for motor . | -•••• | 15000 | - . . - | - . - . | . . . . | 15000 |
| Sundries and small supplies | 4353 | 5034 | -•. . . . | 1901 | - - . - | 11288 |
| Electric-light repairs | - • . . | 82 ธั0 | . . . . . | - - . . | - . . . | 8250 |
| Travelling expenses . |  |  | . . . | - . . . | 6005 | 6005 |
| Printing aud stationery. |  | -••• | - . . . . | - • . . | 4622 | 4622 |
| Water-rates | 1600 | - . . | 550 | 1100 | - . . . | 3250 |
| Paint and painting | 313 |  |  | 1921 | - . . . | 4622 |
| Totals. | \$3,023 91 | \$4,848 50 | \$3517 26 | \$3,791 39 | \$356 27 | \$12,537 33 |

Table of expenditures for maintenance for the last five (5) years:

| 1891 | $(13$ months $)$ | . | . | . | . | $\$ 11,866$ | 42 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1892 | . | . | . | . | . | . | 11,079 | 76 |
| 1893 | . | . | . | . | . | . | 11,493 | 16 |
| 1894 | . | . | . | . | . | . | 11,986 | 85 |
| 1895 | . | . | . | . | . | . | 12,537 | 33 |

## FERRY DIVISION.

On July 1, 1895, the Ferry Department was consolidated with the Street Department, and has been operated since that time as the Ferry Division, with a Deputy Superintendent in charge. Of the seven ferry-boats belonging to the division, six are in active use each week-day: three at the North and three at the South Ferry ; one is kept as a spare boat; three are used on Sundays - two at the North and one at the South Ferry.

The following table shows the amount expended for maintenance by the Ferry Division for the last five (5) years:

| 1891 |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1892 | $(13$ months $)$ | $\cdot$ | $\cdot$ | $\cdot$ | . | $\$ 216,867$ | 81 |
| 1893 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 211,567 |
| 1894 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 213,746 |
| 76 |  |  |  |  |  |  |  |
| 1895 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 212,988 |
| 13 |  |  |  |  |  |  |  |

The boats of the division are from twenty-five to five years of age, and while their condition is good, each one of them having been thoroughly overhauled and painted during the past year, they should unquestionably be taken out, stripped, calked, and coppered, as some of them have not been out of the water for nine years. One of them, the "Ben Franklin," has been built up twelve (12) inches, in order to fit the drops, and the "East Boston," although five years old, has been first put in commission this year.

The head-house at the South Ferry, East Boston side, is not a credit to the city, especially as to its sanitary arrangements, whieh have been complained of by the Board of Health; and the coal-shed at this place is old, and its fall is not unlikely at any time.

The improvement in the service and equipment since May 1, 1895, the cost of which has been charged to maintenance, may be here referred to. A third boat has been operated at the North Ferry, as it had been apparent for some time that it was necessary for the proper service of the public, and it has been run every day except Sundays, from 7 A.M. to 7 P.M., entailing an additional expenditure from maintenance of some $\$ 8,000$.

The spare doek on the South Ferry, East Boston side, has been dredged at an expense of $\$ 600$. This dock is used to
hanl off boats that are to undergo repairs, and there was so little water in it at low tide that the boats rested on the bottom. One of the boats ("East Boston") was never in this dock, as it was unsafe to put her in there, and she always had to be laid at an outside wharf.

Passenger supplementary drops have been put in on South Ferry on both sides, same as at North Ferry, at a cost of about $\$ 1,200$. These were needed very hadly, and should have been put in years ago, as their absence has undoubtedly been the cause of many accidents and sobsequent payment of damage.

Another improvement was the rumning of the second boat at North Ferry at night, until 12 o'clock. Formerly it stopped at 11 o'clock, thereby discommoding hundreds of people.

By order of United States Steamboat Inspectors, the lifeboats have been removed from over the wheel-honses to forward end of canopies on all of the boats, and a skiff, with water-tight compartments, has been put on each end of canopies on ladies' side, so now each boat is equipped with a life-boai and two skiffs. These have cost about $\$ 700$.

The drops and piers at both ferries have been equipped with electric lights, superseding the old-fashioned lanterns and gas. This is one of the greatest improvements that could have been made at small expense, and it has proved an unqualified success.

During the year a pass system has been introduced on the ferries, principally for the purpose of obtaining an account of the number of teams and foot-passengers carried free, but also to restrict as far as possible the unwarranted free use of the boats. Return is now made by gatemen and collectors, of travel of this class, amounting to 2,406 teams in seven months, and 13,077 foot-passengers in three months, the time during which this method has been in operation.

The constructive work, which is paid for from loans provided for permanent improvements, has not been large during the year; the remodelling of the "East Boston " has been completed, and a new drop constructed for the Sonth Ferry and put in place.

The amount of expenditure from loans provided for permanent improvements during the last five (5) years has been as follows:


The following statement of the City Engineer contains the main features of the special work of construction assigned to him by this department for engineering supervision :

> City of Boston, Engineering Departient, 50 City Hall, January $31,1895$.

Mr. B. T. Wheeler, Superintendent of Streets:
Sir: I herewith submit the following report of the work done under my direction for the Ferry Division of the Street Department during the year 1894.

North Ferry Pier. - March 27, 1895, a contract was made with W. H. Ellis \& Co., for extending the middle pier at the East Boston side of the North Ferry. The pier was extended 30 feet at a cost for contract work of $\$ 1,775.60$.

New Drop. - A contract was made by the Superintendent of Ferries, .June 20, 1895, with Willian McKie, to build a new ferry drop to replace the old one at the southerly side of the Boston landing of the South Ferry for $\$ 5,611$. The old drop was delivered to the Ferry Division, its machinery being removed to the new drop, and the necessary changes of the foundation and landing being made.

$$
\begin{aligned}
& \text { Yours Repectfully, } \\
& \text { Willam Jackson, } \\
& \text { City Engineer. }
\end{aligned}
$$

An increase in the receipts of this year over last, results from an increase of foot-passengers carried of 648,469 , and of teams, 30,270 , and amounts to $\$ 14,084.66$.

Details of expenditure, income, and table of travel will be found in Appendix B.

## Comparative Table showing net cost of maintenance of Ferry Division to the City of Boston.

|  | Expenditures. | Income. | Net Cost. |
| :---: | :---: | :---: | :---: |
| 1891 (13 months) | \$216,867 81 | 161,942 80 | 54,92501 |
| 1892 | 211,56719 | 154,66065 | 56,906 54 |
| 1893 | 213,74676 | 152,069 54 | 61,677 22 |
| 1894 | 212,988 13 | 155,502 87 | 57,485 26 |
| 1895 | 209,911 30 | 169,584 85 | 40,326 45 |


KENNEY-STREET LEDGE AND STONE-CRUSHING PLANT

## PAVING DIVISION.

The following table shows the amonnt expended for maintenance of the Paving Division and from special appropriations derived from loans for the last five (5) years, not including the cost of street-watering, to be found on another page :

|  |  | Maintenan | Specia | tals. |
| :---: | :---: | :---: | :---: | :---: |
| 1891 (13 | months) | . $\$ 872,93640$ | \$1,014,324 26 | \$1,887,260 66 |
| 1892... |  | 915,460 99 | 962,889 09 | 1,878,350 08 |
| 1893. |  | 745,681 52 | 707,801 49 | 1,453,483 01 |
| 1894 |  | . 715,60862 | 839,713 78 | 1,55う,322 40 |
| 1895 | . . . . . | . 683,89942 | 823,01170 | $1,006,91112$ |

The following table shows the length of public highways and the character of pavements, February 1, 1896 :

## Length in Miles.

|  |  |  | $\begin{aligned} & \dot{\mathrm{E}} \\ & \frac{\mathrm{D}}{0} \end{aligned}$ |  | - |  | - |  | ¢़゙ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| In previous Report | 7.04 | 0.85 | 78.79 | 0.42 | 3.15 | 219.89 | 129.10 | 13.73 | 452.12 |
| Febinary 1, 1896. |  |  |  |  |  |  |  |  |  |
| City Proper. | *7.11 | 0.85 | $\dagger \ddagger 42.52$ | 0.42 | 2.23 | 27.40 | 0.38 | - • | 80.35 |
| Charlestown | 0.05 | . . . | 8.80 |  | . | 13.76 | 0.03 | 0.04 | 22.68 |
| East Boston | - . | - . | 4.42 | . . | 0.14 | 4.58 | 17.80 | 0.18 | 27.12 |
| South Boston. | 0.53 | . . . | 12.43 | - . | 0.05 | 22.06 | 1.55 | 3.74 | 40.36 |
| Roxbury | 0.37 |  | 8.06 | . . | 0.01 | 57.83 | 12.93 | 2.85 | 82.05 |
| W. Roxbury |  | - . | 0.09 | - • | -• | 34.61 | 40.57 | 1.44 | 76.71 |
| Dorchester |  | . . . | 3.47 | - . | -• | 50.57 | 32.82 | 1.34 | 88.20 |
| Brighton |  | . |  | - . | . | 17.39 | 19.29 | 1.96 | 38.64 |
| Total . | 8.06 | 0.85 | 79.79 | 0.42 | 2.43 | 228.29 | 125.57 | 11.55 | 456.11 |

Note. - The above districts refer to areas enclosed by the original boundary lines.

* Of this amnunt, 0.85 miles $=$ asphalt blocks.
$\dagger$ Of this amount, 2.69 miles = granite block paving on concrete, with pitch joints.
$\ddagger$ Of this amount, 0.75 miles $=$ granite blocks on concrete, with cement grout jointe.
Total length of public streets, 456.11 miles.
There have been laid out and accepted by the Street Commissioners during the year 3.91 linear miles : only six square
feet have been discontinued; corrections to previous measurements on account of revision and correction of previous tables from all causes, show an increase of 0.08 miles; making a total net increase of 3.99 miles. Street widenings and relocations have been ordered to the extent of 163,223 square feet.

Not included in the above table, there are about 142 miles of private ways and alleys which are not under the care of this department.

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

| 1859. | . 111.50 miles. |  | 1884. | . 874.10 | miles. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1871. | 201.32 | * | 1885 | . 379.60 | ، |
| 1872. | .207. 4 | " | 1886. | . 383.55 | " |
| 1873. | 209.24 | " | 1887. | . 390.30 | ، |
| 1874. | . 313.90 | " | 1888. | . 392.72 | ، |
| 1875. | 318.58 | ، | 1889. | . 397.84 | ، |
| 1876. | $3 \pm 7.50$ | " | 18!0. | . 404.6 | ، |
| 1877. | 333.2 | ' | 1891. | .4(9.6 | ، |
| 1878. | 340.39 | " | $18!22$ | . 434.59 | ، |
| 1879. | 345. 19 | ، | 1893. | .443.34 | , |
| 1880. | 350.54 | " | 1894. | .447.65 | ، |
| 1881. | . 355.5 | " | 1895. | . 452.12 | ، |
| 1882 | . 3 5 9.85 | " | 1896. | . 456.11 | " |
| 1883. | . 367.99 | ، |  |  |  |

## Areas of Pavements.

The following table shows the area of pavements in square yards, arranged by districts :

|  | Asphalt | Block. | Brick. | Cobble. | Telford and Macadam. | Gravel. | Not graded. | Totals. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Feb. 1,1895. | 121,713 | 1,700,699 | 5,166 | 36,966 | 3,997,799 | 2,123,460 | 374,677 | 8,360,480 |
| Feb. 1, 1896. |  |  |  |  |  |  |  |  |
| City Proper, | *117,617 | $\dagger \ddagger 908,432$ | 5,166 | 24,037 | 516,999 | 9,721 | 411 | 1,582,383 |
| Charlest' $n$, | 786 | 198,118 |  | $\cdots \cdots$ | 204,506 | 161 | 1,073 | 404,944 |
| E. Boston . | -••• | 101,144 | -•• | 2,867 | 99,071 | 328,689 | 3,555 | 535,326 |
| S. Boston . | 7,740 | 261,332 | - | 1,192 | 384,242 | 30,903 | 77,857 | 7 $\sim 3,266$ |
| Roxbury . | -6,559 | 172,46\% | -•• | 408 | 1,040,364 | 213,984 | 87,193 | 1,520,971 |
| W. Roxb'y. | - . . | 2,067 | -•• | - • . - | 591,386 | 627,669 | 21,347 | 1,242,469 |
| Dorchester, | - . . . | 74,594 | - . | -•••• | 898,129 | 539,925 | 62,877 | 1,575,525 |
| Brighton . | - • • | -•••• | - . | -•••• | 447,441 | 311,342 | 62,204 | 820,987 |
| Total . | 132,702 | 1,178,050 | 5,166 | 28,504 | 4,182,438 | 2,062,394 | 316,517 | 8,445,871 |

* Of this amount. $14,208 \mathrm{sq}$ yds. = asphalt blocks.
$\dagger$ Of this amount, $54,121 \mathrm{sq} . y \mathrm{ds}$. = granite-block paving on concrete, with pitched joints.
$\ddagger$ Of this almount, $14,342 \mathrm{sq}$. $\mathfrak{j} \mathrm{ds}$. = granite-block paving on concrete, with cement grout joiuts.
Total area of public streets, $8,445,87 \mathrm{l}$ sq. yds .

Edgestones and Sidewalks－New Edgestones．（Lin．ft．set．）

| Year． |  | 完 |  |  |  |  | $\frac{\dot{5}}{\frac{50}{0}}$ |  | E゙ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1891. | 8，236 | 22，693 | 11，724 | 4，131 | 18，138 | 4，617 | 2，032 | 2，227 | 73，798 |
| 1892. | 9，222 | 25，506 | 9，631 | 11，238 | 36，859 | 9，970 | 9，001 | 2，804 | 114，231 |
| 1893. | 1，118 | － 14,979 | 4，372 | 1，969 | 10，587 | 4，795 | 3，981 |  | 41，804 |
| 1594 | 1，916 | 39，324 | 521 | 816 | 6，544 | 1，568 | 1，323 | 694 | 52，706 |
| 1895. | 2，990 | 17，053 | 2，097 | 1，146 | 15，205 | 8，319 | 4，191 | 668 | 51，669 |
| Total | 23，482 | 119，555 | 28，348 | 19，300 | 87，333 | 29，269 | 20，528 | 6，393 | 334，208 |

New Brick Sidewalks．（Sq．yds．laid．）

| Year． |  |  |  |  |  |  |  | $\dot{5}$ 0 0 0 范 0 | \＃ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1891 | 3，881 | 9，098 | 3，628 | 2，176 | 1，478 | 967 | 377 | 120 | 21，725 |
| 1892 | 10，423 | 20，23］ | 4，484 | 12，847 | 10，462 | 2，905 | 1，068 | 3，451 | 65，871 |
| 1893 | 964 | 5，912 | 751 | 2，197 | 2，412 | 350 | －．． | 175 | 12，761 |
| 1894 | 1，537 | 11，533 | 2，706 | 2，115 | 453 | $83 \pm$ |  | 457 | 19，615 |
| 1895 | 4，103 | 6，246 | 1，946 | 1，151 | 2，146 | 1，734 | 2，908 | 408 | 20，632 |
|  | 20，908 | 53，020 | 13，505 | 20，486 | 16，951 | 6，790 | 4，353 | 4，591 | 140，604 |

## Full List of Streets now Paved with Trinidad Asphalt. City Proper.

| Name. |  | Length. Feet. | Area. Sq. yds |
| :---: | :---: | :---: | :---: |
| Albany st. | From East Concord st. to East Springfiel | 450 | 2,700 |
| Arch st. | From Franklin st, to Milk | 426 | 1,267 |
| Ash st. | From Beunet st. to Nassau st. | 230 | 409 |
| Barton court | From Brighton st. to Barton st. | 134 | 179 |
| Beacon st. | From Charles st. through Arling | 870 | 3,800 |
| " 6 | From Dartmouth st., within 150 ft . of Gloucester st. | 1,744 | 9,277 |
| " " | From 68 ft . of Gloucester st. to Massachusetts ave. | 1,019 | 5,391 |
| Bennet st. . | From 90 feet west of Harrison ave. to 162 ft . east of Washington st. | 180 | 300 |
| Bond st. | From Hanson st. to Milford st. | 192 | 410 |
| Brattle sq. | From Brattle st. to Elm st. | 281 | 670 |
| Brighton st. . | From Leverett st. to Allen st. | 845 | 1,737 |
| Brimmer et. | From Reacon st. to Pinckney st. | 1,094 | 3,272 |
| Central st. | From Broad st. to Kilb | 313 | 869 |
| Chambers at. | From Green st. through Poplar st. | 460 | 1,050 |
| ، | From Brighton st. to Charles st. | 271 | 589 |
| Charter st. | From Hanover st. to Uuity st. . | 318 | 636 |
| Cherry st. . | From Washington st. to Shawmut | 334 | 594 |
| Clarkst. | From Hanover st. toward North | 120 | 227 |
| Columbus are. | From B.EA. R.R. bridge through M | 3,505 | 15,578 |
| Congress sq. . . | From State st. throngh P. O. ave. | 110 | 160 |
| Cooper st. | From North Margin st. to Endicott st. | 166 | 516 |
| " ، | From Endicott st. to Charlestown st. | 200 | 600 |
| Court st. | From Washington st. to Court sq. | 231 | 642 |
| Court sq. | From Court st, to Court st. | 665 | 1,883 |
| Davis st. | From Washingtou st. to Harrison ave. | 323 | 646 |
| Dartmouth st. . | From Boylston st. to Newbury st. | 266 | 2,058 |
| Doane st. | From Kilby st. 10 Broad st. . | 312 | 624 |
| Edinboro'st. | From Essex st. to Beach st. . | 470 | 908 |
| Endicott st. | From Cooper st. through Thacher st. . | 312 | 1,005 |
| Exchange pl. | From Congress st. to Kilby st. | 244 | 678 |
| Groton st. | From Washington st. to Shawmut ave. | 335 | 558 |
| Hanover ave. | Erom Hanover st. to North st. | 307 | 266 |
| Harrison ave. | From East Newton st. to East Springfield st. | 626 | 1,850 |
|  | From East Springfield st. to Roxbury line | - | 130 |
| Hollis st. | From Tremont st. toward Washington st. . | 276 | 521 |

## Streets Paved with Trinidad Asphalt. - Concluded. City Proper.

| Name. |  | Length Feet. | Area. Sq. yds. |
| :---: | :---: | :---: | :---: |
| Hudson st. | From Beach st. to 90 ft . of Curve st. . . . . . . . . <br> ( Minus Kneeland and Harvard sts.) | 1,407 | 3,938 |
| Indiana pl. | From Shawmut ave to Washington s | 343 | 686 |
| Kilby st. . . . . . | From State st. to Milks | 648 | 2,628 |
| Malcolm st. . | From Mt. Vernon st. to Chestnut st. | 261 | 290 |
| Massachusette are | From T'remont st. to Columbus ave., S'ly road | 534 | 1,621 |
| " | From Tremont st. to Shawmut ave., " | 940 | 2,934 |
| " | From Shawmut ave. to Washington st. " | 710 | 994 |
| Moon st. | From between North square and Fleet st. . | 182 | 384 |
| North Bennet st. | From Hanover st. to Salem st. | 552 | 920 |
| North Margin . | From Thatcher st. to Stillman st | 295 | 1,157 |
| Oxford st. | From Beach st. to Essex st. | 432 | 735 |
| Parmenter st. | From Hanover st. to Salemst. | 279 | 764 |
| Pinceney st. | From Charles st. through Brimmer st. | 271 | 710 |
| Poplar st. | From Chambers st. to Charles st | 1,188 | 2,442 |
| Spring st. | From Poplar st. to Leverett st. . | 447 | 877 |
| Stillman st. . | From between Salem st. to Endicott st. (on cobble) . | 150 | 17 |
| Stoddard et. . | From Howard st. to Court st. (on cobble) | 135 | 150 |
| Sun-court st. | From North st. to Moon st. | 151 | 218 |
| Taylor st. | From Dwight st. to Milford st. | 193 | 300 |
| 'Ihacher st. | From Charlestown st. to Endicott st | 203 | 562 |
| Tileston st. | From between Hanover st. and Wiggin st. | 417 | 470 |
| Warrenton st. . | From Eliot st. to Tremont st. | 670 | 1,587 |
| " | From Shawmut ave. to Washington st. . | 468 | 91 |
| Water st. | From Congress st. through Batterymarch | 325 | 97 |
| Wiggin st. | From North Bennett st. to Tileston st | 107 | 11 |
| Whitmore st. | From Kneeland st. to Harrard st. | 250 | 418 |

South Boston.

| D st. . . . . . . | From West Fifth st. to Gold st. . . . . . . . . . . . | 126 | 448 |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: |
| E st. . . . . . . | From Third st. to Bolton st. . . . . . . . . . . . . | 111 | 419 |
| Rogers st. . . . . | From Dorchester st. to Preble st. . . . . . . . . . . | 360 | 480 |
| West Sixth st. . . | From west of C st. toward D st. . . . . . . . . . . | 95 | 316 |
| West Third st. . . | From west of E st. through E.st. . . . . . . . . . . | 185 | 769 |

Roxbury.

| Cabot st. . .... From Tremont st. to Vernon st. . . . . . . . . . | $\mathbf{1 , 9 5 5} \mid$ | 6,559 |
| :--- | :--- | :--- | :--- |

## Charlestown.

| Austin st. . . . From between Seminary pl. to Lawrence st. . . . . | $144 \mid$ | 421 |
| :--- | :--- | :--- | :--- | :--- |

## Streets Paved with Sicilian Rock Asphalt. City Proper.

| Name. |  | Length. Feet. | Area. Sq. yde. |
| :---: | :---: | :---: | :---: |
| Ashst. ............ | Nassua st. to Oak st. . .... . . . . . . . . . . . . . . . . . . . . . | 225 | 435 |
| Barton st., ......... | Leverett st. to Milton st. | 403 | 643 |
| Charles st. . . . . . . . | From between Revere st. to Cambridge st | 191 | 225 |
| Decatur st.......... | From Wrashington st. to Hurrison are................. | 370 | 781 |
| Dwight st........ | From Shawmutave. to Tremont s | 716 | 781 |
| Fabin st............ | From Newland st. to Ivanhoe st. | 422 | 615 |
| Fay st. | From Dover st. to Harrison ave. | 318 | 560 |
| Mason st. | From point 213 feet south of West street, a distance of 231 feet southerly. | 231 | 480 |
| Massachusetts ave.. | From Washington st. to Albany, Southerly roadway | 1,327 | 3,953 |
| Motte st.. | From Harrison ave. to Washington st. . . . . . . . . . . . . | 332 | 516 |
| Pemberton sq. | In front of Court-Hou | 323 | 1,365 |
| Prince st. | Hanover st. to Bennett ave | 285 | 638 |

## Solth Boston.

| Athens st.. . . . . . . . | From B st, to C st. | 515 | 746 |
| :---: | :---: | :---: | :---: |
| Athensst... | From Second st. to A st. | 616 | 916 |
| W. Broadway..... | From 206 ft . east of easterly line of Dorchester ave. to A st. | 350 | 1,944 |
| W. Broadway | From Gardner pl. to 150 ft . east. | 150 | 648 |

## Charlestown.

| Warren st.. | From Winthrop st. to Soley st. | 128 | 365 |
| :---: | :---: | :---: | :---: |

## Streets Paved with Granite Blocks, Pitch, and Pebble Joints, on an American Concrete Base. City Proper.

| Name. |  | Lengih Feet. | Area. Sq. yds. |
| :---: | :---: | :---: | :---: |
| Bedford st. | From Chauncy st. to Columbia st. | 480 | 1,650 |
| Cambridge st....... | From Bowdoin sq, through Joy st. | 721 | 2,347 |
| Causeway st........ | From Nashua st. to Haverhill st. | 692 | 3,807 |
| Chardon st. | From Bowdoin sq. to Merrimac | 738 | 2,578 |
| Charles st.......... | From Beacon st. to Pinckney st. | 964 | 3,856 |
| Charles st. | From Pinckney st. through Revere st., one side...... | 243 | 486 |
| Charles st.. | From between Revere st. to Cambridge st.. | 411 | 844 |
| Court st. | From Court sq. to Scollay sq. | 100 | 267 |
| Devonshire st. ..... | From State st. to Milk st.................................. | 650 | 2,133 |
| Eliot st......... . . . | From Washington st. to Pleasant st.................... | 1,183 | 4,634 |
| Exchange st........ | From State st. to Dock sq | 335 | 589 |
| Harrison are. ...... | From Beach st. toward Essex st. | 338 | 2,146 |
| India st. | From State st. to Central st. . . . . . . . . . . . . . . . . . . . . . . | 126 | 921 |
| Kingston st. ....... | From Summer st. to Bedford st | 308 | 933 |
| School st.. | From Washington st. to Tremont st.................... | 570 | 1,298 |
| Tremont st......... | From Scollay eq. to Boylston s | 2,826 | 12,675 |
| Washington st. .... | From Cornhill through Eliot st. | 3,504 | 12,967 |

## Streets Paved with Granite Blocks, with Portland cement, Gront and Pebble Joints, on American concrete base. City Proper.

| Name. |  | Length. Feet. | Area. Sq. yds. |
| :---: | :---: | :---: | :---: |
| Charles st.......... | From Pinckney st., through Revere st. | 243 | 486 |
| Charles st... | From Revere st. to Cambridge st. | 411 | 1,395 |
| Columbus ave...... | From Park sq., about 100 ft . beyond Ferdinand st. | 825 | 4,950 |
| Devonshire st. | From Milk st. to Franklin st. | 435 | 1,468 |
| Merchante row..... | From State st. to N. Market st. | 417 | 2,077 |
| Merchatts row.. | From N. Market st. to North st. | 152 | 397 |
| N. Market st. | At Merchants row | 95 | 465 |
| Summer st. | From Washington st. to Federal st | 1,529 | 1,918 |
| West st. | From Washington st. to Tremont st. | 486 | 1,186 |

The following statement of the City Engineer contains the main features of the special work of construction assigned to him by this department for engineering supervision :

> City of Boston, Engineering Department, $$
50 \text { City Hall, January } 31,1896 .
$$

Mr. B. T. Wheeler, Superintendent of Streets:
Sir: I herewith submit the following report of the work done under my direction for the Paving Division of the Street Department during the year 1895.

The work done is similar to that heretofore, with the addition of a large amount of work upon the five main avenues, the construction of which was authorized by the Legislature of 1895, Chapters 268 and 334, referring back to Chapter 323 of the Acts of 1891 ; namely, Blue Hill avenue, Columbus-avenue extension, Huntington avenue, Common-wealth-avenue extension, and Brighton avenue. These acts require the construction of sewers, gas, and water pipes in each avenue, with house connections for all abutting lots. The construction of these, together with other miscellaneous structures, such as water-main pipes, underground wires, and surface drains, intended to forestall the necessity for breaking up the surface of the finished street, require a large amount of labor to be performed before the surfacing of the street can be commenced.

In these avennes, a very large amount of this preliminary work has been done. Early in the year estimates were made of the cost of construction of these arenues, exclusive of sewers and land damages, upon a defiuite plan, and such rough grading as could be done in advance of sewer construction was commenced then as filst as the sewer construction was completed ; contracts were made for grading. The work of grading has been in progress during the winter, and with a single exception, all the rough grading contemplated at present is under contract and should be completed by .June 1, 1896. The exception referred to consists of about 20,000 cubic yards of surplus material on Blue Hill avenue opposite Franklin park. A part of this material can be used to supply a deficiency in Columbus avenue, and it is probable that the remainder can be used for contemplated improvements in the near vicinity.

## Blue Hill Avenue.

The portion of the avenue laid out under the act commences at Washington street or Grove Hall, and follows the course of the old Blue Hill avenue to the Neponset river at

TOWARD ROXBURY CROSSING,
AFTER REMOVAL OF BUILDINGS.

Mattapan, a distance of 2.86 miles, nearly in a straight line. The part between Washington and Walk Hill streets, a distance of 2.21 miles, has been ordered to be constructed. The part under construction borders on Franklin Park for a distance of 2,670 feet, and Framklin Field, a distance of 1,340 feet. It is 120 feet wide throughout, and will be built for the greater part of its length with two roadways, each 32.5 feet wide, a central reservation 25 feet wide for street-cars, and two sidewalks, each 15 feet wide. The sidewalk will have a loamed space 5 feet in width next the roadway, and the central reservation will be loamed and grassed.

In front of Franklin Park this construction will be varied and provision made for easy access to the park. The roadways are to be built of Telford macadam, with pared gutters, but with edgestone from Washington street to the circle at Talbot avenue only. Ten contracts for rough grading have been made, seven of which are not completed at this date. One of these contracts includes the road construction opposite the main entrance to Franklin Park, and calls for completion of this section by August 1, 1896.

Provision has been made for saving all stone suitable for use in constructing roadways, but a large part of the rock excavated is of such inferior quality as to be only suitable for filling. The estimated quantities of grading to be done under these contracts, and the corresponding cost of doing the work, is as follows:

| Earth excavation | . | $100,796.77$ | cubic yards. |
| :--- | :--- | :--- | :--- |
| Rock excaration | . | 28,600 | cubic yards. |

The average prices to be paid are as follows:
Earth excavation . . $\$ 0.356$ per cubic yard.
Rock excaration . . 1.023 per cubic yard.
The total amount paid to contractors for work done to February 1, 1896 , is $\$ 18,663.35$.

## Columbus Avenue Extension.

This avenue extends from Northampton sireet to Frank lin Park, by the way of Roxbury Crossing, along Pynchon to C'entre street, then through vacant land to and across Washington street and by way of Seaver street to Franklin Park, a total distance of 2.21 miles. It is generally 80 feet wide, and is to be built without a special reservation for a street railway. The section between Roxbury Crossing and Hog rridge is about 3,105 feet in length and includes the pres-
ent and prospective site of Stony brook; the improvement of the brook will necessarily precede the construction of the road, and, with the exception of the removal of the buildings, filling cellars, etc., no work has been or can be done at present. It is intended to pave this section with granite blocks. From Roxbury Crossing to the old part of the avenue, the roadway will be of asphalt. From Centre street to the park the roadway will be of Telford macadam. The only work done by this department has been the rough grading between Washington and Centre streets. A considerable part of the avenue will be in readiness for road-making on the opening of the working season, and with the exception of the Pynchon street section the work will be practically finished during 1896.

## Huntington Atenue.

This avenue extends from Copley square, along the line of the old avenue to Tremont street, and thence follows the former location of Tremont street to the Brookline line, at the Parkway, a distance of 2.25 miles. From Copley square to Massachusetts avenue, a distance of 3,240 feet, the boundary lines are unchanged, but the avenue will be rebuilt with a reserved space 25 feet wide for street cars, two roadways, paved with granite blocks, each 25 feet wide, and two sidewalks, paved with bricks, each $12 \frac{1}{2}$ feet wide. From Massachusetts avenue to Tremont street, a distance of 1.15 miles, the avenue is widened to 100 feet, laid out in the same manner and built with Telford macadam roadways and gravel sidewalks. The part of Tremont street renamed Huntington avenue, 2,563 feet in length, has been widened to a general width of 80 feet. In this section there will be no reservation for street-cars. Roadways will be built of Telford macadam, and the sidewalks, which will be 13 feet wide, will be built of gravel. The preliminary underground work is well adtvanced on this avenue, and it is expected that the surfacing can be begun early in the season. The work done ly this department was the resetting of the edgestones and the regulating of the sidewalks on the northerly side, between Copley square and Massachusetts avenue, and the depositing of about 10,000 cubic yards of filling between Gainsborough street and Longwood arenue. This will not complete the filling between these points, and the balance of about 15,000 cubic yards will be supplied from the surplus on the remaining parts of the avenuc. The gravel filling referred to is being furnished for $\$ 0.793$ per cubic yard, and the work will be completed in February, 1896.


COMMONWEALTH-AVENUE EXTENSION, - LOOKING EAST FROM THE HILL, NEAR NEWTON LINE.

## Brighton Avenue.

This avenue extends from Commonwealth avenue to Union square, Allston, a length of 0.67 miles. It is 100 feet wide, and will be built with a central reservation 25 feet in width for a street railway, two roadways, the northerly one 30 feet wide and the southerly one 25 feet wide, and two sidewalks each 10 feet wide. The roadways are to be built of Telford macadam.

Preliminary underground work is well advanced and the surfacing is under contract, conditioned to be completed on September 1, 1896. Amount paid to contractors for grading, ts) February 1, 1896, is \$2,467.63.

## Comionivealth Ayenue Extension.

('ommonwealth avenue has been extended from Chestnut Hill avenue, Brighton, to the Newton line, there connecting with the Newton boulevard; the extension is 0.71 mile in length and 120 feet in width. It is to be built with a central reservation 25 feet in width for a street railway, two roadways, the northerly one 25 feet wide and the southerly one 40 feet wide, and the two sidewalks each 15 feet wide. The roadways are to be huilt of Telford macadam. Four contracts for rough grading have been let, one of which is still unfinished. A large quantity of excellent stone for road construction has been found, and there will be a considerable surplus of stone and of loam available for other avennes. Trap rock of excellent quality is now being delivered at the city stone-crusher near by, and is being crushed and piled for future use. Eleven thousand one hundred and fifty cubic yards of surplus filling has been delivered on the adjoining section of Commonwealth avome. The rough grading, including rock excavation, will be completed early in the season, and it is expected that the underground work can be completed in time to allow of the entire completion of the arenue during 1896 . The total amount of earth excavation is estimated at 35,732 cubic yards, and of rock excavation at 9,200 cubic yards. Earth excavated and delivered within three-quarters of a mile has cost an average of $\$ 0.284$ per cubic yard: earth delivered on the adjoining section of Commonwealth avenue, hauled about one mile, has cost $\$ 0.228$ extra per cuhic yard for hauling. Rock excaration, including breaking, hanling, and piling, has cost an average of $\$ 1.30$ per culic yard measured in the cut. The total sum paid to the contractors for grading, to February 1, 1896, is $\$ 14,070.79$.

The table showing lengths and areas of paving on accepted
streets has been carefully revised and compared with the list of streets in Boston, published by the Street Commissioners. As has been before stated, there is and can be no complete and authoritative list of public streets in Boston. The older streets have become public in many instances without record, and frequently the status of streets and alleyways has been questioned in the interest of abutters. The manuscript list in this office, and from which the table has been made, is as nearly complete as it can be made at this date. In this connection it should be stated that 3,600 square yards of asphalt pavement, commenced (the concrete base only being laid) in 1894 and completed in 1895, have been credited to 1894 in the tables.

Block-stone pavement has been laid with concrete 6 inches thick with a cushion coat of sand about $1 \frac{1}{2}$-inches thick. The material used for filling joints, adopted by the Street Department, was pebbles and Portland cement grout. The cement grout has heen mixed with sand in varying quantities for experimental purposes. The proportion of one part cement to one-fourth part of fine house sand was found to give the best results, and was adopted for most of the work done. The quantity of cement used varied greatly on different jobs, the average of all work so done being 9.94 square yards of pavement per cask of cement, at a cost for cement of $\$ 0.231$ per square yard. The cost of filling joints in this manner has been about $\$ 0.20$ less than the sum paid in 1894 for pitch and pebble joints.

Strect paving, on old and new streets, has been supervised in all cases where requested, and the following quantities have heen laid under contracts supervised by this department:

Block-stone pavement, on a concrete base, laid with Portland cement grout joints, 14,428 square yards, at an average cost of about $\$ 4.25$ per square yard.

Block-stone pavement, on a gravel base, laid with Portland cement grout joints, $11,405.6$ square yards, at an average cost of about $\$ 3.10$ per square yard.

Block-stone pavement, on a gravel base, laid with gravel joints, 13,579 square yards, at an average cost of about $\$ 2.75$ per square yard.

Trinidad sheet asphalt, with a binder course of asphaltic cement concrete, on an American cement concrete base, $10,639.3$ square yards, at an average cost of about $\$ 3.65$ per square yard.

Sicilian rock asphalt, on an American cement concrete base, $7,293.7$ square yards, at an average cost of about $\$ 3.65$ per square yard.

Edgestones set, 36,093 linear feet; brick sidewalks laid, $20,621.5$ square yards; gravel sidewalks constructed, 1,835 square yards ; flagging crosswalks laid, 2,217 square yards.

The following is a statement of the streets paved and constructed, for which plans were made and grades given, and the work supervised:

Ash Street. - From Oak to Nassan street was paved by H. Gore \& Co. with Sicilian rock asphalt, with a base course of bituminous concrete on the existing cobble-stone pavement. Before putting down the base course, the old cobblestone pavement was relaid by H. Gore \& Co.

Barton Street. - From Leverett to Milton street was paved with Sicilian rock asphalt on an American cement concrete base. The old parement was removed and the subgrading was done by the Paving Division. The concrete base and asphalt surface was laid by the Boston Asphalt Company. The edgestones were reset and the brick sidewalks relaid by H. Gore \& Co. The pavement removed was old cobble-stones and granite blocks.

Billerica Street. - From Causeway to Minot street was paved with large granite blocks, on a gravel base, with Portland cement gront joints. The old pavement was removed and sub-grading done by the Paving Division. The roadway was paved, brick sidewalks relaid, and edgestones reset by A. A. Libby \& Co. The pavement removed was old cobble-stones.

Bond Street. - From Hanson to Milford street was paved with Trinidad asphalt, with asphaltic cement concrete binder on an American cement concrete base. The street was subgraded by the Paving Division. The concrete hase and asphalt surface was laid by the Barber Asphalt Paving Company. The edgestones were reset and brick sidewalks relaid by T. H. \& W. A. Payson. The former surface was macadam.

Brimmer Street. - From Beacon to Pinckney street was paved with Trinidad asphalt, with asphaltic cement concrete binder on an American cement concrete base. The subgrading was done by the Paving Division. The concrete base and asphaltic surface were laid by the Barber Asphalt Paving Company. Edgestones were reset, brick sidewalks and flagging cross-walks were relaid by T. H. \& W. A. Payson. The former surface was macadam.

Chambers Street. - From Brighton to Charles street was paved with Trinidad asphalt, with asphaltic cement concrete binder. That portion from Brighton street through Auburn street has an American cement concrete base ; that portion
from Auburn to Charles street was laid on old cobble-stone pavement. The concrete base and asphalt surface were laid by the Barber Asphalt Paving Company. Sub-grading was done by the Paving Division. Edgestones were reset, brick sidewalks and flagging cross-walks relaid by T. H. \& W. A. Payson. The former pavement was old cobble-stones.

Charles Street (easterly side). - From Pinckney to Cambridge street, including the easterly track of the West End Street Railway, and also the four-foot space between the tracks, was paved with large granite blocks, with Portland cement grout joints, on an American cement concrete base. The old pavement was removed and sub-grading done by the Paving Division. Concrete base and block paving was laid, edgestones reset, and brick sidewalks relaid by $H$. Gore \& Co. The former parement was old granite blocks. The West End Street Railway, by agreement, paid for the work done in their tracks. Work in front of the Eye and Ear Infirmary, which had been postponed on account of unfavorable weather the previous season, was completed. The crushed stone, which was used to make the street passable temporarily, was taken off and about four inches of the concrete base was remored and replaced with four inches of Portland cement concrete, on which $2 \frac{1}{2}$ inches of Sicilian rock asphalt was laid by H . Gore \& Co.

Charter Street. - From Unity street to Jackson avenue was paved with large granite blocks, on a gravel base, with Portland cement grout joints. The old pavement was removed and the sub-grading done by the Paving Division. The roadway was paved, brick sidewalks relaid, and edgestones reset by C. L. Ward. The pavement removed was old cobble-stones.

Columbus Avenue. - From Park square to heyond Ferdinand street was paved with large granite blocks, on an Americun cement concrete base, with Portland cement grout joints. The old parement was remored, the sulb-grading done, the concrete base laid, the roadway paved, edgestones reset, and brick sidewalks relaid by H. Gore \& Co. The West End Street Railway, by agreenent, paid for the work done in their tracks. Two new catch-basins were built. The former pavement was old granite blocks.

Devonshire Street. - From Franklin to Milk street was paved with large granite blocks, on an American cement concrete base, with Portland cement grout joints. The old pavement was barred out and loaded, the sub-grading was done, concrete base laid, the roadway paved, and flagging cross-walks laid by James Grant \& Co. The Paving Division
furnished teans for carting away surplas material. The former pavement was old granite hlocks.

Edinboro Street. - From Essex to Beach street was paved with Trinidad asphalt, with an American cement concrete base and asphaltic cement concrete binder, by the Barber Asphalt Paving Company. The sub-grading was done by the Paring Division. The edgestones were reset and brick sidewalks relaid by $P$. Brennan \& Co. The former surface was macadam.

Fubin Street. - From Newland to Ivanhoe street was pared with Sicilian rock asphalt, with an American cement concrete base, by the Boston Asphalt Company. The subgrading was done by the Paving Division. Edgestones were reset, brick sidewalks and cross-walks relaid, by H. Gore \& Co. The former parement was cobble-stones.

Mlarison Avenue (westerly side). - From about 85 feet south of East Newton street to about 100 feet south of East Springfield street, and (easterly side) from East Newton street, through Stoughton street, was paved with Trinidad asphalt, on an American cement concrete base, with asphaltic cement binder, by the Barber Asphalt Paving Company. The sul)-grading was done by the Paving Division. The former pavement was granite blocks.

Henchman Street. - From Charter to Commercial street was paved with large granite blocks, on a gravel base, with Portland cement grout joints. The sub-grading was done by the Paving Division. The roadway was paved, edgestones reset, brick sidewalks and flagging cross-walks relaid by J. B. O'Rourke \& Co. The former surface was macadam.

Lancaster Street. - From Causeway to Merrimac street was paved with large granite blocks, on a gravel base, with Portland cement grout joints. The sub-grading was done by the Paving Division. The roadway pared, edgestones reset, brick sidewalks and flagoing cross-walks relaid by Tohn Turner \& Co. The former parement was asphalt, so worn that the cobble-stones on which it was laid were exposed for large areas.

Massachusetts Avenue (sontherly side). - From W:ashington to Albany street was paved with Sicilian rock asphalt, on an American cement concrete base, by H. Gore \& Co. Work on the above, which had been postponed on account of unfavorable weather the previous season, was completed in June, 1895. A part of the asphalt surface, which was laid in 1894, was taken up and relaid, the surface of the concrete base scraped off and repaired, in part with Portland cement concrete, and in part with an asphaltum concrete binder.

Merchants Rox. - From State to North street was pared with large granite blocks, on an American cement concrete base, with Portland cement grout joints. The sul-grading was done by the Paving Division. The concrete base put down, paving laid, edgestones reset, brick sidewalks and flagging cross-walks relaid, by A. A. Libby \& Co. The former pavement was granite blocks.

North Margin Street. - From Thatcher to Stillman street was paved with Trinidad asphalt, on an American cement concrete base, with asphaltic cement concrete binder, by the Barber Asphalt Paving Company. The sub-grading was done by the Paving Division, edgestones were reset, and brick sidewalks were repaved by T. H. \& W. A. Payson. The former pavement was part cobble-stones, part old asphalt on cobbles, and part macadam.

Otis Street. - From Summer street to Winthrop square was paved with large gramite blocks, on gravel base, with Portland cement grout joints. The old pavement was barred out and loaded, the sub-grading was done, the roadway paved, and the flagging cross-walks relaid by James Grant \& Co. The Paving Division furnished teams for carting away the surplus materials. The former pavement was old granite blocks.

Oxford Street. - From Beach to Essex street was paved with Trinidad asphalt, on existing macadam, with asphaltic cement binder and base course, by the Barber Asphalt Paving Company.
l'inckney Street. - From Charles through Brimmer street was pared with Trinidad asphalt, on an American cement concrete base, with asphaltic cement concrete binder, by the Barber Asphalt Paving Company. The sub-grading was done by the Paving Division. The edgestones were reset, and the brick sidewalks repaved by T. H. \& W. A. Payson. The former surface of the street was macadam.

Prince Street. - From Hanover street to Bemnett avenue was paved with Sicilian rock asphalt, on an American cement concrete base, by H. Gore \& Co. The existing block pavement was removed, and the sub-grading done by the Paving Division. Edgestone were reset, brick sidewalks and flagging cross-walks were relaid by H. Gore \& Co. The old paving-blocks were used on Barton street and on Noyes place. The former parement was old granite blocks.

Spring Street. - From Poplar to Leverett street was paved with Trinidad asphalt, with asphaltic cement concrete base course and binder, on existing cobble-stone pavement, by the Barber Asphalt Paving Company. The edgestones were reset, and the brick sidewalks and flagging crosswalks
relaid by J. Turner \& Co. The former pavement was cobble-stones.

Summer Street (northerly side).- From Washington to Federal street, with the exception of a part at High street, was paved with large granite blocks; on an American cement concrete base, with Portland cement joints. The sub-grading was done by the Paving Division. The paving was laid, the edgestones reset, and the brick sidewalks and flagging cross-walks relaid by James Grant \& Co. By agreement, the West End Street Railway Company paid for 1,438.7 square yards, at the rate of $\$ 0.38$ per square yard; and the Edison Electric Illuminating Company paid for 936.3 square yards, at the rate of $\$ 0.38$ per square yard. The former parement was old granite blocks.

Tileston Street - From Salem to Wiggin street was paved with Trinidad asphalt, on an American cement concrete base, with asphaltic cement concrete binder, by the Barber Asphalt Paving Company. The sub-grading was done, the edgestones were reset, and the brick sidewalks relaid by the Paving Division. The former pavement was old cobblestones.

Warren Street (Charlestown). - From Winthrop to Soley street was paved with Sicilian Rock asphalt, on an American cement concrete base, by the Boston Asphalt Company. The sub-grading was done by the Paving Division. The edgestones were rest, the brick sidwalks and flagging crosswalks relaid by John Turner \& Co. The pavement removed was old granite blocks.

West Street. - From Tremont to Washington street was paved with large granite blocks, on an American cement concrete base, and Portland cement grout joints. The old payment was removed, the sub-grading done, the concrete base laid, the paving laid, the edgestones reset, the brick sidewalks and flagging cross-walks relaid by II. Gore \& Co. The former pavement was old granite blocks.

Whitmore Street. - From Kneeland to Harvard street was paved with Sicilian rock asphalt, on an American cement concrete base, by the Boston Asphalt Company. The subgrading was done by the Paying Division. The edgestones were reset and the brick sidewalks and flagging crosswalks relaid by H. Gore \& Co. The former pavement was macadam.

## New Streets.

Construction on the following streets has been done under Chapter 323 of the Acts of the Legislature of Massachusetts of 1891, and Acts in amendment thereof or in addition
thereto. Five of them ; namely, Boylston street, Ivy street, Norway, Parker, and St. Germain streets were commenced in 1894.

Boylston Street. - From Boyston road to Brookline line is about 2,070 feet long. The work of filling to sub-grade was begun on this street in 1894 and completed April 27, 1895 , at a total cost of $\$ 47,819.37$, at the rate of $\$ 0.62 \frac{1}{2}$ per cubic yard. The contractor was John O'Brien. No contracts have yet been made for constructing the street, as extensive sewer construction upon piles is in progress.

Harvard Avenue. - From Commonwealth avenue to the Brookline town line is about 550 feet long. The contract for constructing this anvenue was awarded to William Scollans. Work was commenced October 19, 1895, and completed December 21, 1895, at a total cost of $\$ 3,313.09$. This is a Telford macadam road, with gravel sidewalks; the base is eight inches and the surface four inches in thickness. Telford stone and crushed stone was furnished and delivered by the city; the edgestones were furnished by the city and hauled by the contractor.

Iey Street. - From St. Mary to Mountfort street, not including the Audubon road intersection, is about 772 feet long. Work was begun on this street in 1894 and completed June 15,1895 , at a total cost of $\$ 7,322.44$. It is a 6 -inch macadam road with brick sidewalks. The contractors were James Grant \& Co. Crushed stone was furnished and delivered by the city: the edgestones were furnished by the city and hauled by the contractor.

Kenmore Street. - From Commonwealth avenue to Newbury street is about 239 feet long. The contract for constructing this street was awarded to Doherty \& Connors. Work was begun July 22, 1895; and completed August 12, 1895, at a total cost of $\$ 974.23$. It is a 6 -inch macadam road with brick sidewalks. The crushed stone was furnished and delivered by the city; edgestones were furnished by the city and hauled by the contractors.

Norway Street. - From Massachusetts avenue to Falmonth street is about 610 feet long. The contract for constructing the street was awarded to Quimby \& \& Furguson. Work was begun May 21, 1895, and completed August 7, 1895, at a total cost of $\$ 3,162.27$. This is a Telford macadam road, with brick siderralks, the base is eight inches and the surface four inches in thickness. Telford stone and crushed stone were furnished and delivered by the city; the edgestones were furnished by the city and hauled by the contractors.

Parker Street. - From Huntington avenne 10 Westland avenue is about 1,687 feet long. Work was begun on this
street in 1894, as noted above, and completed June 19, 1895, at a total cost of $\$ 23,850.26$. The contractors were Doherty \& O'Leary. It is a Telford macadam road, with brick sidewalks; the base is ten inches and the surface six inches in thickness. The contractors furnished all materials used in constructing this street.

St. Germain Street. - From Missachusetts avenue to Dalton street is about 749 feet long. Work was begun on this street in 1894, and completed June 8, 1895, at a total cost of $\$ 4,923.36$. The contractors were Quimby \& Ferguson. It is a Telford macadam road, with brick sidewalks; the base is eight inches and the surface four inches in thickness.

Sherborn Street. -- From Commonweath avenue to Charles river is about 464 feet long. The contract for constructing this street was awiarded to Doherty \& Connors. Work was begun July 23, 1895, and completed October 5, 1895, at a total cost of $\$ 4,214.21$. This is a b-inch macadam road, with gravel sidewalks. In addition to the above work, a capstone and iron fence were placed upon the saa-wall at the river; the capstone was furnished and laid by Joseph Ross for $\$ 4.92$ per lin. foot for 64 feet, or $\$ 315$. The iron fence, built and erected by P. J. Dinn, for $\$ 118$, is 63 feet 9 inches long. Crushed stone was furnished and delivered by the city ; edgestones were furnished by the city and hauled by the contractor.

## Grading Street-Rallway Tracks.

The grades for tracks in the following streets have been determined and furnished to the street railway companies. On streets marked * the surveys were made and levels taken by the tailway companies.

## West End Street Rallway.

Battery Sireet. - From Commercial street to North Ferry. Brighton Avenue. - From Commonwealth avenue to Cambridge strcet.

* Brooliline Avenue. -From Longwood avenue to the Fenway.
* Caldwell, Perkins, and Brighton Streets (Charlestown). - From Main to Cambridge street.
* Chelsea Street (Charlestown). - From Bunl er Hill street to Vine street.

Columbus Arenue. - From Park square to heyond Ferdinand street.
*. Commonwealth Avenue. - From St. Paul street o beyoud Essex street.

East Sixth Street. - From N street to O street.
Harvard Avenue. - From Commonwealth avenue to Brookline line.

Huntington Avenue. - From 200 feet north of Vancouver street to beyond Longwood arenue.

Longicood Avenue. - From Autumn street to Huntington avenue.

Lowell Streel. - From Causeway street to Brighton street.

* Norfoll: Street. - From Washington street to the N. Y. \& N. E. R.R. bridge.

I' Street. - From Fourth street to Sixth street.

* Shawmut Avenue. - From Dover street to Roxbury street.
* Summer Street. - From Washington street to Kingston street.

S'ummer Street. - From Kingston street to Federal street.

* Warren Street. - From Dudley street to Grove Hall.

Washington Street. - From Parsons street to Oak square.

## Norfolk Suburban Street Railivay.

* River Street. - From Blue Hill avenue to the Lower Mills.

Lynn \& Boston Street Ratlway Company.

* Chelsea Street. - From Vine street to Scotts court.

Miscellaneous Work.
Ashmont Street and Dorchester Avenue Bridge. - Plan and proposed grades for additions to the bridge over the N. Y., N. H., \& H. R.R. (Old Colony System), necessitated by the construction of the Talbot-avenue extension.

Algonquin and Bradlee Streets. - Plan of proposed park curbing for planting space.

Sherborn Street. - Plans of proposed granite capstone for sea-wall, and also for iron fence.

Catch-Basins. - Details of coping and gutter stones for eorners, Bradlee pattern.

Riverside Gravel Bank, (Auburndale). - Plan and erosssection of bank for gravel used for filling on Boylston-street extension.

Harrison Avenue (From East Newton street to East Springfield street). - Plan showing limits of asphalt pavement under guarantee.

Commonwealth Avenue (at Washington street.) - Plan and eross-section of ledge for measurement.

Chelsea Street (at Scotts court). - Plan and profile showing grades of edgestone for the B. \& M. R.R. Company.

Surveys, plans, and estimates for improving and paving the following streets have been made:

Barton Street. - From Lowell street to Minot street.
Beacon Street. - From Arlington street to Dartmouth street.

Doane Street. - From Kilby street to Broad street.
Garland Street. - From Washington street to Shawmut avenue.

Harrison Avenue. - From Harvard street to Kneeland street.

Lowell Street. - From Causeway street to Brighton street.
Neubury Street. - From Arlington street to Dartmouth street.

Surveys and plans were made for work upon the following streets : grades and lines given, but the work of construction was not supervised by this department:

Austin Street (Charlestown). - From the Fitchburg Railroad track to the B. \& M. R.R. track was paved with large granite blocks on a gravel base with gravel joints.

Barrett Street. - From Fulton street to North street was paved with large granite blocks, on a gravel base, with Portland cement grout joints ; the old pavement was removed and the sub-grading done by the Paving Division. The roadway was paved, the edgestones reset, and the brick sidewalk relaid by A. A. Libby \& Co. The former pavement was of cobble-stones.

Barton Street. - From Leverett street to Lowell street was paved with granite blocks taken from Prince street and from part of Barton street. The blocks were laid on a gravel base with gravel joints. The old pavement was taken up and sub-grading done by the Paving Division. The roadway was paved, the edgestones reset, and the brick sidewalks relaid by J. Turner \& Co. The pavement removed was of old granite blocks.

Castle Street. - From Washington street to Tremont street was paved with granite blocks, on a gravel base, with Portland cement grout joints. The sub-grading was done by the Paving Division ; the roadway was paved, the edgestones reset, brick sidewalks and crosswalks relaid by James Grant \& Co. The old pavement was taken up and relaid.

Commonwealth Avenue. - From Cottage Farm bridge to Warren street, lines and grades were given and measurements made for a large amount of work done upon this part of the avenue by the Street Department.

East Eighth Street. - From H street to K street was paved with large granite blocks on a gravel base, with gravel joints. The sub-grading was done by the Paving Division. The roadway was paved, edgestones reset, brick sidewalks and cross-walks relaid by J. B. O'Rourke \& Co. Two new catch-basins were built. The former surface was macadam.

East Sixth Street (northerly side). - From N street to O street was paved with large granite blocks, on a gravel base, with gravel joints. The sub-grading was done by the Paving Division. The roadway was paved, edgestones reset, and the brick sidewalks and flagging crosswalks relaid by J. B. O'Rourke \& Co. The former surface was macadam.

Lewis Street. - From Commercial street to North street was pared with large granite blocks, on a gravel base, with Portland cement joints. The sulb-grading was done by the Paving Division. The roadway was paved, the edgestones reset, and the brick sidewalks and flagging cross-walks relaid by A. A. Libby \& Co. The former parement was cobblestones.

Maverick Street. - From Chelsea street to the B. \& M. R.R. crossing was paved with large granite blocks, on a gravel base, with gravel joints. The sub-grading was done by the Paving Division. The roadway was paved, the edgestones reset, and the brick sidewalks relaid by C. L. Ward. The former pavement was part cobble-stone and part macadam.

I' Street. - From Fourth street to Sixth street was paved with large granite clocks, on a gravel base, with Portland cement grout joints. The smb-grading was done by the Paring Division. The roadway was pared, the edgestones reset, and the brick sidewalks relaid by J. B. O'Rourke \& Co. The former surface was macadam.

The work done by the Surveying Division of this department, for the Street Department, has been almost exclusively in the giving of street lines and grades, for setting and resetting curbstone, laying brick sidewalks, and the measurement of the work so constructed, together with the measiurement of some granite paving-work, not supervised by this department, on Baldwin, Burbank, Bristol, D, Chambers, Merrimac, Oak, Richards, and Wapping streets.

The total amount of work measured by the Surveying Division for the Street Department during the year is as follows:


In addition to the work above described in detail, in the report of the City Engineer, street construction and resurfacing has been carried on by the permanent force of the Division and is given below by districts in the approximate order of construction.

## District No. 1.

South Boston.

| Street. | Limits. | Kind of Work. | $\begin{aligned} & \text { Length, } \\ & \text { Feet. } \end{aligned}$ | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| B st. | First to Tbird | Mac. | 500 | 2,146 |
| H st. | Sixth to Ninth | ، | 857 | 3,494 |
| D st. | First to Third | '6 | 500 | 2,017 |
| Seventh st. | I to K | " ...... | 644 | 2,561 |
| I st. | Sixth to Ninth . | " ...... | 857 | 3,365 |
| K st. | Seventh to water front | " ...... | 85: | 3,460 |
| Fifth st. | E to Dorchester ave. | "، ...... | 2,166 | 8,346 |
| Dexter st. | Ellery to Dorchester ave. | Grav. | 325 | 848 |
| Ellery st. | Dexter to Swett . . . . . . . . . . . | ، | 210 | 467 |
| Ward st. | Preble to Dorchester | " | 520 | 1,124 |
| Est. | Broaduray to Sixth. | Mac. | 891 | 3,494 |
| Eighth st. | E to D..... | ، | 520 | 1,600 |
| Sixth st. | B to Dorchester | 6 | 1,920 | 7,381 |
| Fourth | E to D. | / | 513 | 2,179 |
| C st. | Seventh to Baxter | '6 | 153 | 691 |
| Baxter | C to D. | Grav. | 541 | 1,278 |
| E st. | First to Broadway | Mac. | 867 | 3,405 |
| Baxter | D to E. | Grav. | 522 | 1,483 |
| Fourth | Dorchester to ladder-house | Mac. | 135 | 510 |
| $K$ st. | Fourth to Fifth. | 4 | 264 | 1,125 |
| Eighth st. | D to R.R. | " | 253 | 829 |
| Mt. Vernon st.. | Boston to Dorchest | " | 1,100 | 4,156 |
| Athens st...... | C to E. | " ...... | 864 | 1,248 |
| Silver st. | A to Dorchester | Grav. | 400 | 578 |
| Gold st. | E to F. | ، ...... | 512 | 825 |
| Silver st. | E to F. | "... | 513 | 826 |
| F st.. | Broadway to Eighth......... | Mac. | 1,606 | 6,067 |
| Baldwin st. | Granite to A................ . | Blocks on grav. .... | 253 | 731 |
| Gold st. | Dorchester to F | Mac. . . . . . | 553 | 799 |
| Emerson st.... | Dorchester to Third | ' | 307 | 1,159 |
| Richards st.... | Granite to A.. | Blocks on grav..... | 256 | 739 |
| Athens st. | Dorchester to F | Mac. . . | $75 \%$ | 1,086 |
| F st. | Broadway to Seco | " . . . . . | 597 | 2,383 |
| Athens st. | Second to A. |  | 617 | 916 |
| Third st.. | H to I. | Mac. ...... | 400 | 1,510 |
| D st. | Seventh to Eighth. | $\begin{gathered} \text { Blocks on } \\ \text { grav. .... } \end{gathered}$ | 294 | 1,337 |
| Congress st.... | B.B. ground to C........... | Graded and mac. . . .. | 1,250 | 6,945 |
| Second st. | L to O . | Mac. | 1,095 | 6,082 |
| Swett st....... | 120 ft . beyond Ellery to R.R. |  | 1,360 | 6,045 |
| Vale st. ...... | Burnham st. to Water. . . . . . | Graded and grav. .... | 345 | 997 |
| Total....... |  |  |  | 94,232 |


| ranite | 2.807 sq. yds . |  |
| :---: | :---: | :---: |
| Macadan | 82,083 | . |
| Asphalt. | 916 | ، |
| Gravel. | 8,426 | ، |

## District No. 2.

East Boston.

| Street. | Limits. | Kind of Work. | Length, Feet. | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Sumner and |  |  |  |  |
| Webster sts. | Over B., R.R., \& L. R.R. | Graded and grav. .... | 300 | 1,133 |
| Gove st. | Meridian to Chelsea | Grav....... | 605 | 2,017 |
| Paris st. | Gove st., 400 ft . easterly | .6 | 400 | 1,333 |
| Decaturst. | Havre to Border. | ، | 598 | 2,126 |
| Maverick st. | Meridian to Border | , | 1,006 | 3,466 |
| White st. | Meridian to Brooks | " | 817 | 3,440 |
| Marion st. | Meridian to Eutaw | ، | 750 | 2,583 |
| Marion st. | Eutaw to Lexington | " | 466 | 1,770 |
| Brooks st. | Trenton to Eagle. | ، 6 ..... | 772 | 2,745 |
| Brooks st. | Eutaw to White | '6 | 215 | 764 |
| Bennington st. | Chelsea to Byron. | Mac. | 3,680 | 14,030 |
| Blackinton st. | Leyden to Walley | Graded and grav. ... | 252 | 728 |
| Falcon st. | Brooks to Putnam | Mac. . . . . . | 686 | 2,592 |
| Eagle st. | Prescott to Putnam | Grav. | 510 | 1,907 |
| Condor st. | Meridian to Brooks | , | 843 | 3,185 |
| Saratoga st. | Putnam to Prescott | ' | 616 | 2,053 |
| Gladstone st... | At Walley $200 \mathrm{ft} .$. | '، .... | 200 | 578 |
| Walley st. . . . | Leyden to Gladstone | Graded and grav..... | 280 | 1,058 |
| Saratoga st.... | Chelsea to Moore. . . . . . . . . | Mac. . . . . . | 2,349 | 8,874 |
| Bennington st. | Byron to Winthrop Junction inclusive square | Graded and grav. ... | 3,751 | 14,135 |
| Walley st. . . . | Bennington to Leyden ..... | Graded and grav. ... | $1,111$ | 4,197 |
| Marion st. | Chelsea to Morris. . . . . . . . . | Grav. . . . | 147 | 555 |
|  |  |  |  | 75,269 |


| Macada | 25,496 sq. yds. |
| :---: | :---: |
| Gravel | .49,773 ، |
|  | 75,269 sq. yds. |

## District No. 3.

Charlestown.

| Street. | Limits. | Kind of Work. | $\begin{aligned} & \text { Length, } \\ & \text { Feet. } \end{aligned}$ | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Jenner st. | Bow to Front. | Mac. | 238 | 555 |
| Moulton st. | Bunker Hill to Bainbridge. | ، | 460 | 1,533 |
| Bainbridge st. | Decatur to Moulton. | " | 166 | 498 |
| Mishawum st. | Main to Rutherford ave | '6 | 336 | 859 |
| Hudsonst. | Chelsea to Water. | , | 272 | 423 |
| Belmont st. | Medford to Bunker Hill. | ، | 598 | 1,794 |
| Mill st. | Rutherford ave. to Hancock. . | ، | 420 | 947 |
| Monument sq. | (east side) | . | 465 | 1,757 |
| Alford st. .... | End of block pav. to Everett line $\qquad$ | Grav. | 2,114 | 7,249 |
| Winthrop st. . . | Warren to Monument sq | Mac. | 745 | 2,483 |
| School st. . . . | Main to Sumner st. | ، | 508 | 1,130 |
| Tibbetts Townway. | (entire length)............. | Graded and mac. ... | 423 | 705 |
| Corey st. | Moulton to Bedford. | Graded and mac. . . . | 727 | 1,616 |
| Bunker Hill st. | Main to Sackville. | Graded and mac..... | 2,050 | 9,200 |
| Foss st........ |  | Grav. | 321 | 1,038 |
| Wapping st. .. | Water to Chelsea. | Blocks on gravel... | 457 | 1,117 |
| Chelseast. .... | Vine to Medford. | Repaved blocks on grav, .... | 1,150 | 6,133 |
| Albion pl.. | (entire length) | Grav. | 347 | 887 |
| Essex st. . . . . | Rutherford ave. to junct. of Mill | Mac. . . . . | 794 | 2,661 |
|  |  |  |  | 42,585 |


| Granite blocks on gravel | 7,250 sq. yds. |
| :---: | :---: |
| Macadam | 26,161 sq. yds. |
| Gravel | 9,174 sq. yds. |
|  | $42,585 \mathrm{sq} . \mathrm{yds}$. |

## District No. 4.

Brighton.

| Street. | Limits. | Kind of Work. | Len gth, Feet. | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| N. Beacon st. | Union sq. to Market st. | Mac. | 3,280 | 12,978 |
| Western ave... | Market st. to Barry's corner. | " | 4,397 | 14,931 |
| Washington st. | Cambridge st. to Oak sq. .... | ، | 4,818 | 24,454 |
| Commonwealth avenue. | Cottage Farm to St. Paull st., south side. | Excav. and |  |  |
| Commonwealth avenue $\qquad$ | Cottage Fa | graded .. | 1,150 | 4,472 |
|  | north side ............. | Tel. mac.. | 1,000 | 5,000 |
| Fairbanks st... |  | Graded and grav..... | 1,183 | 3,418 |
| Winship st. | Union st. to W ashington st... | Mac. | 1,120 | 5,476 |
| Pomeroy st.... |  | Grav | 336 | 962 |
| Commonwealth avenue..... | Brighton ave. to Warren, west side | Tel. mac... | 4,700 | 13,578 |
| Commonwealth avenue ..... | Brighton ave. to Harvard ave., east side . . . . . . . . . . . . | " " | 1,905 | 5,503 |
| Commonwealth avenue..... | Harvard ave. to Allston, east side | Sub-graded. | 1,850 | 5,345 |
|  |  |  |  | 96,117 |



## District No. 5.

West Roxbury.

| Street. | Limits. | Kind of Work. | Length, Feet. | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| St. John st. . . | Centre to Rockview | Mac. | 958 | 2,446 |
| Ophir st.. |  |  | 549 | 1,403 |
| Danforth st. | (entire length) | " | 827 | 2,389 |
| Centre st.. | May to Allandale. | . | 3,520 | 10,169 |
| Paul Gore st... | Chestnut to Centre | '6 | 1,543 | 4,458 |
| Boylston st.... | Centre to Lamartine |  | 2,611 | 6,648 |
| Orehard st.... | (entire length). | Grav. | 1,566 | 4,524 |
| Pond st... | May to Orehard | Mac | 1,335 | 3,918 |
| Catharine st... | (formerly Spruce st.), st. widened.. | ، ...... | 895 | 2,585 |
| March ave. | Bellevue to Park......... | ، ${ }^{\text {a }}$...... | 493 | 1,041 |
| Wren st.. | Rutledge to Oriole | ' | 1,257 | 3,631 |
| Bellevue st... | Centre to Oriole. | Grav. | 2,231 | 6,445 |
| South st... | So. Walter to Wash | Mac. | 2,100 | 7,940 |
| Allandale st... | Centre to Sprague estate | Grav. | 300 | 867 |
| Lamartine st... | At Boylston, widening.. | Mac. | 180 | 680 |
| Green st. . | -R.R. to Washington... |  | 778 | 2,247 |
| Glen road..... | Washington to Forest Hills. | " | 565 | 1,632 |
| South Fairview st. |  | Filled and graded... | 806 |  |
| Bellevue st | Oriole to Martin |  | 1,145 | 3,308 |
| Maple st. |  | Mac. | 1,989 | 5,525 |
| S. Walter st... |  | $\begin{gathered} \text { Graded and } \\ \text { grav..... } \end{gathered}$ | 538 | 1,586 |
| Hewlett st. |  | Filled and graded. | 1,677 | 4,888 |
| Burrst.. | Boylston to Spring. | Grav. | 577 | 1,474 |
| Centre st. | Paul Gore to Burroughs | Mac. | 3,535 | 15,711 |
|  |  |  |  | 97,867 |



97,867 sq. $y$ ds.

## District No. 6

Dorchester.

| Street. | Limits. | Kind of Work. | Length, Feet. | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Pearl st. | Pleasant to Dorchester ave. | Mac. | 796 | 1,808 |
| Taylor st | Neponset ave. to Rice st. | ، | 550 | 1,100 |
| Thornley st. | Pleasant to Dorchester ave... | ، | 785 | 2,206 |
| Rockwell st. | Milton ave. to Washington .. | ، | 1,290 | 4,873 |
| Lyndhurst st... | Washington Allston. | '6 | 1,254 | 3,623 |
| Adams st...... | Codman to beyond Minot.... | ، | 1,050 | 4,400 |
| Tremlett st. | Hooper to Waldeck. | ، | 573 | 2,340 |
| Kenwood st. | Washington to Allston | ' | 1,292 | 3,733 |
| Walnut st. | Ericson to R.R. | ، | 1,624 | 4,400 |
| Bicknell st. | Harvard to White | ، | 648 | 2,450 |
| Faulkner st. | entire length . | Graded | 509 | 1,301 |
| Pleasant st. | Thornley to Town-Meeting sq. ............................ | Mac. | 1,540 | 6,300 |
| Wrentham st. | (entire length) | ، 6 | 1,019 | 2,944 |
| Bruce st. | from Wrentham. | ، 6 | 518 | 1,500 |
| Wheatland ave. | Whitfield to R.R. | ، | 830 | 3,400 |
| Spencer st. | Park to Wheatland | '6 | 657 | 1,898 |
| Millet st. . | 500 feet from Wheatland | , | 500 | 1,445 |
| Edson st. | Norfolk to Milton ave | " | 1,189 | 3,435 |
| Maxwell st. | Milton to Capen | ، | 940 | 2,716 |
| Capen st. | Norfolk to Evans | " ${ }^{6}$...... | 664 | 1,918 |
| Evans st. |  | Graded | 2,354 | 6,800 |
| Greenheys st. | (entire length) | Mac. | 404 | 1,167 |
| Salcombe st. . |  | Graded | 735 | 1,961 |
| Talbot ave. | Welles ave to Washington.. | Tel. mac.. | 1,220 | 6,777 |
| Adams st... | Meeting-House Hill to Field's Corner | Mac. | 2,316 | 6,381 |
| Ashmont st.... | West from Adams . . . . . . . . | d | 300 | 1,000 |
| East Cottage st. | Dorchester ave. to TownMeeting sq. | ، | 578 | 2,184 |
| Dudley st. . . . | Stoughton st. to R.R. . . . . . . | , | 1,020 | 4,533 |
| Morton st. | Oakridge to River st. | , | 1,645 | 5,061 |
| Melville st. . | Dorchester ave. to Washington. | ، | 2,924 | 11,046 |
| McLellan st. . . | Eric ave. to White | Graded and stoned . . . | 780 | 2,053 |
| Oakland st. | Mattapan sq. to R.R........ . | Widened and graded, | 1,300 | 4,911 |
| Quincy st. | Blue Hill ave. to Columbia .. | Mac. . . . . . | 2,642 | 7,632 |
|  |  |  |  | 119,896 |



[^4]
## District No. 7.

Roxbury.

| Street. | Limits. | Kind of Work. | Length, Feet. | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Ruggles st. | Parker to Cabot. | Mac. | 3,140 | 11,862 |
| Warren st. | Haywood to Savin | ، | 255 | 1,615 |
| Culvert st. | Tremont to Cabot | ، | 630 | 1,820 |
| Woodbinest. |  | '6 | 1,060 | 3,062 |
| Warwick st. | (entire length) | Grav. | 1,266 | 3,946 |
| Quincy st.. | Blue Hill ave. to Warren. | Mac. | 1,226 | 4,198 |
| Gaston st.. | Blue Hill ave. to Warren. . . | " | 1,0`3 | 3,042 |
| Burney st..... | 'Tremont to Delle ave....... | Filled and . graded. | 305 | 881 |
| Eldora st. |  | Grav....... . | 440 | 1,124 |
| Madison st |  | Mac. | 481 | 1,051 |
| Sunset st. | Hillside to Parker Hill ave. . | Grav. | 413 | 1,055 |
| Sterling st. | Westminster to Shawmut av. | Mac. | 430 | 1,624 |
| Hammond st. | (entire length) | Grav. | 1,120 | 4,230 |
| Humboldt ave. | Townsend to Waumbeck | Mac. | 975 | 4,333 |
| Vine st....... |  | ، | 581 | 1,678 |
| Greenville st. . | Winthrop to Dudley | ، | 903 | 2,408 |
| Prescott |  |  | 316 | 702 |
| Morley st. |  | Grav. | 334 | 592 |
| Adams st. | Dudley to | Mac. | 780 | 2,340 |
| Leon st. |  | ، | 355 | 790 |
| Hazelwood st.. |  | " . . . . . | 379 | 971 |
| Lawn st. . |  | Grad. and grav. . . . | 1,454 | 4,202 |
| Maywood st... |  | Mac. | 1,267 | 3,660 |
| Ottawa st. |  | " | 735 | 2,123 |
| Glenwood st. |  | Grav. | 523 | 988 |
| Hunneman st. . | Harrison ave. to Washington. | Graded and mac...... | 511 | 1,473 |
| Sachem st. |  | Grav. | 350 | 1,011 |
| Judson st. | Julian to Cottage | Mac. | 410 | 1,184 |
| Weston st. | Cabot to Tremont. | " | 368 | 1,022 |
| Maple st. | At Georgia. | " | 190 | 549 |
| Townsend st. | Harold to Warren | '، ...... | 1,845 | 5,330 |
| Fenno st. . |  | Graded and Grav. ... | 394 | 876 |
| Bower st. | Humboldt ave. to Warren... | Mac. | 1,130 | 3,264 |
| Walnut ave | Townsend to Ruthven. | ، . .... | 1,665 | 6,839 |
| Tabor st...... | Harrison ave. to Winslow.... | '" ...... | 225 | 500 |
| Washington st. | Bartlett to Guild. . | Rep'd, blks. on grav.. | 590 | 1,967 |
| Buena Vista st. |  | Mac. ...... | $\because 00$ | 445 |
| Cunard st..... | Tremont to Cabot. | Graded and Mac. . . . | 188 | 710 |
| Windsor st.., | Cabot to Warwick . . . . . . . . | Mac. | 661 | 608 |
| Parker st...... | Tremont to Parker Hill ave.. | " , ..... | 1,495 | 3,748 |
| Tremont st.... | W alpole to Coventry, west side | Rep'd, blks. on grav. | $322$ | 787 |
| Thorndike st.. |  | Mac. ...... | $612$ | 2,312 |
|  |  |  |  | 96,925 |

| Granite | 2,754 sq. yds. |  |
| :---: | :---: | :---: |
| Macadan | 75,266 ${ }^{\text {6 }}$ |  |
| Gravel. | 18,024 ' | 6 |
| Grading | 881 " | ، |

## District No. 8.

South End.

| Street. | Limits. | Kind of Work. | Length, Feet. | $\begin{gathered} \text { Area } \\ \text { sq. yds. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Massachusetts ave. ...... | Shawmutave. to Washington, | Mac. | 360 | 978 |
| Massachusetts ave.......... | Columbusave. to N.Y., N.H., \& H. R.R. $\qquad$ | ، | 480 | 3,695 |
| Massachusetts ave.......... | Harrison ave. to Washington | ، | 688 | 2,030 |
| Massachusetts ave.......... | Harrison ave. to Albany | " ...... | 618 | 1,820 |
| Oak st. | Albany to Mudson . . . . . | Blocks on gravel .. | 145 | 419 |
| Waltham st. | Tremont to Harrison ave. | Mac. . . . | 1,370 | 4,846 |
| Clarendon st... | Tremomt to Warren ave.. | " | 385 | 1,711 |
| Montgomery st. | Tremont to Clarendon | " | 230 | 870 |
| W. Newton st. | Columbus ave. to R.R....... | " . . . . . | 1,467 | 5,613 |
| Bristol st. ..... | In front of engine-house.... | Blocks on gravel . . | 100 | 290 |
| Chandler st. | Columbus ave. to Berkeley | Mac. | 1,103 | 4,955 |
| Hanson st. |  | ، | 628 | 2,093 |
| Bradford st |  |  | 586 | 1,270 |
| E. and W. Canton sts. ..... | (entire length) | ".... | 3,624 | 13,005 |
| Burbank st. .. |  | Blocks on gravel .. | 72 | 160 |
| Warren ave. | Columbus ave. to Berkeley . . | Mac. . . . . | 2,355 | 13,750 |
| Milford st. |  | "، ...... | 640 | 2,133 |
| Pembroke st. . |  | ، | 1,453 | 5,489 |
| Norfolk ave. | Magazine to Cottage . . . . . . . | , | 2,472 | 7,099 |
| Compton st.... | Washington to Shaw mut ave. | Blocks on gravel .. | 308 | 960 |
| Lincoln st. | Essex to Tufts, repaved | Blocks on gravel .. | 211 | 938 |
| Flagg st....... |  | Grad. and grav. ... | 457 | 812 |
| Essex pl... | Repaved | Blocks on gravel .. | 194 | $3 \bullet 3$ |
| Buckingham st. |  | Mac. . . . . | 627 | 1,602 |
| Wellington st.. |  |  | 449 | 1,650 |
|  |  |  |  | 78,506 |


| Granite blocks on gravel | 2,930 sq. yds. |
| :---: | :---: |
| Macadam . | 74,764 ، ${ }^{\text {a }}$ |
| Gravel. | 812 " ${ }^{\text {a }}$ |
|  | 78,506 sq. yds. |

## District No. 9.

Back Bay.

| Street. | Limits. | Kind of Work. | Length, Feet. | Area sq. yds. |
| :---: | :---: | :---: | :---: | :---: |
| Newbury st.... | Arlington to Massachusetts ave. | Mac. | 4,742 | 18,968 |
| Beacon st. | Arlington to Dartmouth. . . . | ، | 1,652 | 9,466 |
| St. James ave. |  | ، | 1,118 | 4,184 |
| Raleigh st.. | Beacon to Charles river | ، | 320 | 956 |
| Boylston st.... | Arlington to Clarendon. | " | 1,200 | 6,700 |
| Mas sachusetts ave. | Harvard Bridge to N. Y., N. H., \& H. R.R. | " | 3,929 | 26,382 |
| Dartmouth st.. | Commonwealth ave. to Newbury | ، | 278 | 2,162 |
| Dartmouth st.. | Boylston to Warren ave. .... | ، | 2,190 | 10,770 |
| Westland ave.. | Massachusetts ave. to Parker st. | ، | 1,056 | 6,336 |
| St. Stephen st. | Massachusetts ave. to Gainsboro' | '6 | 588 | 2,221 |
| Trinity sq. . . . | St. James ave. to Huntington ave. | " | 360 | 1,180 |
| Marlboro' st... | Arlington to Fairfield, sides only | ، | 3,732 | 8,300 |
| W. Newton st. | N. Y., N. H., \& H. R.R. to Huntington ave. | ، | 580 | 2,191 |
| Francis st. . | Huntington ave. to Brookline st. | " | 1,540 | 5,820 |
|  | Westland ave. to Boylston... | " | 1,040 | 3,930 |
| Longwood ave. | Brookline ave. to Parkway.. | ، | 847 | 3,011 |
|  |  |  |  | 112,577 |

Macadam
112,577 sq. yds.

District No. 10.<br>West and North Ends.

| Street. | Limits. | Kind of Work. | Length, Feet. | Area, sq. yde. |
| :---: | :---: | :---: | :---: | :---: |
| Blossom st. | Cambridge to Parkman | Mac. | 360 | 1,080 |
| Spruce st. . | Beacon to Chestnut | "6 ..... | 283 | 566 |
| Chambers st. | Ashland to Poplar | Blocks on gravel... | 355 | 710 |
| Derne st. | Temple to Bowdoin | Mac. . . . . | 150 | 317 |
| Allston st. | Bowdoin to Somerset | '، | 353 | 1,068 |
| Bowdoin st. | Cambridge to Bulfinch | ‘، | 275 | 839 |
| Chestnut st.. | Charles to Walnut | '6 | 1,015 | 3,158 |
| Temple st. | Cambridge to Derne | '6 | 614 | 1,296 |
| Staniford st. | Cambridge to Green | ، | 450 | 823 |
| Sheafe st. | Salem to Snowhill | 6 | 454 | 807 |
| Walnut st. | Beacon to Mt. Vernon. | 6 | 463 | 1,132 |
| River st. | Chestnut to Mt. Vernon | ، | 260 | 578 |
| Mt. Vernonst. . | Charles to Brimmer. | ، | 450 | 1,650 |
| Joy st. | Beacon to Myrtle | " . ..... | 765 | 1,785 |
| Merrimac st... | Chardon to Staniford. | Blocks on gravel... | 712 | 2,373 |
| Mt. Vernon st. . | Joy to Walnut | Mac. | 300 | 850 |
| Bowdoin st. | Beacon to Bulfinch. | ، | 1,005 | 2,154 |
| Ashburton pl. . | Bowdoin to Somerset. | ، | 338 | 858 |
| N. Grove st. . . | Cambridge to Fruit | " | 525 | 1,667 |
| Beaver st. |  | ، | 164 | 474 |
|  |  |  |  | 24,185 |



A general recapitulation of the work for the year gives the following result:

| Granite blocks on concrete, cement grout joints. | 14,428 | square yards. |
| :---: | :---: | :---: |
| Granite blocks on gravel, cement grout joints. | 11,405.6 | ، 6 |
| Granite blocks on gravel, gravel joints (inc. gutters), | 79,055.6 | 6 '6 |
| Round blocks on gravel, gravel joints (gutters).... | 32,941 | " |
| Asphalt on concrete | 19,230 | 16 " |
| Telford macadam surface | 41,945 | 6 6، |
| Other macadam surface | 649,123 | " ${ }^{6}$ |
| Gravel surface | 108,793 | ، ${ }^{6}$ |
| Filled and graded only | 34,962 | " |
| Edgestone set and reset | 165,475 | lin. feet. |
| Brick sidewalks laid and relaid | 92,992 | square yards. |
| Artificial stone sidewalks laid. | 12,295 | " ، |
| Crosswalks laid | 2,217 | ، 6 |

Details of expenditure, income, and operation will be found in Appendix C.

## Street Openings.

A fertile source of annoyance to the travelling public, the real-estate owner and this department, is the subject of street openings. The recent acts by which streets are constructed and assessed upon the abutters, provide that servicepipes for sewer, water, and gas shall be laid to the sidewalk line, and that the street shall not be again opened for the space of two years, "except in case of obvious necessity." An ordinance of the city of Boston provides that when about to construct or resurface a street, the Superintendent shall give notice to all persons authorized to place any structure in such street, and after the completion of the work shall not permit an opening to be made therein for the space of one year, "except in case of obvious necessity."

It is apparent at once that the construction of the words 'obvious necessity" must be a much disputed subject.
There is still a larger number of streets, which have no legislative protection, but whose constant reopening and repair of surface thereafter is a continual drain upon the public treasury.

The landholder, who is about to construct a building, and who claims not to have seen the published notice, requires water, gas, and sewer connections, and while in most cases he has been careless or indifferent in providing himself with these necessities to a tenantable building, the blame is usually charged to the contractor or to some one for whom the owner does not feel personally responsible; and a claim is made that no encouragement is given for the development of property and increased taxation if the owner is compelled to hold his property useless for a year or a portion thereof.

There is a certain claim of right in this, and it may be said that real-estate owners have a right to these necessities at all reasonable seasons of the year; granted that such openings should be permitted in a newly surfaced street, some method other than those at present in vogue must be employed to protect the department and the tax-payer against increased outlay and expense on this account. The difficulty is not that the corporation or persons so opening cannot, but that they do not replace the pavement in as good condition as when originally laid.

The remedy, then, seems to be, that every party, having the right to open the streets, be required to make a deposit with the City Treasurer, upon which this department may draw for the expense in making the pavement good with its own force, and that this deposit be renewed from time to time as required by the department, no permit being issued
until such deposit is made. This, in itself, would have a salutary effect in causing the exercise of greater care in complying with the regulations of the department, and would make it possible to restore the surface to its original condition without expense to the department and the public.

In an attempt with the authority the department now has to get the best results possible from the work of the companies opening the streets, the following regulations and instructions were issued:

## CITY OF BOSTON.

## Street Department - Paving Division. Instructions for Inspectors.

Inspectors are to be appointed by the Superintendent of Streets, and are to have charge, under the direction of the Deputy Superintendent of the Paving Division, of all openings made in, and obstructions of, the public streets of the City of Boston, by corporations having the right to lay, maintain, or repair rails, wires, pipes, or conduits therein.

Inspectors are to be paid by the corporation whose work they have in charge at the rate of $\$ 3.00$ per day of nine hours. When their services are required for ten hours, they are to receive 30 cents for the tenth hour ; for all time over this, and for all work on Sundays and holidays, they are to receive "time and a half," or 45 cents per hour. When corporations are excavating trenches orer time, they will not require the service of an Inspector; but when they are back-filling or surfacing the street, the Inspector must be present.

The Inspector must make a daily report, in writing, to the Deputy Superintendent of the Paving Division of the work of which he is in charge; and he must also be on. his work from 7 A.M. to 5 P.M. There is to be only one Inspector on a trench, and he is to be held responsible for the condition of the trench.

In the refilling of trenches the best of the excavated material is to be carefully replaced in the trenches, and thoroughly consolidated by ramming.

Paved Streets. - The trenches are to be refilled and paved to an even longitudinal grade, and in case this metbod leaves any sags or depressions in the existing roadway, within a distance of ten from the side of the trench, such sags are to be taken up and repaired with material of the same character and quality. If any of the paving stones are broken, or are unfit for use, they must be replaced with large granite blocks of the standard specifications of the Street Department.

Macadam Streets. - The trenches are to be refilled to an even longitudinal grade, and all macadam material is to be replaced on top of the trench; and in case the macadam has been wasted, or is insufficient to make a depth of eight inches, new crushed stone is to be furnished. In case this method leaves sags or depressions in the present roadway, within a distance of ten feet from the side of the trenches, such sags are to be refilled with crushed stone, and the whole surface of the trench and the sags which bave been refilled are to be covered with gravel binder, thoroughly wet down, and rolled to a hard, uniform surface.

The above directions apply also to gravel streets, except that a good quality of coarse gravel shall be used instead of broken stone.

The above directions apply to all ordinary work; and inspectors are to carefully examine all permits that are granted for opening trenches,
in order to see whether they contain special instructions for doing the work; and in case such special instructions are given, the Inspectors are to see that they are carefully followed.

The Inspectors can allow parties opening streets under a permit to tunnel under crossings; but after the pipes are laid and the back-filling commences, the Inspectors must see that the tunnel is broken down, and the crossings carefully relaid.

In case any corporation refuses to obey these instructions, the Inspector on the work is to take the permit, and report to the Deputy Superintendent of the Paving Division; and this shall be a revocation of the company's right to open the streets.

> B. T. Wheeler,
> Superintendent of Streets.

Boston, June 5, 1895.
Twenty thousand four hundred and forty eight ( 20,448 ) permits were granted during the past year to open streets. The excavations made under these permits aggregate 266.4 miles in length, and show the extent of this work.

The Street Department has been accustomed to grant to the various gas and other companies, whose work wonld in certain cases admit of no delay, a so-called "emergency permit," which allowed excavations to be made without special permission being obtained, the only requirement being that a daily return of openings made under this form of permit shonld be forwarded to the office of the superintendent.

Five thousand and ninty four $(5,094)$ openings of an average length of six feet each were made under "emergency permits" for breaks in water and gas pipes which were alleged to require immediate attention. These openings were made under 106 permits.

In addition to the above permits, various other permits have been issued to pedlers, mechanics, and others, for different purposes, fifteen thousand eight hundred and thirty six $(15,836)$ in number; making the total number of permits issued thirty six thousand two hundred and eighty four $(36,284)$.

## Smoke Nuisance.

A review of the work of the past year, in enforcing the statutes for the abatement of the smoke nuisance in the City of Boston shows very good results not alone in the adoption of many patent devices and the use of smokeless fuels, but since the passage of the new law, operative on July 1, 1895, owners of estate have shown a very liberal spirit in the matter. This is mainly due to the persistent work of the observers and the almost constant patrolling of the city, which is divided into districts, more especially the congested or business portion. This section of the city has been receiving
special attention, the observers patrolling some part of it every day, and so fimiliar have they become with the condition and location of the various stacks that any slight change is immediately noticed and steps are at once taken to find out the causes. This diligence on the part of the observers has resulted in the discovery of two places using a cheap and inferior grade of fuel, presumely on trial.

It was formerly the custom to bring the complaints to the attention of the engineer in an effort to keep them within bounds, but of late these complaints have been brought directly to the attention of the owners, and frequent visits have resulted in changes which have been very beneficial to the community and in the direction of economy.

While the work performed by the observers and the frequent visits to the owners has had a most salutary effect, and tends to keep in check a great deal of carelessness heretofore exhibited by the stokers, yet the increased consumption of coal, made so by the additional demands on the plant, and in some cases, the addition of work beyond the capacity of the boilers, makes the usefulness of the patrol system more and more pronounced.

During the past year 11 complaint notices were served and 12 inspections made, making a total of 330 notices served and 312 inspections completed. This shows 18 more notices served than inspections made, which may be classified as follows: Error, 1; duplicates, 2; refused to give information, 3 ; moved or closed down, 12 .

In the latter part of 1894, it was very evident that the law of 1893 , Chap. 353, entitled "An Act to Abate the Smoke Nuisance in Large Cities," was rery lenient, and to say the least, somewhat inoperative, in view of which the matter was taken up by many merchants doing business in the central section of the city, who were affected by the then existing smoke nuisances, and a bill embodying their ideas was submitted to the Legislature of 1895 , and was referred to the Committee on Cities. After a two days' hearing, the Merchants Association, being represented by Hon. A. E. Pillsbury, the soft coal dealers and consumers by Mr. E. W. Burdett, and the City of Boston by Corporation Counsel A. J. Bailey, the committee reported a bill - House Document, No. 1048 - now known as Chap. 389, entitled "An Act to Abate the Smoke Nuisance in the City of Boston." This Act was signed by the Governor in the latter part of May, to take effect July 1.

Immediately following the passage of said Act, the chief inspector waited upon the owners or representatives of a number of boiler plants that were likely to become amenable to
the law, sooner or later, when the demand on their plant should happen to be increased, and called their attention to the new law, and of the intention of this department to strictly enforce the same.

The success of this method of notification was very gratifying, as in nearly every case visited a disposition was shown to comply with the law, either by the adoption of a smokeconsuming device or a change of fuel; in some cases it simply requiring a closer attention to the boilers, and a change in the method of firing by the stoker. In some instances the owners were willing to subject themselves to considerable expense, that they might, as law-abiding citizens, contribute to the public comfort and general cleanliness of the city.

The boiler plants, the owners or representatives of which have been interviewed in relation to the new law, are as follows:

Badger, W. F., 535 Albany street.
Bogart Laundry, Florence street, Roslindale.
Boston Belting Company, Elmwood street.
Boston Globe, Washington street.
Boston Herald, Washington street.
Boston \& Albany R.R. (Mr. Taft), Chandler st.
Boston \& Albany R.R. (Mr. Taft), Lehigh street.
Boston \& Maine R.R. Electric Light Station, Minot street.
Boston Towboat Company, Border street, E. B.
Briggs, Hoffinan, \& Co., 31 Batterymarch street.
Brigham \& Co., 386 Tremont st.
Carter Building, Water street.
Castle Square Theatre (Mr. Savage), Tremont street.
City Hospital, new (Mr. A. Shuman), Albany street.
City Laundry, Lenox street.
Claflin, Young, \& Stanley, 107 Kingston street.
Cobb Boston Tea Company, Court street., cor. Cornhill.
Cold Blast Distilled Water Company, 140 Oliver street.
Cotting, C. U., agent (Mr. Pope), 27 Brattle square.
Court-House (Mr. Stebbins, superintendent), Pemberton square.
Dammerall, J. W., 94 High street.
Dana Estes, \& Co., 196 Summer street.
Dwinnell, Wright, \& Co., 1 Hamilton street.
Edison Electric Illuminating Company, Hawkins street.
Exchange Building (Mr. Pope), 53 State street.
Guyer Hat Company, 132 Hampden street.
Hancock Inspirator Company, Watson street.
Hall, C. E., \& Co., 69 Charlestown street.

Hathaway Buildings (Mr. Whittier), 612 Atlantic avenue and 176 Summer street.
Holmes de Blanchard, 39 Charlestown street.
Hotel Reynolds, 623 Washington street.
Houghton \& Dutton, Tremont street.
Howard Watch Company, Hampden street.
Johnson, H. A., \& Co., 81 Commerce street.
Jordan, Marsh, \& Co. (Mr. Waters), Washington street.
Kelley, Henry (Mr. Farrow), 175 Dudley street.
Keyes, B. B., 9 Quincy row.
Knight, A. A., 10 India street.
Krey \& Co., 28 School street.
Locke \& Knox, 226 Congress street.
Merchants National Bank, 28 State street.
Marston \& Co., Brattle street.
Millen, C. A., 24 Beverly street.
Mills, W. \& Co., 227 Washington street.
Minot \& Co., 3-9 Randolph street.
Moulton Café, 24 Summer street.
Mudge \& Son, 24 Franklin street.
Murray, B. H. (Drake's Mill), Border st.
New England Conservatory of Music, Newton street.
Oak Grove Artificial Ice Company, Ruggles street.
Oriental Tea Company, 89 Court street.
Paine Furniture Company, 48 Canal street.
Park Building (Mr. Pope), 2 Park square.
Paul, J. F., \& Co., 373 Albany street.
Perry, A. W., Sullivan place.
Pfaff, H. \& J., Pynchon street.
Pickett \& Son, 74 Broad street.
Pray, J. H., Sons \& Co., 646 Washington street.
Priest, C. M., 102 Dartmouth street.
Quincy House, Brattle street.
Riding Academy, Parker street.
Roessle Bros., Pynchon street.
Rogers Building, 209 Washington street.
Rogers, Burdett, \& Co., 146 Franklin street.
Robbins, N., estate, 251 Causeway street.
Sammett \& Son, 154 Hanover street.
Sears Estate, 41 Arch street.
Shepard, Norwell, \& Co., Winter street.
Shoe and Leather Exchange, Bedford street.
Sheplie DeL. \& Co. (Mr. Pope), 131 Kingston street.
Smith Building (Turkish baths), Court square.
Smith's Brewery, Marginal street, E. B.
Standard Nipple Company, 434 Atlantic avenue.
Sturtevant Mills, Border street, E. B.

Sullivan, W. J., Swett street.
Swain, Earle, \& Co., 67 Commercial street.
Tufts, J. W., \& Co., 96 Portland street.
United States Hotel Company (Mr. Chapin), Lincoln, cor. Tufts street.
University Building, Milton place.
Waitt, James T., 519 E. Eighth street, S. B.
Weeks, W. B. P., High, near Oliver street.
West End Power Station, Albany street.
Wood, A. M., 51 Beverly street.
Young, G. W., Albany, cor. Dedham street.
Of the above, the Cobb Boston Tea Company, City Hospital (new), J. W. Dammerall, Moulton Café, Pigott \& Son, C. M. Priest, G. W. Sammett \& Son, and United States Hotel Company, adopted the use of hard coal. Smoke-consuming devices were adopted by the following : Boston Globe, Briggs, Hoffman, \& Co., Dwinnell, Wright, \& Co , Guyer Hat Company, Hollis Cold Storage, Houghton \& Dutton, Hutchins Church Organ Company, Krey \& Co., H. \& J. Pfaff, A. W. Perry, Rich Building, Nathan Robbins estate, Sears estate, 41 Arch street, Shepard, Norwell, \& Co., R. H. White \& Co., and G. W. Young.
H. \& J. Pfaff and Shepard, Norwell, \& Co were equipped with a fire brick arch furnace, known as the "Central Draft Furnace," and in both plants the device was short-lived. G. W. Young, who burns mainly shavings, equipped his plant of two boilers with the "Lord Device," a steam and air arrangement, and the device not proving satisfactory has since been ordered out. Smith's Brewery, Marginal street, East Boston, was equipped with the "Andrews Hot Air Device," and a recent visit to the plant found it burned out. A. W. Perry, Sullivan place, was equipped with a patent deflector inserted in the smoke-flue, and the same has been recently taken out.

In addition to the above work, the observers were notified to report all upright boilers used by contractors, if burning soft coal. When these were found on principal thoroughfares, the owner's attention was called to the new law, and also to the menace and nuisance likely to exist, and they invariably adopted the use of hard coal, that being particularly adapted to the upright type. Among these notified were the three subway contractors, Messrs. Jones \& Meehan, Mr. Everson and Mr. Shaw, John S. Jacobs \& Son, C. H. Williams, and Mr. Carson, Chief Engineer of the Boston Transit Commission.

## Observations.

A large number of short observations, covering only a few firings, have been taken by the observers on various plants throughout the city since the passage of the new law, with a view of getting violators of the five-minute clanse. When a violation is found, the attention of the boiler-plant owner is called to it, and assurances are received that the matter will receive his earliest attention. Other observations have been made at the request of boiler-plant owners, who having equipped their plant with devices, and before accepting the same, wished the city to pass upon them. These latter observations with reports are on file.

## Nova Scotla Coal.

The following table shows the number of tons and value of importations of Nova Scotia coal recorded at the port of Boston for the year ending Jan. 31, 1896, no coal being received from Feb. 1 to July 31.


Apparently this coal in the main is sold outside the city limits, and the few plants in this city who have been found using it are located in out-of-the-way places, and are mixing it with hard coal screenings.

Regllations covering Permits for New Boilers.
As a result of our standing objection, filed with the Building Departmemt, 135 boiler applications have been received and disposed of as follows:

House-heating furnaces and hot-water heaters (hard
coal) . . . . . . . . 60
Signed to use hard coal . . . . . . 39
Adopted devices . . . . . . . 13
Gas and other engines . . . . . . 9
Granted by department pending objections, two of which were for heating and three sulstitutes 8

| Unsigned | - | . | - |
| :---: | :---: | :---: | :---: |
| Applications withdrawn |  |  |  |
| Screenings and soft coal mixed | - | - |  |

According to a recent ruling of the Corporation Counsel arrangements have been made for filing objections in each individual case with the Building Commissioner, and the boiler permit will not be granted until objection is waived by this department or objections overruled by the Board of Appeal. (Chap. 419, Acts of 1892.)

## Special Reports.

March 1. Report on attachment of Smith Setting under boilers on Devonshire Building, Devonshire, corner State street.
March 7. Report on complaint against C. M. Priest, 102 Dartmouth street.
March 14. Report on boiler plant connected with the Boston Water Board, 710 Albany street.
April 12. Report with observations on plant of the D. S. McDonald Company, rear 50 Winter street.
April 16. Report on boiler plant, Milton place, owned by the Boston University.
April 26. Report on device in usc at Hollis Cold Storage, 20 North street.
May 3. Report on Church Cleansing Company, Kemble street, Roxbury ; Monlton Café, 24 Summer street, and W. J. Sullivan, Swett street.

May 21. Report on Sears estate, 41 Arch street.
June 27. Report on hoisting boilers owned by John S. Jacobs \& Son and Jones \& Meehan.
June 27. Report on Vieth's Spa, Washington street, corner Boylston square; Sears estate, 41 Arch street; Mudge \& Son, Franklin street; E. F. Crosby, 470 Harrison avenue.
June 27. Report on complaint made by the secretary of the Exchange Club, Milk street.
June 28. Report on Houghton \& Dutton, Tremont street. July 12. Report on J. W. Dammerall, 94 High street.
July 24. Report on City Laundry, Lenox street.
July 24. Report on Boston Towboat Company and Murray's Planing Mill, Border street, East Boston.
July 31. General Report.
August 8. Report on Boston Gaslight Company, Commercial street.

August 9. Report on Guyer Hat Company, 132 Hampden street.
August 12. Report on complaint against Wm. Mills \& Co., 235 Washington street.
August 15. Report on Sears estate, 41 Arch street.
August 26. Report on Boston Bolt Company, 29-33 Purchase street.
September 6. Report, with observations, on Houghton \& Dutton, Tremont street.
October 7. Report on C. M. Priest, 102 Dartmonth street.
October 28. Report, with observations, on Sears estate, 41 Arch street.
November 13. Report on Beacon Lamp Company, Parker, near Haviland street.
December 2. Report on complaint of Bamber, Jacobs, \& Louis, 31 Otis street.
December 2. Report, with observations, on W. H. Elliott, Oak square, Brighton.
December 14. Report on complaint against Owen Nawn, Paul Gore street, Jamaica Plain.
January 21, 1896. Report, with observations, on Boston Gas Company, Commercial street.
January 22. Report on Boston \& Maine Electric Light Station, Minot street.
January 27. Report, with observations, on Sears Building, Washington, corner Court street.

SANITARY DIVISION.

The work of the Sanitary Division includes the removal of house-offal and the removal of house and store dirt and ashes, accumulated from the burning of materials for heating buildings and for domestic purposes.

The following table shows the amounts expended for the maintenance of the Sanitary Division for the past five (5) years:


But few complaints have been received concerning the failure of the division to promptly remove offal and ashes; investigation of these has usually shown that either offal has not been properly separated from ashes or other refuse, as is insisted upon by the department, or else that the receptacles were deposited in some inaccessible place, or were larger than the ordinances provide and the regulations of the department permit.

In order that householders might understand these regulations, and that easy access would be given employees to the receptacles, and the work not unnecessarily delayed, the following circular was issued:

CITY OF BOSTON.
Street Department - Sanitary Division.
Notice to Householders.
Attention is called to the following sections of the revised ordinances of the City of Boston:

## CHAPTER 43.

Sect. 14. No person shall keep in his house, or on his land, any house-offal, unless the same is placed in a suitable ressel, free from ashes and other refuse matter, and so placed as to be easily remored.

Sect. 17. No person shall place or keep, in or near any building, ashes or cinders in such a manner as to be liable to cause fire, nor mix them with other substances, nor place or keep them except in metallic vessels, so placed as to be easily removed.

The regulations of this department require that all receptacles for ashes or offal, shall be placed either at the curbstone or in an easily accessible place on the level of the lot on which the building stands.

Employees of this department are not supposed to enter cellars, cellarways, areas, or bulkheads, for the removal of ashes or offal.

The use of receptacles larger than an ordinary flour barrel is strictly prohibited.

> B. T. Wheeler,
> Superintendent of Streets.

During the past few years the shops of the division at the South Yard had been almost entirely discontinued. These have now been reëstablished with competent mechanics upon the same basis as any journeyman shop in the city, and the repairs and some constructive work of this and other divisions has been done cheaply and well.

To the operation of these shops and the methods established there, is due in large measure the decreased expense of operating this as well as other divisions of the department. These consist of a wheelwright and blacksmith shop, paint shop, harness shop, and horse-shoeing shop, and a statement of the work performed will be found later in Appendix D.

The following table shows the number of loads of offal collected and removed in the last five (5) years, since reorganization as a division by the Street Department:

## Anount of House-offal Removed.



Each load of offal is equivalent to fifty-seven (57) cubic feet and has a maximum weight of one and one-half ( $1 \frac{1}{2}$ ) tons tons at certain seasons of the year.

The above table does not include previons to the year 1893 the amount collected by contract in East Boston and Brighton, which amounted to about 5,100 loads per year. Of the amount ( 51,327 loads) collected during the year 1895, 3,732 loads were collected by the East Boston contractor, 1,419 loads were collected by the Brighton contractor, and 4,179 loads were collected by the Dorchester contractor, and 517 loads were collected by the West Roxbury contractor, leaving 41,480 loads collected by city teams.

The collection of this material is attended to in winter by an average regular force of 77 city offial carts and 169 men, and on contract work 16 offal carts and 32 men; making a
total of 93 offal carts and 201 men. At different times, and especially in summer, an approximate extra force of 21 teams and 42 men are employed.

The disposal has been made during the year in the following manner: The offal from the markets, and offal that is decayed, is put on board a scow and towed to sea; the offal of Charlestown is taken to the yard at Malden bridge and there disposed of to farmers; the offal of East Boston is collected by contractors, and is removed to Revere; the offal of the City Proper and South Boston is conveyed to the yard at the South End, and disposed of to farmers, who remove it daily; the offal of Roxbury and a part of West Roxbury is conveyed to the yard on Highland street, and disposed of to farmers ; a portion of the collections of West Roxbury is collected by contract and removed to Needham; the offal of Brighton is collected by contract and disposed of outside of the district ; the offal in Dorchester, commencing January 21, 1895, was delivered to the New England Construction Company, at its plant on Gibson street, under a contract made July 25, 1894, for reduction and final disposition; teams which had made the collection formerly, under a contract which was rendered void upon the operation of this plant, were hired by the day, and this continued until the complaints of the residents of the locality caused the plant to be adjudged detrimental to the public health, after an examination by the Board of Health, and the process was discontinued on April 18, 1895; since that time the offal has been collected by a contractor, who in turn sells it to farmers from his own offal-sheds near Commercial Point.

Collection and Disposal of Offal.

| Year. | Total amount collected. |  | Amount sold. |  | Amount dumped on scow and towed to sea or wasted. |  | Per cent. wasted to total collection. |  | Amount of receipts from sales. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $1891{ }^{1}$ | 42,616 | oads. | 40,492 | oads. | 2,124 | oads. | 5 per | cent. | \$30,672 65 |
| $1892{ }^{2}$ | 46,343 | " | 30,773 |  | 15,570 |  | 33 " | * | 21,282 82 |
| $1893{ }^{3}$ | 46,276 | " | 30,824 |  | 15,363 |  | 30 " | " | 20,790 03 |
| 1894 * | 42,082 | " | 37,057 |  | 5,025 | * | 12 " | " | 26,262 40 |
| $1895{ }^{5}$ | 41,480 | " | 36,620 |  | 4,860 |  | 12 " |  | 27,37447 |

[^5]The following table shows in convenient form the full force engaged in the collection of offal alone throughout the entire city :

The Force Employed.

| City Force. |  | Hired teams. | Contractors' Teams. |  |  |  | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | E. Boston. | Brighton. | Dorch'ter. | W. Roxbury. |  |
| Sub-Foremen...... | 2 |  | . $\cdot$. | . |  |  | 1 | 3 |
| Inspectors......... | 5 | ........ | 1 | 1 | 1 | ............... | 8 |
| Offal Clerks....... | 1 | . $\cdot$....... |  |  |  | . | 1 |
| Teamsters. . . . . . . . | 68 | 7 | 6 | 2 | 6 | 2 | 91 |
| Helpers . . . . . . . . . | 72 | 7 | 6 | 2 | 6 | 2 | 95 |
| Dumpers.......... | 3 |  |  |  |  |  | 3 |
| Totals........... | 151 |  | - 13 | 5 | 13 | 5 | 201 |

The experiment in the disposal of offal which resulted in the construction of the reduction plant of the New England Construction Company, demonstrated that public opinion will not permit the establishment of such a process in a settled portion of the community. The representatives of other processes, both of reduction and incineration, claim them odorless and unobjectionable, but even if this be true in itself, their establishment must result in the concentraltion of the offal collection at this point. When the present methods of disposal become detrimental to the health of the community, or are made impossible by legislative enactment, the plant of the process adopted should be located upon some island in the harbor, and the collection should be made in covered cans or detachable wagon bodies, and delivered on the water front at many and widely distributed points; it could then be taken by scow to the point of final disposition without rehandling, and the most objectionable feature of garbage collection thus obviated.

## Removal of Ashes and House-Dirt.

The removal of ashes, house and store dirt has been attended to during the year by a minimum force of 223 men and 93 city carts, also by 6 carts with an East Boston contractor, 5 carts with a South Boston contractor, 10 carts with a Dorchester contractor, and 3 carts with a West Roxbury contractor. At different times, and especially during
the winter months, an additional force of 37 teams and 74 men are employed.

This work shows a constant increase from year to year, as will be seen in the following table, and is an indication of the actual growth of the city :

Amount of Ashes, House and Store Dirt Removed.

Year.
1891 (13 months)
No. of Loads. 1892
1893
1894
1895
313,464
303,878
320,571
326,798
336,886

Each load of ashes contains about 40 cubic feet.
The following table shows in convenient form the force engaged in this collection throughout the entire city :

The Force Employed.

| City Force. |  | Hired 'Teams. | Contractors' Teams. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Total. |
| sub-Foremen . . . . . | 3 | -••• | - • | - . | -•• | -•• | 1 | 4 |
| Inspectors. . . . . . . . . . | 8 | -••• | 1 | 1 | $\cdots$ | 1 | - . - | 11 |
| Tallymen . . . . . . . . . . | 2 | - •• | - • | -•• | -•• | - . | - . | 2 |
| Teamsters . . . . . . . . . . | 93 | 37 | 5 | 5 | 5 | 6 | 3 | 154 |
| Helpers . . . . . . . . . . . . | 96 | 37 | 5 | 5 | 5 | 6 | 3 | 157 |
| Dampers . . . . . . . . . | 21 | - • • | -•• | -•• | -•• | -•• | -•• | 21 |
| Total . . . . . . . . . | 223 | 74 | 11 | 11 | 10 | 13 | 7 | 349 |

Comparative Statement of Number of Loads of Ashes Collected during 16 Weeks of the Summer and 16 Weeks of the Winter.

| Summer. |  |  |  | Loads. <br> 76,625 | Winter. |  |  |  | Loads. | Difference for Winater |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May | 2, 1891, to |  | 21, 1891 |  | Oct | 31, 1891, to |  | 19, 1892 | 100,223 | 23,598 |
| Apr. | 30, 1892, '6 | ' | 19,1892 | 82,034 | " | 30, 1892, '6 | ، | 12, 1893 | 166,772 | 24,738 |
| " | 29, 1893, '6 | 6 | 18, 1893 | 91,721 | 6 | 28, 1893, " | ، | 16, 1894 | 106,851 | 15,130 |
| " | 27,1894, '6 | " | 16, 1594 | 88,865 | " | 25, 1894, " | " | 7,1895 | 116,915 | 28,050 |
|  | 26,1895, " | " | 15, 1895 | 94,671 | " | 18, 1895, " | 6 | 6,1896 | 121,873 | 27,202 |

Final Disposition of all material collected from February 1, 1894, to February 1, 1895 , together with the portion of street-sweepings and cesspool-dirt, disposed of for other division by the Sanitary Division is shown in the following table :

|  | Amount <br> collected. | Deposited <br> on low <br> lands. | Towed <br> to sea. | Collected <br> by con. <br> tractors. | Sold to <br> farmers. |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | Loads. | Loads. | Loads. | Loads. | Loads. |
| Ashes, house and store dirt . | 336,886 | 180,347 | 103,501 | 53,038 |  |
| House-offal . . . . . . . | 51,327 | $\ldots . .$. | 4,860 | 19,847 | 36,620 |
| Steeet-sweepings . . . . . | 34,468 | $\ldots . .$. | 34,468 |  |  |
| Cesspool dirt . . . . . . . | 1,758 | $\ldots .$. | 1,758 |  |  |

${ }^{1}$ This amount is included in the amount collected, 51,327 ; of the 9,847 loads, 3,732 were collected in East Boston, 1,419 in Brighton, 4,197 in Dorchester, and 517 in West Roxbury.

The total expenditures of the division, including work done for other divisions and paid for by them, was
\$465,188 88
Less amount so repaid . . . . . 32,34036

$$
\$ 432,778 \quad 52
$$

Cash paid and bills rendered to City Collector, 42,985 53
Net cost of maintenance of Sanitary Division,
February 1, 1895, to January 31, 1896 . \$389,792 99
Details of expenditures, income, and operation will be found in Appendix D.

## Comparative Table Showing Net Cost of Maintenance of the Sanitary Division to the City of Boston.

|  | Expended. | Jncome. | Net cost to City |
| :---: | :---: | :---: | :---: |
| 1891 (13 months) ${ }^{1}$ | \$509,342 24 | \$45,485 29 | \$463,856 95 |
| 1892 | 46!,370 74 | 36,426 16 | 432,94458 |
| 1893 | 481,300 63 | 32,056 27 | 449,244 36 |
| 1894 | 467,459 02 | 42,320 55 | 425,638 47 |
| 1895 | 432,778 52 | 42,985 53 | 389,792 99 |

[^6]
## SEWER DIVISION.

The maintenance force of this division is engaged in the operation and repair of the Main Drainage Works, at Old Harbor Point and Moon Island, as well as the repair and care of the entire sewer system of the city, including the flushing and cleaning of sewers and catch-basins.

The following table shows the amounts expended from the maintenance appropriation of the Sewer Division for the past five (5) years:


The past year has been one of such unnsual activity that the amount of sewer construction in 1894, previously the largest in the history of the division, has been exceeded in the number of lineal feet of sewer built by over fifty per cent. ( $50 \%$ ).

The city has built with its own labor and by contract 139,200.09 linear feet of sewers, and designed and inspected 36,287.35 linear feet for private parties building under release; making a total for the year of $175,487.44$ feet, or over thirty-three miles. The total mileage of sewers now built is 416.45 , of which 22.93 miles are intercepting sewers. Many new catch-basins and culverts have been built and old ones repaired. Over sixteen miles of sewers have been cleaned and flushed, and $18,264.25$ cubic yards of sludge removed from various catch-basins.

All sewers, with four exceptions, when the law under which they were constructed permitted, have been built by department day labor' the sewers in all streets laid out under Chap. 323 of 1891 , and Acts amending and referring thereto, including "The Boulevards," have been built by contract, as well as all surface drains, catch-basins, and house connections therein, which will ever be required, carrying the latter to within the curb-line.

In addition to the $7 \frac{1}{3}$ miles of boulevard, requiring two sewers, with house comections and a surface drain with con-

necting catch-basins for nearly the entire distance, sewers, with house drains, or surface drains, or both, have been constructed in the following "Board of Survey" streets, so called :

Abbotsford strect, Bay State road, Brighton avenue, Granby street, Greenbriar strect, Geneva avenne, Harvard avenue, Josephine street, Kenmore street, Lauriat avenue, St. Alphonsus street, and Sherborn street.

## Surface Drainage.

The attention of the City Government and the public is again called to the subject of surface drainage and the necessity for legislation to protect natural water-courses from obliteration. It is unfortunately the fact that private interest is rapidly filling up these outlets which Nature provided for the surface drainage of the water-sheds, and considers itself injured when flooded thereby in time of storm; connecting the City of Boston in some unaccountable way with the injury, and unfairly demanding the construction of catchbasins for this flow to be connected with the public sewers.

A portion of the article on "Surface Drainage" published in the report of last year seems worthy of reproduction in an attenpt to bring forcibly to public attention the necessity of immediate legislative action :
"While the sewers in the City Proper, East and South Boston, and Charlestown are, in the main, large enough to carry both the sewage and surface water, those of the outlying districts are altogether too small to take the surface water, the areas to be drained being enormonsly larger than in the districts first mentioned. As the sewer system has been extended, year by year, into these outlying districts, the sizes designed have been but little larger than what was necessary to serve the needs of the district at the time of building. For many reasons this policy has been unavoidable; the size of oulets limits the size of extensions, and scarcity of funds often makes it imperative to build a sewer smaller than good judgment would dictate, in order to reach some community where the public health is endangered for lack of sewerage.
"In many cases it would be not only financially impracticable but would show bad business judgment to sink large sums of money in building sewers large enough for all time, when the development of the district is uncertain or likely to be slow. The result of these various causes is, that the sewer system in Dorchester, West Roxbury, Brighton, and parts of Roxbury, while large enough in general to take care
of the honse sewage and the street-water during light rains, is totally inadequate to carry off the surface-water of heavy rains.
"The state of things is growing constantly worse as the city grows, because, as new streets and houses are built, the proportions of impervious service from which the rain runs off rapidly, is being increased, calusing the rainfall upon any given area to be concentrated and discharged in less time than in former years.
"The inadequacy of the sewer systems to carry the stormwater becomes, therefore, more apparent every year as this change in the character of the surface of the ground goes on. It is also apparent that it becomes correspondingly important to preserve and improve the natural water-courses to serve as carriers of the bulk of these floods, as the alternative to this is practically to rehuild the whole sewer system of the suburban districts upon a larger scale.
"In other words, we shall be compelled to regard our sewers as part of a partially separate system, although they were built and have been used upon the combined principle.
"By confining the sewers to the duty of carrying the house sewerage and the discharge from a limited number of catchbasins only, they will prove in most cases large enough, while the natural water-courses, supplemented by surface drains in the streets, will have to be developed into a system for carrying away the storm-water.
"It is also important to keep as much surface-water as possible out of the sewer system, for the additional reason that all water, whether sewerage or rain water, has to be lifted by the pumps of the intercepting system.
"But however much those whose business it is to care for the city's interest may be impressed with the importance of preserving the water-courses, it is very difficult to impress the general public with its importance. This department is constantly involved in contests with land-owners who are filling up and obliterating these water-courses, heedless of well-defined channels or conspicuous strect culverts. And here comes in play that discouraging phase of human nature, in consequence of which men, who are honorable in their dealings with their fellows, seem to be able to make use of a much lower code of morals when they come to deal with that impersonal entity called the city.
"Although it may be explained to them that their course will entail upon the city in a fer years an enormous expense for rebuilding the sewers of larger size, and although the law is perfectly clear that no man has a right to obstruct a
natural water-course and thereby damage his neighbor, still their personal gain outweighs these theoretical considerations, and they will persist in obliterating the channel, and will bring every political and other influence to bear to the end that the water which should flow in that channel be turned into the sewer, and have in many cases sncceeded.
"No one can pretend that the land speculator suffers any hardship by not being allowed to improve his lot in this manner, because the depreciation in the value of the land caused by the presence of the water-course has undoubtedly been discounted in the purchase price in every transfer through which it has passed, and certainly no one can claim that he has any moral right to the increment of value added thus at the city's expense. Unfortunately, his legal right to it is clear if he can get the thing done, and therein lies the temptation.
"Now, the city's interest is such a vital one in this matter that it cannot afford to remain passive; its course must be more aggressive in the future, or many of the most important of these water-courses will be practically obliterated within a few years, as a perusal of the paragraphs describing their present condition will prove.
"The law, as it stands, gives the city no rights which are at all commensurate with its interest in the matter.
"The city's obligation is to keep a good and sufficient culvert in operation on every water-course which crosses a public street.
"If an abutter upon a water-course starts filling it in, the city can take no action until actual damage has resulted from flooding the street.
"This is the sum total of the city's duties and rights in regard to these channels."

Following this were suggestions for new legislation, the object of which would be to keep the existing channels open, also to improve the same without the necessity of making takings, and the consequent liability for damages; and also to enable the city to assess the cost of improvements upon lands abutting upon such stream.

This last phase of the question deserves further discussion.
Abutting lands are not the only lands benefited or served by an improvement of a water-course. Let us consider what are the causes which bring about the necessity of improving, that is, enlarging the capacity of a water-course. It is not only the desire to utilize, by building upon, the low lands near the brook, but it is the actual change in the nature of the surface of the entire valley or water-shed for
which the brook serves as the natural drain, caused by the grading, filling of hollows, construction of streets, houses, etc., whereby the proportion of impervions surface is increased, and the surface-water discharged more quickly into the water-courses, as previously explained.

Although the total quantity of water to be provided for is not increased, the effect is the same as though there were an actual increase, because the same quantity is discharged in less time ; enlargement of the discharging channels therefore becomes necessary, for the channel must be equal to the maximum demand upon it, even if that demand be of short duration, or a flood ensues.

The service which such an enlarged water-course performs, then, is to drain off the surface-water of all the land, high as well as low, which lies within its water-shed; indeed the changes just described usually take place first upon the high lands, which are naturally occupied and developed before the low lands. It is evident, therefore, that the cost of enlargement should be assessed upon all the lands within the water-shed of that portion of the brook which is enlarged, and, in equity, the assessment should be confined to such lands as the city, outside of such water-shed, is not benefited or served in any way by the improvement. But the low lands, which have always been liable to be flooded, receive a benefit in addition to the service which the brook renders them in common with all the land of its water-shed, - they become habitable; whereas before the enlargement, which means deepening and lowering, of the brook they were not. Hence, a larger proportion of the cost of improvement should be assessed upon them than upon the high lands.

The difference in the valuation of the low lands, as shown by the assessors' books, in the year following the completion of the improvement, as compared with the valuation in the year before the improvement was begun, might fairly be considered as measuring the benefit received by them, and an assessment to defraly the cost of the improvement might be made to equal this amount, the remainder of the cost of improvement, if any, being assessed equally upon all the lands within the water-shed, including the low lands; in the case of the latter, the last described increment of assessment (representing service) being added to the first described increment (representing benefit received), and constituting the total assessment upon the low lands; that upon the high lands being the increment which represents service only.

Details of expenditure, income, and operation of the Sewer Division will be found in Appendix E.

## STREET-CLEANING DIVISION.

The Street-Cleaning Division has charge of the cleanliness of the public ways in the central portion of the city in which there are paved streets; namely, in seven districts, while the suburban districts - No. 4, Brighton; No. 5, West Roxbury, and No. 6, Dorchester - are cared for by the Paving Division.

The following table shows the amounts expended for the maintenance of the Street Cleaning Division for the past five (5) years:


## Street-Cleaning.

With an expenditure of $\$ 305,998.50$, this division has cleaned $11,418.99$ miles of streets, removing 122,544 loads of street-dirt; has also cleaned 2,718.45 miles of paved gutters on macadamized streets, including special work on crossings, maintained 16 dumping-stations, removed excess of snow from pavements and crossings, paid special attention to the collection and removal of leaves in the fall of the year, maintained a paper-patrol in freezing weather and a push-cart patrol in the retail district, which has been extended during the year into the business section of Roxbury; and, besides making necessary repairs to its plant and purchasing the new stock needed, made a disposal at sea of 31,278 loads of street-dirt. The average cost of sweeping streets, including supervision, labor, yard, and stable expenses, pro rata of dumps, and removal, was, by improved organization and supervision, reduced from $\$ 15.61$ (the cost last year) to $\$ 14.44$ per actual mile of street swept, during the last eight and one-half months of the year. In the care of the three suburban districts, the Paving Division removed from macadamized streets, 22,636 single and 2,107 double loads of street-scrapings. After a severe snow-storm, the

[^7]Paring Division force is called to the aid of the Street-Cleaning force, and the cost of snow removal by it is reported in Appendix C. The cost of snow removal by the StreetCleaning Division will he found in Appendix F.

The following table shows the number of loads of streetsweepings removed each year during the last five years:

| Year. |  |  | No. of Loads. |
| :---: | :---: | :---: | :---: |
| 1891, | (13 months) ${ }^{1}$ | . . | 91,425 |
| 1892 | . . . | . $\quad$ | 106,899 |
| 1893 | . . . | - . | 110,496 |
| 1894 | . . . | . | 95,478 |
| $1895{ }^{2}$ | . . . | - - | 12, 244 |

The following shows the average force employed during the year on the New District basis:
Average No. men
District. ..... employed.
Office, including Deputy-Superintendent ..... 4
1, South Boston ..... 34
2, East Boston \} ..... 26
3, Charlestown
7, Roxbury ..... 34
8, South End ..... 78
9, Back Bay ..... 20
10, West End and North End ..... 66
Yard and stable ..... 12
Push cart patrol ..... 42
Total ..... 316

The above-mentioned force use in carrying out the work of the division the following plant:

19 double-sweeping machines, 21 single-sweeping machines, 12 water-carts, 79 street-carts, 93 horses (owned by the division), 20 asphalt-scrapers.

Six of the above horses are driving-horses.
The push-cart patrol use:
Sixty-one push-cats, 82 extra barrels, 3 street-carts, 3 borses (all hired). Of the 61 push-carts, 37 are in daily service.

In addition to the above-mentioned carts, the division hires about 43 extra teams.

During the summer an extra single team and helper were hired, to empty the public waste-barrels located throughout the city.

[^8]The department owns three 3 -horse sweeping-machines, which are stored in the yard of the Lockwood Man'f'g Company at East Boston. These were purchased in 1894, and were not found to operate successfully; they are designed for self-loaders, but are of no use to the department.

Special efforts have been made during the year for the abatement of the "paper nuisance" and kindred causes of unsightliness, due to the carelessness of abutters and the travelling public.

The following circular has been issued and given wide distribution :

> CITY OF BOSTON.

Street Department.
Notice to Occupants.
Your attention is hereby called to the following sections of the Revised Ordinances in relation to

## Throwing or Sweeping Dirt of any kind into the Public Streets.

CHAPTER 43.
Sect. 38. No person shall, except in accordance with the permission of the Superintendent of Streets, or in accordance with the provisions of Section 42 of this Chapter (providing for the sanding of sidewalks), sprinkle, scatter, put, or place, any earth, dirt, gravel, sand, cinders, ashes, sawdust, salt, or mixture of salt, in or upon a street, not nor shall any person, except in accordance with the permission of the Superintendent of Streets, remove any manure or dirt from any street.

SECT. 39. No person shall throw, or sweep into, or place or drop and suffer to remain in any street, any piece of hoop, board, wood, wire, paper, or any nails, sweepings, sawdust, soot, ashes, cinders, shavings, hair, manure, oyster shell, clam shell, lobster shell, card, hand-bill, or rubbish or filth of any kind, or any noxious or refuse liquid or solid matter or substance.
SEct. 103. Whoever violates any provision of this Chapter, shall be punished by a fine not exceeding twenty dollars for each offence, and not only the person actually doing the prohibited thing, but also his employer and every other person concerned in so doing, shall be punished by the said fine.

Sweeping store dirt to the sidewalks, and thence to the gutters, is in violation of the above ordinances. You are therefore notified to provide other measures for the removal of all sweepings and litter, as the above ordinances will be enforced.

## B. T. Wheeler, <br> Superintendent of Streets.

If the existing ordinances regulating the conduct of the public with respect to cleanliness were faithfully observed and duly enforced, the task of the Street-Cleaning Division would be greatly lightened. With streets swept every night and patrolled during the day, no condition of cleanliness can
be preserved when the operations of the department are followed by a procession of the thoughtless, the indifferent, and the ignorant, casting from them into the street refuse of fruit, torn scraps of letters, destroyed after perusal, the daily papers, and everything which ceases to have a use, while they are conveniently near a public way.

The number of public waste-barrels has been largely increased during the year, and the tendency of fruit dealers and others selling goods, under a permit from this department, to throw refuse into the streets has been largely checked by the issuance of the following letter, and if compliance therewith has been refused the permit to sell has been revoked:

CITY OF BOSTON.
Street Department.
Boston, 189

Dear Sir: Complaint having been made of the condition in which the street is kept in front of your premises, where you are doing business under a permit obtained from the Street Department, you are hereby notified that it will be necessary for you to procure a waste barrel, to be located in the immediate vicinity of your stand. In order that these barrels may be of uniform dimensions, color, and lettering, you will be obliged to purchase the same of the city of Boston. Application for one of these barrels must be made to the Deputy Superintendent of the Street-Cleaning Division, at his office at 14 Beacon street, within ten days from date.

> Yours truly,
> B. T. Wheeler,
> Superintendent of Streets.

Details of expenditure, income, and operation will be found in Appendix F.

Comparative Table Showing Net Cost of the Maintenance of the Street-Cleaning Division to the City of Boston.


## STREET-W ATERING DIVISION.

This division was made a separate and distinct part of the Street Department, with a Deputy Superintendent in charge, March 6, 1895. Heretofore the street-watering has been conducted by the Paving Division, with a foreman in charge. That the change fixes responsibility and increases efficiency, the service rendered by the division during the year and the reduced expense will prove clearly.

The following sums have been expended for street-watering during the past five (5) years:


In the past it was deemed proper that the watering in the Back Bay and the South End should be done by contract rather than day work. This method at best is unsatisfactory, as the division and the contractor would often be of counter opinions as to when the carts are needed, and the supervising force compelled to be constantly on the alert to provide for the conditions before their tardy appearance. A contract, in street-watering at least, no matter what rebates it contains for poor service, does not give the satisfaction that day work does. For this reason, after due consideration, day work was substituted for contract work in the Back Bay and the South End districts, with the gratifying result that the watering was better done in those localities and at an astonishingly smaller expense than formerly. The cost of watering the Back Bay under contract in 1894 was $\$ 6,696.02$; this year under day work the expense was $\$ 4,990$. The cost of watering the South End under contract in 1894 was $\$ 5,128.50$, against $\$ 2,540$ for day work this year. A saving in both districts of $\$ 4,294.52$ in day work over contract.

This saving in the South End is, of course, partly due to the discontinuance of the use of salt-water furnished by the contractor.

The past season was not excessively hot nor yet particularly wet. The greatest advantage was taken of the rainfall.

Complaints made of the work of the division are of two kinds, one from the houscholder, who considers the flooding of the street from curb to curb only sufficient for his taste ; the other, from drivers and cyclists who appreciate proper and intelligent street-watering to be the laying of the dust without soaking the street into mud.

Unusual attention has been given to the prevention of this flooding of macadam streets, a custom heretofore prevailing to the utter ruin of the street, but to the advantage of the water-cart owner since it permitted him to make fewer trips over his route, without complaint from the alntters because of dust ; and it has been the constant aim of the division to acquire that happy medium so difficult to attain, which will give protection from dust to the ahutters, and freedom from mud to the cyclist, meanwhile saving the city the thousands of dollars in the cost of maintenance which improper watering of its macadamized streets has always cost it.

Better results were made possible by more complete supervision, and to increase the efficiency of the inspecting force, its members were provided with bicycles. The effect of this improved organization has been to give much better watering in the districts where in the past negligence in watering was due to the large territory assigned to the inspectors, averaging over twenty-five miles each, and which it was impossible for them to cover twice a day as is now done with the aid of the bicycles. The utter absence of any grave street-watering complaint, the work of the year having been sulbject to the smallent number of complaints of any kind ever known, is unquestionably a remarkable testimonial to the efficiency attained by the division. It has been brought about with the assistance of the bicycle, and the excellent telephone system arranged with the inspectors whereby they are in communication with the Deputy. Superintendent morning and noon.

There is still a false impression in some sections that the division waters paved streets, whereas the watering is done as formerly by the subscriptions of the abutters; this is because of the extra original cost of paved streets over macadam, and the further fact that it is possible to keep them clean by sweeping. Corporations are compelled to water after finishing their operations in paved streets. The division is always willing to assist the abotters in having any nuisance abated, and invariably the contractors are ready to meet the extra demand upon them in the matter of operations in paved streets.

The use of salt-water on macadam streets is impracticable
save in a very few locations, and is an undoubted injury to the better class of vehicles, and it has therefore been entirely discontinued.

Comparative | Table Showing |
| :---: |
| Watering Division to the City of Boston. | Cost of Maintenance of the Street-

Expenditure.

[^9]
## STREET DEPARTMENT.

ORGANIZATION, 1895.
Central Office . . . . Room 47, City Hall.
BERTRAND T. WHEELER, Superintendent of Streets.
HENRY B. WOOD, Executive Engineer.
BRIDGE DIVISION.
14 Beacon Street.
JOHN A. McLaUGHLIN, Deputy Superintendent. (Until June 1, 1895.)
JOHN P. WISE, Deputy Superintendent. (June 1, 1895, to the present time.)
FREDERICK H. SPRING, Chief Clerk.

## BOSTON AND CAMBRIDGE BRIDGES.

BERTRAND T. WHEELER, Commissioner for Boston (ex officio). WILLIAM J. MARVIN, Commissioner for Cambridge.

## FERRY DIVISION.

North Ferry, East Boston.
WILLIAM J. BURKE, Superintendent Ferry ${ }_{\text {A }}$ Department. (Until May I, 1895.)

THOMAS KELLOUGH, Superintendent Ferry Department. (May 1 to July 1, 1895.)
Ferry Department consolidated with Street Department, July 1, 1895. THOMAS KELLOUGH, Deputy Superintendent. (July 1 to the present time.)
J. A. RAYCROFT, Chief Clerk.

PAVING DIVISION. Room 44, City Hall.
DARIUS N. PAYSON, Deputy Superintendent. benjamin b. TREMERE, Chief Clerk.

## SANITARY DIVISION.

12 Beacon Street.
CHARLES A. YOUNG, Deputy Superintendent.
M. J. MURRAY, Chief Clerk.

## SEWER DIVISION.

Room 5, Probate Building.
HENRY W. SANBORN, Deputy Superintendent.
FRANK H. RICE, Chief Clerk.
E. S. DORR, Chief Engineer.

STREET-CLEANING DIVISION.
14 Beacon Street.
PHILIP A. JACKSON, Deputy Superintendent. (Until March 22, 1895.)
BENJAMIN M. CRAM, Deputy Superintendent. (March 22, 1895, to the present time.)
thomas mclaughlin, Chief Clerk.
STREET-WATERING DIVISION.
Room 1, Probate Building.
M. EDWIN LIBBY, Deputy Superintendent. (March 6, 1895, to the present time.)

## APPENDIX A.

## REPORT OF THE DEPUTY SUPERINTENDENT OF THE BRIDGE DIVISION.

## 14 Beacon Street, Boston, February 1, 1896.

Mr. B. T. Wheeler, Superintendent of Streets:
Dear $\mathrm{Sir}_{\text {: }}$ I respectfully submit my annual report of the expenditures, income, and operation of the Bridge Division of the Street Department for the financial year ending Jannary 31, 1896.

> Respectfully yours,
> John P. Wise,

Deputy Superintendent.

## FINANCIAL STATEMEN'E.

Regular Appropriation.
Appropriation, 1895-6 . . . . . . \$120,000 00
Amount of expenditures from February 1, 1895, to January 81, 1896

119,716 00
Balance, transferred to Police Department
$\$ 120,00000$
Objects of Expenditures.
Administration.
Office expenses:
Printing . . . . . . \$184 70
Stationery and postage . . . 14205
Office books . . . . . . . 4500
Engraving plates, etc., annual report . 5498
Envelopes, Superintendent of Streets . 4591
Atlas (Boston and Roxbury) . . 3150
Telephone . . . . . . 15765
Advertising (spruce) . . . . 650
Subscription (newspapers, etc.) . . 1050
City map . . . . . . 1000
Letter press . . . . . . 1200
Typewriter and cabinet : . . . 11025
Letter-book, bath, etc. . . . . 8-50
Carried forward,

| Brought forwarc, - \$81954 |  |
| :---: | :---: |
| Brush, soap, etc. . . . . . 560 |  |
| Directory . . . . . . 550 |  |
| Lease of index-book . . . . 250 |  |
| Salary of John P. Wise, Deputy Superintendent, 7 months | 1,750 |
| Salary of J. A. McLanghlin, Deputy Superintendent, 5 months | 1,250 |
| Salaries of Chief Clerk, Messenger $9 \frac{16}{30}$ months, and Messenger $2 \frac{11}{30}$ months | 2,793 |
| Salaries of Chief of Draws and Bridges $8 \frac{19}{3} 9$ months ; General Foreman, 11 weeks ; Foreman, District No. 1, 20 .weeks, and Foreman, District No. 2, 51 weeks. | 4,207 39 |
| Salary of Clerk of Committee on Streets and Sewers, 10 weeks | 287 |
| Travelling expenses | 20 |
| Board of Deputy Superintendent's horse and horsehire | 356 |
| Amount expended, administratiou | \$11,49760 |
| Total Regular Expenditures. |  |
| Expenditures, administration | \$11.497 60 |
| "6 on tide-water bridges | 86,984 38 |
| 6 on inland bridges | 10,572 |
| " north yard and stable | 4,007 32 |
| 6 south yard and stable | 6,653 85 |
| Total amount expended for the year February 1, 1895, to January 31, 1896 | \$119,716 |

## FINANCIAL STATEMENT.

Special Appropriations.
Amount of appropriations and transfers . . . \$91,514 92
Amount of expenditures, February 1, 1895, to January 31, 1896

52,471 06
Balance unexpended $\$ 39,04386$

## Objects of Expenditures.

Special Appropriations.
Chelsea-street bridge, rebuilding.
Contract with D. H. Andrews . . $\$ 8,45000$
Contract with B. F. Nay . . . 4,432 93
Sundry bills and charges . . . 1,271 51

## Brought forward,

$\$ 14,15444$
Charles river bridge-draw, remodelling.
Contract with J. N. Hayes \& Co. . $\$ 4,25951$
Sundry bills and charges . . . 91633

Contracts with F. H. Blaisdell . . $\$ 4,41582$
Contracts with D. H. Andrews . . $\quad 1,57000$
Sundry bills and charges . . . 41660 5,17584

## Gold-street bridge.

$$
6,40242
$$

Chelsea bridge, north, rebuilding draw.
Contract with Penn. Bridge Co. . . $\$ 6.05746$
Contracts with Aug. Bellevue \& Co . 15,898 20
Sundry bills and charges . . . 4,782 70
26,738 36
$\$ 52,47106$


## Income.

The amount of bills deposited with the City Collector during the year was as follows:


A detailed statement of expenditures, and description of work performed follows, also a list of those bridges supported wholly or in part by the City of Boston ; statement of the public landingplaces, etc. ; width of draw openings; widths of bridges, roadway and sidewalks; kind of pavement used; number of draw openings made for navigation, and a census of traffic taken on some of the most important bridges.

## TIDE-WATER BRIDGES.

## Broadway bridge (over Fort Point Channel.)

Sheathed roadway of Foundry-street span and boxed in around girders. Sheathed roadway from Foundry street to the draw, also patched deck. Patched deck and sheathing on the draw several times, put in new oak headers, repaired latches and iron fence, and built new sand-box. Sheathed roadway and patched deck from the draw to Lehigh street. Sheathed roadway on Lehigh-
street span, boxed in around girders, put in new deck on northerly sidewalk and new concrete walk on same. Repaired piers, waterways, engines, gas-pipes, water-pipes, pump, etc. Erected cinder and smoke fenders on span over the New York, New Haven, and Hartford railroad. Painted entire length of bridge on top two coats, inside of draw and engine-house two coats, and outside of tool-house two coats.
Carpenters . . . . $\$ 96482$
Painters . . . . 55951
Lumber . . . . 1,360 44
Nails . . . . . 6515
Ironwork . . . . 31485
Cinder and smoke fenders . 31096
Repairing engines . . . 5068
Hardware . . . . 3073
Paint stock . . . . 11890
Plumbing . . . . 4666
Painting sigus . . . 10200
Repairing concrete walk . 15912
Cement . . . . 450

Repairing gas-pipes . . 5603
Teaming . . . . 600
$\$ 4,15035$
Regular expenses :
Draw-tenders . . $\$ 5,80650$
Substitutes . . . . 5440
Coal . . . . . 16880
Gas . . . . . 3698
Ice . . . . . 600
Small supplies . . . 5225

-     - 6,12493 $\$ 10,27528$

Cambridge-street bridge (from Brighton to
Cambridge).
Sheathed roadway and draw, repaired/sheathing and
flaps, and painted boat.
Carpenters . . . . $\$ 4300$
Painters . . . . 575
Lumber . . . . 6963
Nails . . . . . 420
Ironwork . . . . 1261
Paint stock . . . . 123
Car-fares . . . . 185
Regular expenses:
Draw-tender . . . . \$365 56
Coal . . . . . 736
Small supplies . . . 392

## Brought forward,

Charles-river bridge (from Boston to Charlestown).
Patched deck and sheathing on draw several times, also sidewalk and fence, repaired track, sheaves, piers, waterway, draw-house and engine, put in new trucks, and new oak headers, painted top of draw one coat; draw-tender's house and engineroom two coats, and row-boat two coats.


Regular expenses:
Draw-tenders . . . $\$ 4,29102$
Substitutes . . . . 12198
Coal . . . . . 30816
Gas . . . . . 3240
Cordage . . . . 13721
Stove-pipe and repairing stove, 5100
Lubricating oil . . . . 473
Kerosene oil . . . 338
Ice . . . . . 600
Small supplies . . . 4856
5,004 44 $\underbrace{}_{6,258 \quad 78}$

Chelsea bridge [North] (over North channel, Mystic river).
Repaired sheathing, timbers, headers, and roof of draw-tender's house ; painted draw-tender's house inside two coats; red-leaded ironwork on new electric apparatus, and painted boat.


$$
\text { Brought forward, } \quad \$ 30948 \quad \$ 17,04917
$$

Regular expenses:
Draw-tenders . . . \$2,392 69
Substitutes . . . . 37000
Coal . . . . . 15643
Electric lights . . . 3600
Water . . . . 2750
Clock . . . . 475
Ice . . . . . 600
Small supplies . . . 2951

3,02288
3,332 36

Chelsea bridge [South] over South channel, Mystic river).
Stripped entire roadway on draw, put in new hardpine stringers and new deck of kyanized lumber, also new sheathing, replaced wheel-guards, calked the deck, repaired latches, screws, engines, watertank and pipes, and furnished new signs for gates, pier, etc. Scraped all the ironwork on the draw, red-leaded underneath two coats, painted top of draw two coats, inside of draw-house two coats, engine-room and engine two coats, and boat two coats.
Carpenters . . . . $\$ 58075$
Painters . . . . 50413
Lumber . . . . 90351
Nails . . . . 1670
Ironwork . . . . 7586
Repairing engines . . . 15409
Hardware . . . . 2880
Paint stock . . . . 10822
Plumbing . . . . 13911
Painting signs . . . 11400
Calking deck . . . 5037
Throwing out pipes . . 900
Advertising . . . 4004
Paint brushes . . . 850

Regular expenses :
Draw-tenders . . . \$3,439 17
Substitutes . . . . 8382
Coal . . . . . 19374
Gas . . . . . 1694
Water . . . . 3425
Ice . . . . . 600
Small supplies . . . 3501
Brought forward,$\$ 26,923 \quad 54$
Chelsea-street bridge (from East Boston to Chelsea).
Repairing iron fence on draw, and painting sign.
Repairing fence ..... $\$ 2590$
Painting sign ..... 400
Regular expenses:
Draw-tender ..... $\$ 29900$
Supplies ..... 672
Commercial Point or Tenean bridge, Dor-chester.Put in new deck, sheathed the roadway, and built new fence on thebridge.
Carpenters ..... \$210 50
Lumber ..... 38042
Nails ..... 1507
Ironwork ..... 1402
Car-fares ..... 625

Regular expenses:
Draw-tender . . . . . 5000
Congress-street bridge (over Fort Point channel.
Sheathed draw twice, repaired same and put in new
oak headers at various times, repaired fence, concrete walk, latches, running-gear on draw, waterways, draw-house, built new gate in fence, put in repair foundation for machinery and making same secure, redecked the piers, repaired engines, water connections, and roof of house, painted drawhouse and office inside, also painted boat.
Carpenters ..... \$1,034 38
Painters ..... 14075
Lumber ..... 52428
Nails ..... 2568
Ironwork ..... 13598
Repairing engines ..... 6471
Hardware ..... $40 \quad 19$
Paint stock ..... 3015
Plumbing ..... 35907
Repairing concrete walk ..... 6625
Throwing out pipes ..... 1055
Cement ..... 490
Regular expenses:
Draw-tenders ..... \$5̃,282 05
Substitutes ..... 20349Carried forward,$\begin{array}{llllll}\$ 5,485 & 54 & \$ 2,436 & 89 & \$ 27,935 & 42\end{array}$


Dover-street bridge (over Fort Point channel).
Sheathed roadway on Foundry-street span, and from there to and across the draw ; repaired waterway, pier, water-pipes, and controller on the draw; painted entire brilge and top of draw two coats, also boat and new signs.
Carpenters . . . . \$486 42
Painters . . . . 1,190 50
Lumber . . . . 61112
Nails . . . . . 2017

Ironwork . . . . 19245
Hardware . . . . 2008
Paint stock . . . . 25204
Plumbing . . . . 8492
Painting signs . . . 4400
Repairing controller . . 713
Paint brushes . . . 950
$\$ 2,91833$
Regnlar expenses :
Draw-tenders . . . \$5,714 70
Suhstitutes . . . . 21758
Coal . . . . . 2568
Stove-pipe and zinc . . 1360
Ice . . . . . 600
Small supplies . . . 5373
$6,031 \quad 29$

Essex-street bridge (from Brighton to Camlridge).
Repaired deck, sheathing, sidewalk, flaps, and sheathed draw.
Carpenters . . . . $\begin{array}{r}\$ 22944 \\ 28996\end{array}$
Lumber . . . . 28996
Nails . . . . . 1476
Ironwork . . . . 4407

Hardware . . . . 204
Car-fares . . . . 600
Brought firward,
$\$ 50627$ \$45̃,283 53

Regular expenses:
Draw-tender . . . \$655 32
Substitute . . . . 2532
Coal . . . . . 1104
Small supplies . . . 1571
71039
1,29666
Federal-street bridge (over Fort Point channel).
Sheathed both roadways on draw twice, put in new oak headers, reset buoys, and repaired water-pipes ; painted entire bridge on top and sides two coats, draw-house inside two coats, both motor-houses iuside and out two coats, also building on pier, and new signs on draw and piers.
Carpenters . . . . $\$ 14600$
Painters . . . . 28150
Lumber . . . . 18414
Nails . . . . . 1335
Ironwork . . . . 21388
Hardware . . . . 782
Paint stock . . . . 6540
Plumbing . . . . 12607
Setting buoys . . . 19050
Paiuting signs . . . 10200
$\$ 1,33066$
Regular expenses :
Draw-tenders . . . \$5,742 97
Substitutes . . . . 4500
Coal . . . . . 3672
Gas . . . . . 4217
Repairing stove . . . 850
Ice . . . . . 600
Small supplies . . . 2979
$5,911 \quad 15$
7,241 81
Granite bridge (from Dorchester to Milton).
Making and putting on flaps, and small repairs on machinery.
Carpenters . . . . $\$ 1500$
Lumber . . . . 427
Nails . . . . . 180
Ironwork . . . . 719
$\$ 28 \quad 26$
Regular expenses :
Draw-tenders . . . $\$ 23920$
Supplies . . . . 250
24170

## Brought forward,

L-street bridge (over reserved channel at junction of Congress and $L$ streets).
Repaired stage-float, sheathing, engines, relined water-tank, repaired water-closet and supply-pipes,
and reset buoy, also painted boat, etc.
Carpenters . . . . \$0̃9 00
Painters . . . . 4525
Lumber . . . . 8856
Nails . . . . . 400
Ironwork . . . . 8028
Repairing engines . . 4502
Hardware . . . . 2339
Paint stock . . . . 1005
Plumbing . . . . 18446
Setting buoy . . . 5000
$\$ 59001$
Regular expenses :
Draw-tenders . . . \$4,337 07
Substitntes . . . . 4347
Coal . . . . . 24772
Water . . . . . 16262
New stove . . . . 3500
Pipe and zinc . . . 1225
Ice . . . . . 600
Small supplies . . . 3197

|  | $4,876 \quad 10$ |
| :--- | :--- | :--- | :--- |

Malden bridge (from Charlestown to Everett).
Repaired deck, sheathing, centre-bearing of draw,
waterway, and water-pipes, also painted boat, etc.
Carpenters . . . . $\$ 13800$
Painters . . . . 2225
Lumber . . . . 2446
Nails . . . . 563
Ironwork . . . . 3640
Hardware . . . . 909
Paint stock . . . . 495
Plumbing . . . . 8360
$\$ 32438$
Regular expenses:
Draw-tenders . . . \$3,163 90
Substitutes . . . . 11500
Coal . . . . . 2478
Gas . . . . . 2562
Water . . . . 1000
Stove . . . . . 1300
Ice . . . . . 600
Small supplies . . . 1142
3,3697シ
Brought forward,
Meridian-street bridge (from East Boston to Chelsea).$\$ 63,25217$

Sheathed draw, rebraced truss, repaired latches, machinery on draw, put in new oak headers, repaired piers, waterways, float, and stable, reset buoys and painted boat.
Carpenters . . . . \$370 50
Painters ..... 4200
Lumber ..... 20534
Nails ..... 1110
Ironwork ..... 11628
Paint stock ..... 848
Diving, buoy stone, etc. ..... 22 ล 00
Use of spurshore screw ..... $30 \quad 00$
$\$ 1,008 \quad 70$
Regular expenses :
Draw-tenders . . . \$3,007 55
Substitutes ..... 25500
Coal ..... 2518
Feed ..... 10645
Gas ..... 3135
Water ..... 1000
Horseshoeing ..... 2900
Repairing harness ..... 700
Ice ..... 600
Small supplies ..... 22183,499 71

Mt. Washington-avenne bridge (over FortPoint chanuel).
Repaired damage to sidewalk caused by steam-collier, sheathed draw twice, put in new oak headers, repaired gates, house, and concrete sidewalk, reset bnoy, and made general repairs on water connections; painted inside of draw-house two coats, painted boat.
Carpenters . . . . \$307 75
Painters . . . . 4100

Lumber . . . . 29683
Nails . . . . . 1767
Ironwork . . . . 21361
Hardware . . . . 3593
Paint stock . . . . 860
Plumbing • . . . 12434
Setting buoy, etc. . . 6576
Repairing concrete walk . 6375
$\$ 1,175 \quad 24$
Regular expenses :
Draw-tenders . . . $\$ 4,42233$
Substitutes . . . . 21297
Carried forward, $\quad \$ 4,635 \quad 30 \quad \$ 1,175 \quad 24 \quad \$ 67,760 \quad 58$


Neponset bridge (from Dorchester to Quincy).
Sheathed draw in part, and repaired hinges on flaps, aud made general repairs on machinery.
Carpenters . . . . $\$ 6500$
Lumber . . . . 402
Nails . . . . . 175
Ironwork . . . . 11124
Hardware . . . . 274
$\$ 18475$
Regular expenses:
Draw-tender . . . \$398 84
Supplies . . . . 75
39959
58434
North Beacon-street bridge (from Brighton to Watertown).
Put in new deck on bridge, sheathed the same and patched sheathing on draw.
Carpenters . . . . $\$ 21000$
Lumber . . . . 40391
Nails . . . . . 2115
Ironwork . . . . 112
Car-fares . . . . 1000
$\$ 64618$
Regular expenses:
Draw-tender . . . $\$ 7488$
Execution of Court . . 12611
Small supplies . . . 75
$201 \quad 74$
North Harvard-street bridge (from Brighton to Cambridge).
Sheathed draw, repaired flaps, and reset buoy.
Carpenters . . . . $\$ 3800$
Lumber . . . . 7320
Nails . . . . . 280
Setting buoy . . . 3750
$\$ 15150$
Regular expenses:
Draw-tender . . . 36556
Carried forward,
$\frac{51706}{\$ 75,76403}$

## Brought forward,

Warren bridge (from Boston to Charlestown).
Sheathed both draws three times, repaired fence, iron curb on sidewalk, road-gates, trucks and rails, put in new oak headers several times, repaired drawtenders' house, engines, water-pipes, and relocated lines for signals ; painted top and sides of draw, road-gates, and part of fence one coat, and boat two coats.
Capenters . . . . $\$ 49350$
Painters . . . . 9200
Lumber . . . . 45006
Nails . . . . . 45 25
Ironwork . . . . 16055
Repairing engines . . 15557
Hardware . . . . 1064
Paint stock . . . . 1848
Plumbing . . . . 2665
Painting signs . . . 7300
Relocating lines for signal . 7477
Iron curb . . . . 1197
Slating . . . . 9530
Window-glass . . . 334
Regular expenses:
Draw-tenders . . $\$ 5,75011$
Substitutes . . . . 8000
Coal . . . . . 62624
Gas . . . . . 6692
Ice . . . . . 600
Small supplies . . . 4389

$$
6,57316
$$

Western-avenue bridge (from Brighton to Cambridge).
Repaired planking and sleathing, new flaps put on aud reset buoy.
Carpenters . . . $\$ 8200$
Lumber . . . . 16800
Nails . . . . . 720
Ironwork . . . . 2941
Setting buoy . . . 3750
Car-fares . . . . 1500
$\$ 33911$
Regular expenses:
Draw-tender . . . $\$ 36556$
Supplies . . . . 38

Brought forward, $\$ 84,753 \quad 32$
Western-avenue bridge (from Brighton to Watertown).
Regular expenses:
Draw-tender . . . . . . . . 74
7488
Winthrop bridge (from Breed's island to Winthrop).
Patched sheathing and repaired fence.
Carpenters . . . . $\$ 800$
Lumber . . . . 982
Nails . . . . . 135
$\$ 1917$
Regular expenses :
Draw-tender . . . \$100 00
Kerosene oil . . . 1008
Brooms . . . . 134
Small supplies . . . 565
11707
13624
Sundry Expenditures on tide-water bridges.
Worked lumber . . . $\$ 595$
Oak . . . . . 22075
Wedges . . . . 500
Hardware . . . . 2235
Street Dept., tickets, mechan-
ics . . . . . 825
West End, tickets, mechanics, 12750

- $\$ 389$ S0

Regular expenses :
Chief draw-tender(11 weeks), \$385 C0
Messenger . . . . 69030
Draw-tenders' books . . 7523
Steel shovels . . . 2400
Silver badges . . . 5500
Chairs . . . . 2600
Small supplies . . . 609
$1,261 \quad 62$

## Public landings.

Repairs.
Commercial Wharf :
Ironwork . . . . . . \$181 02
Regular expenses:
East Boston :
Rent . . . . . . . 18750
36852
Total expended on tide-water bridges
\$86,984 38

## RECAPITULATION.

Table showing Expenditures on the Tide-water Bridges for the Year, February 1, 1895, to January 31, 1896.

| Name of Bridge. | Repairs, Labor, Lumber, Iron. work, and Painting. | Regular Expenses, Salaries, Fuel, and supplies. | Total. |
| :---: | :---: | :---: | :---: |
| Broadway | \$4,150 35 | \$6,124 93 | \$10,275 28 |
| Cambridge street | 13827 | 37684 | 51511 |
| Charles river* | 1,254 34 | 5,004 44 | 6,258 78 |
| Chelsea (North) | 30948 | 3,022 88 | 3,332 36 |
| Chelsea (South) | 2,733 08 | 3,808 93 | 6,542 01 |
| Chelsea street | 2990 | 30572 | 33562 |
| Commercial point . | 62626 | 5000 | 67626 |
| Congress street . | 2,436 89 | 5,961 60 | 8,398 49 |
| Dover street | 2,918 33 | 6,031 29 | 8,949 62 |
| Essex street | 58627 | 71039 | 1,296 66 |
| Federal street | 1,330 66 | 5,911 15 | 7,241 81 |
| Granite | 2826 | 24170 | 26996 |
| L street | 59001 | 4,876 10 | 5,466 11 |
| Malden | 32438 | 3,369 72 | 3,694 10 |
| Meridian street. | 1,00870 | 3,499 71 | 4,508 41 |
| Mount Washington avenue | 1,175 24 | 4,878 89 | 6,054 13 |
| Neposet | 18475 | 39959 | 58434 |
| North Beacon street . | 64618 | 20174 | 84792 |
| North Harvard street . | 15150 | 36556 | 51706 |
| Warxen | 1,711 08 | 6,573 16 | 8,284 24 |
| Western avenue (to Cambridge) . | 33911 | 36594 | 70505 |
| Western avenue (to Watertown) . | -••• | 7488 | 7488 |
| Winthrop | 1917 | 11707 | 13624 |
| Sundry expenditures | 38980 | 1,261 62 | 1,651 42 |
| Public landings . . | 18102 | 18750 | 36852 |
| Totals | \$23,263 03 | \$63,721 35 | \$86,984 38 |

## INLAND BRIDGES.

Albany-street bridge (over Boston \&t Albany Railroad).
Sheathed roadway and made sundry repairs.
Carpenters . . . . . . $\$ 500$
Painters . . . . . . 825
Lumber . . . . . . 10169
Nails . . . . . . . 7 50
Paint stock . . . . . . 120
Allston bridge (over Boston \& Albany Railroad, at Cambridge street).
Sheathed both roadways.
Carpenters . . . . . . $\$ 7925$
Lumber . . . . . . 17688
Nails . . . . . . . 540
Car-fares . . . . . . 500
26653
Athens-street bridge (over N. England Railroad). Repaired sheathing and sidewalk.
Carpenters . . . . . . $\$ 350$
Lumber . . . . . . 2242
Nails . . . . . . . 135
Beacon-street bridge (over Boston \& Albany Railroad).
Patcher and sheathed roadway.
Carpenters . . . . . . $\$ 2750$
Lumber . . . . . . 802
Nails . . . . . . . 75
Beacon-street bridge (over outlet).
Patched and sheathed roadway.
Carpenters . . . . . . $\$ 1550$
Lumber . . . . . . 7680
Nails . . . . . . . 375
Berkley-street bridge (over Boston \& Albany
Railroad).
Sheathed both roadways.
Carpenters . . . . . . $\$ 4100$
Lumber . . . . . . 5262
Nails . . . . . . . 180
Berkeley-street bridge (over New York, New Haven, \& Hartford Railroad, Providence Div.). Sheathed roadway and patched deck.
Carpenters . . . . . . $\$ 15275$
Lumber . . . . . . 41364
Nails . . . . . . . 1260

## Brought forward,

Blakemore-street bridge (over New York, New Haven, \& Hartford Railroad, Providence Division).
Patched sheathing and repaired sidewalk. .
Carpenters . . . . . . $\$ 4200$
Lumber . . . . . . 5456
Nails . . . . . . . 360

## Bolton-street bridge (over New Eugland Railroad). <br> Sheathed roadway. <br> Carpenters . . . . . . $\$ 900$ <br> Lumber . . . . . . 1084 <br> Nails . . . . . . . 90

Boylston-avenme bridge (over Stony brook.)
Patched sheathing.
Carpenters . . . . . . $\$ 2525$
Lumber . . . . . . 3920
Nails . . . . . . . 113
Boylston-street bridge (over Boston \& Albany Railroad).
Stripped entire roadway, put in new deck of hardpine, sheathed the same, and repaired sidewalks; scraped all iron work underneath roadway and sidewalks, and red-leaded the same two coats ; scraped both iron fences and painted same two coats.
Carpenters . . . . . . \$559. 75
Painters . . . . . . 49862
Removing rust . . . . . 23950
Watchman . . . . . . 7000
Lumber . . . . . . . 1,196 51
Nails . . . . . . . 6580
Lag-screws . . . . . . 496
Repairing scrapers and hammers . . 3100
Paint brushes . . . . . 1160
Paint stock . . . . . . 12781
Broadway bridge (over Boston \& Albany Railroad).
Patched sheathing and sheathed both roadways, repaired deck around centre-chords, and painted same, also scraped the chords and red-leaded them two coats, painters and paint stock charged to Broadway draw-bridge.
Carpenters . . . . . . $\$ 9675$
Lumber . . . . . . 25824
Nails . . . . . . . 1050
$\$ 1,275 \quad 17$

10016
$20 \quad 74$

6558

2,805 55

36549
Brought forward,$\$ 4,63269$
Canterbury-street culvert (at Ashland street).
Sheathed roadway.
Carpenters ..... $\$ 1000$
Lumber ..... 2715
Nails ..... 427
Central-avenue bridge (from Dorchester to Milton, over Neponset river).
Sheathed roadway.
Carpenters ..... $\$ 8850$
Lumber ..... 10696
Nails ..... 660
Columbus-avenne bridge (over Boston \& Al- bany Railroad.)
Patched sheathing and sheathed both roadways.
Carpenters ..... $\$ 6900$
Lumber ..... 8908
Nails ..... 855
Bolts ..... 333
Cottage Farm bridge (over Boston \& Albany Railroad at Commonwealth avenue).
Patcher sheathing.
Carpenters ..... $\$ 500$
Lumber ..... 1502
Nails ..... 95
Cottage-street [foot] bridge (over flats, EastBoston).
Bridge-tender ..... $\$ 60200$
Coal ..... 3 ¢8
Sundries ..... 235
Dartmonth-street bridge (over Boston \& Al- bany, and Providence Division of New York, New Haven, \& Hartford Railroad).
Sheathed both roadways.
Carpenters ..... $\$ 5950$
Lumber ..... 17222
Nails ..... 540
Dorchester-street bridge (over New York, NewHaven, \& Hartford Railroad, Plymouth Division).
Sheathed the roadway.
Carpenters ..... $\$ 2500$
Lumber ..... 2473
Nails ..... 341
Brought forward,$\$ 5,965$39
Ferdinand-street bridge (over Boston \& AlbanyRailroad).
Patched sheathing and sheathed the roadway.Carpenters$\$ 1650$
Lamber ..... 4963
Nails ..... 4.72
Florence-street bridge (over Stony brook).
Painted fence.
Painters ..... $\$ 4125$
Paint stock ..... 1031
Huntington-avenne bridge (over Boston \&Albany Railroad).
Patched sheathing at various times.
Carpenters ..... $\$ 3875$
Lamber ..... 4359
Nails ..... 360
Longwood-avenue bridge (from Roxbury toBrookline).
Patched sheathing and sidewalk. Carpenters ..... $\$ 700$
Lumber ..... 339
Nails ..... 50
Massachusetts-avenue bridge (over Boston \&Albany Railroad).
Sheathed roadway and patched sheathing. Carpenters ..... $\$ 4425$
Lumber ..... 11284
Nails ..... 652Massachusetts-aveume bridge (over New York,New Haven, \& Hartford Railroad, ProvidenceDivision).
Patched sheathing and sheathed roadway.Carpenters$\$ 1475$
Lumber' ..... 7707
Nails ..... 428
Mattapan bridge (from Dorchester to Milton,over Neponset river).
Sheathed roadway.
Carpenters ..... $\$ 5025$
Lumber ..... 11258
Nails ..... 541
Bolts ..... 3789610
Brought forward,$\$ 6,61636$
Powell-street culvert (West Roxbury).
Sheathed roadway.
Carpenters ..... $\$ 2500$
Lumber ..... 5279
Nails ..... 7058484
Roxbury Crossing [foot-bridge] (over New York, New Haven, \& Hartford Railroad, atTremont street).
Erected elevated foot-bridge.
Contract price ..... $\$ 97500$
Building platform ..... 600
Shawnut avenue bridge (over Boston \& AlbanyRallroad).
Sheathed roadway and patched sheath- ing.
Carpenters ..... $\$ 4650$
Lumber ..... 11295
Nails ..... 945
Swett-street bridge (east of New England Rail-road).
Repaired bulkhead, and sheathed theroadway with 3 -inch spruce.
Carpenters ..... $\$ 7050$
Watchman ..... 1250
Lamber ..... 21677
Nails ..... 1450
Kerosene ..... 60West Newton-street bridge (over New York,New Haven, \& Hartford Railroad, ProvidenceDivision).
Sheathed the bridge.
Carpenters ..... $\$ 3000$
Lumber ..... 8417
Nails ..... 360
Sundry expenditures on inland bridges.
Labor on snow ..... $\$ 77445$
Labor, bridge-cleaners ..... 1,407 40
Sand for slippery walks ..... 2375
Lumber, sundry repairs ..... 958
Nails, sundry repairs ..... 468
Street Department, tickets, mechanics ..... 425
West End, tickets, mechanics ..... 650011777
2,289 11
Total expended on inland bridges ..... $\$ 10,57285$

## RECAPITULATION.

Table showing Expenditures on the Inland Bridges for the Year
February 1, 1895, to January 31, 1896.

Name of Bridge. | Repairs, Labor, |
| :---: |
| Lumber ITonwork, |
| and Painting. |

Albany street . . . . . . . \$174 64
Allston . . . . . . . . . 26653
Athens street . . . . . . . . 2727
Beacon street (over B. \& A. Railroad) . . . 3627
Beacon street (over outlet) . . . . . 9605
Berkeley street (over B. \& A. Railroad) . . . 9542
Berkeley street (over Providence Division) . . 57899
Blakemore street . . . . . . . 10016
Bolton street . . . . . . . . $20 \quad 74$
Boylston avenue . . . . . . . 6558
BoyIston street (over B. \& A. Railroad) . . 2,805 55
Broadway (over B. \& A. Railroad) . . . 36549
Canterbury-street culvert (at Ashland street) . . 4142
Central avenue . . . . . . . 20206
Columbus avenue . . . . . . . 16996
Cottage Farm . . . . . . . 2097
Cottage street . . . . . . . 60803
Dartmouth street . . . . . . . 23712
Dorchester street . . . . . . . 5314
Ferdinand street . . . . . . . 7085
Florence street . . . . . . . 5156
Huntington avenue . . . . . . 8594
Longwood avenue . . . . . . . 1089
Massachusetts avenue (over B. \& A. Railroad) . 16361
Massachusetts avenue (over Providence Division) . 9610
Mattapan . . . . . . . . 17202
Powell street culvert . . . . . . 8484
Roxbury Crossing . . . . . . . 98100
Shawmut avenue . . . . . . . 16890
Swett street (east) . . . . . . 31487
West Newton street . . . . . . 11777
Sundry expenditures . . . . . . 2,28911
Total
$\$ 10,57285$


Stable, District No. 1. Warren Bridge.
Teamster . . . . . . \$774 89
Hostler . . . . . . 62475
Feed . . . . . . . 26677

Repairing wagon . . . . . 730
Repairing harnesses . . . . 2645
New harness . . . . . 4100
Horseshoeing . . . . . 8462
Veterinary service . . . . 1200
Small supplies . . . . . $\quad 5938$

Total expended North Yard and Stable
$\$ 4,00732$

South Yard, District No. 2. No. 45 Foundry Street.
Messenger . . . . . . $\$ 78234$
Watchman ( 15 weeks) . . . . 21000
Boy (22 weeks) . . . . . 22575
Tools for carpenters . . . . 6410
Tools for painters . . . . 16346
Telephone . . . . . . 15615
Coal . . . . . . . 2388
Painters' tool-bouse . . . . 4500
Carpenters' tool-house . . . . 4500
Repairing buildings, painters . . 69 อ 8
Ladders . . . . . . 816
Plumbing . . . . . . 8663
Carried forucard, • $\$ 1,88005$


Stable, District No. 2. No. $6 t$ Dorchester Avenue.

Teamster . . . . . . $\$ 73700$
Hostler . . . . . . 76500
Stable boy (29weeks) . . . . 35525
Feed . . . . . . . 57749
Repairing wagons . . . . 4860
" buggies . . . . 4325
Sundry repairs on vehicles and harnesses
by Sanitary Division . . . . 34800
Horseshoeing . . . . . 27125
Two horses . . . . . . 39000
Clipping horses . . . . . 3300
Rent of stable . . . . . 60000
Coal . . . . . . . 1782
Veterinary service . . . . 10550
Colic medicine . . . . . 3000
Repairing harnesses . . . . 4790
New harness . . . . . 3500
Fur robes . . . . . . 3957
Grain-box . . . . . . 1156
Small supplies . . . . . 18245
$\$ 4,70189$
\$6,653 85
Brought forward, ..... $\$ 9,72151$
Contract with B. F. Nay \& Co. for work done and material furnished, rebuilding bridge (fourth and final estimate) . 4,432 93
Total expended January 31, 1896 ..... $\$ 14,15444$
Balance ..... 4,26048
Balance of appropriation on hand Feb. 1, 1895$\$ 18,41492$Florence-street bridge (over Stony brook, WestRoxbury).
Rebuilt bridge, sidewalks, and fence.
[Balance of work done paid for in 1894.]
Lumber ..... $\$ 360 \quad 57$
Ironwork ..... 8689
Nails ..... 2050
Car-fares ..... 2000
Charged to Street Improvements, Wards 23 and 25. ..... $\$ 48796$
Charles-river bridge, draw, remodelling, etc.(Boston to Charlestown).
Advertising ..... $\$ 4146$
Blank specifications ..... 640
Inspector ..... 17000
Ironwork ..... 8335
Five bridge trucks ..... 50000
Teaming trucks ..... 1250
Steel rails ..... 10022
Car-fares ..... 240
Contract with J. N. Hayes \& Co. forwork done and material furvished . 4,259 51
Total expended January 31, 1896 ..... $\$ 5,17584$
Balance2,924 16
Appropriation ..... $\$ 8,100 \quad 00$Gold-street bridge (over New England Railroad).Rebuilding bridge.
Advertising ..... $\$ 5100$
Blank specifications ..... 960
Inspector ..... 35600
Contract with F. H. Blaisdell for workdone and material furnished on bridgeabutments.$1,814 \quad 00$
Carried forward, ..... $\$ 2,23060$

Brought forward,
Contract with F. H. Blaisdell for work done and material furnished raising building $\$ 1,95000$
Extra work . . . . 13237

$$
2,08237
$$

Contráct with F. H. Blaisdell for work done
and material furnished on retaining-wall, 51945
Contract with D. H. Andrews for work
done and material furnished on super-
structure . . . . . .
Total expended Tanuary 31, 1896 . . . . $\$ 6,40242$
Balance . . . . . . . . 18,597 58
Appropriation
$\$ 25,00000$
Chelsea bridge [North] rebuilding draw, etc. (over North channel, Mystic river).
Advertising . . . . . . . \$143 70
Blank specifications . . . . 7268
Inspector . . . . . . 70400
Resetting buor, new chain, etc. . . 8100
Thirty-six chilled cast-iron wheels . . 43699
Bolts, nuts, washers, etc. . . . 14000
Bridge-girders . . . . . 5600
Spikes . . . . . . . 1800
Spur and mitre gears . . . . 10068
Steel rails, fish-bars, and track-bolts . 48479
Lead ballast . . . . . . 21060
Teaıning gears, etc. . . . . 350
Inspecting and testing at mill material for steel draw . . . . . 8565
Car-fares . . . . . . 470
Nine trucks, complete . . . . 1,674 00
One G. E. 800 electric motor, controller, and switches 56641
Contract with Penn Bridge Co. for steel draw complete . . . $\$ 6,00000$
Extra work . . . . 5746
Contract with Augustus Bellevne \& Co., rebuilding 50 feet of bridge

1,20000
Contract with Augustus Bellevue \& Co. for work done and material furnished (seven estimates) $14,698 \quad 20$
'Total expended January 31, 1896 . . . . \$26,738 36
Balance 13.26164

Appropriation $\$ 40,00000$
Cottage Farm bridge (over Boston \& Albany Railroad, at Commonwealth avenue).
Building new bridge.
Advertising ..... $\$ 54 \quad 68$
Blank specifications ..... $26 \quad 12$
Inspectors ..... 50
Car-fares, etc. ..... 570
Inspecting and testing at mill material for 20 -inch steel beam ..... 24109
Hollow brick and skews (first estimate). ..... 50000
Contract with David S. Crockett forwork done and material furnished oncentre pier . . . . . 8,800 00
Contract with the Cape Ann GraniteCompany for parapet and bearing-courses . . . . . . 1,839 00
Contract with David S. Crockett, set- ting parapet ..... 50000
Contract with Page, Newell, \& Co. for 20-inch steel heams ..... 12,71653
Contract with D. H. Andrews for steelsuperstructure for northerly section :Price . . . . $\$ 2,60000$
Work on girder "A" and floor ..... 8675
2,686 ..... 75
Charged to Commonwealth avenne ..... $\$ 27,92737$
[Work uncompleted.]
Recapitulation.
Amounts charged to Special Appropriations
Chelsea-street Bridge, Rebuilding ..... \$14,154 44
Street Improvements, Wards 23 and 25 ..... 48796
Charles-river Bridge, Draw, remodelling, etc. ..... 5.17584
Cold-street Bridge ..... 6,402 42
Chelsea Bridge (North), rebuilding draw, etc. ..... 26,738 36
Commonwealth avenue ..... 27,92737
Total . ..... $\$ 80,886 \quad 39$

## LIST OF BOSTON BRIDGES.

## I. - Bridges wholly supported by Boston.

[In the list those marked with an asterisk (*) are over navigable waters, and are each provided with a draw.]
Aggasiz road, in Back Bay Fens.
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 New England Railroad.
Audubon road, over Boston \& Albany Railroad, Brookline Branch.
Beacon entrance, Back Bay Fens, over Boston \& Albany Railroad.
Beacon street, over outlet to Back Bay Fens.
Beacon street, over Boston \& Albany Railroad.
Berkeley street, over Boston \& Albany Railroad.
Berkeley street, over N. Y., N. H., \& H. Railroad, Providence Division.
Berwick-park (foot) bridge, over N. Y., N. H., \& H. Railroad, Providence Division.
Blakemore street, over N. Y., N. H., \& H. Railroad, Providence Division.
Bolton street, over New England Railroad.
Boylston street, over Boston \& Albany Railroad.
Boylston street, over outlet to Back Bay Fens.
*Broadway, over Fort-Point channel.
Broadway, over Boston \& Albany Railroad.
Brookline avenue, over Boston \& Albany Railroad.
Byron street, over Boston, Revere Beach, \& Lynn Railroad.
*Castle Island, from Marine park, South Boston to Castle Island.

* Charles river, 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.
Commonwealth arenue, over outlet to Back Bay Fens.
*Congress street, orer Fort-Point channel.
Cornwall street, over Stony brook, West Roxbury.
Cottage Farm, over Boston \& Albany Railroad, at Commonwealth avenue.
Cottage-street foot-bridge, over flats, East Boston.
Dartmouth street, over Boston \& Albany, and Providence Division of N. Y., N. H., \& H. Railroad.
*Dover street, over Fort-Point channel.
*Federal street, over Fort-Point channel.
Fen, Back Bay Fens.
Ferdinand street, over Boston \& Albany Railroad.
Florence street, over Stony brook, West Roxbury.

Gold-street foot-bridge, over New England Railroad.
Huntington avenue, over Boston \& Albany Railroad.
Irvington-street foot-bridge, over N. Y., N. H., \& H. Railroad, Providence Division.

* L street, over Reserved channel at junction of Congress and L streets.
Leyden street, over Boston, Revere Beach, \& Lynn Railroad.
Linden Park street, over Stony brook.
*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.
*Mt. Washington avenue, over Fort-Point channel.
Neptune road, over Boston, Revere Beach, \& Lynn Railroad.
Public Garden foot-hridge.
Roxbury Crossing, footbridge, at Tremont street, over N. Y., N. H., \& H. Railroad, Providence Division.
Shawmut avenue, over Boston \& Albany Railroad.
Stony brook, Back Bay Fens.
Swett street, cast of New England Railroad.
Swett street, west of New England Railroad.
*Warren, from Boston to Charlestown.
West Newton street, over N. Y., N. H., \& H. Railroad, Providence Division.
West Rutland-square, foot-bridge, over N. Y., N. H., \& H. Railroad, Providence Division.
Winthrop, from Breed's Island to Winthrop.
II. - Bridges of which Boston supports the Part within its
Limits.
*Cambridge street, from Brighton to Cambridge.
Central avenue, from Dorchester to Milton.
*Chelsea (North), from Charlestown to Chelsea.
*Essex street, from Brighton to Cambridge.
*Granite, from Dorchester to Milton.
Longwood avenue, from Roxbury to Brookline.
Mattapan, from Dorchester to Milton.
Milton, from Dorchester to Milton.
*Neponset, from Dorchester to Quincy.
*North Beacon street, from Brighton to Watertown.
*North Harvard street, from Brighton to Cambridge.
Spring street, from West Roxbury to Dedham.
*Western avenue, from Brighton to Cambridge.
*Western avenue, from Brighton to Watertown.


## III. - Bridges of which Boston pays a Part of the Cost of Maintenance.

Albany street, over Boston \& Albany Railroad.
Dorchester street, over N. Y., N. H., \& H. Railroad, Plymonth Division.

Everett street, over Boston \& Albany Railroad, Brighton.
*Harvard, from Boston to Cambridge.
*Canal, from Boston to Cambridge.

* Prison Point, from Charlestown to Cambridge.
*West Boston, from Boston to Cambridge.
The last four bridges are in the care of two Commissioners, one of whom is appointed by the City of Cambridge and the other by the City of Boston.

> IV. - Bridges supported by Railròod Corporations. 1st. - Boston \& Albany Railroad.

Harrison avenue.
Market street, Brighton.
Tremont street.
Washington street.

> 2d. - Boston \& Maine Railroad, Eastern Division.

Mystic avenue.
Main street.
3d. - Boston \& Maine Railroad, Western Division.
Mystic avenue.
Main street.
4th. - Boston, Revere Beach, \& Lynn Railrocal.
Everett street.

> 5th. - New England Railroad.

Dorchester avenue.
Harvard street, Dorchester.
Morton 6، 6

Norfolk 66 66
Norfolk 6، 6
Silver street.
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.
Ashmont street and Dorchester avenue.
Cedar Grove Cemetery.
Freeport street.
Savin Hill avenue.

## 7th. - New York, New Haven, \& Hartford Railroad, Providence

 Division.Beech street, West Roxbury. Bellevue street, West Roxbury. Canterbury street, West Roxbury.
Centre street, or Hog Bridge, West Roxbury.
Centre and Mt. Vernon streets, West Roxbury.
Dudley avenne, West Roxbury.
Park street, West Roxbury.

## Recapitulation.

I. Number wholly supported by Boston . . . 58
II. Number of which Boston supports the part within its
limits . . . . . . . . . 14
III. Number of which Boston pays a part of the cost of $\begin{aligned} & \text { maintenance }\end{aligned}$
IV. Number supported by railroad corporations:

1. Boston \& Albany . . . . . . 4
2. Boston \& Maine, Eastern Division . . . 2
3. ، ، Western Division . . 2
4. Boston, Revere Beach, \& Lynn . . . 1
5. New York \& New England . . . . 13
6. New York, New Haven, \& Hartford, Plymouth $\begin{aligned} & \text { Division . . . . . . . } 50\end{aligned}$
7. New York, New Haven, \& Hartford, Provi-
dence Division

Total number . . . . . . . 113

Street Department - Bridge Division.
List of Small Bridges or Culverts having Wooden Tops, which are repaired by Bridge Division. - Walls repaired and Openings cleaned by Sewer Division.
Those marked with (*) are over Stony brook.

| Location. | Span. <br> Feet. | Height of Opening. Feet. | Length. Feet. | Side-walls. | Covering. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| *Ashland street and Canterbury, West Roxbury | 7.6 | 5.5 | 75 | Stone . | Wood. |
| Baker street, at Brook farm, West Roxbury | 15.0 | 5.0 | 30 | Stone . | Wood. |
| Beech street, near Anawan avenue, West Roxbury . | 4.0 | 4.0 | 50 | Stone . | Wood. |
| *Boylston avenue, West Roxbury . | 15.0 | 9.5 | 30 | Stone . | Wood. |
| Brighton avenue, west of Essex street, Brighton | 3.0 | 3.0 | 50 | Wood | Wood and earth. |
| Gardner street, near Cow island, West Roxbury | 5.0 | 5.5 | 33 | Wood | Wood. |
| *Hyde Park avenue, West Roxbury | 19.5 | 5.0 | 50 | Stone . | Wood. |
| Park street, west of Dorehester avenue, Dorchester | 5.0 | 3.67 | 50 | Stone . | Wood. |
| Preston street, Dorchester | 9.0 | 5.08 | 40 | Wood | Wood and earth. |
| Summer street, near Spring-street station, West Roxbury | 4.0 | 4.5 | 40 | Stone | Wood. |
| Tenean street, near Fulton, Dorehester | 6.25 | 6.25 | 40 | Wood | Wood and earth. |
| *Williams street, West Roxbury | 15.5 | 8.0 | 40 | Stone . | Wood. |

## Public Landing-Places.

The following public landing-places have been built by the city, and are maintained and controlled by the Street Department:

Charles-river Bridge. - Size, $40 \times 60$. Built in 1890. Moored from city's property.

Essex-street Bridge. - Size, $9 \times 23$. Built in 1890. Moored from city's property.

Eust Boston, Public Landing. - Size, $18 \times 30$. Built in 1893. Moored at dock of East Boston Dry Dock Company. Dock and flats leased at $\$ 200$ per year.

Commercial Wharf. - Size, $30 \times 50$. Built by M. F. Sullivan : contract dated January 1, 1892. Moored at dock of Commercial Wharf Corporation. Dock and flats leased November 30, 1891, at $\$ 1,000$ per year.

Fereral-street Bridge. - Size, $20 \times 30$. Built by M. F. Sullivan, October 26, 1892. Moored from city's property.

## Cable-Houses.

The following is a list of cable-honses on bridges in charge of this division :
New England Telephone and Telegraph Company :
Charles-river bridge . . . . . 2 houses.
Chelsea, south bridge . . . . . 1 house.
Congress-street bridge . . . . . 2 houses.
(Erected in 1882.)
Dover-street bridge . . . . . 2 houses. (Erected in 1894.)
American Telephone and Telegraph Company :
Federal-street bridge (erected in 1890) . . 1 house.
West End Street Railway Company :
Federal-street bridge . . . . . 2 houses.
Warren bridge . . . . . . 2 houses.
(Erected in June, 1892.)
Dover-street bridge . . . . . 1 house.
(Erected in 1895.)
Postal Telegraph Cable Company :
Congress-street bridge . . . . . 2 houses.
(Erected in 1894.)
Boston Fire Department:
Dover-street bridge . . . . . 1 house.
(Erected in 1895.)
DRAW-TENDERS' REPORTS. ${ }^{1}$
Giving the Number of Vessels passing through the Drawbridges controlled by the City of Boston,



City Document No. 29.
Draw-Tenders' Reports. - Concluded.

| Name of Bridges. | Steamers. |  |  | Sailing Vessels. |  |  | Tugs. |  |  | All Others. |  |  | Total Number of Vessels. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | $\begin{gathered} \mathrm{By} \\ \mathrm{Bl}_{\mathrm{ight} .} . \end{gathered}$ | Total. | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | $\begin{gathered} \text { By } \\ \text { Night. } \end{gathered}$ | Total. | $\begin{aligned} & \text { By } \\ & \text { Day. } \end{aligned}$ | $\begin{gathered} \text { By } \\ \text { Night. } \end{gathered}$ | Total. | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | $\begin{gathered} \mathrm{By} \\ \text { Night. } \end{gathered}$ | Total. | $\begin{gathered} \text { By } \\ \text { Day. } \end{gathered}$ | $\stackrel{\mathrm{By}}{\mathrm{By} \mathrm{~g} \text {. }}$ | Total. |  |  |
| Granite street. |  |  |  | 125 | 1 | 126 | 300 | 6 | 306 | 39 | 2 | 41 | 464 | 9 | 473 | 81 | 324 |
| L street . | 2 |  | 2 | 423 | 118 | 541 | 2,535 | 597 | 3,132 | 1,605 | 523 | 2,128 | 4,565 | 1,238 | 5,803 | 688 | 3,590 |
| Malden | 2 |  | 2 | 253 | 20 | 273 | 1,357 | 262 | 1,619 | 917 | 319 | 1,236 | 2,529 | 601 | 3,130 | 763 | 1,656 |
| Meridian | 38 | 20 | 58 | 752 | 66 | 818 | 3,361 | 685 | 4,046 | 1,663 | 368 | 2,031 | 5,814 | 1,139 | 6,953 | 1,579 | 4,282 |
| Mount Washington avenue | 54 | 15 | 69 | 2,645 | 1,054 | 3,699 | 4,086 | 1,033 | 5,119 | 1,605 | 624 | 2,229 | 8,390 | 2,726 | 11,116 | 2,905 | 6,244 |
| Neponset |  |  |  | 142 | 6 | 148 | 298 | 8 | 306 | 46 | 1 | 47 | 486 | 15 | 501 | 95 | 337 |
| North Beacon street |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Harvard street |  |  |  | 89 | 7 | 96 | 209 | 15 | 224 | 30 | 5 | 35 | 328 | 27 | 355 | 67 | 227 |
| Warren | 39 | 8 | 47 | 1,291 | 1,021 | 2,312 | 1,889 | 699 | 2,588 | 1,431 | 576 | 2,007 | 4,650 | 2,304 | 6,954 | 2,097 | 5,050 |
| Western avenue to Cambridge |  |  |  | 10 s | 7 | 115 | 447 | 38 | 485 | 128 | 8 | 136 | 683 | 53 | 736 | 132 | 455 |
| Western avenue to Watertown |  |  |  |  |  |  | 7 |  | 7 | 7 |  | 7 | 14 |  | 14 | 5 | 14 |
| Totals | 591 | 209 | 800 | 19,413 | 7,233 | 26,666 | 37,164 | 7,501 | 44,665 | 16,787 | 4,647 | 21,434 | 73,955 | 19,610 | 93,565 | 23,229 | 60,984 |

## Table showing the Widths of Openings for Vessels in all Bridges provided with Draws, in the City of Boston, January 31, 1896.

| Name of Bridge. | Location. |  | Width. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Boston \& Maine R.R., Eastern Division. | Boston to Charlestown . | 1 |  | feet | nches. |
| Boston \& Maine R.R., Eastern Division . | Over Miller's river . | 1 | 35 | " | " |
| Boston \& Maine R.R. (freight), Southern Division | Boston to East Cambridge | 1 | 40 | " | " |
| Boston \& Maine R.R. (passenger), Southern Division | " " " | 1 | 39 | 6 7 | " |
| Boston \& Maine R.R., Western Division | Boston to Charlestown . | 1 | 39 | " 7 | " |
| Boston \& Maine R.R., Western Division | Over Miller's river . . . | 1 | 36 | " 0 | " |
| Broadway | Over Fort Point channel, | 1 | 43 | " 3 | " |
| Cambridge street . | Brighton to Cambridge . | 1 | 36 | " 3 | * |
| Canal (or Craigie's) | Boston to East Cambridge | 1 | 36 | " | " |
| Charles river . . | Boston to Charlestown | 1 | 36 | " 0 | ، |
| Chelsea (south channel) | Charlestown to Chelsea. | 1 | 38 | " 9 | " |
| Chelsea (north channel) | " " ، . | 1 | 44 | ' 10 | " |
| Chelsea st. (East Boston side) | East Boston to Chelsea. | 2 | 36 | ، 0 | " |
| " " (Chelsea side) . . | " ، " " |  | 36 | ' 0 | " |
| Commercial point (or Tenean) . . | Dorchester | 1 | 24 | " 0 | " |
| Congress street (Boston side) . . . | Over Fort Point channel, | 2 | 43 | ، 3 | " |
| " " (South Boston side). | " ، ، ، |  | 43 | " 11 | " |
| Dover street . | " ، " |  | 36 | " 10 | " |
| Essex street | Brighton to Cambridge . | 1 | 35 | " 9 | " |
| Federal street | Over Fort Point channel, | 1 |  | ' 10 | '6 |
| Fitchburg R.R. | Boston to Charlestown | 1 | 36 | '6 0 | " |
| " " (for teaming freight) | " " ، | 1 |  | " 0 | " |
| Grand Junction R.R. | Brighton to Cambridge . | 1 |  | eet 9 | ches. |
| " " " | East Boston to Chelsea . | 1 |  | " | " |
| Granite | Dorchester to Milton | 1 |  | " 0 | ، |

Table showing Width of Openings, etc. - Concluded.


Table showing Width of Bridges, kind of Roadways, Sidewalks, etc., on Tide-water Bridges, January 31, 1896.

DRAW－TENDERS＇REPORTS．${ }^{1}$

| Name of Bridge． | Steamers． |  |  |  | Sailing Vessels． |  |  |  |  | Tugs． |  |  |  |  | All others． |  |  |  |  | Total number of Vessels． |  |  |  |  | Totals． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \hat{\mathrm{e}} \\ & \underset{\sim}{x} \end{aligned}$ |  | $\begin{aligned} & \text { + } \\ & \text { D } \\ & \hline \end{aligned}$ | $\stackrel{1}{\stackrel{\rightharpoonup}{\dot{\sim}}}$ | $\underset{\sim}{\underset{\theta}{*}}$ | $\begin{aligned} & \hat{\theta} \\ & \hat{\theta} \end{aligned}$ | $\begin{aligned} & \text { 答 } \end{aligned}$ | $\underset{\sim}{\otimes}$ | $\begin{aligned} & \text { 爰 } \\ & =0 \end{aligned}$ | $\underset{\sim}{6}$ | $\begin{aligned} & \text { el } \\ & \stackrel{y}{e} \\ & \hline \end{aligned}$ | $\begin{aligned} & \stackrel{\ddot{\circ}}{\otimes} \\ & \underset{\sim}{0} \end{aligned}$ | $\underset{\underset{\sim}{\otimes}}{\stackrel{\rightharpoonup}{\theta}}$ | $\begin{aligned} & \stackrel{10}{0} \\ & \underset{\sim}{\infty} \end{aligned}$ | $\underset{\sim}{\infty}$ | $\begin{aligned} & \hat{2}, \\ & \stackrel{\infty}{\infty} \end{aligned}$ | $\begin{aligned} & \text { 侖 } \\ & 0 \end{aligned}$ | $\stackrel{\rightharpoonup}{0}$ | $\begin{aligned} & \hat{\circ} \\ & \stackrel{\theta}{\infty} \end{aligned}$ | $\underset{\sim}{x}$ | $\stackrel{A}{\hat{0}}$ |  | $\underset{\sim}{\infty}$ | $\begin{gathered} \text { R } \\ \underset{\sim}{\circ} \end{gathered}$ |  |
| Broadway |  | 88 |  |  | 3，325 | 3，118 | 2，959 | 2，800 | 3，115 | 1，374 | 1，709 | 1，840 | 1，935 | 2，279 |  |  | 664 | 795 | 816 | 5，158 | 5，461 | 5，471 | 5，536 | 6，226 | 27，8 |
| Cambridge street |  |  |  |  | 325 | 36 | 149 | 109 | 150 | 75 | 33 | 68 | 523 | 599 | 12 | 269 | 186 | 205 | 81 | 1，414 | 1，238 | 13 | 37 | 930 |  |
| Charles river．． | 44 | 2930 | 34 |  | 3，231 | 2，800 | 2，690 | 2，503 | 2，815 | 2，907 | 2，854． | 3，175 | 2，942 | 3，641 | 2，144 | 2，010 | 2，352 | 2，271 | 2，492 | 8，326 | 7，693 | 8，247 | 7，750 | 8，993 | 41，00 |
| Chelsea（North）． | 124 | 35.57 | 66 |  | 981 | 17 | 898 | 1，141 | 995 | 4，109 | 2，899 | 3，422 | 3，841 | 4，662 | 2，503 | 1，205 | 1，697 | 1，631 | 2，383 | 7，717 | 4，956 | 6，074 | 6，679 | 8，155 | 33，48 |
| Chelsea（South） |  | 8580 | 51 |  | 1，016 | 1，037 | 1，130 | ${ }^{50}$ | 847 | 3，023 | 2，923 | 2，540 | 1，810 | 2，275 | 1，460 | 986 | 1，328 | 1，083 | St | 5，507 | 5，031 | 5，078 | 3，794 | 4，137 |  |
| Chelsea street |  |  | 6 |  |  |  | 14 | 57 | 24 |  | 36 | 35 | 159 | 105 | 32 | 14 | 20 | 116 | 41 | 32 | 54 | 69 | 38 | 70 |  |
| Commercial Point． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |
| Congress street | 2942 | 298 |  |  | 5，132 | 4，896 | 671 | 4，080 | 4，174 | 7，064 | 7，647 | 7，411 | 7，626 | 7，886 | 2，522 | 2，834 | 2，694 | 2，850 | 2，838 | 15，012 | 15，675 | 15，137 | 14，833 | 15，281 |  |
| Dover street． | 13 | 10 | 6 |  | 2，652 | 2，557 | 2，415 | 2，355 | 2，894 | 1，211 | 1，505 | 1，574 | 1，557 | 1，999 | 25 | 54 | 618 | 11 | 12 | 4，301 | 4，616 | ，61 | 4，629 | 5，621 |  |
| Essex street | 4 | 1323 |  |  |  | 247 | 180 | 134 | 58 |  |  | 17 | 639 | 721 | 537 | 287 | 218 | $2+4$ | 12 | 1，993 | 1，251 | 1，138 | 1，021 | 1，121 |  |
| Federal street |  | 10.9 | ${ }^{9} 9$ |  | 3，538 | 3，295 | 3，199 | 3，0 | 3，366 | 1，660 | 2，044 | 2，231 | 2，261 | 2，666 | 690 | 646 | 703 | 816 | 848 | 5，890 | 5，995 | 6，1＋2 | 6，100 | 6，896 | 31, |

Street Department - Bridge Division.
Draw-Tenders' Reports. - Concluded.



It will be noted that the largest outlay for maintenance was upon the Boylston-street bridge, over the Boston \& Albany R.R., for cleaning and red-leading all the ironwork, and redecking and sheathing the same. 'Ihis was done upon the recornmendation of the City Engineer, and cost for labor and material, $\$ 2,805.55$.

All of the bridges requiring it have been painted during the year, and all of the draw-houses have had all sanitary necessities put in complete good order. Water has been connected at Lstreet bridge, and the water connections have been made more complete at Congress street, which will result in a considerable saving for water formerly bought of water-boats. The men's quarters at draw-houses have been renovated and repainted. The carpenters have done a great deal of work and done it well, the roadways on all the bridges being in excellent condition.

The names of each of the principal bridges have been painted and set up in conspicuous places on them.

Work upon the inland bridges, in addition to repairs, includes keeping them clean. They have been swept regularly and thoroughly, and in winter kept clear of snow.

## APPENDIX B.

# REPORT OF DEPUTY SUPERINTENDENT OF FERRY DIVISION. 

North Ferry, East Boston, February 1, 1896.
Mr. B. 'T. Wheeler, Superintendent of Streets:
Dear Sir: I respectfully submit the annual report of the expenditures, income, and operations of the Ferry Division of the Street Department for the financial year ending January 31, 1896.

Respectfully yours,
Thomas Kellough, Deputy Superintendent.

The Ferry Department ceased to exist by legislative enactment, July 1, 1895, but after that date its appropriation, property, and obligations were assumed by the Street Department, and it has been operated as the Ferry Division of that department. No report having heen made, however, for the five months of its operation as the Ferry Department, the financial statement and report which follows are for the entire twelve months, since its last report:

## FINANCIAL STATEMENT.

## Regular Appropriation.



## FINANCIAL STATEMENT.

## Spectal Appropriations.

| Amount of appropriations and transfers |
| :--- |
| Less transfer |$\cdot \cdot$


$\cdot$$\quad$| $\$ 13,00257$ |
| ---: |
| 3,84 |



Objects of Expenditures. Special Appropriations.

| D. D. Kelly \& Co., contract for remod elling ferry-boat "East Boston" |  |
| :---: | :---: |
| Sundry bills for same | 8106 |
| Wm. McKie, contract for building South drop, South Ferry | 5,611 |
| Sundry bills for same | 1,292 |

## \$11,902 64

Total appropriations less transfers . . . $\$ 222,99873$
Total expenditures . . . . . . 221,813 94
Balance . . . . . . . . $\$ 1,18479$
Recapitulation of Expenditures.


Income.
Cash Receipts from February 1, 1895, to February 1, 1896.
At Office :
Rent . . . . . . $\$ 2,51649$
Foot pass sales . . . . 1,284 50
Team ticket sales . . . . 1,051 50
Old material . . . . . 6805
Reimbursed damages . . . 70000
Free ferries, July 4 . . . 2500
$5,645 \quad 54$
From Tollmen :
For $11,519,898$ foot-passengers, at1c. $\$ 115,19898$
Team tickets . . . . 30,088 00

| Brought forw <br> From Gatemen : |  |  | \$150,932 52 |
| :---: | :---: | :---: | :---: |
| For 275,523 foot-passengers, at 1c. |  | \$2,755 23 | 18,659 35 |
| Teams . . |  | 15,904 12 |  |
|  |  |  |  |
| Total receipts |  |  | \$169,591 87 |
| Statement Showing Receipts at each Ferry. North Ferry. |  |  |  |
| From Tollmen | Foot-passengers, at 1 cent. | Team Tickets. | Total. |
| No. $2 \ldots . \ldots \ldots \ldots$ | $\$ 11,27958$10,913 | \$2,083 00 | \$13,362 58 |
|  |  | 2,012 50 | 12,925 79 |
| " 5 | 10,956 61 | 2,142 00 | 13,098 61 |
| "6 6 | 10,993 61 | 2,090 00 | 13,08314,15912 |
| " 9 | 12,41911,307101 | 1,740 00 |  |
| $\begin{aligned} & " 10 \\ & " 13 \end{aligned}$ |  | 2,077 00 | 13,384 61 |
|  | 10,828 52 | 2,138 50 | 12,967 02 |
|  | \$78,698 97 | \$14,283 00 | \$92,981 97 |



Total at North Ferry
$\$ 101,68194$
South Ferry.

| From Tollmen. | Foot-passengers, at 1 cent. | Team Tickets. | Total. |
| :---: | :---: | :---: | :---: |
| No. 1 | \$8,683 64 | \$3.855 50 | \$12,539 14 |
| '6 4 | 8,240 88 | 3,891 56) | 12,132 38 |
| " 7 | 8,691 86 | 3,980 00 | 12,671 86 |
| " 8 | 8,489 92 | 3,649 50 | 12,139 42 |
| "11 | 1,160 05 | 12250 | 1.28255 |
| "12 | 1,233 66 | 30600 | 1,539 66 |
|  | \$36,500 01 | \$15,805 00 | \$52,305 01 |
| From Tollmen |  |  | \$52,305 01 |
| From Gatemen : |  |  |  |
| For 114.081 foot-passengers, at 1c. |  | \$1,140 81 |  |
| For teams |  | 8,818 57 |  |
|  |  |  | 9,959 38 |
| Total at South Ferry |  | - - . | 62,264 39 |


| North and South Ferries as above |  | \$163,946 33 |
| :---: | :---: | :---: |
| Tickets at office . | \$2,336 00 |  |
| Cash for running free ferries, July 4 | 2500 |  |
| Total for tolls received in twelve months |  | \$166,307 33 |
| Rent, old material, etc. |  | 3,284 34 |
| Total receipts for the year 1895 |  | \$169,591 87 |

## Cash Statement.

From February 1, 1895, to February 1, 1896.

## Dr.

To cash received . . . . . . . $\$ 169,59187$

Cr.
By amount paid City Collector . . $\$ 169,58485$
"، rejected coin . . . . 702
\$169,591 87

Statement of the Receipts.
From April 1, 1870, ${ }^{1}$ to February 1, 1896.
Cash received for tolls from April
1, 1870, to February 1, 1892 - \$3,627,710 75
Cash received for tolls from February 1, 1892, to February 1, 1893 . . . . . 151,775 28
Cash received for tolls from February 1, 1893, to February 1, 1894 . . . . . 149,388 61
Cash received for tolls from Febrnary 1, 1894, to February 1, 1895 . . . . . 152,950 04
Cash received for tolls from February 1, 1895, to February 1, 1896 . . . . . 166,307 33

Total receipts for 25 years 10 months . . . $\$ 4,311,56215$

[^10]Cash Statement.
From April 1, 1870, to January 31, 1896.
Dr.

To receipts from all sources . . . . $\$ 4,311,50215$

$$
C r .
$$

By amount paid City Collector . $\$ 4,310,84123$
By cash with tollmen and gatemen as capital . . . 60800
By counterfeit money and rejected coin in 25 years and 10 months 5292

## Expenditures.

From March 4, 1857, to April 1, 1870.
Amount charged to the East Boston Ferries by Auditor previous to purchase:

For avenues . . $\$ 250,00000$
For repairs . . 65,815 68

$$
\$ 315,81568
$$

For Ferry property purchased April 1, 1870 . . . . 276,375 00

$$
\$ 592,19068
$$

From April 1, 1870, to February 1, 1892 . . . . . \$4,981,485 70
From February 1, 1892, to February 1,1893 . . . . 233,06601
From February 1, 1893, to February 1,1894 . . . . 249,370 65
From February 1, 1894, to February 1,1895

224,441 04
From February 1, 1895, to February 1,1896 . . . . 221,81394

$$
\text { ——— } 5,910,17734
$$

\$6,502,368 02
Deduct.
Amount paid into the City Treasury . . . 4,310,841 23
Net cost of ferries to city to date, not including interest on loans

# Statement Showing the Actual Standing of Ferry Division, Street Department, with the City of Boston, February 1, 1896. 

$$
D r
$$

Amount paid previous to April 1, 1870
$\$ 592,19068$
Amount paid from April 1, 1870, to February 1, 1896, as follows:
Seven ferry steamers . . . . . . 371,95604
New piers. buildings, and drops . . . . 357,918 35
Fuel
886,429 05
Repairs of all kinds
652,080 47
Salaries and wages
2,792,822 70
Tools and fixtures
11,920 68
Land from Lincoln wharf in 1887 . . . 5,56252
Land from Battery wharf in 1893 . . . 10,00090
All other expenditures
821,487 53

By amount paid to the city for income $\$ 4,310,84123$
" amount charged to ferry property for avenues that were laid out as streets, August, 1880, and which should be credited to this division,

250,000 00
"paving avenues . . . . . .
" amount received for rents previous to January 1, 1881, by Department of Public Buildings, and should be credited to this Division

60,27756
" estimated value of seven ferry steamers . . . . . \$200,186 73
" less $6 \%$ for depreciation . . 12,011 20
" estimated value of real estate and franchise, as per last report, $\$ 620,70000$
" estimated value for improvement since on South drop

6,900 00
188,17553 . . 6,000 00
" land from Lincoln wharf in 1887 . . . ${ }_{5,562}^{52}$
" land from Battery wharf in 1893. . . 10,00000
" estimated value of tools and fixtures . . 6,00000
"estimated value of fuel on hand . . . 2,69132
" estimated value of supplies on hand . . 2,505 59
" amount expended on Eastern avenue wharf . 1,499 46
" cash on hand with employes as capital . . 60800
" amount due for rent . . . . . 12.500
" profit and loss for 25 years 10 months . . $1,024,95097$

Statenent Showing the Difference of Travel on the Ferries from February 1, 1895, to Febrdary 1, 1896.


Total Travel on both Ferries from January 1, 1891, ${ }^{1}$ to Jannary 1, 1896.

|  | (13 mos.) 1891. | From Feb. 1, 1892, to Feh. 1, 1893. | From Feb. 1, 1893, to Feb. 1 , 1894. | From Feb. 1, 1894, to Feb. 1, 1895. | From Feb. <br> 1, 1895, to Feb. 1 , 1896.2 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| One-horse teams . . . . . | 727,170 | 689,978 | 665,967 | 690,427 | 676,294 |
| Two " ". | 228,287 | 219,354 | 202,323 | 204,667 | 248,291 |
| Three " " . | 4,639 | 6,547 | 7,573 | 6,242 | 9,095 |
| Four " " | 14,273 | 13,180 | 16,641 | 14;503 | 16,939 |
| Two-horse carriages and hacks | 19,189 | 17,598 | 16,340 | 16,236 | 10,349 |
| Two-cent tolls for hand carts, etc. | 7,196 | 6,632 | 6,259 | 5,726 | 7,059 |
| Drag-wheels, etc. . | 62 | 85 | 88 | 57 | 101 |
| Foot-passengers . . . | 11,686,505 | 11,095,832 | 10,988,027 | 11,281,321 | 11,929,790 |

${ }^{1}$ For travel previous, see previous reports.
${ }^{2}$ Free travel not included. as follows:
$\begin{array}{ll}\text { Teanis } \\ \text { Foot } & \cdot \\ 2,406,-7 & \text { months. }\end{array}$

## Ticket Statement.

Foot-passes outstanding February 1, 1895 . . 186,696
Foot-passes sold during the year . . . . 128,450
Foot-passes delivered city employees on requisition, $\quad 7,000$

Received and destroyed during this year . . . 134,369
Outstanding February 1, 1896
187,777

Team Tickets.

|  | 1-Horse. | 2-Horse. | 3-Horse. | 4-Horse. |
| :---: | :---: | :---: | :---: | :---: |
| Outstanding February 1, 1895 . . | 48,306 | 25,702 | 1,535 | 3,736 |
| Sold during the year | 409,216 | 218,880 | 7,222 | 15,900 |
| Delivered city employees on requisition | 2,128 | 480 |  |  |
|  | 459,650 | 245,062 | 9,257 | 19,636 |
| Receired and destroyed during year | 408,117 | 214,927 | 7,271 | 15,292 |
| Outstanding February 1, 1896 . . . | 51,533 | 30,135 | 1,986 | 4,344 |

Pleasure Carriage Tickets.

|  | 1-Horse. | 2-Horse. |
| :---: | :---: | :---: |
| Outstanding February 1, 1895 . . . . . . . | 11,170 | 3,274 |
| Sold during year . . . . . . . . . . . . . . . | 76,660 | 10,080 |
| Delivered city employees on requlsition. . . . . | 1,000 |  |
|  | 88,830 | 13,354 |
| Received and destroyed during year | 74,701 | 10,526 |
| Outstanding February 1, 1896. | 14,129 | 2,828 |

## Plant and Property in Charge of the Ferry Division.

South Ferry, East Boston side, located at the terminal of Lewis street, covers an area of 68,725 square feet of land and water. On these premises there is one head-house, one coal-shed, one work-shop for carpenters, machinists, and blacksmith, one gateroom and oil-room, three piers, which form the two ferry slips, two drops and tanks, and one dock, where boats are laid when not in use or while undergoing repairs.

South Ferry, city side, located at the terminal of Eastern avenue, covers an area of 28.135 square feet, upon which is erected one heal-house, with canopies extending over driveways, also boiler-room and gate-room, three piers, which form the two slips, and two drops and tanks.

North Ferry, city side, located at the terminal of Battery street, covers an area of 45,000 square feet of land and water, upon which is erected one head-house, with canopies, boiler-room, gateroom, store-shed, etc., three piers, which form the two slips, and two drops and tanks.

North Ferry, East Boston side, located at the terminal of Border street, covers and area of 62,138 square feet of land and water, upon which is erected one head-house, with canopy, boiler-room,
gate-room, oil-room, stable and coal-shed, three piers, which form two slips, two drops and tanks.

The wharf property adjoining the head-honse on Eastern' avenue was leased several years ago by the Ferry Department for $\$ 4,000$ per year. The whole premises are now sublet to the Institutions Department for $\$ 2,000$ per year.

Of the drops there are eight - two of them are new, one having been built in 1894 and the other in 1895.

Of the other six, four of them are in good condition, two are not so good.

The South drop on North ferry, Boston side, is poor, but perfectly safe.

The North drop on South ferry, Boston side, is in the same condition.

All the piers, twelve in number, are now in fair condition.
The North pier on South ferry, Boston side, has just been repaired at a cost of over $\$ 1,300$.

The several head-houses and buildings are in good condition, except the head-house and the coal-shed at the South ferry, East Boston side, which must soon be replaced by new ones.

The head-house on South ferry, Boston side, should be moved over to one side same as at North ferry, thereby making it safe and more convenient to foot-travel and greatly facilitating team traffic.

Battery street should be widened on westerly side between Commercial street and ferry gate. This has been agitated for a long time without success, but should be done.

With the coöperation of the Board of Police, patrol-boxes have been placed ateach of the head-houses, and better protection thus secured to person and property of the patrons of the ferries.

## APPENDIX C.

## REPORT OF DEPUTY SUPERINTENDENT OF PAVING DIVISION.

Room 44, City Hall, Boston, February 1, 1896.
Mr. B. T. Wheeler, Superintendent of Streets:
Dear Sir: I respectfully submit my annual report of the expenditures and income of the Paving Division of the Street Department for the financial year ending January 31, 1896, showing the nature of the work, the number and variety of permits issued, and the details of expenditures involved in paving, macadamizing, and regulating the various streets.

Respectfully yours,
D. N. Payson,

Deputy Superintendent.
The following shows the total yearly expenditures of the Paving Division, according to the report of the Superintendent of Streets, for the last five (5) years:


Total . . . . . . . $\$ 8,666.69793$

## FINANCIAL STATEMENT.

Regular Appropriation.
Appropriation for 1895-96 . . . . . \$750,000 00
Amonut collected by City Collector for repairs made by Paving Division for different companies, etc.

1856

Amonnt of expenditures from February 1, 1895 , to Jannary 31, 1896 . . . . . . $\$ 683,89942$

Carried forward,
$\$ 683,89942 \$ 750,01856$
Street Department - Paving Division. ..... 187
Brought forward, $\$ 683,89942 \quad \$ 750,018 \quad 56$
Transferred to Street Cleaning- Division . . . . . 35,00000
Transferred to Sanitary Division ..... 23,000 00
Transferred to Common Council Contingent . . . . . 1,665 71
Transferred to Hospital Department, ..... 3,017 92
Transferred to Board of Aldermen, ..... 2,043 75
'Transferred to City Clerk Depart- ment ..... 3811
Transferred to Institutions Depart- ment ..... 2296
Transferred to Police Department . ..... 1,330 69
$\$ 750,018 \quad 56$
Total expenditures from regular appropriation ..... \$683,899 ..... 42
Balance nnexpended ..... $\$ 66,11914$
Objects of Expenditure from the Regular Appropriation, classified by Districts, from February 1, 1896.

| Districts. | Repairs. | Snow. | Edgestones, Sidewalks, and Crossings. | Fences and Plank-walks. | $\begin{aligned} & \text { A. } \\ & \text { Miscellaneous. } \end{aligned}$ | B. <br> Executions. of Court. | In $\underset{\substack{\text { Excess of } \\ \text { Special }}}{\text { C }}$ Appropriation | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. South Boston. | \$12,687 71 | \$7,320 68 | \$7,191 55 | \$1,560 84 |  |  |  | \$28,760 78 |
| 2. East Boston. | 11,057 43 | 4,534 00 | 4,133 57 | 29652 |  |  | \$1,593 07 | 21,614 59 |
| 3. Charlestown | 9,163 85 | 6,549 - 49 | 3,553 72 | 68999 |  |  |  | 19,957 05 |
| 4. Brighton. | 29,771 57 | 4,837 94 | 1,281 94 | 1,226 11 |  |  |  | 37,117 56 |
| 5. West Roxbury | 54,27167 | 7,020 63 | 2,767 70 | 1,705 69 |  |  | 15,735 75 | 81,501 44 |
| 6. Dorchester ... | 68,377 39 | 7,224 18 | 7,617 81 | 925 65 |  |  | 57704 | 84,72207 |
| 7. Roxbury | 71,888 69 | 8,308 85 | 18,511 14 | 258351 |  |  | 9,296 54 | 110,588 73 |
| 8, 9, 10. City proper | 92,958 10 | 37,624 78 | 27,150 08 | :3,643 87 |  |  | 37,855 17 | 199,232 00 |
| 11. ${ }^{1}$ Roxbury and West Roxbury. | 1,739 41 | 1,388 53 | 15730 | 770 |  |  |  | 3,292 94 <br> 87,100 46 |
|  |  |  |  |  | \$87,100 46 | \$10,011 80 |  | $\begin{aligned} & 87,10046 \\ & 10,01180 \end{aligned}$ |
| Totals | \$351,915 82 | \$84,809 08 | \$72,364 81 | \$12,639 88 | \$87,100 46 | \$10,011 80 | \$65,057 57 | \$683,809 42 |

[^11]
## FINANCIAL STATEMENT.

Speclal Appropriations, Paving and Street Improvements.
Amount of balances
transfers
1894-5, less

Amount of Appropriation 1895-6 . 844,100 00
$\$ 998,43022$
Amount of expenditures . . . . . \$669,992 69
Balance unexpended . . . . . $\$ 328,43753$
Total Expenditures.
Maintenance appropriation . . . . \$683,899 42
Special appropriations . . . . . 669,992 69
Laying out and construction of highways . . 87,67692
Blue Hill and other avenues . . . . 65,34209
Grand total . . . . . . . $\$ 1,506,91112$

Income.
Statement showing the amount of bills deposited mith the City Collector from February 1, 1895, to February 1, 1896, on account of the Paving Division :

| Edgestone and sidewalk assessments |
| :--- |
| Miscellaneous. |
| $\cdot$ |$\quad . \quad . \quad$| $\$ 8,105$ |
| ---: |
| 39 |
| 509 |
| 15 |

The amount paid into the city treasury during the year on account of the Paving Division is as follows:

Sidewalk construction assessments (Law of 1892), $\quad \$ 21,77767$
Edgestone and sidewalk assessments (Law of
1893) . . . . . . . .

1,963 41
Miscellaneous . . . . . . .

## SCHEDULE A.

## Expenditures. (Details.)

Salaries of Paving Division office, February 1, 1895,
to January 31, 1896
Salaries of permit office, February 1, 1895, to Jan-
uary 31, 1896 . . .
Advertising in and subscribing for daily papers . 59581
Horses, carts, and harnesses (new) . . . 7,177 42
Printing and stationery . . . . . . 1,86677
Printing and stationery (permit office) . . . 53362
Repairing stables, sheds, etc. . . . . 1,764 13
Stock and supplies not included elsewhere . . 20,31616
Sundries . . . . . . . . 8,382 90
Street signs and numbering . . . . . 52013
Telephones, expense of . . . . . 1,99382
Tools, cost of keeping the same in repair, etc. . 11,418 11
Building addition to Corlman street stable . . 1,743 09
Taking down derrick at Tremont crusher . . 29915
Construction of Kenney street crusher . . . 7,622 94
$\$ 87,10046$

## SCHEDULE B.

Executions of Court, etc.
Bailey, J. Whitman, personal injuries . . . $\$ 1,10152$
Beaumont, Walter, trespassing on land . . . 2500
Bowles, James, personal injuries . . . . 23680
Carter, Charles, grade damages . . . . 60000
Churchill, Joseph R. and John M. B., grade damages . . . . . . . . 96000
Goodyear, Charles, personal injuries . . . 5000
Hanrahan, William, damage to wagon . . . 6000
Jones \& Meehan, settlement of claim . . . 2,026 11
Joy, Mary A., personal injuries . . . . 10000
Lowe, Fred. M., grade damages . . . . 20396
Luscomb, Fanny C., persoual injuries . . . 72644
Moore, Mary E. F., " . . 2,02526
Murch, Frances E., " . . 10000
Raymond, Artemas, injuries to horse and harness . 17518
Redmond, Charles D., personal injuries . . . 22644
Ross, Walter, "، . . . 17611
Saunders, Charles G., damage by blasting . . 53007
Siobodkin, Meier A., personal injuries . . . 16280
Stevens, Mrs. Lyman S., " . . . 20000
Whipple, Josie, " . . . 32611
$\$ 10,01180$

## SCHEDULE C.

The following schedule shows the expenditure from the maintenance appropriation of this division in excess of special appropriations:
White street, between Meridian and Brooks streets. In excess of special appropriation . ..... $\$ 593 \quad 50$
Maverick street, between Meridian and Border streets.
In excess of special appropriation . ..... 81747
Gove street, between Meridian and Chelsea streets. In excess of special appropriation ..... 11210
Decatur street, between Meridian and Border streets. In excess of special appropriation ..... 7000
Bellevue street, between Centre and Oriole streets. In excess of special appropriation ..... 71116
Boylston street, between Centre street and the R.R. In excess of special appropriation . ..... 1,03500
Centre street, between Paul Gore and Burroughs streets.
In excess of special appropriation . ..... 51575
Maple street, between Centre street and Weld Hill. In excess of special appropriation ..... 4,06425
March avenue, between Park and Bellevue streets. In excess of special appropriation ..... 42300
Paul Gore street, between Centre and Lamartine streets. In excess of special appropriation . . . . 2,171 16
Sonth street, between Washington and South Walterstreets.
In excess of special appropriation. ..... 1,29595
St. John street, hetween Centre and Rockview streets. In excess of special appropriation . ..... 3,71045
South Fairview street, between Centre and South Walter streets.
In excess of special appropriation . ..... 36940
Wren street, between Rutledge and Oriole streets. In excess of special appropriation ..... 1,43963
Greenheys street, whole length.
In excess of special appropriation ..... 29925
Melville avenue, whole length.
In excess of special appropriation ..... 27779
Brought forward, ..... $\$ 17,90586$
Buckingham street.
In excess of special appropriation ..... 1,20655
(Yhandler street, between Berkeley street and Colnm- bus avenue.
In excess of special appropriation ..... 34475
Columbus avenue, between Park square and Ferdi- nand street.
In excess of special appropriation ..... 20,35773
Newbury street, between Arlington street and Mas- sachusetts avenue.
In excess of special appropriation ..... 7,677 92
0xford street.
In excess of special appropriation . ..... 11679
Westland avenue, between Massachusetts avenue and Parker street.
In excess of special appropriation ..... 13875
Greenville street, between Dudley and Winthrop streets.
In excess of special appropriation ..... 29289
Lawn street, between Fisher avenue and Heathstreet.
In excess of special appropriation ..... 1,75900
Maywood street.
In excess of special appropriation ..... 2,75234
Quincy street, between Warren street and Blue Hill avenue.
In excess of special appropriation ..... 38180
Townsend street, between Harold and Warren strreets.
In excess of special appropriation ..... 3,83451
Washington street, between Guild row and Bartlettstreet.
In excess of special appropriation ..... 27600
Beacon street, between Arlington and Dartmouth streets.
In excess of special appropriations . ..... 3,50346
Boylston street, between Massachusetts avenue and Parker street.
In excess of special appropriation ..... 76446
Boylston street, between Arlington and Clarendon streets.
In excess of special appropriation ..... 3,31149
Bradford street.
In excess of special appropriation ..... $433 \quad 27$

## detail of expenditures made under special APPROPRIATIONS.

Bellflower street, Dorchester avenue to Boston street, filling.
Labor . . . . . . . . . $\$ 23965$
Teaming . . . . . . . . 4200
Filling . . . . . . . . . 50400
Edgestone . . . . . . . . 3266
Paving . . . . . . . . . 2600
Crossing-blocks . . . . . . . 9000
$\$ 93431$
Amount of special appropriation . . . . $\$ 93431$
Bond street, Hanson to Milford street, asphalted with Trinidad asphalt. Length, 192 feet; area, 426 sq. yds.
Labor . . . . . . . . . . $\$ 510$ 55
Teaming . . . . . . . . 37800
Masonry . . . . . . . . 5600
2,900 paving-brick . . . . . . . 2741
Gravel . . . . . . . . . 855
Paving . . . . . . . . . $80 \quad 53$

Advertising . . . . . . . . 1000
Amount paid to Barber Asphalt Paving Co. :
409.6 sq. yds. Trinidad asphalt pavement, with
concrete base and binder course, at $\$ 3$
1,22880
$\$ 2,29984$
Amount of special appropriation . . \$1,091 18
A mount paid out of Street Improvements,
Wards 17 and 18 . . . . 1,208 66
$\$ 2,299 \quad 84$

Charter street, Unity street to Jackson avenue, pared with large granite blocks with cement joints, edgestone reset, brick sidewalks relaid and crosswalks relaid. Length, 540 feet; area, $1,125 \mathrm{sq} . \mathrm{yds}$.
Labor . . . . . . . . . \$1,243 20
Teaming . . . . . . . . 92250
Gravel . . . . . . . . . 18582
325 feet edgestone . . . . . . . 20770
160 feet flagging . . . . . . . 5200
18,000 paving-brick . . . . . . 17010
25, 819 large blocks . . . . . . 1,494 91
97 barrels cement . . . . . . . 22440
Advertising . . . . . . . . 7122
Sundries . . . . . . . . 5250
Carried forward,



Dartmouth street, Newbury street to Commonwealth arenue, macadamized. Length, 278 feet; area, 2,162 sq. yds.
Labor . . . . . . . . . 9080
Teaming . . . . . . . 47300
Gravel . . . . . . . . . 13950
Stone . . . . . . . . . 49575
Advertising . . . . . . . . 2125
\$1,220 30
A mount of special appropriation . . \$360 35
Amount paid out of Street Improvements,
Ward 11 . . . . . . 85995
\$1,220 30

Henchman street, Charter to Commercial street, paved with large granite blocks on a gravel base, with cement grout joints, edgestone reset and brick sidewalks relaid. Length, 232 feet; area, 458 sq. yds.

Labor . . . . . . . . . \$59130

Teaming . . . . . . . . 30800
Gravel and sand . . . . . . . 8840
92 feet edgestone . . . . . . . 5704
6,000 paving-bricks . . . . . . 5670
10,225 large granite blocks . . . . . 59203
50 feet flagging . . . . . . . 2000
43 barrels cement . . . . . . . 9890
Advertising . . . . . . . . 2400
Sundries . . . . . . . . 31 弓0
Amount paid to J. B. O'Rourke \& Co. :
$4 \check{5} 9 \mathrm{sq}$. yds. granite block-paving, with
Portland cement grout joints, at 40 cts., $\$ 18360$
247 sq. yds. brick sidewalks relaid, at
18 cts. . . . . . . 4446
433 lin . feet edgestone reset, at 8 cts. . 3464
23 sq. yds. block-paving, at 25 cts. . 575

Melville avenue, Dorchester avenue to Washington street, mac-adamized and graded. Length, 2,924 feet; area, 11,046 sq.yds.
Labor ..... $\$ 49605$
Teaming ..... 38.500
Gravel ..... 30940
Stone ..... 5,645 66
Steam-roller ..... 31000
210 feet flagging ..... 13335
Paving ..... 3833Amount paid to John McMorrow:Excavating and grading for sidewalks and gutters, asper agreement$460 \quad 00$
$\$ 7,77779$
Amount of special appropriation . . $\$ 7,50000$
Amount paid out of Paving Division ..... 27779
$\$ 7,777 \quad 79$

Monlton street (Bunker Hill, Vine, and Moulton streets), macadamized. Levgth, 460 ; area, 1,533 sq. yds.
Labor . . . . . . . . . \$5̃61 20
Teaming . . . . . . . . 23200
Gravel . . . . . . . . . 10502
Stone . . . . . . . . . 26344
$\$ 1,161 \quad 66$

Prince street, Hanover street to North Bennett avenue, asphalted with Sicilian rock asphalt, edgestone reset and brick sidewalks relaid. Length, 293 feet ; area, 654 sq . yds.
Labor . . . . . . . . . $\$ 60390$
Teaming . . . . . . . . 19850
Gravel and sand . . . . . . . $3+10$
9,000 paving-brick . . . . . . 8505
Advertising . . . . . . . . 1790
Sundries . . . . . . . . 2100

A mount paid to H. Gove \& Co. :
43.5 sq. yds. block-paving, at 25 cts. . $\$ 1088$

510 lin. ft. edgestone set, at 8 cts . . 4080
Carried forward, $\$ 51 \quad 68 \quad \$ 96045$
Brought forward, ..... $\$ 5168$
$\$ 96045$
316.6 sq. yds. brick sidewalks relaid, at 18 cts . ..... 5699
12.6 sq . yds. flagging crossings relaid, at 25 cts. ..... 3.15
637.7 sq. yds. Sicilian rock asphalt pave- ment, with concrete base, at 3.00 . \$1,913 102,02492$\$ 2,985 \quad 37$
Talbot avenue, Welles avenue to Washington street, Telfordmacadam. Length, 1,220 feet; area, 6,777 sq. yds.
Labor ..... $\$ 6,002$ 55
Teaming ..... 3,27000
Gravel ..... 1,623 75
Stone ..... 11,649 07
1,734 $\frac{8}{12}$ feet flagging ..... 59902
2.190 feet edgestone ..... 1,357 80
$122 \frac{1}{4}$ feet circular edgestone ..... 15890
Carting edgestone ..... 15120
16.598 gatter-blocks ..... 31536
Steam-roller ..... 73000
Sundries ..... 185
A mount paid to T. H. \& W. A. Payson :
2,764 feet edgestone set, at 8 cts. ..... $\$ 22112$
$2,743.4$ sq. yds block-paving, at 25 cts . ..... 61835
83947
$\$ 26,69897$
Warren street, Winthrop to Soley street, asphalt with Sicilianrock asphalt, edgestones set. brick silewalks relaid, and cross-ings relaid. Length, 127 feet; area, 365 sq. yds.
Labor ..... $\$ 19820$
Teaming ..... 8500
Gravel ..... 2492
2,500 paving-brick ..... 2500
Paving ..... 8611
Sundries ..... 700Amonnt paid to Boston Asphalt Company :
365.3 sq. Yds. Sicilian-rock asphalt, with concrete base, at \$2.30 ..... $840 \quad 19$
Amount retained from Boston Asphalt Company ..... \$1,266 42 ..... 12603
Amount of special appropriation . . \$600 00
Amount of special appropriation . . \$600 00
Amount paid out of Street Improvements, Ward 5 ..... $540 \quad 39$

STREET IMPROVEMENTS, ALDERMANIC DISTRICT NO. 6.

Ash street, Oak to Nassau street, asphalted with Sicilian rock asphalt. Length, 220 feet; area, 435 sq . yds.
Labor ..... $\$ 21543$Teaming70) 00
Gravel ..... 1197Amount paid to H. Gore \& Co. :
458.4 sq. yds. cobble-paving laid, at25 cts.$\$ 11460$
4353 sq. yds. Sicilian rock asphalt, at$\$ 2.25$97943
1,094 03

Brought forward,
\$1,391 43

Amount paid out of Street Improve-
ments, Aldermanic District No 6
Amount paid out of Street Improvements,
Ward 13 . $\$ 55369$
W . . .

Athens street, C to E street, macadamized. Length, 864 feet; area, $1,248 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 16790$
Teaming . . . . . . . . . 4000
Gravel . . . . . . . . . 5644
Stone . . . . . . . . . 23491
$\$ 49925$
B street, First to Third street, macadamized. Length, 500 feet; area, 2,146 sq. yds.
Lahor . . . . . . . . . $\$ 21850$
'Teaming . . . . . . . . 7000
Gravel . . . . . . . . . 3339
Stone . . . . . . . . . 46739
$\$ 78928$
Baldwin street, Granite to A street, paved with large granite blocks on a gravel base, and edgestone reset. Length, 253 feet; area, 731 sq . yds.
Labor . . . . . . . . . $\$ 46420$
Teaming . . . . . . . . 18100
Gravel


Baxter street, C to D street, macadamized. Length, 541 feet; area, 1,278 sq. yds.
Labor . . . . . . . . . $\$ 14030$
Teaming . . . . . . . . 3000
Gravel . . . . . . . . . 1987
Stone . . . . . . . . . 14 乞 27
$\$ 33544$
C street, Seventh to Baxter street, macadamized. Length, 153
feet; area, 691 sq . yds.
Labor . . . . . . . . . \$6 90
Teaming . . . . . . . . 2000
Gravel . . . . . . . . . 954
Stone . . . . . . . . . $10+46$
$\$ 14090$
D street, First to Third street, macadamized. Length, 500 feet; area, $2,017 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 16100$
Teaming . . . . . . . . 1000
Gravel . . . . . . . . . 1670
Stone . . . . . . . . . 11766
$\$ 30536$
E street, Broadway to Sixth street, macadamized. Length, 891 feet ; area, $3,494 \mathrm{sq}$. yds.
Labor . . . . . . . . . \$486 45
Teaming . . . . . . . . 14100
Gravel . . . . . . . . . 9938
Stone . . . . . . . . . 95118
$\$ 1,678 \quad 01$
Street Department - Paving Division. ..... 201
Eighth street, D street to R.R., macadamized. Leugth, ..... 253
feet; area, 829 sq . yds.
Labor ..... $\$ 9200$
Teaming ..... 1500
Gravel ..... $18 \quad 29$
Stone ..... 8994
$\$ 215 \quad 23$
Essex street (unfinished work from 1894).Paving$\$ 2528$
Fifth street, Dorchester avenue to E street, macadamized.Length, 2.166 feet; area, $8,346 \mathrm{sq}$. yds.Labor$\$ 51060$
Teaming ..... 15900
Gravel ..... 9302
Stone ..... 84720
\$1,609 82
Fourth street (in front of Bigelow School-house), macadamized.Length, 250 feet ; area, $1,000 \mathrm{sq}$. yds.
Labor ..... $\$ 11040$
Teaming ..... 6500
Gravel ..... 4770
Stone ..... 16891$\$ 392 \quad 01$Gold street, from B street, resurfaced.Stone$\$ 66 \quad 67$Richards street, Granite to A street ; paved with large graniteblocks on gravel, edgestone set. Length, 256 feet; area, 739sq. yds.
Labor ..... $\$ 928 \quad 22$
Teaming ..... 21700
Gravel ..... 19763
824 feet edgestone ..... 51088
17,086 large granite-blocks ..... 98928
Wharfage . ..... $66 \quad 50$
Amount paid to H. Gore \& Co. :
559.6 feet edgestone set, at 8 cts . ..... \$44 77
8893 sq. yds. block-paving laid, at 25 cts., ..... 22233
179.9 b brick " " at 18 cts., ..... 3238
29948$\$ 3,20899$
A mount paid out of Street Improvements,
Aldermanic District No. 6 . . \$2,685 57Amount paid out of Street Improvements,Ward 1352342

Silver street, A street to Dorchester avenue, macadamized. Length, 400 feet; area, 578 sq. yds.
Labor . . . . . . . . . $\$ 11773$
Teaming . . . . . . . . 6500
Gravel . . . . . . . . . 1670
Stone . . . . . . . . . 29717
$\$ 496 \quad 60$
Sixth street, $B$ street to Dorchester avenue, macadamized. Length, 1,920 feet; area, 7,381 sq. yds.
Labor . . . . . . . . . $\$ 6900$
Teaming . . . . . . . . 1250
Gravel . . . . . . . . . 1272
Stone . . . . . . . . . 0811
$\$ 15233$

## STREET IMPROVEMENTS, WARDS 1 AND 2.

Bennington street, Chelsea to Saratoga street, and Saratoga to Walley street, resurfaced. Length, 6,291; area, 23,730 sq. yds.
Labor . . . . . . . . . $\$ 3,04823$
Teaming . . . . . . . . 1,005 50
Gravel . . . . . . . . . 3,07798
Filling 49620
Stone . . . . . . . . . 2,99047
Rolling . . . . . . . . . 57000
Crossing-blocks . . . . . . . 25000
Advertising . . . . . . . . 2288
$\$ 11,46126$
Blackinton street, Leyden to Walley street, filled. Length, 252 feet; area, 728 sq. yds.
Labor . . . . . . . . . $\$ 12075$
Teaming . . . . . . . . 1650
Filling 76200
$\$ 89925$
Brooks street, Trenton to West Eagle street, and Eutaw to White street, resurfaced. Length, 987 feet; area, 3,409 sq. yds.
Lahor . . . . . . . . . $\$ 30360$
Teaming . . . . . . . . 6450
Gravel . . . . . . . . . 37288
Rolling . . . . . . . . . 15000
Brick . . . . . . . . . 500
Paving . . . . . . . . . $81 \quad 56$
Decatur street, Havre to Border street, resurfaced. Length,541 feet; area, 1,924 sq. yds.
Labor ..... $\$ 22080$
Teaming ..... 98 г 0
Gravel ..... 3950
Stone ..... 35491
Rolling ..... 7000
$\$ 783 \quad 71$
Amount paid out of Street Improvements, Wards 1 and 2 ..... $\$ 71371$
Amount paid out of Paving Division ..... $70 \quad 00$78371
East Eagle Street, Prescott to Putnan street, resurfaced.
Labor ..... $\$ 3820$
Paving ..... 4147
$\$ 7967$
Eutaw street, Marion to Brooks street, repaved. Labor ..... $\$ 7590$
'Teaming ..... 2400
$\$ 9990$
Falcon street, Brooks to Putnam street, repaired.
Labor ..... $\$ 10580$
Gladstone street, at Walley street, graded. Labor ..... $\$ 3450$
Teaming ..... 16
Filling ..... 4620
Paving ..... $23 \quad 58$$\$ 120 \quad 28$
Gove street, Meridian to Chelsea street, resurfaced Length,605 feet; area, $2,017 \mathrm{sq} \cdot \mathrm{yds}$.
Labor ..... $\$ 23690$
Teaming ..... 5700
Stone ..... 20710
Rolling ..... $90 \quad 00$
$\$ 591$ C0
Amount paid out of Street Improvements, Wards 1 and 2 ..... $\$ 47890$
Amount paid out of Paving Division ..... 11210


Meridian street, White to Condor street, macadamized, crossings laid. Length, 750 ; area $3,000 \mathrm{sq} \cdot \mathrm{yds}$.
Labor . . . . . . . . . $\$ 20470$
Teaming . . . . . . . . 10400
Gravel . . . . . . . . . 790
Stone . . . . . . . . . 28196
Rolling . . . . . . . . . 5000
960 feet fiagging . . . . . . . . 38400
1,8u0 gutter-blocks . . . . . . 4500

Amount paid to C. L. Ward :
277 feet edgestune reset, at 8 cts. . . $\$ 2216$
Carried forward, $\quad \$ 22 \quad 16 \cdot \$ 1,077 \quad 56$


Saratoga street, Putnam to Prescott street, and Chelsea to Moore street, macadamized, edgestones set, gutters paved, and brick sidewalks relaid. Length, 1,948 feet; area, $10,384 \mathrm{sq}$. yds.
Labor
\$1,766 16
Teaming $802 \quad 50$
Gravel 32627
Stone 71103
Advertising : . . . . . . 600
Amount paid to C. L. Ward :
$3,103.7$ feet edgestone reset. at 8 cts. . $\$ 24829$
189.2 sq. yds. block paving, at 25 cts . . 4731
$1,741.1 \mathrm{sq}$. yds. round-stone paving, at
25 ets. . . . . . . 43528
$1,801.1$ sq. yds. brick-paving, at 18 cts., 32409
$\$ 4,66693$
mount paid out of Street Improvements,
Wards 1 and 2 . . . . . \$4,614 03
Amount paid ont of appropriation for
Saratoga street . . . . . 5290
\$4,666 93
Trenton street, Brooks to Prescott street, edgestone set, gutters paved. Length, 1,270 feet ; area, 4,657 sq. yds.
Labor . . . . . . . . . \$158 70
Teaming . . . . . . . . 2100
Gravel . . . . . . . . . 3081


West Eagle street, Meridian street to Brooks street, resurfaced. Length, 8.50 feet; area, $3,800 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 37720$
Teaming . . . . . . . . 5 50
Gravel . . . . . . . . . 21883
Rolling . . . . . . . . . 10000
Paving . . . . . . . . . 51 乞1
$\$ 75304$
White street, Meridian to Brooks, resurfaced, crosswalks laid. Lergith, 817 feet ; area, 2,723 sq. yds.

Labor . . . . . . . . . $\$ 82685$
Teaming . . . . . . . . 10050
Gravel . . . . . . . . . 23700
Rolling . . . . . . . . . 14000
464 feet flagging . . . . . . . 18560
1,100 gutter-blocks . . . . . . 2750
Paving . . . . . . . . . 18594
$\$ 1,70339$
Amount paid out of Street Improvements,
Wards 1 and 2 . . . . . \$1,109 89
Amount paid out of Paving Division . 59350
\$1,703 39
Work done by the Sewer Division .
$\$ 1,795 \quad 73$

## STREET IMPROVEMENTS WARD 3.

Chelsea street, Vine street to ,Chelsea bridge, repaved, edgestone reset. Length, 1,150 feet; area, $6,133 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 23097$
Teaming . . . . . . . . 23814
Gravel . . . . . . . . . 75828
Brought forward, ..... \$1,227 39
Amount paid to John Turner \& Co. :
549.1 feet edgestone set, at 15 cts. ..... $\$ 8236$
t,590.6 sq. yds. block paving, at 35 cts., 1,606 71
54 . sq. yds. brick paving, at 18 cts . ..... 972
1,698 79$\$ 2,92618$
Chestnut street, resurfaced.
Labor ..... $\$ 11270$
'Teaming ..... 5600
Gravel ..... 4094
Stone ..... 10150$\$ 311 \quad 14$
Corey street, Medford to Bunker Hill street, macadamized,edgestone set, gutters paved, brick sidewalks laid. Length,727 feet ; area, 1,616 sq. yds.
Labor ..... \$1,103 80
Teaming ..... 16300
Gravel ..... 29548
Stone ..... 35273
24,000 paving-brick ..... 24000
Amount paid to John Turner \& Co. :
$1,448.1 \mathrm{ft}$. edgestone set, at 8 cts . ..... $\$ 11585$
34.3 sq. yds. block paving, at 25 cts. ..... 857
467.8 sq. yds. round paving, at 25 cts. ..... 11695
$1,019.3$ sq. yds. brick paving, at 18 cts. ..... 18347
Monument square, resurfaced. Length, 465 feet; area, 1,757 sq. yds.
Labor . . . . . . . . . $\$ 52670$
Teaming ..... 16350
Gravel ..... 13172
Stone ..... 16311
5,000 paving-brick ..... 5000
Paving ..... 15700
$\$ 1,19203$
Amount paid out of Street Improvements,Ward 3$\$ 72103$Amount paid out of Street Improvements,Ward 547100
Work done by the Sewer Division .
$\$ 14433$

## STREET IMPROVEMENTS, WARD 4.

Albion place, resurfaced. Length, 347 feet; area, 887 sq. yds.
Labor . . . . . . . . . \$304 60

Teaming . . . . . . . . 5250
Gravel . . . . . . . . . 5340
Stoue . . . . . . . . . 7000
3,000 paving-brick . . . . . . . 3000
Paving . . . . . . . . . 18996
$\$ 63046$
Alford street (from end of block-paving to Everett), macadamized.
Length, 2,114 feet; area, 7,249 sq. yds.
Labor . . . . . . . . . \$683 30
Teaming . . . . . . . . 8200
Gravel . . . . . . . . . 15308
Stone . . . . . . . . . 40306
$\$ 1,32144$
Belmont street, Medford to Bunker Hill street, macadamized. Length, 598 feet; area, 1,794 sq. yds.
Labor . . . . . . . . . $\$ 72400$
Teaming . . . . . . . . 4600
Carried forward,

Mishawim street, Main street to Rutherford arenue, macadam-ized, edgestone set, gutters paved, crossings laid. Length, 336feet; area, 859 sq. yds.
Labor ..... $\$ 86020$
Teaming ..... 25800
Gravel ..... 16484
Stone ..... 47639
576 feet edgestone and 6 large corners ..... 39072
9,130 gutter-blocks ..... 17347
Crossing-blocks ..... 11200
Advertising ..... 500
Paving ..... 17758
$\$ 2,61820$
Tibbetts Townway, macadamized. Length, 423 feet ; area, 705sq. yds.
Labor ..... $\$ 38525$
Teaming ..... 11500
Gravel ..... 23318
Paving ..... 6130
$\$ 794 \quad 73$
Work done by the Sewer Division ..... $\$ 2,342 \quad 67$
STREET IMPROVEMENTS, WARD 5.
Austin street (Fitchburg Railroad to Boston \& Maine Railroad),paved with large granite blocks, edgestone reset, brick side-walks relaid. Length, 340 feet; area, 1,003 sq. yds.
Labor ..... $\$ 550 \quad 10$
Teaming ..... 23350
Gravel ..... 29192
5,000 paving-brick ..... 50 00
22,802 large granite blocks ..... 1,40503
Amount paid to John Turner \& Co. :
122.8 feet edgestone, at 70 cts. ..... \$85 96
520 " $6 \quad$ set, at 8 cts. ..... 4160
$1,003 \mathrm{sq}$. yds. block paving, at 25 c ets. ..... 25075
210 sq. yds. brick paving, at 18 cts. ..... 3780

Hudson street, Chelsea to Water street, macadamized. Length, 272 feet; area, 423 sq. yds.
Labor . . . . . . . . . \$21790
Teaming . . . . . . . . 6600

Gravel screenings . . . . . . . 10680
Paving . . . . . . . . . 10427


Wapping and Foss streets. Wapping street paved with large granite blocks, edgestones set, brick sidewalks relaid. Length, 457 feet; area, 1,117 sq. yds. Foss street macadamized. Length, 321 feet ; area, 963 sq. yds.
Labor . . . . . . . . . \$1,330 72
Teaming . . . . . . . . 39100
Gravel . . . . . . . . . 47704
Stone . . . . . . . . . 18432
14,000 paving-brick . . . . . . 14000
20,219 large paving-blocks . . . . . 1,170 68
Crossing-blocks . . . . . . . 7200
Advertising . . . . . . . . 1075
Amount paid to John Turner \& Co. :
$13 \frac{2}{12}$ feet edgestone, at 70 cts . . $\$ 928$
$1,451.9$ feet edgestone set, at 8 cts. . $116 \cdot 15$
$1,780.4$ sq. yds. block paving, at $25 \mathrm{cts} ., \quad 44510$
926.4 sq. yds. brick paving, at 18 cts. . 16675

73728
$\$ 4,513 \quad 79$

Amount paid out of Street Improve-
ments, Ward 5. . $\quad . \quad . \quad . \$ 4,334 \quad 39$
Amount paid out of Street Improvements, Ward 4 . . . . . 17940
$\$ 4,51379$
Winthrop street, Warren street to Monument square, macadamized. Length, 745 feet ; area, 2,483 sq. yds.
Labor . . . . . . . . . $\$ 48680$
Teaming . . . . . . . . 347 „0
Gravel . . . . . . . . . 25098
Stonc . . . . . . . 70350
Amount paid to John Turner \& Co. :
854.6 feet edgestone set, at 8 cts. . . \$68 37
139.9 sq. yds. block paving lait, at 25 cts. 3497
428.2 sq. yds. round-stone paving laid, at 25 cts. . . . . . . 10705
587.3 sq. yds. brick paving laid, at 18 cts., 10571

## STREET IMPROVEMENTS, WARD 6.

Congress square, paved with asphalt blocks, granolithic sidewalks. Area, 200 sq . yds.
Labor ..... $\$ 34095$
Teaming ..... 14450
Gravel and sand ..... 3709
$32 \frac{10}{12}$ feet circular edgestone ..... 4269
$44 \frac{2}{12}$ feet straight edgestone ..... 2738
$30 \frac{4}{12}$ feet flagging ..... 1216
700 paving-brick ..... 700
Crossing-blocks ..... 523
4,536 asphalt blocks ..... 18144
1,783 sq. ft. granolithic sidewalks ..... 10698
Paving ..... 14186
$\$ 1,04728$
Amount paid out of Street Improve- ments, Ward 6 . . . . \$1,019 89Amount paid out of Street Improve-Wards 6, 7, 8$27 \quad 39$\$1,047 28

Sheafe street, Salem to Snowhill street, macadamized. Length, 454 feet ; area, 809 sq. yds.
Labor ..... \$192 05
Teaming ..... 13200
Gravel ..... 2850
Stone ..... 14000$\$ 49255$
Work done by the Sewer Division ..... $\$ 65 \quad 27$STREET IMPROVEMENTS, WARDS 6, 7, 8.
Barrett street, Fulton to North street, paved with large graniteblocks on a gravel base with Portland cement grout joints.Length, 280 feet; area, 486 sq. $y$ ds.
Labor ..... $\$ 82160$
Teaming ..... 47000
Gravel and sand ..... 8770
10,534 large granite blocks ..... 57937
3,500 paving-brick ..... 3308
Cement. ..... 11040
Sundries ..... $66 \quad 50$


Billerica street, Causeway to Minot street, paved with large granite blocks on a gravel base with Portland cement grout joints, edgestone reset, brick sidewalks relaid. Length, 674 feet; area, 1,348 sq. yds.

Brought forward, ..... \$3,834 80
31,500 large granite blocks ..... 1,823 8 อ̃
20 feet edgestone and two large corners ..... 2360Amount paid to A. A. Libby \& Co. :
1,331 sq. yds. block paving, cement joints, at 42 cts. ..... $\$ 55902$
227 sq. yds. block paving, gravel joints, at 25 cts. ..... 5675
1,461 feet edgestone set, at 8 cts. ..... 11688
840 sq. yds. brick paving laid, at 18 cts. ..... 15180
16 sq. yds. crossings laid, cement joints, at 42 cts. ..... 672
12 sq. yds. crossings laid, gravel joints, at 25 cts. ..... 300

Chambers street, Ashland to Poplar street, paved with granite blocks; Brighton street to Charles street, asphalted, edgestones reset, brick sidewalks relaid. Length, 642 feet; area, 1,367 sq. yds.
Labor ..... \$1,082 88
Teaming ..... 58400
Gravel and sand ..... 20112
203 feet edgestone ..... 13206
12,500 paving-brick ..... 13208
15,610 large granite blocks ..... 90382
50 feet flagging ..... 2000
Advertising ..... 2850
Sundries ..... 1465
Amount paid to John Turner \& Co. :
701 feet of edgestone set, at 8 cts . ..... $\$ 5608$
705.4 sq. yds. block paving, at 25 cts. ..... 17635
422 sq. yds. brick paving, at 18 cts. ..... 759630839
Amount paicl to T. H. \& W. A. Payson :
66 sq. yds. block paving, at 25 cts. ..... $\$ 1650$
510 feet edgestone set, at 8 cts . ..... 4080
245 sq. yds. brick paving laid, at 25 cts., ..... 6125
18 sq. yds. flagging crossings, at 25 cts., ..... 450Brought forward,\$3,531 55
Amount paid to Barber Asphalt Paving Co. :
337 sq. yds. Trinidad asphalt pavement, with concrete base and binder course, at $\$ 3.00$ ..... $\$ 1,01100$
252.3 sq. yds. Trinidad asphalt pavement, with cobble base and binder course, at $\$ 2.65$ ..... 66859
1,679 59$\$ 5,21114$
Amount paid out of Street Improve- ments, Wards 6, 7, and 8 . . . \$2,014 40
Amount paid out of Street Improve- ments, Wards 7 and 8 . . . 3,196 74$\$ 0 ๊, 21114$
Doane street (work not started).
Labor ..... $\$ 925$
Advertising ..... 795
$\$ 17$ ..... 20
Granolithic sidewalks.
Rebate on 1,519 sq. ft. artificial stone sidewalks, at6 cts. .$\$ 91 \quad 14$
Lancaster street, Causeway to Merrimac street, paved with largegranite blocks on a gravel base with Portland cement groutjoints, edgestone reset, brick sidewalk relaid. Length, 365feet; area, $1,071 \mathrm{sq}$. yds.
Iabor . . . . . . . . . $\$ 1,05060$
'Teaming ..... 86000
Gravel and sand ..... 21972
Cement ..... 23000
23,045 large granite blocks ..... 1,26748
188 feet flagging ..... 11938
155 feet edgestone ..... 9610
15,000 paving-brick ..... 14175
Advertising ..... 600702 feet edgestone set, at 8 cts.$\$ 5616$
$1,071.3$ sq. yds. block-paving, cement joints, at 42 cts. ..... 44995
25 sq. yds. block paving, gravel joints, at 25 cts . ..... 625
59.7 sq. yds. crossings laid, cement joints, at 42 cts . ..... 2507
401 sq. yds. brick paving, at 18 cts. ..... 7218
$\$ 60961$

Lewis street, Commercial to North street, paved with large granite blocks, on a gravel base, with Portland cement grout joints, edgestone reset, brick sidewalks relaid. Length, 188 feet; area, 603 sq. yds.
Labor . . . . . . . . . \$638 34
Teaming . . . . . . . . 52200
Gravel and sand . . . . . . . 10760
Cement . . . . . . . . . 15180
12,900 large granite blocks . . . . . 74691
5, 000 paving-brick . . . . . . 4725
496 feet flagging . . . . . . . 19840
Advertising . . . . . . . . 675
Amount paid to A. A. Libby \& Co.
567.5 sq . yds. block paving, cement joints, at 42 cts.
$\$ 238^{5} 35$
74 sq. yds. block paving, gravel joints,
at 25 cts. . . . . . . 1850
360 feet edgestone set, at 8 cts. . . 2880
235 sq. yds. brick paving, at 18 cts. . 4230
39.7 sq. yds. flagging crossings, cement
joints, at 42 cts.
$344 \quad 62$
$\$ 2,76567$
Amount paid out of Street Improvements,
Wards $6,7,8$. . . . . \$2, 75917
Amount paid out of appropriation for
Lewis street
450
$\$ 2,763 \quad 67$
Merchants low, State to North street, paved with large granite blocks on concrete base, with Portland cement grout joints, edgestone set, brick sidewalks relaid. Length, 613 feet; area, $2,914 \mathrm{sq} . \mathrm{yds}$.
Labor . . . . . . . . . $\$ 2,60677$
Teaming . . . . . . . . 1, 18300
Gravel and sand . . . . . . . 48945
373 feet edgestone, 1 large and 1 small corner . 24021
$48 \frac{11}{12}$ feet circular edgestone . . . . . 6359
63,860 large granite blocks . . . . . 3,69749
2,052 feet flagging . . . . . . 74790
20,000 paring-brick . . . . . . 18900
Lumber . . . . . . . . . 3114
Cement . . . . . . . . . 85675
Sundries . . . . . . . . 3250
Amonnt paid to A. A. Libby \& Co.:
$2,906.8$ sq. yds. concrete base, at 75 cts. $\$ 2,180 \quad 10$
$3,101.6$ sq. yds. block paving, cement
joints, at 42 cts. . . . . 1,302 67
Carried forward,
Brought forward,820 feet edgestone set, at 8 cts.\$3,482 $77 \quad \$ 10,13780$6560
555.5 sq. yds. brick paving, at 18 cts. ..... 9999
684 sq. yds. block paving, gravel joints, at 25 cts. ..... 17100
58.5 sq. yds. brick paving on edge, at 36 cts. ..... 2106
3,84042
$\$ 13,97822$
North Margin street, Stillman to Thatcher street, asphalted withTrinidad asphalt. Length, 515 feet; area, $1,154 \mathrm{sq}$. yds.
Labor$\$ 77228$
Teaming ..... 57100
Gravel and sand ..... 4780
10,500 paving-brick ..... $99 \quad 24$
$5 \frac{11}{12}$ feet circular edgestone ..... 769
1 large and 2 small corners ..... 1230
Advertising ..... 880
Sundries ..... 1900
Amount paid to T. H. \& W. A. Payson :
145 sq. yds. block paving, at 25 cts. ..... $\$ 3625$
1,030 feet edgestone set, at 8 cts. ..... 8240
567.5 sq. yds. brick paving laid, at 18 cts. ..... 10215
10 sq. yds. crossings laid, at 25 cts. ..... 250
20.4 sq. yds. brick paving, herring-bone, at 36 cts . ..... 734Amount paid to Barber Asphalt Paving Company :$1,156.7 \mathrm{sq} \cdot \mathrm{yds}$. Trinidad asphalt, with concrete baseand binder, at $\$ 3$3,470 10$\$ 5,23885$
Amonnt retained from Barber Asphalt Paving Company ..... 17351$\$ 5,06534$
Tileston street, Unity to Salem street, asphalted with Trinidadasphalt. Length, 163 feet; area, 132 sq. yds.
Labor ..... $\$ 222 \quad 15$
Teaming ..... 17250
Gravel ..... 1170
Lumber ..... 133
2,000 paving-brick ..... 1890Amount paid to Barber Asphalt Paving Company :
123.8 sq . yds. Trinidad asphalt, with concrete baseand binder, at $\$ 3$$\$ 37140$
8.6 sq. yds. 'Trinidad asphalt, with binder, at $\$ 2.25$ ..... 1935


## STREET IMPROVEMENTS, WARD 9.



Bowdoin street, Cambridge street to Bulfinch place; macadamized. Length, 275 feet; area, 764 sq . yds.
Labor . . . . . . . . . $\$ 53138$
Teaming . . . . . . . . 9900
Stone . . . . . . . . . 3500
$\$ 66538$

| Amount paid out of Street Improvements, Ward 9 | \$158 |
| :---: | :---: |
| Amount paid out |  |
| Wards 9 and 10 |  |

66538
Bulfinch street, Allston street to Bulfinch place; macadamized. Lerigth, 225 feet; area, 424 sq . yds.
Labor . . . . . . . . . $\$ 5900$
Teaming . . . . . . . . 15555
Gravel . . . . . . . . . 1140

- \$225 95

A mount paid out of Street Improvements,

- Ward 9 . . . . . \$214 ธั

A mount paid out of Street Improvements, Wards 9 and 10

1140
22595

Chestnut street, Charles to Walnut street, macadamized. Length, 1,015 feet ; area, 3,158 sq. yds.
Labor . . . . . . . . . $\$ 22880$
Teaming . . . . . . . . 16600
Stone . . . . . . . . . 13700
Gravel . . . . . . . . . 4161

Brought forward.
857341
Amount paid out of Street Improvements, Ward 9
\$5̃31 80
Amount paid ont of Street Improvements, Wards 9 and 10

4161

Derne street, Temple to Bowdoin street, resurfaced, granolithic sidewalks laid. Length, 150 feet; area, 317 sq . yds.
Labor
$\$ 16425$
Teaming . . . . . . . . 3750
2,498 sq. yds. artificial stone sidewalk, rebate, at 6 cts.

14988
$\$ 35163$
Amount paid out of Street Improvements, Ward 9
$\$ 20175$
Amount paid out of Street Improvements, Wards ? and 10 14988
$\$ 351 \quad 63$
Green street, resurfaced.
Labor . . . . . . . . . $\$ 1400$
Stonc . . . . . . . . . 14000
$\$ 15400$

Joy street, Beacon to Myrtle street, macadamized. Length, 765 feet; area, $1,785 \mathrm{sq}$. yds.

| Labor | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\$ 188$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Teaming | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 118 |
| Stone | 00 |  |  |  |  |  |  |  |  |
|  | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 108 |
|  |  |  | 50 |  |  |  |  |  |  |

Mount Verion street, Charles to Brimmer street, macadamized. Length, 450 feet; area, 1,650 sq. yds.
Labor . . . . . . . . . \$2S5 23
Teaming . . . . . . . 29200
Gravel . . . . . . . . . 4446
Stone 5950

Advertising
1000
$\$ 691 \quad 19$
Amount paid out of Street Improvements, Ward 9
$\$ 35183$
Amount paid out of Street Improvements, Wards 9 and 10 33936

River street, Chestnut to Mt. Vernon street, macadamized. Length, 260 feet ; area, 578 sq. yds.
Labor ..... $\$ 45330$
Teaming ..... 16950
Stone ..... 15400$\$ 77680$
Temple street, Cambridge to Derne street, macadamized.Length, 614 feet; area, 1,296 sq. yds.
Labor . . . . . . . . . \$5068 40
Teaming . . . . . . . . 31800Gravel4560
Amount paid out of Street Improvements, Ward 9 ..... $\$ 88640$
Amount paid out of Street Improvements, Wards 9 and 10 ..... 4560
$\$ 93200$
Walnut street, Beacon to Mt. Vernon street, macadamized.Length, 463 feet ; area, 1,132 sq. yds.
Labor ..... $\$ 14740$
Teaming ..... 13925
Gravel ..... 3990
Stone ..... 14000$\$ 46655$
Amount paid ont of Street Improvements, Ward 9 ..... $\$ 42665$
mount paid ont of Street Improvements, Wards 9 and 10 ..... 3990
$\$ 46655$
STREET IMPROVEMENTS, WARDS 9 AND 10.
Ashburton place, resurfaced.
Labor ..... $\$ 11155$
Teaming ..... 8550\$197 05Brimmer street, Beacon to Pinckney street, asphalted withTrinidad asplatt, edgestone reset, brick sidewalks relaid.Length, 1,087 feet ; area, 3,300 sq. yds.
Labor ..... $\$ 2,14090$
Teaming ..... 35700
Gravel ..... 13945
16,000 paving-brick ..... 15850
Advertising ..... 1800Brought forward,Amount paid to T. H. \& W. A. Payson:
189 sq. yds. block paving, at 25 cts. ..... $\$ 4725$
2,117 feet edgestone set, at 8 cts. ..... 16936
115 sq. yds. flagging set, at 25 cts. ..... 2875
1,437 sq. yds. brick paving, at 23 cts. ..... 33051
36 sq. yds. brick paving (herring-bone) on edge, at 55 cts. ..... 1980Amount paid to Barber Asphalt Paving Company :
$3,272 \mathrm{sq}$. yds. Trinidad asphalt on a concrete base, at $\$ 3, \quad 9,81600$
$\$ 13,225 \quad 52$
Amount retained from Barber Asphalt Paving Com- pany ..... 49080
\$12,734 ..... 72
Amount paid out of Street Improvements,
Wards 9 and 10 ..... $\$ 12,67032$
Amount paid out of Street Improvements, Ward 9 ..... 6440
$\$ 12,73472$
Charles street, Pinckney to Cambridge street (easterly side), paved with large granite blocks on a concrete base, with Portland cement grout joints, edgestones reset, brick sidewalks relaid. Length, 845 feet; area, 1,989 sq. yds.
Labor ..... \$1,798 82
Teaming ..... 1,020 50
Gravel and sand ..... 29677
Cement ..... 44160
387 feet flagging ..... 14228
33,000 large granite blocks ..... 1,910 70
14,000 paving bricks ..... 13230
Sundries ..... 800
Amount paid to H. Gore \& Co. :
$2,091.4$ sq. yds. American cement, con-
crete base, at 75 cts. ..... $\$ 1,56855$
$2,127.8$ sq. yds. block paving, Portland cement grout joints, at 42 cts . ..... 89368
1,129 feet edgestone reset, at 8 cts. ..... 9032
759 sq. yds. brick sidewalks relaid, at 18 cts. ..... 13662
Extra work as ordered ..... 19082
2,879 99$\$ 8,63096$Amount paid out of Street Improvements,Wards 9 and 10\$8,164 84
Amount paid out of Street Improvements,Ward 946612

## STREET IMPROVEMENTS, WARDS 9 AND 10.



Otis street, Summer street to Winthrop square, paved with large granite blocks on a concrete base, with Portland cement grout joints, crossings laid. Length, 257 feet; area, 881 sq. yds.
Labor
$\$ 12118$
Teaming . . . . . . . . 60400
22,500 large granite blocks . . . . . 1,302 75
Gravel and sand . . . . . . . 7450
Cement . . . . . . . . . 23000
120 feet flagging . . . . . . . 3900
Advertising . . . . . . . . 600
Amount paid to James Grant \& Co.:
881.5 sq. yds. block paving, with Portland cement,
grout joints, at 58 cts. . . . \$511 27
172 sq. yds. crosswalks laid, at 35 cts . . 6020
$\$ 2,948 \quad 90$
Oxford street, Beach to Essex street, asphalted with Trinidad asphalt. Length, 430 feet ; area, 735 sq. yds.
Labor . . . . . . . . . $\$ 9200$

Gravel and sand . . . . . . . 2420
8,850 paving-bricks . . . . . . 88 乞0
6.6 feet edgestone .

409
Brought forward,$\$ 20879$
Amount paid to Barber Asphalt Paving Company :
735 sq . yds. base course for asphalt, at40 cts .$\$ 29400$
735 sq. yds. Trinidad asphalt pavement
and binder, at $\$ 2.25$. . . . 1,653 75
1,94775$\$ 2,15654$
Amount paid out of Street Improvements,
Wards 9 and 10 . . . . . $\$ 2,03975$
Amount paid out of Paving Division ..... 11679
$\$ 2,15654$
Parkman street, resurfaced.Labor$\$ 12420$Pinckney street, Brimmer to Charles street, asphalted withTrinidad asphalt. Length, 271 fcet; area, 723 sq . yds.
Labor ..... $\$ 15595$
Teaming ..... 7350
Gravel and sand ..... 2398
Paving . ..... 9235Amount paid to Barber Asphalt Paving Company :
710 sq. yds. Trinidad asphalt on concrete, at $\$ 3$ ..... 2,130 00$\$ 2,47578$
Amount retained from Barber Asphalt Paving Com- pany . ..... 10650$\$ 2.369 \quad 28$Summer street, Washington to Federal street, paved with largegranite blocks on a coucrete base, crossings laid. Length,1,528 feet; area, $1,918 \mathrm{sq}$. yds.
Labor ..... \$1,801 84
Teaming ..... 1,88000
Gravel and sand ..... 33005
Cement . ..... อ 0600
42,550 large granite block ..... 2,390 13
192 feet flagging ..... 9372
Advertising ..... 4075
Amount paid to James Grant \& Co. :
$1,918.1$ sq. yds. cement concrete base, at75 cts. $\$ 1,43858$
$2,037 \mathrm{sq}$. yds. block-stone and crossings
laid, with cement joints, at 42 cts. ..... 86554
314.2 sq. yds. block-stone and crossingslaid, with gravel joints, at 25 cts.7856
Carried forward, ..... $\$ 2,38268$
Brought forward, ..... \$2,382 68 ..... $\$ 7,04249$
174 feet edgestones reset, at 8 cts. . ..... 1392
134.2 sq. yds. brick sidewalks, at 18 cts., ..... 2416
Extra work as ordered ..... 141732,ä62 49$\$ 9,60498$
Less amount paid by the West End Street Railway Company ..... $\$ 54671$
Less amount paid by the Edison Electric Illuminating Company ..... 35579
$\$ 902 \quad 50$$\$ 8,70248$
Amount paid out of Street Improvements, ..... Warls 9 and 10 . . . . . $\$ 5,81042$
Amount paid out of Street Improvements, Ward 12 ..... 2,89206West street, Tremont to Washington street, paved with largegranite blocks on a concrete base, with cement joints, crossingslaid. Length, 486 feet ; area, 1,186 sq. yds.
Labor ..... $\$ 15555$
18.965 large granite blocks ..... 1,043 08
6,500 paving-brick. ..... 6143
272 feet flagging ..... 8840
164 feet edgestone and 1 large corner ..... 10728
Advertising ..... 2900
Sundries ..... 3200
Amount paid to H. Gore \& Co.:
1,135 sq. yds. block paving, cement joints, at $\$ 2.25$ ..... 75
377 feet edgestone, at 25 cts. . ..... 9425
184 sq. yds. brick paving, at 43 cts. ..... 7912
60 sq. yds. flag crossings, with cement joints, at \$2.25 ..... 13500
Extra work as ordered ..... 8298Amount retained from H. Gore \& Co.14726$\$ 4,314 \quad 58$
Work done by Sewer Division ..... $\$ 59172$

## STREET IMPROVEMENTS, WARD 11.

Beacon street, Arlington to Dartmonth street, macadamized, edgestone reset, brick sidewalks relaid and gutters repared. Length, 1,852 feet ; area, $9,466^{\circ}$ sq. yds.


Amount paid out of Street Improvements, Ward 11 . . . . . . $\$ 6,29828$
Amonnt paid out of Paving Division . 3,503 46
$\$ 9,80174$

Boylston street, Arlington to Clarendon street, macadamized.
Length, 1,200 feet ; area, 6,700 sq. yds.
Labor . . . . . . . . . $\$ 99820$
Teaming . . . . . . . . 84500
Gravel . . . . . . . . . 25265
Stone . . . . . . . . . 1,215 64
$\$ 3.31149$
Amount paid out of Paving Division . . . \$3,311 49

Buckingham street, Columbus avenue to Dartmouth street, macadamized, edgestone reset, brick sidewalks relaid. Length, 627 feet ; area, 1,602 sq. yds.
Labor . . . . . . . . . $\$ 42140$
Teaming . . . . . . . . $4 \geqslant 100$
Gravel and sand . . . . . . . 19.515
Stone . . . . . . . . . 47680
10,500 paving-brick . . . . . . 9922
Amount paid to James Doherty \& Co.:
1,129 feet'edgestone set, at 15 cts. . . $\$ 16935$
353 sq. yds. block paving, at 35 cts., . 12355
1,106 sq. yds. brick paving, at $23 \mathrm{cts} .$, . 25438

| Brought forward, |  | \$2,160 85 |
| :---: | :---: | :---: |
| Amount paid out of Street Improvements, Ward 11 |  |  |
| Amount paid out of Paving Division | 1,206 55 |  |
| Chandler street, Berkeley street to Columbus avenue, macadamized, edgestone reset, brick sidewalks relaid, gutters repaved. Length, 1,103 feet ; area, $4,955 \mathrm{sq}$. yds. |  |  |
|  |  |  |
|  |  |  |
| Labor |  | \$771 97 |
| 'Teaming |  | 96800 |
| Gravel and sand |  | 29879 |
|  |  | 28050 |
| 375 large granite blocks . |  | 2171 |
| 16,000 paving-brick |  | 15120 |
| Granolithic sidewalks |  | 9828 |
| Amount paid to T. H. \& W. A. Payson : |  |  |
| 1,938 feet edgestone set, at 15 cts., . \$290 70 |  |  |
| 978 sq. yds. block paving, at 35 cts., . 34230 |  |  |
| 3.6 sq. yds. round stone, at 35 cts., . 1.26 |  |  |
| 1,918 feet brick paving laid, at 23 cts., . 44114 |  |  |
| 22.9 sq. yds. brick paving (herring-bone), at 36 cts . |  |  |
|  |  | 1,083 64 |
|  |  | \$3,674 09 |
| Amount paid out of Street Improvements, Ward 11 | $\$ 3,329 \quad 34$ |  |
| Amount paid out of Paving Division | 34475 |  |
|  |  | \$3,674 09 |

Columbus avenue, Park square to Ferdinand street, paved with large granite blocks on a concrete base, with cement joints, edgestones reset, crossings laid, brick sidewalks relaid. Length, $8: 25$ feet; area, $4,950 \mathrm{sq}$. yds.
Labor ..... $\$ 26206$
108,725 large granite blocks ..... $6,125 \quad 59$
780.6 feet flagging ..... 43299
47,850 paving-brick ..... 45219
2 large and 2 small corners ..... 1790
Advertising ..... 3833
Sundries ..... 226Amount paid to H. Gore \& Co. :
$5,229.8$ sq. yds. block paving on con-crete base, with cement joints, at$\$ 2.25$$\$ 11,76705$
472 sq. yds. block paving on gravel, with gravel joints, at $\$ 1.00$ ..... 472 00
$1,504.5$ feet edgestone set, at 25 cts. ..... 37613
1,972 sq. yds. brick paving, at 43 cts.,84796


## STREET MMPROVEMENTS, WARD 12.

Devonshire street, Milk to Franklin streets, paved with large
granite blocks on a concrete base, with cement joints, crossings laid. Length, 435 feet ; area, $1,468 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 11080$
Teaming . . . . . . . . 1,11600
Gravel and sand . . . . . . . 21870
Cement . . . . . . . . . 37490
Lumber . . . . . . . . . 4608
37.625 large granite blocks . . . . . 2,15702

582 feet flagging . . . . . . . 18885
Sundries . . . . . . . . 1800
Amount paid to James Grant \& Co. :
$1,520.6 \mathrm{sq}$. yds. concrete base, at 75 cts. $\$ 1,14045$
$1, \check{2} 20.6 \mathrm{sq} \cdot \boldsymbol{r} \mathrm{ds}$. block paving with cement,
grout joints, at 67 cts. . . . 1,018 80
281 sq. yds. block paving, with gravel
joints, at 25 cts. . . . . 7025
281 sq. yds. block paving, at 10 cts. . 2810
3 days stone-cutter, at $\$ 4.50$. . . 1350

Harvard street, Harrison avenue to Washington street, repaved, crossings laid. Length, 400 feet; area, 900 sq. yils.
Labor . . . . . . . . . \$318 15
Teaming . . . . . . . . 22850
Gravel . . . . . . . . . 2850
102 feet flagging . . . . . . . 3315
8,550 large granite blocks . . . . . 49505
Advertising . . . . . . . . 2250
Paving . . . . . . . . . 15716
$\$ 1,283 \quad 01$

Oak street, Hudson to Albany street, paved with large granite blocks, edgestone reset, brick sidewalks relaid. Length, 145 feet ; area, 419 sq. yds.
Lahor . . . . . . . . . $\$ 36340$
Teaming . . . . . . . . 39150
Gravel . . . . . . . . . 83 52
2,600 paving-brick . . . . . . 2600
8,820 large granite blocks . . . . . 51068
12.8 feet flagging . . . . . . . 512

Advertising . . . . . . . . 1850
Paving . . . . . . . . . 16229

| Tyler street. (Work not started.) Advertising | \$20 50 |
| :---: | :---: |
| Whitmore street, asphalted with Sicilian rock asphalt. Length, 249 feet ; area, 418 sq. yds. |  |
|  |  |
| Labor | \$395 97 |
| Teaming | 15500 |
| Gravel and sand | 760 |
| 3,150 paving-brick . | 2977 |
| Paving | 15666 |
| Amount paid to Boston Asphalt Co.: |  |
| 418 sq. yds. Sicilian rock asphalt, with concrete base, at \$3 | 1,254 00 |
|  | \$1,999 00 |
| Amount retained from Boston Asphalt Co. | 6270 |
|  | \$1,936 30 |

## STREET IMPROVEMENTS, WARD 13.

D street, Seventh to Eighth street, paved with large granite blocks, edgestone reset, crossings laid, brick sidewalks laid. Length, 294 feet ; area $1,337 \mathrm{sq}$. yds.
Lahor ..... \$193 83
Teaming ..... 13850
576 feet flagging ..... 18540
14,000 paving-brick ..... 13790
34.377 large granite blocks ..... 1,990 43
Wharfage ..... 3120
Advertising ..... 2500
Amount paid to Collins \& Ham :
557.2 feet edgestone set, at 8 cts. ..... $\$ 4458$
253.2 feet erlgestone set, at 20 cts . ..... 5064
1.2319 sq . yds. block paving, at 60 cts . ..... 73914
171.3 sq . yds. round-stone paving, at 60 cts ., ..... 10278
698.2 sq. yds. brick paving, at 38 cts. ..... 265321,202 46
$\$ 3,90472$

Amount paid'out of Street Improvements, Ward 13

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$1,745 54
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Amount paid out of Street Improvements, Wards 14 and 15

$$
2,159 \quad 18
$$

## STREET IMPROVEMENTS, WARD 14.

Last Neventh street, I to K street, macadamized. Length, 644 feet; area, 2,561 sq. yds.
Labor . . . . . . . . . $\$ 30000$
Teaming . . . . . . . . 10600

Gravel
Stone
17270
$\$ 59460$
Emerson street, Dorchester to East Third street, macadamized. Length, 307 feet ; area, $1,159 \mathrm{sq} \cdot \mathrm{yds}$.
Labor . . . . . . . . . $\$ 15982$
Teaming . . . . . . . . 8250
Gravel . . . . . . . . . 318
Stone . . . . . . . . . 30292
\$548 42
Amount paid out of Street Improvements, Ward 14 $\$ 8368$
Amount paid out of Street Improvements, Wards 14 and 15

46474
$\$ 54842$
F street, Second to Eighth street, macadamized. Length, 2,203 feet; area, $8,450 \mathrm{sq}$. yds.
Labor . . . . . . . . . \$776 65
Teaming . . . . . . . . 27200
Gravel . . . . . . . . . 13516
Stone . . . . . . . . . 1,314 83
Advertising . . . . . . . . 720
Paving . . . . . . . . . 3960
$\$ 2,54544$

$\$ 2,54544$
H street, East Sixth to East Ninth street, macadamized. Length, 857 feet ; area, $3,494 \mathrm{sq} . \mathrm{yds}$.
Labor . . . . . . . . . \$276 15
Teaming . . . . . . . . 10100
Gravel . . . . . . . . . 14708
Stone . . . . . . . . . 06806
Granolithic sidewalks . . . . . . 3170


East Eighth street, H to K streets, paved with large granite blocks. edgestone reset, brick sidewalks relaid. Length, 1,073 feet ; area, $2,738 \mathrm{sq} . \mathrm{yds}$.
Labor ..... $\$ 1,16739$
Teaming ..... 75000
Gravel ..... 53007
18,000 paving-brick ..... 17731
49,596 large granite blocks ..... 2,871 61
Wharfage ..... 8350
Amount paid to J. B. O'Rourke \& Co. :
$2,738 \mathrm{sq}$ yds block paving, at 25 cts . . \$684 50
$2.09 y$ feet erlgestone set. at 15 cts . ..... 31485
$1,022 \mathrm{sq}$. yds brick paring, at 18 cts. ..... 32796 ..... 32796
26 sq . y (ls. brick paring (herring-bone) at 36 cts . ..... 936
47 sq. yds. crosswalks laid, at 25 cts . ..... 1175
East Second street, L to O street, macadamized. Length, 1.095feet; area, $6,082 \mathrm{sq}$. yds.
Labor ..... \$812 44
Teaming ..... 395 50
Gravel ..... 30926
Stone ..... 1,59388
Advertising ..... 1200

East Sixth street, N to O street, paved with large granite blocks (east side), edgestone set, brịck sidewalks relaid. Length, 528 feet; area, 599 sq . yds.
Labor ..... \$563 60
Teaming ..... 4600
Gravel ..... 9519
203 feet edgestone. ..... 12586
14,016 large granite blocks ..... 81152
Wharfage ..... 3040Amount paid to J. B. O'Rourke \& Co. :
599 sq. yds. block paving, at 25 cts. ..... \$149 75
755 feet edgestone set, at 8 cts. ..... 6040
100 sq. yds. brick paving, at 18 cts. ..... 180022815$\$ 1,900 \quad 72$

East Third street, H to I street, macadamized. Length 400 feet; area, $1,510 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 22180$
Teaming . . . . . . . . 127 乞̃0
Gravel . . . . . . . . . 6122
Stone . . . . . . . . . 67303
Advertising . . . . . . . . 750brick sidewalks relaid. Length, 568 feet; area, 1,206 sq. yds.
Labor ..... $\$ 81235$
Teaming ..... 412 50
Gravel ..... 26790
Cement ..... 27600
3.000 paving-brick ..... $49 \quad 25$
24,066 large granite blocks ..... $1,32: 36$
Wharfage ..... 4670$\$ 3,18833$Amount paid to J. B. O'Rourke \& Co. :$1,204.4$ sq. yds. block paving, cementjoints, at 42 cts.$\$ 50585$
550.5 feet edgestone set, at 8 cts. ..... 4404
556 sq. yds. brick paving, at 18 cts. ..... 10008
2.2 sq. yds. block paving, gravel joints, at 25 cts ..... 55
Swett street, Ellery street towards Albany street, macadamized. Length, 1,360 feet; area, 6,045 sq. yds.
Labor
$\$ 1,60847$
Amonnt paid out of Street Improvements, Wards 14 and 15 . . . . 99935
A mount paid out of Street Improvements, Ward 15 . . . . . . 28367
Amount paid out of Street Improvements, Ward 20 32545

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$1,608 47
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Vale street, Burnham street to water line, graded and gravelled.
Labor
$\$ 7820$

## STREET IMPROVEMENTS, WARD 15.

Baxter street, D to E street, resurfaced. Length, 522 feet; area, 1,483 sq. yds.
Labor . . . . . . . . . . $\$ 5290$
Stone . . . . . . . . . . 50
Gravel . . . . . . . . 477
$\$ 63 \quad 17$
Dexter street, Ellery street to Dorchester avenue, resurfaced. Length, 325 feet; area, 848 sq . yds.
Labor . . . . . . . . . \$102 35
Teaming . . . . . . . . 1500
Stone . . . . . . . . . 9507
$\$ 21242$
Eighth street, D to E street, resurfaced. Length, 520 feet; area, $1,600 \mathrm{sq} . \mathrm{yds}$.
Labor
$\$ 17725$
Teaming . . . . . . . . 4500
Gravel . . . . . . . . . 4611
Stone . . . . . . . . . 16450
$\$ 43286$

| Ellery street, Dexter to Swett street, macadamized, 210 feet;' area, 467 sq. yds. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Labor |  | . |  |  | . | . |  | . | \$29 90 |
| 'Teaming |  | . |  |  | - | . |  | - | 2000 |
| Gravel . |  | - |  |  | - | - |  | . | 1431 |
| Stone |  | - | - | - | . | . | . | . | 6200 |
|  |  |  |  |  |  |  |  |  | \$126 21 |
| Gold street, F to Dorchester street, resurfaced. |  |  |  |  |  |  |  |  |  |
| Labor . |  | . |  |  | . | . |  | . | \$74 75 |
| Teaming |  | . | - | . | . | . | - | . | ว 00 |
| Stone | - | - | - | - | - | - | - | . | 1328 |
|  |  |  |  |  |  |  |  |  | \$93 03 |

Jenkins street, Dorchester street to N.Y., N.H., \& H. R.R., resurfaced.
Labor . . . . . . . . . $\$ 6210$
Teaming . . . . . . . . 500
Gravel . . . . . . . . . 1749
Stone . . . . . . . . . 2203
$\$ 106 \quad 62$

Mt. Vernon street, Dorchester avenue to Boston street, resurfaced.
Labor . . . . . . . . . \$180 75
Teaming . . . . . . . . 4750
Stone . . . . . . . . . 39971
$\$ 62796$
Silver street, E to F street, resurfaced.
Labor . . . . . . . . . $\$ 11040$
Gravel . . . . . . . . . 6042
$\$ 17082$
Ward street, Preble to Dorchester street, resurfaced.
Labor . . . . . . . . . $\$ 6210$
Teaming . . . . . . . . 5500
Gravel . . . . . . . . . 1988
Stone . . . . . . . . . 7184
$\$ 20882$

## STREET IMPROVEMENTS, WARD 16.

## Bristol street, in front of engine-house, paved with large granite

 blocks. Length, 100 feet ; area, 290 sq. yds.Labor . . . . . . . . . $\$ 17250$
Teaming . . . . . . . . 18600
Gravel . . . . . . . . . 2280
5,525 large paving-blocks . . . . . 31990
Paving . . . . . . . . . 5325
$\$ 75945$
Castle street, Washington to Tremont street, paved with large granite blocks on a concrete base, with cement joints, edgestone reset, brick sidewalk relaid, crossings laid. Length, 1,082 feet; area, $4,100 \mathrm{sq}$. yds.
Labor ..... $\$ 1,57280$
Teaming ..... 82400
Gravel and sand ..... 42006
Cement ..... 69000
391 feet flagging ..... 24829
21,150 paving-brick ..... 19986
5,975 large paving blocks ..... 34596
Amount paid to James Grant \& Co. :
1,808 feet edgestone set, at 8 cts. ..... $\$ 14464$
1.310 sq. yds. brick paving, at 18 cts. ..... 23580
3,973 sq. yds. block paving, with cement joints, at 42 cts. ..... 1,66866
359 sq. yds. block paving, with grarel joiuts, at 25 cts. ..... 8975
310 sq. yds. flagging crossings, with cement joints, at 42 cts . ..... 13020
22 sq. yds. flagging crossings, with gravel joints, at 25 cts. ..... 550
2,274 55$\$ 6,575 \quad 52$

Compton street (formerly Chapman street), Washington street to Shawmut avenue (work unfinished).
Labor
$\$ 77510$
Kirkland street, Pleasant to Corning street, resurfaced, edgestone reset, brick sidewalks relaid, gutters paved. Length, 534 feet ; area, 711 sq . yds.
Labor . . . . . . . . . $\$ 33430$
Teaming . . . . . . . . 19350
Gravel and sand . . . . . . . 5120
13,000 paving-brick . . . . . . 12285
Advertising . . . . . . . . 1620
Carried forward,
$\$ 71805$
Brought forward, ..... $\$ 71805$
Amount paid to P. Brennan :
1,057 feet edgestone set, at 18 cts. ..... $\$ 19026$
370 sq. yds. block paving, at 35 cts . ..... 12950
303 sq . yds. brick paving, at 28 cts. ..... 8484
Milford street, Shawmut avenue to Tremont street, macadamized, edgestone reset, brick sidewalks relaid, gutters repaved. Length, 640 feet ; area, 2,133 sq. yds.
Labor . . . . . . . . . $\$ 43350$
Teaming . . . . . . . . . 67500
Gravel . . . . . . . . . 28075
Stone . . . . . . . . . 09180
10,100 paving-brick . . . . . . 9545
20 feet flagging . . . . . . . . 800
Amount paid to T. H. \& W. A. Paysou :
1,178 feet edgestone set, at 15 cts. . . \$176 70
483 sq . yds. round-stone paving, at 35 cts., 16905
1,181 sq. yds. brick paving, at 23 cts. . 27163
Amount paid out of Street Improvements, Ward 16 . . . . . . \$1,149 20
Amount paid out of Street Improvements, Wards 17 and 18 . . . . 1,552 68

## STREET IMPROVEMENTS, WARDS 17 AND 18.

Bradford street, Waltham street to Shawmut avenue, macadamized, edgestone reset, brick sidewalks relaid, gutters repaved. Length, 586 feet ; area, $1,270 \mathrm{sq}$. yds.
Labor
$\$ 29090$

Teaming . . . . . . . . 22800
Gravel and sand
8027
Stone . . . . . . . . . 13530
7,800 paving-brick . . . . . . . 7690
Amount paid to James Doherty \& Co. :
1.040 feet edgestone set, at 23 cts. . . $\$ 23920$
407.7 sq. yds. block paving, at 35 cts. . 14270

224 sq. yds. brick paving, at 28 cts. . 6272
229 sq. yds. brick paving, at 23 cts. . 5267
Brought forward, ..... $\$ 1,30866$
Amount paid out of Street Improvements, Wards 17 and 18 ..... $\$ 87539$
Amoant paid out of Paving Division ..... 43327
$\$ 1.30866$
Clarendon street, Tremont street to Warren ${ }^{\text {「 }}$ avenue, mac-adamized. Length, 385 feet; area, 1,711 sq. a yds.
Labor ..... \$276 05
Teaming ..... 5100
Stone ..... 40985
Rolling ..... 3000$\$ 76690$
East Canton street, Albany to Washington street, macadam-ized, edgestone reset, gutters repaved, brick sidewalks relaid.Length, 1,300 feet; area, $4,760 \mathrm{sq}$. yds.
Labor ..... \$1,062 93
Teaming ..... 1,033 00
Gravel and sand ..... 30681
Stone ..... $66 \quad 50$
86 feet flagging ..... $27 \quad 53$
17,250 paving-brick ..... 16301
550 large paving-blocks . ..... 3184
Amount paid to T. H. \& W. A. Payson :
1,075 feet edgestone set, at 8 cts. ..... \$86 00
758 sq. yds. block paving, at 25 cts. ..... 1895
317 sq. yds. round-stone paving, at $2 \overline{5}$ cts. ..... 7925
820 sq. yds. brick paving, at 18 cts . ..... 14760
33180$\$ 3,023 \quad 42$East Newton street, James to Washington street, macadam-ized. Length, 315 feet ; area, $1,12 \bar{s}$ sq. yds.
Labor ..... $\$ 1400$
Teaming ..... 12750
Stone ..... 25900
Advertising ..... 1975
Paving ..... 1854
\$438 79

Fabin street, Newland to Ivanhoe street, asphalted with Sicilian rock asphalt. Leugth, 421 feet; area, 615 sq. $y$ ds.
Labor ..... $\$ 75633$
Teaming ..... $\$ 1,03883$
Brought forward, ..... \$1,038 83
Gravel ..... 1420
5,500 paving-brick. ..... 5198
425 large paving-blocks ..... 2779
60 feet flagging ..... 2400
Advertising ..... 1425
Sundries ..... 700
Paving ..... 11819Amount paid to Boston Asphalt Company :
615.1 sq. yds. Sicilian rock asphalt, with concretebase, at $\$ 3$1,845 30
Amount retained from Boston Asphalt Company ..... $92 \quad 27$
Hauson street, Shawmnt avenue to 'Tremont street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid. Length, 628 feet ; area, 2,093 sq. yds.

| Labor | - . | \$345 20 |
| :---: | :---: | :---: |
| Teaming | . | 31750 |
| Gravel and sand | - . | 27480 |
| Stove | - | 13960 |
| ¢,450 paring-brick. | . . | 8147 |
| Amonnt paid to 'T. H. \& W. A Payson: |  |  |
| 1,113 feet edgestone set, at 15 cts. | \$169 95 |  |
| 384 sq . yds. block paving, at 35 cts . | 13440 |  |
| 1,055 sq. yds. brick paving, at 23 cts. | 24265 | 54700 |
|  |  | \$1,705 57 |

Harrison avenue, E. Newton to E. Springfield street, asphalted with Trinidad asphalt. Length, 700 feet; area, 1,208 sq. yds.



Montgomery street, Tremont to Clarendon street, macadamized. Length, 230 feet ; area, 870 sq . yds.
Labor . . . . . . . . . \$11130
Teaming . . . . . . . . 10700
Gravel . . . . . . . . . 500
Stone . . . . . . . . . 14175
\$365 05
Pembroke street, macarlamized, edgestone reset, gutters repaved, brick sidewalks relaid. Length, 1,453 feet; area, 5,489 sq. yds.
Labor" . . . . . . . . . $\$ 63850$
Teaming . . . . . . . . 77800
Gravel . . . . . . . . . 38730
Stone . . . . . . . . . 1,38060
13,950 paving-brick . . . . . . 13950
104 feet flagging . . . . . . . 3302
Carried forward,

| Brought forward, |  | \$3,356 92 |
| :---: | :---: | :---: |
| Amount paid to T. H. \& W. A. Payson | . A. Paysou : |  |
| 2,964 feet edgestone set, at 15 cts. . . \$44460 |  |  |
| 117 sq. yds. block paving, at 35 cts. . 4095 |  |  |
| $1,028 \mathrm{sq} . y \mathrm{ds}$. round-stone paving, at |  |  |
| 35 cts . . . . . . . | . . . 35980 |  |
| $2,237 \mathrm{sq} . \mathrm{yds}$. brick paving, at 23 cts. . |  |  |
| 2.7 sq. yds. brick paving, (herring-bone), at 41 cts. |  |  |
| Extra work | 3163 |  |
|  |  | \$1,392 60 |
|  |  | \$4,749 52 |
| Rollins street, resurfaced. Length, 315 feet ; area, 595 sq. yds. |  |  |
| Labor . | . . . . . | \$113 80 |
| Teaming | . . . . . | 4400 |
| Gravel . | . . . . . | 2223 |
|  |  | \$180 03 |
| Waltham street, Harrison avenue to Tremont street, macudamized. Length, 1,370 feet ; area, $4,846 \mathrm{sq}$. yds. |  |  |
| Labor . . . . . . . | - y | \$299 26 |
| Teaming | - . . . . | 71300 |
| Gravel | . . . . . | 43875 |
| Stone | - . . . | 15435 |
| Rolling | - . . . . | 4000 |
|  |  | \$1,645 36 |
| Warren avenue, Berkcley street to Columbus avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid. Length, 2,355 feet ; area, $13,750 \mathrm{sq}$. yds. |  |  |
| Labor . . . . . . . | , \% | \$1,464 80 |
| Teaming | . . . . . | 1,855 00 |
| Gravel . | . . . . . | 1,330 80 |
| Stone | - . . . . | 3,115 80 |
| Rolling | . . . . . | 31000 |
| 25,200 paving-brick | . . . . . | 23825 |
| 224 feet of flagging | . . . . . | 7242 |
| 423 feet edgestone . . . . . | - . . . | 26226 |
| Amount paid to T. H. \& W. A. Payson : |  |  |
| 3,596 feet edgestone set, at 15 cts. . . | 5 cts. . . \$539 40 |  |
| $1,982.7$ sq. yds. block paving, at 35 cts., | g, at 35 cts., 69395 |  |
| 3,263 sq. yds. brick paving, at 23 cts. | at 23 cts. . 75049 |  |
| 512 sq. yds. brick paving (herring-bone) | erring-bone) 18432 |  |
| Extra work . . . . . . | . . . 5162 | 2,219 78 |
|  |  | \$10,869 11 |

West Canton street, Washington street to Shawmut avenue, and Columbus avenue to railroad, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid. Length, 782 feet; area, 2,954 sq. yds.
Labor ..... \$2,184 60
Teaming ..... 1,882 50
Gravel and sand ..... 47698
269 feet flagging ..... 9570
1,654 large paring-blocks ..... 9808
29,825 paving-brick ..... 28394
Crossing-blocks ..... 4850
Stone ..... 25550Amount paid to T. H. \& W. A. Payson :
3,431 feet edgestone set, at 8 cts. . . $\$ 27448$
207.7 sq. yds. block paving, at 25 cts ..... 51 93
$1,189 \mathrm{sq}$. yds. round-stoue paving, at
25 cts. ..... 29725
2,545 sq. yds. brick paving, at 18 cts. ..... 45810
Amount paid to P. Brenuan :
918 feet edgestone set, at 18 cts. ..... $\$ 165 \quad 24$
397 sq. yds. block paving, at 35 cts.
15120
540 sq. yds. brick paving, at 28 cts. ..... 15120
$1,081 \quad 76$
-45539$\$ 6,86295$
West Newton street, Columbus avenue to railroad, macadam-ized. Length, 1,467 feet ; area, 5,613 sq. yds.
Labor ..... $\$ 47050$
Teaming ..... 22550
Gravel ..... 11910
Stone ..... 61672
Rolling ..... 2000
850 paving-brick ..... 850
Building bulkhead and fence ..... 34400
\$1,804 32
Work done by the Sewer Divisiou ..... $\$ 26098$
STREET IMPROVEMENTS, WARDS 19 AND 22.
Bay State road.
Labor ..... $\$ 20670$
Granolithic sidewalk ..... 1722

Haviland street, Massachusetts avenue to Parker street, resurfaced, gutters repaved, edgestone set. Length, 500 feet; area, $1,670 \mathrm{sq} \cdot \mathrm{yds}$.
Labor . . . . . . . . . $\$ 6651$
Teaming . . . . . . . . 2550
Gravel . . . . . . . . . 10695
5,125 large granite blocks . . . . . 15375
Paving . . . . . . . . . 14808
410 feet edgestone . . . . . . 25420
$\$ 75499$

Lawn street, graded and macadamized. Length, 1,454 feet; area, $4,202 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 32200$
Stone . . . . . . . . . 1,64400
$\$ 1,96600$
A mount paid out of Street Improvements,
Wards 19 and 22 . . . . $\$ 20700$
Amount paid out of Paving Division . 1,759 00
$\$ 1,966 \quad 00$
Longwood arenue, Brookline avenue to Parkway, macadamized Length, 847 feet ; area, $3,011 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 35820$
Teaming . . . . . . . . 57650
Gravel . . . . . . . . . 34100
Stone . . . . . . . . . 24592
Amount paid to James Doherty \& Co. :
1,533.1 foot edgestone set, at 15 cts. . $\$ 22997$
550.5 sq . yds. block paving, at 35 cts. . 19268

Madison street, Washington street to Shawmut avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid. Length, 481 feet ; area, $1,051 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 44280$
Teaming . . . . . . . . 42200
Gravel . . . . . . . . . 9240
Stone . . . . . . . . . 14250
Amount paid to William McEleney :
952 feet edgestone set, at 8 cts. . . $\$ 7616$
325 sq. yds. round-stone paving, at 25 cts., 8125
577 sq. Jds. brick-paving, at 18 cts. . 10386
New Edgestones, Sidewalks, and Gutters.
Labor ..... $\$ 14555$
Teaming ..... 1250
Gravel ..... 1860
Granolithic sidewalks ..... 7926
218 feet of edgestone set, at 15 cts. ..... \$32 70
213.5 feet edgestone set, at 8 cts . ..... 1708
74.6 sq. yds. block paving, at 35 cts. ..... 2611
30.7 sq . yds. round-stone paring, at 25 cts ..... 768
2. sq. yds. brick paving, at 23 ets. ..... 46
140. sq. yds. brick paving, at 18 cts. ..... 2520
43.4 sq. yds. brick (lerring-bone) paving, at 36 cts . ..... 1562
Parker street, Tremont street to Parker Hill avenue, macadamized, edgestone set, gutters repaved, brick sidewalks relaid, granolithic sidewalks laid. Length, 1,495 feet; area, $3,748 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 1,15946$
Teaming . . . . . . . . 2,789.58
Gravel and sand . . . . . . . 70725
Stone . . . . . . . . . 2,016 22
$33 \frac{3}{12}$ feet circular edgestone . . . . . 4322
1,196 feet edgestone . . . . . . $741 \quad 52$
Granolithic sidewalks . . . . . . 1 . 92
Amount paid to James Doherty \& Co. :
216 feet edgestone set, at 8 cts. . . \$17 28
256 feet edgestone set, at 15 cts . . 3765
646.8 sq. yds. block paving, at 35 cts. . 22638
309 sq. yds. brick paving, at 23 cts . 7107
152 sq. yds. brick(herring-bone, at 41) cts. 6232
Extra work . . . . . . 1200
42670
$\$ 8,035 \quad 87$
Raleigh street, Beacon street to Charles river, macadamized, crossings laid, granolithic sidewalks. Length, 320 feet; area, $956 \mathrm{sq} \cdot \mathrm{yd}$.
Labor . . . . . . . . . $\$ 17290$
'Teaming . . . . . . . . 24750
Gravel . . . . . . . . . 7440
Stone . . . . . . . . . 25650
208 feet flagging . . . . . . . 8320
Rolling . . . . . . . . . 4000
Granolithic sidewalks . . . . . . 9863
Paving . . . . . . . . . 3458


Westland avenue, Massachusetts avenue to Parker street, macadamized. Length, 1,056 feet ; area, $6,336 \mathrm{sq}$. yds .


Norfolk avenue, Magazine to Cottage street, macadamized. Length, 2,472 feet: area, $7,099 \mathrm{sq}$. yds.
Labor ..... $\$ 2,19752$
Teaming ..... 1,194 00
Gravel and sand ..... 7695
Stone ..... 1,20000
50 feet flagging ..... 1588
\$4,684 95

Prescott street, Eustis to Hampden street, macadamized, edgestones set, gutters paved. Length, 316 feet; area, 702 sq. yds.
LaborTeaming\$241 50Gravel and sand15100
Stone ..... 15475
Paving ..... 16026
Quincy street, Columbia street to Blue Hill avenue, macadam-ized, gutters paved. Length, 2,642 feet; area, 7,632 sq. yds.
Labor ..... \$1,353 69
Teaming ..... 3900
Gravel ..... 7560
Stone ..... 1,659 64
Rolling ..... 1000
10,270 gutter-blocks ..... 19513
Advertising ..... 1650
Paving ..... 6636
$\$ 3,41592$
Shirley street. (Work unfinished.)
Labor ..... $\$ 11500$
Paving ..... 3700$\$ 15200$Vine street, Dudley to Mt. Pleasant avenue, macadamized, edge-stone reset, gutters repaved, brick sidewalks relaid. Length,581 feet ; area, 1,678 sq. yds.
Labor ..... \$273 33
Teaming ..... 42600
Gravel and sand ..... 19420
Stone ..... 51754
Advertising ..... 3540
Amount paid to A. A Libby \& Co. :
204 feet edgestone set, at 8 cts. ..... $\$ 9632$
14.5 . sq. yds. block paving, at 25 cts . ..... 355
393 sq. yds. round-stone paving, at 25 cts., ..... 9825
449 sq. yds. brick paving, at 18 cts. ..... 8082
45.4 sq. yds. brick (herring-bone), at 36 cts . ..... 1634
$\$ 1,741 \quad 75$
Work done by the Sewer Division ..... 66709

## STREET IMPROVEMENTS, WARD 21.

Brunswick street, Warren street to Blue Hill avenue, edgestone set, granolithic sidewalks laid.
Gravel ..... \$105 60
Teaming ..... 3600
Paving ..... 17984
Granolithic sidewalks ..... 11970
Crawford street, Humboldt avenue to Warren street, edgestoneset, gutters repared, granolithic sidewalks laid.
Teaming ..... $\$ 12300$
Gravel ..... 24460
707 gntter-blocks ..... 1343
Granolithic sidewalks ..... 1961
376 feet edgestone set, at 8 cts. ..... $\$ 3008$
342 sq. yds. block paving, at 25 cts. ..... 8550
504 sq. yds. brick paving, at 18 cts. ..... 9072
Gaston street, Blue Hill avenue to Warren street, macadamized, edgestone set, gutters repared, granolithic sidewalks laid. Length, 1,053 ; area, 3,042 sq. yds.
Labor ..... $\$ 33235$
Teaming ..... 45347
Gravel and sand ..... 13580
Stone ..... 64340
Granolithic sidewalks ..... 15744
Paving ..... 16880
Rolling ..... 13000
4,635 granite blocks ..... 13905
\$2,160 ..... 31
Greenville street, Winthrop to Dudley street, macadamized,edgestones reset, gutters, repaved, brick sidewalks relaid.Length, 903 feet; area, 2,408 sq. yds.
Labor ..... $\$ 15023$
Teaming ..... 45000
Gravel and sand ..... 33580
Stone ..... 31539
Cement ..... 600
3,000 paving-brick ..... 3060Amount paid to A. A. Libby \& Co.:
1,587 feet edgestone, at 18 cts. ..... $\$ 28566$
596 sq. yds. block paving, at 40 cts . ..... 23840
$1,345 \mathrm{sq}$. yds. brick paving, at 23 cts. ..... 30935
6.4 sq . yds. brick (herring-bone) paving,
at 41 . ..... 262
Amount paid out of Street Improvements, Ward 21 ..... \$1,831 16
Amount paid out of Paving Division ..... 29289
$\$ 2,12405$

Homestead street, edgestone set, granolithic sidewalks laid.


Howland street, edgestone set, gutters paved, granolithic sidewalks laid.

Gravel and sand . . . . . . . $\$ 1620$
13 feet circular edgestoue . . . . . . 1690
6,800 gutter-blocks . . . . . .' 13800
Granolithic sidewalks . . . . . . 10422
Paving . . . . . . . . . 1221
$\$ 28753$

Maywood street, Warren street to Blue Hill avenue, macadamized, edgestone set, gutters repaved. Length, 1,267 feet; area, $3,660 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 79235$
Teaming . . . . . . . . 21600
Gravel . . . . . . . . . 31320
Stone . . . . . . . . . 7650
1,364.9 feet edgestone . . . . . . 84624
Amount paid to A. A. Libby \& Co. :
800 feet edgestone set, at 18 cts. . . $\$ 14400$
282 sq. yds. block paving, at 40 cts. . 11280
16.3 sq. yds. bricks paving, at 23 cts. . 37.5
$82 \frac{1}{2}$ days ledgemen, at $\$ 3$. . . 24750

50805
\$2,752 34
Amount paid ont of Paving Division
2,752 34
New Edgestones, Sidewalks, and Gutters:
Gravel and saud . . . . . . . \$237 64
Teaming . . . . . . . . 48600
Granolithic sidewalks . . . . . . 22836
Circular edgestone . . . . . . . 1636
1,190 feet edgestone set . . . \$95 21
43.3 sq. yds. block paving . . . 1083

1,395.4 sq. yds. brick paving . . . 25372
Quincy street, Blue Hill avenue to Warren street, macadamized, gutters repaved, edgestone set, brick sidewalks laid. Length, 1,226 feet ; area, $4,198 \mathrm{sq}$. yds.

| Labor | - | \$1,766 20 |
| :---: | :---: | :---: |
| Teaming | . . | 56046 |
| Gravel and sand | . . | 41320 |
| Stone | . . | 1,316 93 |
| 874.5 edgestone and 2 small corners | - . | 54889 |
| Rolling . . | . . | 14000 |
| Amount paid to A. A. Libby \& Co. : |  |  |
| 1,150 feet edgestone set, at 8 cts. . | \$92 00 |  |
| 26.3 sq. yds. block paving, at 25 cts. | 658 |  |
| 450 sq . yds. round paving, at 25 cts. | 112 20 |  |
| $436 \mathrm{sq} . \mathrm{yds}$. brick paving, at 18 cts. | 7848 | 289 ว6 |
| - |  | \$5,035 24 |
| A mount paid out of Street Improvement Ward 21 | \$4,603 44 |  |
| Amount paid out of Paving Division | 38180 |  |
|  |  | \$5,035 24 |

Ruthven street, Harold street to Humboldt avenue, gutters repaved, granolithic sidewalks laid.


Granolithic sidewalks . . . . . . 14706
$\$ 20066$

Townsend street, Harold to Warren street, macadamized, edgestone set, gutters repaved, brick sidewalks relaid, crossings laid. Length, 1,845 feet ; area, $5,330 \mathrm{sq}$. yds.
Labor ..... $\$ 77740$
Teaming ..... 1,500 22
Gravel and sand ..... 83360
Stone ..... 48283
Rolling ..... 24000
$55 \frac{4}{12}$ feet circular edgestones ..... 7172
2,718 feet edgestone and 6 small corners ..... 1,706 86
546 feet flagging ..... 17745
Ledgeman ..... 51000
Advertising ..... 1713
Amount paid to A. A. Libby \& Co. :
2,870 feet edgestone set, at 18 cts. ..... \$5516 60
$1,083 \mathrm{sq}$. yds. block paving, at 40 cts. ..... 43320
467.5 sq. yds. brick paving, at 23 cts. ..... 10753
Brought forward,$\$ 7,37454$
A mount paid out of Street Improvements,
Ward 21 . . . . . . $\$ 3,54003$
Amount paid out of Paving Division ..... 3,834 51
\$7,374 54
Walnut avenue, Townsend to Ruthven street, gutters repaved,granolithic sidewalks laid.

Warren street, Rockland street to Blue Hill ávenue, paved with large granite blocks. Work done by West End Street Railway Company.
Labor ..... \$34 50
Teaming ..... 24250
10ə̆,419 blocks ..... 3,478 82
1,022 feet flagging ..... 40880
Granolithic sidewalks ..... 3072
Paving ..... 2441
$\$ 4,219 \quad 75$
Washington street, Bartlett street to Guild row, repaved, cross-ings laid, edgestone reset, brick sidewalks relaid. Length, 590feet; area, 1,967 sq. yds.
Teaming ..... $\$ 262 \quad 50$
6,900 paving-blocks ..... 27600
1,000 feet flagging ..... 31750
Gravel and sand ..... 32440
1,000 paving-brick ..... 10200Amount paid to A. A. Libby \& Co. :
1,222 feet edgestone set, at 8 cts. ..... $\$ 9776$
$2,055.2$ sq. yds. block paving, at 25 cts. ..... 51380
1,309 sq. yds. brick paving, at 18 cts. ..... 23562
15.3 sq . yds. brick (herring-bone) par- ing, at 36 cts. ..... 5 51
Amount paid out of Street Improvements,
Ward 21 ..... \$1,859 09
Amount paid out of Paving Division ..... 27600

STREET IMPROVEMENTS, WARD 23.
Bellevue street, Centre to Martin street, macadamized, gutterspaved, crossings laid. Length, 3,376 feet; area $9,753 \mathrm{sq}$. yds.
Labor ..... $\$ 1,17300$
Teaming ..... 89500
Gravel ..... 1,206 00
Stone ..... 26356
160 feet flagging ..... 5080Amount paid to T. H. \& W. A. Payson :
10 feet edgestone set, at 8 cts. ..... $\$ 080$
154 sq. yds. block paving, at 25 cts . ..... 3850
$1,870 \mathrm{sq}$. yds. round paving, at 25 cts. ..... 46750

| Ward 23 |  |
| :---: | :---: |
| Amount paid out of Paving Division | 711 |

Boylston street, Centre to Lamartine street, macadamized. Length, 2,611 feet; area, 6,648 sq. yds.
Labor ..... $\$ 8395$
Teaming ..... 36000
Gravel ..... 8700
Stone ..... 95550
Rolling ..... 10000
$\$ 1,58645$
Amount paid out of Street Improvements, Ward 23 ..... $\$ 55145$
Amount paid out of Paving Division ..... 1,03500
$\$ 1,58645$


Glen road, Washington to Forest Hills street, resurfaced. Length, 565 feet; area, 1,632 sq. yds.
Teaming . . . . . . . . $\$ 4000$
Gravel . . . . . . . . . 2300
Stone . . . . . . . . . 19095
Rolling . . . . . . . . . 7000
$\$ 32395$

Maple street, Centre to Weld Hill street, macadamized. Length, 1,989 feet; area, 5,525 sq. yds.
Labor . . . . . . . . . \$525 73
Teaming . . . . . . . . 1,42500
Gravel . . . . . . . . . 68200
Stone . . . . . . . . . 1,81881
Paving . . . . . . . . . 8421
$\$ 4,53575$
Amount paid out of Street Improvements,
Ward 23 . $\$ 47150$
Amount paid out of Paving Division $\quad$.
4,06425
$\$ 4,53575$

March avenue, Paul to Bellevue street, macadamized. Length, 493 feet ; area, 1,041 sq. yds.
Labor . . . . . . . . . $\$ 25530$
Teaming . . . . . . . . 17375
Gravel . . . . . . . . . 20500
Stone
8850
Paving . . . . . . . . . 12075
Advertising . . . . . . . . 375
Brought forward, ..... $\$ 84705$
A mount paid out of Street Improvements, Ward 23 ..... $\$ 42405$
Amount paid out of Street Division ..... 42300
847 ..... 05
New Edgestones, Sidewalks, and Gutters:
'Teaming ..... 16600
Gravel ..... 900
Granolithic sidewalks ..... 263 24
372.7 feet edgestone set, at 8 cts ..... $\$ 2982$
32.6 sq. yds. block paving, at 25 cts . ..... 815
233.6 sq . yds. round paving, at 25 cts . ..... 5841
540.4 sq. yds. brick paving, at 18 cts. ..... 9727

19365
$\$ 63187$
New Keyes street, work done for the Sewer Division.Stone$\$ 522 \quad 50$Orchard street, from Centre to Pond street, macadamized.Length, 1,566 feet ; area, 4,524 sq. yds.
Labor ..... \$33 35
Teaming ..... 15650
Gravel ..... 21500
Stone ..... 7260
Paul Gore street, Chestnut to Centre street, macadamized, gutters paved. Length, 1,543 feet ; area, 4,458 sq. yds.
Labor ..... $\$ 31050$
Teaming ..... 80061
Gravel ..... 28900
Stone ..... 83323
15,700 gutter-blocks ..... 30855
Paving ..... 4965
$\$ 2,591 \quad 54$
Amount paid out of Street Improvements, Ward 23 ..... $\$ 42038$
Amount paid out of Paving Division . 2,171 16
$2,591 \quad 54$St. John street, Centre to Rockview street, macadamized, edge-stone set, gutters paved, crossings laid. Length, 958 feet;area, $2,448 \mathrm{sq}$. yds.
Labor ..... $\$ 54050$
Teaming ..... 61850
Brought forward, ..... \$1,159 00
Gravel ..... 9300
Stone ..... 43950
30,000 gutter-blocks ..... 57000
Rolling ..... 11000
$1,535.8$ feet edgestone ..... 95220
2 large and 2 small corners ..... 1790
50 feet flagging ..... 4072Amount paid to T. H. \& W. A. Payson :
$1 ; 936$ feet edgestone set, at 8 cts. . . \$15 488701 sq. yds. block paving, at 25 cts. . 17525$330 \quad 13$$\$ 3,71045$
Amount paid out of Paving Division ..... $\$ 3.71045$
South street, Washington to South Walter street, macadmized,edgestone set, gutters paved, crossings laid. Length, 2,100feet ; area, $7,940 \mathrm{sq}$ yds.
Labor ..... \$1,209 80
Teaming ..... 1,183 62
Gravel ..... 86600
Stone ..... $1,5() 600$
Rolling ..... 14000
834 feet flagging ..... 30330
160 feet edgestone ..... 9980
130 feet circular edgestone ..... 16900
8 small corners ..... 2680Amount paid to T. H. \& W. A. Payson :
$3,464.8$ feet edgestone set, at 8 cts ..... $\$ 27718$
291.8 sq. yds. block paving, at 25 cts . ..... 7285
$1,261.7 \mathrm{sq}$. yds. romd paving, at 25 cts. ..... 31543
66546$\$ 6,169 \quad 18$
Amount paid out of Street Improvements, Ward 23 ..... \$4,873 23
Amount paid ont of Paving Division . 1,295 95\$6,169 18South Fairview street, Centre to South Walter street, filledand graded. Length, 806 feet; area, 2,350 sq. yds.
Labor ..... $\$ 56350$
Teaming ..... 12950
Gravel ..... 5620
$\$ 74920$
Amount paid out of Street Inprovements, Ward 23 ..... $\$ 37980$
Amount paid out of Paving Division$\$ 749 \quad 20$


STREET IMPROVEMENTS, WARDS 23 AND 25.
Catharine street, Bourne to Florence street, graded. Length, 895 feet ; area, $2,585 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 1,18220$
Teaming . . . . . . . . 23000
Gravel . . . . . . . . . 14642
Powder and fuse . . . . . . . 4000

New edgestones, sidewalks, and gutters :
Labor . . . . . . . . . $\$ 2500$
Teaming . . . . . . . . 4100
Gravel . . . . . . . . . 12096
\$186 96
Ophir street, Washington street to Brookside avenue, resurfaced.
Labor . . . . . . . . . \$106 00
Teaming . . . . . . . . 6750
Gravel . . . . . . . . . 2400
$\$ 19750$
Work done by the Bridge Division . . . $\$ 48796$
Work done by the Sewer Division . . . . \$2,337 02

## STREET IMPROVEMEN'TS, WARD 24.

Adams street, Meeting-House Hill to Field's Corner, and Codman street to beyond Minot street, macadamized, edgestones set, gutters paved, crossings laid. Length, 3,366 feet; area, 11,381 sq. yds.
Labor . . . . . . . . . $\$ 89136$

Teaming . . . . . . . . 96500
Gravel . . . . . . . . . 94210
Stone . . . . . . . . . 3,432 72
Rolling . . . . . . . . . 11000
$77 \frac{4}{12}$ feet circular edgestone . . . . 10055
1,670 $\frac{7}{12}$ feet edgestone . . . . . . 1,035 76
602 feet flagging . . . . . . . 19392
Crossing-blocks . . . . . . . 14750
36,065 gutter-blocks . . . . . . 68523
Amount paid to W. Gore \& Co. :
2,162 feet edgestone set, at 18 cts. . $\$ 38916$
$1,119.3$ sq. yds. block paving, at 35 ets. 39176
78092
\$9,285 06

Alban street, Welles avenue to Ashmont street, edgestone set, gutters paved.
Labor . . . . . . . . . $\$ 1150$
Teaming . . . . . . . . 29100
Gravel . . . . . . . . . 42980
$2,732 \frac{5}{12}$ feet edgestone and 7 small corners . . 1,71755
25,290 gutter-blocks . . . . . . 48051
Amount paid to James Grant \& Co. :
2,733 feet edgestone set, at 18 cts. . \$491 94
919.9 sq. yds. block paving, at 35 cts. . 32197
$\$ 3,74427$

Algonquin street, edgestone set, granolithic sidewalks laid.
Grarel . . . . . . . . . $\$ 7700$
214.5 feet dressed curbing . . . . . 58988

Granolithic sidewalks . . . . . . 18055
Paving . . . . . . . . 9244


Everett avenue, Stoughton to Jerome street, resurfaced, edgestone set, gutters paved, brick sidewalks laid, crossings laid. Length, 618 feet ; area, 1,373 sq. yds.
Labor . . . . . . . . . \$193 20
Teaming . . . . . . . . 3300
Crossing-blocks . . . . . . . 15000
Amount paid to T. H. \& W. A. Payson :
1.315 .4 feet edgestone set, at 8 cts. . \$105 23
74.7 sq. yds. block paving, at 25 cts. . 1868
481.7 sq. yds. round paving, at 25 cts. . 12043
730.7 sq. yds. brick paving, at 18 cts. . 13243
$\$ 752 \quad 97$
Fanlker street, Dorchester avenue to Freeman street, graded, gutters paved, granolithic sidewalks laid.
Gravel . . . . . . . . . $\$ 12740$
19,401 gutter blocks . . . . . . 36862
Paving . . . . . . . . . 13052
Granolithic sidewalks . . . . . . 38352

Glenway street, granolithic sidewalks.
Granolithic sidewalks
$\$ 467 \quad 40$
Greenheys street, Magnolia to Mascoma street, macadamized. Granolithic sidewalks laid. Length, 404 feet; area, 1,167 sq. yds.
Labor . . . . . . . . . \$481 85
Teaming . . . . . . . . 50350
Gravel . . . . . . . . . 20860
Stone . . . . . . . . . 40772
Brought forward, ..... \$1,601 67
Granolithic sidewalks ..... 35592
Paving ..... 7850
Advertising ..... 600
$\$ 2,04209$
A mount paid out of Street Improvements, Ward 24 ..... $\$ 1,74284$
Amount paid out of Paving Division ..... $299 \quad 25$
Kenwood street, Washington street to Allston street, macadam-ized, edgestone set, gutters pared, crossings laid. Length,1,292 feet ; area, 3,733 sq. yds.
Labor ..... $\$ 54740$
Teaming ..... 59200
Gravel ..... 55860
Stone ..... 13610
Rolling ..... 11000
2,594 feet edgestone and 3 large corners ..... 1,619 48
52 feet flagging ..... 1690
Amount paid to H. Gore \& Co. :
3,298 feet edgestone set, at 18 cts . ..... $\$ 59364$
983.2 sq. yds. block paving, at 35 cts. ..... 34622
939 ..... 86$\$ 4,3220 \quad 34$
Lyudhurst street, Washington to Allston street, macadamizedLength, 1,254 feet ; area, 3,623 sq. yds.
Labor ..... $\$ 22045$
Teaming ..... 22400
Stone ..... 365 50
Rolling ..... $10 \quad 00$$\$ 81995$
Mayfield street, grauolithic sidewalks.
Granolithic sidewalks ..... $\$ 31704$
Morton street, Oakridge to River street, macadamized. Length, 1,645 feet ; area, $5,061 \mathrm{sq}$. yds.
Labor ..... $\$ 42090$
Teaming ..... 8800
Gravel ..... 40100
$\$ 909$ ..... 90
New Edgestones, Sidewalks, and Gutters:
Labor ..... $\$ 37237$
Granolithic sidewalk ..... 95849
Paving ..... 1917


Park street, Adams to Freeport street, granolithic sidewalks. Granolithic sidewalks
$\$ 26464$
Pleasant street, Town Meeting square to Thornley street, mac-
adamized, crossings laid. Length, 1,540 feet ; area, $6,300 \mathrm{sq}$. ft.
$\$ 45080$
Teaming . . . . . . . . 33150
Gravel . . . . . . . . . 88680
Stone . . . . . . . . . 3,790 28
Rolling . . . . . . . . . 10000
138 feet flagging . . . . . . . 4485
Advertising . . . . . . . . 1950
$\$ 5,62373$
Rockwell street, Washington street to Milton avenue, macadamized. Length, 1,290 feet; area, $4,873 \mathrm{sq}$. yds.
Than . . . .

Rolling
3780
$\$ 1,37832$
Tremlett street, Hooper to Waldeck street, macadamized, gutters paved, edgestone set, granolithic sidewalks. Length, 573 feet; area, $2,340 \mathrm{sq} . \mathrm{yds}$.
Labor . . . . . . . . . $\$ 9625$
Teaming . . . . . . . . 32350
Gravel . . . . . . . . . 21000
Stone . . . . . . . . . 39503
Granolithic sidewalk . . . . . . 38887
177 feet edgestone . . . . . . . 10974
Paving . . . . . . . . . 17988
\$1,703 27
Walnut street, Ericson street to railroad, macadamized, edgestone set, gutter repaved, brick sidewalks relaid. Length, 1,624 feet; area, 4,400 sq. yds.
Labor . . . . . . . . . $\$ 35880$
Teaming . . . . . . . . 55300
Gravel and sand . . . . . . . 36790
Amount paid to James Grant \& Co. :
1,620 feet edgestone set, at 15 cts . . . $\$ 24300$
633.1 sq . 5ds. round-stone paving, at 35 cts .22159
241.5 sq . yds. brick paving, at 23 cts . 5555


## STREET IMPROVEMENTS, WARD 25.

Fairbanks street, graded, gutters paved. Length, 1,183 feet; area, $3,418 \mathrm{sq}$ - yds.
Labor ..... $\$ 53935$
Teaming ..... 43500
Gravel ..... 1,834 30
Lumber ..... 16700
Sundries ..... 975Amount paid to A. A. Libby \& Co.:
$1,032 \mathrm{sq} \cdot \mathrm{yd}$. round stone paving ..... 2 2ั 00$\$ 3,24340$
Garduer street, granolithic sidewalks. Granolithic siderralks ..... $\$ 56890$
Paving ..... 955
$\$ 57845$
New Edgestones, Sidewalks, and Gutters. Labor ..... $\$ 690$
Gravel ..... 7140
245 feet edgestone ..... 15190
$40 \frac{5}{12}$ feet circular edgestone ..... 5255
Paving ..... 4189
Advertising ..... 350
$\$ 32814$
Pomeroy street, graded, gutters paved, edgestones set. Length
336 feet; area, 962 sq. yds.
Labor ..... $\$ 9660$
Teaming ..... 4900
Gravel ..... 7480
400 feet edgestone ..... 24800
116 feet circular edgestone ..... 15183
Paving ..... 15800

## Sutherland road, resurfaced.

| Gravel . | - | . | . | - | . | - | . | . | \$282 20 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Paving . | - | - | - | - | - | - | . | . | 13625 |
|  |  |  |  |  |  |  |  |  | \$418 45 |

Winship street, Union to Washington street, macadamized, edge-
stone set, gutters paved. Length, 1,120 feet; area, $5,476 \mathrm{sq}$. yds.
Labor . . . . . . . . . $\$ 51060$
Teaming . . . . . . . . 16600
Gravel . . . . . . . . . 46070
Stone . . . . . . . . . 7326
Rolling . . . . . . . . . 3500
Amount paid to A. A. Libby \& Co. :
1,082 feet edgestone set, at 8 cts. . . $\$ 8656$
16 sq. yds. block paving, at 25 cts. . 400
619 sq. yds. round paving, at 25 cts. . 15475
24531
$\$ 1,490 \quad 87$
Work done by the Sewer Division . . . . \$1,359 87

SUMMART OF EXPENDITURES UNDER SPECIAL APPROPRIATIONS.
Total Amount Expended.
Bellflower street . . . . . . . \$934 31
Bond street . . . . . . . . 2,29984
Charter street . . . . . . . 5,38087
Commonwealth avenue . . . . . . 88,414 11
Congress street . . . . . . . 3,575 22
Dartmouth street . . . . . . . 1,220 30
Henchman street . . . . . . . 2,136 32
McLellan street . . . . . . . 1,24360
Mellville avenue . . . . . . . 7,77579
Moulton street . . . . . . . 1,161 66
Prince street . . . . . . . . 2,98537
Talbot avenue . . . . . . . 26,698 97
Warren street, Charlestown . . . . . 1,140 39
Washington street, Brighton • . . . . . 36,025 57
Street Improvements, Aldermanic District No. 6 :
Ash street . . . . . . . . 1,391 43
Athens street, Second to A street . . . 2,333 38
Athens street, C to E street . . . . 49925
B street . . . . . . . . 78928
Baldwin street . . . . . . . 2,20616
Baxter street, C to D street . . . . 33544
Carried forward,
Brought forward, ..... \$188,549 26
C street ..... 14090
D street, First to Third street ..... 30536
E street, Broadway to Sixth street ..... 1,678 01
Eighth street, C to D street ..... 21523
Essex street ..... 2528
Fifth street ..... 1,609 82
Fourth street ..... 39201
Gold street ..... 6667
Richards street ..... 3,208 99
Silver street ..... 49660
Sixth street ..... 15233
Street Improvements, Wards 1 and 2:
Bennington street ..... 11,461 26
Blackinton street ..... 89925
Brooks street ..... 97754
Decatur street ..... 78371
East Eagle street ..... 7967
Eutaw street ..... 9990
Falcon street ..... 10580
Gladstone street ..... 12028
Gove street ..... 59100
Ida street ..... 10380
Marion street ..... $1,143 \quad 29$
Maverick street ..... 3,595 35
Meridian street ..... 1,216 50
Monmouth street ..... 14780
New edgestones, sidewalks, and gutters ..... 5550
Paris street ..... 28736
Saratoga street ..... 4,666 93
Trenton street ..... 21051
Walley street ..... 32298
West Eagle street ..... 75304
White street ..... 1,70339
Sewers ..... 1,795 73
Street Improvements, W ard 3 :
Chelsea street ..... 2,926 18
Chestnut street ..... 31114
Corey street ..... 2,579 85
Monnment square ..... 1,192 03
School street ..... 2,878 47
Sewers ..... 14433
Street Improvements, Ward 4 :
Albion place ..... 63046
Alford street ..... 1,32144
Belmont street ..... 1,110 64
Bunker Hill street ..... 9,676 53
Essex street ..... 1,264 82
Mill street ..... 1,527 34
Mishawnm street ..... 2.61820
Brought forward, ..... $\$ 256,14248$
Tibbetts Townway ..... 79473
Sewers ..... 2,342 67
Street Improvements, Ward 5 :
Austin street ..... 2,946 66
Hudson street ..... 49497
Jenner street ..... 30049
Wapping street ..... 4,513 79
Winthrop street ..... 2,104 88
Sewers ..... 24028
Street Improvements, Ward 6 :
Congress square ..... 1,047 28
Sheafe street ..... 49255
Sewers ..... $65 \quad 27$
Street Improvements, Wards 6, 7, and 8 :
Barrett street ..... 2,168 65
Barton street ..... 4,859 30
Billerica street ..... 6,57582
Chambers street ..... 5,211 14
Doane street ..... 1720
Granolithic sidewalks ..... 9114
Lancaster street ..... 4,600 64
Lewis street ..... 2,763 67
Merchants row ..... 13,978 22
North Margin street ..... 5,065 34
Tileston street ..... 79779
Sewers ..... 42789
Street Improvements, Wards 7 and 8 :
Spring street ..... 3,858 28
Staniford street ..... 39135
Sewers ..... 7046
Street Improvements, Ward 9 :
Allston street ..... 23354
Bowdoin street ..... 66538
Bulfinch street ..... 22595
Chestnut street ..... 57341
Derne street ..... 35163
Green street ..... 15400
Joy street ..... 41530
Mt. Vernon street ..... 69119
River street ..... 77680
Temple street ..... 93200
Walnut street ..... 46655
street Improvements, Wards 9 and 10 :
Ashburton place ..... 19705
Brimmer street ..... 12,734 72
Charles street ..... 8,630 96
Edinboro' street ..... 3,749 18
Otis street ..... 2,948 90
Oxford street ..... 2,156 54
Brought forward, ..... $\$ 358,26599$
Parkman street ..... 12420
Pinckney street ..... 2,369 28
Summer street ..... 8,702 48
West street ..... $4,314 \quad 58$
Sewers ..... 59172
Street Improvements, Ward 11 :
Beacon street ..... 9,801 74
Boylston street ..... 3,311 49
Buckingham street ..... 2,160 85
Chandler street ..... 3,674 09
Columbis avenue ..... 20,992 23
Newbury street ..... 17,316 39
St. James avenue ..... 2,211 98
Sewers ..... 1,073 18
Street Improvements, Ward 12 :
Devonshire street ..... 6,501 45
Harvard street ..... 1,283 01
Oak street ..... 1,567 01
Tyler street ..... 2050
Whitmore street ..... 1,936 30
Street Improvements, Ward 13 :
D street, Seventh to Eighth street ..... 3,90472
Street Improvements, Ward 14: East Seventh street ..... 59460
Emerson street ..... 54842
F street ..... 2,545 44
H street ..... 1,123 99
I street ..... 74941
K street ..... 51747
Pacific street ..... 6412
Street Improvements, Wards 14 and 15 :
Athens street, F to Dorchester street ..... 529 33
East Eighth street ..... 6,928 30
East Second street ..... 3,123 08
East Sixth street ..... 1,900 72
East Third street ..... 1,091 05
P street ..... 3,838 85
Vale street ..... 7820
Swett street ..... 1,608 47
Street Improvements, Ward 15 :
Baxter street ..... $63 \quad 17$
Dexter street ..... 21242
Eighth street, D to E street ..... 43286
Ellery street ..... 12621
Gold street ..... 9303
Jenkins street ..... 10662
Mt. Vernon street ..... 62796
Silver street ..... 17082
Ward street ..... 20882
Brought forward, ..... $\$ 477,40655$
Street Improvements, Ward 16 :
Bristol street ..... 75945
Castle street ..... 6,575 52
Compton street ..... 77510
Kirkland street ..... 1,122 65
Milford street ..... 2,701 88
Street Improvements, Wards 17 and 18 :
Bradford street ..... 1,308 66
Clarendon street . ..... 76690
East Canton street ..... 3,023 42
East Newton street ..... 43879
Fabin street ..... 3,049 27
Hanson street ..... 1,705 57
Harrison avenue ..... 5,431 55
Massachusetts avenue ..... 17,781 52
Montgomery street ..... 36505
Pembroke street ..... 4,74952
Rollins street ..... 18003
Waltham street ..... 1,645 36
Warren avenue ..... 10,869 11
West Canton street ..... 6,862 95
West Newton street ..... 1.80432
Sewers ..... 26098
Street Improvements, Wards 19 and 22 :
Bay State road ..... 22392
Boylston street ..... 5,58182
Burney street ..... 59310
Calumet street ..... 1,02750
Eldora street ..... 73939
Francis street ..... 3,892 51
Highland street ..... 75499
Lawn street ..... 1.96600
Longwood avenue ..... 1,94427
Madison street ..... 1,360 97
New edgestone, sidewalks, and gutters ..... 38076
Parker street ..... 8,035 87
Raleigh street ..... 1,007 71
St. Stephen street ..... 1,718 75
Sunset street ..... 98119
Sterling street ..... 2,085 83
Westland avenue ..... 2,543 36
Weston street ..... 25100
Sewers ..... 1,71605
Street Improvements, Ward 20 :
Adams street ..... 59465
New edgestones, sidewalks, and gutters ..... 29513
Norfolk street ..... 4,68495
Prescott street ..... 87051
Quincy street ..... 3,415 92
Brought forward, ..... $\$ 596,250 \quad 30$Sbirley street15200
Vine street ..... 1,741 75
Sewers ..... 66709
Street Improvements, Ward 21 :
Brunswick street ..... $441 \quad 14$
Crawford street ..... 61694
Gaston street ..... 2,160 31
Greenville street. ..... 2,124 05
Homestead street ..... 44174
Howland street ..... 28753
Maywood street ..... 2,752 34
New edgestones, sidewalks, and gutters ..... 1,328 12
Quincy street ..... 5,035 24
Ruthven street ..... 20066
Townsend street ..... 7.37454
Walnut avenue ..... 24138
Warren street ..... 4,219 75
Washington street ..... 2,185 09
Woodbine street ..... 1,649 22
Sewers ..... 1,52949
Street Improvements, Ward 23 :
Bellevue street ..... 4,095 16
Boylston street ..... 1,58645
Centre street ..... 2,930 24
Glen road ..... 32395
Maple street ..... 4,535 75
March avenue ..... 84705
New edgestones, sidewalks, and gutters ..... 63187
New Keyes street ..... 52250
Orchard street ..... 47745
Panl Gore street. ..... 2,591 54
St. John street ..... 3,710 45
South street ..... 6,169 18
South Fairview street ..... 74920
Washington street ..... 26946
Wren street ..... 3,823 81
Sewers ..... 7,663 40
Street Improvements, Wards 23 and 25 :
Catharine street ..... 1,59862
New edgestones, sidewalks, and gutters ..... 18696
Ophir street ..... 19750
Bridges ..... 48796
Sewers ..... 2,337 02
Street Improvements, Ward 24:
Adams street ..... 9,285 06
Alban street ..... 3,744 27
Algonquin street ..... 93986
Bicknell street ..... 3,340 79
Bradlee street ..... 22758
Brought forward, ..... \$694,621 76
Everett avenue ..... 75297
Faulkner street ..... 1,010 06
Glenway street ..... 46740
Greenheys street ..... 2,042 09
Kenwood street ..... 4,52034
Lyndhurst street ..... 81995
Mayfield street ..... 31704
Morton street ..... 90990
New edgestones, sidewalks, and gutters ..... 1,350 03
Park street ..... 26464
Pleasant street ..... 5, 62373
Rockwell street ..... 1,378 32
Tremlett street ..... 1,703 27
Walnut street ..... 1,799 84
Washington street ..... 1,55348
Sewers ..... 7,718 03
Street Improvements, Ward 25 :
Fairbanks street ..... 3,243 40
Gardner street ..... 57845
New edgestones, sidewalks, and gutters ..... 32814
Pomeroy street ..... 77823
Sutherland road ..... 41845
Winship street ..... 1,490 87
Sewers ..... 1,359 87
Total $\$ 735,05026$
Less amount paid out of appropriation for Paving Division ..... 65,057 57
\$669,992 69
DETAIL OF EXPENDITURES FROM LAYING OUT AND CONSTRUCTION OF HIGHWAYS LOAN.
Sewer Construction:
Labor ..... $\$ 951 \quad 15$
Gravel ..... 28726
Bricks ..... 3780
Flagging ..... 3239
Paving ..... 91451
$\$ 2,22311$
Ar'undel street, Beacon street to Mountfort street.Amount retained from H. Gore \& Co. for work doneunder contract in 1894$\$ 9217$
Bay State road, Sherborn to Granby street (work not started).
Labor ..... \$27 75
Advertising ..... 3115

Boylston street, Boylston road to Brookline avenue.

| Labor, including engineering an | on | \$1,576 04 |
| :---: | :---: | :---: |
| Printing | . | 590 |
| Lumber . |  | 1286 |
| Fuel | . | 295 |
| Sundries | . | 6780 |
| Amount paid to John O'Brien : |  |  |
| $76,511 \mathrm{cu}$. yds. filling, at 62 cts. | \$47,819 37 |  |
| Less amount paid in 1894 | 8,819 81 |  |
|  |  | 38,999 56 |
|  |  | \$40,665 11 |

Brighton avenue, Commonwealth avenue to Cambridge street.
Labor, including engineering and inspection . . \$603 05
146 feet edgestone . . . . . . . 9052
Advertising . . . . . . . . 5213
Printing . . . . . . . . 275
Fuel . . . . . . . . . 860
Sundries . . . . . . . . 11681
Amount paid to Doherty \& Connors, Section 1 :
$4,460 \mathrm{cu}$. yds. sub-grading, at 31 cts . $\$ 1,38260$
Removing tree stumps, etc. . . . 45000
Section 2:
630 cu. yds. sub-grading, etc., at 35 cts. $\$ 92050$
emoving tree stumps, etc. . $\quad . \quad 15000$


1,832 60

$$
\frac{1,07050}{\$ 3,77696}
$$

Amount retained from Doherty \& Comors:
Section 1 . . . . . . $\$ 27489$
Section 2 . . . . . . 16058
43547
$\$ 3,34149$

Geneva avenne, Westville street to Dorchester avenue, (work not started).
Labor . . . . . . . . . $\$ 300$
Granby street, Commonwealth avenue to Charles River, (work not started.)
Labor . . . . . . . . . $\$ 2025$
Advertising . . . . . . . . 5225
$\$ 7250$

Harvard avenue, Commonwealth avenue to Brookline line.
Labor, including engiueering and inspection . . $\$ 44026$
Teaming . . . . . . . . 69500
Advertising . . . . . . . . 10525
1,064 feet edgestone, 1 large and 3 small corners . 67533
65 feet circular edgestone . . . . . 7156
152 feet flagging . . . . . . . 6080
Amount paid to William Scollans :
1,137 cu. yds. sub-grading, at 28 cts. . $\$ 31836$
$1,977.8$ sq. yds. Telford base, at 14 cts. 27689
$2,011 \mathrm{sq} . \mathrm{yds}$. macadam, at $20 \mathrm{cts} . \quad 40220$
398 sq. yds. block-gutters laid, at \$2.25, 89550
1,145 linear feet edgestone set, at 18 cts. 20610
$1,051 \mathrm{sq} . \mathrm{yds}$. gravel sidewalks, at $80 \mathrm{cts} . \quad 84080$
36.9 sq. yds. flagging crosswalks, at \$4.75, 17528

Extra work removing trees and stumps:
9 days, foremen, at $\$ 2.61$. $\$ 2349$
49 days, laborers, at $\$ 1.75$. 8575
9 days, double team, at $\$ 4.35$, 3915
Removing stone walls:
2 days, foreman, at $\$ 2.61$. 522
23 days, laborers, at $\$ 1.75$. 4025
7 days, double team, at $\$ 4.35$, 3045


Ivy street, St. Mary's to Mountfort street (unfinished work from 1894).
Labor . . . . . . . . . $\$ 22480$
Stone . . . . . . . . . 41792
Teaming . . . . . . . . 17750
Amount paid to James Grant \& Co. :
70 cu. yds. sub-grading, at $25 \mathrm{cts} . \quad . \quad \$ 1750$
$2,498 \mathrm{sq}$. yds. macadam, at 19 cts. . $47^{\circ} 462$
533 sq. yds. block-gutters, at \$2.32 . 1,236 56
1,528 linear feet edgestone set, at 25 cts. $382{ }^{*} 00$
$1,272 \mathrm{sq}$. yds. brick sidewalks, at \$1.10 • 1,399 20


Kenmore street, Commonwealth avenue to Newbury street.
Labor . . . . . . . . . \$160 50
Stone . . . . . . . . . 26740
Printing . . . . . . . . 8893
Advertising . . . . . . . . 10475

548 feet edgestone . . . . . . . 33976
Amount paid to Doherty \& Connors:
94 cu. yds. sub-grading, at 29 cts. . $\$ 2726$
521 sq. yds. macadam, at 14 cts. . . 7294
160.7 sq. yds. block-gutters, at $\$ 2$. 32140

519 lin. ft. edgestone set, at 29 cts. . 15051
280.5 sp. yds. brick sidewalks, at 95 cts. 26648
19.7 sq. yds. flagging crossings, at $\$ 4.35 \quad 8570$
35.5 cu . yds. gravel, at 77 cts. . . 2734

29 sq. yds. block-gutters, relaid, at 50 cts. .

1450
7 sq. yds. brick sidewalks, relaid, at 55 cts.

385
5 sq. yds. flagging crossings, at 85 cts. . 425

Amount retained from Doherty \& Connors

Mountfort street, Ivy steet to Audubon road.
Amount retained from H. Gore \& Co. for work done under contract in 1894
$\$ 12750$

Newbury street, Charlesgate west to Brookline avenue.
Payments made on account retained from F. H.
Cowin for work done under contract, in 1894

Stove . . . . . . . . . 1,49206

Advertising . . . . . . . . 4762
$631 \frac{7}{12}$ feet edgestone . . . . . . 39164
$13 \frac{7}{12}$ fcet circular edgestone . . . . . 1766
Rolling . . . . . . . . . 18500
Amount paid to Quimby \& Ferguson :
245 cu. yds. sub-grading, at 30 cts . . $\$ 7350$
$1,309 \mathrm{sq}$. yds. Telford base, at 11 cts. . 14399
$1,409 \mathrm{sq} .5 \mathrm{ds}$. mac:adam, at $20 \mathrm{cts} . \quad$. 28180
443.7 sq. yds. block-gutters, at \$2.00 . 88740

1,108 lin. ft. edgestone set, at 18 cts. . 19944
574 sq . yds. brick sidewalks, at $\$ 1.00$. 57400
54.8 sq. yds. flagging crossings, at $\$ 4.50 \quad 24660$

693 cu . yds. gravel, at 82 cts . . . 56826
13 sq. yds. block-gutters, at 50 cts. . 650
240 sq . yds. brick sidewalks, at 60 cts . . 14400
Extra work:
$8 \frac{8}{9}$ dars labor, removing mud, at $\$ 1.75$
$\$ 1556$
1 day, double team . $\quad 500$
$1 \frac{7}{9}$ days, stone-cutter, at $\$ 4.00$. 711
248 lin. ft. edgestone reset, at
7 cts.
1736
$\$ 4503$
Plus $15 \%$. . . 675
5178
$\$ 3,17727$
Credit:
8 days, steam-roller . . . . 12000
3,057 27
$\$ 5,59575$
Amount retained from Quimby \& Ferguson
15286
$\$ 5,44289$
Parker street, Westland avenue to Huntington avenue.
Labor . . . . . . . . .
Stone . . . . . . . . . 2,71738
Teansing . . . . . . . . 97000
Hardware. . . . . . . . . 14136
228 feet edgestone . . . . . . . 35
Amount paid to Doherty \& O'Leary :
$7,081.3$ cu. yds. filling, at $\$ 1$. . . $\$ 7.08130$
$1,454 \mathrm{cu}$. yds: sub-grading at 37 cts . 53798
6,185 sq. yds. Telford base, at 67 cts. . 4,143 90



Sherborn street, Commonwealth avenue to Dalton street.
Labor, including engineering and inspection . . $\$ 32450$
Stone . . . . . . . . . 1,424 09
Advertising . . . . . . . . 10603

790 feet edgestone . . . . . . . 48980
Iron fence on sea-wall . . . . . . . 11800
Capstone for sea-wall . . . . . . 31500
Amonnt paid to Doherty \& Connors :
33 cu. yds. sub-grading, at 25 cts . . $\$ 825$
2,165 sq. yds. macadam, at 19 crs. . 41135
307 sq. yds. block-gntters, at $\$ 2.01$. 61707
1,022 feet edgestone set, at 27 cts. . 27594
784 sq. yds. gravel sidewalks, at 15 cts. 11760
29 sq. yds. flagging crossings, at \$4.25 . 12325
3,040 cu. yds. gravel furnished, at 79 cts. 2,491 50
138 sq. yds. block-gutters relaid, at 51 cts ., 7038
65 sq. yds. flagging crossings, at 70 cts. . 4875
Extra work, puddling, etc. :
$4 \frac{2}{9}$ days, foreman, a $\$ 2.60$. $\$ 1098$
$19 \frac{75}{9}$ days labor, at $\$ 1.75$. 3471

Plus $15 \% \quad . \quad . \quad$| $\$ 4569$ |
| ---: |
| 685 |
| $\$ 5254$ |

291,600 gallons for puddling, at
3 cts. . . . . . 8748

| --. | 14002 |  |
| :---: | :---: | :---: |
|  |  | 4,214 21 |
| Amount retained from Doherty \& Connors |  | $\$ 6,99163$ 21071 |
|  |  | 210 |
|  |  | \$6.780 92 |

St. Germain street, Massachusetts avenue to Dalton street.
Labor, including engineering and inspection . . $\$ 22495$
Teaming . . . . . . . . 43000
Stone . . . . . . . . . 1,82518
Rolling . . . . . . . . 1000
1,016 feet edgestone, 1 large and 1 small corner . 63887
Amount paid to Quimby \& Ferguson :
180 cu. yds. sub-grading, at 30 cts. . \$54 00
$1,616 \mathrm{sq}$. yds. Telford base, at 11 cts. . 17776
1,616 sq. yds. macadam, at 20 ets. . 32320
525.2 sq. yds. block-gutters, at $\$ 2$. 1,050 40

1,031 lin. ft. edgestone set, al 20 cts. . 20620
812.4 sq. yds. brick sidewalks, at $\$ 1$. 81240
44.1 sq. yds. flagging crossings, at $\$ 4$. 17640

1,878 cu. yds. gravel, at 95 ets. . . 1,784 10
17 sq. yds. gutters relaid, at 50 cts. . 850
355 sq. yds. brick sidewalks, at 60 cts. . 21300
Extra work:
533 lin. feet edgestone reset, at
$\$ 3.04$.
$\$ 16203$
148 sq. yds. macadam, at $17 \frac{1}{2}$. 2590
$\frac{7}{9}$ days, stone-cutter, at $\$ 3.50$, 272
$\frac{4}{9}$ days, paver, at $\$ 3.50$. . 156
$\frac{t}{9}$ days, laborers, at $\$ 1.75$. 78


Credit:
$\frac{2}{3}$ days steam-roller, at $\$ 15$. . . 1000
5,028 36
$\$ 8,15736$
Amount paid Quimby \& Ferguson in 1894 . $\frac{1,48580}{\$ 6,67156}$
Amount retained from Quimby \& Ferguson
25192
\$6,419 64

## SUMMARY OF ENPENDITURES.

## LAYING OUT AND CONSTRUCTION OF HIGHWAYS.

Total Amount Expended.

| Sewer construction |  |  | . | . |  |  | \$2,223 11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Arundel street |  |  |  | . | - |  | $92 \quad 17$ |
| Bay State road |  |  | . | . | - | . | 58 90 |
| Boylston street |  |  |  |  |  |  | 40,665 11 |
| Brighton avenue |  |  | . | . | . |  | 3,341 49 |
| Geneva avenue |  |  | . | . | . | . | 300 |
| Granby street |  | . | . | . | . |  | 7250 |
| Harvard avenue |  | - | . | - | . | . | 5,19564 |
| Iry street . | . | . | . | . | . |  | 2,14942 |
| Kenmore street |  |  | . | . |  |  | 1,906 86 |
| Mountfort street | . | - | . | . | - |  | 12750 |
| Newbury street | - | . | - |  |  |  | 60265 |
| Norway street |  |  |  |  |  |  | 5,442 89 |
| Parker street |  |  |  | . |  |  | 12,595 12 |
| Sherborn street | . | . | . |  | . |  | 6,780 92 |
| St. Germain street |  |  |  |  |  |  | 6,419 64 |

DETAIL OF ENPENIITURES FOR BLUE HILL AND OTHER AVENUES.

## Blue Hill Avenue.

Labor, including engineering and inspection . . $\$ 4,41848$
Arlvertising . . . . . . . . 34078
Rent of office . . . . . . . 4800
Printing . . . . . . . . 4426
Hardware . . . . . . . . 308
Fnel . . . . . . . . . 263
Sundries . . . . . . . . 29637
Removing houses . . . . . . . 40000
Amonnt paid to H. P. Nawn (Section 1) :
$3,177.5$ cn. yds. excavation, at 34 cts. . $\$ 1,08037$
66.33 cn . yds. bowlders broken, at 34 cts. 2255
$90 \cdot \mathrm{cn}$. yds. loam hauled, at 15 cts . . 1350
Removing trees, etc. . . . . 5000
$3,271.27 \mathrm{cu} . \mathrm{yds}$. excavation, at 30 cts. . 98738
Amount paid to H. P. Nawn (part of Section 11 and Sections 12, 13):
$3,650 \mathrm{cu} . \mathrm{yds}$. excavation, at 34 cts. . $\$ 1,24100$
Removing trees, etc. . . . . 5000
Carried forward, $\quad \frac{1,29100}{\$ 8,998} 40$
Brought forward,

$\$ 8,99840$
Amount paid to H. P. Nawn (Sectious 14, 15) : $3,831.39$ cu. yds. excavation, at 34 cts. . $\$ 1,30267$ 307.6 cu. yds. bowlders broken, at 34 cts. 10458 Removing trees, etc. . . . . 5000
Amount paid to Davern \& Cronin (Sections 2 and 3) :
3,600 cu. yds. sub-grading earth, at ..... 44 cts. . . . . . . $\$ 1,43440$
$1,000 \mathrm{cu}$. yds. excavation rock, at $\$ 2$ ..... - 2,000 00
Removing trees, etc. ..... 1000
Amount paid to Davern \& Cronin (Sections 7, 8,and 9):
$8,496.83$ cur. yds. excavation, at 30 cts. . $\$ 2,54905$
$160.34 \mathrm{cu} . \mathrm{yds}$. bowlders broken, at $30 \mathrm{cts} .$, ..... 4810
Removing trees, etc. ..... 10000
Amount paid to J. McDonald (Section 1) :
400 cu . yds. road excavation, at $\$ 1.35$54000
Amount paid to Collins \& Ham (part of Sections3,4 , and 5) :
$8,500 \mathrm{cu}$. yds. of excavation, at 37 cts . ..... 3,187 05
Amonnt paid to J. D. Gennaro (Sections 9, 10and parts of Sections 5 , and 8) :
$3,300 \mathrm{cu}$. yds. earth excavation, at 33 cts . ..... 1,10550
$\$ 21,43020$
Amount retained from H. P. Nawn (Sec- tions 11, 12, and 13) ..... $\$ 193 \quad 65$
Amount retained from Davern \& Cronin
(Sections 2 and 3) ..... 51666
Amount retained from J. McDonald (Sec- tion 1) ..... 8100
Amount retained from Collins \& Ham
(Sections 3, 4, and 5) ..... 47812
Amount retained from J. D. Genuaro
(Sections 9 and 10 , parts 5 and 8) $\quad 16582$
$\$ 19,994.95$

## Columbus avenue.

Labor, including engineering and inspection ..... $\$ 1,32853$
Teaming ..... 10800
Filling ..... 3,080 30

## Commonwealth avenue.



## Huntington avenue.

Labor, including engineering and inspection

1,032 00
Filling . . . . . . . . $\quad 2,145 \div 6$
$116 \frac{2}{12}$ feet circular edgestone
15109
145 feet flagging 9208
Brought forward, ..... $\$ 18,16081$
Amount paid to J. B. O'Rourke \& Co.:
727 feet edgestone reset, at 18 cts . ..... $\$ 13086$
377 sq. yds. block-gutters laid, at 35 cts., ..... 13195
917 sq. yds. brick sidewalks relaid, at 28 cts. ..... 25676
Excavating and removing loam and trees, ..... 900060957
3,041 feet edgestone reset, at 21 cts. ..... $\$ 63861$
1.368 sq. yds. bloek paving, at 33 cts. ..... 45144
2,272 sq. yds. brick sidewalk relaid, at 23 cts . ..... 52256
268 sq. yds. brick sidewalk relaid (her- ring-bone), at 41 cts. ..... 10988
Excavating and remoring loam and trees, ..... 350002,07249Amount paid to Wm. Scollans:$6,000 \mathrm{cu}$. yds. filling, at $79 \frac{3}{4}$ cts. . . . . 4,785̃ 00Amount retained from Wm. Scollans
SUMMARY OF EXPENDITURES FOR BLUE HILL AND OTHER AVENUES.
Blue Hill avenue ..... \$19,994 95
Columbus avenue ..... 4,51683
Commonwealth avenue ..... 15,920 19
Huntington avenue ..... $24,910 \quad 12$$\$ 65,34209$NE W EDGESTONE.

The following tables show the amount of new edgestone set during the year:

City Proper.

> Wards $6,7,8,9,10,11,12,16,17$, and 18 (Paving Districts Nos. 8,9, and 10).
Cambria and Scotia streets ..... 60
Norway street ..... 1,108
St. Botolph street ..... 2.5
St. Germain street ..... 1,031
Warren avenue ..... 435
Washington street ..... 98
Roxbury.
Wards 19, 20, 21, and 22 (Paving Districts Nos. 7 and 9).
Lin. feet.
Alaska street ..... 133
Aspen street ..... 56
Beacon street ..... 95
Brunswick street ..... 574
Buena Vista street ..... 158
Cobden street ..... 256
Columbus avenue ..... 57
Crawford street ..... 320
Cunard street ..... 58
Fenno street ..... 400
Gaston street ..... 660
Gurney street ..... 92
Hammett street ..... 141
Hammond street ..... 76
Harold street ..... 120
Haviland street ..... 472
Hazelwood street ..... 635
Holborn street ..... 130
Homestead and Harold streets ..... 351
Homestead street ..... 152
Howland street ..... 745
Hulburt street ..... 82
Humboldt avenué ..... 61
Hunneman street ..... 88
Judsou street ..... 62
Kenmore street ..... 573
Leyland street ..... 74
Longwood avenue ..... 95
Marshfield street ..... 250
Maywood street ..... 1,371
Maple and Georgia streets ..... 219
Moreland and Whiting streets ..... 280
Munroe street ..... 80
Ottawa street ..... 224
Parker street ..... 1,598
Quincy street ..... 1,075
Raleigh street ..... 139
Ruthven street ..... 229
Savin street ..... 98
Schiller and Mansur streets ..... 165
Sherborn street ..... 1,022
St. Alphonsus street ..... 119
Sterling street ..... 184
'Thorndike street ..... 190
Townsend street ..... 2,744
Walnut avenue ..... 157
Westland avenue ..... 96
Sundry streets in small quantities ..... 97

## South Boston.

Wards 13, 14, and 15. (District No. 1.)


Dorchester.
Ward 24. (District No. 6)
Idams street . . . . Lin.ft.

Alban street
$1,9.6$
. . . . . . . . . . . 719
Algonquin street . . . . . . . 595
Argyle street . . . . . . . 107
Auckland street . . . . . . . 65
Bicknell street . . . . . . . 80
Blue Hill avenue . . . . . . . 350
Bowdoin avenue . . . . . . . 223
Bullard street . . . . . . . 147
Church street . . . . . . . 300
Clapp street . . . . . . . 162
Cushing avenue . . . . . . . 214
Dewey, Danube, and Dacia streets . . . . 214
Dorchester arenue . . . . . . . 105
Harvard street . . . . . . . "369
Howard avenue . . . . . . . 131
Kenwood street . . . . . . . 2,563
Melville avenue . . . . . . . 85
Carried forward, $\quad 10.365$
Lin. ft.
Brought forward, ..... 10,365
River street ..... 100
Salcombe street ..... 113
Stockton street ..... 506
Talbot avenue ..... 2,516
Tremlett street ..... 173
Walton street ..... 328
Washington street ..... 974
Sundry streets in small quantities ..... 130West Roxbury.Ward 23. (District No. 5.)
Boylston street ..... 568Lin. ft .
Brookside avenue ..... 211
Centre street ..... 203
Mt. Vernon street
Panl Gore street ..... 893
Perkins steeet ..... 240
Peter Parley street ..... 80
St. John street ..... 1,936
Sonth street ..... 3,432
Varney street ..... 100
Walk Hill street and Hyde Park avenue ..... 151
Washington street ..... 336
8,319
Brighton.
Ward 25. (District No. 1.)
Cambridge street ..... 80
Commonwealth avenue ..... 1,953
Gardner street ..... 82
Gordon street ..... 255
Harvard avenue ..... 1,145
Pomeroy street ..... 445
Washington street ..... 88
Western avenue and North Harvard street ..... 143
4,191
Charlestown.
Wards 3, 4, and 5. (District No. 3.)
Lin. ft .
Boyle street ..... 63
Mishawum street ..... 605
Recapitulation.
Lin. ft.
City Proper ..... 2,990
Roxbury ..... 17,053
South Boston ..... 2,097
East Boston ..... 1,146
Dorchester ..... 15,205
West Roxbiry ..... 8,319
Brighton ..... 4,191
Charlestown ..... 668

51,669
NE W BRICK SIDE WALKS.
The following tables show the number of square yards of new brick sidewalks laid during the year:

## City Proper.

Wards 6, 7, 8, 9, 10, 11, 12, 16, 17, and 18. (Paving Districts Nos. 8, 9, ared 10.)
Sq. yds.
Albemarle street . . . . . . . 73
Blackmood street . . . . . . . 74
Bothnia and Scotia streets . . . . . 100
Columbus avenue . . . . . . . 800
East Canton street . . . . . . . 130
East Newton street . . . . . . . 103
Harrison avenue . . . . . . . 108
Norway street . . . . . . . 814
St. Botolph street . . . . . . . 483
St. Germain street . . . . . . . 812
Union Park street . . . . . . . 433
Washington street . . . . . . . 88
Sundry streets in small quantities . . . . 85
4,103
Roxbury.
Wards 19, 20, 21, and 22. (Districts Nos. 7 and 9.)
Beacon street . . . . . . . . 160
Bower street . . . . . . . . 127
Cobden street . . . . . . . . 178
Cunard street . . . . . . . . 123
Dudley street . . . . . . . . 209
Elm Hill avenue . . . . . . . 282
Fenno street . . . . . . . . 96
Brought forward,

Sq. Yds.

1,175
Gaston street ..... 212
Gurney street ..... 60
Hammett street ..... 62
Hammond street ..... 66
Hazelwood street ..... 113
Homestead and Harold streets ..... 275
Howland street ..... 490
Hulbert street ..... 54
Kenmore street ..... 280
Maple and Georgia streets ..... 144
Maple and Wayne streets ..... 143
Mills street ..... 73
Moreland street ..... 97
Mudroe street ..... 193
Parker street ..... 375
Quincy street ..... 382
Regent street ..... 77
Roxbury street ..... 205
Ruthven and Harold streets ..... 152
St. Alphonsus street ..... 110
Savin street ..... 69
Sheridan street ..... 109
Shirley street ..... 205
Sterling street ..... ธ9
Thorndike street ..... 71
Thwing street ..... 223
Townsend street ..... 420
Westland avenue ..... 125
Sundry streets in small quantities ..... 227
6,246
South Boston.
Wurds 13, 14, and 15. (District No. 1.)
Dorchester avenne ..... Sq. Yds.
East Fifth street ..... 68
East Fifth street ..... 222
East Secoud street ..... 88
East Sixth street ..... 100
East Third street ..... 343
First street ..... 89
I street ..... 319
Mt. Vernon street ..... 119
O street ..... 105
Richards street ..... 159
Washburn street ..... 74
West Sixth street ..... 64
Sundry streets in small quantities ..... 186

# East Boston. <br> Wards 1 and 2. (District No. 2.) 

Byron street . . . . . . . . 124

Condor street ธ0
Falcon street . . . . . . . . 68
Jeffries street 99
Marion street . . . . . . . . 88
Maverick street . . . . . . . . 90
Paris street . . . . . . . . 112
Saratoga street . . . . . . . . 227
Sumner street . . . . . . . . 85
West Eagle street . . . . . . . 92
Sundry streets in small quantities . . . . 116
1,151
Dorchester.
Ward 24. (District No. 6.)
Auckland street . . . . . . . Sq. Yds.

Blue Hill avenue . . . . . . . 73
Bowdoin avenue . . . . . . . 128
Bushnell street . . . . . . . . 178
Dewey, Danube, and Dacia streets . . . . 322
Dorchester avenue . . . . . . . 231
Dracut street . . . . . . . . 115
Erie street . . . . . . . . 122
Ererett avenue . . . . . . . . 63
Grant street . . . . . . . . 93
Howard avenue . . . . . . . . 122
River street . . . . . . . . 72
Savin Hill avenue . . . . . . . 60
Walnut street . . . . . . . . 58
Washington street . . . . . . . 330
Sundry streets in small quantities . . . . 128
2,146
West Roxbury.
Ward 23. (District No. 5.)
Boylston a venue . . . . . . . $\mathrm{Sq} . \mathrm{Yds} 50$

Boylston street . . . . . . . . 375
Brookside aveuue . . . . . . . 115
Centre street . . . . . . . . 117
Green street . . . . . . . . 158
Lamartine street . . . . . . . 120
Paul Gore street . . . . . . . 460
South street . . . . . . . . . 124
Walk Hill street and Hyde Park avenue . . . 110
Wenham street . . . . . . . . 105

## Brighton.

Ward 25. (District No. 4.)


Charlestown.
Wards 3, 4, and 5. (District No. 3.)
Moulton, Vine, and Bunker Hill streets . . . Sq. Yds. 313

Sundry streets in small quantities . . . . . 95
408

## Recapitulation.



## Property in charge of the deputy superINTENDENT OF PAVING DIVISION.

Buildings and wharf on Albany street, opposite Sharon street. The building is of brick and wood, and covers some 8,000 square feet of land, and is divided into a shed for storage, blacksmith's and carpenter's shops, tool-room, and stable. The total contents of the lot, including wharf and building, are 63,180 square feet.

Fort-hill Wharf, containing 21,054 square feet, placed in charge of the Paving Department May 18, 1874, to be used for the landing and storage of paving-blocks and gravel until such time as said wharf shall be wanted for the extension of Oliver street. The greater part of said wharf is occupied by the Sanitary Division as a garbage-dump, and the building thereon is leased to a tenant.

Lot on Chelsea, Marion, and Paris streets, East Boston, containing 43,550 square feet. Part of this lot used by the Sewer Division.

Ledge lot on Washington street, corner Dimock street, Roxbury, containing 134,671 square feet. Upon this lot are buildings containing a steam-engine and stone-crusher.

Highland-street Stable lot. Upon this lot is a large brick stable, erected iu 1873 , and occupied by the Sanitary and Paving

Divisions ; also a brick building used as a blacksmith's shop, and a shed for the storage of tools, etc.

Ledge lot on Codman street, Dorchester, containing 299,000 square feet, was purchased in 1870 . Upon this lot is a shed containing a steam-engine and stone-crusher ; also a stable and toolhouse.

On the Almshouse lot, Hancock street, Dorchester, there are two stables; also a shed and tool-house.

Ledge lot on Magnolia street and Bird place, Dorchester, containing 81,068 square feet. This lot was purchased by the town of Dorchester in 1867.

Downer-arenue lot, Dorchester, containing 35,300 square feet.
On Child street, West Roxbury, a lot of land containing 43,024 square feet, upon which are a stable and shed, blacksmith's shop, and tool-house.

Gravel lot in the town of Milton, on Brash Hill road, containing 64,523 square feet, hired by the town of Dorchester for nine hundred and ninety-nine years.

Gravel lot on Morton street, Ward $\approx 3$, containing about onethird of an acre, purchased by the town of West Roxbury in 1870 , used for storage purposes.

Ledge and gravel lot, rear of Union street, containing about 37,000 square feet, purchased by the town of Brighton. This lot is at present leased.

Ledge lot on Chestuut Hill avenue, Brighton, containing about thirteen acres, upon which are an office, engine-house, stable, and crusher plant.

On Medford street, Charlestown, a wharf lot, foot of Elm street, containing 8,000 feet, upon which are sheds, office, stable, etc.

In South Boston, corner of H and Ninth streets, stable, car-riage-house, shed, tool-house, and office on leased land.

On Hereford street, a yard with shed, tool-house, and office.
Wharf, known as Atkin's wharf, 521 Commercial street, purchased in 1887 for $\$ 24,000$, containing 22,553 square feet, having on it an office and stable.

On Kenney street, Roxbury, buildings containing engines, stone-crushers, tools, etc., on leased land.

Property belonging to the Paving Division, consisting of 91 horses, 71 carts, 15 water-carts, 16 wagons, 5 steam-rollers, 7 stone-crushers, and 7 engines.

Streets Laid Out or Extended.

| Date. |  | Location. | Length, Lin ft, |
| :---: | :---: | :---: | :---: |
| Sept. 19, | Abbotsford st. | From Walnut ave. to Harold st., Rox. | 584.20 |
| Nov. 7, | Audobon road.. | From Beacon st. to and across Ivy st., Roxbury $\qquad$ | 256.00 |
| Aug. 15, | Bay State road, | From Sherborn st. to Granby st., Rox. | 775.31 |
| June 7, | Blackinton st... | From Walley st. to Leyden st., E. B., | 236.89 |
| Jan. 3, | Bradshaw st. | (Formerly White st.) from Glenway st., Dorchester. | 602.00 |
| Nov. 13, | Chiswick road. . | From Englewood ave. to Chestnut Hill ave., Brighton.................. | 2,050.00 |
| June 14, | Comins terrace. | From Bower st., Roxbury . . . . . . . . . | 156.44 |
| June 11, | Fenno st. | From Rockland st. to Buena Vista st., Roxbury | 384.40 |
| June 5 , | Flagg | (Formerly Walnut pl.) from Washington st. to Reed st., City Proper. . | 438.42 |
| Sept. 7. | Geneva ave. | From Westville st. to Dorchester ave., Dorchester | 1,327.00 |
| May 3, | Gloucester s | From Beacon st., north, to a 30 -foot passageway, City Proper. | 150.00 |
| Mar. 14, | Gol | Over N. Y. \& N. E. R.R., S. B. | 52.00 |
| Sept. 19, | Greenbrier s | From Bowdoin st. to Bloomfield st., Dorchester | 688.00 |
| Aug. 15, | Granby | From Commonwealth ave. to Charles river | 414.08 |
| June 5, | Hartland s | From Saxton st, to Sydney st., Dor | 305.39 |
| Sept. 7, | Josephine | From Geneva ave. to Ditson st., Dor., | 611.28 |
| Sept. 7, | Julian st. | From Rand sq. to Howard ave., Rox., | 732.00 |
| Nov. 23, | Kingsdale st. | (Formerly Coolidge ave.) from Standish ave., Dorchester............... | 964.38 |
| Sept. 7, | Lauriat ave. | From Blue Hill ave. to Tucker st., Dorchester | 3,143.11 |
| July 23, | Mayf | From Pleasant st. to Bakersfield st., Dorchester | 382.05 |
| Mar. 5, | Otisfield st. | (Formerly Otisfield ave.) from Blue Hill ave. to Gaston st., Roxbury... | 454.83 |
| Nov. 23, | Park Lane st. | (Formerly Franklin Park ter.) from Walnut ave., West Roxbury...... | 579.00 |
| Jan. 4, | Romsey | From Sagamore st. to Sydney st., Dorchester | 443.98 |
| Mar. 16, | Rosedale st..... | (Formerly Rosedale ave.) fromWashington st. to Whitfield st., Dor. .... | 759.12 |
| Sept. 23, | St. Alphonsus st. | From Tremont st. to Calumet st., Roxbury | 712.00 |
| June 5, | Salcombe st. | From Stoughton st. to Cushing ave., Dorchester | 718.42 |
| Mar. 30, | So. Fairview st., | From South st. to South Walter st., West Roxbury | 798.32 |
| Mar. 30, | So. Walter st. | From South st. to South Fairview st., West Roxbury | 520.25 |
| Sept. 30, | Vermont st. | (Formerly Vermont ave.) from Corey st. to Mt. Vernon st., West Roxbury, | 1,402.00 |
|  |  |  | 20,641.32 |

## Streets Widened and Relocated.

| Date. | Street. | Locations. | Sq. ft. |
| :---: | :---: | :---: | :---: |
| July 31, | Bendall's lane.. | From Faneuil Hall sq. to North st., City Proper. |  |
| Aug. 29, | Brighton ave... | From Conımonwealtlı ave. to Cambridge st., Brighton.. | 137,494 |
| Aug. 29, | Cambridge st... | Corner of Henshaw st., Brighton..... | 1,890 |
| Jan. 3, | Clinton st. . . . . | From Commercial st. to Fulton st., City Proper. | 4,893 |
| Jan. 23, | Dudley st. . . . . | Between Mt. Pleasant ave. and Mt. Pleasant pl. Roxbury | 964 |
| Mar. 19, | India st. | From Atlantic are. to India sq., City Proper. |  |
| July 31, | Northampton st. | Corner Albany st., Roxbury ......... | 4,761 |
| Aug. 29, | Washington st.. | Between Henshaw st., and Wirt st., Brighton. | 6,037 |
| Jan. 4, | Washington st.. | From Welles ave. to Ashmont st., Dorchester. | 7,184 |
|  |  |  | 163,223 |

Streets Discontinued.

| Date. | Street. | Location. | Sq. ft. |
| :---: | :---: | :---: | :---: |
| July 31, | Battery st...... | From northerly side between Hanover <br> and Commercial sts., City Proper. | 6 |

## Names of Streets Changed.

| DATE. | Street. | Locations. |
| :---: | :---: | :---: | :---: |
| Feb. 18, | Indiana pl...... | Between Tremont and Washington sts., City <br> Proper; now Corning st. |
| Feb. 18, | Chapman st..... | Between Washington and Tremont sts., City <br> Proper; now Compton st. |

The records of the Street Commissioners for the year 1895 show the following results :

Streets laid out or extended . . . 20,641.32 lin ft.
Streets widened and relocated . . . $163,223 \mathrm{sq}$. ft.
Streets discontinued . . . . . . 6. sq. ft.
Increase in milage . . . . . . $3.90+$ miles.

## Permit Office.

The following report shows the work of the Permit Office for the year ending January 31, 1896, during which time permits have been issued to make openings in the streets as follows:

| American Telegraph Co. | Permit. | Feet. 124 |
| :---: | :---: | :---: |
| Boston Electric Light Co. | 926 | 49,158 |
| Boston Fire Department | 108 | 2,346 |
| Boston Gas Light Co. | 887 | 25,002 |
| Boston \& Albany R.R. Co. | 5 | 210 |
| Boston Lamp Department | 8 | 32 |
| Boston \& Maine R.R. Co. | 8 | 525 |
| Boston Police Department | 100 | 13,252 |
| Boston, Revere Beach, \& Lynn R.R. Co. | 1 | 70 |
| Boston Sewer Division | 231 | 51,865 |
| Boston Transit Commission | 57 | 1,663 |
| Boston Water Dept. (Eastern Division) | 4,935 | 172,273 |
| Boston Water Dept. (Mystic Division) | 144 | 2,941 |
| Brookline Gas Light Co. | 4,780 | 238,397 |
| Charlestown Gas Light Co. | 92 | 8,063 |
| Church Green Light \& Power Co. | 8 | 503 |
| Dorchester Gas Light Co. | 666 | 48,2う1 |
| Edison Electric Illuminating Co. | 306 | 22,408 |
| East Boston Gas Light Co. | 191 | 10,038 |
| Jamaica Plain Gas Light Co. | 201 | 14,265 |
| Lynn \& Boston R.R. Co. | 3 | 5,550 |
| Metropolitan Sewerage Commission | 2 | 2,700 |
| New England Telephone and Telegraph Co. | 9 9̌6 | 56, 285 |
| New England Telegraph Co. | 1 |  |
| N.Y., \& N.E. R.R. Co. | 6 | 340 |
| N.Y., N.H., \& H. R.R. Co. | 6 | 236 |
| Norfolk Suburban Street Railway Co. | 156 | 9,708 |
| Park Department | 2 | 360 |
| Postal Telegraph Cable Co. | 56 | 10,736 |
| Quincy \& Boston Street Railway Co. | 6 | 24 |
| Quiney Market Cold Storage Co. | 6 | 1,470 |
| Roxbury Gas Light Co. | 373 | 14,222 |
| South Boston Gas Light Co. | 464 | 15,805 |
| Standard Oil Co. . | 13 | 171 |
| Suburban Light and Power Co. | 8 | 370 |
| Union Freight Railway Co. | 5 | 11,450 |
| West End Street Railway Co. | 1,077 | 431,127 |
| Western Union Telegraph Co. | 560 | 7,840 |
| Miscellaneous | 3,474 | 186,831 |

Total, 20,448 permits ; $1,406,615$ feet, or 266.4 miles.
In connection with the above, the Barber Asphalt Company has received 34 permits on which they have repaired asphalt paving to the amount of $1,513.50$ square yards.

There have also been 106 Emergency Permits granted, on which, according to the returns made to this office, 5,094 openings have been made, of an average of about six feet each.

Permits other than for opening streets, have been issued as follows:
Advertising by man wearing hat and coat lettered ..... $\because 8$
Clearing snow on roofs ..... 126
Driving cattle ..... 12
Distributing sand ..... 11
Erecting projections (illuminated signs. etc.) ..... 49
Erecting, repairing, and removing awnings ..... 4,138
Erecting and repairing buildings ..... 6,874
Feeding or baiting horses on the streets ..... 795
Moving buildings . ..... 119
Occupying the sidewalk for loading and unloading goods. ..... 10
Pedlers (four different classes) ..... 705
Placing signs tlat on buildings ..... 1,884
Raising and lowering safes, machinery, etc. ..... 580
Special for various purposes ..... 361
Watering-carts ..... 144
Total ..... 15,836
Grand total ..... 36.284

There have been 13,334 notices sent to the various foremen directing them to rejair defects in the streets, which have been reported by the police, or from other sources; also 2,424 notices to private parties to repair work which had been improperly done by them where they had received permits to open the streets, and to owners of estates where there were defective coal-holes or Hyatt lights.

In accordance with Sect. 8, Chap. 36, Revised Ordinances of 1892, 328 notices have been sent to the foremen of the several districts, directing them to make, if necessary, repairs where parties making openings had neglected to attend to them within a specified time atter being notified to do so.

Three hundred and nine notices have been sent to departments, and others, regarding proposed street improvements.

There have been 544 new bonds filed; also 316 applications referred to the Police Department, asking for information regarding locations where permits had been asked for to sell fruit, etc., from windows, bulkheads, and areas, and the granting or refusal has been governed by the recommendations received. The same course has been pursued in cases of individuals desiring to occupy sidewalks for more than ten minutes at a time to load or unload goods.

The inspectors connected with the Paving Division have reported to this office at an appointed honr daily, and presented in writing a statement of their doings of the previous day, all of which have been examined, and such notices or correspondence as becomes necessary by reason of their reports, forwarded. During the open season there have been a number of extra inspectors employed to
watch over the work of companies opening long trenches. Their reports were also made in writing daily, giving the number of feet opened, amount of pipe or conduit laid, also the amount of backfilling, material nsed, and quality of the work in refilling and resurfacing, thus giving an idea of the condition of the streets at the points of opening.

These inspectors were paid by the companies to whose work they were assigned.

Since the removal of this oflice, on April 15, from Room No. 7. Old Court-House to the present quarters, Old Probate Building, No. 28 Court square, where, for the first time there is sufficient accommodation for the work of the office, all plans of street-railway tracks, poles, etc., and underground pipes or condnits have beeu removed from the office of the Paving Division to this office, and together with all other plans showing locations of electric poles, underground conduits, etc., are now being arranged and indexed. No plan is now loaned to any department or person without a receipt being taken for the same.

Early in March a new duty was assigned to this office, in the examination of conditions of streets and sidewalks at points where it had been claimed that accidents had happened, and from statements received from the Inspector of Claims for the city, it seems to have been of much value. The following is the summary of this work during the season:

The number of claims filed against the department since March 12 is 100 .

The general character of these claims is found upon inspection to be based on various alleged defects. When, received at this office the claim is carefully investigated by the examiner, the place measured, and a sketch made of the location, report is made to the Superintendent of Strects, and is filed in his office for reference; to be used also for the benefit of the committee on claims, and as evidence in court if necessary, and a duplicate report is also kept in the Permit Office.

A great many of these claims are in reality for no defects in the highway, but are traced to the negligence of corporations, contractors, builders, drain-layers, etc., who fail to properly light or guard their trenches or obstructions, and who do not put the street back in a workmanlike or satisfactory manner, therefore a new feature has been added to fit these cases in the form of a notice which is sent to the parties who have or had permits for openings, obstruc. tions, etc. As will be readily seen, they place the responsibility for these accidents and defects on the proper parties. It is also a matter of importance to know that these notices greatly aid the Inspector of Claims in the settlement of a number of such cases.
The number of claims investigated ..... 100
The number of notices sent out ..... 45
Miscellaneous matter looked up, such as petitions for Hyatt lights, areas, coal-holes, bulkheads, etc. ..... 30

## Street-Numbering.

Numbers have been assigned to the estates in the different districts as follows:


Total . . . 59 whole streets, and 302 parts of streeets

## APPENDIX D.

## REPORT OF THE DEPUTY SUPERINTENDENT OF THE SANITARY DIVISION.

12 Beacon Street, Boston, February 1, 1896.

Mr. B. 'T'. Wheeler, Superintendent of Streets:
Dear Sir: I respectfully submit my annual report of the expenditures, income, and operation of the Sanitary Division of the Street Department for the financial year ending January 31, 1896.

Respectfully yours,
C. A. Young, Deputy Superiutendent.

## FINANCIAL STATEMENT.

| Amount of appropriation | . | $\$ 00,000$ | 00 |
| :--- | :--- | ---: | :--- | :--- |
| Transferred from Paving Division | . | 23,000 | 00 |
| Transferred from Sewer Division | . | 5,000 | 00 |

Total amount appropriation . . $\$ 43 \overline{5}, 00000$
'Total amount expended . . . 432,778 52
Balance
$\$ 2.22148$

Objects of Expenditures.

| Items. | Amounts charged to the <br> Sanitary Division. | $\begin{aligned} & \text { Amounts paid } \\ & \text { by } \\ & \text { other Divisions. } \end{aligned}$ | Total amount expended. |
| :---: | :---: | :---: | :---: |
| For salaries of Deputy Superintendent and clerks in office.... | \$9,102 16 |  | \$9,102 16 |
| For labor in collecting and removing house-dirt and ashes.. | 126,628 63 | \$376 00 | 127,004 63 |
| For labor in collecting and removing house-offal. | 81,121 56 |  | 81,12156 |
| For labor of foremen and inspectors | 19,504 03 |  | 19,504 03 |
| For labor of men employed in stables and yards . . . . . . . . . . . . | 18,057 14 |  | 18,057 14 |
| For holidays (allowed time)..... | 10,554 44 |  | 10,554 44 |
| For labor, stock, and tools used in blacksmith-shop............. . . | 5,86189 | 20313 | 6,065 02 |
| For labor, stock, and tools used in wheelwright-shop $\qquad$ | 3,635 11 | 30510 | 3,940 21 |
| For labor, stock, and tools used in harness-shop. | 4,140 68 |  | 4,140 68 |
| For labor, stock, and tools used in paint-shop. | 4,605 91 | 7275 | 4,678 66 |
| For labor, stock, and tools used in horseshoeing-shop | 4,170 42 | 18196 | 4,352 38 |
| For labor, rental, towage, etc., on account dumping-scow.... | 14,959 34 | 38203 | 15,341 37 |
| For shoeing horses (outside shops) | 1,739 82 |  | 1,739 82 |
| For extra teams, collecting ashes and house-dirt. | 39,331 00 | 17,758 50 | 57,089 50 |
| For extra teams, collecting houseoffal | 7,433 50 | 3,098 00 | 10,531 50 |
| For grain used in stables | 14,971 84 | 3,311 94 | 18,283 78 |
| For hay and straw used in stables, | 10,586 47 | 3,041 82 | 13,628 29 |
| For horses . . . . . . | 4,987 70 |  | 4,98770 |
| For repairs on stables and sheds, | 2,358 33 | 26251 | 2,620 84 |
| For fuel, gas, and electric lights, | 1,631 28 | 4340 | 1,674 68 |
| For veterinary services and medicine for horses | 1,434 30 | 5450 | 1,488 80 |
| For printing, stationery, and adv̀ertising. | 1,859 76 | 9940 | 1,959 16 |
| For water rates. . . . . . . . . . . . . | 14330 |  | 14330 |
| For ash stock, consisting of cart covers, baskets, etc. | $20 \pm 90$ |  | 20490 |
| For offal stock, consisting of buckets, etc. | 54084 | 10618 | 64702 |
| For stable stock, consisting of curry-combs, brushes, etc. | 83083 | 6187 | 89270 |
| For collecting house-dirt and ashes in East Boston. . . . . . . . . | 6,691 67 | 60833 | 7,300 00 |
| For collecting house-dirt and ashes in South Boston, west of Dorchester st. | 5,486 25 | 49875 | 5,985 00 |
| For collecting house-dirt and ashes in South Boston, east of Dorchester st. | 1,283 32 |  | 1,283 32 |
| Carried forward. | \$403,856 42 | \$30,466 17 | \$434,322 59 |


 | Items. |
| :---: |

## Income.

Amount of moneys deposited and bills presented to the City Collector for collection, for material sold and work performed by the Sanitary Division of the Street Department during the year ending January 31, 1896.

Moneys deposited with the City Collector.
From sale of house-offal . . . $\$ 27,37447$
From letting of scow privileges . . $728 \quad 15$
$\$ 28,10262$
Bills deposited with the City Collector.
For the removal of engine asbes . . \$12,627 93
For the sale of manure . . . 75169
For the sale of ashes and house-dirt . 44710
For the sale of house-offal . . . 650
For the sale of tin cans . . . 2229
For the letting of scow privileges . 2830
For the letting of Fort Hill wharf . 1,000 00
14.88291
\$42,985 53
Amonnt collected by the City Collector . . . $\$ 43,62980$

## Amount expended for the Collection of Honse Dirt, Ashes, and House-offal, Labor, Hired Teams, and Contracts.

| District. |
| :---: |
|  |



## Offal Contracts.

Thomas Mulligan... $\$ 8,000.00$ for territory in East Boston.


## Total cost for Removal of House dirt, Ashes, and House offal.

House-dirt and Ashes Account.

| Expended for labor, as per pay-rolls |  |  | $\$ 127,004$ | 63 |
| :--- | :--- | :--- | :--- | :--- |
| Expended for stock, ete., per ledger account | $:$ | 135,444 | 60 |  |
| Expended on contracts, South Boston | $:$ | 7,268 | 32 |  |
| Expended on contracts, Dorchester | $:$ | 8,335 | 12 |  |
| Expended on contracts, East Boston. | $\cdot$ | 7,300 | 00 |  |
| Expended on contract, part of West Roxbury | $:$ | 2,910 | 37 |  |

$\$ 288,26304$
House-offal Account.


Material collected by Districts.

| Yards. |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Material. |  | $\begin{aligned} & \dot{\Phi} \\ & \stackrel{\rightharpoonup}{*} \end{aligned}$ | 范 |  |  | $\dot{\tilde{\circ}}$ $\stackrel{H}{\circ}$ 0 $\dot{\circ}$ $\dot{\circ}$ |  |  |  |  |
| House-dirt and ashes | 100,415 | 87,159 | 50,965 | 18,932 | 7,000 | 22,642 | 12,809 | 20,392 | 16,571 | 336,886 |
| House-offal | 22,394 | 1,647 | 8,685 | 2,546 | 1,419 | 3,965 | 3,732 | 4,179 | 2,760 | 51,327 |
| Totals | 122,809 | 85,806 | 59,650 | 21,478 | 8,419 | 26,607 | 16,541 | 24,572 | 19,331 | 388,213 |

## Disposition of Material Collected.

| Where dumped. | Loads house-dirt and ashes. | Loads houseoffal. | Loads street sweeping, Street Cleaning Div. | Loads cesspool matter, Sewer Div. | Total Loads. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Massachusetts ave., J. C. Cobb | 25,703 |  |  |  | 25,703 |
| First street, East Cambridge, Scullys ..... | 15,572 |  |  |  | 15,572 |
| Masssachusetts ave. (new st't), J. C. Cobb, | 14,261 |  |  |  | 14,261 |
| Mill pond, Charlestown, | 10,322 |  |  |  | 10,322 |
| Congress street, State of Massachusetts ... | 9,103 |  |  |  | 9,103 |
| E. Ninth street, estate Choate Burnham... | 厄, 850 |  |  |  | 5,850 |
| Ward street, SewellDay Company ..... | 8,962 |  |  |  | 8,962 |
| Norfolk ave., J. J. Nawn | 8,618 |  |  |  | 8,618 |
| Centre st., Owen Nawn, | 8,512 |  |  |  | 8,512 |
| Medford street, Geo. H. Wood | 8,094 |  |  |  | 8,094 |
| Marshfield strect, A. D. Gould | 4,485 |  |  |  | 4,485 |
| Harold street, Harris estate | 4,312 |  |  |  | 4,312 |
| Main street, East Cambridge | 4,100 |  |  |  | 4,100 |
| Massachusetts ave., "Camb," J. W. Allen | 2,787 |  |  |  | 2,787 |
| Williams street, Mrs. Casey .............. | 2,754 |  |  |  | 2,754 |
| E. Ninth street, W. T. Tufts | 2,671 |  |  |  | 2,671 |
| Rogers ave., W. Gilligan, | 2,617 |  |  |  | 2,617 |
| Various places, City teame . ............... | 41,624 |  |  |  | 41,624 |
| Various places, contracts . . . . . . . . . . . . | 53,038 |  |  |  | 53,038 |
| At sea by scows | 103,501 | 4,860 | 34,468 | 1,758 | 144,587 |
| Sold to farmers |  | 36,620 |  |  | 36,620 |
| East Boston, by Thomas Mulligan |  | 3,732 |  |  | 3,732 |
| Brighton, by David B. Morrill |  | 1,419 |  |  | 1,419 |
| Dorchester, by John McShane ........... |  | 4,179 |  |  | 4,179 |
| West Roxbury, by Geo. <br> T. Barnes |  | 517 |  |  | 517 |
|  | 336,886 | 5,137 | 34,468 | 1,750 | 424,439 |

## Comparative Table showing cost of collecting Ashes and Offial and delivering same at various Dumps.

Cost per cart-load, including administration expenses . . . $\$ 112$
" " " minus " " . . . 109
" " " of ashes, hired teams, including contracts . 59
" " " " 6 labor, hired teams, and contracts . 85
" " " " offal, hired teams, including contracts . 220
" " " " " labor, hired tcams, and contracts . 323
" " scow-load to transport garbage to sea . . . . 4721
" " cart-load " " " 6 " . . . . 11
Material Collected and Cost of Hired Teams．

|  | South Yard． | $\begin{aligned} & \text { West } \\ & \text { Yard. } \end{aligned}$ | Roxbury Yard． | Charles． town yard． |  |  | $\begin{gathered} \text { Brighton } \\ \text { Yard. } \end{gathered}$ |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 5 teams in winter． 4 teams in summer． | East of Dor．st．， on ashes． All so． Boston， offal． |  | 6 teams in winter． 5 teams in summer． | 5 teams in winter． 3 teams in summer． |  | Offal，W． R．， 2 teams in winter and summer． |  |  |
| Days＇work ． | 5，421 $\frac{1}{5}$ | 2，354 | 3，210 ${ }^{\frac{1}{2}}$ | 248 | 64 |  | $580 \frac{1}{2}$ |  |  | $578 \frac{1}{2}$ | 589 | －•••• |  |
| Number of loads，ashes ． Number of loads，offal． | $\begin{array}{r} 38,933 \\ 286 \end{array}$ | $\begin{array}{r} 18,588 \\ 129 \end{array}$ | $\begin{array}{r} 18,614 \\ 2,001 \end{array}$ | $\begin{array}{r} 1,786 \\ 125 \end{array}$ | 212,742 .. | $\begin{array}{r} *, 260 \\ 125 \end{array}$ | $\begin{array}{r} 3,113 \\ \tau_{1,419} \end{array}$ | 311，602 $\cdots$. | ${ }^{4} 8,791$ | $\cdot \stackrel{80,179}{ }$ | $\begin{array}{r} 55,988 \\ -\quad 9517 \end{array}$ | $\begin{array}{r} 1 \\ \left.\begin{array}{r} 12,809 \\ 63,732 \end{array} \right\rvert\, \end{array}$ | $\begin{array}{r} 139,2 \cdot 26 \\ 12,513 \end{array}$ |
| Total ．．．．．． | 39，219 | 18，717 | 20，615 | 1，911 | 12，742 | 6，385 | 4，532 | 11，602 | 8，791 | 4，179 | 6，505 | 16，541 | 151，739 |
| Amount expended | \＄27，106 00 | 11，770 00 | \＄16，052 50 | \＄1，240 00 | \＄10，48 | 882 | \＄5，635 79 | \＄4，387 44 | \＄3，947 68 | \＄8，106 38 | \＄6，416 37 | \＄15，300 00 | \＄110，442 98 |


．\＄27，539 67

Ashes ．．\＄82，903 31

8888
888．8．
${ }^{\circ}$
$\therefore$

－• | Contracts． |
| :--- |
| year．$\quad{ }^{6}$ Mulligan |
| ＂Morrill． |
| ＂ | ＂ 9 Barnes．

－ 1,106 loads collected by Mohan，included in above．

## Expenses of Dimping Boats.



Cost per trip, \$47.21.
Number of cart loads of garbage carried to sea, 144,587 .
Cost per cart load, 11 cents.
Number of Carts and Wagons Collecting House=dirt, Ashes, and Offal.
Offal-wagons owned by Sanitary Division . . . . . 8:
" in use " Thomas Mulligan, East Boston . . i
" " " David B. Morrill, Brighton . . . 3
" " " John McShane, Dorchester . . . 8
" " " George T. Barnes, West Roxbury . . 2
Ash-carts owned by Sanitary Division . . . . . . 167
" in use " Wm. F. Hedrington, East Boston . . . G
" ." " M. E. Nawn, West Roxbury . . . . 3
" " " Denis O'Sullivan, W. South Boston . . 5
" " " John MeShane, Dorchester . . . . 10
Market wagons owned by Sanitary Division . . . . . 8

## Capacity of Offal-Wagons.

During the fall of 1892, 24 offal-wagons were measured and contents weighed for the purpose of obtaining the capacity of wagons and the weight of offal per cart-load. Their capacity averaged, $3 \frac{33}{6}$ cord feet, or $56.25 \mathrm{cu} . \mathrm{ft}$., and the weight averaged $3,115 \mathrm{lbs}$. A cord equals $128 \mathrm{cu} . \mathrm{ft}$. or $7,091 \mathrm{lbs}$. Price per cord for offal, same as 1892. South Yard, \$4.00; Highland Yard, $\$ 5.00$; Charlestown Yard, $\$ 4.00$.

1 Paid Sewer Division towards maintenance of boats.

## Street Department - Sanitary Divinion. ;03

## Cost of Carts.

| 1891. | Ash-carts | . . | - | \$133 00 |
| :---: | :---: | :---: | :---: | :---: |
| 1892 | " | . . . |  | 14200 |
| 1893 | " | . . . | . | 14200 |
| 1894 | 6 | . . . | - | 14000 |
| 1895 | '، | . . . |  | 12900 |
| 1895 | Market-wagon |  |  | 17500 |
| 1895 |  | (with pole) |  | 20000 |
| 1895 | Offal-wagon |  |  | 17600 |

Acconnt of the Number of Loads of Material Collected from
January 1, 1891 to February 1, 1896.

| Years. | Ashes. | Orital. | StreetSweepings. | Total Loads. |
| :---: | :---: | :---: | :---: | :---: |
| 1891 | ${ }^{1} 313.464$ | 46,742 | ${ }^{2} 10,564$ | 370,770 |
| 1892 | 303,878 | 46,343 |  | 350,221 |
| 1593 | 320,571 | 51,415 |  | 371,986 |
| 1894 | 326,798 | 50,637 |  | 377,435 |
| 1895 | 336,886 | ${ }^{3} 51,3 \geq 7$ |  | 388,213 |



Cost of Horse-shoeing.
$\left.\begin{array}{llllllllll} \\ \text { Stock } & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \$ 1,497 & 56 & \\ \text { Labor } & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & 2,854 & 82 & \\ \text { Shops. }\end{array}\right)$

| Kind and Stite. | Divisions. |  |  |  | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sanitary | Street. Cleaning. | Paving. | Sewer. |  |
| New shoes | 5,527 | 3,799 | 544 | 591 | 10,461 |
| Bar shoes | 148 | 97 | 18 | 11 | 274 |
| Resets | 36 | 4 |  |  | 40 |
| Leather | 501 | 399 | 114 | 121 | 1,135 |

Average cost per shoe about 38 cents.
Contracts. (New Contracts made 1895.)



Contracts made in 1894 and still in Force.

Hay and Grain.
Account of Hay, Grain, and Straw fed out and used February 1, 1895, to February 1, 1896.

|  | Yards. | Bales. | Bushels. | Pounds. | Total Cost. | Cost per Horse per day. | Lbs. per Horse per day. | Horses. Divisions: <br> San. Street-Cl. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [ Hay | 2,723 |  | 613,679 | \$4,905 54 | \$0.11 $\frac{27}{4} \frac{1927}{50}$ | 424881 |  |
|  | Oats |  | 20,774 | 664,784 | 7,577 41 | $0.188^{715}$ | $15^{439} 3 \underline{ }$ | $42,057$ |
| South- | Shorts |  |  | 6,880 | 6908 | $\underline{6908}$ | 6889 |  |
| yard | $\left\{\begin{array}{l}\text { Straw }\end{array}\right.$ | 408 |  | 81,735 | 58581 | $0.011^{16524}$ | 132678 | Average per |
| Stable. |  |  | 966 | 54,096 | 47436 | 0.015373 | $1^{12039}$ | day. |
|  | Salt . . . . . . . . . | $\frac{1}{2}$ sacks |  |  |  |  |  | $80 \quad 36$ |
|  | Carrots |  |  | 3,190 | 1914 | 1914 | 3120. |  |
|  | Totals. |  |  | 1,424,364 | \$13,635 06 | $0.32 \frac{17682}{42057}$ | $33 \frac{36483}{2057}$ |  |



Street Department - Sanitary Division. 307
Hay and Grain. - Continued.
Account of Hay, Straw, and Grain fed out and used from February 1, 1895, to February 1, 1896.

|  | Yard. | Bales. | Bushels. | Pounds. | Total Cost. | Horses per day. Cost. | Horses per day. Pounds. | Horses. Divisions: San. St.Cl. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hay | 1,173 |  | 255,185 | \$2,035 21 | 12,3541 |  |  |
|  | Oats . |  | $6,759 \frac{1}{2}$ | 216,304 | 2,576 93 | 15,7718 | 12, ${ }^{1}$, | 14,879 1,786 |
|  | Shorts |  |  | 8,800 | 9025 | 9025 | 8800 | 16,665 |
|  | Straw. | 185 |  | 43,871 | 29534 | . $01{ }^{\text {12809 }}$ | $2,1054 \mathrm{l}$ | Average per |
|  | Corn |  | 692 | 38,752 | 38814 | . 02 馬 4 8 | 2,5422 | day, |
|  | Salt . . | $\frac{1}{2}$ sack |  | 2,190 | 1314 50 | 1314 | 2190 | 415 |
|  | English Vegetab |  |  |  |  |  |  |  |
|  | Totals |  |  | 565,102 | \$5,399 51 | . $32 \frac{6671}{6665}$ | $33, \frac{151587}{1665}$ |  |
|  | - |  |  |  |  |  |  |  |
| Charlestownyard Stable. |  |  |  |  |  |  |  |  |
|  | Hay | 784 |  | 176,784 | \$1,448 96 | . $178 \frac{923}{469}$ | 20, 74.804 |  |
|  | Shorts |  | 4,088 | 130,816 4,100 | 1,505 37 35 | .176344 3785 | 15, $\frac{3181}{4100}$ | $5,612 \quad 2,857$ |
|  | - Straw | 55 |  | 14,264 | 9558 | . $01{ }^{1089} 9$ | 1,57.25 | Average |
|  | Corn . . |  | 20 | 1,120 | 1360 | 1360 | 1120 | per day, |
|  | Carrots |  |  | 1,260 | 756 | 756 | 1260 | $15 \quad 8$ |
|  | (English Veget |  |  |  |  |  |  |  |
| Totals |  |  |  | 328,344 | \$3,108 72 | . $36 \frac{5}{84888}$ | $38, \frac{65}{8469}$ |  |

City Document No. 29.
Hay and Grain. - Concluded.

${ }^{1}$ South Boston stables established November 14, 1895.
Recapitulation.

| Material. | Pounds. | Cost. | Horses per Dat. |  | Number of Horses Fed. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Cost. | Fed out, Pounds. |  |
| Hay | 1,593,834 | \$12,892 00 | . 13.634828 | 16, $\frac{85}{6558}$ | Sanitary Division, $\quad 65,408$ |
| Shorts | $1,384,800$ 24,080 | 16,00112 23918 | . $169 \begin{array}{r}91536 \\ \hline 2918 \\ \hline\end{array}$ |  | Street-Cleaning Division, 28,878 |
| Straw | 223,506 | 1,571 16 | . 0162839 | 2, $\underline{34 \underline{934} 4}$ | 94,286 |
| Corn.. | 93,968 | 87610 | $\underline{87610}$ | $\underline{23968}$ | Average number per day: |
| Carrots Salt .. | 8,750 | $\begin{array}{rr} 52 & 50 \\ 5 & 09 \end{array}$ | 5250 $\underline{509}$ | 8750 | $\begin{array}{lr}\text { Sanitary Division, } & 189 \\ \text { Street-Cleaning Division, } & 79\end{array}$ |
| Totals | 3,328,938 | \$31,637 15 |  | $35, \frac{289288}{9426}$ |  |

[^12]|  | Organization. |
| :--- | :---: |
| 1 Deputy Superintendent. | 3 watchmen. |
| 4 clerks. | 5 feeders. |
| 5 foremen. | 5 messengers. |
| 1 captain of scows. | 6 stablemen. |
| 6 sub-foremen. | 10 yardmen. |
| 13 inspectors. | 24 dumpers. |
| 19 mechanics. | 189 ash-cart drivers and helpers. |
| 2 tallymen or aids. | The offal-cart drivers and helpers. |
|  |  |
|  | Total, 433 employees. |

## House-offal.

There are employed in the removal of house-offal 201 men and 93 wagons. The offal is removed from dwelling-houses twice a week during the summer months, and once a week during the winter ; from hotels, markets, and restaurants it is removed daily.

The men are required to enter the yards, collect the offal, empty into wagons, and deliver at the depots, located as follows : one on Albany street, one on Highland street, Roxbury; and one at the Almshouse, Charlestown; also to the dumping-boats located at Fort Hill wharf, on Atlantic arenue.

The offal is largely sold to farmers of adjoining towns, the remainder is dumped on the scows and carried to sea. About nine per cent. of the quantity collected during the past year has been disposed of in this manner.

On January 21, 1895, the New England Construction Company commenced the disposition of the offal collected under the McShane contract at the plant erected by them on the city land located on Gibson street, Dorchester. They disposed of $910 \frac{1}{2}$ tous under their patented process, for which they received $\$ 509.44$; but the residents of Dorchester objected to the process and location of the plant, and held public indignation meetings, appealing to the Board of Health to stop the running of the plant, and finally applied to the Courts for an injunction ; this was granted, and on April 18, 1895 , it was closed, and still remains so.

The Dorchester contractor disposes of the offal at present in the same manner as the city itself, by sale to farmers.

At present there are four sections of the city let out by contract for the collection of house-offal: East Boston, by Thomas Mulligan ; Dorchester District, by John McShane ; Brighton District, by D. B. Morrill ; and a portion of West Roxbury, by George 'T. Barnes.

The cash revenue received from the sale of house-offal for the past five years has been as follows :

| 1891 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\$ 30,246$ | 65 |
| ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ---: | :--- |
| 1892 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 21,282 | 82 |
| 1893 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 20,790 | 03 |
| 1894 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 26,262 | 40 |
| 1895 | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | $\cdot$ | 27,374 | 47 |

The money received from the sales of house-offal is deposited monthly with the City Collector, and then credited to the SinkingFund of the City of Boston.

## House-dirt and Ashes.

In the colleetion of house-dirt and ashes there are employed 271 men and 199 carts. This material is removed from hotels, tene-ment-houses, and stores daily ; from dwelling-houses once a week. The City Ordinances of 1892 (Chapter 36) require that house-dirt and ashes 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 sidewalks, where their contents are dumped into the carts. The receptacles are then placed in their original position. The material is disposed of, if possible, on low lands, being used for filling, and is also dumped on scows, to be carried to sea. Of the amonnt collected last year, thirty-one per cent. was disposed of in this manner, viz., carried to sea.

There are five sections of the city let ont by contract for the collection of house-dirt and ashes. Both Dorchester contracts are held by John McShane ; South Boston, west of Dorchester street, by Denis O'Sullivan; East Boston by Wm. F. Hedrington ; and a part of West Roxbury by Matthew E. Nawn.

At the expiration of one of the Sonth Boston contracts - that one held by F. J. Mohan, - east of Dorchester street, on May 1, 1895 , the work was continued by day labor, with teams from the South yard. Later in the year, a stable and yard were hired on Ninth street, corner of Vale, and all of the teams for the collection of ashes in this section were located there, together with the offal wagons that were working in South Boston, in order that the work of collecting and removing both house-dirt and ashes and houseoffal might be done by day labor.

## Division Repair-Shops.

## Located at the South End Yard, situated 650 Albany Street.

At these shops all of the repairs on carriages, carts, wagons, etc., are made, together with the painting of same; all harnesses are repaired and many made, and a portion of the horse-shoeing done.

The mechanics in these shops are engaged also in making repairs on the vehicles, etc., sent by the different divisions of the Street Department; all street-signs are painted for the Paving Division, and a certain amount of horseshoeing is done for the several divisions.

## Wheelwright and Blacksmith Shops.

Cost to maintain during the past year, the sum of $\$ 10,005.23$, of which amount $\$ 5,206.25$ was expended for labor and $\$ 4,798.98$ for stock. The carts, wagons, and other vehicles of the division were properly overhauled, when in need of repairs, and the entire lot of ash and offal sleds were put in proper working order. Of
the above amount expended in maintaining these shops, the following amounts were charged off to the several divisions and others for repairing, altering, and putting in good condition their carts, wagons, watering-carts, buggies, sleds, etc. :


This leaves a net cost of $\$ 6,358.65$ for the repairs and construction of all work of this character for the Sanitary Division.
There are employed in these shops 2 wheel wrights, 2 blacksmiths, and 3 helpers.

## Paint-Shop.

Cost to maintain $\$ 4,678.66$, of which amount $\$ 3,649.88$ was expended on labor and $\$ 1,028.78$ on stock. The work done by this shop was the painting and lettering of that which was either built or repaired in the wheelwright and blacksmith shops, together with 762 different styled signs that were painted for the Paving Division. Of the above amount expended for maintaining this shop, the following amounts were paid by the several divisions of the departments for painting carts, wagons, buggies, signs, etc.:

\$2,649 10
Leaving the balance, $\$ 2,029.56$, as the cost of this work for the Sanitary Division.

This shop employs 4 painters and 1 helper.

## Harness-Shop.

Cost to maintain, $\$ 4,140.68$, of which amount $\$ 2,385.93$ was expended for labor and $\$ 1,754.75$ on stock; part of the work sent to the blacksmith and wheelwright shops was always repaired here, such as Goddard and Concord buggies, leather seats to wagons, etc., together with all the new pieces of harness made for the several divisions. The entire lot of old and new harness owned by the Sanitary Division has during the year been overhauled, repaired, and oiled at this shop. Of the above amount
paid out for maintaining this shop, the amounts charged to the several divisions of the department for work done were as follows:


Leaving balance, $\$ 3,243$, as the net cost of work done for the Sanitary Division.

This shop employs 4 harness-makers and helpers.
Horse-shoeing Shop.
Cost to maintain during the past year $\$ 4,352.38$, of which amount $\$ 2,854.82$ was expended for labor, and $\$ 1,028.78$ for stock. All of the horses at the South Yard, together with the Street-Cleaning Division horses stabled there, as also some of the horses located in the different stables of this division, and of other divisions of this department, are shod at this shop and for which the several divisions were charged the following amounts :


Leaving balance of $\$ 1,227.88$ as cost to the Sanitary Division, for this class of work.

This shop employs 4 horseshoers and helpers.
Following are tables showing the nature of work that was performed by the mechanics in the different shops of this division for the several divisions of the Street Department :


Table showing the Number and Variety of Vehicles, etc., belonging to the several Divisions of the Street Department on which Repairs were made at the Shops and by the Mechanics of the Sanitary Division.


New work included in above. Two offal wagons, 1 market wagon and 1 ash cart were constructed.
Table showing the amonnts paid for the different kinds and character of work performed by the Sanitary Division, by the several other Divisions of the Street Department and others.

| Items. | Paving Div. | Sewer Div. | Street-Cleauing Div. | Bridge Div. | Street-Watering Div. | Central Office. | County of Suffolk. | $\begin{aligned} & \text { Institutions } \\ & \text { Dept. } \end{aligned}$ | Totals. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Blacksmithing and Wheel-wright-work . | \$1,036 65 | \$1,247 12 | \$879,46 | \$204 68 | \$21794 | \$55 93 | \$480 |  | \$3,646 58 |
| Harness-work.. | 16717 | 23475 | 44411 | 4109 | 1056 |  |  |  | 89768 |
| Painting | 1,546 08 | 46067 | 41855 | 10223 | 11750 | 407 |  |  | 2,649 10 |
| Horseshoeing | 36900 | 32775 | 2,428 75 |  |  |  |  |  | 3,125 50 |
| Use of Dumping-sco |  | 58038 | 7,969 32 |  |  |  |  | \$107 00 | 8,656 70 |
| Hay and Grain, Board of Horses. |  |  | 9,584 43 |  |  |  | 1,060 00 |  | 10,644 43 |
| Yard and Stable Labor. |  |  | 2,077 72 |  |  |  |  |  | 2,077 72 |
| Fuel, Lights, and Water at Stables |  |  | 65484 |  |  |  |  |  | 65484 |
| Totals <br> Balances. | \$3,118 90 | \$2,850 1 | $\begin{array}{r} \$ 24,45718 \\ 78709 \end{array}$ | \$348 00 | \$346 00 | $\$ 6000$ | $\$ 1,06480$ $11 \quad 02$ | \$107 00 | $\begin{array}{r} \$ 32,35255 \\ 79928 \end{array}$ |
| Totals | \$3,118 90 | \$2,849 50 | \$23,670 09 | \$348 00 | \$346 00 | \$60 00 | \$1,053 78 | \$107 00 | \$31,553 27 |

## PLANT AND PROPERTY IN CHARGE OF SANITARY DIVISION.

South City Stables, Shops, and Sherls.

Situated on Albany street, opposite Newton street. The lot belonged to the city before being used for this purpose, and contains 90,780 feet. The stable and buildings connected therewith are 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.

Connected with stables are blacksmith, wheelwright, painters, and harness-makers' shops, in which the wagons, carts, harnesses, etc., used by the department are constructed and kept in repair.

## Offal Depot.

Erected in 1864, on the wharf fronting on Albany street, opposite Brookline street, on the other side of the dock from that used by the Paving Division. The lot which the building occupied, and the yard attached to the same, contains 39,511 feet, and belonged to the city before being used for this purpose. Total original cost of building, $\$ 18,578.89$. This building is used for the deposit of house-offal daily collected in the city carts, and from which it is thence conveyed without the limits of the city proper by purchasers.

## West Stable and Sheds.

The stable is a brick building, a story and a half high, 128 feet by 50 , located on North Grove street, built in 1860 , with suitable outbuildings attached to the same. It has accommodations for 83 horses, in stables and sheds. The lot coutains about 45,152 square feet.

## Highland Stable.

With accommodations for 60 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, which cost $\$ 88,594.13$. On this lot is an offal-shed, erected in 1875 , at a cost of $\$ 1,160.12$

## Charlestown Stable.

With accommodation for 25 horses, is situated on Rutherford a venue; lot contains 17,300 square feet of land ; stable built in 1875 , cost $\$ 5,083.07$; sheds and outbuildings built in 1879 .

## 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 landing-place for scows, which couvey this stuff to sea. There are two dumping-boats, known as the Barney dumpingscows, and these are in continual use for the above purpose, and are towed to sea by the Street Department steam tug-boat "Cormorant." The tug-boat is also used by the Sewer Division. A portion of this wharf is used by the Street-Cleaning Division as a locker for push patrol-carts, etc.; a part is in charge of the Paving Division ; and a portion occupied by a tenant.

## Gibson Street Plant.

Containing 42,000 square feet, and situated in Dorchester district, which has been used and occupied by the New England Construction Company, for the treatment and disposition of offal, and which is now closed.

## APPENDIX E.

## REPORT OF THE DEPUTY SUPERIN'TENDENT OF THE SEWER DIVISION.

Probate Building, 28 Court Square, Boston, February 1, 1896.

Mr. B. T. Wheeler,<br>Superintendent of Streets:

Dear Sir: I respectfully submit the following report of the expenses, income, and business of the Sewer Division, for the financial year ending January 31, 1896, together with a brief statement of the present condition of the sewers and other property, the work done this year, and what should be done in the near future that the efficiency of the sewers may be improved.

Respectfully yours,

> H. W. Sanborn,
> Deputy Superintendent.

The Sewer Division has charge of the following work:

1. The maintenance and construction of all common sewers and catch-basins.
2. The maintenance of the main drainage works.
3. The maintenance of Stony brook.
4. The maintenance and construction of all street culverts.
5. The preparation of plans, and the engineering and supervision required on the construction and maintenance of all work connected with the division.
6. The granting of permits for all convections to be made with the common sewers, and the custody of bonds filed by drain-layers authorized to make such connections.
7. The levying of assessments on estates benefited by the construction of sewers.

One hundred and thirty-nine thousand two hundred $(139,200)$ lin. ft. of sewers have been built during the past year by the city, and thirty-six thousand two hundred and eighty-seven (36,257) lin. ft. have been built by private parties according to the plans, and under the inspection of this division, and accepted by the city under the usual forms of release.

Before submitting any of the details necessary to a comprehensive statement of what has been accomplished by the Sewer

Division during the past year, your attention is called to the urgent necessity of an increase in the maintenance appropriation over what we have had for the past two or three years. It is impossible to do justice to the citizens or the department without it. The amount received has been carefully expended, bat it is impossible to keep the sewers and catch-basins in anything like a sanitary condition without an increase. To emphasize the fact, I have only to state that fifty-five (55) miles of sewers and five hundred and seventy (570) catch-basins have been added to the system in the last two years alone, and yet instead of an increased appropriation to care for the same, the division had appropriated for maintenance the past year $\$ 50,000$ less than in 1893 .

Another item that should be recognized in providing for the maintenance of the division is that of repairs to the plant at the pumping-station. Money must be provided to do the necessary work, or the vital point in the whole sewer system will some day become suddenly inoperative.

The experience of the last few years has proven that money for this work cannot be obtained outside of the maintenance appropriation.

It would seem that the healthfulness of the city, which is to a great extent dependent upon the proper sanitary condition of the sewer system, would be reason enough to furnish a sufficient amount to properly maintain the system, even if some less urgent matters were curtailed in consequence.

The city is growing fast, new teritory is being developed, the sewer system expanding proportionally, and it is impossible to maintain it properly withont a somewhat nearly corresponding increase in appropriation.

## City Proper and Back Bay.

The system of sewers in the vicinity of Haymarket square, bounded roughly by Causeway, Hanover, Endicott, and Merrimac streets, and having its outlet ihrough Canal street, remains in the same condition in which it was left by the building of the westside intercepter in 1883.

It was assumed by the authorities of the Improved Sewerage at that time that the city would proceed at once to rebuild this system, but it has been put off from year to. year until now thirteen years have elapsed, and the sewers are filled nearly to the top with sewage deposit.

A more unsanitary condition of things can hardly be fonnd in any large city in this country than exists in this district. This whole matter, and the possible remedies therefor, were fully discussed in the annual report for 1891 , to which reference is made. Briefly, there are two courses which may be pursued, one, to rebuild all the sewers at an elevation several feet higher to correspond with that of the west-side intercepter; the other, to build a new sewer across the city from the east-side intercepter low enough to drain out these sewers; a plan which is feasible from the fact that the east-side intercepter is about four feet lower than that of the westside. The latter plan is favored on account of its being somewhat
cheaper, and affording a system of sewers at a lower grade, a desirable object for this business section of the city, where cellars will probably be deeper in the future than they are now.

The completion of the Beach-street system should be undertaken, or at all events, that portion which includes the rebuilding of the contracted section of the Harvard-street outlet sewer ; the Hooding of cellars connected with this system demonstrates its necessity.

The sewer in Falmouth and Norway streets, which is badly settled and broken, should be rebuilt without further delay, as its collapse would dam up the sewage of a considerable section. The main sewers in Berkeley, Dartmouth, Fairfield, and Hereford streets are contracted at their storm outlets into Charles river; these outlets should be enlarged and tide-gates of sufficient capacity provided.

The perfection of the surface drainage system of the Back Bay, for which a study was made last year, should be attended to: about one hundred and thirty-three catch-basins and seven thousand linear feet of pipe sewers and surface drains are needed.

Twelve catch-basins in Charlesgate East are connected with a sewer, while the covered channel of Stony brook lies in the same street.

These basins should never have been connected with a sewer when a large surface drain was almost equally convenient. Their connections should be removed from the sewer and put into the brook; an inexpensive change by which a considerable amount of surface-water could be kept out of the Hereford-street sewer system.

The houses on the water-side of Beacon street still drain into Charles river. A sewer should be built for these honses whenever the proposed boulevard along the bank of the river is built.

A very large number of sewers in the city proper, especially in the South Cove, are settled and defective. The following list will give an idea of the extent to which the city will be called upon to rebuild sewers in the near future ; the rebuilding of a large proportion of these cannot be much longer postponed, and should not be any longer delayed, if funds can possibly be secured, as the cleaning of them is continuous and expensive :

Brighton street, from Milton to Leverett street.
Wall street, from Minot to Causeway street.
Wiget street, from N. Margin to Salem street.
Webster avenne, from Hanover to Unity street.
Hull street, from Commercial to N. Hudson street.
S. Market street, from Commercial street to Merchants row.

Haverhill street, from Traverse to Causeway street.
Nashua street, from Minot to Causeway street.
India street, from Central street to India square.
Milton street, from Brighton to Spring street.
Leverett street, from Canseway to Green street.
Chatham street, from Commercial street to Merchants row.
Bread street, from India to Broad street.

Part of sewer at Prince and Thacher street.
Stillman street, from Charlestown to Salem street.
Way street, from Harrison avenue to Albany street.
East street, from Federal to Lincoln street.
Ediuboro' street, from Essex to Beach street.
South street, from Beach to Kneeland street.
Winchester street, from Church street to Edgerly place.
Appleton street, from Tremont to Berkeley street.
Albany street, from Geuesee to Troy street.
Oak street, from Albany to Hudson street.
Warren avenue, from Dartmonth to Clareudon street.
Passageway between Concord street and Worcester square.
St. Charles, Guy, Piedmont, Ferdinand, Fayette, and Kirkland streets are badly settled and need either partial or complete rebuilding.

## Work done during 1895.

The defective drainage of the Quincy Markets, frequently mentioned in previous annual reports, is in a fair way to be remedied, the special sewer for that purpose being now under way, including a large tank for the storage of sewage during those periods of rain and high tide when the common sewers do not afford drainage to low cellars.

The cellars of business blocks in this viciuity are in much the same coudition as those of the markets, and it would be a desirable thing, if funds were available, to build similar systems for their accommodation.

Five thousand seven hundred and thirty-seven $(5,737)$ linear feet of sewers and surface drains were built by the city by day labor and coutract, and two thousand one hundred and sixty-two $(2,162)$ linear feet by private parties and released to the city.

## Charlestown.

A sewer will have to be built in Chelsea street, between Medford street and Scott's court, to conduct the sewage of the court into the Metropolitan sewer, whieh ends at Medford street.

Twelve convections, costing abont $\$ 30,000$ in the aggregate, will hare to be made with the Metropolitan sewers the coming season, as was stated during the year in a communication to the Mayor, transmitted by him to the City Council.

New sewers are needed in Arlington avenue, Russell street, between Mead and Eden streets, and in Concord street.

The Beach-street outlet should be rebuilt of increased size, the backing up of sewage in the Cambridge-street sewer being largely due to the outlet.

Old and defective sewers in the following streets should be rebuilt:

Lyndeboro' street, Essex to Middlesex street.
Beacham street.
Monument avenue, Warren street to Monument square.
Ratherford avenue, Chapman to Dunstable street.

Corey street.
Winthrop street, Warren to Adams street.
Frothingham avenue.
Work done during 1895.
One thousand three hundred and eleven $(1,311)$ linear feet of sewers and surface-trains were built by the city by day labor.

## East Boston.

The outlet-sewer for Leyden street, west of Breed street, is now under way. It will serve for the outlet for sewers on the southwestern part of the hill.

The Havre-street sewer, between Meridian and Sumner streets, should be rebuilt; and a main sewer should be started in Chelsea street, near the bridge.

The following sewer-outlets need rebuilding :
Porter street.
Putuam street.
Jeffries street.
Decatur strect.
Brooks street.
Outlet at Dock No. 13.
Eighteen connections with the Metropolitan sewer system, estimated to cost $\$ 45,000$, should be made during the coming year.

Work done during 1895.
The Orleans-street sewer, between Maverick and Porter streets, has been completed, and a connection made with the Metropolitan sewer.

Three thousand four hundred and fifty-four $(3,454)$ linear feet - of sewers have been built by the city by day labor.

## Brighton.

Complaints are constantly coming in to the department from residents on Union, 'Shepard, Winship, and Washington streets, on account of their cellars being flooded during every considerable rain-storm. The trouble has been exhanstively discussed in unmerous past reports; briefly, it is due to the fact that the sewers are too small to carry the surface-water during storms, and the brook, which formed the natural drain for this district, has been almost completely obliterated by the abutters, who now suffer the natural consequences of their folly.

The city, too, is not blameless, its agents in past times having yielded to the importunities of these same abutters, and connected the brook at various places with the sewers. This department has but two alternatives to consider in devising a remedy: either to restore the brook channel upon the old route, or by arrangement with the abutters, upon lines near those of the old route, or to build an expensive surface drain located in the streets. The

Board of Health has the power, which this department does not possess, to enter upon private lands and restore the old channel and assess the cost of the work upon those benefited, and should take this action in the interest of public sanitation.

The house sewer and surface drain, contemplated for several years, for North Harvard street, shonld be built. Sewers should also be built in the following streets:

Newton street.
School street, from Market to Portsmouth street.
Allston square, from Commonwealth avenue to Allston street.
A sewer should be built from Buffalo to Everett street, there to connect with the Everett-street sewer, to take the sewage from the stock yards, leaving the old culvert, through which the sewage of the stock yards now drains, to carry the surface-water from the road-bed of the B. \& A. R.R. and the water from the old brook.

An outlet should be provided for the surface-water of Lincoln street, near where the track of the Sewall \& Day Cordage Company crosses it.

Our topographical plans show that a small branch of the brook mentioned in the precerling paragraph formerly flowed along and across the tracks of the B. \& A. R.R. at this point; this should be restored and the Lincoln street catch-basins drained into it.

Work done during 1895.
The sewer system of Harvard-avenue has been built, and also those of Sections 1, 2, 4, 6, and 8 of Commonwealth-avenue boulevard.

Section 3 is being built, as are the ontlet sewers in Chestnut Hill avenue. A long and expensive outlet remains to be built in new streets, between Foster and Lake strects. The Lake-street sewer, completed in 1895, is the outlet for a portion of Commonwealth avenue and for a part of the Newton boulevard. A new main sewer, connecting with the Metropolitan sewer at Faneuil Station, has been built, and will afford an outlet for sewers in the streets on the northerly side of Bigelow hill.

Twenty-eight thonsand three hundred and eighty-four (28,384) linear feet of sewers and surface drains have been built by the city by day labor and contract, including the sewers of the bonlerards, and four thousand six hundred and sixteen $(4,616)$ linear feet by private parties.

## South Boston.

The sewer outlets along the sonthern shore of the peninsula at H, I, K, N, P, and Q streets are all in very bad condition and should be rebuilt. As the Park Department is engaged in building the Strandway along this shore, the rebuilding and extending these ontlets must be done in connection with the work of the Park Department. The latter department should pay the cost of extensions beyond the present shore line, necessitated by the strandway.

The B and Seventh street outlet, from the junction of these streets to South Bay, should be rebuilt, both on account of its insufficient size and defective condition. If funds can be made available the whole scheme, discussed in several previous reports, of sewering Dorchester arente between B and D streets, and rebuilding D-street sewer, between Dorchester avenue and Eighth streets, should be carried out in connection with work on the outlet. The sewer in Seventh street, also, between B and D streets, should be rebuilt, as it is in bad condition.

The outlet at Dorchester avenue and Dorr street will have to be extended, as parties owning the flats are filling in, and have nearly shat off the ontlet. The Kemp-street outlet, which has been broken down for years, should be rebuilt and made of sufficient size to serve for an overflow for the Sonth Boston intercepter.

The sewers in Dorchester avenue, between D and Dexter streets, and in E street, between Seventh and Eighth streets, are broken and settled and liable to fall in at any time ; they shonld be rebuilt at once.

The sewer in Silver street, between C and D streets, is broken in in so many places that the flow of sewage is obstructed and backs into the cellars; only temporary relief can be given by frequent cleaning.

It should be rebuilt immediately, as the cost of cleaning it, in its present condition, will soon exceed the cost of rebuilding.

The sewers in Dexter and Ellery streets are so badly broken and settled that the cleaning-rods cannot be pushed throngh them, houses are flooded, and complaints are numerous. They should receive early attention, and be rebuilt upon a substantial foundation.

The sewer in Mercer street should be rebuilt of larger size, to prevent further flooding on Mercer and Vale streets.

Many new catch-basins are asked for by the Paving Department, and many new manholes are needed on old sewers, as the distance between existing manholes is too great to admit of proper cleaning. A fund should be provided for building these in this district, and also for repairing defective catch-basins and manholes.

A sewer in Dorchester avenue, between $B$ and $D$ streets, is desirable, but not imperative, at the present time, and the D-street sewer, between Dorchester arenue and Eighth street, should be built, as it is settled so much as to form a poor outlet for the lateral sewers commected with it.

## Work done during 1895.

The Dorchester-avenue sewer, between Fort Point channel and Broadway, has been rebnilt in a substantial manner.

Two thousand and ninety-seven $(2,097)$ linear feet of sewers were built by the city by day labor.

## Dorchester.

The sewer outlet and overflow for the Dorchester intercepting sewer, at the corner of Freeport and Shamrock streets, has been
obstructed by filling in of the flats during the past year; a large wooden outlet sewer should be built at this point as soon as practicable and carried out upon the flats as far as the wharves now extend. Any serious obstruction of this outlet will result in flooding of cellars all along the line of the intercepter.

The Dorchester intercepter should be provided with a capacious overflow outlet at or near Crescent avenne. This sewer is controlled by a single regulator, situated at its junction with the main at Mount Vernon street; when the regulator shuts during storms there is no relief for the sewer nearer than Glover's Corner, about one mile away. All the sewers which connect with it between these points are consequently backed up at such times, and remain so until the regulator opens again the connection with the main intercepter. The building of this overflow sewer, which should properly have been built in connection with the building of the regulator, has now become a necessity, and should not be longer delayerl. Another locality which stands in pressing need of relief, and the condition of which has been discussed in numerous previous ammal reports, is the Gibson and Park streets district. So greatly are the sewers overcharged with water during storms that the manhole covers are thrown off, and the water spouts so high from them as to scour out the hard frozen macadam surface of the streets and make it necessary to fence off these places until the streets can be repaired; the sewers in these streets, together with Tenean brook, drain a very large territory, and their capacity, combined with that of the brook, is entirely inadequate to carry off the water of a storm. Tenean brook, between Park street, near Clayton street, and the Shawmut Branch of the Old Colony Railroad at Geneva avenue, inclusive, should be largely deepened and widened, and would then be an effective aid to the sewers. The temporary plan for sewering Lairiat arenue and vicinity has been adopted, the gravity main from Talbot avenue to Lyons street begun, and land purchased for a pumping-station, on the corner of Chapman avenue and Lyons street. The main sewer, extending southerly and easterly from Lauriat avenue, to receive the sewers of the Nelson and Corbet streets district, should be built this year, and also as many of the laterals in the streets of this district as possible.

This will provide for the house sewage of the district, but not for the storm-water, for, inasmuch as all the sewage must be pumped once at Lyons street and again at the pumping-station of the main intercepter at the Calf Pasture, no surface-water can be admitted into these sewers.

This region is now overflowed and the streets rendered impassable at nearly every storm, owing to the inadequate size and obstructed condition of the Canterbury branch of Stony brook. An extensive improvement of this branch of Stony brook will have to be undertaken by the city, and either the cost assessed upon the lands benefitted, as elsewhere discussed, or horne by the city in general, in the interest of the public health. This work cannot be much longer postponed as the region is being rapidly settled, on account of the proximity of the stations on the New York \& New England Rail-


DORCHESTER-BROOK SEWER, - SHOWING NECESSITY OF BEING REBUILT.
road. The improvement must be started at least as far down stream as the culvert on Walk Hill street, and extended to connect with the drainage ditch dug by the Park Department around Franklin field. Another region where a similiar improvement must be undertaken in the near future is that drained by the Mattapan brook; a main sewer will also have to be built in this valley, to connect with the Neponset Valley interceptor, when the latter sewer reaches this locality. The building of the Neponset Valley interceptor is being undertaken by the Metropolitan Sewerage Commission, and none too soon, as no sewers can be built in those portions of Dorchester and West Roxbury which slope towards the Neponset and Charles rivers, until the intercepting sewer is ready to carry away the sewage; the presence of sewage could not be tolerated in the mill ponds of the Neponset river.

The sewer system of Geneva avenue, Greenbriar street, Josephine street, all laid out under Chapter 323 of the Acts of 1891 as amended by Chapter 418 of the Acts of 1892 , have been completed, as have also those of Sections $5,6,8,10,11$, and 12 of the Blue Hill-avenue boulevard; Sections 1 and a part of 2 and 3 are under contract and in progress, and the same is the case with Lauriat a venue.

Four thousand one hundred and thirty-nine $(4,139)$ linear feet of sewers and surface drains have been built by the city by day labor and contract, including the boulevard systems, and eighteen thousand six hundred and fifty-two $(18,652)$ linear feet by private parties.

## Roxbury.

Dorchester-brook sewer, between Norfolk avenue and Clifton street, a stone arched channel with very slight covering, has collapsed, the arch having probably been lifted by internal pressure from the volume of water which it had to carry in storms, as it was much too small. It is about to be rebuilt of brick of much larger size, and at a greater depth. The new channel will be a continuation of the chamel built during the last few years from the South Bay up to the point in Norfolk avenue where the old sewer formerly crossed it. The location will be changed and will lie in the centre of a new street recently laid out by the Board of Street Commissioners, nearly parallel with Pontine street.

Numerous complaints of flooding have been made along the line of this sewer up as far as Quincy street; it is undontedly too small for the constantly increasing volume of water which it has to carry, and will have to be rebuilt before long up to this point.

Complaints of flooding are received at every storm from the residents of Orchard park and Yeoman street. Some good can be done by building a surface drain in Orchard park, but the sewers in Yeoman, Chadwick, and Hampden streets are all too small and will have to be rebuilt or their capacity supplemented by new sewers. Meanwhile the residents should protect themselves from flooding by putting back-water traps upon their connections with the sewers.

Guild row is another locality which frequently suffers from floods
due to the insufficient size of the sewers. The plan for extending the large Vernon-street sewer to this locality shonld be carried out.

The projected system of sewers in Columbus-avenue extension will aftord an outlet for a sewer to relieve Notre Dame street, which now suffers from the inadequacy of the sewer in this street and Bragdon street.

A system of pipe-sewers is necessary to take the drainage from the houses on hoth sides of the old channel of Stony brook between Huntington :irenue and the Roxbury Crossing. (See the Annual Report for 1892.)

Until these sewers are built, about 3,000 feet in all, Stony brook will continue to be somewhat polluted with sewage.
'The Harrison-avenne sewer, between Northampton and Eustis streets, is settled so much that it cannot be cleaned without pumping it out with a steam-pump. Although the rebuilding of this sewer will be rery expensive, it should not be put off any longer.

The following is a list of defective sewers requiring rebuilding :

> Davenport street, from Columbus avenue to Tremont street.
> Walpole street, from Columbus avenue to Tremont street.
> Burke street, from Columbus avenue to Tremont street.
> George street, from Clarence street to Dorchester brook.
> George street, from Gerard to Magazine street.
> Haskins street, from Vernon to Ruggles street.
> Chesterfield street.
> Orchard street, off Yeoman street.
> Winslow street, from Palmer to Eustis street.
> Chadwick street, from Ambrose to Yeoman street.
> Marshfield street, from Batehelder street to Norfolk avenue.
> Hunneman street, from Brown street to Harrison avenue.
> Harrison avenue, from Eustis to Northampton street.
> Newcomb street, from Reed street to Harrison avenue.
> Lenox street, from Sanford place to Harrison avenue.
> Haviland street, from Parker street to Massachusetts avenue.

Work done during 1895.
Main sewers have been built in Massachusetts avenue, Gerard street, and Boylston-street extension ; the latter a difficult and expensive sewer to build, the street consisting of a new gravel fill upon deep beds of mud and peat. The sewer system of the Hunt-ington-avenue boulevard is practically completed, with the exception of a few unimportant items, and also with the exception of the work of strengthening the arches of the old stone channel of Stony brook. The sewer system of Columbus-avenue boulevard is also practically completed from Northampton to Ruggles street, and is under contract up to the Roxbury Crossing.

The sewer system of the last section of the avenue, from a point between Dimock and Brighton streets to Franklin park, is also completed.

A section of the channel for Stony brook, recommended by the Commission of 1886 , has been built by the N.Y., N.H., \& H. R.R., in connection with the raising of the tracks of its Providence

Division from the bend of the brook at the railroad near Amory street to a point 400 feet south of Boylston street, in West Roxbury.

This channel is submerged nearly to the top of the arch, and will remain so until the new channel is built at the low grade, from the inlet chamber up to join it. A section of the West Roxbury low-level sewer, discussed in previous annual reports, was built in connection with, and supported on the haunch of, the Stony-brook channel, and paid for by the city, for the reason that it could be built cheaper at this time and in this manner than at any subsequent time.

Forty thousand seven hundred and sisty-two $(40,762)$ linear feet of sewers and surface drains were built by the city, by day labor and contract, iucluding the sewer systems of the boulevards mentioned, and four thousand one hundred and forty $(4,140)$ linear feet by private parties, including sewers and surface drains built by the N. Y., N. H., \& H. R.R. in connection with raising the tracks of the Providence Railroad.

## West Roxbury.

There is a large region in the southern and western quarters of Roslindale, part newly settled and part old, which is without sewers, although fairly populons. This region embraces, among the older streets, Hemlock, Bellevue avenue, etc., sonth-west of Roslindale village; also a number of new streets, which have been graded off of Bellevue and Belgrade avenues, such as Orange, Berry, Newburg, Aldrich, and Colburg streets. All of these could be drained directly, or with short outlets, into the West Roxbury trunk sewer. Another group, embracing South Fairview, South Walter, and Brookfield streets, etc., would need an outlet across the Dedham Branch Railroad, just west of Roslindale Station, into the Brandon and Corinth streets sewer. This outlet would eventually be continued across South street to accommodate Farquhar and Selwyn streets, and incleed all of that valley south-west of Hewlett street, the sewer in which has already been built to go into the existing sewer in Walter street.

Streets which have been laid out across the lowlands adjoining Stony brook, in Jamaica Plain, such as New Keyes and Williams streets, have needed sewerage for a long time, but could not be accommodated because the existing system of sewers is too high to be extended into them. If the West Roxbury low-level sewer should be completed as far as Boylston Station during this coming year, in connection with the building of the Columbus avenue boulevard, as now seems probable, it will then be within a reasonable distance of these streets, and it will then be possible to extend it to them and sewer them at moderate cost.

Those valleys which lie between the Stouy brook divide aud Charles river can be sewered as soon as the Neponset valley and Mother brook intercepting sewer is completed. As the work of building this sewer has been taken up by the Metropolitan Sewerage Commission, there seems to be a probability of being able to sewer these districts properly in the near future.

The streets in the vicinity of Florence, Sycamore, Ashland street, etc., have been in need of sewerage for a long time; a branch of the Roslindale main sewer will have to be extended to this neighborhood from the northerly of the two intersections of Washington and South streets.

## Work done during 1895.

Work is in progress upon a sewer, upon the separate principle, to extend from the Roslindale main sewer at Franklin place to the Insane Asylum on Walk Hill street. This sewer will afford housesewerage only for streets along its route, but cannot receive the flow from catch-basins.

Seventeen thousand three hundred and fifty-eight $(17,358)$ linear feet of sewers and surface-drains have been built by the city by day labor and contract, and six thousand seven hundred and seventeen $(6,717)$ linear feet by private parties, including sewers and surface-drains built by the N. Y., N. H., \& H. R.R., in connection with raising the tracks of the Providence Division.

## Main Drainage Works.

The amount oî sewage handled at the Pumping-station is increasing so rapidly from year to year that it is imperative that some action should be taken towards increasing the high-duty pumping capacity or keeping surface-water to a greater extent out of the sewers. It was necessary the past year to run the low-duty pumps one-quarter of the time, which increased the coal consumption to a much greater extent than would have been the case if high-duty pumps only could have been used.

So large an amonnt of surface-water now gets to the Pumpingstation that, withont the pumping capacity to handle it, it causes the regulators to be closed longer than they should be, discharging more throngh the overflows than is advisable, and keeping the common sewers backed up more than is desirable.

Another thing that is working to the detriment of the system is the continued postponement of building overflows for some of the intercepting sewers, that have been recommended for a long time, and are now an urgent necessity; also the failure to extend numerous overflows of the common sewers that are becoming obstrncted to an unsafe extent by the filling-in of the flats at their outlets.

These overflows are spoken of in detail elsewhere in the report under the districts in which they are. Mention was made in the last annual report of the inadequate accommodations of the force in charge of the main and intercepting sewers. Nothing has been done towards putting their quarters on Massachusetts avenue in shape. It should not be deferred longer.

The construction of the many connections with the Metropolitan system in East Boston and Charlestown will add greatly to the work of this force, which will have to be increased, and proper buildings should be constructed for their use without delay.

At the Pumping-station the conditions are about the same as at
the beginning of the year. The amount of sewage pumped has increased materially, but the much-nceded renewals and additions, spoken of so repeatedly in past reports, have been held in abeyance by the lack of funds. The force has been kept very busy on the regular work and the incidental repairs absolutely necessary to keep the pumps in operation.

Pump No. 4 was shut down while the boxes of the main and beam shafts were rebabbiter, necessitating jacking-up the engine, at a cost exceeding $\$ 2,000$. A few of the items most needing attention are :

New sleeves for plunger-rods, general repairs on air-pumps, and the substitution of rock-shafts for the present valve motion, all on pumps Nos. 1 and 2 ; extensive repairs on the pump-well gates, a duplicate main steam-pipe from the boiler-house, and two (2) new cages at the filth-hoist.

There has been more sludge removed from the deposit-sewer during the past year than ever before. Unusual quantities of soft slndge were deposited in the lower sections of the sewer during the hot months.

The following is some of the work accomplished by the outside force in addition to the regular work: The two scows were put on the blocks and thoroughly calked; the sea-wall at the west shaft was repointed over the whole face; the high board fence around the grounds was painted; and a new machine for moving the sludge in the north deposit-sewer is being constructed to replace the old one that gave out.

The two sewer-boats, kept in the deposit-sewers, became useless and were replaced by new ones. The sludge-tank is getting beyond many more repairs, and it is only a question of a short time before it will have to be replaced by a new one. The Hooring of the wharf will have to be renewed this year, as it is hardly safe.

When this is done, it would be well to make the extension that has been recommended in previous reports. Tests of the tunnel, to determine its condition as regards deposits, give a better result than has been shown for several years. Waves in the tunnel have been noticed more frequently than usual ; and I would suggest the placing of antomatic gauges, at favorable points, to obtain data, from which the cause might be determined.

At Moon Island, considerable work has been done outside of the regular routine work. The walls in two divisions of the reservoir were repointer, as also was considerable brick masonry on the buildings and ventilators of the discharge-sewers. A large amount of gravel was hauled to different points on this property, to repair damage done to banks and roads by the storms, and for the necessary filling in the cove.

An old building was remodelled for the use of the night-men when off duty, to take the place of the inadequate quarters in the gate-house.

Two old buildings at Squantum, that were unsafe, were razed.
I give the following statement of what is needed at Moon Island and Squantum. It is imperative that some of this should
be done this year, but all of it is necessary: the building of a boat chamber on the outfall sewer; the laying of a 6 -inch cast-iron water-pipe along the outfall sewer from the reservoir to the connection chamber, with a hydrant at each manhole, for use in washing off the tie-rods and the upper sewer, to prevent odors; the complete renewal of upper staging in 6-foot gallery in each division of the reservoir, and also of all tie-rods and cross-pieces; the building of a new barn and shed or storehouse at Moon Island; the building of a new shed or storeroom (temporary) at east shaft; the laying of a new floor at the lower gate-house; the removal of iron gates in the outfall sewer, for repairing, and also for renewal of all anchor-bolts, which latter work cannot be done until the boat chamber mentioned is built; pointing and repairing of walls in two divisions of the reservoir, and on the buildings ; setting of ganges at east shaft and at connection chamber; building a stone wall and repairing roadway at Squantum ; painting both iron and wooden fences at reservoir, and improved arrangements for handling grease at east shaft.

Sewer assessments have been made by this division for the year ending January 31, 1896, in accordance with Chapter 402 of the Acts of 1892, and amendments thereto, to the amount of $\$ 202,110.06$, and the bills have been deposited for collection with the City Collector.

Bills for sewer assessments, amounting to $\$ 3,557.98$, have also been deposited for collection, representing those estates assessed under Chapter 456 of the Acts of 1889 , and amendments thereto, which have made connection with the public sewers during the year; making the total amount of assessments deposited for collection \$205,668.04.

There remain on the books of this division, at 5 per cent. interest, $\$ 32,864.35$, representing the assessments under the Acts of 1889, and amendments thereto, for these estates which have not been connected with the sewers for which they were assessed, and bills for which will be deposited for collection as the connections are made. This sum represents 24.8 per cent. of the total assessments made under those Acts.

Entrance fees to the amount of $\$ 4,474.07$ have been collected from estates upon which no sewer assessment was ever paid, in accordance with Chapter 36, Section 10, of Revised Ordinances. Permits have been issued to licensed drain-layers to make 3.071 connections with the public sewers, and the work dove under these permits has been inspected and a record of same made on the plans of this division.

The following tables and statements will show the amount of money expended and work done by this division during the year:
Financial Statement,

| Appropriations. | Balance on hand Feb. 1, 1895. | Appropriations added during the year. | Total Credits. | Expenditures during the year. | Balances on hand Jan. 31, 1896. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Street Department, Sewer Division |  | ${ }^{1} \$ 280,59607$ | \$280,596 07 | \$280,596 07 |  |
| Sewers, Soutl Boston. | \$1,266 25 |  | 1,266 25 | 38874 | \$877 51 |
| Sewer outlet (low level), West Roxbury 1)istrict, |  | 21,000 00 | 21,000 00 | 13,175 36 | $7,82 \pm 64$ |
| Forest arenue section, temporary sewer outlet, etc. |  | 19,400 00 | 19,400 00 | 2,283 35 | 17,116 65 |
| Laying Out and Construction of Highways (sewer construction) |  | 404,162 78 | 404,162 78 | 404,162 78 |  |
| Blue Hill and other avenues (sewer construction) |  | 151,570 44 | 151,570 44 | 151,570 44 |  |
|  | \$1,266 25 | \$876,729 29 | \$877,995 54 | 852,176 74 | \$25,818 80 |

 $\$ 33,048.96$; making a total of $\$ 885,225.70$.

19,403 93
$\$ 280,59607$

## OBJECTS OF EXPENDITURE.

## Improved Sewerage.

| Office salaries |  | . | - | - | . |  |  | \$500 00 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pumping-station, inside |  | - |  |  |  |  |  | 44,712 61 |
| Pumping-station, outside |  |  | - |  |  |  |  | 12,021 78 |
| Engines and boilers |  |  |  |  |  |  |  | 5,194 21 |
| Main and intercepting sewers |  |  |  | . |  |  |  | 10,630 53 |
| Moon Island |  | . | - | . |  |  |  | 10,030 36 |
| Towboat . | - | - | . | - | - | . |  | 4,379 15 |
|  |  |  |  |  |  |  |  | \$87,468 64 |

## Stony-Brook Improvement.

Maintenance . . . . . . . . . . . . .
Pumping-Station, Forest-avenue Section.
Land purchased . . . . . . . . . . . .

## Probate Building, 28 Court Square.

Remodelling . . . . . . . . . . $\$ 59824$

## Miscellaneous.

Office expenses, including salaries of Deputy Superintendent, clerks, and draughtsmen, stationery, drawing materials, etc.
$\$ 20,59893$
Engineering expenses, including salaries of engineers, instruments, etc.

46,438 71
Current expenses of yards and lockers .
Current expenses of stables, including cost of horses, vehicles, harnesses, etc. . . . . . . $\$ 27,84601\}$
Less amount earned by department teams . $\quad 7,65271\}$ 23,505 62

Repairing sewers
20,193 30
Cleaning and flushing sewers . . . . . . . 8,73159
Cleaning catch-basins . . . . . . . . 28,584 38
Repairing streets . . . . . . . . . 89247
Building, repairing, and cleaning culverts and surface drains, not included in the Stony-brook system
Examining condition of sewers and catch-basins . . . 3,08155
Work for departments and others . . . . . . 2,335 23
House connections . . . . . . . . . 3,405 46
Damages and claims . . . . . . . . 14,048 52
Holidays . . . . . . . . . . 7,270 00
Travelling and incidental expenses . . . . . 4,156 85
Repairs of department buildings, stables and yards . . 2,18367
Engines and boilers and repairs . . . . . . . 65032
Hardware, tools and blacksmithing, not included elsewhere . 7,60166
Rubber goods, not included elsewhere . . . . .
1,429 97
Stock and supplies, not included elsewhere
General repairs
1,282 56
Inspection of smoke
1,350 25
Balances on old contracts . . . . . . . 44110

Less over credit on water-rates, charged off to sewer construction
$\$ 5,503 \quad 20$
Less amount paid this year by Boston, Revere Beach, \& Lynn Railroad Company for work done in 1894

Street Departhent - Sewer Division.
City Proper.

| Locality. |  | Length in Feet. | Dimensions and Material. | Remarks. |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between |  |  |  |
| Butler sq. | Chatham st. and Butler row |  |  | Built in 1894. |
| Chambers st. | Brighton st. and Auburn st. | 87.82 | $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$., brick. | Rebuilding. |
| Chauncy st. | Summer st. and Avou pl... | 47.28 | 10-in., pipe. |  |
| Curve st. | Hudson st. and Tyler st. | 180.43 | 10-in., pipe. |  |
| Dover st. | South Bay and Harrison ave. | 272.00 | $3 \mathrm{ft} .4 \mathrm{in} . \times 4 \mathrm{ft}$.6 in ., brick. | $\left\{\begin{array}{c}\text { Rebuilding. Brick sewer built in } \\ \text { side of old wood sewer }\end{array}\right.$ |
| Essex pl. | Essex st. and Tufts st. | 200.00 | 12 -in., pipe. | Rebuilding. |
| Harvard st. | Hudson st. and Washington st. | 356.00 383.40 | $2 \mathrm{ft} .8 \mathrm{in} . \times 3 \mathrm{ft} 6 \mathrm{in} .,$. brick. $2 \mathrm{ft} .6 \mathrm{in}. \times 3 \mathrm{ft}$, brick. | Rebuilding. Rebuilding. |
|  |  | 383.40 695.14 | $2 \mathrm{ft} .6 \mathrm{in}. \times 3 \mathrm{ft}$. , brick. $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$, brick. | Rebuilding. Rebuilding. |
| Merrimac st. | Causeway st. and Chardon st. ... | 25.00 | 18-in., pipe. | Rebuilding. |
| Norman st. ..... | Merrimac st. and South Margin st. . | 9.13 | 18-in., pipe. | Rebuilding. |
| North Margin st. | Cooper st. and Thatcher st......... | 313.05 | $2 \mathrm{ft}$.6 in. $\times 3 \mathrm{ft}$, brick. | Rebuilding. |
| North Market st. | \{ Commereial st. | 43.67 | $8 \mathrm{ft} . \times 7 \mathrm{ft} .6$ in., brick. | \{Tank. Paid for by Public Build- |
| Noyes pl. | and Faneuil Hall sq............ | 146.33 170.48 | 12-in., pipe. $10-\mathrm{in}$. | ings Department. |
|  | (Massachusetts ave. and Hereford) |  |  |  |
| Passageway ... | $\left\{\begin{array}{l} \text { st., betiveen Commonwealth } \\ \text { ave. and Newbury st. } \end{array}\right.$ | 246.00 | 12-in., pipe. | Rebuilding. |
| Salem st | Prince st. and Noyes pl. ... | 68.25 | 18-in., pipe. | Rebuilding. |
| Tyler st | Oak st. and Curve st.............. | 112.00 | $2 \mathrm{ft} . \times 3 \mathrm{ft}$., brick. | Rebuilding, heavy gravel foundation. |

City Proper. - Continued.
Sewers built between Febrnary 1, 1895, and February 1, 1896, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892 , or Special Acts referring thereto.

| Locality. |  | Length in Feet. | Dimensions and Material. | Remarks |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between |  |  |  |
| Norway st. <br> St. Germain st. | Falmouth st. and Massachusetts ave Dalton st. and Massachusetts ave.. |  | 2 drop inlets. | Built in 1894. |
| $\left.\begin{array}{rr} \text { Huntington } & \text { ave., } \\ \text { Section } 1 . . . . . . . . \end{array}\right\}$ | Copley sq. and Brookline line..... | $\begin{array}{r} 186.53 \\ 590.44 \\ 1,066.47 \\ 298.30 \\ 22.00 \end{array}$ | 12-in., pipe, sewer. 12-in., pipe, C.B. drain. 10-in., pipe, C.B. drain. 8 -in., pipe, house drain. 6 -in., pipe, house drain. 29 catch-basins. 3 drop-inlets. | Contract. |
| A mount expended for above sewers . 19 new catch-basins built and 116 repaired$\begin{array}{r} \$ 47,47541 \\ 5,12855 \\ \hline \$ 52,60396 \end{array}$ |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Surface Drains built between February 1, 1895, and February 1, 1896, by the City, either by Contract or Day Labor. |  |  |  |  |
| Columbus ave.. | Berkeley st. and-Grenville place .. | 216.91 | 12-in., pipe. |  |

Sewers built between February 1, 1895, and February 1, 1896, by Private Parties.

Charlestown. - Concluded.

| Locality. |  | Length in Feet. | Dimensions and Material. | Remarks. |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between |  |  |  |
| Alford st. . | Mystic River and Main st | 525.20 515.95 | 15-in., pipe. <br> 12-in., pipe. |  |

\footnotetext{


| Locality. |  | Length in Feet. | Dimensions and Material. | Remarks. |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between |  |  |  |
| Argyle road. | Englewood ave.and Sutherland road, | 561.82 | 12-in., pipe. | Rock. |
| Bigelow st. . . . . . . . . | Oak sq. and Webster st. . . . . . . . . |  |  | Built in 1894. |
| Cambridge st........ | Webster st. and 205 ft . westerly... | 205.04 | 12-in., pipe. |  |
| $\left.\begin{array}{c} \text { Commonwealth ave. } \\ \text { outlet . . . . . . . } \end{array}\right\}$ | B. \& A. R.R. and Com'wealth ave., | 232.00 | 2 ft .6 in. $\times 3 \mathrm{ft}$.9 in., brick |  |
| $\left.\begin{array}{l} \text { Dustin and Cam- } \\ \text { bridge sts. ...... } \end{array}\right\}$ | Existing sewer and Warren st...... | 499.67 | 18-in., pipe. |  |
| Elnirast. | George st, and Murdock s | 500.00 | 12-in., pipe. | Contract. |


| Elmira st | Market st. and George st. | 608.00 | 12-in., pipe. | Contract. |
| :---: | :---: | :---: | :---: | :---: |
| Faneuil st. | Parsons st. and Bigelow st. |  |  | Built in 1894. |
| Faneuil st. | Bigelow st. and Champney st. | 224.30 | 12-in., pipe. |  |
| Fairbanks st. | Washington st. and Faneuil st. |  |  | Built in 1894. |
| Faneuil Valley Sewer Outlet in Parsons st. and private land. f | Metropolitan Main Sewer and Charles river ...................... | $\begin{array}{r}14700 \\ \hline\end{array}$ | $5 \mathrm{ft} . \times 5 \mathrm{ft}$., wood. | Tide-work. |
| Lake st. . . . . . . . . . . | Washington st. and Com'wealth ave. | $\left\{\begin{array}{r}1,008.90 \\ 317.68 \\ \cdots \ldots \ldots \\ 1,406.52 \\ 843.66 \\ 2450\end{array}\right.$ | $3 \mathrm{ft} . \times 3 \mathrm{ft} .2$ in., brick 24 -in. pipe, including 24 ft . of 24 -in., iron pipe. <br> 15-in., pipe. <br> 12-in., pipe. <br> 36-in., iron pipe. | 1,088.53 cubic yards, rock. |
| Holman st. | Coolidge st. and Hooker st. | 275.00 | 15 in., pipe. | Rebuilding. Very wet. |
| Nonantum st. | Washington st. to Newton line | 2,062.42 |  |  |
| North Beacon st. | Gordon st. and Everett st. | 437.02 | 12 in., pipe. | Rock. |
| Private land, Parkman, Brooks, and Bigelow sts. | Metropolitan main sewer and Webster st. | $\left\{\begin{array}{l}386.00 \\ \\ 299.31 \\ 203.00 \\ 216.00\end{array}\right.$ | $\left.\begin{array}{l}2 \text { ft. } 4 \text { in. } \times 3 \mathrm{ft} .6 \text { in., } \\ \quad \text { brick. } \\ 24 \text {-in., pipe. } \\ 20 \text {-in., pipe. } \\ 18 \text {-in., pipe. }\end{array}\right\}$ |  |
| Sutherland road | Argyle road and Kinross road | 514.56 | 10-in., pipe. | Rock. |
| Tremont st.. | Oak sq. and Newton line . | 858.10 650.58 | $\begin{aligned} & \text { 12-in., pipe. } \\ & 18 \text {-in., pipe. } \end{aligned}$ | Contract, |
| Washington st. | Oak sq. and Newton line .......... | $\left\{\begin{array}{l}399.90 \\ 680.47\end{array}\right.$ | (15-in., pipe. $\left.\begin{array}{l}12 \text {-in., pipe. }\end{array}\right\}$ |  |

Brighton. - Continued.
Sewers built between February 1, 1895, and February 1, 1896, by the City, under Chapter 32.3 of the Acts of 1891 , as amended oy Chapter 415 of the Acts of 1892, or Special Acts referring thereto.


Brighton. - Concluded.

| Locality. |  | Length in Feet. | Dimensions and Material. | Remarks, |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between |  |  |  |
| Faneuil st. . Tremont st. | Oak sq. and Champney st. Oak sq. and Newton line . | $\begin{aligned} & 101.67 \\ & 209.54 \\ & 426.04 \end{aligned}$ | $\begin{aligned} & 21 \text {-in., pipe, } \\ & 30 \text {-in., pipe, } \\ & 3 \mathrm{ft} . \times 2 \text { tt. } 9 \text { in., brick. } \end{aligned}$ |  |

Sewers built between February 1, 7895, and February 7, 1896, by Private Parties.


## East Boston.

Sewers built between February 1, 1895, and February 1, 1896, by the City, either by Contract or Day Labor.

| Chelsea st Marion st. | Bennington st. and Prescott st. .... Havre st. and Bennington st. ...... | 280.05 | 12-in., pipe. |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 199.08 | 15-in., pipe. |  |
|  |  | 1,259.04 | $4 \mathrm{ft} . \times 4 \mathrm{ft} .3 \mathrm{in}$., brick. | 621.21 ft . of $4 \mathrm{ft} . \times 4 \mathrm{ft} .3 \mathrm{in}$., brick |
| Orleans st........... | Porter st. and Maverick st......... | 33.86 4.44 | 4 ft . circ. brick. | sewer was rebuilding. One sump |
|  |  | 4.44 14.12 | 16-in., iron pipe. | manhole, one weir manhole, one |
|  |  | 14.12 33.00 | 12-in., iron pipe. 15-in., pipe. | regulator manhole, and one tidegate manhole. Tide-work. |
| Porter st. ........... | Orleans st. and Bremen st. ........ | 281.45 | $6 \mathrm{ft} . \times 6 \mathrm{ft} .4$ in., brick. | \} Rebuilding. |
| Private land and Leyden st. <br> Eagle-sq. Outlet |  |  |  |  |
|  | Breed st. and Chelsea ave. Old outlet and 250 feet northerly... | 237.00 | 30 in. $\times 36$ in., brick. |  |
|  |  |  |  | Built in 1894. |
| Saratoga st.......... | Bennington st. and Austin ave. .... | $\left\{\begin{array}{r}1,090.66 \\ 5.25\end{array}\right.$ | 12-in., pipe. <br> l2-in., iron pipe. | One sump manhole, one regulator chamber and manhole. |
| 12 new catch-basins built and 22 repaired .......................................................... 2,87950 <br> Amount expended for above sewers..................................................... $\$ 32,59533$ |  |  |  |  |
|  |  |  |  |  |  |
| \$35,474 83 |  |  |  |  |
| South Boston.Sewers built between February 1, 1895, and February 1, 1896, by the City, either by Contract or Day Labor. |  |  |  |  |
|  |  |  |  |  |  |
| Dorchester ave. ..... | Fort Point Channel and Broadway . | $\left\{\begin{array}{r} 456.02 \\ 468.93 \\ 46.47 \\ 427.02 \end{array}\right.$ | 5 ft circ. brick. $3 \mathrm{ft} . \times 3 \mathrm{ft} .2$ in., brick. 36 in. $\times 48$ in., brick. 10-in., pipe. | 1 \}Rebuilding. One tide-gate manhole. |
|  |  |  |  |  |
|  |  |  |  |  |

South Boston. - Concluded.

$\left\{\begin{array}{l}\text { South side. } \\ \text { North side. }\end{array}\right\}$ Much Rock.
Much rock.
Much rock.
Some rock.
Much rock.
Contract.
Sonie rock.
Built in 1894 .
Built in 1894.

| East Cotta | Dorchester ave. and Pond st. | 525.60 | 18-in., pipe. |
| :---: | :---: | :---: | :---: |
| l'ond st. | East Cottage st. and Parkway ...... | 481.00 | 15-in., pipe. |
|  |  | 65.00 | 15-in., pipe. |
| Parkway | Pond st. and Dorchester a | 696.23 | 12-in., pipe. |
|  |  | 80.00 | 15 -in., pipe. |
| Geneva ave. | Columbia st. and Wilder st. | 95.14 | 12-in., pipe. |
|  |  | 550.00 | 24 -in. $\times 36$ in., brick. |
| Glenway | White st. and | 200.00 | 15-in., pipe. |
|  |  | 200.00 | 12-in., pipe. |
| Glenway | Erie st. and Blue Hill ave. | 549.60 | 12-in., pipe. |
| Grampian way | N.E. junction of Savin Hill ave.. | 151.00 | 12-in., pipe. |
|  | abont 1,100 ft. westerly......... | 746.40 | 10-in., pipe. |
| King st... | Adams st. and Nepouset ave. ...... | 43.00 | 12-in., pipe. |
| \{ Lyons st.... |  | 975.00 |  |
| \{Franklin fiel | Lyons st. and Talbot ave......... \} | 975.00 | 30-in., pipe. |
| McClellan | Near Milton ave. ab't200 ft. westerly | 1,019.80 |  |
| Milton st. | Granite ave. and Granville st | 365.90 | 12-in., pipe. |
| Morton | Sanford st. and River st.... | 484.06 | 12-in., pipe. |
| Neponset ave | $\left\{\begin{array}{c}\text { Existing sewer-month west of } \\ \text { Mill st. and Tileston pl....... }\end{array}\right\}$ | 1,240.83 | 12-in., pipe. |
| Private land. | Stockton and Mora sts... |  |  |
| Ro | Adams st. and Draper st | 474.90 | 12-in., pipe. |
| se | hester | 494.55 | 4 ft ., circular brick |
|  |  | 39.75 | 12-in., pipe. |
| Templeton st | Dorchester ave. and Summit east'rly, | 509.18 | 12-in., pipe. |
| Tremlett st. <br> White st... | Hooper st. about 200 ft . easterly. | 206.15 410.60 | 12-in., pipe. |
| Washington | Ashmont and Dunbar sts.. |  | 12-in., pipe. |

Dorchester. - Continued.


Dorchester. - Continued.


Dorchester, -- Continued.
Sewers built between February 1, 1895, and February 1, 1896, by Private Parties.


Duke st.............. $\mid$ Ponemah st. and Ormond st. ....... $|$| 10-in., pipe. |
| ---: | ---: | ---: | ---: |

Duke st............................. Ponemah st. and Ormond st.
Ormond st.

Culverts built between February 1, 1895, and February 1, 1896, by Prirate Parties.
Dorchester. - Concluded


Roxbury. -. Continued.


| St. Alphonsus st. | Tremont st. and Calumet st . | $\left\{\begin{array}{l} 650.88 \\ 120.91 \\ 376.72 \\ 105.22 \end{array}\right.$ | 12-in., pipe, sewer. 10-in., pipe, C. B. drain. 8 -in., pipe, house-drain. 6 -in., pipe, house-drain. 7 catch-basins. | Contract. |
| :---: | :---: | :---: | :---: | :---: |
| Arundel st. | Beacon st. and Mountfort st. |  |  | Built in 1894 |
| Ivy st. | St. Mary's st. and Mountfort st. |  |  | Built in 1894 |
| Mountfort st | Ivy st. and Andubon road. |  |  | Built in 1894 |
| Parker st. | Huntington ave. and Westland ave, |  |  | Built in 1894 |

Sewers built between February 1, 1895, and February 1, 1896, by the City, under Chapter 323 of the Acts of 1891 , as amended by Chapter 418 of the Acts of 7892 , or Special Acts referring thereto.

Roxbury. - Continued.

Boulevards.

Roxbury. - Continued.
Surface Drains built between February 1, 1895, and February 1, 1896, by the City, either by Contract or Day Labor,

| Locality, |  | Length in feet. | Dimensions and Material. | Remarks. |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between |  |  |  |
| Bay State road. | Beacon st. and Ralergì st. . | 228.05 | 12-in., plpe. |  |
| Sewers built between February 1, 1895, and February 1, 1896, by Private Parties. |  |  |  |  |
| Bumstead lane...... | Tremont st. and ab't 165 ft , soutlı'ly, | 165.00 | 12-in., pipe. |  |
| Hartwell st......... | Georgia st. and Cheney st. ........ | 169.37 | 12-in., pipe. |  |
| Hutchings st........ | Humboldt ave. and Elm Hill ave... | 1,073.70 | 12-in., pipe. |  |
| Marbury terrace..... | $\left\{\begin{array}{c}\text { Stony Brook Valley sewer and } \\ \text { Anory st. ................ }\end{array}\right\}$ | 341.31 | 10 -in., pipe. |  |
| Reed st............ | Flagg st. and Northampton st. . ..... | 129.00 | 12-in., pipe. |  |
| Texas st........... | $\left\{\begin{array}{r} \text { Columbus ave. and end of old } \\ \text { sewer in Texas st. } \ldots \ldots \ldots . . \end{array}\right\}$ | 137.00 | 10-in., pipe. | Rebuilding. |
| $\left\{\begin{array}{c} \text { West Roxbury } \\ \text { low level sewer, } \end{array}\right\}$ | Texas st, and Roxbury Crossing.... | 256.70 | 2 ft .6 in. $\times 2 \mathrm{ft} .6$ in., brick. |  |
| Surface Drains built between February 1, 1885, and February 1, 1896, by Private Parties. |  |  |  |  |
| $\left\{\begin{array}{r} \text { Texas st. and pri- } \\ \text { vate land....... } \end{array}\right.$ | Columbus ave. and point in Boston Belting Co.'s property.......... | 245.00 | $4 \mathrm{ft}$. cir., brick. |  |

Surface Drains built between February 1, 1895, and February 1, 1896, and released to the City by the N. Y., N. II., \& 11. R.R. Co., in connection with raising tracks of the Providence Division.

West Roxbury. - Continued.

| Locality. |  | Length in feet. | Dimensions and Material. | Remarks. |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between |  |  |  |
| Lamartine place. | Lamartine st. and Boylston ave.... | 99.80 | 12-in., pipe. |  |
| Landseer st. .... | Bellevue st. and LaGrange st...... | 249.85 | 12-in., pipe. 15 -in, pipe. |  |
| Maple st. | Centre st. and Weld st. . . . . . . . . . . | 77.92 | 12-in., pipe. | \} Contract. Very much rock. |
| March ave. | Park st. and Bellevue st. | 497.45 | 24-in., pipe. | Very deep; all rock. |
| Oriole st. | Wren st. and Bellevue st. . . . . . . . | 40495 | 12-in., pipe. |  |
| Pomfret st... | Maple st. and Corey st. ........... | 703.90 | 15-in., pipe. | Very much rock. |
| Private land of Geo. <br> Goodnow .......... | $\left\{\begin{array}{l}\text { Washington st. and B. \& P. R.R... } \\ \text { B. and P. R.R. and South st..... }\end{array}\right.$ | $\begin{array}{r} 1,119.50 \\ 10.00 \end{array}$ | $2 \mathrm{ft} . \times 3 \mathrm{ft}$, brick. 24-in., pipe siphon. |  |
| Spalding st. . . . . . . . . | ¢B. and P. R.R. and South st..... | 10.00 | 24-in., pipe siphon. |  |
| South st. | Morton st. and Keyes st. . . . . . . . . | 624.65 752.25 | 15-in., pipe. 12-in., pipe. |  |
| Sylvia st | Washington st. and Forest Hils st.. | 235.46 | 10-in., pipe. |  |
| Weld st. | Maple st. and Ruskin st............. | 630.35 | 12-in., pipe. | \} Very deep; all rock. |
| Weld st. | Maple st. and Willow st. | 565.55 | 15-in., pipe. | Contract. Very deep; all rock. |
| Wheaton sq. | Lamartine st. and Boylston ave. ... | 80.67 | 18-in., pipe. |  |
| $\left.\begin{array}{c}\text { West Roxbury low } \\ \text { level sewer...... }\end{array}\right\}$ | About 500 ft . N. and 200 ft . S. of Boylston st. | 697.00 | $2 \mathrm{ft}. \times 3 \mathrm{ft}$.6 in., brick. | Built by N. Y., N. H., \& H. R.R. Co. and paid for by the city of Boston. |
| Willow st. | Weld st., and 750 ft . southerly.... | 761.06 | 12-in., pipe. | Contract. Considerable rock. |
| Wren st.. . . . . . . . . . | Existing sewer and Oriole st. . . . . . | 824.35 | 12-in., pipe. |  |


$\$ 79,425.57$

West Roxbury. - Concluded.
Sewers built between February 1, 1895, and February 1, 1896, by Private Parties.

|  | Locality. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Built in | Between | feet. | Material. | Remarks. |
| Argyle st. . | Cornwall st. 32.5 ft . northerly. | 325.40 | 10-in., pipe. |  |
| ¢Cable st. . | Minton st. and Merriam st. | 234.40 | 12-in., pipe. |  |
|  |  | 410.80 | 12-in., pipe. |  |
| $\{$ Minton st. | Boylston ave. and Brookside ave. | 20.00 | $\left\{\begin{array}{c}12 \text {-in., spiral welded } \\ \text { steel pipe. }\end{array}\right.$ |  |
| (Merriam st. . . . . . . | $\left\{\begin{array}{l}\text { Stony Brook channel and Brook- } \\ \text { side ave. }\end{array}\right\}$ | 240.05 | 12-in., pipe. |  |
| Castleton st. | Parkway and Catalpa st. | 443.00 377.00 | 12-in., pipe. 10-in., pipe. |  |
| Catalpa st. | Castleton st. and Perkins st. | 92.00 481.32 | 12-in., pipe. |  |
| Clements ave.... | Flora st. and Farrington st. | 481.32 125.15 | 10-in., pipe. 12-in., pipe. |  |
| Hampstead road and passageways..... | South st. and parkway.. | 416.00 | 8-in., pipe. |  |
| Loclistead st. | Centre st. and Jamaicaway .. | 94.58 | 12-in., pipe. |  |
| Sheldon st. ......... | Ashland st. and Prospect ave. | 198.30 | 12-in., pipe. |  |
| Surface Drains built between February 1, 1895, and February 1, 1896, by Private Parties. |  |  |  |  |
| Castleton st. | Parkway and Catalpa st. . . . . . . . . . | 450.00 | 18-in., pipe. |  |
|  |  | 57.00 | 10-in., pipe. |  |
| Minton st. | Stony Brook and Brookside ave. ... | 283.85 | 24-in., pipe. |  |
|  |  | 37.00 | 15.in., pipe. |  |

Surface Drains built between February 1, I895, and February 1, 1896, and released to the City by the N. Y., N. II., \& H. R. R. Co., in connection with raising tracks of the Providence Division.


## Work done for and paid by Paving Division, including the following Class of Work: Building and Repairing Culverts, Surface Drains, Catch-Basins, and Sewers.

| Street Improvements, Wards 1 and 2 |  |  |  | \$1,795 73 |
| :---: | :---: | :---: | :---: | :---: |
| Street Improvements, Ward 3 |  |  |  | 14433 |
| Street Improvements, Ward 4 |  |  |  | 2,342 67 |
| Street Improvemeuts, Ward 5 |  |  |  | 24028 |
| Street Improvements, Ward 6 |  |  |  | 6527 |
| Street Improvements, Wards 6, 7 , and 8 |  |  |  | 42789 |
| Street Improvements, Wards 7 and 8 |  |  |  | 7046 |
| Street Improvements, Wards 9 and 10 |  |  |  | 59172 |
| Stre et Improvements, Ward 11 |  |  |  | 1,073 18 |
| Street Improvemeuts, Wards 17 and 18 |  |  |  | 26098 |
| Street Improvements, Wards 19 and 22 |  |  |  | 1,716 05 |
| Street Improvements, Ward 20 |  |  |  | 66709 |
| Street Improvements, Ward 21 |  |  |  | 1,529 49 |
| Street Improvements, Ward 23 |  |  |  | 7,66340 |
| Street Improvements, Wards 23 and 25 |  |  |  | 2,337 02 |
| Street Improvements, Ward 24 |  |  |  | 7,718 03 |
| Street Improvements, Ward 2 j |  |  |  | 3,437 27 |
| Commonwealth Avenue Construction |  |  |  | 96810 |

Street Improvements, Wards 1 and $2 \ldots$. $\quad$ 1, 9553
Street Improvements, Ward 3 • • • • 14433
Street Improvements, Ward 4 . . . . 2,342 67
Street Improvements, Ward 5 . . . . 24028
Street Improvements, Ward 6 . . . . 6527
Street Improvements, Wards 6, 7, and 8 . . . 42789
Street Improvements, Wards 7 and 8 . . . 7046
street Improvements, Wards 9 and 10 . . . 59172
Sireet Improvements, Ward 11 . . . . 1,073 18
Street Improvemeuts, Wards 17 and 18 . . . 26098
Street Improvements, W ards 19 and 22 . . . 1,716 05
Street Improvements, Ward 20 . . . . 66709
Street Improvements, W ard 21 . . . . 1,529 49
Street Improvements, Ward 23 . . . . 7,663 40
Street Improvements, Wards 23 and 25 . . . 2,337 02
Street Improvements, Ward 24 . . . . 7,718 03
Commonwealth Avenue Construction . . . 96810
$\$ 33.048 \quad 96$

## RECAPITULATION.

Sewers.


## Catch-Basins

City Proper . . . . . \$5̃,128 55
Charlestown . . . . . 3,717 97
Brighton . . . . . . 4,645 44
East Boston . . . . . 2,879 50
South Boston . . . . . 3,387 51
Dorchester . . . . . 2,451 62
Roxbury . . . . . . 6,110 31
West Roxbury . . . . . 2,656 70

30,977 60
Improved Sewerage Maintenance . . . . 87,468 64
Stouy Brook Improvement Maintenance . . . 12,47802
Pumping Station, Forest Avenue Section . . . 1,440 00
Probate Building, Remodelling . . . . 59824
Miscellaneous . . . . . . . 222,958 54

## Summary of Sewer Construction for the Twelve Months ending January 31, 1896.

| District. | Built by the City, by contract or Day Labor. <br> Feet. | Built by Private Parties. <br> Feet. | Total length built during 12 months ending Jan. 31, 1896. <br> Feet. |
| :---: | :---: | :---: | :---: |
| City | 5,736.63 | 2,162.18 | 7,898.81 |
| Charlestown | 1,311.40 |  | 1,311.40 |
| East Boston. | 3,454.16 |  | 3,454.16 |
| Brighton. | 28,384.38 | 4,616.10 | 33,000.48 |
| South Boston | 2,096.87 |  | 2.096 .87 |
| Dorchester. | 40,095.50 | 18,651.79 | 58,747.29 |
| Roxbury. | 40,762 92 | 4,140.43 | 44,903.35 |
| West lioxbury | 17,358.23 | 6,716.85 | 24,075.08 |
| Total. | 139,200.09 | 36,287.35 | 175,487.44 |

245 catch-basins, built by contract.
76 drop inlets, built by contract.
222 catch-basins, built by day labor.
561 catch-basins, repaired by day labor.
27 drop inlets, built by day labor.
16 manholes built.
317 manholes repaired.
862,964 linear feet sewers flushed.
700 cubic yards material removed from sewers.
6,509 catch-basins cleaned.
$18,264.25$ cubic yards removed from catch-basins.
1,937.75 feet culverts built.
45 feet culverts repaired.
There are now 416.45 miles of sewers in charge of the Sewer Division.

The amount expended by this division during the twelve months ending January 31,1896 , including the amount spent under special appropriations, was $\$ 885,225.70$.

Schedule of Sewers built to date in City of Boston.

| Wards. | Feet. | Wards. | Feet. |  |
| :---: | :---: | :---: | :---: | :---: |
| 1. | 83,529 | 14. | 75,777 |  |
| 2. | 43,639 | 15. | 48,336 |  |
| 3. | 31,794 | 16. | 31,626 |  |
| 4. | 43,143 | 17. | 42,765 |  |
| 5 | 40,288 | 18. | 60,541 |  |
| 6. | 46,135 | 19. | 54,962 |  |
| 7. | 37,032 | 20. | 111,129 |  |
| 8. | 18,636 | 21. | 137,980 |  |
| 9. | 27,247 | 22. | 148,882 |  |
| 10. | 39,719 | 23. | 217,812 |  |
| 11. | 78,204 | 24. | 381,396 |  |
| 12. | 42,326 | 25. | 181,617 |  |
| Intercepting Sewers |  |  | 2,077,761 |  |
|  |  |  |  | 22.93 miles. |
| Total |  |  |  | 416.45 miles. |

Fall of Rain and Snow in inches at South Yard，Albany Street，in twelve months ending January 31， 1896.

| Day． |  | $\begin{aligned} & \dot{\mathrm{J}} \\ & \stackrel{y y y y y y y y y y y y y}{c} \end{aligned}$ | $\underset{\sim}{\underset{\sim}{2}}$ |  | $\stackrel{\text { ® }}{\stackrel{\text { E }}{\square}}$ | 方 | $\begin{aligned} & \dot{\sim} \\ & \stackrel{0}{0} \\ & \underset{\sim}{3} \end{aligned}$ |  | $\begin{aligned} & \dot{0} \\ & \stackrel{0}{0} \\ & \stackrel{0}{0} \\ & 0 \end{aligned}$ | $\begin{aligned} & \dot{0} \\ & \text { 菏 } \\ & 0 \\ & 0 \end{aligned}$ | ¢ E U ¢ | 突 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1．．．． |  |  |  |  | ． 04 |  |  |  |  |  |  |  |
| 2．．．． |  | Snow \＆ Rain ． 68 |  |  |  | ． 31 |  |  |  |  | ． 11 |  |
| 3．．． |  |  | ． 57 |  |  |  |  |  |  | ． 60 |  | ． 05 |
| 4．．．． | Snow .09 | ． 08 |  |  | ． 07 |  |  |  |  |  |  |  |
| $5 .$. |  |  |  |  |  |  |  |  |  |  |  |  |
| 6．．． |  | Snow .07 |  |  | ． 18 | ． 21 | $\ldots$ | $\ldots$ | ． 17 | ．．． | Snow .41 |  |
| 7．．． | Shower |  |  |  |  | ．$\cdot$ ． | 1.02 | ．．． |  | ．．$\cdot$ |  | Snow <br> 12 |
| 8．．．． | Snow .30 | ． 72 |  |  |  |  |  |  |  |  |  |  |
| 9．．．． |  |  | ． 76 |  |  | ． 78 |  |  |  |  |  |  |
| 10．．．． |  |  | ． 24 |  |  |  |  | ． 40 |  | ． 82 |  | ． 38 |
| 11．．．． |  |  |  |  |  |  |  |  |  |  |  |  |
| 12．．． |  |  |  |  |  |  |  | ． 51 |  |  |  | Light Snow |
| 13．．．． |  |  |  | 1.06 |  |  | ． 43 |  |  |  |  |  |
| 14．．．． |  | ． 85 | 1.87 |  |  | ． 56 |  |  | 6.02 |  |  |  |
| 15．．．． |  |  |  |  |  | ．．． |  |  |  | ． 76 |  |  |
| 16．．．． | ．．．．．．． | Snow .15 | ． 81 |  |  |  |  |  |  |  |  |  |
| 17．．．． |  |  |  |  |  | ． 68 |  |  |  |  |  |  |
| 18．．．． |  |  |  | ． 80 |  | － | 1.02 |  |  | ． 80 |  |  |
| 19．．．． |  |  |  |  |  |  |  | ． 02 |  |  |  |  |
| 20．．．． |  |  |  |  |  |  |  |  | － |  |  | Light Snow |
| 21．．． | Snow |  |  |  |  |  |  |  |  |  |  |  |
|  | Squall |  |  | ． 03 | ．．． |  | ．．． | ．．． | ．．． | 1.02 |  |  |
| 22．．．． | Snow Squall |  | ． 20 |  | ． 10 | ． 23 |  |  |  |  | ． 14 |  |
| 23．．．． |  |  |  |  |  |  |  |  |  |  |  |  |
| 24．．．． |  |  |  |  |  |  |  |  |  |  |  |  |
| 25．． |  |  |  |  |  |  |  |  |  |  |  | 1.17 |
| 26．．．． |  |  |  |  |  | ．．． | ．．． |  |  |  | ． 28 | Light |
| 27．．．． |  |  | ． 12 | ． 36 | 1.15 |  |  | ． 04 |  |  |  | Snow |
| 2\％．．．． |  |  | ． 12 |  |  |  | $\ldots$ | ． 04 |  | .96 |  | Snow |
| 28．．．． |  | Snow .22 |  |  |  | ． 68 |  |  | ． 11 |  |  |  |
| 29．．．． |  |  |  |  |  |  | ． 08 |  |  |  |  |  |
| $30 .$. |  | Snow |  |  |  |  |  |  |  |  |  |  |
|  |  | ． 17 | ． 20 |  | ． 11 |  |  |  |  |  | ． 07 |  |
| 31．．． |  |  |  |  |  |  | ． 61 |  | 2.06 |  | ． 51 |  |
| Totals | ． 50 | 2.94 | ＇4．77 | 2.77 | 1.65 | 3.45 | 3.16 | ． 97 | 8.36 | 4.96 | 1.52 | 1.72 |
|  |  |  |  |  |  |  |  |  |  |  | 1.52 |  |

Note．－Total for twelve months， 36.77 inches．
Sewer Department - Pumping-Station.
Record of Pumping done from February 1, 1895, to January 31, 1896.

|  | Engine 1. |  | Engine 2. |  | Engine 3. |  | Engine 4. |  |  |  |  |  |  |  |  | 或 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 1885 . \\ \text { February } \end{gathered}$ | $\begin{array}{r} H . M . \\ 3230 \end{array}$ | 42,915,198 | $\begin{gathered} H . M . \\ 11520 \end{gathered}$ | 156,872,091 | $\begin{gathered} H . M F . \\ 65430 \end{gathered}$ | 938,990,124 |  | 930,643,240 | 2,069,420,653 | 73,907,880 | 32,510 | 7.7 | 2,273 | 35.06 |  | 0.88 |
| March | 16735 | 231,652,150 | 8130 | 110,912,0 | 738 | 1,068,237,063 | 72835 | 1,050,722,836 | 2,461,524,097 | 79,404,003 | 36,387 | 8.1 | 2,182 | 35.26 | 64,394,981 | 2.54 |
| April | 18145 | 245,001,44 | 15533 | 214,475,087 | 71435 | 1,040,107,145 | 70745 | 1,024,657,450 | 2,524,241,125 | 84,141,371 | 39,760 | 7.7 | 2,116 | 34.95 | 61,899,046 | 4.19 |
| May | 9540 | 130,328,044 | 16950 | 149,565,231 | 70631 | 993,146,920 | 69203 | 966,507,214 | 2,239,547,409 | 72,243,464 | 33,574 | 6.9 | 2,152 | 35.44 | 63,820,875 | 3.15 |
| June | 940 | 13,327,582 | 1610 | 22,359,940 | 66635 | 889,643,882 | 67811 | - 880,461,472 | 1,805,792,876 | 60,193,096 | 25,557 | 8.3 | 2,355 | 35.61 | 70,191,149 | 1.64 |
| July . | 37735 | 500,942,108 | 55504 | 753,737,026 | 72810 | 1,026,492,592 | 340 | 4,413,718 | 2,285,585,444 | 73,728,563 | 42,407 | 8.2 | 1,739 | 34.91 | 20,795,079 | 3.01 |
| August | 33414 | 430,0 | 22305 | 299,346,304 | 67514 | 944,376,672 | 31224 | 416,210,631 | 2,090,006,440 | 67,419,562 | 33,619 | 11.2 | 2,005 | 35.05 | 58,825,107 | 4.51 |
| September | 1019 | 14,026,211 | 25 | 28,16 | 8357 | 781,648,998 | 68610 | 912,003,821 | 1,735,248,958 | 57,841,632 | 21,827 | 11.5 | 2,650 | 35.41 | 78,531,878 | 1.54 |
| October | 29813 | 411 |  | 52,052,28 | 45 | 644,593,768 | 72810 | 970,659,727 | 2,078,364,939 | 67,044,030 | 26,587 | 9.5 | 2,522 | 35.04 | 73,948,342 | 8.41 |
| November | 38248 | 538,134,172 | 25825 | 328,940,305 | 71559 | 1,032,279,324 | 71330 | 998,638,951 | 2,897,992,752 | 96,599,758 | 39,046 | 8.2 | 2,474 | 35.18 | 72,839,824 | 6.83 |
| D | 22828 | 311,175,730 | 22048 | 282 | 74135 | 1,069,528,026 | 73305 | 1,02 | 2,688,157,092 | 86,714,745 | 31,974 | 10.6 | 2,712 | 35.00 | 79,439,699 | 2.35 |
| January . | 25414 | 361,780,94 | 25255 | 325,153,407 |  | 1,052;834,256 |  | 996,430,418 | 2,736,199,029 | 88,264,485 | 35,361 | 9.8 | 2,496 | 35.06 | 73,239,763 | 2.08 |
|  | 2,373 01 | 3,230,415,578 | 2,050 26 | 2,723,977,677 | 8,129 09 | 11,481,278,770 | 7,358 18 | 10,176,408,784 | 27,612,080,809 | 75,625,215 | 33,217 | 8.97 | 2,306 | 35.16 | 67,884,321 | 11.13 |

The following table shows the amounts of sludge received in, and removed from, deposit sewers each month from February 1, 1895, to January 31, 1896 :


Property in Charge of the Sewer Division.
Sewer yard, with buildings, at 678 Albany street, South End.
Sewer yard, with building, on North Grove street, West End.
Sewer yard, on Gibson street, Dorchester, with buildings. This is Gibson school-fund land. The buildings were erected by the Sewer Department.

Small lot of land on Stony brook, corner of Centre street, Roxbury.

Gatehouse on Stony brook, Pynchon street, Roxbury, built in 1889.

Sewer yard, with buildings, on Rutherford avenue, Charlestown.
Sewer yard, with buildings, corner Paris and Marion streets, East Boston.

Sewer yard, with buildings, on East Chester park, near Albany street, South End.

Sewer yard, with buildings, on Western avenue, Brighton.
Sewer yard, with buildings, ou Revere street, West End.
Sewer yard, with buildings, H and Ninth streets, South Boston.
Sewer yard, with buildings, Childs and South streets, West Roxbury.

Summary of Sewer Construction for Five Years previous to February 1, 1896.

|  | 1891. | 1892. | 1893. | 1894. | 1895. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Feet. | Feet. | Feet. | Feet. | Feet. |
| Built by City, by |  |  |  |  |  |
| labor........... | 59,250.18 | 71,318.46 | 66,400.85 | 90,802.77 | 139,200.09 |
| Built by private parties. | 20,714.24 | 22,566.73 | 22,837.09 | 24,877.05 | 36,287.35 |
| Total number of feet built. . . . . . | 79,964.42 | 93,885. 19 | 89,237.94 | 115,679.82 | 175,487.44 |

Details of Cost and Construction
are given of the following sewers which have been constructed during the year at a cost exceeding two thousand dollars $(\$ 2,000)$ each :

## Adams Street.

Labor . . . . . . . . . $\$ 2,65532$
Bricks, 15,000 . . . . . . . 12750
Cement, 30 bbls. . . . . . . . 3600
Sand, 10 double loads . . . . . . 1650
Gravel, 10 double loads . . . . . . . 1400
Teaming . . . . . . . . 6150
Lnmber, 7,265 feet . . . . . . 12517
Pipe . . . . . . . . . 3238
Blacksmithing . . . . . . . 1196
$\$ 3,08033$
Size and Length of Sewer.
480 feet 2 ft. 6 in. $\times 3$ ft., brick.

## Angell Street.

Labor . . . . . . . . . \$1,766 37
Cement, $4 \frac{1}{2}$ bbls. . . . . . . . 530
Sand, 1 single load . . . . . . 50
Manhole frames and covers (1) . . . . 675
Powder, fuse, and caps . . . . . . 172
Teaming . . . . . . . . 10450
Lumber, 3,280 feet . . . . . . 5248
Pipe . . . . . . . . . 34295
Fuel and oil . . . . . . . . 1171
Miscellaneous supplies . . . . . . 1 さ̌ 33

Size and Length of Sewer.
706 feet, 12 -inch pipe.

## Bay State Road.



## Bigelow Street Outlet.



Size and Length of Sewer.
386 feet 2 ft .4 in. $\times 3 \mathrm{ft} .6$ in., brick. 299.31 feet 24 -in., pipe.

203 feet 20 -in., pipe.
216 feet 18 -in., pipe.

## Blue Hill Avenne, Sect. 1.

D. E. Lynch, contractor . . . . . . \$1,255 26

Labor . . . . . . . . . 43863
Cement, 20 bbls. . . . . . . . 2400
Traps and hooks, 6 . . . . . . 3810
Carried forward,


Size and Length of Sewer.
895.15 feet 12 in., pipe.

347 feet 6 in., pipe house-drain. 393 feet 12., pipe catch-basin drain. 152.23 feet 10 in., pipe catch-basin drain. 8 catch-basins,

## Blue Hill Avenue, Sect. 6.

James Dolan, contractor . . . . . $\$ 6,13386$
Labor ..... 40975
Cement, 260 bbls. ..... 29975
Iron castings ..... 12396
Manhole steps ..... $25 \quad 20$
Teaming ..... 500
Pipe ..... 66468
Granite ..... 1983
Miscellaneous supplies ..... 5652

Size and Length of Sewer.

$$
152.15 \text { feet } 15 \text { in., pipe. }
$$

$1,179.96$ feet 12 in., pipe.
124.20 feet 15 in., pipe catch-basin drain. 252.05 feet 12 in., pipe catch-basin drain. 126 feet 10 in., pipe catch-basin drain. 55.85 feet 5 ft . $\times 4 \mathrm{ft} 5 \mathrm{in}$., stone culvert. 13.60 feet $5 \mathrm{ft} . \times 4 \mathrm{ft} .8 \mathrm{in}$., stone culvert. 4 catch-basins.
3 drop inlets.

## Blue Hill Avenue, Sect. S.

D. O'Connell, contractor . . . . . $\$ 3,32922$
Labor . . . . . . . . 28500

Cement, 330 bbls. . . . . . . . 39600
Iron castings . . . . . . . . 29317
Teaming
300
Pipe 89295
Miscellaneous supplies . . . . . . 4013
$\$ 5,23947$
Size and Length of Sewer.
1.166.50 feet 12 in., pipe.

29 . 22 feet 15 in., pipe catch-basiu drain. 760.93 feet 12 in., pipe catch-basin drain. 218 feet 10 in., pipe eatch-basin drain. 145.80 feet 3 ft . $\times 3 \mathrm{ft} .4 \mathrm{in}$., stone culvert. 10 catch-basins.
10 drop inlets.

## Blue Hill Avenue, Sect. 10.

## D. O'Connell, contractor . . . . . $\$ 2,54755$

Labor . . . . . . . . . 72482
Cement, 230 bbls. . . . . . . 29900
Iron castings . . . . . . . . 17103
Teaming . . . . . . . . 750
Pipe . . . . . . . . . 1,41146
Miscellanous supplies
6775
$\$ 5,229 \quad 11$
Size and Length of Sewer.
$1,827.50$ feet 12 in., pipe.
545.68 feet 18 in., pipe catch-basin drain.
199.10 feet 15 in., pipe catch-basin drain.
196.88 feet 12 in., pipe catch-basin drain. 115.12 feet 10 in ., pipe catch-basin drain. 4 catch-basins.

## Blue Hill Avenue, Sect. 11.



Size and Length of Sewer. 102.85 feet 15 in., pipe. 1,769.38 feet 12 in., pipe. 332.32 feet 15 in., pipe catch-basin drain. 585.02 feet 12 in., pipe catch-basin drain. 214.14 feet 10 in., pipe catcl-basin drain. 8 catch-basins. 8 drop inlets.

## Blue Hill Avenue, Sect. 12.

D. E. Lyuch, contractor . . . . . \$3,230 75
Labor . . . . . . . . . 25774
Cement, 170 bbls. . . . . . . . 20400
Manhole frames and covers, 6 ..... 3848
Traps and hooks, 2 ..... 1270
Iron castings ..... 8229
Teaming ..... 300
Pipe ..... 3,21670
Granite ..... 1322
Miscellaneous ..... 12738

Size and Length of S'ewer.
$1,6553.45$ feet 12 in., pipe.
445.54 feet 30 in., pipe catch-basin drain.
627.67 feet 20 in., pipe catch-basin drain.
67.41 feet 18 in., pipe catch-basin drain.
71.97 feet 15 in., pipe catch-basin drain.
109.39 feet 10 in., pipe catch-basin drain.

7 catch-basius.
1 drop inlet.

## Boylston Street.

H. P. Nawn, contractor . . . . . . \$12,070 99

Labor . . . . . . . . . 1,207 75
Bricks, 168,000 . . . . . . . 1,428 00
Carried forward,

89.60 feet 12 in., pipe.
518.69 feet 10 in., pipe catch-basin drain. 1,889 feet 8 in., pipe house drain. 13 catch-basins.
12 drop inlets.
Brighton Avenue, No. 2.
D. O'Connell . . . . . . . . $\$ 1,91090$

Labor 10976
Cement, 82 bbls. . . . . . . . 9430
Sand, 2 double loads
360
Manhole frames and covers, 23 . . . . 17138
Catch-basin trajs, 13 . . . . . . 7800
Catch-basin hooks, 13 . . . . . . 455
Manhole steps, 187 . . . . . . 5572
Gutter-mouths and edgestones . . . . 7167
Teaming . . . . . . . . 4500
Pipe • . . . . . . . . 45556
Miscellaneous . . . . . . $30 \quad 55$
$\$ 3,03099$

Size and Length of Sewer.
237.70 feet 12 in., pipe.
426.18 feet 10 in., pipe catch-basin drain. $1,261.06$ feet 8 in ., pipe house drain. 13 catch-basins. 7 drop inlets.

## Columbus Avenue, Sect. 1.



Size and Length of Sewer.
$1,024.25$ feet $3 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft} .8 \frac{1}{2}$ in., brick. $1,740.97$ feet 18 in., pipe.
259.42 feet 18 in., pipe catch-basin drain.
839.38 feet 15 in., pipe catch-basin drain.
200.50 feet 12 in., pipe catch-basin drain.
196.99 feet 10 in., pipe catch-basin drain.

9 catch-basins.
1 drop-inlet.
1 gate-manhole.

## Columbus Avenue, Sect. ${ }^{2}$.

Quimby \& Ferguson, contractors . . . . $\$ 3,51604$
Labor . . . . . . . . . 61630

Bricks, 5,000 . . . . . . . . 4250
Iron castings . . . . . . . . 22561
Teaming . . . . . . . . 1125
Granite . . . . . . . . . 12471
Flagstones . . . . . . . . 1600
Fuel . . . . . . . . . 91
Miscellaneous supplies . . . . . . 5575
$\$ 4,609 \quad 07$
Size and Length of Sewer.
$1,175.32$ feet 3 ft .6 in $\times 3 \mathrm{ft}$. $8 \frac{1}{2}$ in., brick. 14 feet $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$., brick. $1,254.50$ feet 18 in., pipe.
886.64 feet 24 in., pipe catch-basin drain. 270.89 feet 18 in., pipe catch-basin drain. 110.45 feet 15 in., pipe catch-basin drain.

## Columbus Avenue, Sect. 9.



Size and Length of Sewer.
249.84 feet 15 in., pipe sewer.

1,493.39 feet 12 in., pipe.
262.18 feet 10 in ., pipe catch-basin drain.

1,177.69 feet 8 in., pipe house drain.
54.55 feet 6 in., pipe house drain.

18 catch-basins.

## Commonwealth Avenue, Sect. 1.

J. Dolan, contractor . . . . . . $\$ 3,85072$
Labor ..... 42700
Cement ..... 6240
Iron castings ..... 4307
Teaming ..... 1900
Pipe ..... 58620
Granite ..... 3125
Flagging ..... 200
Fuel ..... 160
Miscellaneous ..... 7375

Size and Length of Sewer.
500. feet 10 in., pipe.
307.58 feet 10 in., pipe catch-basin drain. 450.75 feet 15 in., pipe catch-basin drain. 257.07 feet 18 in., pipe catch-basin drain.

5 catch-basins.
4 drop inlets.

## Commonwealth Avenue, North Side, Sect. 2.

D. O'Connell, contractor ..... \$2,193 26
Labor ..... 5362
Cement, 28 bbls. ..... 3370
Iron castings ..... 330
Teaming ..... 7 ว 0
Granite ..... 625
Brought forward, ..... \$2,297 63
Fuel ..... 228
Miscellaneous ..... 5893
Pipe ..... 24452
$\$ 2,603 \quad 36$
Size and Length of Sewer.
1,200 feet 10 in., pipe.
18.87 feet 10 in., pipe catch-basin drain.
1 catch-basin
1 drop inlet.

## Commonwealth Avenue, South Side, Sect. 2.

D. O'Connell, contractor ..... \$1,487 70
Labor ..... 23250
Cement, 34 bbls. ..... 4080
Iron castings ..... 950
Teaming ..... 500
Pipe ..... 77329
Granite ..... 643
Flagging ..... 200
Miscellaneous supplies ..... 2363
$\$ 2,580$ ..... 85
Size and Length of Sewer. $1,045.14$ feet 10 in., pipe. 98 feet 10 in., pipe catch-basin drain. 565.13 feet 18 in., pipe catch-basin drain. 1 catch-basin. 1 drop inlet.

## Commonwealth Avenue, Sect. 4.

J. Dolan, contractor ..... $\$ 1,30957$
Labor ..... 16450
Cement, 93 bbls. ..... 11160
Iron castings ..... 11551
Teaming ..... 250
Pipe ..... 35887
Granite ..... 2565
Miscellaneous ..... 5150

\$2,139

Size and Length of Sewer.

## Commonwealth Avenue Outlet.



Size and Length of Sewer. 232 feet $2 \mathrm{ft} .6 \mathrm{in} . \times 3$ ft. 9 in., brick.
Dorchester Avenue, between King and Ashmont Streets.
Labor ..... \$6,023 81
Bricks, 82,200 ..... 69870
Cement, 217 bbls. ..... 26040
Sand, $51 \frac{1}{2}$, double loads ..... 8848
Gravel, 130 double loads ..... 18200
Manhole frame and cover 10 ..... 6531
Manhole steps, 40 ..... 1920
Powder, fuse, and caps ..... 10201
Teaming ..... 30700
Lumber, 9,659 feet ..... 15280
Pipe ..... 98877
Hardware, tools, and blacksmithing ..... 16393
Resurfacing street ..... 15295
Water ..... 20732
Miscellaneous supplies ..... 1960

## Size and Length of Sewer.

Dorchester Avenue, South Boston.

| Labor | - . . | . | . | . | \$6,862 43 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bricks, 206,510 | . ${ }^{\text {- }}$ |  |  | - | 1,755 42 |
| Cement, 608 bbls. | . - |  |  | . | 72908 |
| Sand, $435 \frac{1}{2}$ double load | . . |  |  | - | 69236 |
| Gravel, 951 double load |  |  |  |  | 1,471 55 |
| Blacksmithing, hardwar | and tools |  |  | - | 4207 |
| Iron castings . | . . |  |  | - | 21976 |
| Teaming | . . . | . | - | - | 1,232 00 |
| Lumber, 26,671 feet | . . . |  |  | - | 44264 |
| Pipe |  |  |  | - | 22660 |
| Carpentry | - . . | - | - | . | 37354 |
| Resurfacing street . | - . . |  |  | - | 1,445 37 |
| Granite curb | . . . | - |  | - | 5000 |
| Water . | . . . |  |  | . | 8959 |
| Miscellaneous supplies | - - . | - | - | - | 3825 |
|  |  |  |  |  | \$15,670 66 |

Size and Length of Sewer.
456.02 feet 5 ft ., circular, brick. 468.93 feet $3 \mathrm{ft} . \times 3 \mathrm{ft} .2$ in., brick. 46.47 feet $3 \mathrm{ft} . \times 4 \mathrm{ft}$., brick. 427.02 feet 10 in ., pipe.
1 tide-gate manhole.

## Dover street.



Size and Length of Sewer.
272 feet 3 ft .4 in. $\times 4 \mathrm{ft} .6$ in., brick.

## Dustin and Cambridge Streets.



Size and Length of Sewer. 499.67 feet 18 in., pipe.

## East Cottage Street.



Size and Length of Sewer.
525.60 feet 18 in., pipe. 626 feet 15 in., pipe. 1,376.23 feet 12 in., pipe.

## Elmira Street.

T. J. Young \& Co., contractor . . . . \$1.407 90

Labor . . . . . . . . . 22282
Cement, 16 bbls. . . . . . . . 2650
Manhole rims and covers, 3 . . . . . 2457
Manhole steps, 18 . . . . . . . 684
Miscellaneous supplies . . . . . . 50
Pipe . . . . . . . . . 52479
$\$ 2,21392$

Size and Length of Sewer. 1,108 feet 12 in., pipe.

## Fairbanks Street.



Size and Length of Sewer. 205.14 feet 12 in., pipe.

## Geneva Aveme.

| D. F. O'Connell, contr | ctor | . | - | . | - |  | \$62 | 960 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Labor | . | - | - |  |  |  |  | 985 |
| Cement, 50 bbls. | - | - | - | . | . |  |  | 000 |
| Iron castings | . | - | - | - |  |  |  | 747 |
| Teaming | - | . | - |  |  |  |  | 500 |
| Pipe | . | - |  |  | - |  |  | 058 |
| Gutter-mouths | - | . |  |  |  |  |  | 561 |
| Miscellaneous supplies | - |  | - |  | - |  |  | 260 |
|  |  |  |  |  |  |  | \$2,19 | 071 |

Size and Length of Sewer.
163.06 feet 15 in., pipe catch-basin drain. 875 feet 12 in., pipe catch-basin drain. 434.39 feet 10 in., pipe catch-basin drain. 918 feet 6 in., pipe house drain. 76.11 feet $4 \mathrm{ft} . \times 3 \mathrm{ft} .6$ in., brick culvert. 44.39 feet 30 in., pipe culvert.
53.60 feet $4 \mathrm{ft} . \times 3 \mathrm{ft}$.6 in ., stone culvert. 9 catch-basins. 2 drop inlets.

Gerard Street.
Labor . . . . . . . . . $\$ 14,66752$
Bricks, 212,500 . . . . . . . 1,806 25
Cement, 601 bbls. . . . . . . 69115
San̉d, 152 dbl. loads . . . . . . 26460
Manhole frames and covers, 4 . . . . 2673
Manhole steps, $\grave{8}$. . . . . . 1520
Teaming . . . . . . . . 80500
Lumber, 61,011 feet . . . . . . . 94421
Pipe . . . . . . . . . 4449
Hardware, tools, and blacksmithing . . . 12579
Fuel and oil . . . . . . . . 10178
Engine-hire . . . . . . . . 33000
Trench-machine hire . . . . . . 79000
Miscellaneous supplies . . . . . . 5915
Spruce piles, 88 . . . . . . . 14340
Carpentry . . . . . . . . 1290
$\$ 20,828 \quad 17$
Size and Length of Sewer.
$1,377.61$ feet $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$., brick. 226.39 feet 15 in., pipe.

Glenway Street, between Erie Street and White Street.

Brought forward, ..... \$4,708 36
Cement, 190 bbls ..... 22790
Sand, 45 double loads ..... 7425
Gravel, 22 double loads ..... 3080
Manhole frames and covers, 4 ..... 2673
Manhole steps, 22 ..... 880
Powder, fuse, caps ..... 11609
Teaming ..... 21550
Lumber, 2,104 feet ..... 3341
Pipe ..... 29077
Blacksmith and tools ..... 16841
W ater ..... 9536
Blasting logs ..... 2400

## Size and Length of Sewer.

550 feet $2 \mathrm{ft} . \times 3 \mathrm{ft}$., brick. 200 feet 15 in., pipe. 200 feet 12 in., pipe.

## Grampian Way.


Size and Length of Sewer.
151 feet 12 in.. pipe. 746.40 feet $10 \mathrm{in} .$, pipe.

## Harvard Avenue.

F. A. Snow, contractor ..... $\$ 2,73531$
Labor and inspection ..... 32627
Cement, 237 bbls. ..... 31410
Manhole frames and covers, 3 ..... 1924
Catch-basin, head, and gutter, 1 ..... 2500
Rd. iron cover, 1 ..... 108
D frames and grates, 2 ..... 1600
Brought forward, ..... $\$ 3,43700$
Traps and hooks, 2 ..... 1250
Gutter-mouths, 2 ..... 700
Teaming ..... 6050
Water ..... 6142
Advertising ..... 5200
Pipe ..... 86413
$\$ 4,494 \quad 55$
Size and Length of Sewer.
439.20 feet 18 in., pipe.175.07 feet 15 in., pipe.115 feet 20 in., bipe catch-basin drain.246.08 feet 18 in., pipe catch-basin drain.103 feet 10 in ., pipe catch-basin drain.466.26 feet 8 in., house drain.91.15 feet $5 \mathrm{ft} . \times 6 \mathrm{ft}$., concrete culvert.2 catch-basins.
1 drop inlet.
Harvard Street.
Labor ..... $\$ 55,39446$
Bricks, 102,300 ..... 86975
Cement, 336 bbls ..... 38640
Sand, $105 \frac{1}{3}$ donble loads ..... 18915
Gravel, $210 \frac{1}{2}$ double loads ..... 26701
Manhole frame and cover, 1 ..... 675
Manhole steps, 24 ..... 960
'Teaming ..... 1,307 00
Pipe ..... 12016
Lumber, 35, 717 feet ..... $546 \quad 64$
Trench-machine hire ..... 20800
Engine-hire ..... 25250
Hardware, blacksmithing, and tools ..... $93 \quad 20$
Carpentry ..... 31 02
Water ..... 7394
Paving ..... 26481
Fuel and oil ..... 5642
Miscellaneous supplies ..... 1233$\$ 10,08914$Size and Length of Sewer.356 feet 2 ft. 8 in. $\times .3$ ft. 6 in., brick.383.40 feet $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$., brick.
Heath Street.
Labor ..... $\$ 2,22135$
Bricks, 3,000 ..... $25 \quad 50$
Brought forward, ..... $\$ 2,24685$
Cement, 13 bbls. ..... 15 55
Sand, $2 \frac{1}{2}$ double loads ..... 475
Manhole frame and cover 1 ..... 675
Manhole steps, 4 ..... 160
Powder, fuse, and caps ..... 4347
Teaming ..... 15250
Pipe ..... 14648
Hardware, blacksmithing, and tools ..... 7172
Fuel and oil ..... $20 \quad 72$
Boiler-hire ..... 8600
Miscellaneous supplies ..... 4306
Size and Length of Sewer.
373.15 feet 12 in., pipe.

## Hewlett street.

Labor ..... \$3,463 88
Bricks, 15,600 ..... 15600
Cement, 61 bbls. ..... 7320
Sand, 8 double loads ..... 800
Manhole frames and covers, 9 ..... 6136
Manhole steps ..... 1900
Powder, fuse, and caps ..... 1280
Teaming ..... 27650
Lumber, 350 feet ..... 560
Pipe ..... 92506
Blacksmithing ..... 5246
Fuel and oil ..... 1888
Miscellaneous supplies ..... 235
\$5,075 09
Size and Length of Sewer.
395.10 feet 18 in., pipe.626.32 feet 15 in., pipe.677.82 feet 12 in., pipe.
Holworthy Street.
Labor . . . . . . . . $\$ 1,79653$Bricks, 2,0001700
Cement, 10 bbls. ..... 1200
Sand, 1 double load ..... 180
Gravel, 6 double loads ..... 960
Manhole frame and corer. 1 ..... 650
Manhole steps, 6 ..... 300
Brought forward, ..... \$1,846 43
Lamp-hole frame and cover, 1 ..... 469
Powder, fuse, and caps ..... 2998
Teaming ..... 19550
Lumber, 9,347 feet ..... 14441
Pipe ..... 13911
Blacksmithing, hardware, and tools ..... 3566
Fuel and oil ..... 623
Driving 50 piles ..... 12000
Water ..... 2613
Miscellaneous supplies ..... 947
$\$ 2,5576$ ..... 61
Size and Length of Sewer. 259.80 feet 12 in., pipe.
Humboldt Avenue and Townsend Street.

| Labor | . . | \$3,583 54 |
| :---: | :---: | :---: |
| Bricks, 5, 012 | . . | 4345 |
| Cement, 25 bhls. | . . | 2594 |
| Sand, 7 double loads | . . | 1385 |
| Mauhole frames and covers, 4 | . ${ }^{\text {. }}$ | 2619 |
| Manhole steps, 24 | . ${ }^{\text {- }}$ | 990 |
| Powder, fuse, and caps | . . | 11236 |
| Teaming | . . | 18125 |
| Pipe . | . . | 426 อั0 |
| Hardware, blacksmithing, and tools | . | 16626 |
| Fuel and oil . . . . | . . | 2608 |
| Miscellaneous supplies | . . | 7447 |
| Water | . . | 9166 |
|  |  | \$4,780 95 |Bricks, 5,0124345

Cement, 25 bbls.1335
Manhole frames and covers, 4990
Powder, fuse, and caps ..... 11230
Teaming426 วั0
Hardware, blacksmithing, and tools ..... 106
Fuel and oil7447
Water$\$ 4,78095$

Size and Length of Sewer. 456.10 feet 15 in., pipe.
Huntington Avenne, Sect. 1.
D. O'Connell, contractor ..... $\$ 2,83058$
Labor ..... 25661
Cement, 13 ā bbls. ..... 15 ล 25
Iron castings ..... 49151
Teaming ..... 2575
Pipe ..... 69921
Granite ..... 8970
Miscellaneous ..... 2850

## Size and Length of Sewer.

186.53 feet 12 in., pipe.
590.44 feet 12 in., pipe catch basin drain. 1066.47 feet $10 \mathrm{in} .$, pipe catch-basin drain.
298.30 feet 8 in., pipe house drain.

22 feet 6 in., pipe house drain.
29 catch-basins.
3 drop inlets.

## Huntington Avenue, Sect. 2.

H. P. Nawn, contractor . . . . . . $\$ 11,30700$

Labor . . . . . . . . . 1,595 82
Bricks, 259,500 . . . . . . . 2,20577
Cement, 1,260 bbls. . . . . . . 1,477 75
Iron castings . . .. . . . . . 49380
Teaming . . . . . . . . 1875
Pipe . . . . . . . . . 67477
Granite . . . . . . . . . 18063
Miscellaneous . . . . . . . 724 a
$\$ 18,02674$

Size and Length of Sewer.
$1,232.63$ feet $3 \mathrm{ft} . \times 4 \mathrm{ft} .$, brick.
178.11 feet $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$., brick.

13 feet 24 in., pipe.
9 feet 18 in., pipe.
93.60 feet 15 in., pipe.

79 feet 12 in., pipe.
36 feet 12 in., iron pipe.
14 feet 6 in., iron pipe.
32.50 feet 12 in., catch-basin drain.
524.30 feet $10 \mathrm{in} .$, catch-basin drain.

1,144 feet 8 in., house drain.
16 catch-basins.
1 drop inlet.

## Huntington Avenue, Sect. 3.

Collins \& Ham, contractors . . . . . \$5,695 38
Labor . . . . . . . . . 48246
Bricks, 81,250 . . . . . . . 69062
Cement, 280 bbls. . . . . . . . 33720
Iron castings . . . . . . . . 46220
Teaming . . . . . . . . 3050
Pipe . . . . . . . . . 1,15501
Edgestone . . . . . . . . 21200
Miscellaneous . . . . . . . 3548

Size and Length of Sewer.
209.10 feet 2 ft .6 in. $\times 3$ ft., brick.
193.50 feet 18 in., pipe.

252 feet 12 in., pipe.
811.10 feet 10 in., pipe catch-basin drain.

2,625 feet 8 in., pipe house drain.
25 catch-basins.

## Huntington Arenue, Sect. 4.

D. O'Connell, contractor . . . . . $\$ 3,27830$

Labor . . . . . . . . . 33565
Cement, 72 bbls. . . . . . . . 8640
Iron castings . . . . . . . . 15925
Teaming . . . . . . . . 1750
Pipe . . . . . . . . . 80909
Edgestone . . . . . . . . 10561
Miscellaneous . . . . . . . 2090
$\$ 4,81274$
Size and Length of Sewer.
714.60 feet 12 in., pipe.
315.86 feet 10 in., pipe catch-basin drain.
$1,706.90$ feet 8 in., pipe house drain.
198.56 feet 6 in., pipe house drain.

12 catch-basins.

## Huntington Avenue, Sect. o.

D. O'Connell, contractor . . . . . \$2,003 78

Labor . . . . . . . . . 24058
Bricks, 85,750 . . . . . . . 77175
Cement, 94 bbls. . . . . . . . 11319
Iron castings . . . . . . . . 21131
Teaming . . . . . . . . 500
Pipe . . . . . . . . . 49732
Granite . . . . . . . . . 8820
Flagging
1400
Miscellaneous

Size and Length of Sewer.
484.34 feet $1 \mathrm{ft} .10 \mathrm{in} . \times 2 \mathrm{ft} .9$ in., brick.
939.85 feet 12 in., pipe.

94 feet 8 in., pipe house drain.
52 feet 10 in ., pipe catch-basin drain. 7 catch-basins.
Huntington Avenue, Sect. 6.
D. F. O'Connell, contractor ..... $\$ 1,43100$
Labor ..... 37969
Advertising ..... 4435
Iron castings ..... 16234
Cement, 114 bbls ..... 13900
Flagging ..... 2000
Edgestone ..... 7128
Square catch-basin head and gutter, 1 ..... 1850
Teaming ..... 2200
Pipe ..... 1,183 91
\$3,472 07
Size and Length of Sewer.
46.30 feet 2 ft. 6 in. $\times 3$ ft., brick.
680.66 feet 12 in., pipe.
330.70 feet 24 in., pipe, catch-basin drain.
143.31 feet 10 in., pipe, catch-basin drain.
750.42 feet 8 in., pipe, house drain.
11 catch-basins.
Jamaicaway.
F. X. Sancier, contractor ..... \$2,389 63
Labor ..... 11957
Manhole frames and covers ..... 7838
Teaming ..... 1000
Water ..... 20871
$\$ 2,806 \quad 29$
Size and Length of Sewer.
322.13 feet 15 in., pipe.
1,765.06 feet 12 in., pipe.
Lake Street, between Washington Street and South Street.
Labor ..... $\$ 14,49982$
Bricks, 189,000 ..... 1,72000
Cement, 595 bbls. ..... 73440
Sand, 93 double loads ..... 17460
Lamphole frames and covers, 2 ..... 918
Manhole frames and covers, 18 ..... 12489
Manhole steps, 100 ..... 5000
Powder, fuse, and caps ..... 18181
Teaming ..... 1,123 25
Lumber, 15,040 feet ..... 14603
Pipe ..... 1,72887
Trench-machine hire ..... 9 98 19
Brought forward, ..... $\$ 21,45404$
Engine-hire ..... 52000
Water ..... 51228
Carpentry ..... 3815
Blacksmithing, hardware, and tools ..... 32581
Fuel and oil ..... 23702
Miscellaneous supplies ..... 12679
$\$ 23,21109$Size anul Length of Sewer.
$1,008.90$ feet $3 \mathrm{ft} . \times 3 \mathrm{ft} .2$ in., brick.317.68 feet 24 in., pipe.$1,406.52$ feet 15 in., pipe.843.66 feet 12 in., pipe.24.50 feet 36 in., iron pipe.
Lamiat Avenue.
H. P. Nawn, contractor . ..... $\$ 3,05342$
Labor ..... 68149
Cement, 128 bbls. ..... 15935
Manhole frames and covers, 13 ..... 11674
Dish frames and grates, 16 ..... 13722
Edgestones ..... 13055
Manhole steps, 168 ..... 6384
Teaming ..... 2500
Pipe ..... 2,318 82
Miscellaneous supplies ..... 10075
\$6,787 18Size and Length of Sewer.
604 feet 18 in., pipe.
900 feet 15 in., pipe.
94.58 feet 12 in., pipe.
Leyden Street.
Labor ..... \$1,823 16
'Teaming ..... 9900
Lumber, 2,096 feet ..... 3343
Pipe ..... 599
Fuel and oil ..... 1793
Carpentry ..... 9377
Hardware ..... 2791
Miscellaneous supplies ..... 405
\$2,105 ..... 24Size and Length of Sewer.

## Maple Street, between Station 11 and Weld Street.

James Dolan, contractor ..... \$3,253 30
Labor ..... 19250
Cement, 40 bbls. ..... 4950
Teaming ..... 2400
Pipe ..... 2160
Fuel ..... 229
Water ..... 9436

Size and Length of Sewer.
185.73 feet 15 in., pipe.
77.92 feet 12 in., pipe.

## March Avenue.

Labor ..... $\$ 5,54039$
Bricks, 10,200 ..... 10120
Cement, 41 bbls. ..... 4940
Sand, 7 double loads ..... 1180
Manhole frames and covers, 3 ..... 1961
Manhole steps, 37 ..... 1785
Powder, fuse, and caps ..... 19613
Teaming ..... 81850
Lumber, 7,646 feet ..... 28234
Pipe ..... 96583
Hardware, blacksmithing, and tools ..... 28948
Carpentry ..... $30 \quad 57$
Fuel and oil ..... 14538
Hire of machinery ..... 82549
Water ..... 11731
Miscellaneous supplies ..... 11171
$\$ 9,52299$
Size and Length of Sewer.
497.45 feet 24 in., pipe.
Massachusetts Avenue.

| Labor |  | - |  |  |  | \$15,298 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bricks, 312,560 |  |  |  |  |  | 2,759 |  |
| Cement, 1, 180 bbls. |  |  |  |  |  | 1,338 |  |
| Sand, 65 double loads |  |  |  |  |  | 118 | 80 |
| Gravel, 249 double loads |  |  |  | - |  | 415 | 55 |
| Iron castings . |  | . |  |  |  | 275 |  |
| Teaming |  |  |  |  |  | 2,080 |  |
| Lumber, 88,627 feet |  |  |  |  |  | 1,334 |  |
| Pipe | - | . | . | - |  | 143 |  |
| Trench-machine hire | - | - | - |  |  | 855 |  |

Brought forward, ..... $\$ 24,62006$
Engine-hire ..... 28500
Carpentry ..... 12177
Hardware, tools, and blacksmithing ..... 35845
Fuel and oil ..... 38 3ั 51
Resurfacing street ..... 30715
Water ..... 16367
$\$ 26,24161$
Size and Length of Sever.
$1,225.14$ feet $4 \mathrm{ft} . \times 4 \mathrm{ft} .23$-in. brick.
35.84 feet 4 ft ., circnlar, brick.
23 feet 15 in., pipe.
210.14 feet 12 in., pipe.
1 regulator manhole.
Merrimac Street.
Labor ..... \$6,139 19
Bricks, 141,725 ..... 1,22042
Cement, $469 \frac{3}{4}$ bbls. ..... 55765
Sand, $91 \frac{5}{6}$ double loads ..... 17773
Gravel, 147 donble loads ..... 23895
Manhole frames and covers, 3 ..... 1995
Manhole steps, 12 ..... 660
Traps and hooks, 3 ..... 2280
Square iron frame and cover, 1 ..... 950
Teaming ..... 1,55625
Lumber, 44,488 feet ..... 69991
Pipe ..... 19426
Hardware, tools, and blacksmithing ..... 9943
Fuel and oil ..... 16437
Carpentry ..... 25158
Trench machine ..... 32232
Engine-hire ..... 19750
Resurfacing ..... 1,032 24
Water ..... 8931
Miscellaneous supplies ..... 4708
$\$ 13,04704$Size and Length of Sewer.
695.14 feet $2 \mathrm{ft} .6 \mathrm{in} . \times 3 \mathrm{ft}$., brick.25 feet 18 in., pipe.
Morley and Highland Streets.
Labor ..... \$1,878 04
Bricks, 5,550 ..... $47 \quad 18$
Cement, 21 bbls. ..... 2520
Brought forward, ..... $\$ 1,95042$
Sand, 5 double loads ..... 930
Manhole frames and covers, 3 ..... 2619
Manhole steps, 22 ..... 880
Powder, fuse, and caps ..... 4996
Teaming ..... 19475
Pipe ..... 19458
Fuel and oil ..... S 14
Resurfacing street ..... 12950
Miscellaneous supplies ..... 3181
Hardware, tools, and blacksmithing ..... 7851
Water ..... 3975 ..... 3975
\$2,721 ..... 71
Size and Length of Sewer.
102.50 feet 12 -in., pipe.
Neponset Avenue.
Labor ..... \$1,269 26
Bricks, 8,150 ..... 6928
Cement, 22 bbls. ..... 2640
Sand, $9 \frac{1}{2}$ double loads ..... 1565
Gravel, 33 double loads ..... 4620
Manhole frames and covers, 4 ..... 2626
Teaming ..... 8800
Pipe ..... 45272
Water ..... 12390
Tools and blacksmithing ..... 3238
$\$ 2,150$ ..... 05
Size and Length of Sewer.
$1,283.83$ feet 12 in., pipe.
Nonantom Street.
Labor ..... $\$ 2,90880$
Bricks, 17,000 ..... 15300
Cement, 46 bbls. ..... 5060
Sand, 13 double loads ..... 2340
Manhole frames and covers, 9 ..... 6579
Teaming ..... 13275
Lumber, 1,074 feet ..... 1638
Pipe ..... 78186
Fuel and oil ..... 4462
Blacksmithing, hardware, and tools ..... 8169
'Trench-machine hire ..... 31168
Engine-hire ..... 16000
Water ..... 20624
Miscellaneous supplies ..... 4.70

Size and Length of Sexer. $2,062.42$ feet 12 in., pipe.

## North Margin Street.

Labor ..... \$2,033 91
Bricks, 49,800 ..... $423 \quad 30$
Cement, 118 bbls. ..... 13570
Sand, 412 $\frac{1}{2}$ double loads ..... 7470
Gravel, $18 \frac{3}{4}$ double loads ..... 3125
Manhole frame and cover, 1 ..... 648
Mauhole steps, 12 ..... 540
Teaming ..... 35500
Lumber 5, 785 feet ..... 8649
Pipe ..... 7038
Water ..... 3080
Carpentry ..... $\because 61$
Blacksmithing, hardware, and tools ..... 1508
Resurfacing ..... 45610
\$3,751 20
Size"and Length of Sewer.
313.05 feet 2 ft .6 in. $\times 3 \mathrm{ft}$., brick.
Oak Square and Tremont Street.
T. J. Young \& Co., contractor ..... \$1,988 07
Labor ..... 33950
Cement, 31 bbls. ..... 3800
Iron casting ..... 39
Teaming ..... 150
Pipe ..... $\because 3440$
Water ..... 8181
\$2,687 ..... 67

## Size and Length of Sewer.

 855.10 feet 12 in., pipe.
## Orleans Street.


Brought furward, ..... $\$ 17,13469$
Teaming ..... 58400
Lumber ..... 70684
Pipe ..... 28133
Fuel and oil ..... 21419
Hardware and supplies ..... 15654
Carpentry ..... 25688
Water ..... 13657
Size and Length of Sewer.
$1,2559.04$ feet $4 \mathrm{ft} . \times 4 \mathrm{ft} .3$ in., brick.
33.86 feet 4 ft ., circ. brick.
4.44 feet 16 in., iron pipe.
14.12 feet 12 in., iron pipe.
33 feet 15 in., pipe.

## Pomfret Street.

Labor ..... $\$ 4,54831$
Bricks, 10,630 ..... 10630
Cement, $40 \frac{2}{3}$ bbls. ..... 4880
Sand, 7 double loads ..... 750
Manhole frames and covers, 5 ..... 3276
Manhole steps, 38 ..... 1710
Powder, fuse, and caps ..... 13966
Teaming ..... 21825
Pipe ..... 44131
Fuel and oil ..... 6828
Blacksmithing, hardware, and tools ..... 25914
Engine-hire ..... 19000
Trench-machine hire ..... 33698
Water ..... 7039
Miscellaneous supplies ..... 795
Size and Length of Sewer. 703.90 feet 15 in., pipe

## Porter Street.



| Brought forward, |  |  |  |  | \$4,953 26 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pipe | - | . | - |  |  |  |  |
| Fuel and oil |  |  |  |  |  |  | 89 |
| Supporting railroad tracks |  |  |  |  |  | 119 |  |
| Engine-hire, etc. | - |  |  |  |  | 149 |  |
| Carpentry |  |  |  |  |  | 163 |  |
| Water . |  | - | - |  |  |  |  |
| Miscellaneous supplies | - | . | . | - | - | 21 |  |
|  |  |  |  |  |  | ,547 |  |

Size and Length of Sewer.
281.45 feet $6 \mathrm{ft} . \times 6 \mathrm{ft} .4 \mathrm{in} .$, brick.
16.21 feet 7 ft. 3 in., circular brick.

## Rosemont Street.



Size and Length of Sewer.
494.55 feet 4 ft . circular brick.
39.75 feet 12 in., pipe.

## Saratoga Street.



Size and Length of Sewer.
$1,090.66$ feet 12 in., pipe.
5.25 feet 12 in., iron pipe.
1 sunp manhole.
1 regulator chamber and manhole.

## South Street Ontlet.



Size and Length of Sewer.
$1,119.50$ feet $2 \mathrm{ft} . \times 3 \mathrm{ft}$., brick.
10 feet 24 in .,pipe siphon.
624.6 feet 15 in., pipe.
752.25 feet $12 \mathrm{in} .$, pipe.

## St. Alphonsus Street.

J. C. Coleman, contractor

\$2,104 10

Labor 26587
Advertising ..... 3525
Granite and flagging ..... 6012
Cement, 20 bbls. ..... 2300
Iron castings ..... 14237
Teaming ..... $12 \quad 25$
Pipe ..... 445 29
$83.088 \quad 25$

Size and Length of Sewer.
650.88 feet 12 in., pipe.
120.91 feet 10 in., catch-basin drain.
376.72 feet 8 in., house drain.
105.32 feet 6 in., house drain.

7 eatch-basins.

## Sutherland Road and Argyle Street.



Size and Length of Sewer.
561.81 feet 12 in., pipe.
514.56 feet 10 in., pipe.

## Tyler Street.

Labor . . . . . . . . . \$2,501 58
Teaming . . . . . . . . 17100
Lumber . . . . . . . . . 11672
Miscellaneous supplies . . . . . . 1045
$\$ 2,799 \quad 75$
Size and Length of Sewer.
112 feet $2 \mathrm{ft} . \times 3 \mathrm{ft}$, brick.

## Washington Street.

Labor . . . . . . . . . $\$ 3,37921$

Bricks, 10,500 . . . . . . . 9450
Cement, 52 bbls. . . . . . . . 5980
Sand, 11 double loads . . . . . . 1980
Manhole rims and covers, 8 . . . . . 5181
Teaming . . . .. . . . . 10750
Pipe . . . . . . . . . 1,165 90
Trench machine-hire . . . . . . 20000
Engine-hire . . . . . . . . 107 乞0
Fuel and oil . . . . . . . . 5273
Blacksmithing . . . . . . . 4315
Miscellaneous supplies . . . . . . ${ }^{2}$

Size and Length of Sewer.
650.58 feet 18 in., pipe.
399.90 feet 15 in., pipe.
680.47 feet 12 in., pipe.

## Whiting Street.



Size and Length of Sewer.
230.83 feet 12 in., pipe.

## Weld Street, between Maple and Ruskin Streets, and Ruskin Street, between Weld Street and 300 feet West.

Labor ..... $\$ 3,25351$
Bricks, 4,870 ..... 4870
Cement, $22 \frac{1}{3}$ bbls. ..... 2680
Sand, 1 double load ..... 150
Manhole frames and covers, 3 ..... 1955
Manhole steps, 10 ..... 500
Teaming ..... 9000
Lumber, 7,023 feet ..... 11237
Pipe ..... 25848
Blacksmithing and tools ..... 15852
Water ..... 6303
Fuel and oil ..... 2120
Miscellaneous supplies ..... 900
Powder, etc. . ..... 7718
$\$ 4,14484$
Size and Lengilh of Sewer.
630.35 feet 12 in., pipe.
Weld Street, between Maple Street and Willow Street.
James Dolan, contractor ..... $\$ 5,07338$
Labor ..... 26250
Cement, 50 bbls. ..... 5900
Manhole frames and covers, 4 ..... 2561
Pipe ..... 31776
Water ..... 5655
Fuel ..... 92
Miscellaneous ..... 150
\$5,797 ..... 22Size and Length of Sewer.
565.55 feet 15 in., pipe.
West Roxbury Low-level Sewer.(Private land between Amory street and 400 feet south ofBoylston.)
N.Y., N.H., \& H. R.R. Co. ..... $\$ 13,01080$
Manhole frame and cover, 1 ..... 648
\$13,017 28Size and Length of Sewer.$2,092.50$ feet $2 \mathrm{ft} . \times 3 \mathrm{ft} .6 \mathrm{in} .$, brick.White Street and McClellan Avenue.
Labor ..... \$1,406 73
Cement, 32 bbls ..... 3840
Bricks, 12.000 ..... 10350
Sand, 8 double loads ..... 1320
Teaming ..... 6950
Manhole framẹs and covers, 7 ..... 4725
Pipe ..... 50729
Blacksmithing ..... 2738
Water ..... 14305
$\$ 2,35630$
Size and Length of Sewer.
$1,019.80$ feet 12 in., pipe.
Willow Street.
D. O'Connell, contractor ..... \$1,631 84
Labor ..... 9450
Cement, 14 bbls ..... 1680
Manhole frames and covers, 3 ..... 1937
Water ..... 7610
Pipe ..... 30667
\$2,145 28Size and Length of Sewer.

## APPENDIX F.

REPORT OF DEPUTY SUPERINTENDENT OF STREET-CLEANING DIVISION.

14 Beacon St., Boston, February 1, 1896.

Mr. B. T. Wheeler, Superintendent of Streets.
Dear Sir: I respectfully submit my annual report of the expenditures and income of the Street-Cleaning Division of the Street Department for the financial year ending January 31, 1896.

Respectfully yours,
Benj. M. Crait,
Deputy Superintendent.

## Financtal Statement.

| Amount of appropriation | \$2.50,000 00 |
| :---: | :---: |
| Transfer from Paving Division | 35,000 00 |
| Transfer from Watering Division | 15,000 00 |
| Transfer from Sewer Division | 6,000 00 |
| Total amount of appropriation | \$306,000 00 |
| Total amount of expenditures | 305,998 50 |
| Balance |  |

Objects of Expenditures. Superintendence.
Salary of Deputy Snperintendent . . . . $\$ 3,00000$
Office pay-rolls . . . . . . . 4,01672
Stationery . . . . . . . . 25127
Printing . . . . . . . . 48331
Board of horses . . . . . . . 69117

Telephone service . . . . . . . 29578
Total cost of superintendence . . . . $\$ 8,73825$
In connection with the following figures, it must be borne in mind, that the district lines were changed in May, and a comparison shows a large resultant economy in favor of the new methods, althongh an exact comparison by districts of the past two years work is impossible:Cleaning Streets, up to May 16, 1895, Inclusive.Including the Cost of Sweeping, Loading, and Removal of Street-dirt.


From May 17, 1895, to January 23, 1896, Inclusive.
New District 1. South Boston . . . . \$11.723 47
New District 2—3. East Boston and Charlestown . 9,63988
New District 7. Roxbury . . . . . 12,427 71
New District 8. South End . . . . . 34,412 82
New District 9. Back Bay . . . . . 6,635 65
New District 10. West End and North End . . 26,395 31
Total cost of cleaning streets . . . . \$101,234 84
Cleaning Gutters up to May 16, 1895, Inclusive.
Including Cost of Sweeping, Loading, and Removal of Street-dirt.
Old District 1. West End . . . . . \$373 1)7
$\left.\begin{array}{l}\text { Old Distıict 2. North End } \\ \text { Old District 3. South End }\end{array}\right\}$ District entirely paved.
Old District 4. South End . . . . . 21692
Old District 5. Back Bay . . . . . 65208
Old District 6. South Boston . . . . 76761
Old District 7. Roxbary . . . . . 1, 19817
Old District 9. Charlestown and East Boston . 84381
Total cost of cleaning gutters . . . . $\$ 4,05166$
Total length of gutters cleaned, 356.06 miles.
Average cost per mile (incl. dump), \$12.41.
From May 17, 1895, to January 23, 1896, Inclusive.
New District 1. Sotith Boston . . . . \$2,739 55
New District 2-3. East Boston and Charlestown . 3,422 07
New District 7. Roxbury . . . . . 5,84343
New District 8. Sonth End . . . . 2.64253
New District 9. Back Bay . . . . 3,013 95
New District 10. West End and North End . 1,418 09
Total cost of cleaning gutters . . . . $\$ 19,07962$

Total length of gutters cleaned, $2,362.39$ miles.
Average cost per mile (incl. dump), $\$ 8.23$.
Average cost per mile, entire year (incl. dump), $\$ 8.78$.
Cost of Maintaining Dumps up to May 16, 1895, Inclusive.
Old District 1. West End . . . . . $\$ 15015$

Old District 2. North End . . . . . 13755
Old District 3. South End . . . . . 15225
Old District 4. South End . . . . . 16275
Old District 5. Back Bay . . . . . 14385
Old District 6. South Boston . . . . 12810
Old District 7. Roxbury . . . . . . . .
Old District 9. Charlestewn and East Boston . 13000
Total cost of dumps . . . . . $\$ 1,00465$
From May 17, 1895, to January 23, 1896, Inclusive.
New District 1. South Boston . . . . \$347 05
New District 2-3. East Boston and Clarlestown . 38500
New District 7. Roxbury . . . . . . . .
New District 8. South End . . . . 75026
New District 9. Back Bay . . . . . 38744
New District 10. West End and North End. . 72675
Total cost of dumps . . . . . $\$ 2,59650$

Removing Snow up to May 16, 1895, Inclusive.
Including Labor on Crossings, in Streets, Carting of Snow, etc.


From May 17, 1895, to January 23, 1896, Inclusive.

New District 1. South Boston . . . . \$1,382 11
New District 2-3. East Boston and Charlestown . 75630
New District 7. Roxbury . . . . . 1,273 34
New District 8. South End . . . . 2,933 38
New District 9. Back Bay . . . . . 72770
New District 10. West End and North End. . 2,345 73

Total cost . . . . . . . \$9,418 56

Miscellaneous Work up to May 16, 1895, Inclusive.
This shows the cost of such work as may not be characterized the same in all districts.

Including miscellaneous work, sweeping and carting of leaves, etc.


From May 17, 1895, to January 23, 1896, inclusive.

| New District 1. | South Boston | \$26 34 |
| :---: | :---: | :---: |
| New District 2-3. | East Boston and Cbarlestown |  |
| New District 7. | Roxbury | 6720 |
| New District 8. | South End |  |
| New District 9. | Back Bay |  |
| New District 10. | West End and North End |  |
| Total cost |  | \$133 |

Cleaning Crossings.
Including Cost of Manual and Machine Labor.

| Cost of cleaning crossings <br> Removing snow by patrol | . | . | . | . | . |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total cost | . | $\$ 1,63322$ |  |  |  |
| 1,972 | 68 |  |  |  |  |

## Patrolling by Districts.

This includes the cost of picking up and removal of refuse papers, etc., from the streets.

Cost of paper patrol . . . . . . \$1,524 03
Push-Cart Patrol System.
Superintendence . . . . . . . $\$ 85460$
Public waste barrels . . . . . . 38000
Push-carts, including labor and teaming . . . $25,357 \simeq 1$
Recapitulation of Expenses, exclusive of Superintendence, Stable and Yard Expenses, Stock and Miscella-


Recapitulation of Expenses, etc. - Concluded.
New Districts.

|  |  |  |  |  |  | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | \$11,723 47 | \$2,739 55 | \$347 05 | \$1,382 11 | \$26 34 | \$16,218 52 |
| 2-3. | 9,639 88 | 3,422 07 | 38500 | 75630 |  | 14,203 25 |
| 7 | 12,42771 | 5,843 43 |  | 1,273 34 | $67 \quad 20$ | 19,611 68 |
| 8. | 34,412 82 | 2,642 53 | 75026 | 2,933 38 |  | 40,738 99 |
| 9 | 6,635 65 | 3,013 95 | 38744 | 72770 |  | 10,764 74 |
| 10. | 26,395 31 | 1,418 09 | 72675 | 2,345 73 | 4033 | 30,926 21 |
| Total. | \$101,234 84 | \$19,079 62 | \$2,596 50 | \$9,418 56 | \$133 87\| | \$132,463 39 |

Stable and Yard Expenses.
Including the Cost of the South Ent, West End, Roxbury, South Boston, and Charlestown Stables, as follows:
Superintendence of stables . . . . . $\$ 1,20016$
Labor, including the cost of feeders, hostlers, broommakers, blacksmiths, carpenters, watclumen, yardmen, messenger, etc. . . . . . . 19,29946
Cart and carriage repairs . . . . . 3,80918
Harness repairs . . . . . . . 66589
Horse-shoeing . . . . . . . 4,850 84
Painting . . . . . . . . 50509
Sweeping-machine repairs . . . . . 2,893 64
Stable and shed repairs . . . . . . 48392
Street-car tickets and ferry passes . . . . 1,052 50
Tool repairs . . . . . . . . 9442
Veterinary services and medicine . . . . 1,526 07
Total . . . . . . . . \$36,381 17

## Stock Account.

Broom stock purchased . . . . . . $\$ 8,64481$
Carts and carriages purchased . . . . 70000
Harnesses and horse furnishings purchased . . 30434
Horses purchased (net) . . . . . . 2,812 50
Tools purchased . . . . . . . 59760
Patrol stock and maintenance of same . . . 86275
Total
$\$ 13,92200$

## Miscellaneous.



General Recapitulation of Expenses.
Superintendence . . . . . . . $\$ 8,738$ 25
Cleaning streets . . . . . . . 142,97926
Cleaning gutters . . . . . . . 23,131 28
Maintaining dumps . . . . . . . 3,601 15
Removal of snow and ice . . . . . 23,330 77
Miscellaneous work . . . . . . 1,505 62
Cleaning crossings . . . . . . . 3,605 90
Paper patrol in business districts . . . . $1,5 \div 403$
Patrol system, push-carts . . . . . 26,591 81
Stable and yard expenses . . . . . 36,381 17
Stock account . . . . . . . 13,92200
Miscellaneous . . . . . . . 22,159 5 5̃
Total
$\$ 307,470 \quad 79$

Note. - Of the above amount, the sum of $\$ 1,472.29$ was paid by other departments and divisions, on account of work done, etc., making the net expenses of this division, as shown in financial statement, $\$ 305,998.50$.

Income.
Amount of bills deposited with the City Collector during the financial year ending January 31, 1896,
$\$ 6,465 \quad 26$
Table showing the Cost per Mile of Cleaning the Streets in each District, exclusive of Supervision and other Expenses.

| Old <br> Districts. | Miles of Streets Cleaned. | Cost of Cleauing. | Pro Rata Cost of Dumpe. | Total Cost. | Cost per Mile. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 439.64 | \$5,356 55 | \$139 71 | \$5,496 26 | $\$ 1250$ |
| 2. | 486.80 | 5,488 50 | 13755 | 5,626 05 | 1155 |
| 3 | 652.00 | 7,395 90 | 15225 | 7,548 15 | 1157 |
| 4 | 399.53 | 6,050 73 | 15711 | 6,207 84 | 1554 |
| 5. | 167.66 | 4,600 88 | 12190 | 4,722 78 | 2810 |
| 6. | 207.89 | 4,666 40 | 11000 | 4,776 40 | 2297 |
| 7. | 94.35 | 4,201 00 |  | 4,201 00 | 4452 |
| 9. | 204.96 | 3,984 46 | 10727 | 4,091 73 | 1996 |
|  | 2,652.83 | \$41,744 42 | \$925 79 | \$42,670 21 |  |

Average cost per mile of cleaning street iu eight old districts, exclusive of supervision, etc., $\$ 16.08$.

| $\underset{\text { New }}{\text { Districts. }}$ | Miles of Streets Cleaned. | Cost of Cleaning. | Pro Rata Cost of Dumps. | Total Cost. | Cost per Mile. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 858.50 | \$11,723 47 | \$281 30 | \$12,00t 77 | \$1398 |
| 2-3 | 799.28 | 9,639 88 | $28+12$ | 9,924 0n | 1241 |
| 7. | 433.71 | 12,427 71 |  | 12,427 71 | 2865 |
| 8. | 3,671.47 | 34,412 82 | 69675 | 35,109 57 | 963 |
| 9 | 459.13 | 6,635 65 | 26642 | 6,902 07 | 1503 |
| 10. | 2,2044.07 | 26,395 31 | 689 68 | 27,084 99 | 1064 |
|  | 8,766.16 | \$101,234 84 | \$2,218 27 | \$103,453 11 |  |

Average cost per mile of cleaning streets in six new districts, exclusive of supervision, etc., $\$ 11.80$.

Table showing the Cost per Mile of Cleaning Streets in each District, including Supervision, Labor, Yard and Stable Expenses.

| $\underset{\text { Old }}{\text { Districts. }}$ | Miles of Streets Cleaned. | Cost of Cleaning Streets. | $64 \%$ of the Total Cost of Superv'n | $73 \%$ of the Total Cost of Yard and stable Expenses. | Total Expense. | 'Total Cost per Mile. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 439.64 | \$5,496 26 | \$210:3 | \$998 86 | \$6,705 45 | \$15 25 |
| 2 | 486.80 | 5,488 50 | 21003 | 99744 | 6,695 97 | 1375 |
| 3 | 652.00 | 7,395 90 | 28304 | 1,344 0t | 9,022 98 | 1383 |
| 4. | 399.53 | 6,207 84 | 23756 | 1,125 16 | 7,573 56 | 1890 |
| 5. | 167.66 | 4,722 78 | 18073 | 8.7829 | 5,761 80 | 3436 |
| 6 | 207.89 | 4,776 40 | 18278 | 86803 | 5,827 21 | 2803 |
| 7 | 94.35 | 4,201 00 | 16077 | 76346 | 5,125 23 | 5432 |
| 9 | 204.96 | 4,091 73 | 15658 | 74361 | 4,991 92 | 2435 |
|  | 2,652.83 | \$42,380 41 | \$1,62182 | \$7,701 89 | \$51,704 12 |  |

Average cost per mile of cleaning streets in eight old districts, including supervision, etc., \$19.49.

| New <br> Districts. | Miles of Streets. Cleaned. | Cost of Cleaning Streets. | $64 \%$ of the Total Cost of Superv'n. | $73 \%$ of the Total Cost of Yard and Stable Expenses. | Total Expense. | Total Cost per Mile. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 858.50 | \$12,004 77 | \$460 77 | \$2,188 11 | \$14,653 65 | 1706 |
| 2-3 | 799.28 | 9,92400 | 38089 | 1,808 85 | 12,113 74 | 1515 |
| 7 | 433.71 | 12,427 71 | 47699 | 2,265 20 | 15,169 90 | 3497 |
| 8 | 3,671.47 | 35,109 57 | 1,347 55 | 6,399 40 | 42,856 52 | 1167 |
| 9. | 459.13 | 6,90: 07 | 26392 | 1,258 04 | 8,425 03 | 1834 |
| 10. | 2,544.07 | 27,084 99 | 1,039 54 | 4,936 76 | 33,061 29 | 1299 |
|  | 8,766.16 | \$103,453 11\| | \| $\$ 3,97066$ | \$18,85¢ 36 | 126,280 13 |  |

Average cost per mile of cleaning streets in six new districts, including supervision, etc., \$14.40.

Table showing the Number of Loads of Street-dirt removed.

| Old <br> Districts. | Nun'r of Loads of Dirt removed. | Cost per Load of cleaning streets and removing to Dumps, including Foreman's superintendence. | New DISTR'TS. | Num'r of Loads of Dirt re- moved. | Cost per Load of cleaning streets and removing to Dumps, in cluding Fore man's superin tendence. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 3,076 | \$1 86 |  | 9,582 | \$150 |
| 2. | 2,760 | 198 | 2-3.... | 9,234 | 141 |
| 3. | 3,119 | 236 | 7. | 19,440 | 93 |
| 4. | 3,553 | 186 |  | 19,819 | 186 |
| 5. | 4,013 | 130 |  | 5,397 | 178 |
| 6. | 3,793 | 143 | 10.... | 15,255 | 182 |
| 7. | 5,651 | 95 |  |  |  |
| 9 | 3,645 | 132 |  |  |  |
|  | 29,610 |  |  | 78,727 |  |

Removed by Paper Patrol, etc.
1,160 loads.
Removed by Push-Cart Patrol System
5,386 loads.
(Equal to 54,026 barrel-loads).
Total cart loads romoved
114,883 loads.
31,278 loads of the above dirt (or about 27 per cent.) were delivered at the dumping-scow, and towed to sea by the Sanitary Division. In addition to the above, 22,636 single loads and 2,107 double loads of street-scrapings were removed from the streets by the Paving Division.

## Public Waste-Barrels.

Total number of waste-barrels emptied . . . 26,188

## Force Employed.

Deputy Superintendent . . . . . . 1

Clerk . . . . . . . . . 1
Messengers . . . . . . . . $\quad 2$
Employees in the Division, not including the above . 317
Entire force . . . . . . . 321
Average force employed during the year on the New District Basis,

## APPENDIX G.

## REPORT OF DEPUTY SUPERINTENDENT OF STREETWATERING DIVISION.

Room 1, Probate Building, Boston, February 1, 1896.
Mr. B. T. Wheeler, Superintendent of Streets:
Dear Sir: I respectfully submit my annual report of the expenditures, income and operations of the Street-Watering Division of the Street Department for the financial year euding January 31, 1896.

Respectfully yours,

> M. Edwin Libby, Deputy Superintendent.

## Financial Statement.

| Amount of appropriation <br> A mount of expenditures Feb 1, 1895 , to |  |  |
| :---: | :---: | :---: |
|  |  |  |
| Jan. 31, 1896. . . . . $\$ 76,42470$ |  |  |
| Amount transferred to Street-Cleaning |  |  |
| Division $\begin{aligned} & \text { mount transferred to }\end{aligned}$ | $\begin{array}{rr} 15,000 & 00 \\ 5.000 & 00 \end{array}$ |  |
| Amount transferred to S | 5,000 00 | 96,424 70 |
| Balance unexpended |  | \$3,575 30 |

Objects of Expenditures.

| Districts. | Hired Carts. | Labor. | Water-Posts. | Bicycles and Repairs | Horse-Hire. | Repairs of carts. | Sundries. | Totals. | Distriots. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| South Boston. | \$4,637 50 | \$506 00 | \$8615 | \$56 73 |  |  |  | \$5,286 38 | South Boston. |
| East Boston. | 4,660 00 | 47400 | 10153 | 5673 |  |  |  | 5,192 26 | East Boston. |
| Charlestown. | 3,895 00 | 50206 | 6153 | 5673 |  |  |  | 4,515 26 | Charlestown. |
| Brighton. | 7,892 50 | 46400 | 13538 | 5673 |  |  |  | 8,548 61 | Brighton. |
| West Roxbury | 10,338 00 | 92700 | 20364 | 11356 |  |  |  | 11,582 20 | West Roxbury. |
| Dorchester. | 10,037 50 | 91800 | 25226 | 11356 |  |  |  | 11,321 32 | Dorchester. |
| Roxbury. | 11,032 75 | 50200 | 20917 | 5673 |  |  |  | 11,800 67 | Roxbury. |
| City Proper | 12,039 50 | 3,697 6.3 | 1595 | 11333 | 71300 | 60424 | 75076 | 18,078 00 | City Proper. |
| Totals | \$64,532 75 | \$7,990 65 | \$1,209 20 | ${ }^{1} \$ 62410$ | \$713 00 | ${ }^{2}$ \$604 24 | \$750 76 | \$76,424 70 | Totals. |

${ }^{1}$ Twelve new bicyeles included. 2 One new Concord buggy included.

## Street Department - Street-W atering Division. 413

## Income.

During the year the Division watered in front of 127 schoolhouses, 9 police-stations, and 39 engine-houses. The Board of Police and the Fire Department agreed to pay for the service, as they have formerly done, but the School Board refuses, on the ground that they have no appropriation for the purpose, although they did pay for such service in 1891 and 1892. It is customary for departments rendering service for other branches of the City Government to charge for the work done, as appropriations are made for specific public work, and each department has money or should have it for service which they are willing to accept or request. Why the School Board should refuse to pay our fair charge is not altogether apparent.

The following sums were charged for street-watering, and bills for the same deposited with the City Collector during the financial year ending January 31, 1896 :


The bill against the School Board amounts to $\$ 3,466.54$.

Summary of Day Work paid for by the City.

| No. | District. | No. Carts. | No. Miles Covered. | Average <br> Per Cart. |
| :---: | :---: | :---: | :---: | :---: |
| 1. | South Boston | 9 | 23.05 | 2.56 |
| 2. | East Boston. | 8 | 21.63 | 2.70 |
| 3. | Charlestown | 7 | 15.00 | 2.14 |
| 4. | Brighton. | 13 | 32.65 | 2.51 |
| 5. | West Roxbury | 18 | 59.06 | 3.28 |
| 6. | Dorchester. . . . . . . . . . . . . . . . . . . . . . . | 19 | 62.31 | 3.28 |
| 7... | Roxbury . . . . . . . . . . . . . . . . . . . . . . . . . | 19 | 54.19 | 2.85 |
| 8... | Back Bay . . . . . . . . . . . . . . . . . . . . . . . | 10 | 15.44 | 1.54 |
| 9. | Beacon Hill. | 2 | 4.25 | 2.25 |
| 10... | South Yard | 7 | 14.36 | 2.05 |
|  | Totals. | 112 | 301.92 | 2.69 |

The above summary shows that 112 carts watered 301.92 miles of macadam streets this year. Last year 1081 carts, hired by the city, $13 \frac{1}{2}$ working under contract, watered 292.16 miles.

The cost of the day work this year, exclusive of supervision, was $\$ 214$ per mile, or $\$ 64,532.75$, against $\$ 229$ per mile for the day work done last year, and \$575 per mile for the contract freshwatering service in the Back Bay, and $\$ 460$ per mile in the South End, and a total expense of $\$ 74,296.67$. Fresh water was used entirely this year.

Comparison of Day Work with Contract Work in Back Bay and South End.


The above comparison is one of the most satisfactory evidences of the good results accomplished by the division this year. To it attention is specially directed.

The cost for watering in the Back Bay, with fresh water, in 1894 under contract was $\$ 575$ per mile, while this year the same service was more efficiently rendered at an expense of $\$ 424$ per mile.

The expense in the South End last year for watering was $\$ 460$ per mile for fresh water, \$630 per mile for salt water, while this year the watering was done under day work at an expense of $\$ 277$ per mile.

Work done by Contractors at the Expense of the Abutters.

| District. | Contractors. | Carts. | Miles. |
| :---: | :---: | :---: | :---: |
| City Proper | Daniel Clark | 4 | 4.45 |
| City Proper | Potter Bros.. | 5 | 8.75 |
| City Proper | Proctor Bros. \& Co.. | 5 | 7.25 |
| City Proper | O. Nute \& Son | 1 | 273 |
| East Boston . . . . . . . . | J. J. Fitzpatrick | 1 | 2.00 |
| Charlestown | W. H. Quigley | 1 | 2.00 |
| Roxbury and S. Boston | H. P. Cook \& Co. | 3 | 7.78 |
| Roxbury ............ | E. J. Janse. | 1 | 1.25 |
| Totals |  | 21 | 36.21 |

This represents the watering done upon paved streets for and at the expense of the abutters; it is not compulsory, resting entirely with the abutter whether or not he shall have it done. The division's conceru in the premises is simply to check exorbitant charges, which it is but fair to state never occur, and to otherwise protect the rights of citizens and the city.

The table shows that 21 carts watered 36.21 miles of paved streets, which is an increase of $1 \frac{1}{2}$ carts and 3.28 miles over lasti year.

Work done by the Contractors Free of Cost to the City.


This summary shows the amount of watering rendered free of cost to the city by the contractors for the franchise of watering for the abutters. They agree to give this gratnitous service in return for the exclusive privilege of soliciting parsonage within defined street-watering districts with the right of nising the city's standpipes and water. The work shown in the above table would cost the division about $\$ 2,000$ to perform.

Distribution of Carts showiug Entire Amomin of Work done.

| No. | District. | Hired carts. | Contractors carts. | Total. | Miles. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | South Boston . | 9 | 1 | 10 | 25.98 |
| 2 | East Boston | 8 | 1 | 9 | 23.63 |
| 3 | Charlestown | 7 | 1 | 8 | 17.00 |
| 4 | Brighton | 13 |  | 13 | 32.65 |
| 5 | West Roxbury | 18 |  | 18 | 59.06 |
| 6 | Dorchester . . | 19 |  | 19 | 62.31 |
| 7 | Roxbury | 19 |  | 22 | 60.24 |
| 8 | City Proper... | 19 | $15$ | $34$ | $57.23$ |
|  | Free Watering |  | $3 \frac{3}{8}$ | $3 \frac{3}{8}$ | $5.47$ |
|  | Totals. | 112 | $24 \frac{3}{8}$ | $136 \frac{3}{8}$ | 343.67 |

## Water-Posts or Stand-Pipes.

During the year seven new stand-pipes were erected, and twelve relocated for the improvement and efficiency of the service.

The table shows their location by districts :

| Districts. | 1891. | 1892. | 1893. | 1894. | 1895 | Increase. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| South Boston. | 23 | 25 | 27 | 27 | 28 | 1 |
| East Boston | 16 | 23 | 28 | 32 | 33 | 1 |
| Charlestown. | 19 | 19 | 20 | 20 | 20 |  |
| Brighton | 25 | 39 | 42 | 44 | 44 |  |
| West Roxbury | 50 | 59 | 60 | 65 | 66 | 1 |
| Dorchester | 61 | 72 | 75 | 82 | 82 |  |
| Roxbury. | 53 | 60 | 65 | 68 | 68 |  |
| City Proper | 24 | 42 | 45 | 48 | 52 | 4 |
|  | 271 | 339 | 362 | 386 | 393 | 7 |

An increase of 122 standpipes since 1891.
The carts used for street-watering this year were almost entirely of the improved style of manufacture.

The division owns seven watering carts which were this year loaned to contractors who furnished horses and driver, and watered the streets at the rate of $\$ 4.50$ per day, the division receiving thereby 50 cents per day for the use of the cart. This arrangement was deemed more profitable than providing horses and a driver for the carts. Two of the carts have been transferred to the Paving Division for use on new macadam work.

The division is indebted to Mr. J. W. Smith, the Local Forecast Official, for the receipt of daily weather reports which assisted us very much in the working of the carts.

To the Water Board also we owe our acknowledgments for the assistance rendered us in supplying standpipes, and in turning on and off the water.

## APPENDIX H.

## FORMER SUPERINTENDENTS AND DOCUMENT NUMBERS OF ANNUAL REPORTS.

Bridge Department before 1891.<br>Previous to 1886 under charge of City Engineer.

| Name. | Year. |
| :---: | :---: |
| Bartholomew M. Young. | 1886 to 1889 |
| James H. Nugent... | 1889 to 1891 |



* Published in Annual Report, Exccutive Department, Part I., City Document No. 1, 1891.

Paving Department before 1891.


Paving Department before 1891.


* Published in Annual Report, Executive Department, Part II., City Document No. 1, 1891.


## Sewer Department before 1891.

| Name. |  | Year. |
| :---: | :---: | :---: |
| Enoch Patterson, Sup | tendent. | 1827 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 H. Moses | " | 1883 to 1885 |
| Thomas J. Young | ، 6 | 1885 to 1887 |
| Seth Perkins | " | 1887 to 1889 |
| Charles Morton | ، | 1889 to 1891 |

Sewer Department before 1891.


[^13]
## Health Department before 1891.

Sanitary.


## Health Department before 1891.

Sanitary.


[^14]
## 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, 1891. |
| Ezra Parmenter, Commissioner for Cambridge | June 14, 1871, to Jan. 31, 1883. |
| William J. Marvin, Commissioner for Cambridge..... | March 28, 1883, to present time. |

Harvard Bridge added in 159\%.

Commissioners of Cambridge Bridges before 1891.
(West Boston, Canal, and Prison Point.)

*Published in Annual Report, Executive Department, Part I., City Document No. 1, 1891.

Ferry Department before 1895.

| Name. | Year. |  |
| :---: | :---: | :---: |
| Board of Ferry Directors. | 1870 | 189 I |
| William J. Burke, Superintendent | 1891 | May 1, 1895 |
| Thomas Kellough, | May 1, 1895 | July 1, 1895. |

Ferry Department before 1895.

|  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

[^15]
## Street Department since 1891.

Superintendent.
Henry H. Carter, Member of American Society Civil Engineers.
Resigned, December 8, $189 \pm$.
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 the present time.

Member of the American Society Civil Engineers.

Executive Engineer.
Henry B. Wood, Member American Soçiety Civil Engineers.
Bridge Division - John A. McLaughlin, Deputy Superintendent until June 1, 1895.
Bridge Division. - John P. Wise, Deputy Superintendent from June 1, 1895, to the present time.
Ferry Division. - Thomas Kellough, Deputy Superintendent July 1, 1895, to the present time.
Paving Division. - Charles R. Cutter, Deputy Superintendent until January 24, 1895.
Paving Division. - Darius N. Payson, Deputy Superintendent from January 24, 7895 , to the present time.
Sanitary Division. - George W. Forristall, ${ }^{1}$ Deputy Superintendent.
Sanitary Division. - Philip A. Jackson, Acting Deputy Superintendent from January 16, 1894, to February 1, 189..
Sanitary Division. - Charles A. Young. Deputy Superintendent from February 1, 1895, to the present time.
Sewer Division. - Henry W. Sanborn, Deputy Superintendent.
Member Philadelphia Society Civil Engineers.
Street-Cleaning Division. - Philip A. Jackson, Deputy Superintendent until March 22, 1595.
Street-Cleaning Division. - Benjamin M. Cram, Deputy Superintendent from March 22, 1895, to the present time.
Street-Watering Division. - M. Edwin Libby, Deputy Superintendent March 6, 1895, to the present time.
Boston and Cambridge Bridges. - Henry H. Carter, Ex-officio, Commissioner for Boston until December 8, 1894.
Charles R. Cutter, Acting, from December 8, 1894, to January 14, 1895.

Bertrand T. Wheeler, since January 14, 1895.
William J. Marvin, Commissioner for Cambridge.

[^16]
## Street Department.



## CONTENTS.

## REPORT OF SUPERINTENDENT OF STREETS

AND

## EXECUTIVE ENGINEER.

CENTRAL OFFICE.
Blue Hill and other Avenues ..... 18
Central Office Division ..... 13
Commonwealth Avenue ..... 10
Comparative Table ..... 15
Description of Districts ..... 2-3
Employment of Labor ..... 56
Expenses Central Office ..... 13
Financial Statement (General), ..... 14
Grade and Number of Em- ployees ..... 56-58
Income ..... 20
Laying Out and Construction of Highways ..... 18
List of Contracts ..... 21-55
Organization ..... 1
Purchasing ..... 5
Recapitulation of Expenditures ..... 19
Special Appropriations ..... 16-18
Stony Brook ..... 6-9
Street-building, Chap. 323 ..... 19
The Boulevards ..... 9
Yards and Stables ..... 5
Bridge Division ..... 60
Boston and Cambridge Bridges, ..... 65
Canal or Craigie's Bridge ..... 65
Cbarles-River Bridge ..... 62
Chelsea Bridge, North ..... 62
Chelsea-Street Bridge ..... 62
Classification of Expenses ..... 69
Comparative Table (5 years). ..... 69
Comparative Table (5 years) ..... 64
PagE
Cottage Farm Bridge ..... 63
Draw Openings ..... 67
Gold-Street Bridge ..... 63
Harvard Bridge ..... 65
In General ..... 67
Prison-Point Bridge ..... 65
Statement of City Engineer . . 62-63Statement of Traffic overBridges68
Temporary Foot-bridge at Roxbury Crossing ..... 63
West Boston Bridge ..... 66
West Newton Street Bulkhead, ..... 63
Ferry Division ..... 70
Comparative Table (5 years) ..... 72
New Drop ..... 72
North Ferry Pier ..... 72
Statement of City Engineer ..... 72
Table, Expenditures from Loans (5 years) ..... 71
Table, Maintenance (5 years), ..... 70
Paving Division ..... 73
Areas of Pavements ..... $7+$
Blue Hill Avenue ..... 80
Brick Sidewalks ..... 75
Brighton Avenue ..... 83
Columbus-Avenue Extension ..... 81
Commonwealth-Avenue Ex- tension ..... 83

| Page | pag |
| :---: | :---: |
| Edgestones and Sidewalks ... 75 | Comparative Statement, Six- |
| Grading Street-Railway Tracks, 91 | teen Weeks in Winter and |
| Huntington Avenue . ........ 82 | Summer . . . . . . . . . . . . . . 120 |
| Length of Accepted Streets | Comparative Table (5 years). 121 |
| and Character of Pavements, 73-74 | Final Disposition of Ma- |
| List of Streets Paved with | terial . . . . . . . . . . . . . . . . 121 |
| Asphalt . . . . . . . . . . . . . . . 76-78 | Force Employed . . . . . . . . . . 119 |
| Maintenance and Special Ex- | Notice to Householders...... 116 |
| penditures (5 years)...... 73 | Removal of Ashes and House |
| Miscellaneous Work......... 92 | Dirt ...................... 119 |
| New Streets . . . . . . . . . . . . . . 89 |  |
| Rate of Increased Mileage . . 74 | Sever Division ......... 122 |
| Report of City Engineer on Special Work ............. | Maintenance Expenditures (5 years) ...................... 122 |
| Street Construction by Depart- | Sewers Built ............... 122 |
| nient Force. . . . . . . . . . . . .96-105 | Surface Drainage . . . . . . . . 123-126 |
| Street Openings............. 106 |  |
| Streets Paved with Granite | Street-Cleaning Division 127 |
| Blocks . . . . . . . . . . . . . . . . 79 | Average No. Men Employed . 128 |
| Smoke Nuisance......... 108 | Comparative Table (5 years) . 130 |
| Boiler Plants examined | General Remarks . . . . . . . . . 12 |
| Devices in Use . . . . . . . . . . . 112 | Maintenance Expenditures (5 |
| General Remarks ........... 109 | Jears |
| New Locations . . . . . . . . . . 113 | Notice to Occupan |
| Nova Scotia Coal . . . . . . . . . 113 | Plant . . . . . . . . . . . . . . . . . . . 128 |
| Observations ............... 113 | lic Waste Barrels........ 130 |
| Regulations ................. . 113 | Street Cleaning, Cost of ..... 12 |
| Results of Inspections . . . . . . 112 | reet Sweepings |
| Special Reports . . . . . . . ... 114 | years |
| Sanitary Division . . . . . . 116 | Street-Whtering Divis- |
| Amount Ashes Removed (5 | Ion . . . . . . . . . . . . . . . . . 13 |
| years) ................... 120 | Comparative Table (5 years) . 13 |
| Amount of House Offal Re- | General Remarks. . . . . . . . . . 131-132 |
| moved (5 years) .......... 117 | Maintenance Expenditures . . 13 |
| Capacity of Offal Wagons .... 117 |  |
| Collection and Disposal of Offal ....................... 118 | Street Department - Organization....................... . 134 |

## APPENDIX A.

REPORT OF DEPUTY SUPERINTENDENT OF BRIDGE DIVISION. (Page 137.)
Appropriations and Expendi-
PAGE
tures. ..... 139
Bridges wholly Supported by Boston ..... 163
Inland Bridges ..... page
Inland Bridges,Recapitulation, ..... 157
List of Boston Bridges ..... 163-166
List of Culverts and Small Bridges Repaired ..... 167
Bridges of which Boston Sup-
Bridges of which Boston Sup- ports the Part within its Limits ..... 164
Bridges of which Boston Paysa Part of the Cost of Main-tenance164
Bridges Supported by Railroad Corporations ..... 165
Cable-houses ..... 168
Draw-tenders’ Report ..... 169
Financial Statement - Regu- lar Appropriations ..... 137
Financial Statement-Specials, ..... 138
Income ..... 139
Objects of Expenditure ..... 137
Public Landing-places ..... 168
Recapitulation, Expenses on
Tide-water Bridges. ..... 151
Recapitulation - Specials ..... 162
Regular Maintenance Ex-
penses at the North andSouth Yards158-159
Special Appropriations ..... 159-162
Tide-water Bridges ..... 139-150
Total Regular Expenditures. ..... 138
Width of Bridges ..... 173
Width of Openings ..... 171
APPENDIX B.
REPORT OF DEPUTY SUPERINTENDENT OF FERRY DIVISION. (Page 177.)
PAGF
Cash Statement ..... 181
Financial Statement. ..... 177
Income ..... 178
Objects of Expenditures ..... 177
Plant and Property ..... 184
Pleasure-Carriage Tickets....
Recapitulation of Expendi- ..... 184
tures 178 Ticket Statement. ..... 183

## APPENDIX C.

REPORT OF DEPUTY SUPERINTENDENT OF PAVING DIVISION. (Page i86).
Blue Hill and other Arenues
(Details) $\ldots \ldots \ldots \ldots \ldots .277-280$
Execution of Courts, etc ..... 190
Expenditures (Details) ..... 193-198
Financial Statement ..... 186-189
Income ..... 189
Laying Out and Construction of Highways (Details)....269-276
Names of Streets Changed ..... 290
New Brick Sidewalks ..... 284
New Edgestones ..... 280
Objects of Expenditure ..... 188
Permits Issued ..... 291
Property ..... 287
Removal of Snow (Table) ..... 188
Street Improvements (Alder- manic Districts) ..... 198-202
Street Improvements (by Wards) 202-263
PAGE
Summary of Expenditures (Specials) ..... 263-269
Summary of Expenditures, Blue Hill and other Ave- nues ..... 280
Street Numbers Assigned ..... 294
Streets Discontinued ..... 290
Streets Laid Out or Extended. ..... 289
Streets Widened or Relo- cated ..... 290
Schedule of Expenditures: Schedule A ..... 190
Schedule B ..... 190
Schedule C ..... $19]$
Table of Expenditures (5 years) ..... 186
Table of Expenses, Regular Appropriation ..... 188
APPENDIX D.
REPORT OF DEPUTY SUPERINTENDENT OF SANITARY DIVISION. (Page 295.)
Amount Expended for Collec-
PAGE
Income ..... 298
tion and Removal of House Dirt and Offal ..... 298
Ash Contracts ..... 299
Comparative Table, Collection Ashes and Offal ..... 300
Contracts ..... 304
Cost of Carts ..... 303
Cost of Horse-shoeing ..... 303
Disposition of Material Col- lected ..... 300
Dirision Repair-Shops ..... 311
Dumping-Boats, Expenses of . ..... 302
Financial Statement ..... 295
Harness Shops ..... 312
Hay and Grain ..... 306
Horse-shoeing ..... 303, 313
House Dirt and Ashes ..... 311
House Offal ..... 310
Material Collected and Cost of Hired Teams ..... 301
Material Collected by Districts, ..... 299
Material Sold by Contract ..... 305
Number of Carts ..... 302
Objects of Expenditure ..... 296
Offal Contracts ..... 299
Organization ..... 310
Paint Shops ..... 312
Plant and Property ..... 317
Revenue (5 years) ..... 310
Total Cost, Remoral, etc. ..... 299
Table of Loads (5 years) ..... 303
Table of Mechanics' Work ..... 314
Table of Vehicles made ..... 315
Table showing Amounts Paid Ont ..... 316

## APPENDIX E.

REPORT OF DEPUTY SUPERINTENDENT OF SEWER DIVISION. (Page 319.)

|  | page |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Catch-basins . . . . . . . . . . . . | 364 | Surface Drains and Culverts |  |
| Culverts . . . . . . . . . . . . | 365 | by Private Parties ....... | 351 |

Duties of the Division ..... 319
Fall of Rain and Snow. ..... 367
Financial Statement ..... 333
Improved Sewerage (Expen- ditures ..... 334
Main Drainage Works ..... 330
Miscellaneous Expenses ..... 334
Objects of Expenditure ..... 334
Property in Charge of Sewer Division ..... 369
Pumping-Station Record ..... 368
Recapitulation ..... 364
Stony-Brook Improvement. ..... 334
Brighton.
Needs of the District ..... 323
Sewers Built by Contract or Day Labor ..... 338
By Private Parties ..... 342
Surface Drains and Culverts, ..... 342
Work done during l'895 ..... 324
City Proper and Back Bay.
Needs of the District ..... 320
Sewers Built by Contract or Day Labor ..... 335
Surface Drains ..... 336
By Private Parties ..... 337
Work donc during 1895 ..... 322
Charlestown.
Needs of the District ..... 322
Sewers Built by Contract or Day Labor ..... 337
Surface Drains ..... 338
Work done during 1895. ..... 323
Dorchester.
Needs of the District ..... 325
Sewers Built by Contract or Day Labor ..... 344
By Private Parties ..... 350
Surface Drains ..... 349

## APPENDIX F.

## REPORT OF DEPUTY SUPERINTENDENT OF STREETCLEANING DIVISION. (Page 402.)

|  | page |  | page |
| :---: | :---: | :---: | :---: |
| Average Force Employ | 410 | General Recapitulation of Ex- |  |
| Cleaning Crossings | 405 | penses | 408 |
| Cleaning Gutters, by Districts, | 403 | Income | 408 |
| Cleaning Streets, Cost by Dis- |  | - Miscellaneous | 408 |
| tricts. . . . . . . . . . . . . . . . . | 403 | Objects of Expenditure | 402 |
| Cost of Collecting Leav | 405 | Patrol System | 05 |
| Cost of Removal of Sno | 404 | Public Waste Barrels | 410 |
| Cost of Maintaining Dumps.. | 404 | Push Cart | 0. |
| Cost per Mile, exclusive of |  | Recapitulation of Expenses | 406 |
| Supervision | 408 | Stable and Yard Expense | 407 |
| Cost per Mile, |  | Stock Account | 407 |
| Supervision | 409 | Total Number of Loads Street |  |
| Financial Statement | 402 | Dirt Removed | 410 |

## APPENDIX G.

## REPORT OF DEPUTY SUPERINTENDENT OF STREETWATERING DIVISION. (Page 4iI.)

|  | - page |  | Page |
| :---: | :---: | :---: | :---: |
| Comparison of Day Work with |  | Table Water-Posts by Dis- |  |
| Contract Work | 414 | tricts | $\pm 16$ |
| Distribution of Carts | 415 | Water-Posts | 415 |
| Financial Statement | 411 | Work done at the Expense of |  |
| Income | 413 | Abutters | 414 |
| Objects of Expenditure | 412 | Work done by Contractor's |  |
| Summary of Day Work | 413 | Force | 415 |

## APPENDIX H.

FORMER SUPERINTENDENTS AND DOCUMENT NUMBERS OF ANNUAL REPORTS. (Page 4I7-424.)

## LIST OF ILLUSTRATIONS.

PAGE
Blue Hill Avenue, looking south (Blue Hill scarcely discernible in the middle distance) ..... 10
Columbus Avenue, looking south-west from Prentiss Street, toward Roxbury Crossing, after removal of buildings ..... 80
Commonwealth-Avenue Extension, looking east from the Hill, near Newton Line ..... 82
Culvert at Canterbury Branch, Stony Brook, Blue Hill Avenue ..... 122
Dorchester Brook Sewer, showing necessity of being rebuilt ..... 326
Kenney-Street Ledge and Stone-Crushing Plant ..... 72
Stony Brook, Northerly End of Low-Grade Covered Channel, show- ing necessity of the continuation of the improvement. ..... 6


[^0]:    ${ }^{1}$ Nine months only.
    ${ }^{2}$ Nine months only, but includes expenditure for Street Police, May 1 to July 10, 1891-\$464.41. ${ }_{4}^{4}$ For comparison, deduct Ferry Division, not before shown, making total - $\$ 1,930,266.33$.

[^1]:    (C) Binder course on existing base.

[^2]:    Explanation of Letters.
    A - Price per sq. yd. for laying granite blocks with cement base and Portland cement grout joints. B - Price per sq. yd. for laying granite blocks with gravel.
    E - Edgestone.
    F - Brick sidewalks.

[^3]:    A - Sub-grading. B - Telford base. C-Macadam. D - Granite block gutters. F - Edgestone. G - Brick sidewalk. H - Gravel sidewalk.

[^4]:    119,896 sq. yds.

[^5]:    123 Twelve months. Above table does not include contracts in East Boston and Brighton.
    ${ }^{4}$ In East Boston, 3.720 loads; Brighton, 1,539 loads; Dorchester, 3,296 loads; total, 8,555 loads, - collected during $189+$ are not included in above table. For 1891 and 1892, East Bos. ton and Briubton were estimated at $5,1,10$ loads.

    5 In East Boston, 3,732 loads; Brighton, 1,419 loads; Dorchester, 4,179 loads; West Roxbury, 517 loads; total, 9,847 loads, - collected during 1895 , not included in above table.

[^6]:    ${ }^{1}$ Including street-cleaniug from January 1, 1891, to May 1, 1891, four months before the Street Cleaniug Division was independently established.

[^7]:    ${ }^{1}$ Duties performed by Sanitary Division and cost charged to its appropriation previous to May 1, 1891.

[^8]:    ${ }^{1}$ Including removal by the Sanitary Division four months previous to May 1, 1891
    ${ }^{2}$ Includes waste-paper, 1,821 loads. Push-car't system, 5,3>6 loads.

[^9]:    ${ }^{1}$ No income was received by the city, the amount rendered for watering in front of schools, engine-houses, and police stations, being repaid to the division and deducted from expenditures.
    ${ }^{2}$ In 1891 and 1892 the School Committee paid for watering in front of school-houses, which they have refused to do since.

[^10]:    ${ }^{1}$ The City of Boston purchased the East Boston ferries April 1, 1870.

[^11]:    C. This schedule shows amount of money spent in excess of the special appropriation, and taken from the maintenance appropriation; for items, see Schedule
    ${ }^{1}$ This district was abolished by the redistricting in May, 1895, and included in Districts 5 and 7.

[^12]:    $\$ 21947{ }^{29226}$
    89) $@ @ .033 \frac{52277}{286}=\$ 21,947.299^{9828}$
    $\overline{\$ 31,637.15}$

[^13]:    * Published in Annual Report, Executive Department, Part II., City Document No. 1, 1891.

[^14]:    * Published in Annual Report, Executive Department, Pt. II., City Document No. 1, 1891.

[^15]:    * Published in Anuual Report, Executive Department, Part I., City Document No. 1, 1891.

[^16]:    ${ }^{1}$ Died January 12, 1894.

