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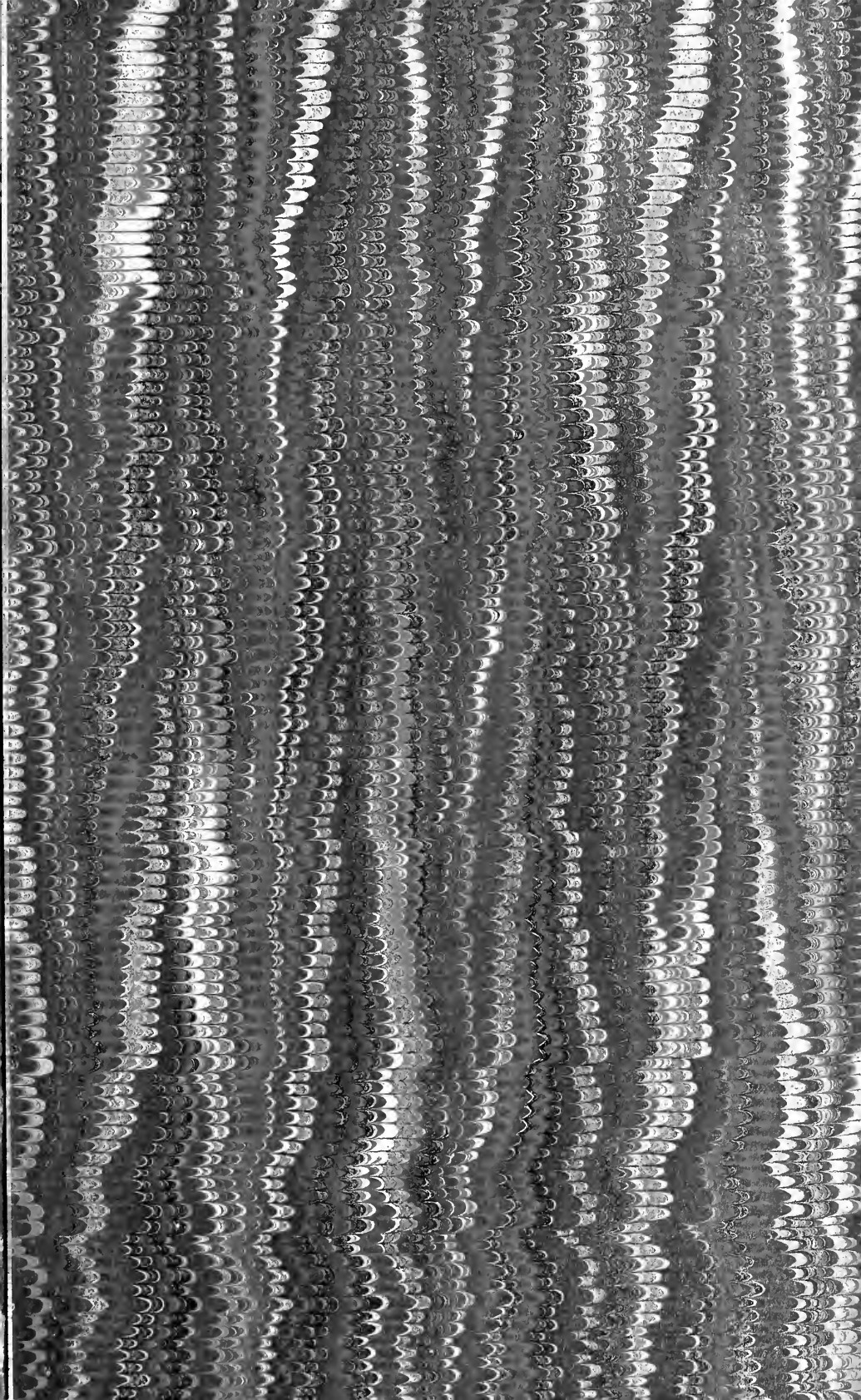
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Boston Street Department





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COMPLIMENTS OF ...

BERTRAND T. WHEELER,

Superintendent of Streets.

PLEASE EXCHANGE.

ANNUAL REPORT

OF THE

STREET DEPARTMENT

FOR THE

YEAR 1899



BOSTON

MUNICIPAL PRINTING OFFICE

1900

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TRADE
UNION
BOSTON

CONTENTS.

PART I.

REPORT OF THE SUPERINTENDENT OF STREETS.

	PAGE		PAGE
Appropriations	2	BRIDGE DIVISION:	
Construction Work	5	Appropriation	30
Department Work (By Dis-		Bridge Shelters	22
tricts)	9	Charlestown Bridge	19
Eight-hour Day	15	Malden Bridge	20
Elevated Railway	23	Railroad Bridges	21
Employment of Labor	34	Summer Street Bridge	20
Expenditures	2	West Boston Bridge	20
" (Recapitulation)	4	Widening of Bridges	21
Horses	18	Work Necessary	30
New District Yard, East		Work Performed	27
Boston	18		
Organization	1	FERRY DIVISION:	
Peddlers	16	New Ferry-boats	31
Pensions	16	Purchase of Ferry-boat	
Permit Charges, Constitu-		"Gov. Russell" from the	
tionality of	12	U.S. Government	31
Recommendations	10	South Ferry Head-house,	
Smoke Nuisance	23	East Boston side	31
Snow and Rainfall	24		
Snow in Public Alleys	17	PAVING DIVISION:	
Street Litter	22	Difficulties met with	25
Summary of Work Done:		Necessity of increase in	
Bridge Division	32	appropriations	26
Ferry Division	33	Output of Stone from City	
Paving Division	33	Crushers	27
Sanitary Division	33	Removal of Snow. Effect	
Sewer Division	33	on the Maintenance Ap-	
Street-Cleaning Division ..	34	propriation	25
Street-Watering Division ..	34	Work Performed	27
Tremont Street Tracks	14		
Veterans' Preference Act ..	23	SANITARY DIVISION:	
		Disposal of Material Col-	
BOSTON AND CAMBRIDGE		lected	29
BRIDGES:		Improvements in the Divi-	
Attention to Details	32	sion	29
North Harvard Street		Recommendations	29
Bridge	32		

	PAGE		PAGE
SEWER DIVISION:		Expenditures.....	34
Sewerage Works Act. Work		Financial Statement, Street	
Performed Under.....	7	Department Maintenance.	35
Maintenance Appropriation.	28	Special Appropriations....	37
Sewer Legislation.....	11	Blue Hill and Other Avenues	40
Work Performed.....	28	Bridge Division Specials...	37
		Comparative Table of Ex-	
		penditures (Maintenance).	36
STREET-CLEANING DIVISION:		Ferry Division Specials....	37
East Boston District, Estab-		Laying Out and Construc-	
lished.....	30	tion of Highways.....	39
Extension of Division Limits	30	Paving Division Specials...	37
Recommendations.....	30	Recapitulation, Maintenance	
		and Special Appropria-	
		tions.....	40
STREET-WATERING DIVISION:		Sewer Division Specials....	39
Street Watering by Assess-		South Union Station.....	40
ment.....	31	Street Improvements.....	39
Defects in this System.....	32	Income.....	70
		Increase in Length of Public	
		Streets.....	71
CENTRAL OFFICE:		Laying Out and Construc-	
Areas of Pavements.....	70	tion of Highways (Assess-	
Asphalt Pavement, Sicilian		ments Collected).....	71
Rock.....	66	Street Building under Chap.	
Asphalt Pavement, Trinidad	62	323, Acts of 1891, etc....	41
Asphalt Pavement, Summary	68	Street Mileage.....	69
Contracts.....	43		

PART II.

APPENDIX A.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE
BRIDGE DIVISION. (Page 3.)

	PAGE		PAGE
Appropriation.....	3	Special Appropriations...	26
Bridge Shelters.....	4	Tidewater Bridges.....	8
Cable Houses and Boxes...	34	Recapitulation.....	16
Drawtenders' Reports.....	36	Financial Statement.....	6
Drawtenders' Reports, Re-		List of Bridges:	
capitulation.....	41	Wholly Supported by Bos-	
Expenditures:		ton.....	28
Inland Bridges.....	17	Of which Boston Supports	
Recapitulation.....	24	the Part within its Lim-	
Maintenance North and		its.....	30
South Yards.....	25		

CONTENTS.

v

	PAGE		PAGE
Of which Boston Pays a Part of the Cost of Maintenance.....	30	Recommendations.....	4
Supported Wholly by Railroad Corporations.....	31	Special Appropriations....	7
Recapitulation.....	32	Statement of Traffic.....	35
List of Small Bridges....	33	Tidewater Bridges Operating Power.....	3
New Bridges.....	3	Widths of Draw Openings, etc.	38
Object of Expenditures....	6	Widths of Bridges.....	40
Public Landing Places.....	34	Work Performed.....	5

APPENDIX B.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE FERRY DIVISION. (Page 42.)

	PAGE		PAGE
Actual Standing.....	51	Receipts.....	48
Cash Statement.....	49	Receipts (1870-1900).....	49
Cash Statement (1870-1900).	50	Special Appropriations....	44
Condition of Buildings....	43	Ticket Statement.....	53
Eight-hour Day.....	43	Total Appropriations.....	46
Expenditures (1857-1900)...	50	Total Expenditures.....	46
Financial Statement.....	44	Traffic Statement.....	52
Income.....	47	Travel Statement.....	53
Location of Ferries.....	42	Work Performed.....	43
Objects of Expenditures...	44		

APPENDIX C.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE PAVING DIVISION. (Page 55.)

	PAGE		PAGE
Districts.....	55	Charlestown Bridge.....	66
Expenditures Under Special Appropriations (Details).....	6	Laying Out and Construction of Highways.....	81
Abolishment of Grade Crossings.....	66	Laying Out and Construction of Highways (Summary).....	94
Blue Hill and Other Avenues.....	80	Laying Out and Construction of Highways, Brighton.....	97
Blue Hill and Other Avenues (Summary).....	81		

	PAGE		PAGE
Laying Out and Construction of Highways, Brighton (Summary)	98	Financial Statement	56
Laying Out and Construction of Highways, Dorchester	98	Income	57
Laying Out and Construction of Highways, Dorchester (Summary)	102	Inspection	119
Laying Out and Construction of Highways, East Boston	96	New Brick Sidewalks	109
Laying Out and Construction of Highways, East Boston (Summary)	97	New Brick Sidewalks (Summary)	112
Laying Out and Construction of Highways, Roxbury and West Roxbury,	102	New Edgestones	106
Laying Out and Construction of Highways, Roxbury and West Roxbury, (Summary)	105	New Edgestones (Summary),	109
Rapid Transit	66	Objects of Expenditures (Regular)	58
South Union Station	67	Miscellaneous	59
Street Improvements	67	In Excess of Special Appropriations	60
Street Improvements (Summary)	77	New Work	61
		Permits	117
		Property in Charge of Divisions	116
		Public Alleys	113
		Streets Laid Out and Ordered Constructed	114
		Streets Widened and Relocated	113
		Street Numbering	120
		Total Expenditures	56
		Work in Charge of	55

APPENDIX D.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE SANITARY DIVISION. (Page 121.)

	PAGE		PAGE
Amount Expended for the Collection and Removal of House Dirt, Ashes, etc., and Offal	137	Disposal of Material Collected	130
Comparative Table, Showing Cost to Collect and Deliver at Various Dumps	136	Division Repair Shops :	
Contracts	140	Blacksmith Shop	141
Cost of Hired Teams	131	Harness Shop	142
Cost of Towing	137	Horseshoeing Shop	143
Disposal of Combustible Waste	122	Paint Shop	142
Disposal of Garbage	122	Wheelwright Shop	141
		Dumping Boats	131
		Dumping Boats (Amount Expended)	137
		Expenditures (Maintenance, Five Years)	123

	PAGE		PAGE
Expenditures (Recapitulation)	135	Revenue (5 years)	123
Extraordinary Expenses...	136	Horseshoeing, Cost of	143
Financial Statement	132	Income	132
Hay and Grain	149	Material Collected by Districts	128
Hay and Grain (Recapitulation)	152	Material Collected (5 years),	128
House Dirt, Ashes, Wastes, and Rubbish:		Method of Collecting	121
Amount Collected	127	Number and Variety of Vehicles, etc., Repaired..	144
Comparative Statement ..	129	Objects of Expenditures ...	133
Contracts	125	Organization	155
Disposal of	125	Property Schedule	153
Force Employed	128	Recommendations	122
Separation of Wastes	126	Street Signs	147
Spring Cleaning	127	Total Cost of Removal of House Dirt, Ashes, Wastes, Rubbish and House Offal,	136
House Offal:		Work of the Divisions	121
Amount Collected	123	Work Done for Other Divisions	138
Contracts	124		
Disposal of	124		
Force Employed	125		

APPENDIX E.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE SEWER DIVISION. (Page 156.)

	PAGE		PAGE
Appropriation Maintenance (10 years)	156	Dorchester	202
Assessments	181	East Boston	191
Catch-basins	186	Roxbury	218
Financial Statement	182	South Boston	189
Objects of Expenditures...	183	West Roxbury	197
Property Schedule	187	Sewers Abandoned:	
Pumping Record	188	City Proper	228
Schedule of Sewers Built to February 1, 1900	185	Roxbury	227
Sewer Legislation:		Sewer Construction (5 years)	186
Chap. 450, Acts of 1899...	174	Sludge Removed	187
Constitutionality of Chap. 426, Acts of 1897	176	Summary of Sewer Construction	186
Sewerage Works Built:		Work in Charge of Division	156
Brighton	193	Work Performed and Recommendations:	
Charlestown	192	Brighton	167
City Proper	223	Charlestown	168
		City Proper	169

	PAGE		PAGE
Dorchester	159	Roxbury	157
East Boston.....	165	South Boston.....	157
Main Drainage.....	171	Stony Brook.....	172
Moon Island.....	169	West Roxbury.....	168

APPENDIX F.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE STREET-CLEANING DIVISION. (Page 229.)

	PAGE		PAGE
Coöperation of the Board of Police.....	229	Stable and Yard Expendi- tures.....	234
Cost per Mile of Cleaning Streets.....	235	Stock Account.....	234
Financial Statement.....	230	Force Employed.....	236
Cleaning Crosswalks.....	232	Income.....	235
Cleaning Gutters.....	231	New Districts.....	229
Cleaning Streets..	230	Number of Loads of Street Dirt, etc., Removed.....	236
General Recapitulation..	234	Public Waste Barrels.....	236
Hand Sweeping.....	231	Recommendations.....	229
Maintaining Dumps.....	231	Shops.....	230
Miscellaneous.....	232	Stables.....	230
Patrolling by Districts..	232	Work Done for Other Divi- sions	235
Push Cart Patrol System..	232	Work of the Division.....	229
Removing Snow.....	232		
Recapitulation of Ex- penditures.....	233		

APPENDIX G.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE STREET WATERING DIVISION. (Page 237.)

	PAGE		PAGE
Assessments :		Income	238
Amount of	244	Object of Expenditures....	244
Constitutionality of.....	238	Objects of Expenditures (by Districts)	245
Districts	237	Water Posts.....	246
Rate of.....	237	Weather Conditions	237
Distribution of Carts	245	Work Performed	237
Financial Statement	244		
Growth of the Division	244		

APPENDIX H.

REPORT OF THE COMMISSIONERS FOR THE BOSTON
AND CAMBRIDGE BRIDGES. (Page 247.)

	PAGE		PAGE
Bridges Under Control of :		West Boston	248
Cambridge Street.....	248	Classification of Expendi-	
Craigie's	247	tures.....	251
Essex Street.....	249	In General	250
Harvard.....	247	Number of Draw Openings,	
North Harvard Street....	249	etc.....	252
Prison Point.....	248	Revenue	250
Western Avenue to Cam-			
bridge	249		

APPENDIX I.

REPORT OF THE CITY ENGINEER ON SPECIAL WORK.
(Page 253.)

	PAGE		PAGE
Asphalt Paving Under Guar-		Miscellaneous	282
anty Feb. 1, 1900	254	New Construction	267
Columbia Road.....	284	South Union Station.....	287
Commonwealth Avenue....	285	Work Performed :	
Cost of Patching	260	In General	253
Comparative Cost of Patch-		In Detail.....	263
ing	263	For Ferry Division	286
Grading Street Railway		For Sanitary Division....	286
Tracks.....	282		

APPENDIX J.

REPORT OF THE CHIEF SMOKE INSPECTOR.
(Page 288.)

	PAGE		PAGE
Boiler Applications.....	292	Smoke Nuisances in Other	
Coal Importations	292	Cities	290
Complaints.....	290	Smoke Controlling Devices.	291
Difficulties met with.....	288	Special Reports.....	292
Quality of Coal Used	288	Summary	293
		Work Performed	288

APPENDIX K.

REPORT OF THE CIVIL SERVICE CLERK. (Page 294.)

	PAGE		PAGE
Applications	298	Grade and Number of Em- ployees	295
Employment of Labor	294		

APPENDIX L.

FORMER SUPERINTENDENTS AND DOCUMENT NUM- BERS OF ANNUAL REPORTS. (Page 299.)

LIST OF ILLUSTRATIONS.

PART I.

	PAGE
Avenues under Construction in 1895-6-7-8 and 9.....	24
Bridge Shelters.....	22
Charlestown Bridge.....	18
Columbia Road at Blue Hill Avenue.....	4
Commonwealth Avenue at Warren Street, showing upper and lower roadways.....	2
Congress Street at State Street, showing Devonshire and Exchange Streets on opposite side.....	28
Dock Square, where, by cutting off corner building, good entrance into Union Street would be made.....	34
Extension of Reservoirs, Moon Island.....	8
Josiah, Prize Winner, Boston Horse Show, 1899.....	30
Moon Island Reservoirs. Basin No. 4.....	6
North Harvard Street, showing need of new bridge.....	32
State Street at Congress, Devonshire and Exchange Streets.....	10
Summer Street Bridge.....	20
Summer Street at Dorchester Avenue widened and rebuilt.....	26
The Terminal Station.....	1
Tremont Street, showing surface cars, wires and poles.....	14
Tremont Street without cars, wires and poles.....	16
Washington Street, near Dover Street, showing Elevated Railway structure.....	12

PART II.

Atlantic Avenue in front of the Terminal Station.....	66
Blue Hill Avenue Surface Drainage (Rock Cut).....	164
Columbia Road at Edward Everett Square.....	274
Columbia Road, near City Point, showing yacht club-houses....	272
Commonwealth Avenue at Aberdeen.....	268
Commonwealth Avenue at entrance to Chestnut Hill Reservoir..	270
Commonwealth Avenue, near Warren Street.....	264
Commonwealth Avenue, North of Wallingford Road.....	270
Congress Street Bridge.....	4
Devonshire Street, between State Street and Adams Square.....	62
Dorchester Avenue, rear of Terminal Station, showing sea wall..	286
Exchange Street, between State Street and Dock Square.....	104
Faneuil Hall Square.....	118
Merchants Row, from State Street.....	112
Moon Island Extension of Reservoirs. Basin No. 3.....	168
Moon Island. Discharge from flushing sewer.....	170
Proposed New Head-house, South Ferry, East Boston side.....	42
Proposed New Stable, East Boston.....	228
Street Department Exhibit, Boston Horse Show, 1899.....	122
Tenean Brook Conduit.....	158
Tremont Street free from tracks and wires.....	60
Washington Street, North from Clifton Place, without the Ele- vated Railway structure.....	54
Washington Street, North from Clifton Place, showing the Ele- vated Railway structure.....	56
Widening of Bridges, showing Berkeley Street Bridge.....	16

PART I.

REPORT OF THE SUPERINTENDENT OF
STREETS.

PAGES 1 TO 72.



THE TERMINAL STATION, SHOWING DEWEY SQUARE IN FRONT, ATLANTIC AVENUE TO RIGHT, AND EXTENSION OF SUMMER STREET TO LEFT.

HON. THOMAS N. HART,

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 1899 is herewith respectfully submitted.

ORGANIZATION.

The work of the department during the past year has been carried on under the same organization that was effected when the consolidated department was created in 1891 and as amended in 1895, the several divisions of the department being as follows :

Central Office.	|	Paving Division.
Boston and Cambridge	|	Sanitary Division.
Bridges.	|	Sewer Division.
Bridge Division.	|	Street-Cleaning Division.
Ferry Division.	|	Street-Watering Division.

Each of the above divisions, with the exception of the Central Office 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.

More extensive study than is given under this *résumé* of the year's work, with detail of figures and expenditure, will be found in the division reports of the Deputy Superintendents.

APPROPRIATIONS.

The money assigned for Street Department work the past year was made available under the following appropriations:

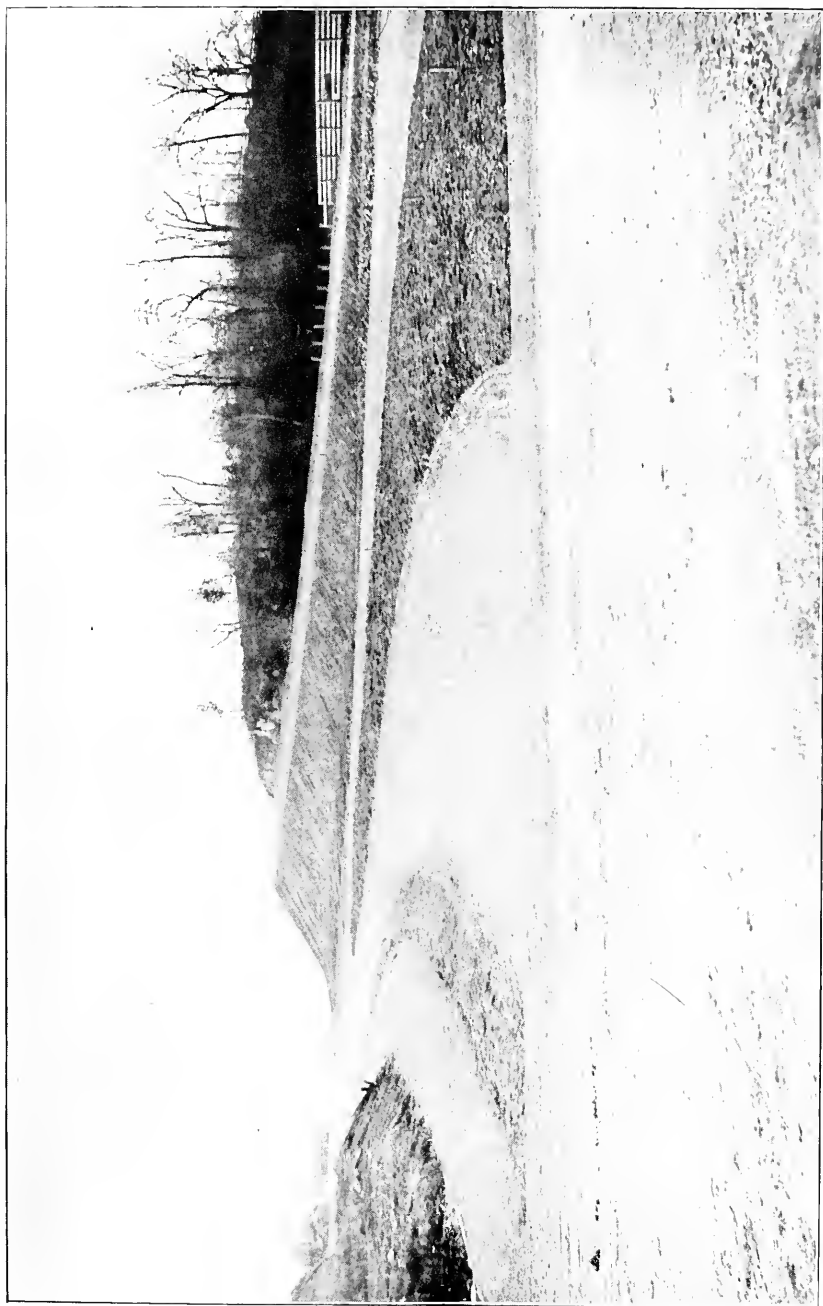
First. — Maintenance: From income of the city raised by taxes. At the commencement of the financial year, February 1, the department estimates of the amounts necessary for the proper maintenance of the various divisions are submitted to His Honor the Mayor, who makes such recommendation as he may deem proper to the City Council. The maintenance appropriations as passed by the City Council were as follows:

Central Office	\$18,800 00
Bridge Division	120,750 00
Cambridge and Boston Bridges	16,000 00
Ferry Division	212,500 00
Paving Division:	
Maintenance	690,000
Removal of snow	50,000
Sanitary Division	570,000 00
Sewer Division	350,000 00
Street-Cleaning Division	315,000 00
Street-Watering Division	175,000 00
	<hr/>
Total	\$2,518,050 00

Second. — Work done under loan appropriations for permanent improvements: There was made available by the City Council from loan money within the debt limit \$303,100 for general new or reconstruction work, and for special items, as follows:

Bridge Division	\$34,469 80
Ferry Division	474 79
Paving Division	316,630 53
Sewer Division	3,000 00
	<hr/>
Total	\$354,575 12

Third. — In 1891 an Act was passed by the Legislature and amended in 1897 entitled, "An Act Relating to the Location, Laying-Out and Construction of Highways in the



COMMONWEALTH AVENUE AT WARREN STREET, SHOWING UPPER AND LOWER ROADWAYS.



City of Boston." (Chap. 323, Acts of 1891.) Loans under this Act are outside the debt limit. From this fund new streets assessable on the abutting property are built. The amount expended the past year was:

Streets \$548,423 01

Fourth. — In 1899 an Act was passed by the Legislature entitled, "An Act relative to Laying-Out and Construction of Highways in the City of Boston." (Chap. 443.) Loans under this Act are outside the debt limit. The amounts authorized and expended last year in each district were as follows:

District.	Amount authorized.	Amount expended.
Brighton	\$200,000 00	\$16,280 36
Dorchester	500,000 00	33,483 80
East Boston	600,000 00	3,561 90
Roxbury and West Roxbury .	350,000 00	24,037 97
Totals	\$1,650,000 00	\$77,364 03

Fifth. — In 1895 an Act was passed by the Legislature and amended in 1898 entitled, "An Act to provide for the Laying-Out and Construction of Certain Highways in the City of Boston" (commonly known as the Boulevard Act). (Chap. 334 of 1895; chap. 236 of 1898.) Loans under this Act are outside the debt limit. The amount expended this year was as follows:

Streets \$246,053 89

Sixth. — In 1896 an Act was passed by the Legislature, entitled, "An Act relative to Stony Brook in the City of Boston." (Chap. 530.) Loans under this Act are outside the debt limit. \$500,000. The amount expended this year was \$46,673.24.

Seventh. — In 1899 an Act was passed by the Legislature, entitled, "An Act relative to Stony Brook in the City of Boston." (Chap. 397.) Loans under this Act are outside the debt limit. \$350,000. The amount expended this year was \$151,518.65.

Eighth. — In 1895 an Act was passed by the Legislature, entitled, "An Act relative to the establishment of a New Ferry Landing in the City of Boston." (Chap. 435.) Loans under this Act are outside the debt limit. \$500,000. The amount expended this year was \$12,187.69, and the sum of \$200,000 was transferred to the Sewer Division under authority of chap. 450, Acts of 1899.

In 1898 the City of Boston sold to the United States Government the ferry-boats "Governor Russell" and the "East Boston" for the sum of \$71,000 and \$57,500 respectively, making a total of \$128,500, which, under an order of the City Council, was transferred to an appropriation for "New Ferry-boats." The amount expended this year was \$64,853.80.

Ninth. — In 1896 an Act was passed by the Legislature, entitled, "An Act to provide for a Union Station for Passengers on Railroads entering the southerly part of the City of Boston." (Chap. 516.) Loans under this Act are outside the debt limit. The amount expended this year was as follows :

Streets	\$71,155 28
-------------------	-------------

Tenth. — In 1897 an Act was passed by the Legislature, entitled, "An Act relative to the Sewerage Works of the City of Boston." (Chap. 426.) Loans under this Act are outside the debt limit. From this fund all "Sewerage Works" are built.

The amount expended the past year was \$1,086,893.33.

Thus the expenditures under the several appropriations of the year 1899 were as follows :

From Income of the City Raised by Taxes.

Maintenance	\$2,638,905 61
-----------------------	----------------

From Loans Inside the Debt Limit.

Street Improvements, general and by wards,	119,891 79
Bridge, specials	28,724 79
Ferry, specials	474 79
Paving, specials	268,841 13

From Loans Outside the Debt Limit.

[Repaid in part to City Treasury by assessment for benefits.]

Laying-Out and Construction of Highways,	548,423 01
Laying-Out and Construction of Highways, by Districts :	
Brighton	16,280 36
Dorchester	33,483 80
East Boston	3,561 90
Roxbury and West Roxbury	24,037 97
Blue Hill and Other Avenues (Boulevard Act)	246,053 89
Stony Brook Improvement	46,673 24

Carried forward,

\$3,975,352 28



COLUMBIA ROAD AT BLUE HILL AVENUE END. NEARLY COMPLETE WITH EXCEPTION OF PLACING CAR-TRACKS IN CENTRE.

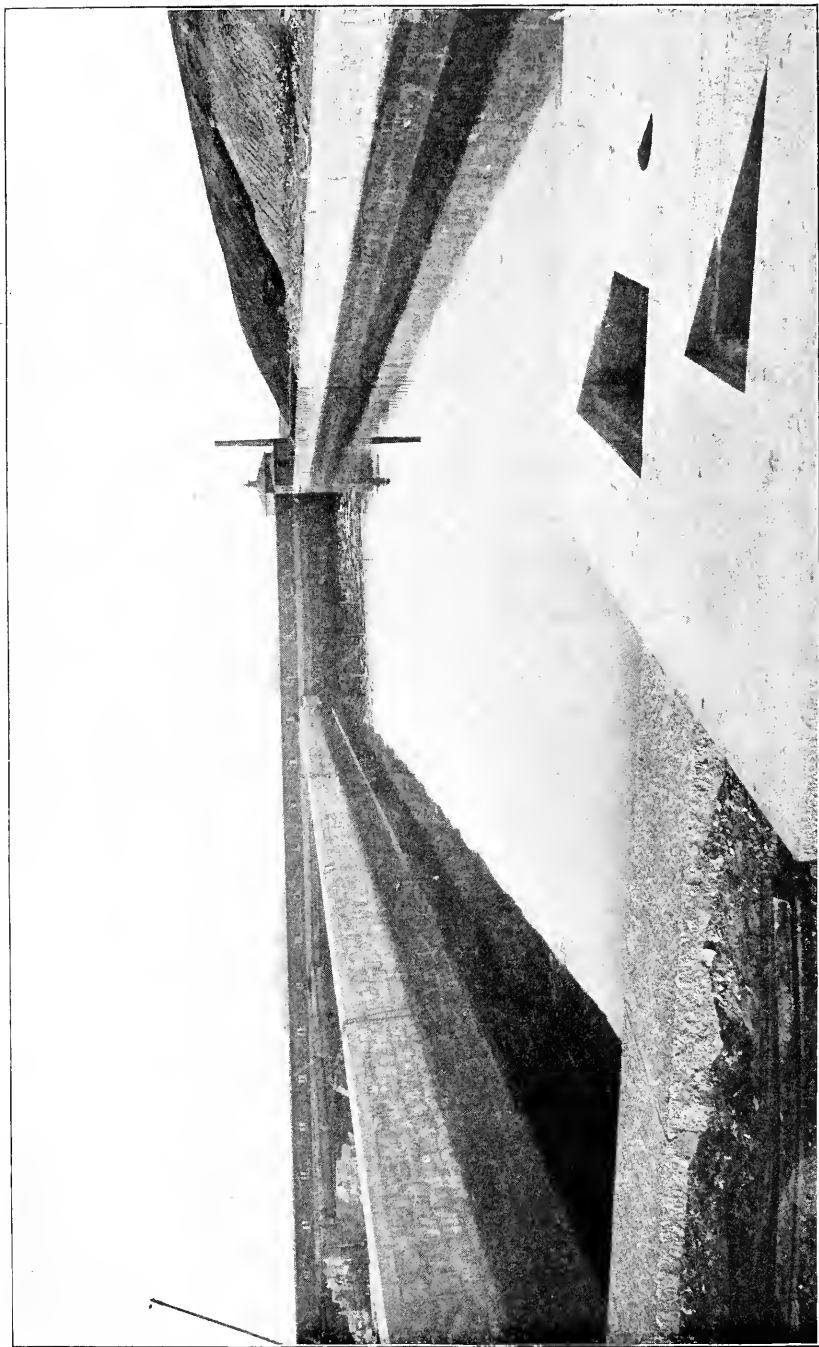
<i>Brought forward,</i>		\$3,975,352 28
Stony Brook Improvement (Chap. 397, Acts of 1899)	. . . . .	151,518 65
New Ferry Landing		12,187 69
New Ferry-boats		64,853 80
South Union Station		71,155 28
Sewerage Works		1,086,893 33
Total		\$5,361,961 03

CONSTRUCTION WORK, STREETS AND AVENUES UNDER
"323," "BOULEVARD" AND "PUBLIC ALLEY" ACTS.

The following streets, avenues and public alleys were under construction during the year, and have been wholly or partially completed at an expenditure of \$625,787.04 for surface work:

Aberdeen street.	Commonwealth avenue.
Albany and Northampton sts.	Congreve street.
Alexander street.	Cummington street.
Alford street.	Custer street.
Amory street.	Devon street.
Andrews street.	Draper street.
Angell street.	Dresden street.
Annabel street.	Edison green.
Ashley street.	Edwin street.
Astor street.	Elizabeth street.
Athelwold street.	Esmond street.
Atherstone street.	Fairmount street.
B street.	Forest Hills street.
Barry street.	Florida street.
Belmore terrace.	Fowler street.
Belvidere street.	Francis street.
Bennington street.	Geneva avenue.
Bernard street.	Gibson street.
Blandford street.	Hamilton street.
Boston street.	Harold street.
Bragdon street.	Hewins street.
Burt street.	Homes avenue.
Callender street.	Hubbard street.
Cambridge street.	Idaho street.
Canal street.	Ipswich street.
Carlos street.	Jersey street.
Chamblet street.	Josephine street.
Charlestown street.	Lauriat avenue.
Chester street.	Leeds street.
Chiswick road.	Leedsville street.
Columbia road.	Leonard street.

Leroy street.	Wainwright street.
Lonsdale street.	Waldeck street.
Malvern street.	Waterlow street.
Maryland street.	Warner street.
Mellen street.	Wensley street.
Merlin street.	Williams street.
Middleton street.	Woodcliff street.
Millet street.	Woodlawn street.
Montague street.	Worthington street.
Newburg street.	Public Alley No. 101
Nightingale street.	“ “ 102
North Harvard street.	“ “ 301
Nottingham street.	“ “ 401
Oakley street.	“ “ 402
Oakview terrace.	“ “ 403
Orkney road.	“ “ 404
Peterborough street.	“ “ 405
Peverell street.	“ “ 414
Pontiac street.	“ “ 415
Queensberry street.	“ “ 416
Rockford street.	“ “ 417
Rosseter street.	“ “ 418
Rowe street.	“ “ 419
Rozella street.	“ “ 420
Ruggles street.	“ “ 421
St. Stephen street.	“ “ 430
School street.	“ “ 431
Seymour street.	“ “ 432
Shafter street.	“ “ 433
Shirley street.	“ “ 434
South street.	“ “ 435
Spencer street, between Athel-	“ “ 436
wold and Park streets.	“ “ 437
Spencer street, between Tal-	“ “ 438
bot and Wheatland avenues.	“ “ 439
Spring street.	“ “ 440
Stanley street.	“ “ 441
Stratford street.	“ “ 442
Stuart street.	“ “ 443
Telford street.	“ “ 444
Thane street.	“ “ 701
Tonawanda street.	“ “ 702
Trinity place.	“ “ 703
Vancouver street.	“ “ 901
Van Winkle street.	“ “ 905
West Selden street.	“ “ 2001



MOON ISLAND. EXTENSION OF RESERVOIRS, BASIN NO. 4.

The Department year ending February 1, 1900, marks the close of the four years under the administration of the Hon. Josiah Quincy, and the writer of this report retires, and his successor, Mr. Bertrand T. Wheeler, under Mayor Thomas N. Hart, assumes charge of the Street Department. In these four years many Street Department problems have been solved.

The SEWER DIVISION has been most fortunate in securing and working under favorable legislative conditions which made possible sufficient appropriations to allow the very necessary work to be done on the Main Drainage plant, the starting of the system of surface drains, the rebuilding of certain important worn-out sewers and outlets, and the construction of much new work.

The dangers and unwisdom of neglecting the sewerage system of the city and the result of a failure to correct certain well-known defective conditions had been dwelt on at length by past superintendents in their reports, and many and various recommendations and calls on the City Council had been made for appropriations; but no relief had been given, largely for the reason that under the then existing statutes covering this class of work sufficient moneys were not available.

In 1896 this department made an extensive report of the conditions of the sewer system to His Honor Mayor Quincy, and as a result the Legislature was petitioned for relief, and the Act of 1897 was put in force, and under this Act and subsequent amendments the sewer system of Boston has been put in first-class condition, and the problems of the future are largely reduced to the caring for the great demand for new sewers. This question of new sewers is of much importance and magnitude, but is not so vital as was the problem presented in 1896 of putting in condition the main sewerage system, the outlets and overflows, and the laying out of the system of surface drainage; all this work was not only necessary to the progress and development of the city, but was closely related to the health and comfort of the community.

The good work accomplished under the Sewerage Act of 1897 has not been realized by the community, misled as they have been by statements made during the fight for a change in the method of assessment. The benefits to the present and the future have been so great that a brief summary of the work is given as follows:

Pumpiņg-station at Cow Pasture. This station handles nearly 100,000,000 gallons of sewage per day, and is the heart of the great South Metropolitan District.

All the pumps and engines have been put in order, iron floors substituted for wood; electric light plant installed; new coal run built; and contract made for a 70,000,000 gallon pump. This with some slight expense on boilers will put this plant in the best possible condition. Expenditure, \$136,006.41.

The storage reservoirs at Moon Island long ago reached their capacity of 50,000,000 gallons. These have been extended to 100,000,000. A sea-wall has been built to protect the outer face of the island, and many minor improvements made. Expenditure, \$202,304.19.

The sewage of Charlestown and East Boston in 1896 discharged into the adjacent water, fouling the shores and flats to such an extent as to create a serious nuisance. The North Metropolitan system controlled by the State was prepared to give relief, and under the statutes the City of Boston was paying rental for its use, but funds were not available for making the necessary connections. The majority of these have been made, and the sewage of East Boston and Charlestown is now carried to the State pumping-station at Deer Island. Expenditure, \$58,647.54.

As the suburban sections of the city developed the old water courses and natural outlets for surface water had to a great extent become obstructed, and as no provision had been made to handle this water in the existing system of house sewers some relief had for several years been urgently petitioned for. There was, however, no legislation on the statute books which gave the city the authority to provide such relief. Under the Act of 1897 the city was empowered to make takings of brooks, water courses and such other lands as might be necessary for the construction or maintenance of surface sewers or streams. The most important water courses have received attention.

Another serious menace to public health was the condition of the overflows and outlets which provided relief in time of storm. Many of these were in such condition that the sewers of certain important sections backed up flooding and damaging much property.

Certain local sewerage systems were in broken down and dangerous condition. The most important of these was the Canal street system on which the old and most congested section of the city depends. For over ten years had the department been presenting this proposition to the City Council for relief. One of the properties most vitally affected by this defective sewer was the Quincy and Faneuil Hall markets. The conditions had become almost unbearable, and



EXTENSION OF RESERVOIRS OF MAIN DRAINAGE SYSTEM AT MOON ISLAND.
Original capacity, 25,000,000 gallons. Present capacity, 50,000,000 gallons. Page 24, 1898 report shows same under construction.

certainly were most unfortunate for buildings used for the storage and sale of perishable food supplies. The rebuilding of the system is nearly completed.

The great amount of boulevard and new street work has occasioned the construction of a large amount of new house sewers, and added greatly to the property available for building purposes within the city limits.

The SANITARY DIVISION has adopted new methods, and the disposal of the wastes of the city is now made in a scientific and sanitary way.

The FERRY DIVISION has been able, under a special appropriation authorized by the Legislature, to build two new boats and contract for a third, renew all the slips, drops and tanks, and there remains a balance of the appropriation sufficient to accomplish the only thing needed to put the entire plant in satisfactory condition, namely, the rebuilding of the south ferry head-house, East Boston side.

The STREET-CLEANING DIVISION leaves its plant in good order, and by new systems has brought about better conditions.

The BRIDGE DIVISION has been handicapped by the fact that no special appropriations have been made for the last three years, but by careful and intelligent handling of such moneys as were made available the bridges are left in fairly good condition.

In STREET-WATERING, legislation has been passed which places the watering of all public streets under the control of this department, and the cost is assessed on the abutters, making the Street-Watering Division self-sustaining. This has proved a benefit and a great advance over the old method of watering some streets by private subscription, while others were cared for by the city.

The work of the PAVING DIVISION must be divided to properly state results. First, there is an appropriation for maintenance. The amount allowed would have been fairly ample had it not been for the unusual cost of snow removal and the very meagre snow appropriation. Second, loans within the debt limit made for ward improvements or special streets. From year to year the amount appropriated has become smaller, so that the last two years it was possible only to accomplish a portion of the reconstruction work desirable and necessary. In addition to the maintenance and

regular loan moneys thus referred to, there is carried in the paving account the work accomplished under loans authorized by the Legislature and made outside the debt limit. Under these special acts a great amount of work has been done; Brighton, Commonwealth, Huntington, Columbus and Blue Hill avenues completed, and a very considerable start made on Columbia road.

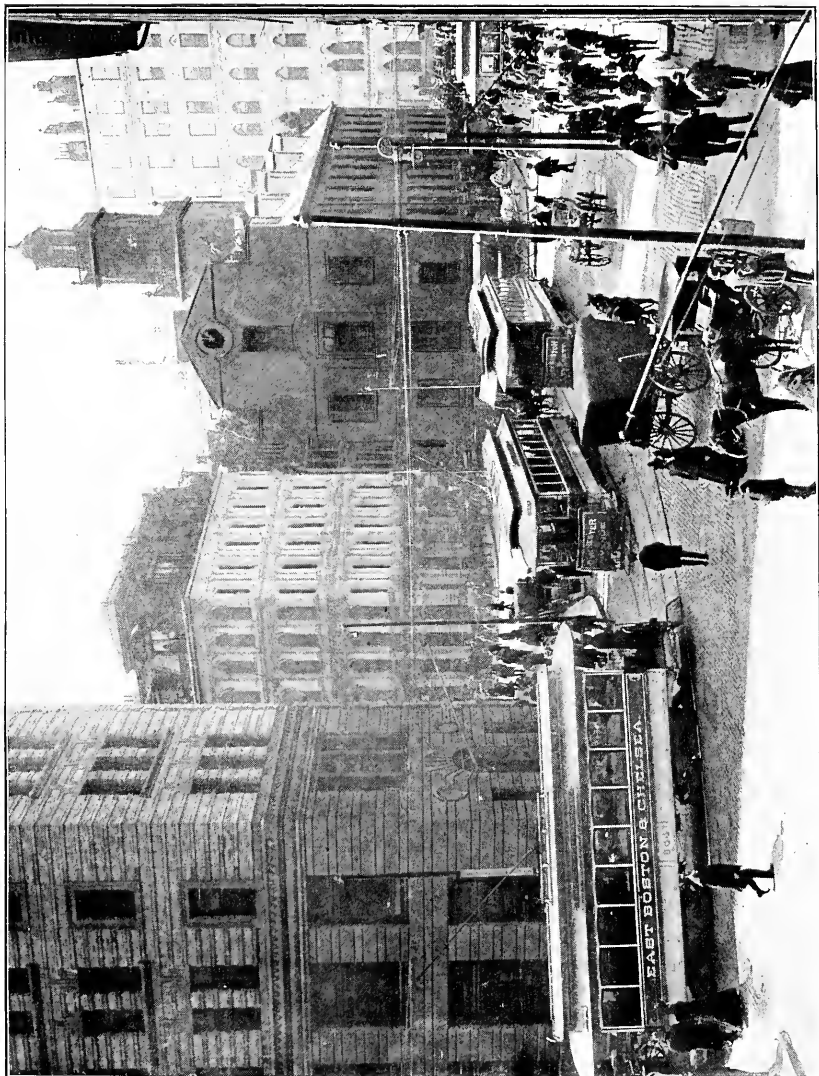
One hundred and seven assessable streets have been built, and there remains a considerable balance available for new work.

So, generally speaking, the most urgent demands which pressed upon the department in 1896 have been met. There is, however, very decided need of legislation which will make possible the correction of certain conditions which exist in the central or down-town districts.

First in importance is the renewal of pavements, which, in a large degree, are entirely unsuited to the needs, comfort and proper appearance of the city which claims such a high place in the business and social life of the country. A few of the most important streets have been put in first-class order; but generally speaking the down-town pavements date back to the time of, or before, the great fire of 1872. The great amount of underground work which has occasioned the disturbance of almost every yard of these pavements, the poor quality and worn condition of the blocks, the settling of the trenches and the general wear and tear makes a surface, which is expensive to maintain, difficult for teaming, impossible to keep clean, and is unsightly. There is a great and increasing demand for asphalt. This form of pavement will hardly stand the wear and tear of the heavily travelled streets where there are car tracks. For such streets and for the main lines of team travel, granite blocks on a concrete base seem the most suitable; but for side streets and lightly travelled streets, asphalt makes a desirable pavement, for the reason that it is more cleanly and comparatively noiseless.

Second, the widening or extension or building of such new ways as will relieve the immense team traffic between the freight receiving points and the business district.

The wholesale business district is bounded on the north by State street, on the east by the water front, on the south by Kneeland street, and on the west by Washington street. There are thousands of tons of freight going through this section of Boston every day. A great part of this freight arrives and departs from the northern terminals and steam-



STATE STREET AT CONGRESS, DEVONSHIRE AND EXCHANGE STREETS.

One of the most difficult crossings in Boston. On account of narrowness of Exchange street and car occupation of Devonshire street at this point cross-town travel is much obstructed.

ship docks. The bulk of all the freight leaving or departing from these northern terminals and steamship docks going into or coming out of the wholesale district must pass through Devonshire street or Exchange street, the other streets running north and south being almost impracticable for teaming purposes.

Devonshire street, between State street and Adams square, is but fifty to fifty-five feet between the curbs, and is occupied by two surface tracks, over which there is continual car traffic. Exchange street is but twenty-three to twenty-six feet from curb to curb. This street should be widened by taking at least thirty-one feet on the easterly side, thus making an extension of Congress street. The building on the easterly side of Dock square should also be removed, and then, with the proper paving of Union street, a material improvement in the freight traffic conditions would be brought about, as the subway on Washington street, which will certainly be built some time in the future, will relieve Congress street of much of its surface car traffic. There are other problems in this same connection of very considerable interest and bearing on the cost of merchandise transportation which should be taken into consideration by the proper authorities, both as to the best means of relief, and how sufficient moneys may be secured to pay the cost.

SEWER LEGISLATION.

The history of the origin and repeal of the Sewerage Act of 1897 should be of interest to the tax-payers and to all who in other cities have this immediate branch of municipal work in charge. In 1896 the absolute necessity of action looking to the correction of certain existing conditions in the sewerage systems of the city brought into being the act of the Legislature which, briefly stated, allowed the City of Boston to expend one million dollars annually on sewerage works, this sum to be returned to the city treasury by assessments on the estates according to the benefit. It also allowed for a maintenance charge proportioned to the use of the sewer by the property connected. The plan of assessment adopted and put in force placed the entire tax on real estate where such charges properly belong. Real estate derives a benefit from sewerage works; personal property does not. This matter was very fully treated in last year's report. Since that time, however, the Legislature has repealed the act, and substituted therefor an act which retains the appropriation

feature, but makes most unscientific and unbusinesslike provision for assessment of construction cost, so that probably less than 40 per cent. will be paid by property benefited and the balance rolled up as a debt for the general tax-payer to care for. It also repeals the charge for maintenance. The text of the new act will be found in Appendix E, page 174.

In addition to legislative opposition to the act, the matter was carried to the courts, and the adverse decision of the court may be of service to officials who are working along similar lines in an attempt to properly regulate taxation for sewerage benefits received. The petition and decision will be found in Appendix E, pages 176 to 180.

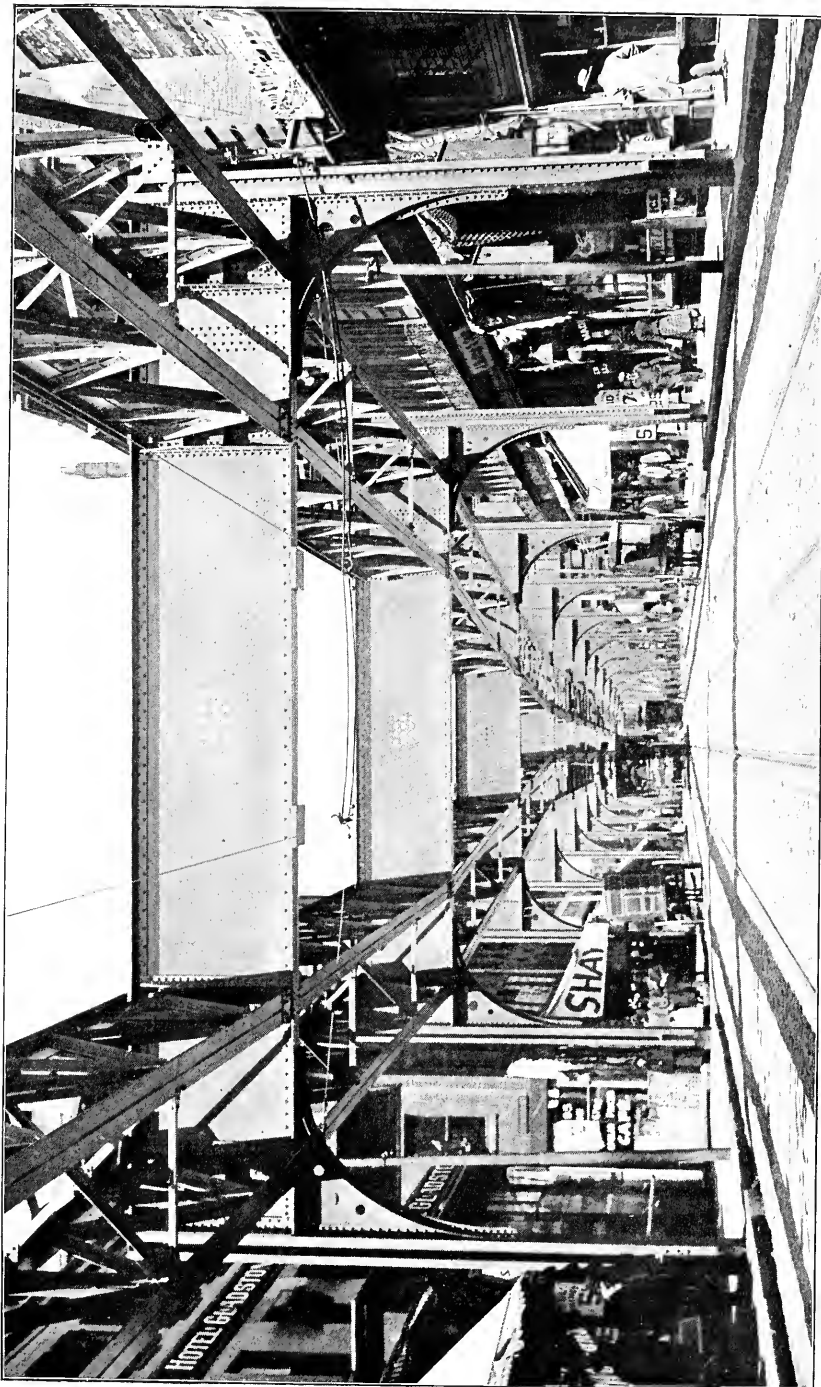
This decision made it incumbent on the city to return the tax illegally levied, and repayment was commenced at once. The tax ledger contained about 65,000 names of those upon whom sewer assessments were levied. The total amount of assessments to be paid back was \$436,312.89. The assessments by wards were as follows:

Ward 1.....	\$9,316 55	Ward 13.....	\$12,551 58
Ward 2.....	8,082 74	Ward 14.....	9,125 20
Ward 3.....	6,716 60	Ward 15.....	9,119 82
Ward 4.....	8,900 68	Ward 16.....	8,994 18
Ward 5.....	7,692 41	Ward 17.....	10,375 06
Ward 6.....	51,812 32	Ward 18.....	11,921 44
Ward 7.....	77,061 81	Ward 19.....	16,309 50
Ward 8.....	16,268 56	Ward 20.....	15,610 00
Ward 9.....	14,269 04	Ward 21.....	13,641 75
Ward 10.....	22,943 71	Ward 22.....	13,831 90
Ward 11.....	39,212 08	Ward 23.....	11,251 83
Ward 12.....	14,104 62	Ward 24.....	15,542 06
Ward 25.....	\$11,656 85		

The Street-watering Act, which was passed in 1897, was also subject to attack both in the Legislature and in the court. It has, however, stood the test. The text of the act and the decision of the court will be found in Appendix G, pages 238 to 244.

CHARGE FOR PERMITS.

Yet once again the department suffered by the ruling of the court in the case of the charge for permits for street openings, etc. A small fee had been charged varying according to the purposes of the permit from twenty-five cents to one dollar. The plan worked admirably, not only bringing in almost sufficient revenue to cover the cost of the Permit Office force, but also gave the permits better standing. The



WASHINGTON STREET, NEAR DOVER STREET, SHOWING ELEVATED RAILWAY STRUCTURE.

following decision was given by Judge Morton in the suits brought by the Boston Elevated Railway Company and the Boston Gas Light Company, against the Superintendent of Streets of the City of Boston, regarding the payment of a fee of \$1 by the companies for each permit to open streets in the city :

“As I understand these cases, the only matter in controversy is the right of the Superintendent of Streets, under the direction or authority of the Mayor, to compel the petitioners to pay \$1 for each permit which they are required to have to open streets in the lawful and proper prosecution of their business.

“I do not understand that any question is seriously made that except for their refusal to pay the fee required for the permits they would have been issued, or that the petitioners are not otherwise entitled to them.

“Something is said in the answer to the petition of the Gas Company about a consent to open the streets being required, and none having been given. How much that is relied on I do not know.

“In answer to the Elevated Company's petition it is admitted in substance, as I understand, that they need no further authority than they have for doing the work to which the applications for permits relate. If the want of consent in the Gas Company's case, on the part of the proper authorities, to the opening of the streets is relied on, then that case will have to stand for further hearing on that point.

“But I assume that the only want of consent that is relied on is that arising out of the refusal to pay the charge of \$1 for the permits.

“There is no statute or ordinance authorizing the collection of the fee. In that respect this case differs from those cited by the respondent in which the imposition of such charges has been sustained. The respondent justifies it under Statutes of 1885, chapter 266, section 6, by which the executive power vested in the Board of Aldermen as surveyors of highways and otherwise is now vested in the Mayor, to be exercised by him through the heads of departments.

“But however just and reasonable the charge may be in itself, I do not see how, in the absence of any statute or ordinance authorizing it, the Mayor and Superintendent of Streets have the right to impose it. It seems to me that it does not come within the scope of the executive and administrative powers of the Mayor and Superintendent of Streets to institute a fee bill, and to compel parties having

otherwise a legal right to permits to pay the fees thus established therefor as a condition of issuing them. Such a power, I think, can only be conferred in cases like these by statute or ordinance.

"The expenses rendered necessary in the way of clerical help and supervision and examination must be presumed to be included in the appropriation, or must otherwise be provided for.

"As I understand the issue presented it seems to me the writ should issue."

The City Council was then requested to pass the necessary ordinance, but the matter was killed in committee and no further action has been taken, and the general public thus continues to stand the expense of work which benefits the individual only.

TREMONT STREET TRACKS.

Under provisions of section 35 of chapter 548 of the Acts of the year 1894, it was required that the company owning and operating the street car tracks on Tremont street should remove them when the subway was put into service. This was done in the early part of October, 1898.

The Legislature of 1899 passed an act recommitting the question to the popular vote of the citizens of Boston at the city election held December 12, 1899. The act in part was as follows:

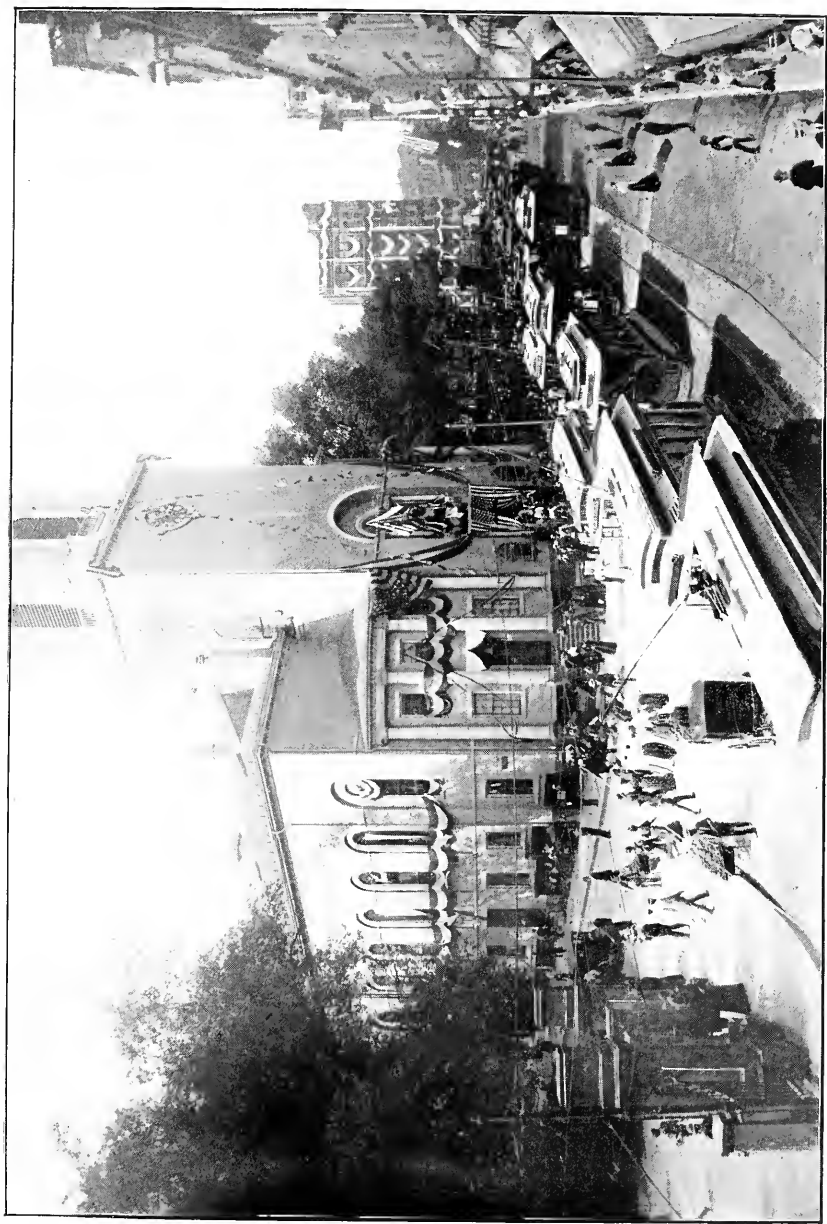
SECTION 1. The West End Street Railway Company and the Boston Elevated Railway Company as its agent, are hereby authorized to replace upon that part of Tremont street, between Boylston street and Scollay square, and upon that part of Boylston street between Park square and Tremont street, the surface tracks which were removed in accordance with the order of the Boston Transit Commission under the provisions of section thirty-five of chapter five hundred and forty-eight of the acts of the year eighteen hundred and ninety-four, and to use said tracks for the running of street cars.

And this act shall not take effect except for the purpose of filing the agreement above described, unless it shall be accepted by a majority of the voters of said city voting thereon at the municipal election in the year eighteen hundred and ninety-nine.

The result of the vote was as follows:

No, 51,643; Yes, 26,166.

The city is to be congratulated on this decision. Had the tracks been returned the conditions of car transit would have



TREMONT STREET, FROM PARK STREET, LOOKING NORTH, SHOWING SURFACE CARS, TRACKS AND WIRES.

been but slightly relieved, and the only result would have been to put off the question of how to handle for future time the growing traffic of the city centre; and also to abandon the opportunity of making a splendid street for the highest class of retail trade, and furthermore taking away the one street without tracks in this section of the city for those whom business or pleasure require to use wagons or carriages.

The accompanying cut, taken by permission from the report of the Rapid Transit Commission, shows what Tremont street was before the building of the subway and the taking up of the tracks and the condition to which it would have returned had the vote been "Yes." The next cut shows the street as it looks to-day. I trust that next year's report may show a picture of this street properly paved with asphalt from Boylston to Winter streets, and thereon to Bosworth street (owing to the grade) with best block paving, and from thence to Tremont row, either asphalt or block.

EIGHT-HOUR DAY.

The working hours of the department have been substantially the nine-hour day, with the exception of bricklayers, who have had the eight-hour day. At the city election held December 12, 1899, the following act was submitted to the citizens:

SECTION 1. Eight hours shall constitute a day's work for all laborers, workmen and mechanics now employed, or who may hereafter be employed, by or on behalf of any city or town in this Commonwealth.

SECT. 2. All acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 3. This act shall not take effect in any city or town until accepted by a majority of the voters voting thereon at an annual election. Such vote shall be taken by ballot. When so accepted this act shall take effect from the date of such acceptance.

The following was the result of the vote:

Yes, 60,836; No, 14,483.

The eight-hour day, therefore, becomes the legal labor limit for the employees of the city of Boston, and was immediately put into practice. Under this new condition the cost of maintenance and construction will be somewhat increased, but by how much can only be estimated after actual test.

PENSIONS.

The subject of pensions for city employees is under discussion at the State House, a bill having been introduced which allows a city to pension its old employees. The plan as outlined in the bill provides that employees shall contribute a certain sum from their wages and the city set aside an equal sum; the sum so created to provide for their payment.

HOUSE BILL NO. 18.

January 10, 1900.

(Introduced on leave by Mr. Jeremiah F. McCarthy of Boston.)

AN ACT TO AUTHORIZE CITIES TO ESTABLISH DEATH
BENEFIT AND RETIREMENT FUNDS FOR THEIR
EMPLOYEES.

SECTION 1. Any city is hereby authorized to provide by ordinance, as a part of the compensation to its employees, for the retirement at a certain age of any or all of such employees who have been in its employment for a period of not less than fifteen years, for the payment of death benefits to the families of such employees and for deducting the whole or any part of the contributions necessary to create and maintain a fund for such payments from the salaries or wages paid to such employees by such city; and any city is authorized to raise by taxation for such fund an amount each year not exceeding the contributions of its employees to be made during such year, as estimated by the city auditor of such city.

SECT. 2. This act shall take effect upon its passage.

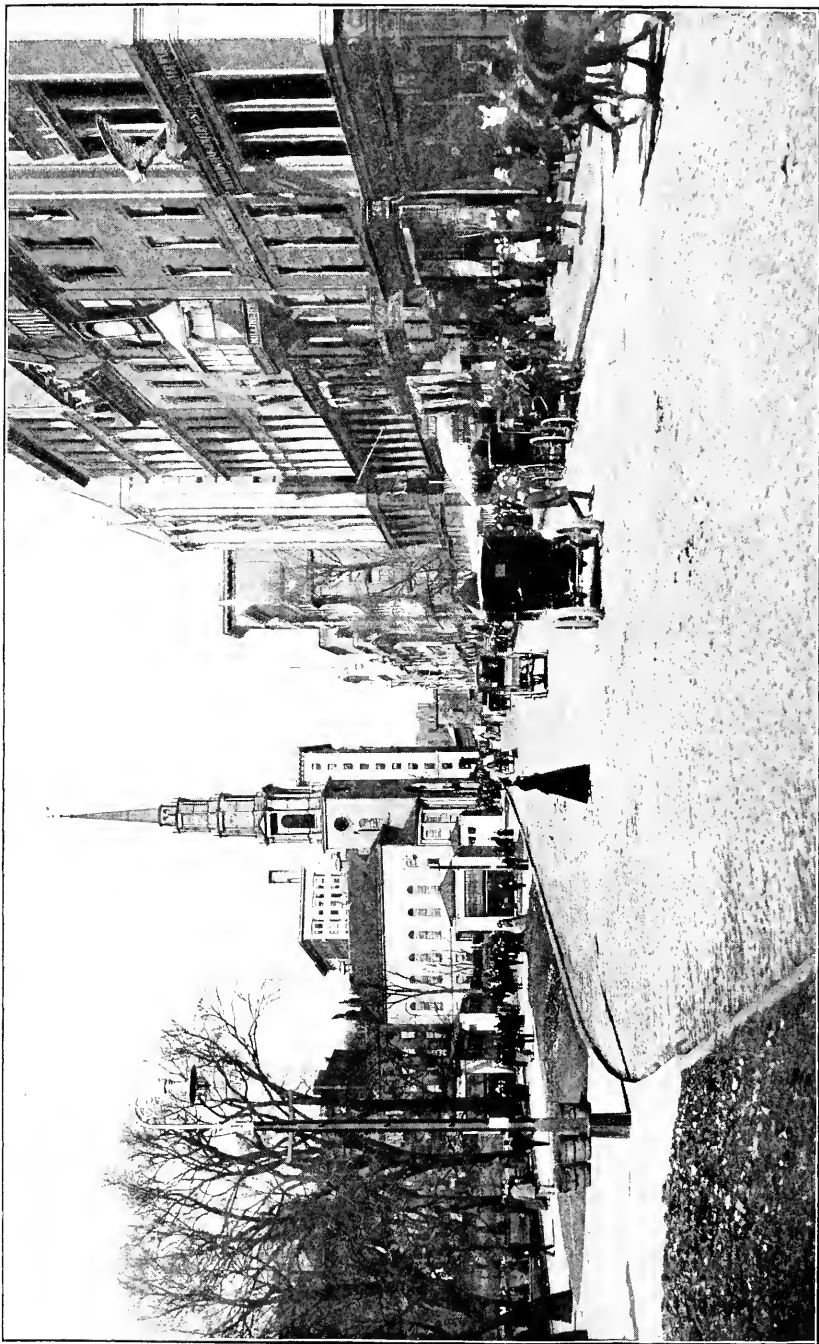
In theory it is doubtful if an entirely sound argument can be advanced in favor of such a pension system, but purely as a matter of business my experience leads me to believe that the city will obtain better results and at substantially no cost if a means were provided for dispensing with the services of men who have been in the employ of the city so long and with good records that no superintendent will discharge them, and yet on account of their age or infirmities are a hindrance to proper and efficient work.

Call the keeping of these employees sentiment, charity, or what you will, the fact remains that they will be kept unless some plan is adopted to care for them.

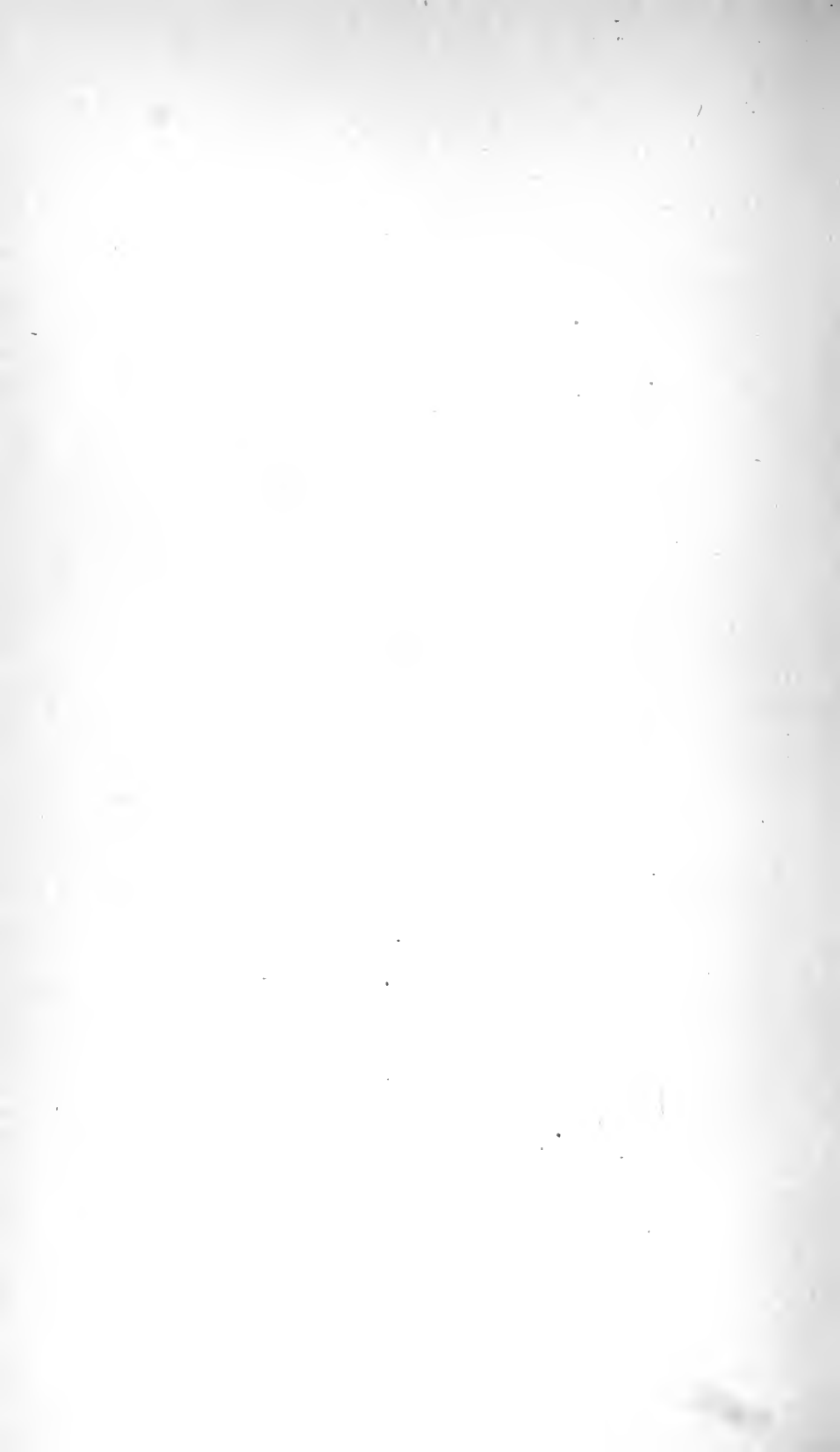
The proposed arrangement therefore becomes a plain, cold, business proposition, and is worthy of the most careful consideration.

REGULATIONS CONCERNING PEDLERS.

After careful and thorough investigation of various complaints received regarding certain pedlers, and under authority vested in the Superintendent of Streets by sections



TREMONT STREET FROM WEST STREET LOOKING NORTH. FREE FROM TRACKS, CARS AND WIRES.



35 and 88, of chapter 47, of the Revised Ordinances of 1898, a complete system of registration has been inaugurated at the Permit Office, 28 Court square. Under this system every pedler engaged in selling in the public streets of Boston is registered, and furnished a number by the department. These numbers are of such size and style as to be easily read, and are placed on the right-hand side of the wagons, and in a conspicuous position on push-carts and receptacles.

By the system of registration the residence of each pedler is obtained, and his signature is also required, so that it is available as a means of identification at any time..

It is expected that the careful registration and numbering of these pedlers, thus compelling them to obtain the proper license, will result in a very considerable increase in the amount paid into the city treasurer. While the honest pedler does not suffer from these regulations they operate as a check upon those who are dishonest, and their customers — who are found to a large extent among the poorer classes — may be expected to benefit thereby.

As it is now possible to identify any pedler giving short weight, acting improperly, or who scatters refuse in the street, it is hoped that, with the co-operation of the public in reporting such violations of law, the new system will cause a marked improvement in the cleanliness of the streets, and the conduct of the pedlers in the sections frequented by this class of dealers, and will remove just cause of complaint which may have existed on the part of shopkeepers or residents in such localities.

REMOVAL OF SNOW IN PUBLIC ALLEYS.

Owing to the great inconvenience to the department teams having charge of the removal of house waste, and to the market, milk, grocery and other wagons using these ways, caused by the placing in the alleys large quantities of snow from the yards and roofs, a bill was introduced into the Legislature permitting the Street Department to remove such snow at the cost of the abutters.

The bill was defeated, however, and the Street Department therefore adopted a plan which has worked satisfactorily, namely: To require the abutters to provide themselves with a permit from the department before allowing the placing of snow in these alleys, and one condition of the granting of such permit is that the applicant must show an agreement with some reliable contractor to immediately remove the snow so placed. The list of such permits are furnished to the police, and, with their co-operation, the matter is now in a

satisfactory condition. Placing of snow in these alleys without permission is, under the statute, punishable by fine.

STREET-CLEANING AND SANITARY DIVISIONS IN EAST BOSTON.

For some years it has been recommended and effort made to do away with the contract system for collecting the ashes and offal and the sending of the Charlestown gang to clean the streets in East Boston, and that the work should be done by the direct labor of an East Boston force. This has now been carried into effect. As regards the ashes and street cleaning and the offal removal by the city force will be undertaken later when certain arrangements can be made as to its disposal.

Some time since the city yard, which comprised the district yard of the Sewer and Paving Divisions was sold, and arrangements made to remove to the wharf property owned by the city in another section of East Boston. Plans were prepared for the new building, but in order to forward the matter and put the new arrangements in force during the construction of the new building the old buildings on the property have been utilized, and, at a small expenditure, fitted up so that there is now ample temporary accommodation, both stable and office, for the four divisions. The Sanitary and Street-Cleaning Divisions, with new carts and horses, and with a proper force of men, should now give East Boston as good service as that received in any section of the city.

The proceeds of the sale of the property formerly occupied by the department will, with a small additional appropriation, be sufficient to provide for the new building.

The new building will be a model of its kind, and better adapted to the needs of the department than any similar building in the city. The plans show that the stable accommodations will be of the very best, with sanitary stalls, etc., and the offices will be properly and conveniently arranged. The architect's outside view is shown on page 42, Part II.

HORSES.

The department owns and stables five hundred and forty-five horses. Care and judgment have been used in their purchase, and among them there are many fine specimens of the draught horse. At the 1899 Boston Horse Show four entries were made; but owing to an accident at the runway but one of the horses could be exhibited. This one secured a prize.



THE NEW CHARLESTOWN BRIDGE, OPENED NOVEMBER 27, 1899, AND ALSO SHOWING OLD BRIDGE (CHARLES RIVER), OPENED JUNE 17, 1786, NOW ABOUT TO BE TORN DOWN.

One improvement made at small expenditure has proved of great value. In the South Sanitary and Street-Cleaning yard, on Albany street, a small but perfectly equipped veterinary hospital has been built, and has already been of much service in bringing back more quickly to health and good condition sick and injured horses.

The following table shows the number of horses and distribution February 1, 1900:

Bridge Division	12
Paving Division	130
Sanitary Division	224
Sewer Division	75
Street-Cleaning Division	101
Street-Watering Division	3
	<hr/>
	545

NEW BRIDGES.

This year sees the completion of two new bridges and the beginning of the rebuilding of two others.

Charlestown Bridge.

The Charlestown bridge was started in 1894, and built under the Rapid Transit Act; it was opened for public travel November 27, 1899. The old so-called Charles River bridge, the first bridge built in Boston, running parallel with the new one, was then abandoned. In connection with the building of this bridge the Street Department was called upon for the rebuilding of the roadway approaches and other work incidental to the changes in grade and conditions. At the opening ceremonies Hon. George G. Crocker, chairman of the Rapid Transit Commission, delivered the following address:

When the government of the Company of Massachusetts Bay was in the summer of 1630 transferred to this country, the Governor, John Winthrop, first took up his abode in what was then called not Charlestown, but Charlton. Three meetings of the Board of Assistants in August and September were held there, but a scarcity of water in that district and the abundance of good springs on the opposite side of the river led the Governor in the autumn to move across to the peninsula, which had been known as Shawmut or Trimountaine, and to which the Board of Assistants had on the 7th of September given the name of Boston.

On the 9th of November, at the fifth meeting of the Board, being the second held in Boston, it was ordered that whosoever should first notify the Governor that he was willing to undertake to set up a ferry between Charlton and Boston should be allowed to collect certain specified tolls thereon. An entry made under date of the

14th of June of the following year (1631) shows that the operation of the ferry had then been undertaken by Edward Converse.

Nine years later, in 1640, this ferry franchise was, by the General Court, granted to Harvard College. For 146 years thereafter the profits derived from it went to promote the cause of education at that institution.

In 1785 John Hancock, Thomas Russell and others were incorporated with power to build a bridge between Boston and Charlestown, "where an ancient ferry had been established." The corporation was authorized to collect tolls for the term of forty years and during that term was required to pay two hundred pounds each year to the college.

On the 17th of June, 1786, the Charles River bridge, the first bridge connecting Boston with the mainland, was opened with much ceremony, including the firing of cannon, a civic procession and a grand dinner, with many toasts and speeches.

The bridge which we now overlook is, therefore, in its 114th year.

By the act of the year 1894, which authorized the construction of the subway, the Boston Transit Commission was instructed to build a bridge across the Charles river between the Charles River bridge and the Fitchburg Railroad bridge. The completed work is now before you. The engineers have been William Jackson, the City Engineer, and his assistant, John E. Cheney. Of their care and skill the structure is the proof and will be the memorial.

Summer-street Bridge.

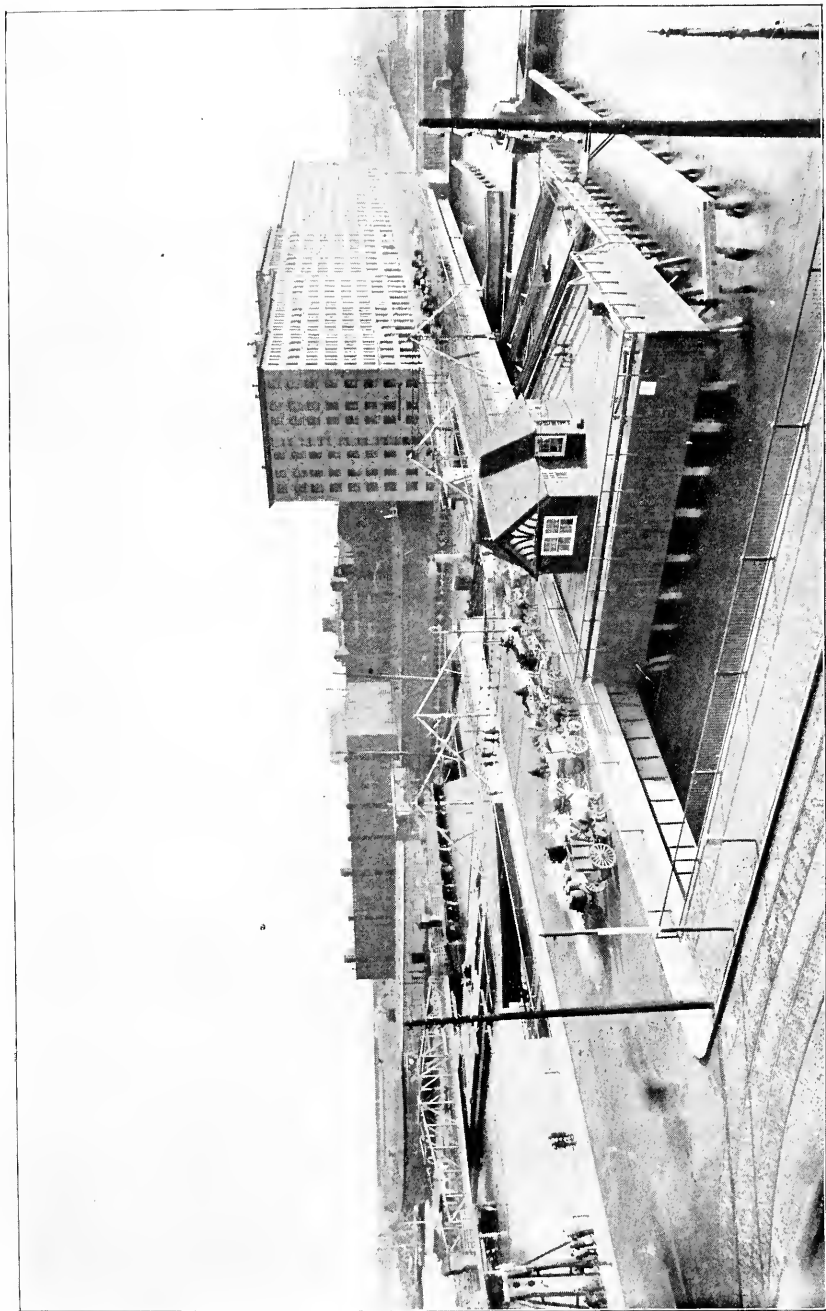
The new bridge carrying Summer street over the Fort Point channel was completed and opened for day travel August 14, 1899. This bridge is a steel-plate girder deck bridge with a double draw of the retractile type, and relieves to a considerable extent the pressure on Congress-street bridge and is an important approach to the rapidly developing lands of the Commonwealth, and the freight of the N.Y., N.H. & H. R.R. Co.

Malden Bridge.

By act of the Legislature of 1899 Boston was required to build a new bridge connecting Boston at Alford street, Charlestown, with Malden, the entire cost to be borne by Boston, and the amount authorized and ordered set aside inside the debt limit was \$200,000. The accompanying pictures show the temporary bridge nearly completed, which is to serve during the rebuilding.

West Boston Bridge.

In 1898 the Legislature passed an act authorizing the appointment of a special commission to rebuild the West Boston bridge connecting Boston and Cambridge. This commission, consisting of the Mayors of Boston and Cambridge for the time being, and E. D. Leavitt, has the work well in



NEW SUMMER STREET BRIDGE OPENED FOR TRAVEL, JANUARY 26, 1900. ACROSS THE BRIDGE ARE THE NEW BUILDINGS OCCUPIED BY THE WOOL TRADE. BEYOND ARE FREIGHT TERMINALS OF THE N. Y., N. H. & H. R. R. CO., AND THE COMMONWEALTH LANDS.

hand, and has constructed the temporary bridge and placed the same in charge of the Boston and Cambridge Commissioners to maintain and care for until the new bridge is completed. As a matter of record the following brief history of the old bridge about to be removed is added: This bridge was erected by popular subscription raised on January 7, 1792. It was completed and opened for travel November 23, 1793, bought by the Hancock Bridge Company July, 1846, and finally made a free public bridge February 1, 1858.

WIDENING OF BRIDGES.

The draw of the Chelsea North bridge is being widened to accommodate the large modern coal-carrying barges, a portion of the expense being borne by the New England Gas & Coke Company, to whom the greatest benefit will come from the improvement, their extensive plant being located above this bridge.

RAILROAD BRIDGES.

To secure entrance to the new Terminal Station the following changes were necessary:

The work along the Boston and Providence Railroad extension consisted primarily of the construction of a four-track railroad parallel with and immediately south of the location of the Boston and Albany Railroad, and on the same grade between Dartmouth and Albany streets, and extending to the new South Station at Summer street.

The streets encountered were all restored to their original lines except Way street, which was reduced to about half its former width, and Orange lane, which was entirely abandoned. The restored streets were carried over the new tracks at about the same grade as existed on the old Boston and Albany Railroad bridges, and generally by the same type of bridge as that over the old tracks. At Dartmouth street, Columbus avenue, Castle square and Broadway, the bridge floor consists of I-beams and brick arches with concrete and asphalt pavement.

As the former grades of all the streets descended more or less rapidly from the old Boston and Albany bridges the new level of bridges carried south necessitated either an extension of the same grade or an increase in its rate, thereby requiring numerous changes to houses or their entrances on both sides of the streets raised. Area ways were built up to new grade, railings erected, steps rearranged with a view to damage as little as possible the adjoining property. A

considerable change in grade occurred at Broadway and Albany street where the new grade is about six feet above old line.

Street traffic was maintained on temporary wooden structures at all streets during progress of the work excepting for short periods at Dartmouth and Washington streets, and at Ferdinand street and Broadway, which were closed except for foot passengers until permanent work was completed.

Broadway is still unfinished owing to lack of material for the new steel bridge over the Boston and Albany Railroad tracks, the new lines of which were changed to connect with the new South Station.

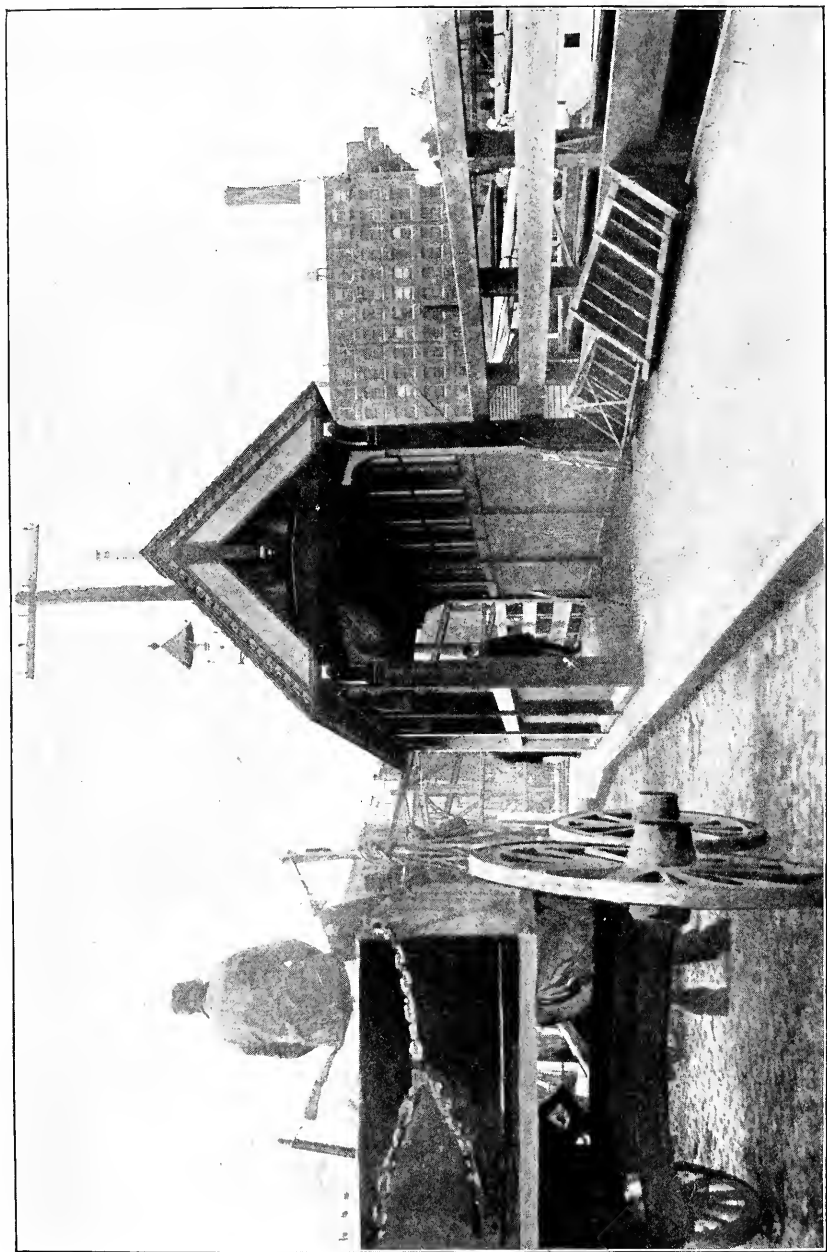
The pavements on streets which were raised were relaid as they existed before change was made, except at bridges, and at Castle square, where pitch and pebble joints took the place of gravel joints in the granite blocks, and at Dartmouth street where the former macadam was replaced with granite blocks laid with gravel joints.

BRIDGE SHELTERS.

As a result of a numerously signed petition received from firms doing business in the neighborhood of Congress and Summer-street bridges stating that their employees, many of whom were women, were subject to much suffering during inclement weather at times of opening of the bridge for the passing of vessels, the matter of shelters was taken in hand and the first of these has been erected at the Congress-street bridge, and should this prove of value, other bridges will undoubtedly be provided with such structures. On the opposite page will be found a picture of the one which is already in place.

VIOLATION OF CITY ORDINANCES.

In order to secure the carrying out of the order for a third separation of the waste and to lessen a nuisance arising from the constant violation in certain sections of the city of the ordinances forbidding the throwing of refuse into the streets, the Board of Police, by request, assigned to the Street Department two regular police officers. These officers did duty with the department for some months under the supervision of the deputies of the Sanitary and Street-Cleaning Divisions. The officers so assigned proved to be of the greatest assistance, and a large number of convictions in court were secured, over one hundred, and much better conditions brought about. The activity, intelligence, good judgment and tact of these officers entitle them to the thanks of the department, and I herewith tender it, and I



CONGRESS STREET BRIDGE, SHOWING SHELTER BUILT TO PROTECT PEDESTRIANS FROM THE WEATHER WHILE WAITING FOR PASSING OF VESSELS THROUGH THE DRAW.

also express my appreciation to the Board of Police for their assistance. But again, as in past reports, I must state that much of the litter of paper and rubbish which creates the unsightly conditions and occasions much unnecessary expense to the department might be stopped if the police force generally would give this matter their attention.

ELEVATED RAILROAD.

The construction of the elevated railroad was commenced this year. The foundation piers were placed over nearly the entire route, occasioning for a time much disturbance of the streets. The putting in place of the upper structure is now in progress.

The iron structure work is of new design, and is placed so as to obstruct the light as little as possible. Accompanying pictures show the change occasioned in street conditions.

VETERANS' PREFERENCE ACT.

Under its operation a veteran once taken into the service cannot be dismissed, suspended, transferred, disgraced or disciplined in any way except after hearing and charges proven before the Mayor. The consequence of this act is directly prejudicial to the best interests of the veteran. If the act were amended so that only the preference clause remained, and that not mandatory; or, in other words, if a veteran placed on the list *might* be appointed in preference to any other by the head of a department, and all other restrictions now in the act removed, I feel sure that many more veterans would receive appointments, and it would work to the best interest of all.

ASPHALT AND ARTIFICIAL STONE GUARANTEE.

The practice of past years has been to require a five years' maintenance and good condition guarantee from the contracting companies for asphalt and granolithic walks. This year's contracts were all made with a ten-year guarantee clause.

SMOKE NUISANCE.

Constant supervision and activity on the part of this department is necessary to prevent the increase of the smoke nuisance. Difficulty in securing the proper grades of coal forced the department for a time to temporary leniency, as large users of soft coal in most cases seem willing, under ordinary conditions, to co-operate as far as possible in preventing the trouble.

The introduction of coke at fair prices and in sufficient quantities, if found practicable as fuel in the large manufacturing plants will greatly aid in the solution of this problem.

SNOWFALL AND RAINFALL.

The snowfall for the year was excessive. The following table showing the snowfall and rainfall for the years since the present organization of the department is of interest:

Snowfall (inches).

MONTH.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.
November.....			3.0	0.4	6.7	.....	2.2	8.1	17.8	.1
December.....	14.5		2.0	18.5	13.5	5.2	8.6	7.8	7.7	.....
January.....	14.7	12.0	14.6	15.0	13.9	9.5	18.2	16.3	6.1	8.3
February.....	13.7	11.5	35.3	21.6	8.8	9.5	10.9	11.5	30.7	.....
March.....	16.2	20.0	4.5	.....	3.8	14.5	3.3	6.0	9.3	.....
April.....			7.9	8.5	0.5	0.2	.....	2.2	.....	.....
Totals.....	59.1	43.5	67.3	64.0	47.2	38.9	43.2	51.9	71.6	8.4

Snow Account.

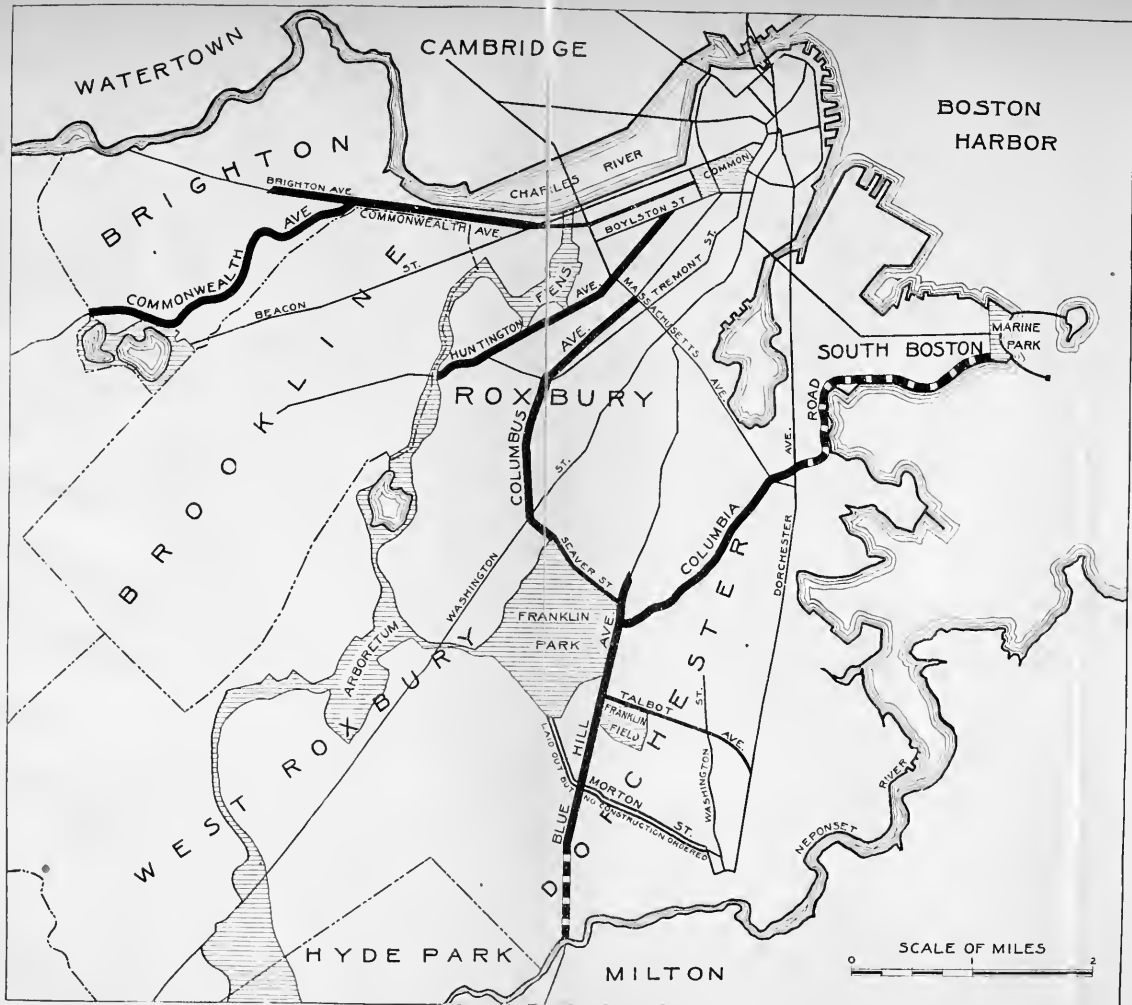
1891-92 . . .	\$102,410 86	1896-97 . . .	\$68,741 07
1892-93 . . .	60,190 20	1897-98 . . .	116,224 20
1893-94 . . .	151,943 33	1898-99 . . .	172,963 48
1894-95 . . .	78,381 71	1899-1900 . . .	154,625 18
1895-96 . . .	84,809 08		

Average for nine years, \$110,032 12.

Rainfall (inches).

	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
January.....	3.40	3.85	2.26	3.01	3.79	2.25	3.16	3.50	4.19
February.....	2.53	.36	4.82	3.15	1.11	3.94	2.12	4.81	3.03
March.....	2.70	1.68	2.80	1.01	2.72	5.41	2.79	1.82	5.95
April.....	1.68	.93	3.13	2.78	3.65	1.56	3.17	6.31	1.29
May.....	1.56	5.15	5.23	4.12	2.71	1.68	4.00	4.33	.81
June.....	3.06	3.05	2.20	.80	1.73	2.71	4.46	1.60	2.86
July.....	3.73	2.56	1.72	3.01	2.98	2.90	4.22	4.42	2.52
August.....	3.87	4.87	6.46	3.03	3.24	2.15	3.95	6.38	2.52
September.....	2.29	1.90	1.59	2.14	1.53	6.40	2.38	1.93	5.09
October.....	5.56	2.31	2.94	5.11	6.19	3.15	.41	7.17	2.40
November.....	2.20	2.94	1.83	3.10	8.07	3.70	6.19	5.32	2.51
December.....	3.50	.87	5.16	4.28	2.45	1.70	3.92	2.19	1.52
Totals.....	36.08	30.47	40.14	36.54	40.17	37.55	40.77	49.78	34.69

In this rainfall is included the precipitation during the winter months, which equals .1 of an inch to 1 inch of snowfall.



PLAN SHOWING AVENUES UNDER CONSTRUCTION IN 1895: 6-7-8 and 9

Solid line shows completed work. Broken line shows work under construction.

PAVING DIVISION.

Expenditures.

Maintenance.
\$860,057.86

Specials.
\$1,331,729.13

It is always extremely difficult in advance to give an estimate of the amount required for the maintenance of the Paving Division, for the reason that much depends upon weather conditions, and the sum needed is also dependent to some extent on the provisions made for special work in the annual loan bill to be passed at a later date by the City Council. This is well illustrated by the experience of the past year. The amount for maintenance recommended by this department was \$775,000 and an additional sum sufficient to cover the cost of snow removal, whatever that might be. The appropriation as made was \$690,000 plus \$50,000 for snow, making in all \$740,000.

This appropriation, had the weather conditions been normal, or had any fair sum or the usual amount been appropriated from loans for special and improvement work, might have been made to cover the maintenance cost. The year preceding this (1898) the amount allowed for reconstruction work was nearly fifty per cent. less than the amount allowed for the several years previous for similar purposes, and the expenditure for snow was nearly twice the average for the past few years, thus making it impossible to do any work other than that most necessary; and certain conditions, which should have been improved, had to be left unchanged until the present year, with the expectation that a proper amount would be allotted for street improvements in the various districts. The conditions of the present fiscal year, however, have been even more difficult. Commencing with the great storm of November 26, 1898, the winters of 1898 and 1899 made a record for snow and difficult weather conditions almost unequalled in the history of the consolidated Street Department, and the expense of snow removal alone was \$154,625.18.

Under modern conditions the streets must be cleared of snow; and particularly in a city where the business sections are so congested the streets must be promptly put in proper condition for travel.

This created at once a shortage over and above the amount allowed for snow of \$104,000. As the current revenue of the city had been allotted to the various departments, it was not possible to make good this amount. The Mayor, however, in anticipation of surplus income, which at the end of the year would be available, allowed it to be carried as an

amount to be made good to the snow fund, whenever under the ordinances transfers of surplus money could be made. Even the necessity for this transfer to the snow fund, however, might have been avoided if an amount in any degree adequate to the calls upon the Paving Division had been appropriated during the year.

The annual appropriation for street construction and reconstruction under the general law had been, since the consolidation of the Street Department, an amount averaging some \$800,000 with the exception of last year, when the amount dropped to \$348,000 and the amount made available this year was but \$292,600, of which but \$75,000 was available for general work, the balance being assigned to special streets. Any one familiar with the cost of street construction, where the street is to be thoroughly rebuilt, knows that \$3,000 is an utterly insignificant sum to cover any ward in the city; and an equal division of the \$75,000 allowed but that amount to each ward.

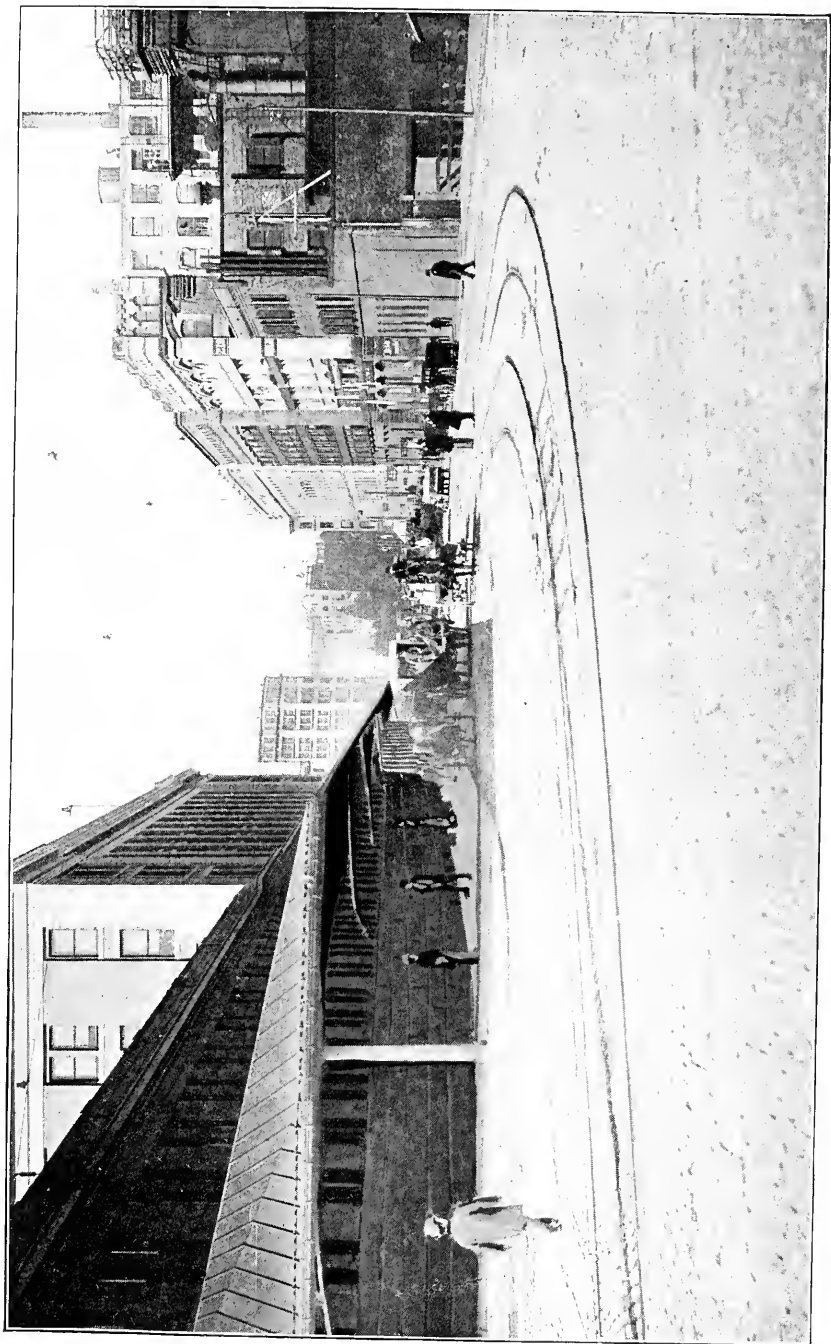
To show the difficulties which this entailed, it is but necessary to refer to the fact that for some years immediately previous to 1898, the amount allowed for each ward was \$25,000. Thus it was absolutely necessary, in order to relieve conditions which were either dangerous or where the demand for improvement was universal and proper, to use a considerable portion of the money, which was appropriated for maintenance only, for work usually and properly covered by loan money. It is safe to assume that at least \$100,000 of the maintenance money was required under such conditions as these. Thus the entire year has been a constant effort to keep as close to the appropriation as possible, and yet at the same time to do whatever was absolutely necessary and could be reasonably covered by the transfer expected at the end of the year.

The Paving Division, which has charge of the street signs, has in this line done a great deal of work, so that the city is better supplied with signs than ever before.

This fall, the suburban sections, the cleaning of which devolves on the Paving Division, have been most thoroughly gone over, this being deemed important work, as clean gutters and clean streets before the cold weather sets in mean much to the health and comfort of such districts during the winter.

The division has charge of the maintenance and reconstruction of about four hundred and eighty-nine (489) miles of streets.

The following shows the amount and kind of reconstruction work done by the Paving Division during the year :



TERMINAL STATION. SUMMER STREET WIDENED AND REBUILT AT CORNER OF DORCHESTER AVENUE AND AT ENTRANCE TO NEW SUMMER-STREET BRIDGE.

	Sq. yds.
Granite blocks on concrete base, with pitch-joints	41,632
Granite blocks on gravel base, with pitch-joints	991
Granite blocks on gravel base, with gravel-joints	59,577
Asphalt	14,190
Macadam. See note.	

NOTE.—A very large portion of the work of the Paving Division is the reconstruction of macadam streets. The amount of this work is best shown by the number of feet of edgestone set and reset, gutters laid and relaid, and brick sidewalks laid and relaid, which are as follows:

Edgestone set and reset, 185,260 linear feet. Gutters laid and relaid, 92,537 square yards. Brick sidewalks laid and relaid, 79,171 square yards.

Crushed Stone, Ballast and Telford.

Output of Stone from City Crushers.

	Crushed Stone. <i>Tons.</i>	Telford. <i>Tons.</i>
Bleiler's ledge	37,523	153
Centre street crusher	15,585	
Chestnut Hill avenue crusher	788	
Codman street crusher	11,163	
Commonwealth avenue crusher	41,256	9,484
Dimock street crusher	22,088	
Rosseter street crusher	33,800	
Totals	162,203	9,637

On Commonwealth avenue the work has been nearly finished, so that the avenue is practically completed from Arlington street to the Newton line. On Columbia road, from Blue Hill avenue to Mt. Vernon street, the work is finished with the exception of the section in the immediate vicinity of the N. Y., N. H. & H. R.R., Midland Division, which will not be completed until the new bridge is built. The section from Mt. Vernon street easterly has been filled and graded.

Charlestown street, from Haymarket square to Causeway street, has been widened, and the roadway paved with large granite blocks on a concrete base with pitch-joints. This work has been done under authority of chapter 346 of the Acts of 1897.

On Ipswich street the steel superstructure over Charlesgate West has been constructed.

Asphalt surfaces were laid on the following streets: Harrison avenue, between Kneeland and Harvard streets; Milton street, Ward 8; Endicott street, between Cooper and Thacher streets; Kingston street, between Beach and Essex streets; Charles street, between Fruit and Allen streets; Devonshire street, between Milk and Water streets, and Genesee and Oswego streets.

The most important paving work was the reconstruction of the following streets which were paved with large granite blocks, with pitch-joints on a concrete base: Atlantic avenue, between Oliver street and Dewey square; Blackstone street, between Hanover and North streets; Congress street, between Atlantic avenue and about 100 feet westerly from the bridge; and Kingston street, between Essex and Bedford streets.

Harrison avenue, between Harvard and Bennet streets, and Leverett street, between Minot and Causeway streets, were repaved with large granite blocks on a gravel base.

Talbot avenue, between Blue Hill avenue and Norfolk street, was constructed and graded; Capen street, between Norfolk and Evans streets, was constructed; Princeton street, between Meridian and Prescott streets, and Prescott, between Trenton and Saratoga streets, were reconstructed.

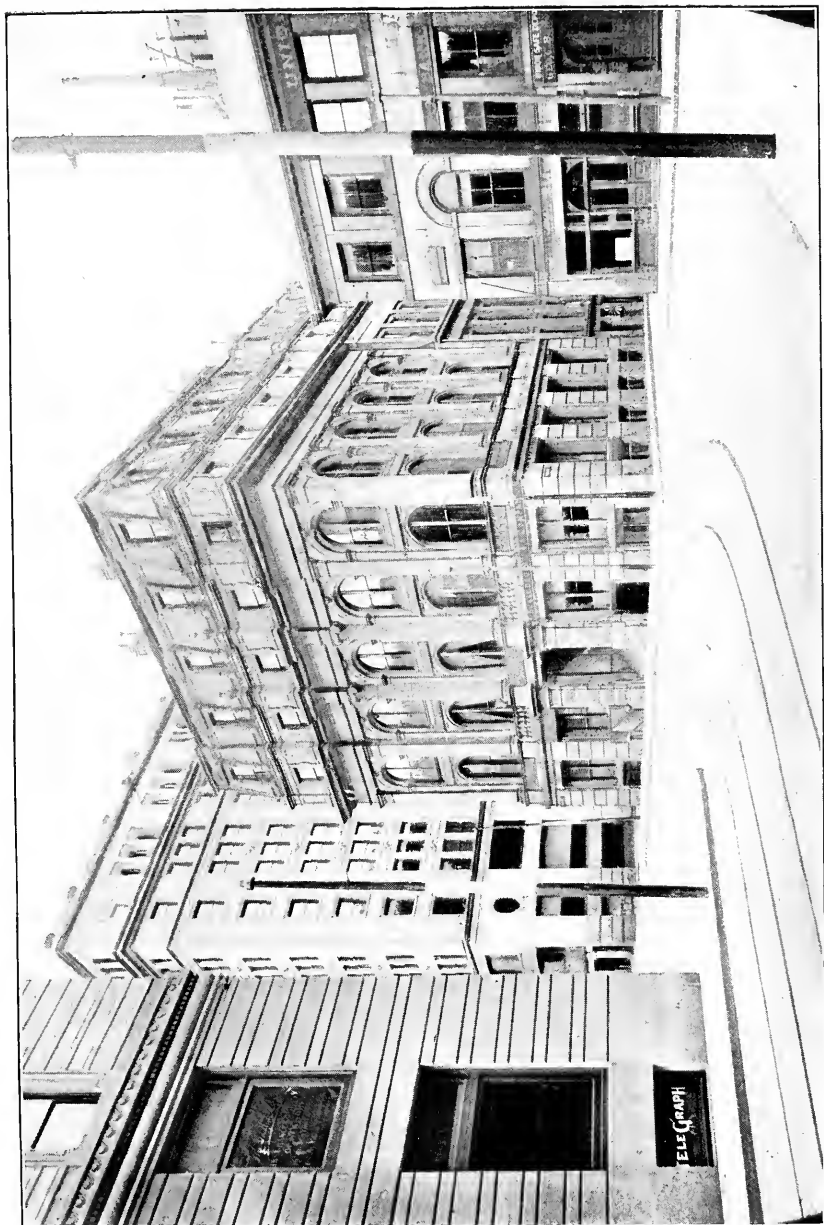
Atlantic avenue and Dewey square, in front of the Terminal Station, has been paved with large granite blocks on a concrete base with pitch joints.

SEWER DIVISION.

The appropriation for the maintenance of the Sewer Division was \$350,000, and this sum has been expended in the operation of the main drainage works, maintenance of Stony brook, operation of the Lyons-street pumping station, and the general expenses of the division, including the main office, and a permit office, with both clerical and inspection force, and also in the cleaning, flushing and repairing of 156 miles of sewers and 6,953 catch-basins throughout the city.

The expenses for maintenance and construction work in this division have been as follows:

Maintenance	\$347,133 64
Sewerage Works	1,086,893 33
Stony Brook Improvement	46,673 24
Stony Brook Improvement (Chap. 397, Acts of 1899)	151,518 65
	<hr/>
	\$1,632,218 86



CONGRESS STREET, SHOWING EXCHANGE AND DEVONSHIRE STREETS ON OPPOSITE SIDE OF STATE STREET, THROUGH WHICH PRACTICALLY ALL TEAMING FROM FREIGHT CENTRES ACROSS THE CITY MUST PASS.

Action should be taken looking to the more stringent regulations to prevent the placing of steam in the sewers.

During the coming year Stony brook construction should be extended to Keyes street.

The city, in conjunction with the town of Brookline, should take action looking to the improvement of Muddy river.

That portion of Stony brook from the Boston Belting Company's property to the Back Bay Fens should be built, and the new and old channels connected, so that none of the foul-water flow of Stony brook can be discharged into the Back Bay Fens.

In the past four years the amount of sewer work has been very considerable, and the main drainage works, pumping station and reservoirs will be found in almost perfect and complete condition, so that the only pressing need now is the new engine, which has been contracted for.

SANITARY DIVISION.

Expenditures.

\$567,107.81.

The plant of this division will be found in excellent condition, and the arrangements well ordered. In four years much has been accomplished, and in the past year the development of modern methods in disposing of the city wastes has been brought about, the garbage being treated at a plant at Cow Pasture, and the light waste at a refuse-burning plant on Atlantic avenue.

A considerable amount of extra work has been accomplished from the maintenance appropriation, such as the building of a new wharf on Albany street, dredging of the docks, and unusual repairs on the dumping scows.

I would recommend that the spring cleaning of private alleys, which has been made the past two years by this division, be continued. Although there is no direct responsibility on the city for this work, as a matter of health it is very desirable and almost necessary that it should be undertaken.

Suitable dumping places become less frequent every year, and it is very desirable that a new dumping scow be provided for at once.

Electric power should be installed in the Albany-street workshops.

STREET-CLEANING DIVISION.

Expenditures.

\$322,951.15.

The division has been somewhat crippled owing to snow work in the early part of the year, which was in excess of that usually required. The service of the division has been extended, so far as the limits of the appropriation would allow, to Dorchester and Brighton; these sections heretofore being cared for by the Paving Division.

All paved streets at least should be cared for by the Street-Cleaning Division, and I believe that there should be a general extension of this work, during the summer months at least, to certain portions of the city now in the care of the Paving Division.

The establishment of a local force in East Boston, which was accomplished this year, will bring about better results in that section, and similar arrangements should be made for the Dorchester District.

BRIDGE DIVISION.

Expenditures.

Maintenance.
\$120,408.72.

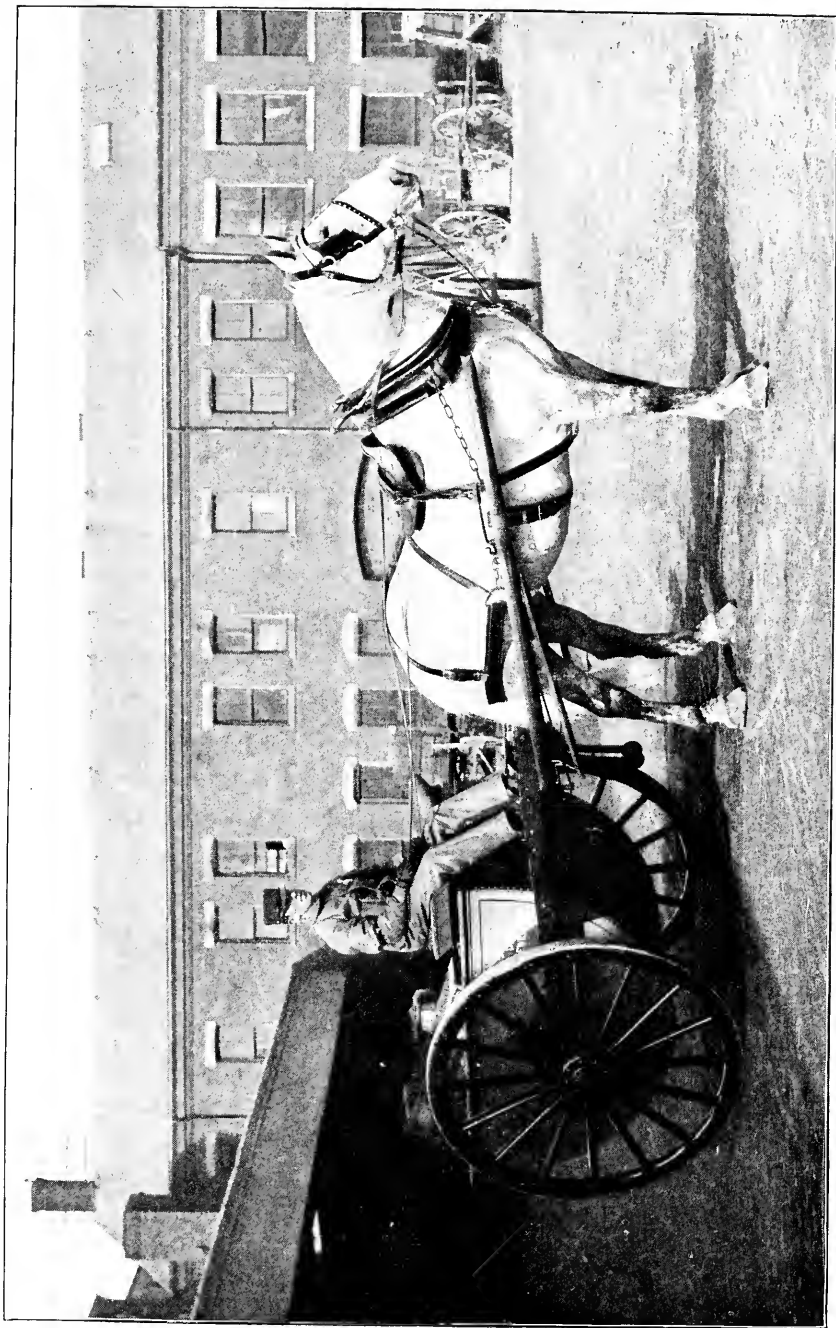
Special.
\$28,724.79

The appropriation for the Bridge Division was \$120,750. There should have been provided a larger sum, as it has been impossible with this amount to do the work urgently called for.

Many of the bridges are old, and require much reconstruction. For some years there has been neglect on the part of the City Council to make appropriations for reconstruction work, so that the coming year there should be provided a very considerable sum to keep the bridges in even a safe condition.

There are on file various recommendations of the City Engineer which it has not been possible to carry out, owing to lack of funds, a very large per cent. of the maintenance appropriation being required for the actual operation of the bridges, payment of draw-tenders, etc.

I would recommend that apparatus operated by electricity be placed in position on Dover street, Federal street, Meridian street, Chelsea North, new Charlestown and Summer-street bridges, to assist vessels through the draws. This would save a very considerable amount of time at the openings.



JOSIAH. — PRIZE WINNER, BOSTON HORSE SHOW, 1899.

The department has commenced the construction of a shelter on the Congress-street bridge, which was asked for in a very numerous signed petition. If this is successful I would recommend that it be extended to other bridges.

FERRY DIVISION.

Maintenance.

Expenditures.

\$211,822.87.

Receipts.

\$169,640.13.

Specials.

Expenditures.

\$77,516.28.

Traffic.

12,453,163 foot passengers.

966,475 teams.

This division will be found in excellent condition, with the exception of the South Ferry head-house, East Boston side, which should be rebuilt. Plans have been prepared, but the matter is now in abeyance, owing to the fact that the Boston and Maine Railroad Company has refused to sell land owned by it, adjoining the head-house, which is required for the building of the new structure. I would recommend that this matter be given early consideration, to see what action can be taken.

One new boat, the "Noddle Island," has been placed in commission the past year, at the cost of about \$75,000.

The "Governor Russell," which was sold to the United States Government, was repurchased for the sum of \$25,000; \$25,000 has been expended in remodelling her for the ferry service, and she went into commission January 4, 1900, costing the city only about \$50,000 for a boat as good as new.

A new boat has been contracted for on the lines of the "Governor Russell" and the "Noddle Island," which will cost in the neighborhood of \$92,000.

STREET-WATERING DIVISION.

Expenditures.

\$174,625.97.

The Street-Watering Division completes its second year under the new Street-Watering Assessment Act, whereby all public streets are watered by the city, and assessment made.

The city for the past season was divided into four districts. Assessment was made for District 1, the down-town and Back Bay section, at seven cents per front foot, the next circle six cents, the next five and the next four.

The plan of watering the whole city, paved as well as macadamized streets, has met with the approval of the public; but the assessment as arranged now, does in some cases work a hardship, and I would suggest that the matter of assessment be taken early in hand, and an effort made to more equitably apportion the assessments.

BOSTON AND CAMBRIDGE BRIDGES.

Expenditures.

\$15,998.18.

William J. Marvin, my fellow-commissioner, upon whom I have allowed all the detail of the work to fall, I again desire to thank for the very efficient and businesslike way in which he has cared for the bridges between the two cities, keeping them in safe and good condition with a limited appropriation. The detail of work in this division will be found in Appendix H.

The most important recommendation that I can make is the need of a new bridge connecting Cambridge and Boston at North Harvard street. This street has been widened and built at a very considerable expense on either side of the river, while the bridge remains a narrow, old-fashioned, poorly-constructed affair. As Soldiers' Field and the Cambridge Park are at this point, there should be a bridge to fit the surroundings. (See picture taken from the Cambridge side looking toward Soldiers' Field.)

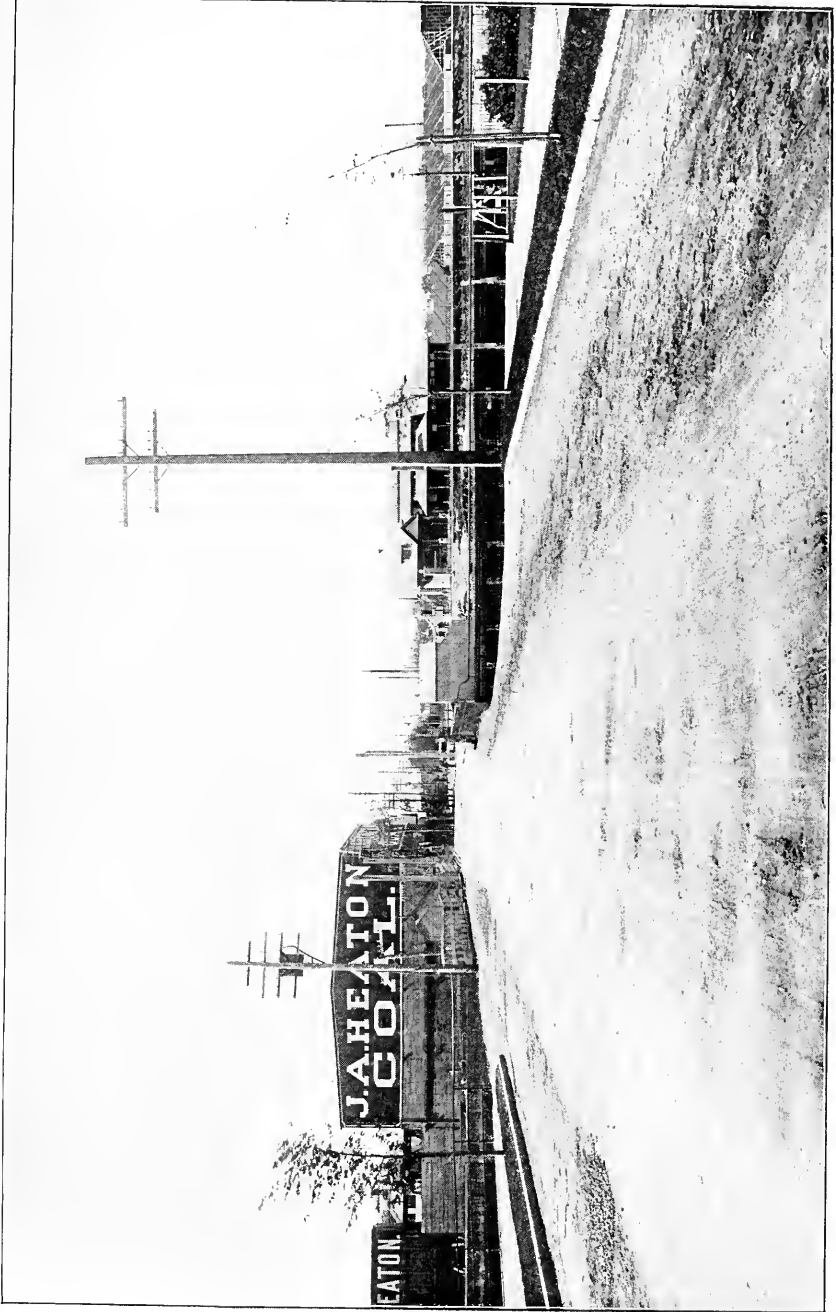
SUMMARY OF WORK DONE.

BRIDGE DIVISION.

Overhauled and thoroughly repaired the following bridges, viz.:

Berkeley street, Columbus avenue, Congress street, Ferdinand street, Granite avenue, Massachusetts avenue, over the B. & A. R.R., Massachusetts avenue, over the N.Y., N.H. & H. R.R. (Providence Division), Shawmut avenue, Williams street, over Stony brook.

Lauriat avenue bridge, to allow the street to pass under the N.Y., N.H. and H. R.R. (Midland Division), was



NORTH HARVARD STREET, SHOWING NEED OF NEW BRIDGE TO CONFORM TO NEW WIDTH OF ROADWAY

completed this year at a cost of \$21,000. The work of constructing the bridge and abutments was done by the railroad company and paid for by the city.

FERRY DIVISION.

Repurchased the ferry-boat "Governor Russell" from the United States Government for \$25,000, refitted her for service at a cost of about \$25,000, making a total cost of about \$50,000. To duplicate this boat to-day would cost about \$95,000, thus the city was saved about \$45,000 by the transaction.

One new ferry-boat has been contracted for, and will be in commission about August 1, 1900.

PAVING DIVISION.

Paved with granite blocks, 41,632 square yards on concrete base and 59,577 square yards on gravel base, or a total of 101,209 square yards, including paving and regulating nine (9) streets.

Paved 92,537 square yards gutters, set or reset 185,260 linear feet of edgestones and laid 14,190 square yards of asphalt on concrete base.

Paved and repaved sidewalks as follows:

Brick	79,171 square yards.
Crushed stone	39,581 square yards.
Artificial stone	23,318 square yards.

Work has progressed on 61 streets, and 11 public alleys laid out and ordered constructed under chapter 323, Acts of 1891 and amendments, and 38 streets and 11 public alleys have been completed. Contracts for 8 streets to be constructed under this Act have been executed, but the work has not yet been started.

SANITARY DIVISION.

Collected and removed 329,096 loads of ashes, 19,815 loads of combustible waste and 59,956 loads of house offal.

Constructed a new dumping station at the wharf of the Albany-street yard.

Erected a hospital at the Albany-street yard for the care and treatment of sick horses.

SEWER DIVISION.

Built 21.46 miles of sewers and 412 new catch-basins; flushed 156.47 miles of sewers, removed 826 cubic yards of

deposit from sewers, and 9,224 cubic yards from the Pumping Station; cleaned 6,953 catch-basins, removing 21,110 cubic yards of deposit.

STREET-CLEANING DIVISION.

Removed 206,853 loads of street sweepings, etc., and emptied 18,409 public waste barrels.

STREET-WATERING DIVISION.

Watered 413.59 miles of streets.

EMPLOYMENT OF LABOR.

The report of the Civil Service Clerk, showing the classification of the employees of the department and the transfers and requisitions made for the several divisions of the department, will be found in Appendix K.

CENTRAL OFFICE DIVISION.

EXPENSES OF THE CENTRAL OFFICE.

For the current expenses of the Central Office the City Council appropriated the sum of eighteen thousand eight hundred (18,800) dollars, which was expended as follows:

Salaries	\$16,077 20
General office expenditures	2,722 21
	<hr/>
Total	\$18,799 41

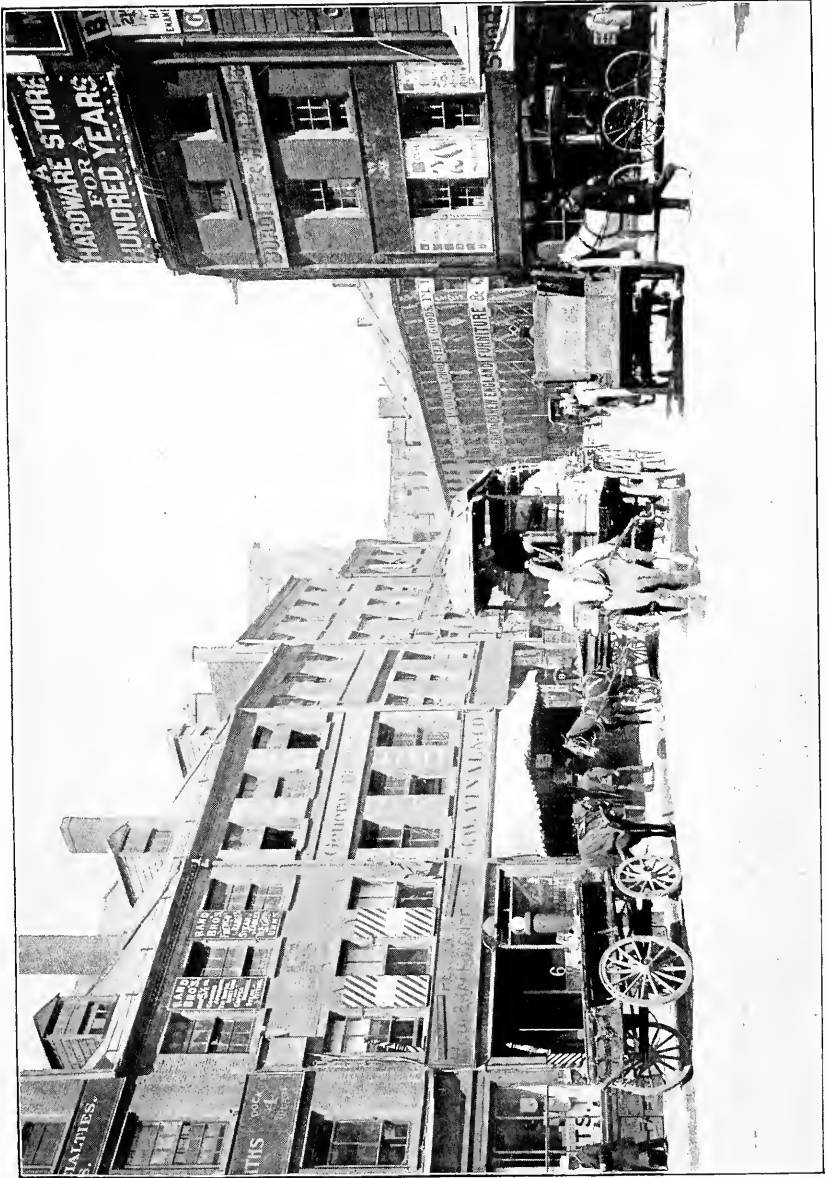
leaving a balance of fifty-nine (59) cents, which was transferred to the City Treasury.

The detailed financial statements, work done, etc., will be found in the pages following and the twelve appendices annexed.

Respectfully submitted,

BENJ. W. WELLS,

Superintendent of Streets.



DOCK SQUARE, OPPOSITE EXCHANGE STREET.

Where by cutting off corner building good entrance into Union street would be made.

Financial Statement of the Street Department Appropriation.

From February 1, 1899, to January 31, 1900.

Maintenance.

APPROPRIATIONS.	Appropriations and Transfers during 1899.	Revenue.	Total Credits.	Expenditures for the twelve months ending January 31, 1900.
Street Department:				
Central Office.....	1 \$18,799 41		\$18,799 41	\$18,799 41
Bridge Division.....	2 120,322 22	\$86 50	120,408 72	120,408 72
Roston and Cambridge Bridges.....	3 15,998 18		15,998 18	15,998 18
Ferry Division.....	4 211,822 87		211,822 87	211,822 87
Paving Division.....	5 854,783 33	5,274 53	860,057 86	860,057 86
Sanitary Division.....	6 567,107 81		567,107 81	567,107 81
Sewer Division.....	7 347,133 64		347,133 64	347,133 64
Street-Cleaning Division.....	8 322,951 15		322,951 15	322,951 15
Street Watering Division.....	9 174,625 97		174,625 97	174,625 97
Totals.....	\$2,633,544 58	\$5,361 03	\$2,638,905 61	\$2,638,905 61
1 Appropriation, 1899-1900.....	\$18,800 00			
Transferred to City Treasury.....	51			
	<u>\$17,799 49</u>			<u>\$347,133 64</u>
2 Appropriation, 1899-1900 ..\$120,750 00				
Repairing for Corporations ..86 50				
Transferred to City Treasury.....	427 78			
	<u>\$120,408 72</u>			<u>\$322,951 15</u>
3 Appropriation, 1899-1900	\$16,000 00			
Transferred to City Treasury.....	1 82			
	<u>\$15,998 18</u>			<u>\$174,625 97</u>
4 Appropriation, 1899-1900.....	\$212,500 00			
Transferred to City Treasury.....	677 13			
	<u>\$211,822 87</u>			<u>\$315,000 00</u>
5 Appropriation, 1899-1900.. \$690,000 00				
Transferred from "Sur- plus Revenue"	114,783 33			
"Removal of Snow".....	50,000 00			
Repairing for Corpora- tions, etc.....	5,274 53			
	<u>\$800,057 86</u>			<u>\$7,813 27</u>
6 Appropriation, 1899-1900.....	\$570,000 00			
Transferred to City Treasury.....	2,892 19			
	<u>\$567,107 81</u>			<u>\$175,000 00</u>
7 Appropriation, 1899-1900.....	\$350,000 00			
Transferred to City Treasury.....	2,866 36			
	<u>\$347,133 64</u>			<u>\$174,625 97</u>
8 Appropriation, 1899-1900.. \$315,000 00				
Transferred from "Sur- plus Revenue"	7,813 27			
Repairing for Corpora- tions.....	137 88			
	<u>\$322,951 15</u>			<u>\$175,000 00</u>
9 Appropriation, 1899-1900.....	\$175,000 00			
Transferred to City Treasury	374 03			
	<u>\$174,625 97</u>			<u>\$174,625 97</u>

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

DIVISION.	1891-92. (13 months.)	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.
Central Office.....	1 \$16,050 00	\$18,763 60	\$20,805 96	\$20,884 29	\$18,315 79	\$18,781 85	\$17,789 95	\$19,186 24	\$18,799 41
Bridge.....	123,010 63	128,954 37	133,159 24	130,137 21	119,716 00	119,963 55	126,529 82	129,253 03	120,408 72
Boston and Cambridge Bridges.	11,866 42	11,079 76	11,493 16	11,986 85	12,537 33	13,885 54	14,403 92	13,569 80	15,998 18
Ferry .....	.....	.....	.....	.....	209,911 30	218,353 10	219,983 24	213,055 79	211,822 87
Paving	770,525 54	855,270 79	593,738 19	637,226 91	599,090 34	539,934 39	573,963 14	553,291 72	705,432 68
Removal of Snow.....	102,410 86	60,190 20	151,943 33	78,381 71	84,809 08	68,741 07	116,224 20	172,963 48	154,625 18
Sanitary.....	2 509,342 24	463,370 74	481,300 63	467,459 02	432,778 52	477,241 54	492,670 56	508,152 88	567,107 81
Sewer.....	446,222 69	560,608 19	373,517 38	304,133 40	280,596 07	276,615 25	295,522 25	337,376 27	347,133 64
Street-Cleaning.....	3 215,929 33	288,320 42	308,707 30	301,477 44	305,998 50	310,286 39	309,938 38	316,032 73	322,951 15
Street Watering.....	104,263 62	94,507 80	99,430 16	87,169 08	76,424 70	71,211 81	5 78,736 72	138,728 57	174,625 37
Totals.....	\$2,299,621 33	\$2,487,095 87	\$2,174,095 35	\$2,088,855 91	4 \$2,140,177 63	4 \$2,134,944 49	4 \$2,245,816 68	4 \$2,401,630 60	4 \$2,638,905 61

1 Nine months only.

2 Includes street cleaning for four months to May 1, 1891.

3 Nine months only, but includes expenditure for Street Police, May 1 to July 10, 1891—\$464.41.

4 For comparison, deduct Ferry Division, not before shown, making total—\$1,939,266.33.

5 Not including water bills of \$76,330.40 not previously paid by Street Watering Division.

Bridge Division Specials.

OBJECT OF APPROPRIATIONS.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1899, to Jan. 31, 1900.	Balances on hand Jan. 31, 1900.
Congress-street bridge.....	\$10,000 00	\$6,300 75	\$3,699 25
Gold-street bridge.....	216 66	216 66	
Harvard-street bridge.....	2,307 89	262 13	2,045 76
Lauriat-avenue bridge.....	21,000 00	21,000 00	
Reconstruction of bridges.....	945 25	945 25	
Totals.....	\$34,469 80	\$28,724 79	\$5,745 01

Ferry Division Specials.

OBJECT OF APPROPRIATIONS.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1899, to Jan. 31, 1900.	Balances on hand Jan. 31, 1900.
Clock, South Ferry head-house (Boston side).....	\$474 79	\$474 79	
New ferry-boats.....	78,036 40	64,853 80	\$13,182 60
New ferry landing (chapter 435, Acts of 1895).....	2156,606 51	12,187 69	144,418 82
Totals.....	\$235,117 70	\$77,516 28	\$157,601 42

¹ Original appropriation.....	\$500 00
Transferred to City Treasury.....	25 21
	<u>\$474 79</u>

² Balance of appropriation, Feb. 1, 1899.....	\$356,606 51
Transferred to City Treasury.....	200,000 00
	<u>\$156,606 51</u>

Paving Division Specials.

OBJECT OF APPROPRIATIONS.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1899, to Jan. 31, 1900.	Balances on hand Jan. 31, 1900.
Abolishment of grade crossings.....	\$1,901 77	\$1,901 77	
Albany street, in front of Massachusetts Homœopathic Hospital.....	1 3,137 92		
Atlantic avenue.....	47,974 94	47,974 94	
Atlantic street.....	299 50	299 50	
<i>Carried forward</i>	\$53,314 13	\$50,176 21	

¹ See page 38.

Paving Division Specials. — *Concluded.*

OBJECT OF APPROPRIATIONS.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1899, to Jan. 31, 1900.	Balances on hand Jan. 31, 1900.
<i>Brought forward</i>	\$53,314 13	\$50,176 21	
Blackstone street.....	10,000 00	10,000 00	
Brighton avenue.....	² 335 12		
Brooks street.....	32,000 00	32,000 00	
Buildings Chelsea street.....	11,180 25	3,194 15	\$7,986 10
Capen street.....	3,000 00	3,000 00	
Charles street.....	9,600 00	8,707 12	892 88
Charlestown bridge.....	13,545 38	13,545 38	
Commonwealth avenue.....	4,105 54		4,105 54
Congress street.....	19,000 00	13,199 75	5,800 25
Devonshire street, Milk to Water street, asphaltting.....	3,800 00	3,800 00	
Devonshire street, State to Water street, repaving.....	6,500 00		6,500 00
Eleanor and Ridgemont streets.....	³ 605 51		
Federal street.....	22,993 53	22,993 53	
Freeport street.....	⁴ 1,033 27	348 50	
Genesee and Oswego streets.....	8,000 00	8,000 00	
Harrison avenue, Asylum to Davis street, asphaltting.....	1,000 00		1,000 00
Harrison avenue, Kneeland to Bennet street, asphaltting.....	9,958 47	9,958 47	
Kingston street.....	13,235 01	13,235 01	
Leverett street.....	17,062 66	17,062 66	
Mead street.....	1,780 96		1,780 96
Milton street.....	1,200 00	1,200 00	
Prescott street.....	5,000 00	5,000 00	
Princeton street.....	10,000 00	10,000 00	
Rapid Transit.....	1,234 94	1,234 94	
Retaining-wall, Marcella and Centre streets.....	2,500 00	7 60	2,492 40
Sydney street.....	⁵ 253 06		
Talbot avenue.....	50,000 00	37,785 11	12,214 89
Washington street.....	4,392 70	4,392 70	
Totals.....	\$316,630 53	\$268,841 13	⁶ \$42,773 02

Transferred to City Treasury as follows:

¹ Albany street, in front of Massachusetts Homœopathic Hospital.....	\$3,137 92
² Brighton avenue.....	335 12
³ Eleanor and Ridgemont streets.....	605 51
⁴ Freeport street.....	684 77
⁵ Sydney street.....	253 06

⁶ Totals.....\$5,016 38

Street Improvements.

OBJECT OF APPROPRIATIONS.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1899, to Jan. 31, 1900.	Balances on hand Jan. 31, 1900.
Street Improvements, Ward 4.....	\$5,488 55	\$5,488 55	
Street Improvements, Ward 5.....	117 99	117 99	
Street Improvements, Ward 8.....	1,336 30	1,336 30	
Street Improvements, Ward 9.....	12,161 18	1,270 79	¹ \$890 39
Street Improvements, Ward 10.....	696 49	696 49	
Street Improvements, Ward 12.....	1,773 21	1,773 21	
Street Improvements, Ward 13.....	892 86	892 86	
Street Improvements, Ward 14.....	693 87	693 87	
Street Improvements, Ward 15.....	3,174 96	3,174 96	
Street Improvements, Ward 16.....	5,025 51	5,025 51	
Street Improvements, Ward 17.....	2,983 77	2,983 77	
Street Improvements, Ward 19.....	7,651 97	7,651 97	
Street Improvements, Ward 22.....	873 71	873 71	
Street Improvements, Ward 23.....	658 09	658 09	
Street Improvements, Ward 25.....	1,813 10	1,813 10	
Street Improvements, General	85,440 62	85,440 62	
Totals	\$120,782 18	\$119,891 79	¹\$890 39

¹ Transferred to the City Treasury, \$890.39.

Sewer Division Specials.

OBJECT OF APPROPRIATIONS.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1899, to Jan. 31, 1900.	Balances on hand Jan. 31, 1900.
Dam from Maverick street to Prescott street, East Boston	¹ \$3,000 00		
Sewerage Works.....	2,044,426 50	\$1,086,893 33	\$957,533 17
Stony Brook Improvement.....	46,673 24	46,673 24	
Stony Brook Improvement (chapter 397, Acts of 1899).....	350,000 00	151,518 65	198,481 35
Totals.....	\$2,444,099 74	\$1,285,085 22	\$1,156,014 52

¹ Order creating appropriations rescinded by Board of Estimate and Apportionment.

Laying-Out and Construction of Highways.

Expenditures.

Street construction (general)	\$511,250 51
Street construction, Charlestown street	37,172 50
Total	\$548,423 01

Brighton.

Street construction	\$16,280 36
-------------------------------	-------------

Dorchester.

Street construction	\$33,483 80
-------------------------------	-------------

East Boston.

Street construction \$3,561 90

Roxbury and West Roxbury.

Street construction \$24,037 97

Blue Hill and other Avenues.

Street Construction.

Blue Hill avenue \$9,372 42
 Columbus avenue 5,585 10
 Commonwealth avenue extension 408 00
 Commonwealth avenue 230,688 37
 Total \$246,053 89

South Union Station.

Expenditures.

Street construction \$71,155 28

**Recapitulation of Expenditures for the Twelve Months Ending
 January 31, 1900.**

OBJECT OF APPROPRIATIONS.	Current Expenses.	Special Appropriations.	Totals.
Street Department:			
Central Office.....	\$18,799 41		\$18,799 41
Bridge Division.....	120,408 72	\$28,724 79	149,133 51
Boston and Cambridge Bridges.....	15,998 18		15,998 18
Ferry Division.....	211,822 87	77,516 28	289,339 15
Paving Division.....	860,057 86	268,841 13	1,128,898 99
Sanitary Division.....	567,107 81		567,107 81
Sewer Division.....	347,133 64	1,285,085 22	1,632,218 86
Street Cleaning Division.....	322,951 15		322,951 15
Street Watering Division.....	174,625 97		174,625 97
Street Improvements.....		119,891 79	119,891 79
Laying-Out and Construction of Highways.....		548,423 01	548,423 01
Laying-Out and Construction of Highways (Brighton).....		3,561 90	3,561 90
Laying-Out and Construction of Highways (Dorchester).....		33,483 80	33,483 80
Laying-Out and Construction of Highways (East Boston).....		16,280 36	16,280 36
Laying-Out and Construction of Highways (Roxbury and West Roxbury).....		24,037 97	24,037 97
Blue Hill and other Avenues.....		246,053 89	246,053 89
South Union Station.....		71,155 28	71,155 28
Totals.....	\$2,638,905 61	\$2,723,055 42	\$5,361,961 03

Street Building under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto.

Alexander st.....	\$14 38	Peverell st.....	\$2,404 75
Alford st.....	13 00	Rosseter st.....	817 69
Amory st.....	193 99	Ruggles st.....	504 01
Andrews st.....	1,468 66	St. Stephen st.....	8,590 97
Angell st.....	5,711 99	School st.....	339 07
Ashley st.....	21 00	Shirley st.....	7,906 11
Astor st.....	6,881 10	Spencer st. (Talbot to Wheatland ave.)....	3,845 29
Athelwold st.....	421 18	Spencer st. (Athelwold to Park st.).....	1,842 45
Atherstone st.....	67 76	Spring st.....	7,765 24
B st.....	53 75	Stanley st.....	2,894 12
Belmore terrace.....	91 76	Stuart st.....	38 35
Belvidere st.....	4,854 86	Telford st.....	33 21
Bernard st.....	171 69	Thane st.....	1,627 14
Blandford st.....	10 65	Tonawanda st.....	420 30
Boston st.....	3 75	Trinity pl.....	4,056 16
Bragdon st.....	66 88	Vancouver st.....	102 67
Burt st.....	4,005 89	Van Winkle st.....	130 17
Callender st.....	136 65	Waterlow st.....	137 38
Cambridge st.....	18 50	Wensley st.....	6,587 55
Canal st.....	10,340 35	West Selden st.....	3,491 31
Carlos st.....	164 18	Woodcliff st.....	22 87
Chamblet st.....	440 73	Woodlawn st.....	6,578 10
Charlestown st.....	37,172 50	Worthington st.....	9,304 53
Chester st.....	3,931 35	Public Alley No. 101..	2,399 88
Chiswick road.....	10,960 50	" " 102..	1,013 78
Columbia road.....	241,403 45	" " 301..	3 95
Commonwealth ave...	867 35	" " 401..	3,222 15
Cummington st.....	16 30	" " 402..	2,764 49
Devon st.....	14,707 05	" " 403..	2,480 36
Edwin st.....	41 98	" " 404..	3,174 75
Elizabeth st.....	38 53	" " 405..	1,290 94
Execution of court...	737 55	" " 414..	13 67
Fairmount st.....	1,416 69	" " 415..	3 94
Florida st.....	31 17	" " 416..	3 94
Forest Hills st.....	16 38	" " 417..	3 94
Fowler st.....	6,875 06	" " 418..	253 12
Francis st.....	9,748 91	" " 419..	1,812 40
Hamilton st.....	4,283 75	" " 420..	119 29
Harold st.....	5,153 16	" " 421..	3 94
Hewins st.....	406 76	" " 430..	266 54
Homes ave.....	44 13	" " 431..	1,259 46
Idaho st.....	5,702 34	" " 432..	3 94
Ipswich st.....	32,299 63	" " 433..	3 94
Jersey st.....	41 06	" " 434..	3 94
Josephine st.....	194 43	" " 435..	3 94
Leeds st.....	6 43	" " 436..	11 44
Leedsville st.....	86 76	" " 437..	752 18
Leroy st.....	54 17	" " 438..	3 60
Lonsdale st.....	4,841 40	" " 439..	3 60
Malvern st.....	86 06	" " 440..	3 60
Maryland st.....	2,025 12	" " 441..	3 60
Mellen st.....	382 09	" " 442..	3 60
Merlin st.....	629 56	" " 443..	3 60
Middleton st.....	3,904 61	" " 444..	3 60
Millet st.....	6 43	" " 701..	4,477 03
Newburg st.....	5 84	" " 702..	1,031 76
Nightingale st.....	593 31	" " 703..	821 30
N. Harvard st.....	10,026 22		
Oakley st.....	66 35		
Orkney road.....	5,268 67		
Peterborough st.....	12,532 61		
		Total	\$548,423 01

Brighton.

Cambridge st. \$16,280 36

East Boston.

Ashley st.	\$1,267 74	<i>Brought forward...</i>	\$2,978 77
Bennington st.	1,711 03	Public Alley No. 2001,	583 13
<i>Carried forward....</i>	<u>\$2,978 77</u>	Total	<u>\$3,561 90</u>

Dorchester.

Alexander st.	\$3,077 02	Lauriat ave.	\$2,629 62
Annabel st.	105 79	Leonard st.	16 75
Atherstone st.	1,946 43	Montague st.	17 95
Barry st.	46 04	Nottingham st.	10 55
Boston st.	461 79	Rockford st.	5 54
Callender st.	118 25	Rozella st.	1,707 56
Draper st.	8 25	Shafter st.	62 20
Edison Green.	127 27	Thane st.	7 00
Edwin st.	7,221 24	Van Winkle st.	70
Esmond st.	80 39	Wainwright st.	12 00
Florida st.	4,630 64	Waldeck st.	10,687 32
Fowler st.	9 79	Warner st.	72 11
Geneva ave.	7 50	Woodcliff st.	70
Gibson st.	413 40	Total	<u>\$33,483 80</u>

Roxbury and West Roxbury.

Aberdeen st.	\$55 25	Oakview terrace.	\$2,427 26
Albany and North-		Pontiac st.	285 00
ampton sts.	350 12	Queensberry st.	1,765 93
Amory st.	5,747 23	Rowe st.	417 72
Blandford st.	108 25	Seymour st.	155 23
Bragdon st.	3,413 44	South st.	37 00
Congreve st.	3,621 84	Stratford st.	36 50
Cummington st.	115 00	Williams st.	6 94
Custer st.	35 89	Public Alley No. 901..	166 60
Dresden st.	109 62	Public Alley No. 905..	3 60
Hubbard st.	1,922 04	Total	<u>\$24,037 97</u>
Newburg st.	3,257 01		

Summary.

Laying-out and construction of Highways.	\$548,423 01
Laying-out and construction of Highways, Brighton.	16,280 36
Laying-out and construction of Highways, Dorchester	33,483 80
Laying-out and construction of Highways, East Boston.	3,561 90
Laying-out and construction of Highways, Roxbury and West Roxbury.	24,037 97
Total.	<u>\$625,787 04</u>

**List of Contracts from February 1, 1899, to January 31, 1900,
made by the Street Department.**

Paving Blocks.

CONTRACT.	Awarded to	Dated	Price per M. deliv- ered on wharves.
Large paving-blocks, 500,000...	Rockport Granite Co...	April 10, 1899...	\$54 90
Philadelphia paving-blocks, 500,000.....	Rockport Granite Co...	April 10, 1899...	53 70
Gutter paving-blocks, 800,000...	Rockport Granite Co...	April 10, 1899...	47 30
Large paving-blocks, 50,000.....	W. G. Sargent & Son...	April 17, 1899...	50 00

Bank Gravel and Sand.

DISTRICT.	Awarded to	Dated	PRICE, DOUBLE LOAD.	
			Gravel.	Sand.
South Boston.....	P. O'Riorden.....	March 31, 1899..	\$1 44	\$1 36
East Boston.....	L. F. Leary.....	March 31, 1899..	1 25	1 25
Charlestown.....	P. O'Riorden.....	March 31, 1899..	1 40	1 10
Brighton.....	F. R. Kimball.....	March 31, 1899..	1 60	1 50
West Roxbury.....	T. Minton.....	March 31, 1899..	1 07	1 07
Dorchester.....	F. McGovern.....	March 31, 1899..	1 38	1 45
Roxbury.....	O. Nawn & Co.....	March 31, 1899..	1 51	1 51
City Proper.....	W. Gilligan.....	March 31, 1899..	1 60	1 60
Districts 8 and 9.....				
City Proper.....	P. O'Riorden.....	March 31, 1899..	1 35	1 10
District 10.....				

NOTE. — Single loads to cost one-half of the foregoing prices.

Crosswalk Flagging.

CONTRACT.	Awarded to	Dated	PRICE PER SQ. FT.	
			On wharves.	On streets.
Granite.....	Rockport Granite Co...	April 10, 1899...	\$0 32	
North River....	A. Ford & Son.....	March 21, 1899..	29½	\$0 33

Spruce Lumber.

DISTRICT.	Awarded to	Dated	Price per M. ft. B. M. planed or rough.
South Boston.....	Curtis & Pope Lumber Co...	Jan. 30, 1899....	\$15 20
East Boston.....	G. Fuller & Son.....	Jan. 30, 1899....	16 75
Charlestown.....	G. Fuller & Son.....	Jan. 30, 1899....	15 75
Brighton.....	G. Fuller & Son.....	Jan. 30, 1899....	15 40
West Roxbury.....	G. Fuller & Son.....	Jan. 30, 1899....	16 75
Dorchester.....	Curtis & Pope Lumber Co...	Jan. 30, 1899....	15 90
Roxbury.....	Curtis & Pope Lumber Co...	Jan. 30, 1899....	15 20
City Proper.....	Curtis & Pope Lumber Co...	Jan. 30, 1899....	15 20

Beach Gravel.

DISTRICT.	Awarded to	Dated	Price per ton, deliv- ered on wharves.
City Wharves.....	W. F. Cargill.....	March 21, 1899..	\$0 73

Iron Castings.

CONTRACT.	Awarded to	Dated	Price per 100 lbs.
Iron Castings.....	Sessions Foundry Co...	March 14, 1899..	\$1 10

Coal.

CONTRACT.	Awarded to	Dated	Price per ton, 2,240 lbs.
1,500 tons, Pumping Station, Dorchester.....	Mitchell Coal and Coke Company..	Feb. 20, 1899....	\$3 05
1,500 tons, Pumping Station, Dorchester.....	Metropolitan Coal Company.....	April 28, 1899....	2 69
1,500 tons, Pumping Station, Dorchester.....	Metropolitan Coal Company.....	Oct. 13, 1899....	3 87
1,500 tons, Pumping Station, Dorchester.....	John Morrison....	Dec. 28, 1899....	5 61
7,000 tons, Ferry Wharves.....	Loyal Hanna Coal and Coke Co....	March 23, 1899..	2 69
2,000 tons, Ferry Wharves... ..	John Morrison....	Dec. 28, 1899....	5 51

Quarrying and Cutting Stone, etc.

CONTRACT.	Awarded to	Dated	Price.
Quarrying and cutting stone from the easterly side of Commonwealth ave., between Washington and Warren sts., and delivering the same as ordered.....	A. McMurtry & Sons.....	May 3, 1899.....	(A) \$1.27 per cubic yard. (B) \$1.60 per cubic yard. (C) \$0.15 per cubic yard.
Excavating earth, and quarrying and cutting stone from the easterly side of Commonwealth ave., between Howard pl. and Wallingford road, and delivering the same as ordered.....	A. McMurtry & Sons.....	August 23, 1899.....	(A) \$1.00 per cubic yard.
Excavating and removing material from Commonwealth ave.....	M. Kiernan.....	September 28, 1899.....	Laborers, \$1.75 per day, plus 15 per cent. Foreman, \$3 per day.
Excavating and removing material from Commonwealth ave.....	A. McMurtry & Sons.....	September 28, 1899.....	Laborers, \$1.75 per day, plus 15 per cent. Foreman, \$3 per day.
Quarrying and cutting stone from Cambridge st., Brighton, and delivering the same at the Chestnut Hill ave. crusher,	J. L. Bryne & Co.....	December 18, 1899.....	\$4.50 per cubic yard.

EXPLANATION OF LETTERS.

(A) Delivered at the foot of the ledge. (B) Delivered within one-half mlle haul of the ledge.

Lease of Land, etc.

CONTRACT.	Lessor.	Dated	Terms.
Lease of land and flats at Jeffries Point, East Boston, for maintaining a public landing.....	G. C. Fitzpatrick.....	May 1, 1899.....	\$250 per year.
Lease of building on Columbus ave. opposite Ferdinand st.	N. Y., N. H. and H. R. R. Co.....	May 5, 1899.....	\$600 per year.
Lease of wharf, etc., Revere st.....	J. J. Costello.....	July 20, 1899.....	\$6,500 per year, and all taxes during the first five years, and \$7,250 per year, and all taxes during the second five years.

Collecting and Removing Ashes.

CONTRACT.	Awarded to	Dated	Price.
Collecting and removing ashes, etc., in the West Roxbury District.....	J. J. Moore.....	April 10, 1899.....	\$2,300 per year for two years.
¹ Collecting and removing ashes, etc., in the Dorchester District.....	D. Flynn.....	April 10, 1897.....	\$3,880 per year for two years.
² Collecting and removing ashes, etc., in the East Boston District.....	W. F. Hedrington.....	July 31, 1896.....	\$7,300 per year for two years.

¹ Extended December 28, 1899, until March 10, 1900.

² Extended July 28, 1899, until November 1, 1899.

Collecting and Removing House Offal.

CONTRACT.	Awarded to	Dated	Price.
Contract for collecting and removing house offal, etc., East Boston District.....	T. Mulligan.....	December 23, 1895.....	\$8,000 per year for three years.

NOTE. — Extended November 14, 1899, until February 23, 1900.

Furnishing and Laying a 6-inch American Cement Concrete Base.

CONTRACT.	Awarded to	Dated	Price.
Blackstone st., from Hanover across North st.....	Metropolitan Contracting Co.....	June 5, 1899.....	\$5.00 per cubic yard.
Atlantic ave., between Dewey sq. and Oliver st.....	Metropolitan Contracting Co.....	October 13, 1899.....	\$4.75 per cubic yard.

Furnishing Filling.

CONTRACT.	Awarded to	Dated	Price.
15,000 cubic yards in Worthington st., between Longwood ave. and the Back Bay Fens.....	J. C. Coleman & Son.....	July 24, 1899.....	(A) \$0.44
200 loads in Public Alley No. 901, between Hemenway st. and the Fenway.....	T. F. Maguire.....	August 12, 1899.....	(B) \$0.70
5,700 loads chip-stone filling in Commonwealth ave., between Warren and Washington sts.....	F. R. Kimball.....	October 2, 1899.....	(B) \$1.00
3,800 loads chip-stone filling in Commonwealth ave., between Warren and Washington sts.....	B. Malone.....	October 2, 1899.....	(B) \$1.00
9,000 cubic yards in Ashley st., between Breed and Walley sts.....	H. & D. Burnett.....	November 20, 1899.....	(A) \$0.44
82,000 cubic yards in Bennington st., between Wordsworth st. and the Revere town line.....	Jones & Meehan.....	November 20, 1899.....	(A) \$0.53
2,100 cubic yards in Bennington st., opposite Harmony st....	W. F. Hedrington.....	November 22, 1899.....	(A) \$0.44
69,000 cubic yards in Cummington and Blandford sts.....	Boston & Albany Railroad Co....	December 27, 1899.....	(C) \$0.45

EXPLANATION OF LETTERS.

(A) Price per cubic yard measured in the fill. (B) Price per double load of forty (40) cubic feet. (C) Price per cubic yard measured in the bank.

Building Ferry-boat.

CONTRACT.	Awarded to	Dated	Price.
Plans, specifications and superintendence of double-screw ferry-boat No. 4.....	R. F. Keough.....	December 2, 1899.....	Three per cent. of the total cost.
Building double-screw ferry-boat No. 4.....	Wm. McKie.....	December 19, 1899.....	\$85,500

Paving and Regulating.

CONTRACT.	Awarded to	Dated	Price.
Commonwealth ave., between Brighton ave. and Washington st.	Barnes-Rudfin Company	May 16, 1899	(A) \$0.10; (D) \$0.35; (E) \$0.25.
Dorchester ave. and Summer st., around the South Union Station.	H. P. Nawn	May 6, 1899	(B) \$0.08; (E) \$0.25; (G) \$0.18.
Blackstone st., from Hanover across North st.	P. McGovern	June 12, 1899	(B) \$0.08; (E) \$0.25; (F) \$0.30; (G) \$0.18.
Talbot ave., between Blue Hill ave. and Norfolk st.	J. Dolan	July 17, 1899	(B) \$0.08; (D) \$0.35; (E) \$0.25; (G) \$0.18.
Leverett st., between Causoway st. and Craigie's bridge.	Jones & Meelian	July 22, 1899	(B) \$0.08; (E) \$0.25; (G) \$0.18.
Charlestown st., between Haymarket sq. and Causeway st.	Metropolitan Contracting Company	July 24, 1899	\$650 earth excavation; (E) \$0.16; (C) \$5.00; (E) \$0.50; (E') \$0.51; (F) \$0.84; (G) \$0.35.
Federal st., between Dewey sq. and Milk st.	P. McGovern	August 9, 1899	(B) \$0.08; (C) \$4.50; (E) \$0.25; (F) \$0.30; (G) \$0.18.
Public Alley No. 101, formerly Chair alley, between Richmond and Cross sts.	P. McGovern	August 22, 1899	\$877.48.
Public Alleys Nos. 418 and 420, between Beacon and Marlborough sts., from Exeter to Dartmouth and from Clarendon to Berkeley sts.	H. Gore & Co.	August 26, 1899	\$5.00 per day for foreman; \$3.00 per day for single team; \$5.00 per day for double team; \$1.00 per double load gravel; \$4.00 per day for paver; \$2.00 per day for runner; \$1.75 per day for tender—plus 15%.
Congress st., between Atlantic ave. and the bridge.	Jones & Meelian	September 11, 1899	(B) \$0.08; (C) \$4.75; (E) \$0.25; (F) \$0.30; (G) \$0.18.
Commonwealth ave., between Washington st. and Chestnut Hill ave.	M. Kiernan	September 18, 1899	(A) \$0.10; (B) \$0.08; (D) \$0.35; (E) \$0.25; (H) \$0.07.

Public Alley No. 2001, from Webster to Marginal st., passageway next south-east from Cottage st.....	Ward & Conlin.....	September 22, 1899.....	\$5.00 per day for paver; \$4.50 per day for stonemason; \$3.50 per day for carpenter; \$3.00 per day for painter; \$3.00 per day for single team; \$1.75 per day for laborer; \$4.50 per day for foreman; \$1.50 per gallon paint — plus 15%.
Northampton and Albany sts., at their junction.....	H. Gore & Co.....	September 30, 1899.....	(B) \$0.20; (E) \$0.60; (G) \$0.43.
Harrison ave., between Kneeland and Bennet sts.....	P. McGovern.....	September 30, 1899.....	(B) \$0.08; (E) \$0.25; (F) \$0.90; (G) \$0.18.
Kingston st., between Bedford and Essex sts.....	H. Gore & Co.....	October 5, 1899.....	(B) \$0.08; (C) \$4.75; (E) \$0.25; (F) \$0.90; (G) \$0.18.
Atlantic ave., from Dewey sq. across Congress st.....	Jones & Meehan.....	October 16, 1899.....	(B) \$0.08; (E) \$0.25; (F) \$0.90; (G) \$0.18.
Atlantic ave., between Congress and Oliver sts.....	P. McGovern.....	October 16, 1899.....	(B) \$0.08; (E) \$0.25; (F) \$0.90; (G) \$0.18.
Park st., between Tremont and Beacon sts.....	W. H. Glenn & Co.....	October 31, 1899.....	\$5.00 per day for edgestone setters; \$4.25 per day for pavers; \$2.25 per day for rammers; \$2.00 per day for tenders; \$4.35 per day for double teams; \$2.61 per day for single teams; \$4.50 per day for fore- man; \$1.75 per day for laborers — plus 15%.
Atlantic ave., between Kneeland st. and Dewey sq., in- cluding Dewey sq.....	H. Gore & Co.....	November 6, 1899.....	(B) \$0.08; (C) \$4.75; (E) \$0.25; (F) \$0.90; (G) \$0.18.

EXPLANATION OF LETTERS.

(A) Earth excavation per square yard. (B) Setting edgestones per lineal foot. (C) Furnishing and laying a 6-inch American cement concrete base per cubic yard. (D) Laying granite blocks for barrel gutters per square yard. (E) Laying granite blocks and flagging crosswalks with gravel joints per square yard. (E¹) Laying granite blocks with gravel joints per square yard. (F) Laying granite blocks and flagging crosswalks with pitch joints per square yard. (G) Laying brick sidewalks per square yard. (H) Earth excavation for edgestones per lineal foot.

1 Artificial Stone Sidewalks.

CONTRACTOR.	Dated	Price.	CONTRACTOR.	Dated	Price.
Aberthaw Construction Company.....	April 13, 1899..	6 cts. per square foot.	W. A. Murtfeldt Company.....	April 28, 1899.	6 cts. per square foot.
Barnes-Ruffin Company.....	June 9, 1899..	6 cts. per square foot.	H. P. Nawn.....	August 7, 1899.	6 cts. per square foot.
Thomas J. Hind.....	May 1, 1899..	6 cts. per square foot.	J. C. Newborg.....	April 15, 1899.	6 cts. per square foot.
H. Johnson & Co.....	April 6, 1899..	6 cts. per square foot.	Simpson Bros. Corporation.....	April 10, 1899.	6 cts. per square foot.
P. F. Lonergan.....	April 11, 1899.	6 cts. per square foot.	Taylor, Carr & Andrews.....	April 10, 1899.	6 cts. per square foot.
P. Lyons.....	June 8, 1899..	6 cts. per square foot.	J. Uffhell & Co.....	May 12, 1899..	6 cts. per square foot.

¹ These walks are guaranteed by a surety company bond for ten (10) years from date of completion and were laid on various public streets where the contractor had agreements with the abutters.

Furnishing and Laying Artificial Stone Sidewalks.

CONTRACT.	Awarded to	Dated	Price.
Canal st., between Causeway and Market sts.....	Simpson Bros. Corporation.....	April 28, 1899.	\$0 20 per square foot.
Canal st., between Haymarket sq. and Market st.....	W. A. Murtfeldt Co.....	May 9, 1899.....	0 20 per square foot.
Fowler st., between Glenway and Greenwood sts.....	Barnes-Ruffin Co.....	June 10, 1899.....	0 16½ per square foot.
Thane st., near Park st.....	Barnes-Ruffin Co.....	July 14, 1899.....	0 16½ per square foot.
Devon st., between Blue Hill ave. and Columbia road.....	P. Lyons.....	August 9, 1899.....	0 16 per square foot.
Edwin st., between Dorchester ave. and Florida st.....	P. Lyons.....	October 25, 1899.....	0 16 per square foot.

Paving with Trinidad Asphalt.

CONTRACT.	Awarded to	Dated	Price.
Asphalting Charles st. from Fruit across Allen st.....	Barber Asphalt Paving Com- pany.....	July 28, 1899.....	(A) \$3.25 per square yard. (B) \$2 per square yard.
Asphalting and regulating Andrews st. between East Can- ton and East Dedham sts.....	Barber Asphalt Paving Com- pany.....	August 16, 1899.....	\$1,035 05
Asphalting and regulating Trinity pl. from St. James ave. to and across Stuart st.....	Barber Asphalt Paving Com- pany.....	August 16, 1899.....	\$3,459 29
Asphalting and regulating Public Alley No. 701, between Union Park and Upton st., from Tremont st. to Shaw- mut ave.....	Barber Asphalt Paving Com- pany.....	September 7, 1899.....	\$3,032 06
Devonshire st., between Milk and Water sts.....	Barber Asphalt Paving Com- pany.....	September 23, 1899.....	(F) \$3.65 per square yard. (C) \$6 per cubic yard.
Endicott st., from Cooper across Thacher st.....	Barber Asphalt Paving Com- pany.....	September 23, 1899.....	(A) \$3.25 per square yard.
Harrison ave., between Kneeland and Bennet sts.....	Barber Asphalt Paving Com- pany.....	September 23, 1899.....	(A) \$3.25 per square yard. (D) \$5 per cubic yard. (F) \$4.75 per cubic yard.

EXPLANATION OF LETTERS.

(A) Furnishing and laying a 6-in. American cement concrete base, an 1½-in. wearing surface and an 1½-in. binder, and guaranteeing the same for a period of ten (10) years after completion. (B) Furnishing and laying a 2-in. wearing surface and an 1½-in. binder on existing concrete base, and guaranteeing the same for a period of ten (10) years after completion. (C) Furnishing and laying a Portland cement (American vulcanite) concrete base. (D) Furnishing and laying extra depth of American cement concrete base. (E) Furnishing and laying a 6-in. American cement concrete base. (F) Furnishing and laying a 6-in. American Portland vulcanite concrete, a 2-in. wearing surface and an 1½-in. binder, and guaranteeing the same for a period of ten (10) years after completion.

Paving with Seyssel Rock Asphalt.

CONTRACT.	Awarded to	Dated	Price.
Asphalting and regulating Genesee and Oswego sts.....	Jones & Meehan.....	June 12, 1899.....	(A) \$3 per square yard; (B) \$0.08 per lineal foot; (C) \$0.25 per square yard; (D) \$0.18 per square yard.
Asphalting and regulating Milton st., between Brighton and Spring sts.....	Jones & Meehan.....	July 13, 1899.....	(E) \$3.25 per square yard; (B) \$0.08 per lineal foot; (C) \$0.25 per square yard; (D) \$0.18 per square yard.
Asphalting and regulating Public Alleys No. 702 and 708, from Worcester to West Springfield sts., next northeast-ly from Newland st., and from Newland st., between Worcester and West Springfield sts., respectively.....	Jones & Meehan.....	September 25, 1899.....	Public Alley No. 702, \$862; Public Alley No. 703, \$510.
Paving and regulating Public Alley No. 102, leading from Marshall st. to Creek sq.....	Jones & Meehan.....	October 5, 1899.....	\$850.
Paving and regulating a portion of Mason st., from a point 450 feet west of West st. to about 120 feet westerly.....	Jones & Meehan.....	November 2, 1899.....	(A) \$3 per square yard; (B) \$0.08 per lineal foot; (C) \$0.25 per square yard; (D) \$0.18 per square yard.

EXPLANATION OF LETTERS.

(A) Furnishing and laying a 6-in. American cement concrete base and a wearing surface of $\frac{1}{2}$ inches of Seyssel rock asphalt, and guaranteeing the same for a period of five (5) years after completion. (B) Setting or resetting edge stones. (C) Laying granite blocks or flagging crosswalk with gravel joints. (D) Laying brick sidewalks. (E) Furnishing and laying a 6-in. American cement concrete base and a wearing surface of 2 inches of Seyssel rock asphalt, and guaranteeing the same for a period of ten (10) years after completion.

Paving with Sicilian Rock Asphalt.

CONTRACT.	Awarded to	Dated	Price.
Kingston st., between Beach and Essex sts.....	Boston Asphalt Company.....	July 17, 1899.....	(A) \$3.25 per square yard.

(A) Furnishing and laying a 6-in. American cement concrete base and a 2-in. wearing surface and guaranteeing same for ten (10) years after completion.

Asphalting and Regulating.

CONTRACT.	Awarded to	Dated	Price per Alley.														
Asphalting and regulating Public Alleys 401 to 405 inclusive, between Huntington ave. and St. Botolph st., from Irvington st. to rear northeast side of Massachusetts ave.; Public Alley 419, between Beacon and Marlborough sts., from Dartmouth to Clarendon st., and Public Alley 431, between Commonwealth ave. and Newbury st., from Hereford to Gloucester st.....	Simpson Bros. Corporation.....	July 27, 1899.....	<table border="0"> <tr> <td>401—</td> <td>\$1,309 00</td> </tr> <tr> <td>402—</td> <td>1,316 00</td> </tr> <tr> <td>403—</td> <td>1,281 00</td> </tr> <tr> <td>404—</td> <td>1,745 00</td> </tr> <tr> <td>405—</td> <td>1,458 00</td> </tr> <tr> <td>419—</td> <td>1,506 00</td> </tr> <tr> <td>431—</td> <td>890 00</td> </tr> </table>	401—	\$1,309 00	402—	1,316 00	403—	1,281 00	404—	1,745 00	405—	1,458 00	419—	1,506 00	431—	890 00
401—	\$1,309 00																
402—	1,316 00																
403—	1,281 00																
404—	1,745 00																
405—	1,458 00																
419—	1,506 00																
431—	890 00																

Sewer Construction under Chapter 426 of the Acts of 1897 and Amendments.

CONTRACT.	Awarded to	Dated	Cost of contract, as per estimated quantities, not including materials.
Sewers and drains in Commonwealth ave., north side, section 13.....	T. J. Young & Co.....	March 15, 1899.....	\$4,980 90
Conduit for Oakland Garden fork, Canterbury branch of Stony brook, between New England ave. and Millet st....	H. P. Nawn.....	March 29, 1899.....	2,570 00
Sewers and drains in Commonwealth ave., north side, section 11 and part of section 13.....	T. J. Young & Co.....	April 14, 1899.....	7,739 50
Sewers and drains in Dent and Winslow sts., West Roxbury.....	C. E. Trumbull & Co.....	April 20, 1899.....	4,801 00
Sewers and drains in Commonwealth ave., section 9, east side.....	T. J. Young & Co.....	June 3, 1899.....	14,773 75
Sewers and drains in Orkney road, between Ayr and Sutherland roads.....	D. E. Lynch.....	June 12, 1899.....	1,990 00
Sewers and drains in Atherstone st., Dorchester.....	F. A. Foster.....	June 30, 1899.....	826 25

Sewer Construction under Chapter 426 of the Acts of 1897 and Amendments. — *Continued.*

CONTRACT.	Awarded to	Dated	Cost of contract, as per estimated quantities, not including materials.
Sewers and drains in Waldeck st., between Tonawanda st. and Melville ave., Dorchester	J. J. Falvey	July 19, 1899	\$3,523 50
Sewer in Commonwealth ave., section 10, east side	T. J. Young & Co.	August 1, 1899	1,688 50
Sewer in Harold st., Roxbury	J. P. O'Connell	August 2, 1899	1,803 00
Sewer work in Public Alley No. 101, between Fulton and Commercial sts., from Cross st. to Richmond st.	M. Regan	August 5, 1899	432 07
Sewer work in Public Alley No. 419, between Beacon and Marlborough sts., from Dartmouth st. to Charendon st.	M. Regan	August 5, 1899	74 20
Sewer work in Public Alley No. 431, between Commonwealth ave. and Newbury st., from Hereford st. to Gloucester st.	M. Regan	August 5, 1899	291 90
Sewer work in Public Alley No. 702, from Worcester to West Springfield sts., passageway next northwest from Newland st.	M. Regan	August 30, 1899	180 70
Sewer work in Public Alley No. 703, between Worcester and West Springfield sts., from Newland st. to Public Alley No. 702	M. Regan	August 30, 1899	180 70
Drains in Congreve st., West Roxbury	J. Dolan	August 31, 1899	759 00
Drains in Oakview Terrace, West Roxbury	J. P. O'Connell	September 1, 1899	1,106 00
Sewers and drains in Alexander st., Dorchester	T. J. Young & Co.	September 14, 1899	797 50
Sewers and drains in Dresden st., West Roxbury	J. Dolan	September 18, 1899	268 00
Sewer in Burrill st., Dorchester	J. F. Cullen	September 27, 1899	561 50
Drains and catch-basins in Rozella st., Dorchester	F. A. Foster	September 27, 1899	420 00
Sewers and drains in Hubbard st., West Roxbury	J. Dolan	September 27, 1899	526 50

Sewers and drains in Florida st., between Edwin and Templeton sts., Dorchester.....	T. J. Young & Co	September 27, 1899	2,170 25
Sewers and drains in Shafter st., Dorchester	F. A. Foster	September 29, 1899	1,153 00
Sewers and drains in Esmoud st., Dorchester	D. E. Lynch	October 2, 1899.....	1,078 49
Drains in Warner st., Dorchester	D. E. Lynch	October 2, 1899.....	400 60
Catch-basins and drains in Callender st., between Don and Tucker sts., Dorchester	M. Regan	October 16, 1899	1,245 00
Sewers and drains in Lauriat ave., between Norfolk and Tucker sts., Dorchester	J. J. Falvey.....	October 19, 1899	4,391 40
Drains in Custer st., West Roxbury.....	T. F. Broderick.....	October 28, 1899	247 60
Sewer in Hancock st. and Downer court, Dorchester.....	F. A. Foster	October 28, 1899	1,577 50
Catch-basins and drains in Waldeck st., between Linsay and Strafford sts., Dorchester.....	J. F. Cullen	November 1, 1899.....	278 00
Sewer and drains in Fowler st., Dorchester	C. W. Kinney.....	November 4, 1899.....	679 14
Sewer in Charlestown and Beverly sts., from the end of the existing brick sewer in Charlestown st., to about 60 feet into Beverly st.....	Metropolitan Contracting Co.....	November 4, 1899.....	
Conduit in Faneuil st., from Fairbanks st. to and across Oak square, Brighton	T. J. Young & Co.....	November 6, 1899.....	16,080 00
Sewer and drains in Nottingham st., Dorchester	J. McLaughlin & Son.....	November 8, 1899.....	344 69
Drains in Homes ave., Dorchester	J. McLaughlin & Son.....	November 8, 1899.....	640 00
Sewer in Darling st., Roxbury	D. H. Sullivan	November 8, 1899.....	1,440 00
Sewers and drains in Corbet and Nelson sts., Dorchester ..	D. E. Lynch	November 9, 1899.....	1,990 00
Sewer in John A. Andrew st., West Roxbury	T. F. Minton.....	November 10, 1899	600 50
Sewer in Garden st., West Roxbury	T. F. Minton	November 10, 1899.....	602 50
Sewer in Bellevue ave., West Roxbury	T. A. Dolan	November 13, 1899.....	4,001 80
Sewer in Bennington st., between Leyden st. and Leverett ave.....	Ward & Conlin	November 14, 1899.....	2,815 00

Sewer Construction under Chapter 426 of the Acts of 1897 and Amendments. — Concluded.

CONTRACT.	Awarded to	Dated	Cost of contract, as per estimated quantities, not including materials.
Brick overflow and conduit in Dorchester ave., between Gibson st. and Teacan brook conduit in Christopher st....	J. P. O'Connell	November 16, 1899.....	\$3,042 75
Culverts, water-courses and drains in Ashland and Rowe sts., and private land.....	T. F. Broderick	November 24, 1899.....	1,073 25
Sewer in Alleghany st.....	M. H. Lynch.....	November 27, 1899.....	2,410 00
Sewers and drains in Saratoga st., from Ford st. about 250 feet west.....	Ward & Conlin	December 15, 1899.....	550 00
Sewers and drains in Leverett ave., between Bennington and Swan st	Ward & Conlin	December 15, 1899.....	787 50
Sewer in private land, between Lamont st. and Prentiss pl.	Bay State Contracting Co.....	December 20, 1899.....	500 70
Catch basins and drains in Draper court and Coleman st....	F. A. Foster.....	December 21, 1899.....	254 00
Sewers and drains in Corbet st., between Morton and Hopkins sts.....	D. E. Lynch.....	December 26, 1899	2,385 00
Sewer in Darling st.....	D. H. Sullivan	December 29, 1899.....	239 00

Street Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto.

Macadam Roads.

Amory st., between School and Bragton sts.....	P. McGovern.....	April 18, 1899.....	\$2,163 01
Chester st., between Commonwealth and Brighton aves....	J. Doherty & Co.....	April 18, 1899.....	1,063 20
Orkney road, between Sutherland and Strathmore roads....	D. E. Lynch.....	April 24, 1899.....	3,120 30
St. Stephen st., between St. Stephen and Bryant sts.....	J. Doherty & Co.....	April 27, 1899.....	1,513 55

Stanley st., between Quincy and Bellevue sts.....	J. Doherty & Co.	April 27, 1899.....	785 75
Idaho st., from River st. about 810 feet northerly.....	James McGovern	April 27, 1899.....	1,490 91
Belvidere st., between Dalton and West Newton sts.....	Collins & Ham.....	May 17, 1899.....	1,397 90
Bragton st., between Columbus ave. and Amory st.....	T. A. Dolan.....	May 17, 1899.....	937 31
Devon st., between Blue Hill ave. and Columbia road.....	J. Connors.....	May 17, 1899.....	3,255 30
Athelwold st., south side, near School st.....	Collins & Ham.....	June 20, 1899.....	125 00
Athelwold st., north side, near School st.....	Collins & Ham.....	June 20, 1899.....	150 00
Shirley st., between Massachusetts and Norfolk aves.....	J. F. Cullen.....	June 20, 1899.....	3,005 80
Spencer st., between Athelwold and Park sts.....	J. McGovern.....	June 20, 1899.....	600 51
Thane st., between Athelwold and Park sts.....	P. Doherty.....	June 20, 1899.....	567 90
Peterborough st., between Boylston and Audubon roads.....	J. Doherty & Co.....	July 14, 1899.....	4,366 00
West Selden st., between Morton and Manchester sts.....	J. McGovern.....	July 14, 1899.....	10,640 00
Woodlawn st., between Hyde Park ave. and Forest Hills Cemetery	T. A. Dolan.....	July 14, 1899.....	1,582 10
Ipswich st., between Boylston road and Boylston st.....	Collins & Ham.....	August 14, 1899.....	4,219 01
Atherstone st., between Fuller and Bailey sts.....	P. Doherty.....	August 14, 1899.....	574 00
Chiswick road, between Englewood and Chestnut Hill aves.,	Collins & Ham.....	August 17, 1899.....	3,368 01
Edwin st., between Dorehester ave. and Florida st.....	P. Doherty.....	September 16, 1899.....	1,763 50
Florida st., between King and Templeton sts.....	P. Doherty.....	September 16, 1899.....	2,673 30
Newburg st., between Beech st. and Belgrade ave.....	J. Doherty & Co.....	September 16, 1899.....	4,308 90
Waldeck st., between Melville ave. and Tonawanda st.....	J. F. Cullen	September 16, 1899.....	3,245 50
Hubbard st., between Chestnut ave. and Lamartine st.....	T. Minton	October 13, 1899.....	452 00
Dresden st., between Boylston st. and Spring Park ave.....	T. Minton	October 13, 1899.....	429 70
Cambridge st., between Brighton ave. and Washington st.....	J. L. Bryne & Co.	October 16, 1899.....	8,762 00

Street Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto. — Concluded.

Macadam Roads.

CONTRACT.	Awarded to	Dated	Cost of contract as per estimated quantities, not including materials.
Alexander st., between Alexander and Oleander sts.	J. McGovern.....	October 18, 1899.....	\$1,088 81
Congreve st., between Centre and South sts.	W. Finneran.....	October 18, 1899.....	2,278 50
Oakview terrace, from Centre st. to about 800 ft. s'heasterly,	Collins & Ham.....	October 18, 1899.....	3,491 10
Annabel st., between Columbia road and Sumner st.	J. McGovern.....	October 31, 1899.....	828 00
Warner st., between Harvard and Park sts.	T. F. Bradley.....	October 31, 1899.....	1,617 40
Edison Green, between Dorchester ave. and Pond st.	J. McGovern.....	November 9, 1899.....	3,149 50
Esmond st., between Blue Hill ave. and Harvard st.	T. F. Bradley.....	November 9, 1899.....	2,452 50
Callender st., between Tucker and Don sts.	J. F. Cullen.....	November 13, 1899.....	3,757 00
Rozella street, between Adams and Muzzy sts.	T. F. Bradley.....	November 23, 1899.....	1,022 50
Seymour st., between Canterbury st. and Brown ave.	T. F. Welch.....	November 24, 1899.....	2,281 60
Rowe st., between Ashland and Sharon sts.	P. Doherty.....	November 24, 1899.....	1,506 50
Shafter st., between Waterlow and Faxon sts.	P. Doherty.....	December 1, 1899.....	1,195 50
Custer st., between Woodman st. and the Arnold Arboretum,	P. Doherty.....	December 15, 1899.....	838 60

Telford Macadam Roads.

Columbia road, from a point 220 feet north of Glendale st. to the southerly line of Hancock st., and from Dudley st. to Edward Everett square. Completion of construction commenced by J. McGraw & Co., under contract dated August 15, 1898.	J. C. Coleman & Son.....	April 20, 1899.....	\$10,195 25
Columbia road, between Dorchester ave. and Buttonwood st.	P. Doherty.....	June 14, 1899.....	1,718 25
Columbia road, between Hancock and Dudley sts.	J. C. Coleman & Son.....	June 21, 1899.....	3,539 70
Lauriat ave., between Ballou ave. and Norfolk st.	T. F. Bradley.....	August 16, 1899.....	3,117 31
Columbia road, at and including Edward Everett square.	J. C. Coleman & Son.....	September 12, 1899.....	3,300 00

Engine Work at the Pumping Station, Calf Pasture, Dorchester.

CONTRACT.	Awarded to	Dated	Price.
Cutting two (2) manholes in fire-box of boiler.....	Edward Kendall & Sons.....	October 9, 1899.....	\$600
Steel forgings for sewerage pumping engine No. 5.....	Bethlehem Steel Company.....	January 18, 1900.....	\$0.22½ per lb.
Sewerage pumping engine No. 5.....	I. P. Morris Company.....	January 19, 1900.....	\$219,400
Reheater, lagging, and fittings for sewerage pumping engine No. 4.....	I. P. Morris Company.....	January 26, 1900.....	\$4,950

Pile Driving.

CONTRACT.	Awarded to	Dated	Price.
Furnishing and driving spruce piles for sewer in Jersey st., between Boylston and Peterborough sts.	A. Bellevue & Co.....	September 18, 1899.....	\$0.12½ per linear foot of pile driven.
Furnishing and driving spruce piles for sewer in passage-way, between Peterborough and Queensberry sts.....	A. Bellevue & Co.....	November 2, 1899.....	\$0.14 per linear foot of pile driven.
Furnishing and driving spruce piles for sewer in Haverhill st., between Charlestown and Travers sts.....	J. T. Scully.....	December 20, 1899.....	\$0.13 per linear foot of pile driven.
Furnishing and driving spruce piles for sewer, and building coffer dam from 215 feet east of Trumbull st. to the southerly side of the B., R. B. & L. R. Co.	A. Bellevue & Co.....	June 26, 1899.....	Foreman, \$4 per day; engineer, \$3 per day; carpenter, \$2.50 per day; plus 15 per cent. Pile-driving machine and engine, \$3 per day. Materials, actual reasonable cost.

Purchase of Ferry-boat, etc., from the United States Government.

CONTRACT.	Awarded to	Dated	Price.
Purchase of ferry-boat "Governor Russell"	City of Boston.....	August 9, 1899.....	\$25,000 paid to the U. S. Government.
Purchase of iron gates, window sash, etc., formerly in use on the "Governor Russell"	City of Boston.....	October 23, 1899.....	\$200 paid to the U. S. Government.

Disposal of Refuse Wastes.

CONTRACT.	Awarded to	Dated	Price.
Disposal of refuse wastes in the Brighton District.....	The City Wastes Disposal Co....	December 13, 1899.....	\$500 per year for ten (10) years.

Bridge Construction.

CONTRACT.	Awarded to	Dated	Price.
Constructing a bridge over Lauriat ave.....	N.Y., N.H. & H. R.R. Co.....	February 14, 1899.....	\$21,000
Steel superstructure of Charlestown West bridge over Ipswich st.....	The King Bridge Company.....	March 25, 1899.....	13,850

Miscellaneous Agreements.

CONTRACT.	Awarded to	Dated	Price.
Placing four (4) weighing machines in the ferry head-houses.....	The National Automatic Machine Co.....	February 27, 1899.....	\$200 per year paid to the City.
Sheathing roadway of Harvard bridge.....	Ross & Fowler.....	March 24, 1899.....	\$2,994 00.
Building a bulkhead on Belvidere street.....	W. H. Ryan & Co.....	March 29, 1899.....	527 00.
Building a retaining wall on Neponset ave. near the bridge.....	P. J. Williams & Co.....	April 1, 1899.....	1,500 00.
Lease of flats, etc., for public landing at Jeffries Point.....	G. C. Fitzpatrick.....	May 1, 1899.....	\$250 per year.
Retaining wall and fence, Harold st.....	P. McGovern.....	April 10, 1899.....	\$380 00.
Iron fence on Freeport st. retaining wall.....	G. T. McLauthlin Co.....	July 1, 1899.....	345 00.
Maintenance of bridge over N. Y., N. H. & H. R. R. at Dorchester and Talbot aves.....	N. Y., N. H. & H. R. R. Co.....	August 10, 1899.....	
Furnishing about 20,000 linear feet of edgestones.....	Shimpon Bros.' Corporation.....	August 16, 1899.....	\$0.60 per linear foot.
Building fence on Ipswich st.....	Collins & Ham.....	October 18, 1899.....	1.15 " "
Dredging dock at the pumping station, Calf Pasture.....	New England Dredging Co.....	December 12, 1899.....	\$175 per day.
Patent rights for Boston in street signs, under letters-patent, No. 477,873.....	E. J. Shaw.....	December 15, 1899.....	\$1,000 00.
Removing snow from Public Alley No. 420, between Commonwealth ave. and Newbury st.; from Massachusetts ave. to Hereford st.....	W. Gilligan.....	December 29, 1899.....	Laborers, \$2 per day; single teams, \$3 per day; double teams, \$5 per day, to be paid by the abutters.
Sale of ferry-boat "Ben Franklin".....	P. Coughlin, purchaser.....	January 29, 1900.....	\$2,650 paid to the city.
Sale of land: City yards in Paris, Morris, Marion and Chelsea sts.....	Various persons.....	Aug. 29 to Sept. 20, 1899..	\$18,227.13 paid to the city.

List of Streets Paved with Trinidad Asphalt, Feb. 1, 1900.

City Proper.

Name.	Location.	Length.	Area.	Year Laid.
Albany st.....	80 ft. north of Broadway, across Way st.	105	397	1899
Albany st.....	East Concord st. to East Springfield st.	450	2,700	1884
Andrews st.....	East Dedham st. to East Canton st.....	216	312	1899
Arch st.....	Franklin st. to Milk st.....	426	1,267	1883-93
Ash st.....	Bennet st. to Nassau st.....	230	427	1887
Barton ct.....	Barton st. to Brighton st.....	134	186	1894
Batterymarch st..	Milk st. to Liberty sq.....	150	466	1896
Beacon st.....	Charles st., across Arlington st.....	870	3,800	1891
Beacon st.....	Dartmouth st. to within 150 ft. of westerly line of Gloucester st.....	1,744	9,277	1892
Beacon st.....	150 ft. from westerly line of Gloucester st. to 68 ft. beyond westerly line of Gloucester st.....	218	1,183	1898
Beacon st.....	68 ft. west of Gloucester st. to Massachusetts ave.....	1,019	5,391	1893
Bennet st.....	90 ft. west of Harrison ave. to 162 ft. east of Washington st.....	180	350	1887
Bond st.....	Hanson st. to Milford st.....	192	426	1895
Boylston st.....	East side Berkeley st., across Clarendon st.....	656	3,869	1897
Brattle sq.....	Brattle st. to Elm st.....	281	670	1888
Brighton st.....	Leverett st. to Allen st.....	845	1,737	1892
Brimmer st.....	Beacon st. to Pinckney st.....	1,087	3,300	1895
Broadway.....	Albany st. to 105 ft. west of Albany st..	105	467	1899
Castle st.....	Castle sq., easterly.....		427	1899
Cazenove st.....	Columbus ave. to 45 ft. south of Columbus ave.....	45	100	1899
Central st.....	Broad st. to Kilby st.....	313	869	1887
Chambers st.....	Green st., across Poplar st.....	460	1,061	1894
Chambers st.....	Brighton st. to Charles st.....	272	604	1895
Chandler st.....	At Castle sq.....		51	1899
Charles st.....	Easterly side Fruit st., across Allen st..	706	1,804	1899
Charter st.....	Hanover st., across Unity st.....	318	636	1894
Cherry st.....	Washington st. to Shawmut ave.....	334	594	1892
Clark st.....	Hanover st. to North st.....	319	614	1892
Columbus ave.....	Boston & Albany Railroad bridge, across Massachusetts ave.....	3,505	15,000	1884-87-88-91-99
Columbus ave.....	Massachusetts ave. to 301 ft. south of Camden st.....	903	5,418	1896
Corning st.....	Washington st. to Shawmut ave.....	338	734	1883-96
<i>Carried forw'd..</i>		16,421	64,137	

List of Streets Paved with Trinidad Asphalt. — Continued.
City Proper.

Name.	Location.	Length.	Area.	Year Laid.
<i>Brought forw'd</i>		16,421	64,137	
Congress st.....	Between Devonshire st. and Congress st.	19	37	1883
Cooper st.....	North Margin st., across Endicott st....	194	597	1887
Cooper st.....	Endicott st. to Charlestown st.....	205	604	1887-97
Court st.....	Washington st. to Court sq.....	231	642	1891
Court sq.....	Court st. to Court st.....	665	1,883	1881-94
Dartmouth st.....	Buckingham st. to B. & A. R. R. bridge.	127	580	1899
Dartmouth st.....	Boylston st. to Newbury st.....	266	2,058	1894
Davis st.....	Washington st. to Harrison ave.....	323	646	1892
Devonshire st....	Milk st. to Water st.....	262	786	1899
Doane st.....	Kilby st. to Broad st.....	312	624	1881
Edinboro' st.....	Essex st. to Beach st.....	470	924	1895
Endicott st.....	Cooper st., across Thacher st.....	318	1078	1884-99
Exchange pl.....	Congress st. to Kilby st.....	244	678	1887
Ferdinand st.....	At Castle sq.....	37	107	1899
Groton st.....	Washington st. to Shawmut ave.....	335	558	1892
Hanover ave.....	Hanover st. to North st.....	307	266	1892
Harrison ave.....	22 ft. south of Kneeland st. to 22 ft. north of Harvard st.....	249	885	1899
Harrison ave.....	East Newton st. to East Springfield st..	928	2,681	1888-95
Harrison ave.....	East Springfield st. to 90 ft. southerly ..		130	1888
Hollis st.....	Tremont st., toward Washington st ..	276	521	1891
Hudson st.....	Beach st. to 90 ft. north of Curve st. (minus Kneeland and Harvard sts. intersections).....	1,407	3,938	1891
Kilby st.....	State st. to Milk st. (Including Liberty sq.)	640	4,059	1881-88- 98
Laconia st.....	Washington st. to Harrison ave.....	330	727	1896
LaGrange st.....	Tremont st., toward Washington st....	181	355	1897
Lincoln pl.....	Worcester st. to Springfield st.....	217	313	1897
Malcolm st.....	Mt. Vernon st. to Chestnut st.....	261	290	1892
Massachusetts ave.	Columbus ave. to Tremont st. (south- erly roadway)	267	1,621	1892
Massachusetts ave.	Tremont st. to Shawmut ave. (southerly roadway).....	470	2,334	1892
Massachusetts ave.	Shawmut ave. to Washington st. (south- erly roadway).....	180	394	1892
Moon st.....	North sq. to Lewis st.....	182	384	1891
N. Bennet st.....	Hanover st. to Salem st.....	552	920	1883
<i>Carried forw'd</i>		26,876	96,957	

List of Streets Paved with Trinidad Asphalt.—Continued.
City Proper.

Name.	Location.	Length.	Area.	Year Laid.
<i>Brought forw'd.</i>		26,876	96,957	
N. Margin st.	Stillman st. to Thacher st.	515	1,154	1895
Oxford st.	Beach st. to Essex st.	430	735	1895
Parkman st.	North Anderson st., across Blossom st.	241	550	1895
Parmenter st.	Hanover st. to Salem st.	279	764	1893
Pinckney st.	Charles st., across Brimmer st.	271	723	1895
Pine st.	Washington st. to Harrison ave.	419	597	1896
Poplar st.	Chambers st. to Charles st.	1,188	2,442	1887-92
Public Alley 301.	Pinckney st. to River st.	270	400	1897
Public Alley 401.	Between Irvington st. and Garrison st.	350	362	1899
Public Alley 402.	Between Garrison st. and West Newton st.	358	374	1899
Public Alley 403.	Between West Newton st. and Cumberland st.	355	370	1899
Public Alley 417.	Exeter st. toward Fairfield st.	115	102	
Public Alley 419.	Dartmouth st. to Clarendon st.	575	511	1899
Public Alley 420.	Clarendon st. to Berkeley st.	580	515	
Public Alley 423.	Berkeley st. to Clarendon st.	580	516	
Public Alley 431.	Hereford st. to 83 ft. west of Gloucester st.	312	277	1899
Public Alley 437.	Berkeley st. to Arlington st.	631	561	1898
Public Alley 438.	Arlington st. to Berkeley st.	631	561	
Public Alley 701.	130 ft. east of Tremont st to Shawmut ave.	521	611	1899
Spring st.	Poplar st. to Leverett st.	447	908	1895
Stevens st.	Lincoln pl. toward Shawmut ave.	16	22	1897
Stillman st.	Endicott st. across North Margin st.	170	453	1892
Stoddard st.	Howard st. to Court st.	135	150	1892
Sun Court st.	North st. to Moon st.	151	218	1891
Thacher st.	Charlestown st. to Endicott st.	203	562	1892
Tileston st.	155 ft. west of Hanover st. across Unity st.	254	346	1887
Tileston st.	Unity st. to Salem st.	163	124	1895
Tremont st.	At Castle square.	60	771	1899
Trinity place.	St. James st. across Stuart st.	398	1,150	1899
Unity st.	Charter st. to Tileston st.	330	500	1897
Warrenton st.	Eliot st. to Tremont st.	670	1,587	1891
Warrenton st.	Shawmut ave. to Washington st.	468	910	1891
<i>Carried forw'd.</i>		38,962	116,783	

List of Streets Paved with Trinidad Asphalt. — *Concluded.*

City Proper.

Name.	Location.	Length.	Area.	Year Laid.
<i>Brought forw'd.</i>		38,962	116,783	
Water st.....	Congress st. to Kilby st.....	255	694	1889
Water st.....	Liberty sq. to Broad st.....	252	682	1896
Wiggin st.....	North Bennet st. to Tileston st.....	107	119	1887
Wiget st.....	Salem st. to North Margin st.....	259	240	1897
		39,835	118,518	

Charlestown.

Austin st.....	Seminary place to Lawrence st.....	144	421	1891
Bunker Hill st	At Tufts st.....		150	1897
Charlest'n bridge.	Over Fitchburg Railroad.....	60	533	1899
Corey st.....	124 ft. north of Moulton st. to Moulton st.....	124	276	1897
Moulton st.....	Easterly side Corey st. to Vine st.....	81	243	1897
Moulton st.....	Vine st. to Bunker Hill st.....	130	390	1897
Rutherford ave..	Devens st., 128 ft. westerly	128	284	1897
Tufts st.....	Bunker Hill st., 141 ft. northerly.....	141	415	1897
Vine st.....	Bunker Hill st. across Moulton st.....	165	670	1897
		973	3,382	

South Boston.

D st.....	West Fifth st. to Gold st.....	126	448	1889
E st.....	West Third st. to Bolton st.....	111	410	1892
Rogers st.....	Dorchester st. to Preble st.....	360	480	1891
West Sixth st.....	160 ft. east of G st., toward D st.....	91	305	1887
West Third st.....	153 ft. west of E st., across E st.....	185	769	1892
		873	2,412	

Roxbury.

Cabot st.....	Tremont st. to Ruggles st.....	1,236	3,571	1891
Cabot st.....	Easterly side Ruggles st. to Vernon st.	723	2,988	1892
Cabot st.....	Easterly side Vernon st. to Linden Park st.....	484	1,390	1897
Columbus ave.....	301 ft. south of Camden st., across Terry st.....	2,640	15,840	1896
Public Alley 404..	66 ft. south of Cumberland st. to public Alley No. 405.....	534	533	1899
Public Alley 405..	94 ft. east of Huntington ave. to 62 ft. west of St. Botolph st.....	100	89	1899
		5,717	24,411	

List of Streets Paved with Sicilian Rock Asphalt, Feb. 1, 1900.

City Proper.

Name.	Location.	Length.	Area.	Year laid.
Acton st.....	Washington st. to Bradford st.....	259	352	1896
Albany st.....	Easterly side Stoughton st., across East Concord st.....	285	1,710	1897
Ash st.....	Oak st., across Nassau st.	220	391	1895
Avery st.....	Washington st. to Mason st... ..	360	275	1897
Barton st.....	Leverett st. to Milton st.	427	723	1895
Bradford st.....	Waltham st. to Shawmut ave.....	600	1,270	1897
Charles st.....	Between Revere st. and Cambridge st., front of Eye and Ear Infirmary.....	191	225	1895
Cobb st.....	Washington st. to Shawmut ave.....	347	1,041	1897
Decatur st.....	Washington st. to Harrison ave.....	370	781	1892
Dwight st.....	Shawmut ave. to Tremont st.....	716	2,075	1893
Exeter pl.....	Chauncy st. to Harrison ave.....	170	387	1897
Fabin st.....	Newland to Ivanhoe sts.....	421	615	1895
Fay st.....	Dover st. to Harrison ave.	318	560	1894
Hanover st.....	Tileston st., across Charter st.....	315	934	1896
Hamburg st.....	Mystic st. to Harrison ave.	383	597	1896
Huntington ave. ..	B. & A. R.R. to Cumberland st.....	1,591	8,840	1896
Kingston st.....	Beach st. to Essex st.....	492	1,859	1899
Mason st.....	From a point 213 ft. south of West st. to 444 ft. south of West st.....	231	470	1894
Massachusetts ave.	Washington st. to Harrison ave. (southerly roadway)	344	2,030	1894
Massachusetts ave.	Harrison ave. to Albany st. (southerly roadway).....	318	2,121	1894
Mayo st.....	Castle st. to Cobb st.....	251	418	1897
Meander st.....	E. Dedham st. to Malden st.	307	437	1896
Motte st.....	Washington st. to Harrison ave.....	332	516	1892-99
Mystic st.....	Malden st. to E. Dedham st.....	204	226	1896
Mystic st.....	E. Dedham st. to E. Canton st.....	215	335	1896
Mystic st.....	E. Canton st. to E. Brookline st.....	216	337	1896
N. Margin st.	Thacher st. toward Endicott st.....	205	518	1897
Norwich st.....	Mystic st. to Meander st.....	221	339	1896
Ohio st.	Washington st. to Shawmut ave.....	343	277	1896
Pemberton sq.....	Front of Suffolk County Court-house...	323	1,365	1894
Prince st.....	Hanover st. to Bennett ave.....	293	654	1895
Shawmut ave.....	132 ft. south of Castle st., across Cherry st.....	327	945	1898
<i>Carried forw'd.</i>.....	.....	11,595	33,623	

List of Streets paved with Sicilian Rock Asphalt.—Continued.

City Proper.

Name.	Location.	Length.	Area.	Year laid.
<i>Brought forw'd.</i>		11,595	33,623	
Taylor st.	Dwight st. to Milford st.	196	274	1896
Whitmore st.	Kneeland st. to Harvard st.	249	445	1895
		12,040	34,342	

Charlestown.

Warren st.	Winthrop st. to Soley st.	127	365	1895
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South Boston.

Athens st.	West Second st. to A st.	617	916	1895
Athens st.	B st. to C st.	515	746	1892
East Broadway...	Front of Lincoln School	180	1,000	1897
K st.	East Sixth st. to East Eighth st.	566	1,083	1896
West Broadway...	From 196 ft. east of easterly line of Dorchester ave. to A st.	360	2,000	1892
West Broadway...	Gardner pl. to 150 ft. easterly.	150	648	1893
West Broadway...	New England Railroad bridge to E st. (4 ft. gutters)		1,487	1897
West Broadway...	150 ft. west of F st. to 267 ft. east of F st.	448	1,544	1897
West Broadway...	267 ft. east of F. st. to 44 ft. west of Dorchester st.	410	1,818	1898
		3,246	11,242	

Roxbury.

Columbus ave.	Terry st. to within 61 ft. north of Sta- tion st.	884	5,304	1896
Huntington ave. ...	Easterly side Cumberland st. to Massa- chusetts ave	747	4,150	1896
Huntington ave. ...	Massachusetts ave to Gainsborough st.	587	3,372	1896
		2,218	12,826	

Brighton.

Cottage Farm Bridge	Over Boston & Albany Railroad	140	1,556	1896
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List of Streets Paved with Seyssel Rock Asphalt, Feb. 1, 1900.

City Proper.

Name.	Location.	Length.	Area.	Year laid.
Genesee st.....	Harrison ave. to Albany st.....	505	1,122	1899
Mason st.....	444 ft. south of West st. to Avery st. ...	123	265	1899
Milton st.....	Brighton st. to Spring st.	308	274	1899
Oswego st.	Harrison ave. to Albany st.....	506	1,068	1899
Paul st.....	Emerald st. to Village st.....	133	236	1897
Paul st.....	Village st. to Tremont st.....	276	456	1897-99
Pelham st.....	Washington st. to Shawmut ave.....	320	693	1897
Public Alley 102...	23 ft. south of Marshall st. to Creek sq.	182	184	1899
Public Alley 702...	Worcester st. to West Springfield st ...	222	222	1899
Public Alley 703...	Between Newland st. and Public Alley 702.....	116	103	1899
Waterford st.....	Washington st. to Shawmut ave.....	313	544	1897
		3,007	5,167	

Other Asphalt Streets.

Name.	Location.	Length.	Area.	Year laid.
Harris st.....	Hanover st. to North st. (coal tar, Ayer's).....	294	425	
Hayward pl.....	Harrison ave. to Washington st (as- phaltina).....	260	578	1898
Massachusetts ave.	Columbus ave. to Tremont st., northerly roadway (asphaltina).....	267	1,622	1897
Public Alley 422...	Arlington st., 70 ft. westerly (tar con- crete).....	70	62	
Public Alley 436..	Berkeley st. to Clarendon st. (tar con- crete).....	580	516	
Ist., South Boston,	East Broadway to East Fourth st. (coal tar, Ayer's).....	272	1,027	
		1,743	4,230	

Summary.

Trinidad asphalt.....	47,398 feet, or	8.98 miles,	or	148,723 sq. yds.
Sicilian rock asphalt.....	17,771 " "	3.36 " "	" "	60,331 " "
Seyssel rock asphalt.....	3,007 " "	0.57 " "	" "	5,167 " "
Other asphalts.....	1,743 " "	0.33 " "	" "	4,230 " "
Total sheet asphalts.....	69,919 " "	13.24 " "	" "	218,451 " "
Asphalt blocks.....	2,912 " "	0.55 " "	" "	7,360 " "
Total.....	72,831 " "	13.79 " "	" "	225,811 " "

Street Mileage.

The following table shows the length of public highways and character of the pavements, February 1, 1900 :

DISTRICTS.	Asphalt.	Block.	Brick.	Cobble.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1898 report.. . .	12.21	85.18	0.60	1.14	270.23	98.72	11.39	479.47
February 1, 1900.								
City Proper.....	*11.23	45.40	0.70	0.79	26.20	0.42	0.06	84.80
Charlestown.....	0.21	9.17	.....	.....	13.69	.....	0.02	23.09
East Boston.....	.....	4.95	.....	0.13	6.87	15.38	0.14	27.47
South Boston.....	0.83	13.71	.....	0.05	20.93	1.99	5.58	43.09
Roxbury.....	1.50	9.40	0.10	0.04	65.47	9.22	2.02	87.75
West Roxbury.....	.....	0.10	.....	.....	50.77	27.52	1.10	79.49
Dorchester.....	.....	4.24	.....	.....	73.28	22.97	1.37	101.86
Brighton.....	0.03	.....	.....	.....	23.36	18.48	0.13	42.00
Total.....	13.80	† 86.97	0.80	1.01	280.57	95.98	10.42	489.55

NOTE.—The above districts refer to areas enclosed by the original boundary lines

* Of this amount 0.55 miles = asphalt blocks.

† Of this amount 7.33 miles = granite-block paving on concrete base.

4.21 miles of public alleys, chap. 298, Acts of 1898, included in this table.

Total length of public streets, 489.55 miles.

There have been laid out and accepted by the Street Commissioners during the year, 6.59 linear miles of public streets and 1.92 miles of public alleys; corrections to previous measurements on account of revision, abolishment of grade crossings and new bridges, and correction of previous tables from all causes show an increase of 1.57 miles, making a total net increase of 10.08 miles.

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

1859.....111.50 miles.	1881.....355.50 miles.	1892.....434.59 miles.
1871.....201.32 "	1882.....359.85 "	1893.....443.34 "
1872.....207.40 "	1883.....367.99 "	1894.....447.65 "
1873.....209.24 "	1884.....374.10 "	1895.....452.12 "
1874.....313.90 "	1885.....379.60 "	1896.....456.11 "
1875.....318.58 "	1886.....383.55 "	1897.....459.12 "
1876.....327.50 "	1887.....390.30 "	1898.....471.19 "
1877.....333.20 "	1888.....392.72 "	1899.....470.47 "
1878.....340.39 "	1889.....397.84 "	1900.....489.55 "
1879.....345.19 "	1890.....404.60 "	
1880.....350.54 "	1891.....409.60 "	

Areas of Pavement.

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

DISTRICTS.	Asphalt.	Block.	Brick.	Cobble.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1898 report..	210,388	1,859,248	6,050	12,471	4,996,684	1,575,596	321,391	8,981,828
Feb. 1, 1900.								
City Proper.....	*168,590	989,970	4,895	7,162	497,038	2,942	2,107	1,672,704
Charlestown.....	3,747	212,832	.....	.....	205,143	.....	3,269	424,991
East Boston .....	.....	111,012	.....	2,600	142,929	284,823	27,687	569,051
South Boston	14,681	297,601	.....	1,192	370,737	39,451	152,172	875,834
Roxbury.....	37,237	204,899	480	377	1,210,083	136,828	39,836	1,629,740
West Roxbury....	.....	2,347	.....	.....	873,002	404,478	27,723	1,307,550
Dorchester .....	.....	93,515	.....	.....	1,336,455	366,497	60,038	1,856,505
Brighton.....	1,556	.....	.....	.....	608,028	283,799	9,401	902,784
Total.....	225,811	†1,912,176	5,375	11,331	5,243,415	1,518,818	322,233	9,239,159

NOTE.—The above districts refer to areas enclosed by the original boundary lines.

* Of this amount 7,360 square yards = asphalt blocks.

† Of this amount 172,853 square yards = granite-block paving on concrete base.
21,142 square yards of public alleys, chap. 298, Acts of 1898, included in this table.

INCOME.

Statement showing the amount of bills and cash deposited with City Collector, less bills withdrawn, for the year ending January 31, 1900, by the several divisions of the Street Department:

Bridge Division	\$123 59
Boston and Cambridge Bridges	713 45
Ferry Division	209,305 72
Paving Division	25,942 05
Sanitary Division	18,822 65
Sewer Division	149,527 89
Street-Cleaning Division	7,665 38
Street-Watering	195,566 84

\$607,667 57

Statement showing the amount paid into the city treasury during the same period on account of the several divisions of the Street Department :

Bridge Division	\$311 50
Boston and Cambridge Bridges	924 35
Ferry Division	212,020 04
Paving Division	25,958 75
Sanitary Division	25,478 28
Sewer Division	81,187 66
Street-Cleaning Division	3,427 13
Street-Watering	177,068 99
	<hr/>
	\$526,376 70
	<hr/> <hr/>

LAYING-OUT AND CONSTRUCTION OF HIGHWAYS.

From assessments on abutters for cost of sidewalk in front of their premises, chapter 401, Acts of 1892

\$7,711 84

Interest on do. 2,326 87

\$10,038 71

Sewer assessments, chapter 402, Acts of 1892

\$41,310 65

Interest on do. 14,022 46

55,333 11

Street construction, chapter 323, Acts of 1891, and amendments :

Abbotsford street \$3,167 03

Interest on do. 861 13

4,028 16

Batavia street \$468 47

Interest on do. 82 85

551 32

Bloomfield street \$246 43

Interest on do. 26 01

272 44

Canal street

104 27

Charlestown street

1,322 43

Ellet street \$981 98

Interest on do. 25 45

1,007 43

Amount carried forward,

\$72,657 87

<i>Amount brought forward,</i>		\$72,657 87
Fullerton street . . .	\$884 76	
Interest on do. . . .	60 80	
	<hr/>	945 56
Gaylord street		159 27
Greenbrier street . . .	\$2,824 05	
Interest on do. . . .	590 00	
	<hr/>	3,414 05
Ivy street	\$847 39	
Interest on do. . . .	875 91	
	<hr/>	1,723 30
Josephine street . . .	\$771 93	
Interest on do. . . .	409 47	
	<hr/>	1,181 40
Miner street	\$2,825 80	
Interest on do. . . .	456 32	
	<hr/>	3,282 12
Morse street	\$496 46	
Interest on do. . . .	24 86	
	<hr/>	521 32
Mountfort street . . .	\$536 74	
Interest on do. . . .	449 38	
	<hr/>	986 12
Newbury street	\$954 43	
Interest on do. . . .	515 50	
	<hr/>	1,469 93
Norway street	\$125 16	
Interest on do. . . .	149 30	
	<hr/>	274 46
Ruggles street		419 75
St. Alphonsus street . .	\$1,584 13	
Interest on do. . . .	441 34	
	<hr/>	2,025 47
St. Germain street . . .	\$68 95	
Interest on do. . . .	34 50	
	<hr/>	103 45
Vancouver street		81 75
Wolcott street	\$1,647 97	
Interest on do. . . .	119 22	
	<hr/>	1,767 19
	<hr/>	<u>\$91,013 01</u>

BLUE HILL AND OTHER AVENUES.

Sewers	\$9,257 38	
Interest on do.	679 32	
	<hr/>	<u>\$9,936 70</u>

PART II.

APPENDICES.

PAGES 1 TO 305.

APPENDIX A.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE BRIDGE DIVISION.

927 AND 928 TREMONT BUILDING,
BOSTON, February 1, 1900.

MR. BENJ. W. WELLS,

Superintendent of Streets :

DEAR SIR, — I herewith submit my annual report of the expenditures, income and operations of the Bridge Division of the Street Department for the financial year ending January 31, 1900.

There was appropriated for the care and maintenance of this division for the year, the sum of \$120,750.

The total number of bridges in Boston is 141, not including culverts. Eight of these bridges, namely, Harvard Canal, Prison Point, West Boston, Essex street, Cambridge street, Western avenue to Cambridge, and North Harvard street, all connecting Boston and Cambridge, are under the care of two commissioners, one of whom is appointed by the city of Boston, and the other by the city of Cambridge.

Thirty-nine bridges are wholly supported by railroad corporations, and 102 are supported wholly or in part by the city of Boston.

There are in charge of this division 20 tide-water bridges provided with draws, an increase of two since last year, Charlestown, and Summer-street bridges, Charlestown bridge, connecting Charlestown with the city proper, and Summer street to South Boston.

* A new bridge over Ipswich street, in the Parkway is under construction.

Of the tide-water bridges there are 13 of great importance. Malden and Mt. Washington avenue are operated by hand power, Meridian street, Chelsea North, Charlestown (new bridge), Summer street (new bridge), Federal street, and Dover street bridges are operated by electricity. Broadway, Congress street, L street, Warren bridge and Chelsea South are operated by steam power.

The old Charles-river bridge has been discontinued, and was closed to public travel on November 28, 1899.

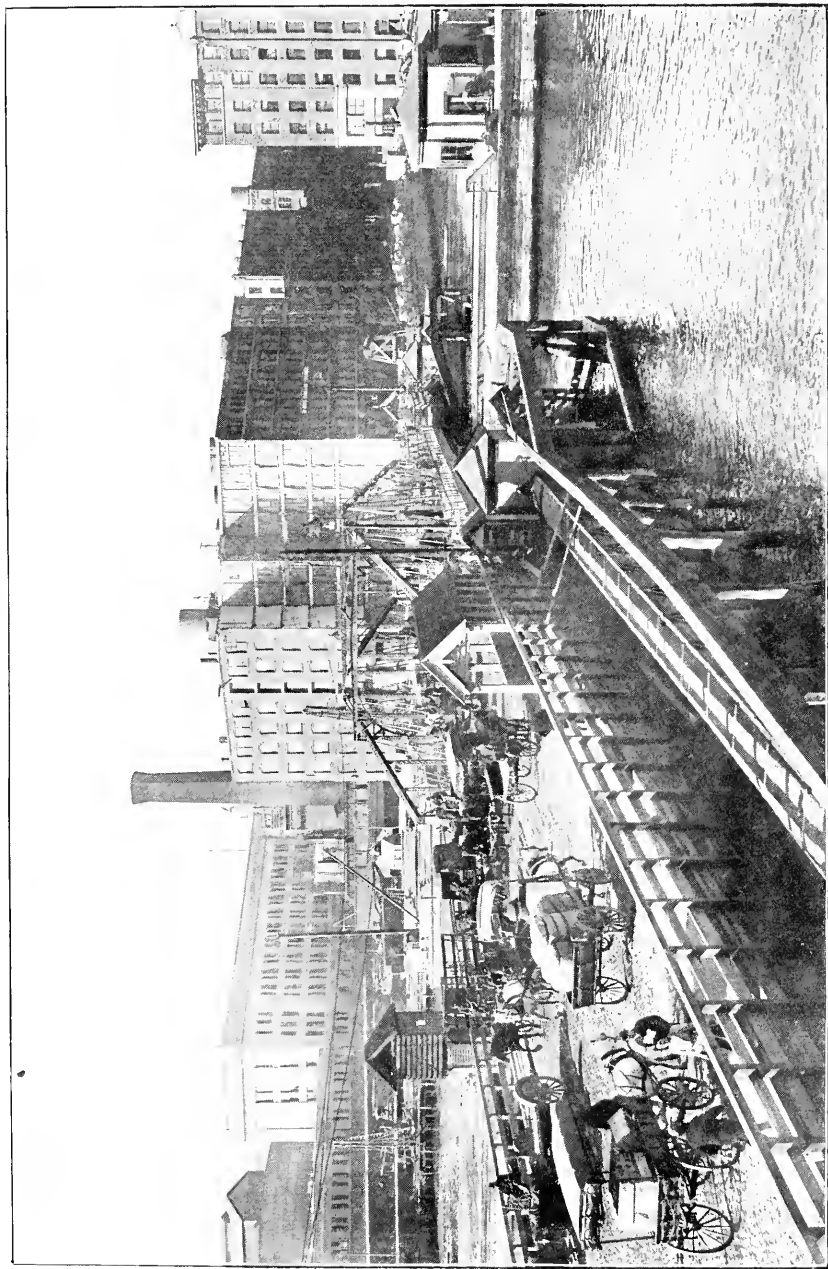
Embodied in this report will be found a detailed statement of expenditures, and a description of the work done on each bridge, also a tabulated account of the bridges supported wholly or in part by the city of Boston; widths of bridges and of draw-openings, widths of roadways, sidewalks, character of pavements, and number of draw-openings made for navigation, and a census of traffic taken on some of the most important bridges.

I would like to make special mention of the efficient work performed by the men in charge of the tide-water bridges. They have kept the piers and premises in a safe condition, and no accident has been reported that could in any way be attributed to the negligence or carelessness of the draw-tenders or their assistants. The inland bridges have all been carefully looked after, and special efforts have been made to keep them in safe condition. They have been thoroughly swept each week, and kept free from all debris. The material used for repairs has been of good quality, and the delivery of the same has been prompt, thereby causing no delay in the performance of the work. We have exercised the same care in keeping duplicate sets of gearing and machinery on hand, and by so doing have taken all due precaution against inconvenience to public travel and accidents.

Your attention is called to the necessity of erecting a new building for headquarters for the mechanics, as the New York, New Haven & Hartford Railroad has, by vote of the City Government, taken the land on which the present headquarters on Foundry street are situated, in exchange for a piece of land on Dorchester avenue, near the corner of Broadway. The cost of such a building would be about \$2,500.

I would also recommend that an engine, with winch attachments, to be operated by electricity, be placed on the following named draw-bridges, to assist vessels through the draw: Dover street, Federal street, Meridian street, Chelsea North, New Charlestown, and Summer street bridges. This would be a great improvement, as it would afford a great saving of time to public travel, as it does in the case of the one already in use on Warren bridge, placed there during the last year. To do this would cost about \$3,000.

In response to a largely signed petition, shelter sheds were erected on Congress-street bridge to protect the public from the weather while waiting for the passing of vessels through the draw.



CONGRESS-STREET BRIDGE.

This old bridge carries an immense daily traffic, and should be rebuilt at full width of street. Territory on the South Boston side is rapidly being developed, and is destined to become a great warehouse and wholesale business district.



I believe this to be a desirable improvement, and other bridges where openings frequently occur should be similiarly equipped. (See illustrations.)

New work has been performed on the following-named bridges: An entire new bridge on Silver street, over the New York, New Haven & Hartford Railroad, Midland Division; Granite avenue, new timbers and new deck and sheathing; Massachusetts avenue, over Boston & Albany Railroad, Boston side, iron scraped and painted, new deck and new sidewalk, and similar work was performed on Massachusetts avenue bridge of the New York, New Haven & Hartford Railroad, Providence Division; Columbus avenue, over Boston & Albany Railroad, iron work scraped and painted, new floor and new sidewalks and same work done on Berkeley street, Ferdinand street and Shawmut avenue bridges over the Boston & Albany Railroad; Williams street, over Stony brook, replaced old timbers with new ones, put in new deck, sidewalk, etc.

Extensive repairs have been made on the roadbed of Congress street, which necessitated the removal of the paving, and putting in new 6-inch timbers under the roadbed, and a new pier has also been built.

If the proposed new bridge at Broadway, which is now under consideration, is not begun in the early part of the coming year, a special appropriation must be made to put the present bridge in good condition.

Mt. Washington avenue bridge, also, is in need of repairs; the foundation of the draw is weak, and the timbers under the sidewalks and bulkheads should be replaced by new ones.

Congress-street bridge, with its immense amount of travel, should have a special appropriation. In a very short time the draw will have to be closed to the public for necessary repairs.

Malden bridge is in a very bad condition, but a new bridge is about to be constructed.

Chelsea bridge, North draw, is under construction by the Engineering Department, as owing to the increased size of vessels and barges passing through the draw it was found necessary to widen it for vessels going up to the New England Gas and Coke Company's Works at Everett.

Close attention has been given to the repairs and all work performed on the several bridges, and everything has been done to insure the safety and convenience of the public.

Respectfully submitted,

WM. H. CARBERRY,

Deputy Superintendent.

OBJECT OF EXPENDITURES.

ADMINISTRATION.

Office expenses :	
Printing	\$158 62
Stationery and office books	277 07
Telephone and photographs	281 76
Sundry office supplies	60 15
	<u>\$777 60</u>
Salaries of Deputy Superintendent, Chief Clerk, Assistant Clerk and Messenger	6,470 53
Salaries of Chief Draw-tender and Chief of Draws and Bridges	3,500 54
Board of Deputy Superintendent's horse, extra horse and carriage hire	668 73
Telephone at Deputy Superintendent's house	73 89
	<u>\$11,491 29</u>
Amount expended, Administration	<u>\$11,491 29</u>

OBJECT OF EXPENDITURES.

Office Expenses.

Salaries	\$9,971 07
General office expenditures	1,520 22
	<u>\$11,491 29</u>

REGULAR EXPENDITURES.

Administration	\$11,491 29
On tide-water bridges	83,826 85
On inland bridges	12,586 69
North yard and stable	5,218 97
South yard and stable	8,216 79
	<u>\$121,340 59</u>
Total	<u>\$121,340 59</u>

FINANCIAL STATEMENT.

REGULAR APPROPRIATION.

Appropriation 1899-1900	\$120,750 00
Received from Boston & Albany Railroad for work done in 1898	86 50
Received from Paving Division for work done in 1898	564 07
Received from Paving Division for work done in 1899	367 80
	<u>\$121,768 37</u>
Total	<u>\$121,768 37</u>

STREET DEPARTMENT — BRIDGE DIVISION. 7

Amount of expenditures from February 1, 1899, to January 31, 1900	\$121,340 59
Transferred to City Treasury, January 31, 1900	427 78
Total	\$121,768 37

SPECIAL APPROPRIATIONS IN CHARGE OF BRIDGE DIVISION.

NAME OF APPROPRIATION.	Appropriations and Balances.	Expended Feb. 1, 1899, to Jan. 31, 1900.	Balances on hand Jan. 31, 1900.
Congress-street bridge, reconstruction,	\$10,000 00	\$6,300 75	\$3,699 25
Gold-street bridge.....	216 66	216 66	.
Harvard-street bridge, reconstruction..	2,307 89	262 13	2,045 76
Reconstruction of bridges.....	945 25	945 25	.
Totals	\$13,469 80	\$7,724 79	\$5,745 01

Amount of expenditures February 1, 1899, to January 31, 1900	\$7,724 79
Balances unexpended	5,745 01

Amount of appropriations \$13,469 80

AMOUNTS CHARGED TO SPECIAL APPROPRIATIONS IN CHARGE OF OTHER DIVISIONS.

NAME OF APPROPRIATION.	Where expended.	Amount expended.
Abolishment of grade crossings.....	Summer-street bridge.....	\$1,006 92
Bridge, Lauriat avenue, Ward 24.....	Under N. Y., N. H. & H. R.R., Midland Division..	21,000 00
Charlestown bridge.....	Charlestown bridge.....	412 21
Laying-out and construction of highways..	Charlesgate west, bridge over Ipswich street.....	14,871 09
Stony brook improvement.....	Coffer dam, Roxbury Crossing.....	350 01
Total.....		\$37,640 23

Amount expended and charged to regular appropriation	\$121,340 59
Amount expended and charged to Bridge Division specials	7,724 79
Amount expended and charged to appropriations in charge of other divisions	37,640 23

Grand total of expenditures February 1, 1899, to January 31, 1900 \$166,705 61

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 landing-places; list of cable-houses and boxes; census of traffic taken on some of the most important bridges; number of draw openings made for navigation; width of draw openings, and table showing widths of bridges and kind of roadway and sidewalks.

TIDE-WATER BRIDGES.

Broadway bridge (over Fort Point channel).

Patched deck in various places, patched sheathing under ten orders issued at different times, repaired sidewalks, machinery, fence and engine-room floor.

Carpenters	\$446 65		
Lumber and nails	687 34		
Repairing engine, machinery, etc.	91 67		
Ironwork	76 12		
Sundry expenses	26 92		
	<hr/>	\$1,328 70	
Regular expenses:			
Draw-tenders	\$4,861 04		
Substitutes	381 65		
Coal, gas, water and supplies	276 85		
	<hr/>	5,519 54	
		<hr/>	\$6,848 24

Charles-river bridge (from Boston to Charlestown).

Patched deck and sheathing at various times, repaired fence, sidewalks, machinery, engine and water-pipes.

Carpenters	\$363 68		
Painters	27 10		
Lumber and nails	148 20		
Repairing engine, machinery, etc.	34 62		
Ironwork	5 79		
Repairing sidewalk	182 00		
Sundry expenses	46 68		
	<hr/>	\$808 07	
Regular expenses:			
Draw-tenders	\$3,566 51		
Substitutes	208 00		
Coal, gas, water and supplies	627 97		
	<hr/>	4,402 48	
		<hr/>	5,210 55
<i>Carried forward,</i>			<hr/>
			\$12,058 79

Brought forward, \$12,058 79
Charlestown bridge (from Boston to Charles-
 town). [New bridge.]

Regular expenses:

Draw-tenders 855 41

Chelsea bridge [North] (over North channel,
 Mystic river).

Repaired deck and sheathing several times, elec-
 trical apparatus, water-pipes, machinery, put in
 new headers and reset buoy.

Carpenters	\$138 65	
Painters	9 00	
Lumber and nails	37 15	
Repairing electrical appa- ratus, machinery, etc.	288 69	
Ironwork	81 36	
Resetting buoy	96 00	
Sundry expenses	13 23	
	<hr/>	\$664 08

Regular expenses:

Draw-tenders	\$4,228 78	
Substitutes	33 50	
Coal, gas, water and sup- plies	110 62	
	<hr/>	4,372 90

5,036 98

Chelsea bridge [South] (over South channel,
 Mystic river).

Patched deck and sheathing, repaired pier and
 machinery, put in new headers and painted iron
 fence.

Carpenters	\$170 15	
Painters	163 30	
Lumber and nails	67 90	
Repairing engine, ma- chinery etc.	27 58	
Ironwork	19 66	
Sundry expenses	2 88	
	<hr/>	\$451 47

Regular expenses:

Draw-tenders	\$5,285 37	
Coal, gas, water and sup- plies	287 35	
	<hr/>	5,572 72

6,024 19

Carried forward,

\$23,975 37

<i>Brought forward,</i>		\$23,975 37
Chelsea-street bridge (from East Boston to Chelsea).		
Sheathed East Boston end of bridge and patched deck.		
Carpenters	\$33 85	
Painters	17 85	
Lumber and nails	139 30	
	<hr/>	\$191 00
Regular expenses :		
Draw-tender	\$299 00	
Coal and supplies	5 70	
	<hr/>	304 70
		<hr/>
		495 70
Commercial Point or Tenean bridge (Dorchester).		
Patched deck and sheathing, put in headers and repaired fence.		
Carpenters	\$44 50	
Lumber and nails	128 08	
Ironwork	3 66	
	<hr/>	\$176 24
Regular expenses :		
Draw-tender	50 00	
	<hr/>	226 24
Congress-street bridge (over Fort Point channel).		
Sheathed draw three times, patched deck and sheathing various times, put in new headers, repaired sidewalk, machinery, pier and engines, reset buoy and painted machinery and draw-tender's house.		
Carpenters	\$915 87	
Painters	213 15	
Lumber and nails	580 57	
Repairing engines, machinery etc.	62 41	
Ironwork	86 54	
Resetting buoy	235 00	
Repairing pier	600 00	
Sundry expenses	125 12	
	<hr/>	\$2,818 66
Regular expenses :		
Draw-tenders	\$5,205 94	
Coal, water and supplies	469 37	
	<hr/>	5,675 31
		<hr/>
		8,493 97
<i>Carried forward,</i>		<hr/>
		\$33,191 28

Brought forward,

\$33,191 28

Dover-street bridge (over Fort Point channel).

Sheathed draw, repaired deck and sheathing, pier, electrical apparatus, machinery, iron fence and painted bridge in part.

Carpenters	\$396 60	
Painters	1,007 50	
Lumber and nails	354 39	
Repairing engines, machinery etc.	66 21	
Ironwork	97 98	
Repairing iron fence	107 07	
Repairing pier	450 00	
Sundry expenses	5 84	
	<hr/>	\$2,485 59

Regular expenses :

Draw-tenders	\$5,186 23	
Substitutes	182 50	
Coal, water and supplies	53 87	
	<hr/>	5,422 60

7,908 19

Federal-street bridge (over Fort Point channel).

Sheathed draw, repaired deck and sheathing, pier, machinery, electrical apparatus, water pipes and painted iron beams and draw-tender's house.

Carpenters	\$490 40	
Painters	671 35	
Lumber and nails	99 60	
Repairing engines, machinery etc.	364 64	
Ironwork	73 93	
Repairing pier	94 50	
Sundry expenses	42 47	
	<hr/>	\$1,836 89

Regular expenses :

Draw-tenders	\$5,186 23	
Substitutes	182 50	
Coal, gas, water and supplies	127 85	
	<hr/>	5,496 58

7,333 47

Granite bridge (from Dorchester to Milton).

Repaired deck, sheathing and machinery.

Carpenters	\$151 00	
Lumber and nails	446 14	
Ironwork	6 12	
	<hr/>	\$603 26

Carried forward,

\$603 26 \$48,432 94

<i>Brought forward,</i>	\$603 26	\$48,432 94
Regular expenses :		
Draw-tender	239 20	
	<hr/>	842 46

L-street bridge (over reserved channel at junction of Congress and L streets).

Repaired sheathing, engines, machinery, bulkhead, and put on new girder caps and bolted same.

Carpenters	\$118 25	
Painters	540 25	
Lumber	4 14	
Repairing engines, ma-		
chinery, etc.	23 00	
Ironwork	13 54	
Girder caps	500 00	
Sundry expenses	12 79	
	<hr/>	\$1,211 97

Regular expenses :

Draw-tenders	\$4,487 83	
Substitutes	450 35	
Coal, water and supplies	395 72	
	<hr/>	5,333 90
		<hr/>
		6,545 87

Malden bridge (from Charlestown to Everett).

Patched deck and sheathing various times, water-pipes, machinery and wheel-guards.

Carpenters	\$378 50	
Lumber and nails	76 92	
Repairing machinery, etc.	12 34	
Ironwork	5 92	
Small sundries	3 02	
	<hr/>	\$476 70

Regular expenses :

Draw-tenders	\$3,521 11	
Substitutes	137 30	
Coal, gas and supplies	78 07	
	<hr/>	3,736 48
		<hr/>
		4,213 18

Meridian-street bridge (from East Boston to Chelsea).

Repaired deck, sheathing, pier, fence, float-stage, machinery, and reset buoys.

Carpenters	\$299 38	
Lumber and nails	29 80	
Repairing machinery, etc.	44 58	
	<hr/>	
<i>Carried forward,</i>	\$373 76	\$60,034 45

<i>Brought forward,</i>	\$373 76	\$60,034 45
Ironwork	8 25	
Resetting buoys	195 00	
Sundry expenses	25 05	
	<hr/>	\$602 06
Regular expenses :		
Draw-tenders	\$4,330 43	
Substitutes	135 00	
Coal, gas and supplies	130 67	
Feed	107 59	
	<hr/>	4,703 69
		<hr/>
		5,305 75
Mt. Washington-avenue bridge (over Fort Point channel).		
Patched deck, sheathing, gates, machinery, and painted boat and gate.		
Carpenters	\$382 96	
Painters	40 50	
Lumber and nails	143 68	
Ironwork	30 93	
Sundry expenses	4 21	
	<hr/>	\$602 28
Regular expenses :		
Draw-tenders	\$4,763 28	
Substitutes	181 25	
Coal, gas and supplies	93 02	
Rent of land, two years	120 00	
	<hr/>	5,157 55
		<hr/>
		5,759 83
Neponset bridge (from Dorchester to Quincy).		
Patched deck and sheathing and repaired machinery and flaps.		
Carpenters	\$175 96	
Lumber and nails	70 33	
Repairing machinery	31 90	
Ironwork	33 88	
	<hr/>	\$312 07
Regular expenses :		
Draw-tender	398 84	
	<hr/>	710 91
North Beacon-street bridge (from Brighton to Watertown).		
Sheathed draw and patched sheathing in several places.		
Carpenters	\$55 00	
Lumber	12 32	
Sundry expenses	43 00	
	<hr/>	\$110 32
		<hr/>
<i>Carried forward,</i>	\$110 32	\$71,810 94

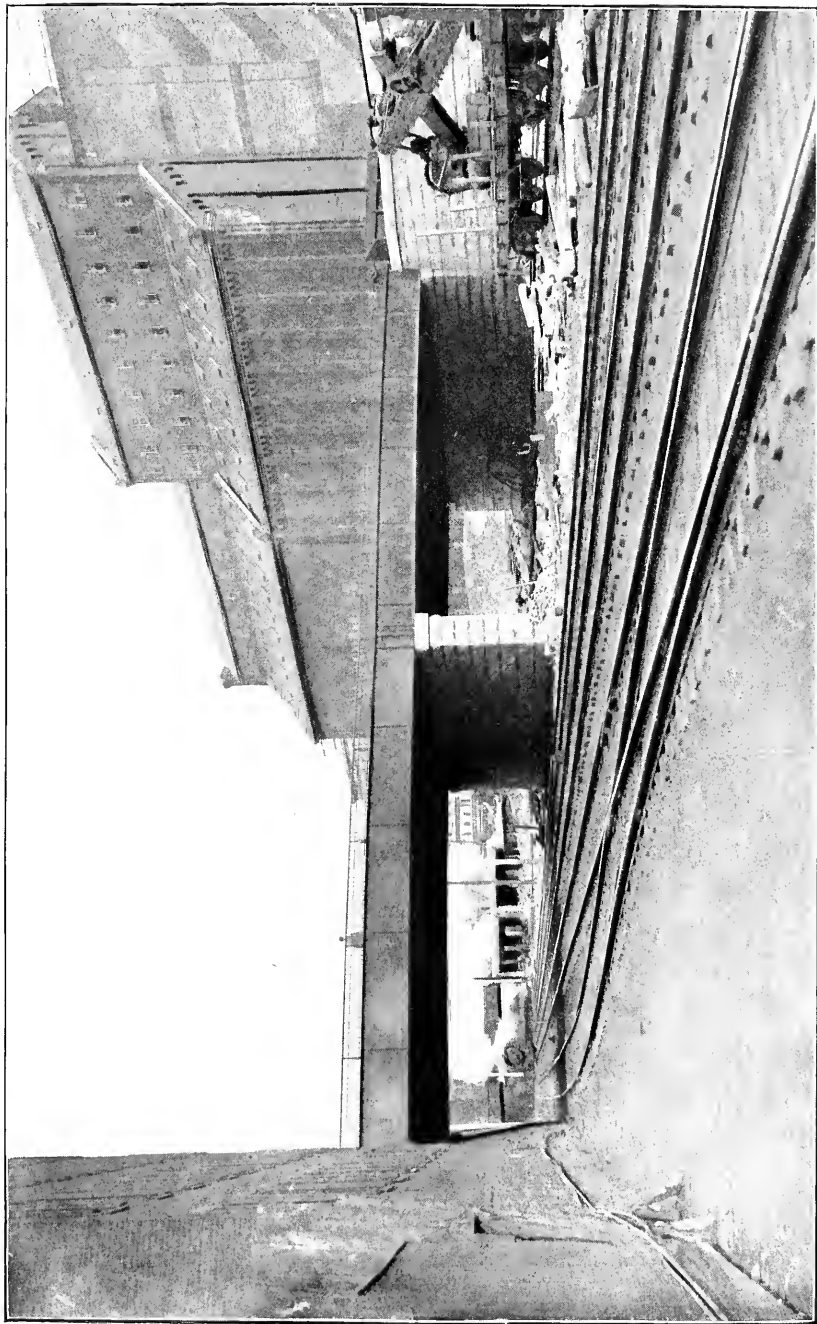
<i>Brought forward,</i>	\$110 32	\$71,810 94
Regular expenses :		
Draw-tender	\$345 07	
Substitute	54 47	
	<u>399 54</u>	
		509 86
Warren bridge (from Boston to Charlestown). Sheathed both draws, patched same numerous times, repaired pier, fence, water pipes, ma- chinery and painted draw-tenders' and engine house.		
Carpenters	\$939 70	
Painters	134 20	
Plumber	59 70	
Lumber and nails	456 17	
Repairing engine, machin- ery, etc.	259 92	
Ironwork	8 23	
Sundry expenses	14 30	
	<u>\$1,872 22</u>	
Regular expenses :		
Draw-tenders	\$5,109 53	
Substitutes	243 00	
Coal, gas and supplies	750 82	
	<u>6,103 35</u>	
		7,975 57
Western-avenue bridge (from Brighton to Watertown). Built new sidewalk, patched sheathing and repaired machinery.		
Carpenters	\$44 75	
Lumber	20 79	
Repairing machinery	41 65	
	<u>\$107 19</u>	
Regular expenses :		
Draw-tender	\$346 07	
Substitute	69 28	
Coal and supplies	14 15	
	<u>429 50</u>	
		536 69
Winthrop bridge (from Breed's Island to Winthrop). Repaired sidewalk and patched sheathing.		
Carpenters	\$147 75	
Lumber	42 58	
	<u>\$190 33</u>	
Regular expenses :		
Draw-tender	50 00	
	<u>240 33</u>	
		240 33
<i>Carried forward,</i>		<u>\$81,073 39</u>

<i>Brought forward,</i>			\$81,073 39
Sundry expenditures on tide-water bridges :			
Oak lumber for headers	\$416 48		
Paint stock	202 30		
Nails	92 90		
Sundry car-fares, Boston Elevated Railway Co., for mechanics	200 00		
Sundry Street Department tickets, N. Y., N. H. & H. R. R. Co. (mechanics),	20 00		
		\$931 68	
Regular expenses :			
Messenger to Chief Draw-tender	\$722 98		
Draw-tenders' books	124 93		
Draw-tenders' supplies	390 17		
		1,238 08	
			2,169 76
Public landings.			
Commercial wharf :			
Repairing float	\$31 00		
East Boston :			
Repairing float	27 70		
		\$58 70	
Regular expenses :			
East Boston :			
Rent of flats and dock	\$250 00		
Care of landing	25 00		
		\$275 00	
Jeffries Point :			
Rent of flats and dock	250 00		
		525 00	
			583 70
Total expended on tide-water bridges,			<u><u>\$83,826 85</u></u>

RECAPITULATION.

*Table showing Expenditures on the Tide-water Bridges from
February 1, 1899, to January 31, 1900.*

	Repairs, Labor, Lumber, Ironwork and Painting.	Regular Expenses, Salaries, Fuel, and Supplies.	Total.
Broadway.....	\$1,328 70	\$5,519 54	\$6,848 24
Charles river	808 07	4,402 48	5,210 55
Charlestown .....	.....	855 41	855 41
Chelsea (North).....	664 08	4,372 90	5,036 98
Chelsea (South).....	451 47	5,572 72	6,024 19
Chelsea street.....	191 00	304 70	495 70
Commercial Point.....	176 24	50 00	226 24
Congress street.....	2,818 66	5,075 31	8,493 97
Dover street.....	2,485 59	5,422 60	7,908 19
Federal street.....	1,836 89	5,496 58	7,333 47
Granite.....	603 26	239 20	842 46
L street.....	1,211 97	5,333 90	6,545 87
Malden.....	476 70	3,736 48	4,213 18
Meridian street.....	602 06	4,703 69	5,305 75
Mt. Washington avenue.....	602 28	5,157 55	5,759 83
Neponset.....	312 07	398 84	710 91
North Beacon street.....	110 32	399 54	509 86
Warren.....	1,872 22	6,103 35	7,975 57
Western avenue to Watertown,	107 19	429 50	536 69
Winthrop.....	190 33	50 00	240 33
Sundry expenditures.....	931 68	1,238 08	2,169 76
Public landings.....	58 70	525 00	583 70
	\$17,839 48	\$65,987 37	\$83,826 85



WIDENING OF BRIDGES TO ALLOW THE PLACING OF FOUR ADDITIONAL TRACKS FOR ENTRANCE OF THE PROVIDENCE DIVISION,
N. Y., N. H. & H. R.R. CO., TO THE TERMINAL STATION. (The view is of Berkeley street.)

INLAND BRIDGES.

Albany-street bridge (over Boston & Albany Railroad).		
Patched sheathing five times.		
Carpenters	\$48 65	
Lumber	24 61	
	<hr/>	\$73 26
Allston bridge (over Boston & Albany Railroad at Cambridge street).		
Patched sheathing three times, patched deck and sheathing five times.		
Carpenters	\$86 00	
Lumber	80 06	
	<hr/>	166 06
Athens-street bridge (over New York, New Haven & Hartford Railroad, Midland Division).		
Repaired and painted fence.		
Carpenters	\$4 50	
Painters	10 50	
	<hr/>	15 00
Beacon-street (waterway).		
Sheathed one side, patched the other.		
Carpenters	\$20 10	
Lumber	79 84	
Nails	5 60	
	<hr/>	105 54
Berkeley-street bridge (over Boston & Albany Railroad).		
Patched sidewalk twice, patched deck and sheathing five times.		
Carpenters	\$98 15	
Lumber	92 62	
Nails	2 75	
Teaming	5 00	
	<hr/>	198 52
Berkeley-street bridge (over New York, New Haven & Hartford Railroad, Providence Division).		
Patched sidewalk and sheathing, patched deck and sheathing thirteen times.		
Carpenters	\$207 63	
Lumber	314 33	
Nails	14 70	
Cement	4 70	
Teaming	20 00	
	<hr/>	561 36
<i>Carried forward,</i>		<hr/>
		\$1,119 74

Brought forward,

\$1,119 74

Blakemore-street bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Patched deck and sheathing.

Carpenters	\$8 50
Lumber	7 40
Nails	25

116 15

Berwick Park [foot] bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Nails

85

Boylston-street bridge (over Boston & Albany Railroad).

Patched sheathing twice, patched sidewalk.

Carpenters	\$71 65
Lumber	42 77
Nails	2 50

116 92

Broadway bridge (over Boston & Albany Railroad).

Patched sheathing three times.

Carpenters	\$21 00
Lumber	46 13

67 13

Brookline-avenue bridge (over Boston & Albany Railroad).

Patched sheathing.

Carpenters	64 67
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64 67

Byron-street bridge (over Boston, Revere Beach & Lynn Railroad).

Patched sheathing.

Carpenters	\$7 35
Lumber	5 68

13 03

Central-avenue bridge (from Dorchester to Milton, over Neponset river).

New sidewalk, patched deck and sheathing three times, painted fence and iron beams.

Carpenters	\$116 23
Painters	349 00
Lumber	145 93
Nails	5 20

616 36

Cohasset-street culvert.

Sheathed.

Carpenters	\$23 00
Lumber	27 12

50 12

Carried forward,

\$2,064 97

<i>Brought forward,</i>		\$2,064 97
Columbus-avenue bridge (over Boston & Albany Railroad).		
Rebuilt in part, decked and sheathed west side, rebuilt sidewalk, easterly side, painted beams under both sidewalks and roadway.		
Carpenters	\$727 58	
Painters	597 96	
Lumber	387 03	
Nails	25 74	
Ironwork	23 76	
Paint stock	88 55	
Teaming	10 00	
Mortar	3 00	
	<hr/>	1,863 62
Cottage-street [foot] bridge (over flats, East Boston).		
Patched deck.		
Bridge-tender	\$728 00	
Carpenters	24 75	
Lumber and nails	47 36	
Coal, ice and supplies	11 90	
	<hr/>	812 01
Dartmouth-street bridge (over Boston & Albany Railroad and New York, New Haven & Hartford Railroad, Providence Division).		
Patched sheathing.		
Carpenters	\$67 08	
Lumber	54 75	
Nails	3 10	
	<hr/>	124 93
Dorchester-street bridge (over New York, New Haven & Hartford Railroad, Plymouth Division).		
Patched deck and sheathing.		
Carpenters	\$41 75	
Lumber	5 43	
	<hr/>	47 18
Elmwood-street bridge (over Stony brook).		
Patched sheathing.		
Carpenters	\$11 65	
Lumber	9 24	
	<hr/>	20 89
Everett-street bridge (over Boston & Albany Railroad, Brighton).		
Sheathed and patch fence.		
Carpenters	\$100 55	
Lumber	277 20	
	<hr/>	
<i>Carried forward,</i>	\$377 75	\$4,933 60

<i>Brought forward,</i>	\$377 75	\$4,933 60
Nails	11 00	
Teaming	15 00	
	<hr/>	403 75
Ferdinand-street bridge (over Boston & Albany Railroad).		
Repaired fence, painted fences and girders.		
Carpenters	\$25 15	
Painters	51 00	
Lumber	17 68	
	<hr/>	93 83
Huntington-avenue bridge (over Boston & Albany Railroad).		
Sheathed one side, and patched deck and sheathing twice.		
Carpenters	\$53 40	
Lumber	67 64	
Nails	3 10	
	<hr/>	124 14
Irvington-street [foot] bridge (over New York, New Haven & Hartford Railroad, Providence Division).		
Safety stair treads	\$165 00	
Hardware	3 06	
	<hr/>	168 06
Leyden-street bridge (over Boston, Revere Beach & Lynn Railroad).		
Patched sidewalk.		
Carpenters	\$3 75	
Lumber	3 04	
	<hr/>	6 79
Linden Park street-bridge (over Stony brook).		
Repaired and patched deck and sheathing.		
Carpenters	\$35 65	
Lumber	39 06	
	<hr/>	74 71
Massachusetts avenue-bridge (over Boston & Albany Railroad).		
Sheathed, new border, patched sidewalk, patched deck and sheathing five times, painted beams.		
Carpenters	\$113 15	
Painters	113 50	
Lumber	265 01	
Nails	18 05	
Teaming	20 00	
	<hr/>	529 71
<i>Carried forward,</i>		<hr/>
		\$6,334 59

Brought forward,

\$6,334 59

Massachusetts-avenue bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Sheathed, repaired sidewalk, patched deck and sheathing five times, scraped and painted beams.

Carpenters	\$259 75
Painters	83 75
Lumber	286 23
Nails	18 40
Teaming	20 00

668 13

Mattapan bridge (from Dorchester to Milton).

New sidewalk, and sheathed complete.

Carpenters	\$69 13
Lumber	57 70
Nails	1 40

128 23

Milton bridge (from Dorchester to Milton).

Repaired sidewalk and abutments.

Carpenters	\$51 30
Granite work and pointing	87 25

138 55

Shawmut-avenue bridge (over Boston & Albany and New York, New Haven & Hartford Railroad, Providence Division).

Sheathed and patched sheathing three times.

Carpenters	\$96 80
Lumber	88 03
Nails	3 75

188 58

Silver-street bridge (over New York, New Haven & Hartford Railroad, Midland Division).

Built new bridge complete, painted fence.

Carpenters	\$89 20
Painters	30 00
Lumber	234 22
Nails	7 97
Bolts	4 40

365 79

Summer-street culvert (West Roxbury).

Sheathed complete.

Carpenters	\$15 00
Lumber	7 47

22 47

Carried forward,

\$7,846 34

<i>Brought forward,</i>		\$7,846 34
Swett-street bridge (west of New York, New Haven & Hartford Railroad, Midland Division).		
Lumber	\$182 92	
Nails	11 60	
Bolts	5 23	
	<hr/>	199 75
West Fourth-street bridge (over New York, New Haven & Hartford Railroad, Plymouth Division).		
Sheathed complete, patched sidewalk, patched sheathing eight times, patched deck and sheathing twice.		
Carpenters	\$569 55	
Lumber	867 35	
Nails	43 60	
Ironwork	1 95	
	<hr/>	1,482 45
West Newton-street bridge (over New York, New Haven & Hartford Railroad).		
Patched sheathing, sheathed complete.		
Carpenters	\$49 45	
Lumber	65 87	
	<hr/>	115 32
Williams-street bridge (over Stony brook, West Roxbury).		
Rebuilt bridge, patched deck and sheathing.		
Carpenters	\$354 90	
Lumber	186 50	
Nails	2 65	
	<hr/>	544 05
West Rutland square [foot] bridge (over New York, New Haven & Hartford Railroad, Providence Division).		
Patched roadway.		
Carpenters		7 50
Sundry expenditures on inland bridges.		
Labor, on snow	\$1,004 67	
Labor, cleaning bridges	734 96	
Nails	46 45	
Paint stock	101 15	
Sundry car fares for mechanics, Boston Elevated Railway Co.	125 00	
Sundry Street Department tickets, New York, New Haven & Hartford Railroad Co. (mechanics)	11 25	
	<hr/>	2,023 48
<i>Carried forward,</i>		<hr/> \$12,218 89

<i>Brought forward,</i>		\$12,218 89
Atlantic avenue (Nos. 10 to 20). Reconstructed sidewalk.		
Carpenters	\$203 30	
Charles-river fence (sea-wall op- posite Arlington street). Repaired fence.		
Carpenters	4 25	
North End Paving Yard shed. Built shed.		
Carpenters	\$144 20	
Painters	16 05	
	<hr/>	160 25
Work done for Paving Division		367 80
Total expenditures on inland bridges		<hr/> <hr/> <u>\$12,586 69</u>

RECAPITULATION.

*Table showing Expenditures on the Inland Bridges from
February 1, 1899, to February 1, 1900.*

Albany street (over B. & A. Railroad)	\$73 26
Allston	166 06
Athens street	15 00
Beacon street (waterway)	105 54
Berkeley street (B. & A. Railroad)	198 52
Berkeley street (N. Y., N. H. & H. Railroad, * Prov. Div.)	561 36
Berwick park	85
Blakemore street	16 15
Boylston street (B. & A. Railroad)	116 92
Broadway (over B. & A. Railroad)	67 13
Brookline avenue	64 67
Byron street	13 03
Central avenue	616 36
Cohasset street (culvert)	50 12
Columbus avenue	1,863 62
Cottage street (E. Boston)	812 01
Dartmouth street	124 93
Dorchester street	47 18
Elmwood street	20 89
Everett street	403 75
Ferdinand street	93 83
Huntington avenue	124 14
Irvington street	168 06
Leyden street	6 79
Linden Park street	74 71
Massachusetts avenue (over B. & A. Railroad)	529 71
Massachusetts avenue (N. Y., N. H. & H. Rail- road, Prov. Div.)	668 13
Mattapan	128 23
Milton	138 55
Shawmut avenue	188 58
Silver street	365 79
Summer street (culvert)	22 47
Swett street (west)	199 75
West Fourth street	1,482 45
West Newton street	115 32
Williams street	544 05
West Rutland square	7 50
Sundry expenditures	2,023 48
Work done for Paving Division	367 80
Total	<u>\$12,586 69</u>

REGULAR MAINTENANCE EXPENSES AT NORTH
AND SOUTH YARDS.

NORTH YARD, DISTRICT NO. 1.

Warren Bridge.

Two messengers, watchman and yardman,	\$2,480 64	
Tools for carpenters and painters	16 43	
Telephone	151 26	
Gas, water, kerosene and supplies	133 73	
	<hr/>	\$2,782 06

STABLE, DISTRICT NO. 1.

Warren Bridge.

Teamster and hostler	\$1,688 30	
Feed	324 66	
New Concord wagon	163 75	
Horseshoeing	145 50	
Repairing harness and clipping horses	91 85	
Supplies	22 85	
	<hr/>	2,436 91

Total expended, North Yard and Stable . . . \$5,218 97

SOUTH YARD, DISTRICT NO. 2.

No. 45 Foundry Street.

Two messengers, watchman, lumber meas- urer, yardman and plumber	\$3,469 16	
Tools for carpenters and painters	144 32	
Telephone	150 00	
Building portable house	64 90	
Coal, water and supplies	71 40	
Medical attendance	26 00	
	<hr/>	\$3,925 78

STABLE, DISTRICT NO. 2.

No. 135 Dorchester Avenue.

Teamster, stable boy and carriage washer,	\$1,371 10	
Board and shoeing of horses	2,092 95	
Repairing vehicles and harness	550 07	
Veterinary service and clipping horses	92 39	
Bay horse	175 00	
Supplies	9 50	
	<hr/>	4,291 01

Total expended, South Yard and Stable . . . \$8,216 79

SPECIAL APPROPRIATIONS.

IN CHARGE OF BRIDGE DIVISION.

Congress-street bridge, reconstruction (over Fort Point Channel).

Carpenters	\$3,041 55
Lumber	695 29
Nails and hardware	69 27
Diver examining piles	125 00
Repairing pier	2,200 00
Repairing paving	41 50
Car tickets	50 00
Iron work	63 14
Teaming	15 00

Total expended January 31, 1900	\$6,300 75
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Balance	3,699 25
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Appropriation	<u>\$10,000 00</u>
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Gold-street bridge (over New York, New Haven & Hartford Railroad, Midland Division).

Execution of Court, grade damages. Paid from loan

<u>\$216 16</u>

Harvard-street bridge, reconstruction (over New York, New Haven & Hartford Railroad, Midland Division).

Widened bridge by building new sidewalk on northerly side.

[Labor paid for in 1898].

Lumber	\$144 00
New girder and brick addition to pier	95 00
Bolts	17 13
Cutting stone	3 00
Rent for privilege of southerly sidewalk, two years, northerly, one year	3 00

Total expended, January 31, 1900	\$262 13
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Balance	2,045 76
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Appropriation on hand, February 1, 1899	<u>\$2,307 89</u>
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RECONSTRUCTION OF BRIDGES.

Brookline-avenue bridge (over Boston & Albany Railroad).

Sheathed bridge.

Carpenters	\$61 78
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Carried forward,

<u>\$61 78</u>

<i>Brought forward,</i>	\$61 78
Malden bridge (from Charlestown to Everett).	
Repairing pier.	
Carpenters	350 00
Mt. Washington-avenue bridge (over Fort Point Channel).	
Repairing pier.	
Carpenters	283 47
Warren bridge (from Boston to Charlestown).	
Repairing guard rail.	
Carpenters	250 00
	<hr/>
Total expended, January 31, 1900	<u>\$945 25</u>

AMOUNTS CHARGED TO SPECIAL APPROPRIATIONS IN CHARGE OF OTHER DIVISIONS.

Summer-street bridge.	
Salaries of draw-tenders	\$1,006 92
[Charged to "Abolishment of Grade Crossings."]	
Lauriat avenue.	
Building new bridge, street passing under railroad,	\$21,000 00
[Charged to "Lauriat avenue, Bridge, Ward 24"].	
Charlestown bridge.	
Salaries of draw-tenders	\$412 21
[Charged to "Charlestown Bridge."]	
Ipswich street.	
Inspector of material	\$101 70
Steel superstructure	13,850 00
Iron, bolts and spruce	919 39
	<hr/>
	\$14,871 09
[Charged to "Laying-Out and Construction of Highways."]	
[Charlesgate west bridge completed.]	
Roxbury Crossing Cofferdam.	
Building coffer-dam, Roxbury Crossing.	
Carpenters	\$94 10
Lumber	153 64
Nails	2 30
Bolts, nuts and washers	40 59
Ironwork	59 38
	<hr/>
	\$350 01
[Charged to "Stony Brook Improvement."]	

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.]

In charge of Bridge Division.

- Allston, over Boston & Albany Railroad at Cambridge street, Brighton.
- Ashland street, over N. Y., N. H. & H. Railroad, Providence Division, West Roxbury.
- Athens street, over N. Y., N. H. & H. Railroad, Midland Division.
- Baker street, at Brook farm, West Roxbury.
- Beacon street, over outlet to Back Bay Fens.
- Beacon street, over Boston & Albany Railroad.
- Berkeley street, over Boston & Albany Railroad.
- 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 N. Y., N. H. & H. Railroad, Midland Division.
- Boylston avenue, over Stony brook, West Roxbury.
- Boylston street, over Boston & Albany Railroad.
- Broadway, over Fort Point channel.
- Broadway, over Boston & Albany Railroad.
- Brookline avenue, over Boston & Albany Railroad.
- Byron street, over Boston, Revere Beach & Lynn Railroad.
- * Charles river, from Boston to Charlestown.
- * Charlestown, from Boston to Charlestown.
- * Chelsea (South) over south channel, Mystic river.
- * Chelsea street, from East Boston to Chelsea.
- Columbus avenue, over Boston & Albany Railroad.
- * Commercial Point, or Tenean, Dorchester.
- * Congress street, over Fort Point channel.
- 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 Railroad.
- * Dover street, over Fort Point channel.
- Elmwood street (private way), over Stony brook, Roxbury,
- * Federal street, over Fort Point channel.
- Ferdinand street, over Boston & Albany Railroad.
- Florence street, over Stony brook, West Roxbury.

- Gold street (foot-bridge), over N. Y., N. H. & H. Railroad, Midland Division.
- Huntington avenue, over Boston & Albany Railroad.
- Hyde Park avenue, over Stony brook, West Roxbury.
- Irvington street (foot-bridge), over N. Y., N. H. & H. Railroad, Providence Division.
- Keys street, over Stony brook, West Roxbury.
- * 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, Roxbury.
- * 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.
- * Mount Washington avenue, over Fort Point channel.
- Shawmut avenue, over Boston & Albany and N. Y., N. H. & H. Railroad, Providence Division.
- Summer street, over Fort Point channel.
- Swett street, east of N. Y., N. H. & H. Railroad, Midland Division.
- Swett street, west of N. Y., N. H. & H. Railroad, Midland Division.
- Texas street, over Stony brook, Roxbury.
- * 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.
- Williams street, over Stony brook, West Roxbury.
- Winthrop, from Breed's Island to Winthrop.

In charge of Park Department.

- Agassiz, in Back Bay Fens.
- Arborway, over Stony brook.
- Audubon road, over Boston & Albany Railroad.
- Bernier street (foot-bridge), in the Riverway.
- Boylston street, in Back Bay Fens.
- Bridle path, in the Riverway, over Muddy river.
- * Castle Island (foot-bridge) from Marine park, South Boston, to Castle Island.
- Charlesgate, Back Bay Fens, over Boston & Albany Railroad.
- Charlesgate (West), over Ipswich street.
- Circuit drive, over Scarboro' pond, in Franklin park.
- Commonwealth avenue, in Back Bay Fens.
- Ellicott arch, in Franklin park.
- Fen, Back Bay Fens.
- Forest Hills entrance, in Franklin park.

Leverett pond (foot-bridge), in Leverett park.
 Neptune road, over Boston, Revere Beach & Lynn Railroad.
 Scarboro' pond (foot-bridge), in Franklin park.
 Stony brook, Back Bay Fens.

In charge of Public Grounds Department.

Public Garden (foot-bridge).

II. — BRIDGES OF WHICH BOSTON SUPPORTS THE PART WITHIN
 ITS LIMITS.

In charge of Bridge Division.

Central avenue, from Dorchester to Milton.
 * Chelsea (North), from Charlestown to Chelsea.
 * Granite, from Dorchester to Milton.
 Mattapan, from Dorchester to Milton.
 Milton, from Dorchester to Milton.
 * Neponset, from Dorchester to Quincy.
 * North Beacon street, from Brighton to Watertown.
 Spring street, from West Roxbury to Dedham.
 * Western avenue, from Brighton to Watertown.

In charge of Park Department.

Bellevue street, in the Riverway, over Muddy river.
 Bernier street (foot-bridge), in the Riverway, over Muddy river.
 Brookline avenue, in the Riverway, over Muddy river.
 Longwood avenue, from Roxbury to Brookline.
 Tremont street, in the Riverway, over Muddy river.

III. — BRIDGES OF WHICH BOSTON PAYS A PART OF THE COST
 OF MAINTENANCE.

In charge of Bridge Division.

Albany street, over Boston & Albany Railroad.
 Chelsea bridge, over Boston & Maine Railroad.
 Dorchester street, over N.Y., N.H. & H. Railroad, Plymouth
 Division.
 Everett street, over Boston & Albany Railroad, Brighton.
 Harvard street, over N.Y., N.H. & H. Railroad, Midland
 Division.
 West Fourth street, over N.Y., N.H. & H. Railroad, Plymouth
 Division.

In charge of Commissioners of Cambridge Bridges.

* Cambridge street, from Brighton to Cambridge.
 * Canal, from Boston to Cambridge.
 * Essex street, from Brighton to Cambridge.
 * Harvard, from Boston to Cambridge.

- * North Harvard street, from Brighton to Cambridge.
- * Prison Point, from Charlestown to Cambridge.
- * West Boston, from Boston to Cambridge.
- * Western avenue, from Brighton to Cambridge.

IV. — BRIDGES SUPPORTED BY RAILROAD CORPORATIONS.

1st. — Boston & Albany Railroad.

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

2d. — Boston & Maine Railroad, Eastern Division.

Main street.
 Mystic avenue.

3d. — Boston & Maine Railroad, Western Division.

Main street.
 Mystic avenue.

4th. — Boston, Revere Beach & Lynn Railroad.

Everett street.

5th. — New York, New Haven & Hartford Railroad, Midland Division.

Dorchester avenue.
 Morton street, Dorchester.
 Norfolk “ “
 Norfolk “ “
 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.

Albany street (new part).
 Beech street, West Roxbury.
 Bellevue street, West Roxbury.

Berkeley street (new part).
 Broadway (new part).
 Canterbury street, West Roxbury.
 Castle street, over the N. Y., N. H. & H. R.R., Providence
 Division.
 Centre and Mt. Vernon streets, West Roxbury.
 Chandler street.
 Columbus avenue (new part).
 Dudley avenue, West Roxbury.
 Ferdinand street.
 Harrison avenue (new part).
 Park street, West Roxbury.
 Tremont street.
 Washington street (new part).

RECAPITULATION OF BRIDGES.

I. Number wholly supported by Boston :		
In charge of Bridge Division	55	
In charge of Park Department	18	
In charge of Public Grounds Department . .	1	
	—	74
II. Number of which Boston supports the part within its limits :		
In charge of Bridge Division	9	
In charge of Park Department	5	
	—	14
III. Number of which Boston pays a part of the cost of maintenance :		
In charge of Bridge Division	6	
In charge of Commissioners of Boston and Cambridge Bridges	8	
	—	14
IV. Number supported by railroad corporations :		
1. Boston & Albany	4	
2. Boston & Maine, Eastern Division . .	2	
3. Boston & Maine, Western Division . .	2	
4. Boston, Revere Beach & Lynn	1	
5. New York, New Haven & Hartford, Midland Division	12	
6. New York, New Haven & Hartford, Plymouth Division	5	
7. New York, New Haven & Hartford, Providence Division	13	
	—	39
Total number		<u>141</u>

List of Small Bridges or Culverts having Wooden Tops, which are repaired by Bridge Division. — Walls Repaired and Openings Cleaned by Sewer Division.

LOCATION.	Span.	Height of Opening.	Length.	Side-walls.	Covering.
	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>		
Ashland street and Canterbury, near Calvary Cemetery, West Roxbury.	7.6	5.5	75	Stone	Wood.
Beech street, near Anawan avenue, at Central station, West Roxbury.	4.0	4.0	50	Stone	Wood.
Cass street, near Spring-street station, West Roxbury.	7.0	3.0	21	Stone	Wood.
Cohasset street, Roslindale.	14.0	7.5	60	Stone	Wood.
Gardner street, near Cow Island, West Roxbury.	5.0	5.5	33	Wood	Wood.
Jamaica street, Jamaica Plain.	10.0	4.0	39	Stone	Wood.
Park street, west of Dorchester avenue, Dorchester.	5.0	3.7	50	Stone	Wood.
Park street, west of N. Y., N. H. & H. Railroad, Dorchester.	8.5	5.0	50	Stone	Wood.
Spring street, near Spring-street station, West Roxbury.	2.7	2.7	63	Stone	Wood.
Summer street, near Spring-street station, West Roxbury.	4.0	4.5	40	Stone	Wood.
Williams street, at Stony brook, West Roxbury.	5.0	5.0	50	Wood	Wood.
Woodman street, Jamaica Plain.	6.3	4.0	65	Stone	Wood.

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 × 60. Built in 1890. Moored from city's property.

Essex-street Bridge.— Size, 9 × 23. Built in 1890. Moored from city's property.

East Boston, Public Landing.— Size, 18 × 30. Built in 1893. Moored at dock of East Boston Dry Dock Company. Dock and flats leased at \$250 per year.

Commercial Wharf.— Size, 30 × 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.

Federal-street Bridge.— Size, 20 × 30. Built by M. F. Sullivan, October 26, 1892. Moored from city's property.

Jeffries' Point, East Boston.— Size, 20 × 50. Moored from Fitzpatrick's Wharf; \$250 per year.

CABLE-HOUSES AND BOXES.

The following is a list of cable-houses and boxes on bridges in charge of this division:

New England Telephone and Telegraph Company:

Charles-river bridge, 2 houses, 1 unused box.

Chelsea [South] bridge, 1 house.

Congress-street bridge, 2 houses.

Dover-street bridge, 2 houses or boxes.

Chelsea [North] bridge, 1 box.

Chelsea-street bridge, 1 box.

Malden bridge, 4 boxes.

Meridian-street bridge, 2 boxes.

Neponset bridge, 2 boxes on poles.

Warren bridge, 2 boxes.

American Telephone and Telegraph Company:

Federal-street bridge, 1 house.

Merchants' Telegraph Company:

Congress-street bridge, 2 boxes.

Postal Telegraph Cable Company:

Congress-street bridge, 2 houses.

Malden bridge, 2 boxes.

Warren bridge, 2 boxes.

Boston Electric Light Company:

Congress-street bridge, 2 boxes.

Lynn & Boston Railroad Company:

Chelsea [North] bridge, 4 boxes.

Chelsea [South] bridge, 8 boxes.
 Boston Elevated Railway Company :
 Cambridge-street bridge, 1 house.
 Dover-street bridge, 1 house, 1 box.
 Federal-street bridge, 2 houses.
 Malden bridge, 2 houses.
 Warren bridge, 2 houses.
 Boston Police Department :
 Chelsea [South] bridge, 1 box.
 Malden bridge, 2 boxes.
 Boston Fire Department :
 Chelsea [North] bridge, 1 box.
 Dover-street bridge, 1 house, 1 box.
 Meridian-street bridge, 2 boxes.
 Warren bridge, 2 boxes.

**Bridge Division. Traffic Account. 6 A.M. to 6 P.M.
 September 18, 1899.**

North Bridges.

NAME OF BRIDGE.	Foot passengers to Boston.	Foot passengers from Boston.	Teams to Bos- ton.	Teams from Boston.	Street cars to Boston.	Street cars from Boston.
Charles river.....	3,440	3,670	1,760	2,310		
Chelsea (North).....	1,060	680	963	704	388	370
Chelsea (South).....	1,418	1,200	1,050	1,960	388	370
Malden.....	487	494	783	791	418	438
Meridian street.....	1,344	1,355	610	550	121	114
Warren.....	5,768	5,394	4,976	4,442	1,419	1,371

South Bridges.

Broadway.....	4,900	5,200				
Congress street.....	3,725	3,520	4,475	4,525		
Dover street.....	4,965	5,380	2,475	2,325	395	388
Federal street.....	1,673	938	1,106	1,170	413	470
L street.....	1,045	823	600	410		
Mt. Washington avenue.....	1,352	1,536	861	905		
Summer street.....	1,316	1,440	1,373	1,360		

DRAW-TENDERS' REPORTS.*

Giving the Number of Vessels passing through the Drawbridges controlled by the City of Boston, from February 1, 1899, to January 31, 1900.

NAME OF BRIDGE.	STEAMERS.		SAILING VESSELS.		TUGS.		ALL OTHERS.		TOTAL NUMBER OF VESSELS.			Total Number of Carries.	Total Number of Openings.				
	By Day.	By Night.	By Day.	By Night.	By Day.	By Night.	By Day.	By Night.	By Day.	By Night.	Total.						
														Total.			
Broadway.....	3	1	4	1,814	485	2,309	3,467	487	3,954	1,450	333	1,783	6,734	1,316	8,050	1,902	4,730
Charles river.....	45	10	55	1,329	439	1,768	3,158	611	3,769	1,637	404	2,101	6,229	1,464	7,693	1,895	524
Chelsea (North)....	217	28	245	866	84	950	6,080	906	6,986	2,614	509	3,123	9,777	1,527	11,304	1,870	7,329
Chelsea (South)....	8	.....	8	995	55	1,050	3,114	208	3,322	1,204	71	1,275	5,321	334	5,655	1,430	4,127
Chelsea street.....	.....	.....	.....	8	.....	8	120	6	126	67	2	69	195	8	203	29	144
Commercial point.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congress street.....	95	18	113	2,230	535	2,765	7,108	1,077	8,185	2,567	467	3,034	12,000	2,097	14,097	2,338	7,779
Dover street.....	5	1	6	1,690	464	2,154	2,921	465	3,386	1,136	272	1,408	5,752	1,202	6,954	1,860	4,536
Federal street.....	14	2	16	1,812	566	2,378	3,555	622	4,177	1,414	333	1,747	6,795	1,523	8,318	2,083	5,776
Granite.....	.....	.....	.....	57	2	59	258	4	262	65	.....	65	380	6	386	59	235
L street.....	.....	.....	.....	329	81	410	1,745	239	1,984	1,336	264	1,600	3,410	584	3,994	487	2,635
Malden.....	.....	.....	.....	234	20	254	1,335	152	1,487	729	137	866	2,298	309	2,607	511	1,506

Meridian street.....	74	9	83	448	49	497	4,672	996	5,668	2,628	623	3,251	7,822	1,677	9,499	2,023	5,870
Mt. Washington avenue.....	72	11	83	1,992	494	2,486	5,877	829	6,706	2,208	417	2,625	10,149	1,751	11,900	2,463	6,459
Neponset.....				67	1	68	263	9	272	78	8	86	408	18	426	64	248
North Beacon street.....																	
Warren.....	28	4	32	1,286	548	1,834	3,246	733	3,979	1,735	487	2,222	6,395	1,772	8,067	1,955	5,235
Western avenue to Watertown.....							981	324	1,305	1,101	422	1,523	2,082	746	2,828		1,256
Totals.....	561	84	645	15,157	3,833	18,990	47,900	7,668	55,568	22,029	4,749	26,778	85,647	16,334	101,981	20,969	58,379

* West Boston, Cambridge street, Essex street, North Harvard street, Western avenue to Cambridge, Prison Point, Canal (or Craigie's) and Harvard bridges are not included in this table, being in the care of commissioners representing the two cities (Boston and Cambridge) connected by these bridges.

Table showing the Widths of Openings for Vessels in all Bridges provided with Draws in the City of Boston, 1899.

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Boston & Maine R.R., Eastern Division.....	Boston to Charlestown.....	1	39 feet 7 inches
Boston & Maine R.R., Eastern Division.....	Over Miller's river.....	1	35 " 6 "
Boston & Maine R.R. (freight), Southern Division.....	Boston to East Cambridge	1	40 " 2 "
Boston & Maine R.R. (passenger), Southern Division.....	" "	1	39 " 7 "
Boston & Maine R.R., Western Division.....	Boston to Charlestown....	1	39 " 7 "
Boston & Maine R.R., Western Division.....	Over Miller's river.....	1	35 " 10 "
Broadway.....	Over Fort Point channel..	1	43 " 3 "
Cambridge street.....	Brighton to Cambridge....	1	36 " 4 "
Canal (or Craigie's).....	Boston to East Cambridge.	1	36 " 0 "
Charles river.....	Boston to Charlestown....	1	36 " 0 "
Charlestown.....	" ".....	2	50 " 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 street (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 " 9 "
Dover street.....	" ".....	1	37 " 0 "
Essex street.....	Brighton to Cambridge....	1	36 " 0 "
Federal street.....	Over Fort Point channel..	1	41 " 10 "
Fitchburg R.R.....	Boston to Charlestown....	1	36 " 0 "
Fitchburg R.R. (for teaming freight).....	" ".....	1	36 " 0 "
Grand Junction R.R.....	Brighton to Cambridge....	1	36 " 0 "
Grand Junction R.R.....	East Boston to Chelsea....	1	34 " 6 "
Granite.....	Dorchester to Milton.....	1	36 " 0 "
Harvard (Boston side).....	Boston to Cambridge.....	2	36 " 6 "
" (Cambridge side).....	" ".....	..	36 " 10 "
L street.....	Over Reserved channel, South Boston.....	1	40 " 0 "
Malden.....	Charlestown to Everett....	1	43 " 4 "

Table showing Width of openings, etc. — *Concluded.*

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Meridian st. (East Boston side)..	East Boston to Chelsea	2	59 feet 2 inches.
“ (Chelsea side).....	“ “	..	59 “ 0 “
Mt. Washington avenue (Boston side).....	Over Fort Point channel ..	2	42 “ 2 “
Mt. Washington avenue (South Boston side).....	“ “	..	42 “ 3 “
Neponset.....	Dorchester to Quincy.....	1	36 “ 0 “
New England R.R.....	Over South Bay.....	1	28 “ 4 “
North Beacon street	Brighton to Watertown....	1	30 “ 3 “
North Harvard street.....	Brighton to Cambridge....	1	36 “ 0 “
New York, New Haven & Hart- ford R.R.....	Over Fort Point channel..	1	36 “ 3 “
New York, New Haven & Hart- ford R.R.....	Dorchester to Quincy.....	1	35 “ 10 “
Prison Point.....	Charlestown to Cambridge	1	36 “ 0 “
Summer street.....	Over Fort Point Channel..	1	50 “ 0 “
Warren	Boston to Charlestown....	1	36 “ 0 “
West Boston (Boston side).....	Boston to Cambridge.....	2	35 “ 6 “
“ (Cambridge side)....	“ “	..	36 “ 6 “
Western avenue	Brighton to Cambridge....	1	36 “ 0 “
“	Brighton to Watertown....	1	35 “ 10 “

Table showing Width of Bridges, kind of Roadways, Sidewalks, etc., on Tide-water Bridges, 1899.

NAME OF BRIDGE.	Width of Bridge.		ROADWAY.		SIDEWALKS.	
	Width.	Kind of Roadway.	No.	Width.	Kind of Walks.	
	<i>Ft. In.</i>	<i>Ft. In.</i>		<i>Ft. In.</i>		
Broadway	60 0	40 0	Plank	2 10 0	Coal-tar concrete.	
Cambridge-street	40 0	32 9	"	1 6 0	Plank.	
Canal	64 0	48 0	Paved	2 8 0	Brick.	
Charles river.....	50 0	34 0	"	2 8 0	"	
Charlestown	100 0	$\left. \begin{array}{l} 1\ 27\ 9 \\ 1\ 22\ 0 \\ 1\ 27\ 9 \end{array} \right\}$	"	2 10 0	Asphalt.	
Chelsea, North.....	49 0	40 0	"	1 8 0	Coal-tar concrete and plank.	
" South.....	50 3	41 2	"	1 8 0	Plank.	
" street.....	30 0	23 2	Plank	1 6 0	"	
Commercial point. ...	about 34 0	about 27 0	"	0		
Congress street	60 0	44 0	Paved	2 8 0	Coal-tar concrete.	
Dover st. (over water)	60 0	40 0	"	2 10 0	Asphalt.	
Essex street.....	31 0	22 8	Plank	1 7 6	Plank.	
Federal street.....	69 0	49 0	Paved	2 10 0	Asphalt.	
Granite	30 2	24 4	Plank	1 5 0	Plank.	
Harvard	69 4	51 0	"	2 9 2	Asphalt.	
L street	60 0	44 0	Paved	2 8 0	"	
Malden.....	40 0	32 0	"	1 7 0	Coal-tar concrete.	
Meridian street	50 0	36 0	"	2 7 0	" "	
Mt. Washington ave...	61 0	39 6	"	2 10 9	" "	
Neponset.....	30 0	23 10	Plank	1 5 5	Plank.	
North Beacon street...	31 0	25 2	"	1 5 0	"	
North Harvard street.	28 2	26 7	"	0		
Prison Point.....	50 0	36 0	{ Plank part } { Paved part }	2 7 0	Coal-tar concrete.	
Summer street	100 0	76 0	" entire...	2 12 0	Asphalt.	
Warren.....	80 0	60 0	Paved	2 10 0	Coal-tar concrete.	
Western ave. to Cambridge.....	33 2	26 3	Plank	1 6 0	Plank.	
Western ave. to Water-town	33 0	24 2	"	1 8 0	"	
Winthrop	24 2	19 10	"	1 3 7	"	
West Boston.....	50 0	36 0	Paved	2 7 0	Brick.	

DRAW-TENDERS' REPORTS.*

Number of Vessels passing through Draw-bridges controlled by the City of Boston from Feb. 1, 1895, to Feb. 1, 1900, inclusive.

NAME OF BRIDGE.	STEAMERS.					SAILING VESSELS.					TUGS.					ALL OTHERS.					TOTAL NUMBER OF VESSELS.					TOTALS. Feb. 1, 1895, to Feb. 1, 1900.
	1895.	1896.	1897.	1898.	1899.	1895.	1896.	1897.	1898.	1899.	1895.	1896.	1897.	1898.	1899.	1895.	1896.	1897.	1898.	1899.	1895.	1896.	1897.	1898.	1899.	
Broadway	16	22	113	70	113	4,174	4,294	4,318	3,421	2,765	1,886	8,347	3,745	8,185	2,838	3,039	3,541	3,296	3,034	15,281	15,902	17,717	15,205	14,097	78,262	
Charles river	45	39	48	34	55	2,815	2,857	2,576	2,011	1,768	3,641	4,121	4,257	2,494	2,492	2,534	2,926	2,912	2,101	8,993	9,551	9,807	9,710	7,683	30,704	
Chelsea (North)	115	159	93	99	245	995	1,169	978	1,243	930	4,662	4,373	5,186	7,892	6,986	2,229	2,709	4,748	3,123	8,155	7,430	9,056	13,082	11,394	38,965	
Chelsea (South)	31	39	46	39	8	847	1,260	1,345	1,197	1,050	2,275	2,748	3,373	3,206	3,222	984	963	1,120	1,275	4,137	4,461	5,557	5,556	5,635	26,065	
Chelsea street	6	.....	.....	.....	.....	24	30	19	12	8	105	163	138	119	126	41	105	49	69	170	304	237	180	203	1,064
Commercial Point.	383	292	113	70	113	4,174	4,294	4,318	3,421	2,765	1,886	8,347	3,745	8,185	2,838	3,039	3,541	3,296	3,034	15,281	15,902	17,717	15,205	14,097	78,262	
Congress street	16	20	6	10	6	2,894	2,871	2,813	2,088	2,154	1,999	2,146	3,099	2,494	2,492	2,534	2,926	2,912	2,101	8,993	9,551	9,807	9,710	7,683	30,704	
Dover street	16	17	6	15	16	3,966	3,393	3,139	2,549	2,378	2,666	2,941	4,025	3,764	4,177	1,083	1,226	1,533	1,747	6,896	7,434	8,456	7,861	8,318	38,965	
Federal street	125	64	58	48	59	306	240	258	239	262	41	55	63	71	65	473	359	379	358	386	1,955
Granite .....	.....	.....	.....	.....	.....	541	730	673	556	410	3,132	2,656	2,065	2,200	1,984	1,128	1,219	1,556	1,600	5,803	4,432	3,962	4,314	3,994	22,505
L street	2	4	2	.....	.....	273	352	450	272	254	1,619	1,384	1,652	1,378	1,487	1,236	961	1,059	935	866	3,130	2,701	3,163	2,967	14,188
Malden	58	51	57	58	83	818	653	610	533	497	4,046	4,391	4,145	5,429	5,668	2,031	1,954	3,199	3,251	6,953	7,049	7,276	9,219	9,499	39,996	
Meridian street .....	.....	.....	.....	.....	.....	69	88	74	69	83	3,699	3,786	2,486	5,119	5,426	6,194	6,706	2,229	2,304	11,116	11,518	12,812	11,775	11,900	59,121
Neponset .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
No. Beacon street.	47	42	41	36	32	2,312	2,320	2,476	1,834	2,588	3,007	2,981	3,338	3,979	3,979	2,007	2,143	1,766	2,071	2,222	6,954	7,512	7,964	7,279	37,076	
Warren .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Western avenue to Watertown .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	800	797	498	447	645	26,147	26,847	26,360	21,072	18,990	42,636	44,553	51,147	52,859	55,368	20,840	20,205	22,364	26,475	26,778	90,423	92,402	100,959	100,853	486,618	

* West Boston, Cambridge street, Essex street, North Harvard Street, Western avenue to Cambridge, Prison Point, Canal (or Craigie's) and Harvard Bridges are not included in this table, being in care of commissioners representing the two cities (Boston and Cambridge) connected by these bridges.

APPENDIX B.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE FERRY DIVISION.

NORTH FERRY, EAST BOSTON, February 1, 1900.

MR. BENJ. W. WELLS,

Superintendent of Streets :

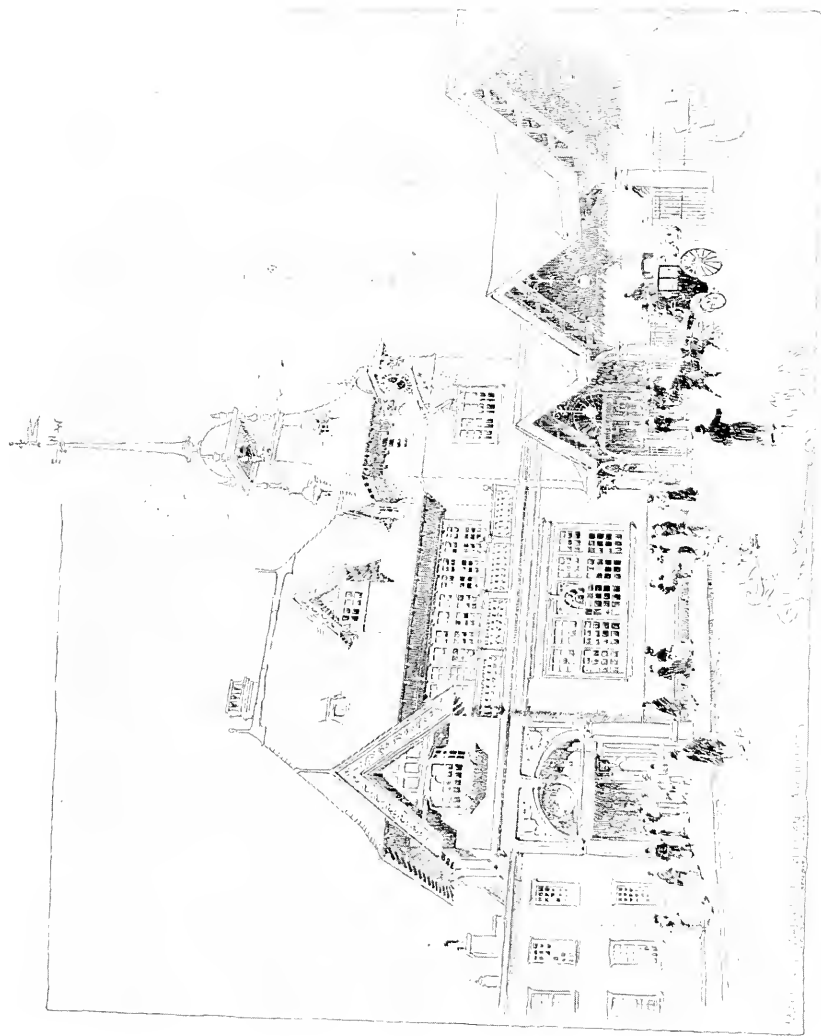
DEAR SIR, — I respectfully submit the annual report of the expenditures, income and operation of the Ferry Division for the twelve months ending January 31, 1900, and the amount of property and the condition of the same.

South Ferry, East Boston Side. — Located at the termination of Lewis street; covers an area of 58,725 square feet of land and water. On these premises are one head-house, one coal-shed, one workshop for carpenters, machinists and blacksmith, one gate-room and oil-room, all in a very poor condition; 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, Boston Side. — Located at the termination of Eastern avenue, and covers an area of 38,135 square feet of land and water, upon which is one head-house with canopies extending over driveways, one gate-room, three piers, which form the two slips, and two drops and tanks. The wharf property adjoining these premises was leased by the East Boston Ferry Company for 999 years at a rental of \$4,000 per year, which lease was assigned to the Ferry Department. The whole of it is sub-let to the Public Institutions Department for \$2,000 per year. This makes a net loss of \$2,000 a year to this division, and in my opinion the Public Institutions Department should pay the whole rental.

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

North Ferry, East Boston Side. — Located at the termination of Border street, and covers an area of 62,138 square



PROPOSED NEW HEAD-HOUSE, SOUTH FERRY, EAST BOSTON SIDE.

feet of land and water, upon which are one head-house with canopy, boiler-room, oil-room, stable and coal-shed, three piers, which form the two slips, two drops and tanks. During the past year one new propeller boat, the "Noddle Island," was built and placed in commission, the cost of which was \$75,000. The "Gov. Russell," which was sold to the United States Government for \$71,000, was repurchased by the city of Boston for \$25,000. She went into commission January 3, 1900, and the total cost of her was about \$50,000. To duplicate this boat to-day would cost the city \$95,000, so that the city has been saved about \$45,000 in the repurchasing of this boat. A contract has been made for another propeller ferry-boat, and when completed and put into commission I am free to say that the ferry service of Boston will be second to none in the country. Plans were drawn and bids received for the construction of a new head-house for South Ferry, East Boston side, but owing to complications arising in the matter of land takings the contract was held in abeyance. All the boats, slips, drops and buildings except the head-house at the South Ferry, East Boston side, are in good condition, and no extraordinary expense will be necessary for a number of years. I again renew my recommendation that Battery street be widened from Commercial street to the ferry gates. On account of being unfit for service the ferry-boat, "Ben Franklin," which has been in use for twenty-eight years, was sold at public auction January 29, 1900, for \$2,650. Upon the acceptance of the eight-hour law by the people, and as directed by His Honor Mayor Quincy, the employees in this division were put on an eight-hour basis. In order to do so, another crew was organized, which practically gave the same service during week days at the South and North Ferries.

Yours truly,

WILLIAM F. McCLELLAN,

Deputy Superintendent.

FINANCIAL STATEMENT.

REGULAR ANNUAL AND SPECIAL APPROPRIATIONS OF STREET DEPARTMENT, FERRY DIVISION, FOR THE YEAR ENDING JANUARY 31, 1900.

Appropriation for year ending January 31, 1900,	\$212,500 00
Amount of expenditures	\$211,822 87
Transferred to City Treasury	677 13
	212,500 00

OBJECTS OF EXPENDITURE.

Salaries and wages for maintenance	\$128,080 48
Salaries and wages for repairs	17,731 83
Current expenses	13,855 04
Fuel	28,264 34
Supplies for maintenance	4,693 13
Supplies for repairs	5,341 87
Repairs on boats	10,920 47
Repairs on buildings, piers and drops	1,285 62
Tools and fixtures	546 81
Incidental expenses	1,103 28
	\$211,822 87
Transferred to City Treasury	677 13
	\$212,500 00

SPECIAL APPROPRIATIONS.

Appropriation authorized and issued for new ferry landings, head house, new boat slips, and drops	\$500,000 00
Amount expended to February 1, 1899	\$143,393 49
Amount transferred to Sewer Division, Street Department, by order of Mayor authorized by Acts of Legislature, chap. 450, sect. 14, 1899	200,000 00
Amount paid on account of drops, piers, slips, and new boats to date	12,187 69
Balance of appropriation	144,418 82
	\$500,000 00

Amount expended during the year as above		\$12,187 69
John M. Brooks, in full for new drop	\$2,120 00	
W. H. Ellis & Co., refitting slips,	2,500 50	
Public Buildings Department, Electrical Construction Division, for electric plant of "Noddle Island"	\$3,470 80	
Less amount charged to appropriation for new boats	301 53	
	<hr/>	3,169 27
Sundry bills for new head-house, South Ferry	1,090 35	
Sundry bills for labor and material furnished for boats, slips and drops	3,307 57	
	<hr/>	<u>\$12,187 69</u>

SPECIAL APPROPRIATION FOR NEW FERRY-BOATS.

Amount apportioned for boat No. 3, "Noddle Island"		\$71,000 00
Amount apportioned for repurchasing and refitting "Gov. Russell"		57,500 00
		<hr/>
Total appropriation		<u>\$128,500 00</u>
"Noddle Island"		\$71,000 00
Amount of expenditure to February 1, 1899	\$50,463 60	
Amount paid William McKie in full for completion of contract for building	18,119 00	
Sundry bills for labor and material,	2,417 40	
	<hr/>	<u>\$71,000 00</u>
"Gov. Russell"		<u>\$57,500 00</u>

Amount of expenditure to February 1, 1900, as follows :

Paid United States Government Navy Department for purchase of boat at Norfolk, Va.	\$25,000 00
Paid for insurance on passage to Boston	900 00
	<hr/>
<i>Carried forward,</i>	\$25,900 00

<i>Brought forward.</i>	\$25,900 00	
Paid Boston Tow Boat Co. for towing boat to Boston	1,310 00	
Sundry bills for labor and material furnished by this division for re- fitting boat for ferry service	17,107 40	
Balance unexpended	13,182 60	
	<hr/>	<u>\$57,500 00</u>
Special Appropriation for New Clock at South Ferry, Boston		\$500 00
Amount paid Howard Watch and Clock Co.	\$250 00	
Labor and material furnished by division	224 79	
	<hr/>	\$474 79
Transferred to City Treasury	25 21	
	<hr/>	<u>\$500 00</u>

TOTAL APPROPRIATIONS.

Annual maintenance	\$212,500 00	
New ferry-landing loan, \$500,000 00		
Less previously ex- pended	143,393 49	
	<hr/>	356,606 51
New ferry-boat "Nod- dle Island"	\$71,000 00	
Less previously ex- pended	50,463 60	
	<hr/>	20,536 40
Repurchase of "Gov. Russell"	57,500 00	
New Head-house, clock, South Ferry, Boston	500 00	
	<hr/>	\$647,642 91

TOTAL EXPENDITURES.

Annual maintenance	\$211,822 87	
New ferry-landing loan, 12,187 69		
New ferry-boat "Nod- dle Island"	20,536 40	
New ferry-boat "Gov. Russell"	44,317 40	
New Head-house, clock	474 79	
	<hr/>	\$289,339 15
Transferred to Sewer Division from new ferry-landing	200,000 00	
	<hr/>	489,339 15
		<u>\$158,303 76</u>

BALANCES UNEXPENDED.

Annual maintenance	\$677 13	
New ferry-landing loan	144,418 82	
New ferry-boat "Gov. Russell"	13,182 60	
New Head-house, clock	25 21	
	<hr/>	\$158,303 76

INCOME.

Cash receipts from February 1, 1899 to February 1, 1900.

From Tollmen :		
For 11,992,521 foot passengers at 1 cent	\$119,925 21	
sales of strip team-tickets	27,517 00	
From Gatemen :		
For 308,392 foot passengers at 1 cent	3,083 92	
cash fares for teams	13,902 38	
At office of City Collector :		
From sale of ferry-boat "Ben Frank- lin"	\$2,650 00	
Less expenses of sale	265 00	
	<hr/>	2,385 00
From sales of foot-passes by requisitions	525 00	
sales of strip team-tickets by requisitions	101 50	
rents	2,523 32	
National Automatic Machine Co.	200 00	
free ferries, July 4, 1899	25 00	
At office of Ferry Division :		
From sales of foot passes	1,016 30	
sales of strip team-tickets	476 00	
sales of old material	174 50	
boat privileges to boot blacks	170 00	
	<hr/>	
Total receipts of the year	\$172,025 13	
From sale of ferry-boat "Ben Frank- lin"	\$2,385 00	
regular ferry income	169,640 13	
	<hr/>	\$172,025 13

STATEMENT SHOWING RECEIPTS AT EACH FERRY.

North Ferry.

	From Tollman.	Foot Passengers.	Team Tickets.	Total.
No. 2		\$12,703 64	\$2,265 00	\$14,968 64
" 3		12,396 92	2,112 50	14,509 42
" 5		12,526 84	2,081 50	14,608 34
" 6		12,224 61	2,062 00	14,286 61
" 9		12,601 34	2,184 00	14,785 34
" 10		12,597 06	2,090 00	14,687 06
" 13		12,509 64	2,138 50	14,648 14
		\$87,560 05	\$14,933 50	\$102,493 55

From Tollmen	\$102,493 55
From Gatemen :	
For 198,769 foot passengers, at 1c.	\$1,987 69
cash fares for teams	6,954 95
	<u>8,942 64</u>
Total at North Ferry	<u>\$111,436 19</u>

South Ferry.

	From Tollman.	Foot Passengers.	Team Tickets.	Total.
No. 1		\$7,557 39	\$3,185 00	\$10,742 39
" 4		7,530 72	3,091 00	10,621 72
" 7		7,821 68	3,056 00	10,877 68
" 8		7,300 74	3,072 50	10,373 24
" 11		930 36	79 00	1,009 36
" 12		1,224 27	100 00	1,324 27
		\$32,365 16	\$12,583 50	\$44,948 66

From Tollmen	\$44,948 66
From Gatemen :	
For 109,623 foot-passengers, at 1c.,	\$1,096 23
cash fares for teams	6,947 43
	<u>8,043 66</u>
Total at South Ferry	<u>\$52,992 32</u>

STREET DEPARTMENT — FERRY DIVISION. 49

North and South ferries, as above	\$164,428 51
Tickets paid for at office of City Collector	626 50
Tickets paid for at office of Ferry Division	1,492 30
Free ferries, July 4, 1899	25 00
	<hr/>
	\$166,572 31
Sale of ferry-boat	2,385 00
Rents, head-house and bootblack privileges	2,893 32
Sales of old material	174 50
	<hr/>
Total cash receipts, as above	<u>\$172,025 13</u>

CASH STATEMENT.

*From February 1, 1899, to February 1, 1900.**Dr.*

To cash received from all sources	<u>\$172,025 13</u>
---	---------------------

Cr.

By amount paid City Collector	\$172,015 04
Amount of rejected coin	10 09
	<hr/>
	<u>\$172,025 13</u>

STATEMENT OF RECEIPTS.

From April 1, 1870, to February 1, 1900.

Cash received for tolls from April 1, 1870, to February 1, 1896	\$4,248,132 01
Cash received for tolls from February 1, 1896, to February 1, 1897	163,769 67
Cash received for tolls from February 1, 1897, to February 1, 1898	168,083 88
Cash received for tolls from February 1, 1898, to February 1, 1899	162,078 87
Cash received for tolls from February 1, 1899, to February 1, 1900	166,572 31
	<hr/>
	\$4,908,636 74
Cash received for rent	\$50,174 62
Cash received for old boats	75,131 71
Cash received for one new boat	71,000 00
Cash received from all other sources	10,614 51
	<hr/>
	206,920 84
	<hr/>
Total receipts in 29 years and 10 months	<u>\$5,115,557 58</u>

CASH STATEMENT.

From April 1, 1870 (date of purchase by the City of Boston, of the East Boston Ferries), to February 1, 1900.

Dr.

To receipts from all sources in 29 years 10 months \$5,115,557 58

Cr.

By amount paid to City Collector, \$5,114,896 39
 By cash with tollmen as capital 575 00
 By counterfeit and rejected money
 in 29 years 10 months 86 19
 _____ \$5,115,557 58

EXPENDITURES.

From March 4, 1857, to April 1, 1870.

Amount charged to the East Boston Ferries by Auditor previous to purchase:

For avenues . . . \$250,000 00
 For repairs . . . 65,815 68
 _____ \$315,815 68

For ferry property purchased
 April 1, 1870 276,375 00
 _____ \$592,190 68

Amount of expenditure from April 1, 1870, to February 1, 1896 . \$5,901,089 97

Amount of expenditure from February 1, 1896, to February 1, 1897 241,057 70

Amount of expenditure from February 1, 1897, to February 1, 1898 270,026 45

Amount of expenditure from February 1, 1898, to February 1, 1899 342,908 06

Amount of expenditure from February 1, 1899, to February 1, 1900 289,469 56
 _____ 7,053,551 74

\$7,645,742 42

DEDUCT.

Amount paid to City Treasury 5,114,906 48

Net cost of ferries to city to date, not including interest on loans \$2,530,835 94

STATEMENT SHOWING THE ACTUAL STANDING OF FERRY DIVISION,
STREET DEPARTMENT, WITH THE CITY OF BOSTON, FEBRUARY
1, 1900.*Dr.*

Amount paid previous to April 1, 1870	\$592,190 68
Amount paid from April 1, 1870, to February 1, 1900, as follows :	
Seven ferry steamers	513,988 75
New buildings, piers and drops	442,212 22
Fuel	1,006,479 35
Repairs of all kinds	695,674 16
Salaries and wages	3,379,904 94
Tools and fixtures	14,263 30
Land from Lincoln's Wharf in 1887	5,562 52
Land from Battery Wharf in 1893	10,000 00
All other expenses	985,466 50
	<hr/>
	\$7,645,742 42
	<hr/> <hr/>

Cr.

By amount paid the city for income	\$5,114,906 48
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
rents prior to 1881	60,277 56
paving avenues	11,530 84
estimated value of seven ferry steamers	\$109,765 59
one added during the year	74,629 44
	<hr/>
	\$184,395 03
less 6 per cent. for depreciation on former	\$6,585 94
less 4 per cent. on latter for nine months' use	2,985 18
	<hr/>
	9,571 12
	<hr/>
	\$174,823 91
deduct sale January 29, 1900, of ferry-boat "Ben Franklin,"	2,385 00
	<hr/>
	172,438 91
estimated value of real estate and franchise as per last re- port	\$702,900 00
added during past year	7,900 00
	<hr/>
	710,800 00
	<hr/> <hr/>
<i>Carried forward,</i>	\$6,319,953 79

<i>Brought forward</i>	\$6,319,953	79
By amount not yet charged to new buildings		84 73
amount paid for awning, North Ferry, East Boston		742 94
amount paid for new clock, South Ferry, Boston		474 79
land from Lincoln's Wharf		5,562 52
land from Battery Wharf		10,000 00
amount expended on Eastern-avenue wharf		1,499 46
estimated value of tools and fixtures		6,000 00
estimated value of fuel on hand		9,148 55
estimated value of supplies on hand		3,281 37
cash with tollmen as capital		575 00
due for rent		16 68
amount charged to "Gov. Russell" repurchased and being fitted out		44,317 40
profit and loss in 29 years and 10 months	1,244,085	19
		<u>\$7,645,742 42</u>

STATEMENT SHOWING THE DIFFERENCE OF TRAVEL ON THE FERRIES
FROM FEBRUARY 1, 1899, TO FEBRUARY 1, 1900.

	<i>North.</i>	<i>South.</i>
Foot passengers, at 1 cent each	8,954,774	3,346,139
Foot passengers, by ticket	105,990	46,260
Foot passengers, free	66,778	5,634
One-horse teams and pleasure carriages	251,625	156,226
Two-horse teams	97,598	110,352
Three-horse teams	4,383	4,603
Four-horse teams	6,323	7,740
Two-horse pleasure carriages and hacks	6,452	1,406
Two-cent tolls (at gate), hand-carts, etc.	4,228	1,848
Four-cent tolls	142,665	139,238
Six-cent tolls	3,705	3,201
Seven-cent tolls	12	4
Eight-cent tolls	10,189	11,961
Ten-cent tolls	489	880
Thirteen-cent tolls	521	776
Fifteen-cent tolls	36	17
Twenty-cent tolls	1	—
Thirty-cent tolls	11	1
Free teams	<u>4,723</u>	<u>1,782</u>

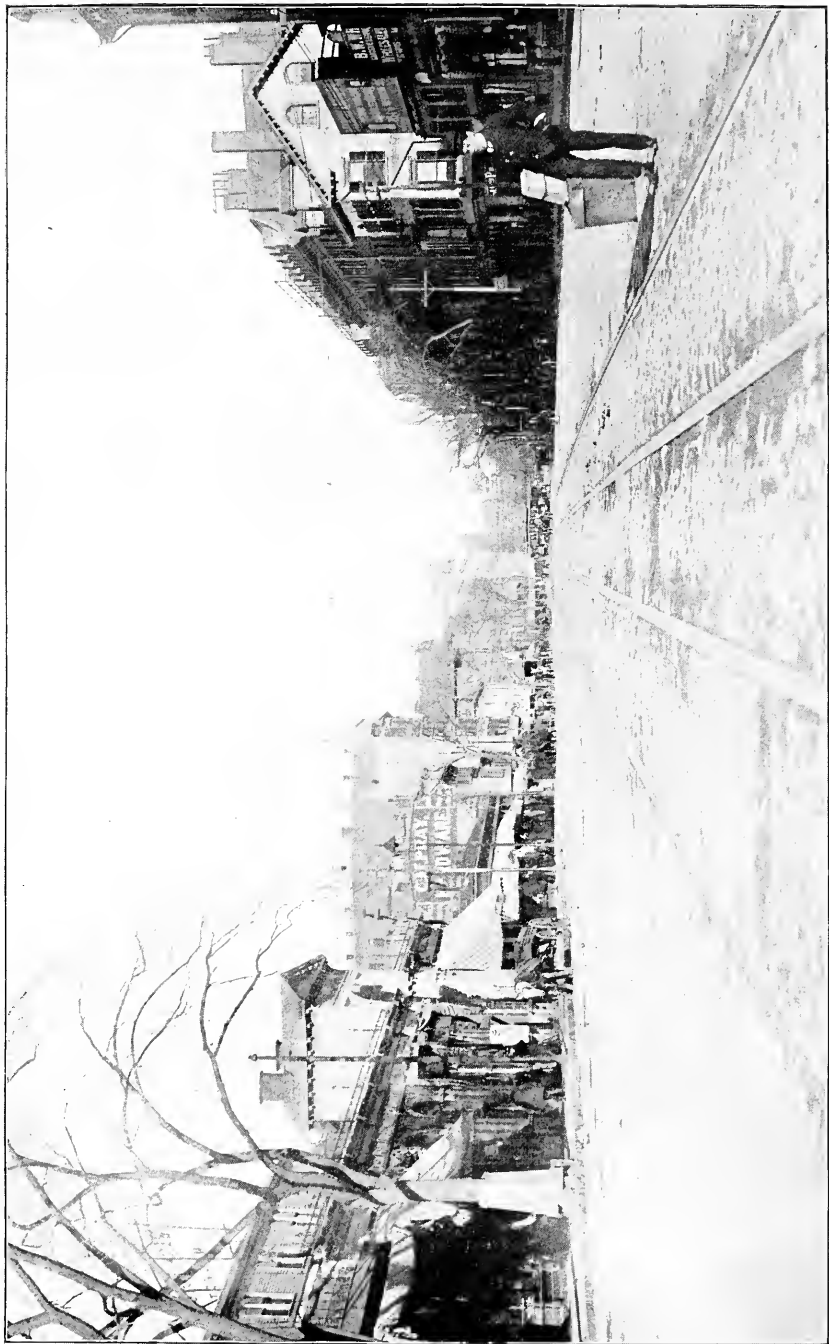
Total Travel on both Ferries from February 1, 1895, to February 1, 1900.

	From Feb. 1, 1895, to Feb. 1, 1896.	From Feb. 1, 1896, to Feb. 1, 1897.	From Feb. 1, 1897, to Feb. 1, 1898.	From Feb. 1, 1898, to Feb. 1, 1899.	From Feb. 1, 1899, to Feb. 1, 1900.
One-horse teams.....	676,294	733,478	738,514	685,422	689,754
Two-horse teams.....	248,291	219,306	240,434	207,402	230,100
Three-horse teams.....	9,095	9,290	7,716	9,474	10,355
Four-horse teams.....	16,939	14,902	14,961	15,311	15,360
Two-horse carriages and hacks.....	10,349	16,299	14,659	13,582	14,764
Two-cent tolls for hand-carts, etc.....	7,059	8,321	8,819	6,850	6,076
Drag-wheels, etc.....	101	76	75	69	66
Foot-passengers.....	11,929,790	12,034,300	12,466,272	12,182,842	12,453,163

TICKET STATEMENT.

Foot-passes outstanding February 1, 1899	195,299
Sold during the year	153,630
On requisitions to other divisions	6,080
	<hr/>
Received and destroyed	355,009
	152,250
	<hr/>
Outstanding February 1, 1900	202,759
	<hr/>
One-horse team-tickets outstanding February 1, 1899	63,924
Sold during the year	363,456
On requisitions to other divisions	1,808
	<hr/>
Received and destroyed	429,188
	362,378
	<hr/>
Outstanding February 1, 1900	66,810
	<hr/>
Two-horse team-tickets outstanding February 1, 1899	33,699
Sold during the year	208,368
On requisitions to other divisions	752
	<hr/>
Received and destroyed	242,819
	207,950
	<hr/>
Outstanding February 1, 1900	34,869
	<hr/>

Three-horse team-tickets outstanding February 1, 1899	2,138
Sold during the year	9,198
	<hr/>
Received and destroyed	11,336
	8,986
	<hr/>
Outstanding February 1, 1900	2,350
	<hr/>
Four-horse team-tickets outstanding February 1, 1899	4,884
Sold during the year	14,340
	<hr/>
Received and destroyed	19,224
	14,063
	<hr/>
Outstanding February 1, 1900	5,161
	<hr/>
One-horse carriage-tickets outstanding February 1, 1899	18,941
Sold during the year	45,400
On requisitions to other divisions	200
	<hr/>
Received and destroyed	64,541
	45,473
	<hr/>
Outstanding February 1, 1900	19,068
	<hr/>
Two-horse carriage-tickets outstanding February 1, 1899	3,005
Sold during the year	7,900
	<hr/>
Received and destroyed	10,905
	7,858
	<hr/>
Outstanding February 1, 1900	3,047
	<hr/>



WASHINGTON STREET, NORTH FROM CLIFTON PLACE, WITHOUT ELEVATED RAILWAY STRUCTURE.

APPENDIX C.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE
PAVING DIVISION.

ROOM 44, CITY HALL, BOSTON, February 1, 1900.

MR. BENJ. W. WELLS, *Superintendent of Streets*:

DEAR SIR,—I respectfully submit the annual report of the expenditures and income of the Paving Division of the Street Department for the financial year ending January 31, 1900, showing the nature of the work, the number and variety of permits issued and the details of expenditures involved in paving, macadamizing, regulating and constructing various streets.

Respectfully yours,

JOHN L. KELLY,
Deputy Superintendent.

The Paving Division has charge of the following work :

The maintenance and rebuilding of street surfaces and sidewalks.

The placing of street signs.

The numbering of buildings.

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

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

The cleaning of streets in the outlying sections of the city not covered by the Street Cleaning Division.

The division is in charge of a deputy superintendent, with office in City Hall, and with a clerical force under the direction of a chief clerk.

The outdoor working force of the division is divided into ten districts, each in charge of a foreman, as follows :

No. 1, South Boston.

No. 2, East Boston.

No. 3, Charlestown.

No. 4, Brighton.

No. 5, West Roxbury.

No. 6, Dorchester.

No. 7, Roxbury.

Nos. 8, 9, 10, City Proper.

FINANCIAL STATEMENT.

REGULAR APPROPRIATION.

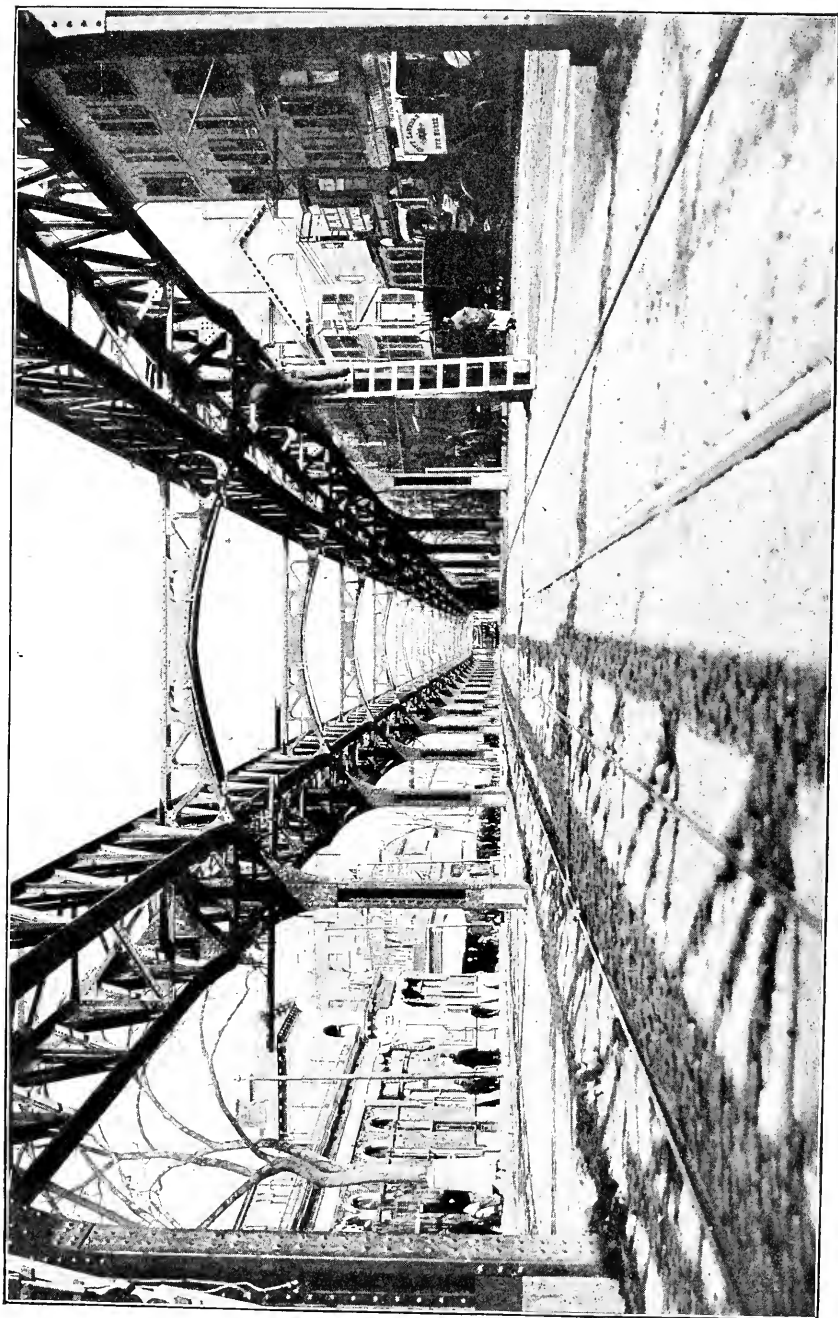
Appropriation for 1899-1900.		
General expenses	\$690,000 00	
Removal of snow	50,000 00	
	<hr/>	\$740,000 00
Amount collected for repairs made by Paving Division and inspector's services for different companies, etc.		5,704 07
Amount transferred from different appropriations,		114,353 79
		<hr/>
		\$860,057 86
General expenditures from Febru- ary 1, 1899, to January 31, 1900,	\$705,432 68	
Removal of snow from February 1, 1899, to January 31, 1900	154,625 18	
	<hr/>	\$860,057 86

SPECIAL APPROPRIATIONS, PAVING AND STREET IMPROVEMENTS.

Amount of balances, 1898-99, less transfers	\$94,647 39	
Amount of appropriations, 1898-99, revenues and transfers	308,996 21	
	<hr/>	\$403,643 60
Amount of expenditures		368,856 68
		<hr/>
Balances unexpended		\$34,786 92

TOTAL EXPENDITURES.

Maintenance appropriation	\$860,057 86
Special appropriations	368,856 68
Laying-Out and Construction of Highways	510,331 12
Laying-Out and Construction of Highways, Brighton	16,280 36
Laying-Out and Construction of Highways, Dor- chester	33,483 80
Laying-Out and Construction of Highways, East Boston	3,561 90
Laying-Out and Construction of Highways, Rox- bury and West Roxbury	24,037 97
Blue Hill and Other Avenues	246,053 89
South Union Station	71,155 28
Rapid Transit	1,234 94
Charlestown bridge	13,545 38
Charlestown street	37,172 50
Abolishment of Grade Crossings	463 00
Buildings, Chelsea street	1,920 91
	<hr/>
	\$2,188,155 59



WASHINGTON STREET, NORTH, FROM CLIFTON PLACE, SHOWING ELEVATED RAILWAY STRUCTURE.

INCOME.

Statement showing the amount of bills deposited with the City Collector from February 1, 1899, on account of the Paving Division.

Edgestone and sidewalk assessments	\$127 44
Permits	2,032 75
	<hr/>
	<u>\$2,160 19</u>

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),	\$7,711 84
Edgestone and sidewalk assessments (law of 1893)	1,583 01
Permits	1,789 75
Miscellaneous	152 50
	<hr/>
	<u>\$11,237 10</u>

Objects of Expenditures from the Regular Appropriation, Classified by Districts, from Feb. 1, 1899, to Jan. 31, 1900.

DISTRICTS.	Repairs.	Snow.	Edgestone and Sidewalk Repairs.	Repairing Fences.	Repairing Plankwalks.	A. Miscellaneous.	B. In excess of Special Appropriation.	C. New Work, Paid from Maintenance.	Totals.
1. South Boston.....	\$7,272 08	\$11,569 32	\$8,498 46	\$926 90	\$1,047 64	.....	\$8,349 81	\$3,780 58	\$41,445 39
2. East Boston.....	11,903 63	6,430 30	7,179 77	299 47	459 66	.....	912 38	.....	27,185 21
3. Charlestown.....	15,841 81	10,543 39	4,861 07	.....	40 50	.....	.....	.....	31,286 77
4. Brighton.....	15,384 14	3,636 75	813 69	167 75	866 17	.....	.....	.....	20,868 50
5. West Roxbury.....	50,007 72	6,448 28	5,496 06	536 53	3,432 70	.....	303 41	.....	66,224 70
6. Dorchester.....	48,635 13	6,962 20	9,375 46	294 99	4,573 46	.....	2,061 28	.....	71,902 52
7. Roxbury.....	100,207 70	16,750 36	28,578 05	327 57	1,138 27	.....	1,845 02	.....	148,846 97
8. South End.....	32,846 74	39,387 49	5,486 38	41 55	3,098 65	.....	15,964 03	.....	96,824 84
9. Back Bay.....	38,719 58	10,119 36	7,853 30	575 08	1,861 33	.....	9,066 74	.....	68,195 39
10. North End.....	31,663 97	42,777 73	7,720 46	133 07	451 43	.....	1,238 51	5,008 87	89,054 04
						\$198,223 53	.....	.....	198,223 53
Totals.....	\$362,488 10	\$154,625 18	\$85,862 70	\$3,302 91	\$16,969 81	\$198,223 53	\$89,801 18	\$8,789 45	\$860,057 86

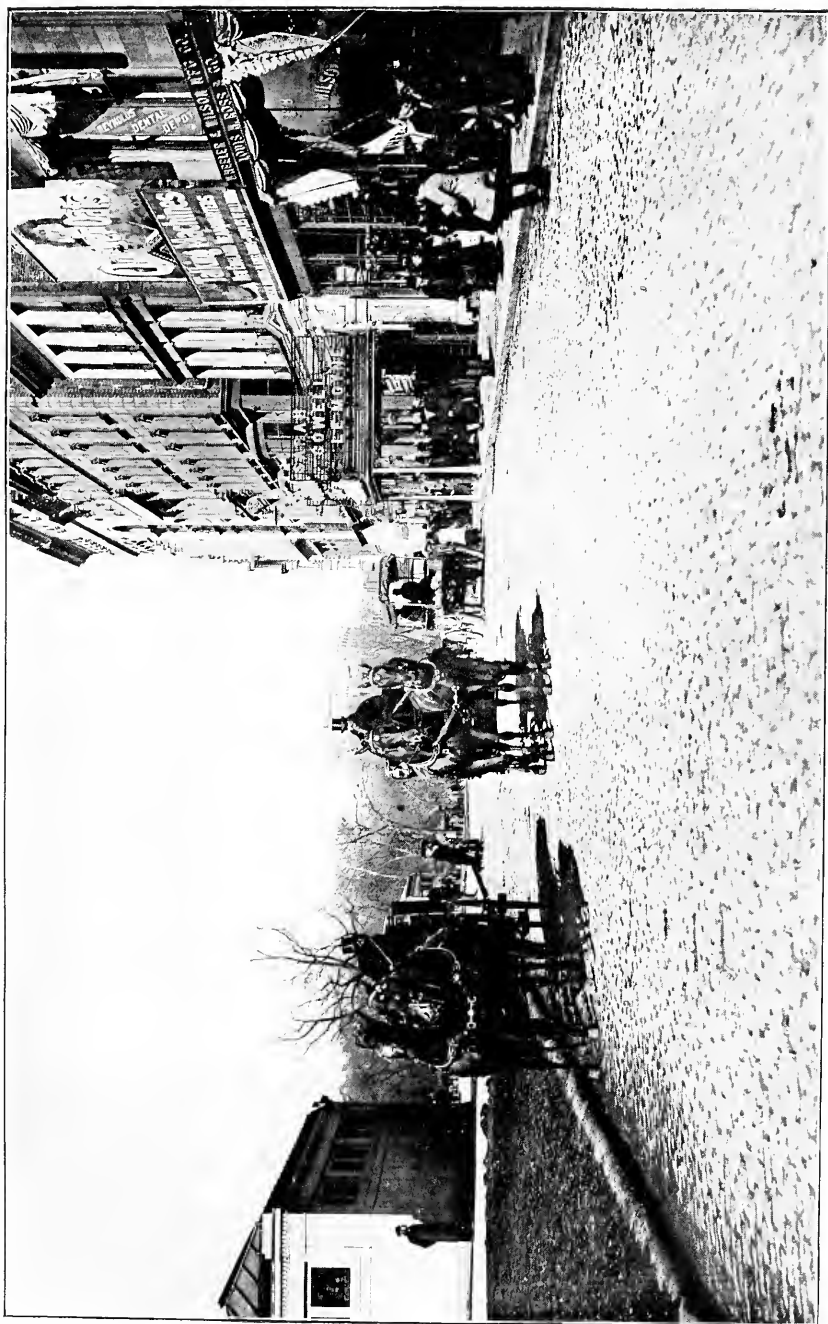
SCHEDULE A.

Salaries of Paving Division office employees, February 1, 1899, to January 31, 1900	\$14,706	36
Salaries of Permit office employees, February 1, 1899, to January 31, 1900	7,903	39
Salaries of Inspectors, February 1, 1899, to January 31, 1900	21,463	93
Salaries of Engineers, February 1, 1899, to January 31, 1900	2,558	03
Smoke inspection	2,853	06
Signs and numbers	8,395	81
Holidays	31,319	67
Furniture	620	73
Repairs to offices, stables, sheds, etc.	2,541	89
Printing and stationery	5,124	89
Gas	345	63
Messenger service	68	65
Wharfage and rent	8,742	06
Medical attendance on injured employees	176	00
Sundries	1,831	90
Fuel and oil	1,768	59
Taxes	115	68
Advertising	296	92
Expenses of yards and stables, including repairs to carts, harnesses and stables, and care of horses, etc.	\$131,242	66
Less amount earned by Division teams,	81,469	25
	<hr/>	
	49,773	41
Tools, cost of keeping same in repair, etc.	14,820	54
Veterinary service	1,163	97
Telephones	1,620	47
Artificial stone sidewalks	5,270	32
Street cleaning	62,522	04
Edgestones and sidewalks, new	21,894	68
Building new fences and plankwalks	536	84
Crossing repairs	12,243	95
Crossings (new)	6,277	33
Building new office at West Roxbury yard	1,202	26
Executions of court	1,943	30
Wagon plates and employees badges	301	50
Repairing approach to temporary West Boston bridge,	1,403	17
Planting trees	100	50
	<hr/>	
	\$291,907	47
Less credit for stone taken from ledges	\$80,190	30
Less amount earned by steam rollers	4,639	92
Decrease in stock	8,853	72
	<hr/>	
	93,683	94
	<hr/>	
	\$198,223	53
	<hr/>	

SCHEDULE B.

The following schedule shows the expenditure from the maintenance appropriation of this division, in excess of special appropriations :

Atlantic avenue, Dewey square to Oliver street	\$6,496 97
Capen street, Dorchester	137 50
Devonshire street, Milk to Water street	214 19
Federal street, Dewey square to Milk street	6,721 54
Harrison avenue, Kneeland to Bennet street	106 03
Prescott street, East Boston, construction	535 34
Kingston street, Beach to Bedford street	363 16
Leverett street, Minot street to Craigie's bridge	1,115 87
Milton street, Ward 8, asphaltting	103 17
Washington street, Grove Hall and Columbia road,	631 18
Street Improvements, General :	
Arlington street	197 22
Beacon street	2,061 94
Belvidere street	2,590 13
Berkeley street	331 50
Castle square and Chandler street	76 75
Causeway and Commercial streets	79 47
Congress street, B to C street	3,814 59
Dartmouth street	252 80
Exeter street	1,171 81
Falcon street	260 62
Huntington avenue	1,369 99
Massachusetts avenue	794 63
Neponset avenue	141 33
Northampton street	66 25
Northfield street	1,845 02
Park street	303 41
Pleasant street	930 83
St. James avenue	135 35
St. Stephen street	66 98
Third street	4,535 22
West Concord street	1,802 61
Winchester street	116 53
Street Improvements, Ward 16 :	
Pleasant street	220 44
Street Improvements, Ward 19 :	
Brookline avenue	94 39
Street Improvements, Ward 25 :	
Foster street	116 42
	<hr/>
	<u>\$39,801 18</u>



TREMONT STREET, NEAR BOYLSTON STREET, AFTER REMOVAL OF TRACKS AND WIRES.

SCHEDULE C.

NEW WORK. — PAID FROM MAINTENANCE.

Endicott street, between Cooper and Thacher streets, asphalted.
 Labor, teaming and materials furnished by the city, \$1,572 31
 Amount paid to Barber Asphalt Paving Co., asphalting 3,436 56
\$5,008 87

Seventh street, between E and Dorchester streets, macadamized, edgestone reset, gutters repaved, and brick sidewalks relaid.
 Labor, teaming and materials furnished by the city, \$3,100 83
 Amount paid to Wm. H. Glenn, paving 679 75
\$3,780 58

DETAIL OF EXPENDITURES MADE UNDER SPECIAL APPROPRIATIONS.

Atlantic avenue, Oliver street to Dewey square, repaved with large granite blocks on a concrete base with pitch joints, and regulated.
 Labor, teaming and materials furnished by the city, \$35,707 58
 Amount paid to Metropolitan Contracting Co., concrete base 8,571 85
 Amount paid to P. McGovern, paving 5,429 32
 Amount paid to Jones and Meehan, paving 4,763 16
*\$54,471 91

Amount of appropriation for Atlantic avenue, Oliver street to Dewey square \$47,974 94
 Amount paid out of appropriation for Paving Division 6,496 97
\$54,471 91

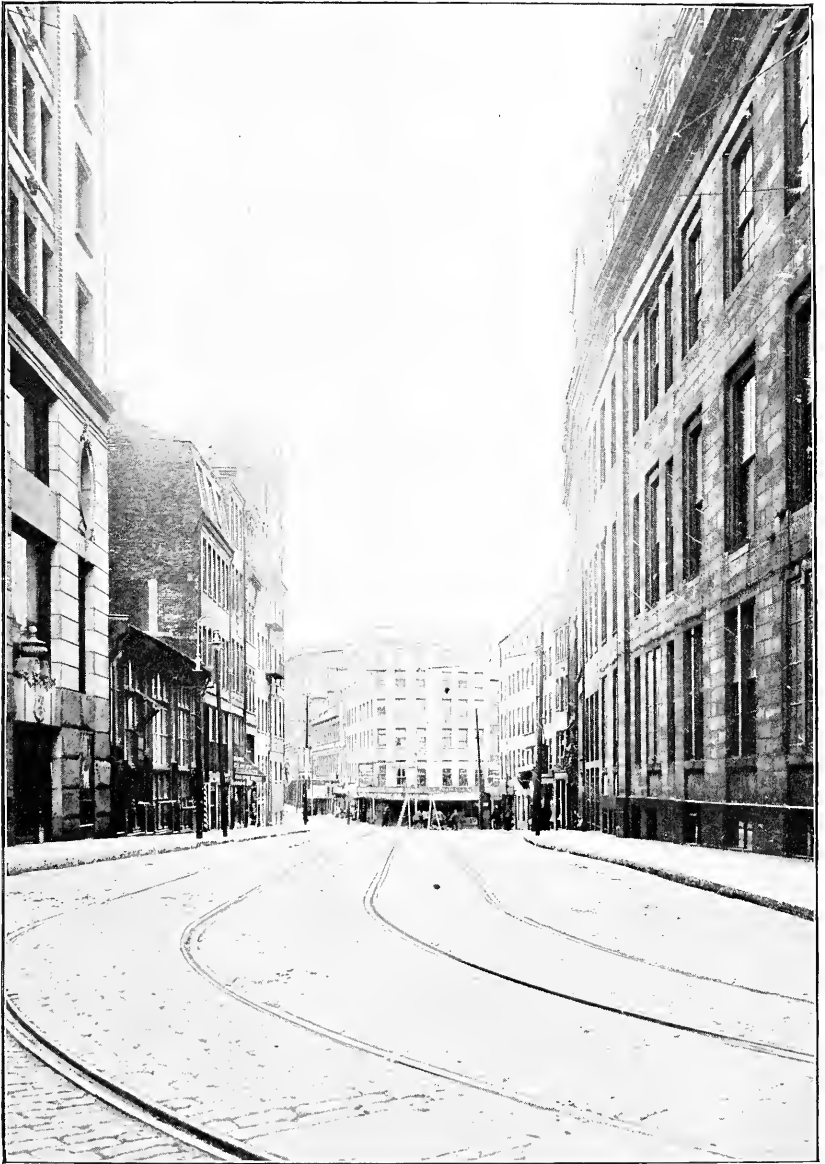
Atlantic street, Ward 15.
 Labor furnished by the city \$299 50

Blackstone street, Hanover to North street, paved with large granite blocks on a concrete base with pitch joints and regulated.
 Labor, teaming and materials furnished by the city, \$7,203 59
 Amount paid to P. McGovern & Co., paving 1,914 98

Carried forward \$9,118 57

*\$4,494.38 paid by Boston Elevated Railway Company.
 \$2,202.27 paid by Union Freight Railroad Company.

<i>Brought forward</i>		\$9,118 57
Amount paid to Metropolitan Contracting Co., concrete base		1,750 00
		<hr/>
		\$10,868 57
Amount of appropriation for Blackstone street, Hanover to North street	\$10,000 00	
Amount paid out of appropriation for Street Improvements, General	868 57	
	<hr/>	\$10,868 57
		<hr/>
Brooks street , Ward 25, construction.		
Amount paid to Boston & Albany Railroad Co.		\$32,000 00
		<hr/>
Buildings, Chelsea street.		
Labor, teaming and materials furnished by the city,		\$1,920 91
		<hr/>
Capen street , construction, Ward 24.		
Labor, teaming and materials furnished by the city,		\$3,458 91
Amount paid to James Dolan, paving		165 42
		<hr/>
		\$3,624 33
Amount of appropriation for Capen street laying-out	\$3,000 00	
Amount paid out of appropriation for Street Improvements, General	486 83	
Amount paid out of appropriation for Paving Division	137 50	
	<hr/>	\$3,624 33
		<hr/>
Charles street , Fruit across Allen street, asphalted.		
Labor, teaming and materials furnished by the city,		\$2,649 99
Amount paid to Barber Asphalt Paving Co., asphaltting		6,057 13
		<hr/>
		\$8,707 12
		<hr/>
Congress street , Atlantic avenue to the bridge, paved with large granite blocks on a concrete base, with pitch joints, and regulated.		
Labor, teaming and materials furnished by the city,		\$8,771 30
Amount paid to Jones & Meehan, paving		4,428 45
		<hr/>
		\$13,199 75
		<hr/>
Devonshire street , Milk to Water street, asphalted.		
Labor, teaming and materials furnished by the city,		\$1,017 42
Amount paid to Barber Asphalt Paving Co., asphaltting		2,996 77
		<hr/>
		\$4,014 19



DEVONSHIRE STREET, BETWEEN STATE STREET AND ADAMS SQUARE.

Amount of appropriation for Devonshire street, Milk to Water street	\$3,800 00	
Amount paid out of appropriation for Paving Division	214 19	
	<u> </u>	<u>\$4,014 19</u>

Federal street, Dewey square to Milk street, paved with large granite blocks on a concrete base, with pitch joints and regulated.

Labor, teaming and materials furnished by the city,	\$21,944 40	
Amount paid to P. McGovern, paving	9,521 67	
	<u> </u>	*\$31,466 07

Amount of appropriation for Federal street, Dewey square to Milk street,	\$22,993 53	
Amount paid out of appropriation for Paving Division	6,721 54	
Amount paid out of appropriation for Street Improvements, General	1,751 00	
	<u> </u>	<u>\$31,466 07</u>

Freeport street, Ward 24, retaining wall (unfinished work from 1898).

Labor, teaming and materials furnished by the city,	<u>\$348 50</u>
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Genesee and Oswego streets, asphalted and regulated.

Labor, teaming and materials furnished by the city,	\$1,792 29	
Amount paid to Jones & Meehan, asphaltting	6,311 90	
	<u> </u>	\$8,104 19

Amount of appropriation for Genesee and Oswego streets, asphaltting	\$8,000 00	
Amount paid out of appropriation for Street Improvements, General	104 19	
	<u> </u>	<u>\$8,104 19</u>

Harrison avenue, Kneeland to Harvard street, asphalted and regulated, and between Harvard and Bennet streets, repaved with large granite blocks on a gravel base.

Labor, teaming and materials, furnished by the city	\$6,155 36	
Amount paid to Barber Asphalt Paving Co., asphaltting	3,161 01	
Amount paid to P. McGovern, paving	748 13	
	<u> </u>	†\$10,064 50

* \$4,993.53 paid by Boston Elevated Railway Company.
 † \$1,859.79 paid by Boston Elevated Railway Company.

Amount of appropriation for Harrison avenue, Kneeland to Bennet street, asphalting	\$9,958 47	
Amount paid out of appropriation for Paving Division	106 03	
		<u>\$10,064 50</u>

Kingston street, Beach to Essex street, asphalted and regulated, and between Essex and Bedford streets, paved with large granite blocks on a concrete base, with pitch joints, and regulated.

Labor, teaming and materials, furnished by the city	\$5,959 12	
Amount paid to Boston Asphalt Co., asphaltting,	5,609 68	
Amount paid to H. Gore & Co., paving	2,029 37	
		<u>*\$13,598 17</u>

Amount of appropriation for Kingston street, Beach to Bedford street	\$13,235 01	
Amount paid out of appropriation for Paving Division	363 16	
		<u>\$13,598 17</u>

Leverett street, Causeway street to Craigie's bridge, paved with large granite blocks on a gravel base, with gravel joints, and regulated.

Labor, teaming and materials, furnished by the city	\$16,200 04	
Amount paid to Jones & Meehan, paving	2,030 99	
		<u>†\$18,231 03</u>

Amount of appropriation for Leverett street, Minot street to Craigie's bridge	\$17,062 66	
Amount paid out of appropriation for Paving Division	1,115 87	
Amount paid out of appropriation for Street Improvements, General	52 50	
		<u>\$18,231 03</u>

Milton street, Brighton to Spring street, asphalted and regulated.

Labor, teaming and materials, furnished by the city	\$1,261 82	
Amount paid to Jones & Meehan, asphaltting	949 67	
		<u>\$2,211 49</u>

* \$560.59 paid by Boston Elevated Railway Company.
† \$2,062.66 paid by Boston Elevated Railway Company.

Amount of appropriation for Milton street, Ward 8, asphalting	\$1,200 00	
Amount paid out of appropriation for Street Improvements, General	908 32	
Amount paid out of appropriation for Paving Division	103 17	
		<u>\$2,211 49</u>

Prescott street, Trenton to Saratoga street, macadamized and regulated.

Labor, teaming and materials furnished by the city	\$6,408 15	
Amount paid to Ward & Conlin, paving	452 69	
		<u>\$6,860 84</u>

Amount of appropriation for Pres- cott street, East Boston, con- struction	\$5,000 00	
Amount paid out of appropriation for Street Improvements, General,	1,325 50	
Amount paid out of appropriation for Paving Division	535 34	
		<u>\$6,860 84</u>

Princeton street, Meridian to Prescott street, macadamized and regulated.

Labor, teaming and materials furnished by the city	\$8,709 38	
Amount paid to Ward & Conlin, paving	2,015 62	
		<u>\$10,725 00</u>

Amount of appropriation for Prince- ton street, East Boston, construc- tion	\$10,000 00	
Amount paid out of appropriation for Street Improvements, General,	725 00	
		<u>\$10,725 00</u>

Retaining Wall, Marcella and Centre streets.

Advertising	\$7 60	
		<u>\$7 60</u>

Talbot avenue, Blue Hill avenue to Norfolk street, graded and regulated.

Labor, teaming and materials, furnished by the city	\$36,570 28	
Amount paid to James Dolan, paving	1,214 83	
		<u>\$37,785 11</u>

Washington street, Grove Hall to Columbia road, widened, constructed and regulated.

Labor, teaming and materials, furnished by the city	\$5,870 16
Amount paid to James Dolan, paving	177 30
	<hr/>
	\$6,047 46

Amount of appropriation for Washington street, Grove Hall to Columbia road	\$4,392 70
Amount paid out of appropriation for Street Improvements, General,	1,023 58
Amount paid out of appropriation for Paving Division	631 18
	<hr/>
	\$6,047 46

\$6,047 46

ABOLISHMENT OF GRADE CROSSINGS.

Boston street and Dorchester avenue.

Labor	<u>\$463 00</u>
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CHARLESTOWN BRIDGE.

Paving done on City square, Water street and approach to bridge, Boston side.

Labor, teaming and materials, furnished by the city	\$10,621 76
Amount paid to John Turner & Co., paving	2,923 62
	<hr/>
	\$13,545 38

\$13,545 38

Charlestown street, Haymarket square to Causeway street, widened, paved with large granite blocks on a concrete base, with pitch joints and regulated.

Labor, teaming and materials, furnished by the city	\$21,132 91
Amount paid to Metropolitan Contracting Co., paving	16,039 59
	<hr/>
	*\$37,172 50

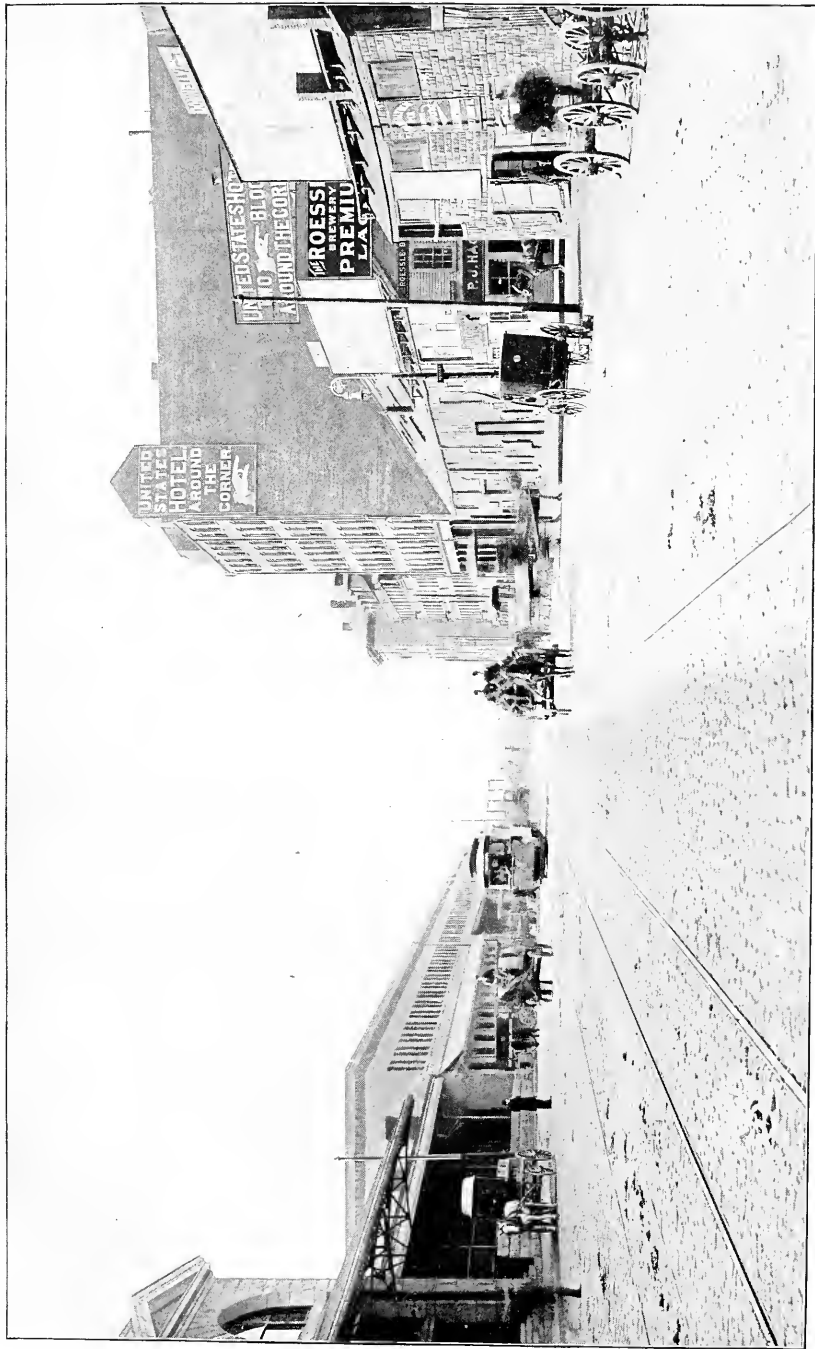
*\$37,172 50

RAPID TRANSIT.

Tremont row, brick sidewalks relaid; **Scollay square and Haymarket square**, crossings laid.

Labor, teaming and materials furnished by the city	<u>\$1,234 94</u>
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* \$3,684.68 paid by Boston Elevated Railway Company.



ATLANTIC AVENUE, FRONT OF TERMINAL STATION. EXPRESS AND FREIGHT HOUSES.

This was formerly Federal and Cove Streets. The extension of this street by bridge to South Boston is urged by the South Boston people. (Cove-street bridge bill.)

SOUTH UNION STATION.

Atlantic avenue and Dewey square, paved with large granite blocks on a concrete base, with pitch joints and regulated. (Work unfinished.)

Labor, teaming and materials furnished by the city	\$24,610 10
Amount paid to H. Gore & Co., paving	14,173 28
Amount paid to H. P. Nawn	385 08
	<hr/>
	<u>\$39,168 46</u>

Dorchester avenue (unfinished work from 1898).

Labor, teaming and materials furnished by the city	\$24,314 99
Amount paid to H. P. Nawn, paving	4,183 82
	<hr/>
	<u>\$28,498 81</u>

Summer street extension (unfinished work from 1898).

Labor, teaming and materials furnished by the city	\$2,013 79
Amount paid to H. P. Nawn, paving	1,474 22
	<hr/>
	<u>\$3,488 01</u>

STREET IMPROVEMENTS, GENERAL.

Arlington street, resurfaced.

Labor, teaming and materials furnished by the city	\$597 37
Amount paid out of appropriation for Street Improvements, General, \$400 15	
Amount paid out of appropriation for Paving Division	197 22
	<hr/>
	<u>\$597 37</u>

Beacon street, Arlington to Dartmouth street, resurfaced.

Labor, teaming and materials furnished by the city	\$2,157 13
Amount paid out of appropriation for Street Improvements, General, \$95 19	
Amount paid out of appropriation for Paving Division	2,061 94
	<hr/>
	<u>\$2,157 13</u>

Belvidere street, Massachusetts avenue to Dalton street, resurfaced and regulated.

Labor, teaming and materials furnished by the city		\$3,001 55
Amount paid to Peter Gilligan, paving		454 60
		<u>\$3,456 15</u>
Amount paid out of appropriation for Street Improvements, General,	\$866 02	
Amount paid out of appropriation for Paving Division	2,590 13	
		<u>\$3,456 15</u>

Berkeley street, Boylston to Beacon street, resurfaced.

Labor, teaming and materials furnished by the city		\$959 00
Amount paid out of appropriation for Street Improvements, General,	\$627 50	
Amount paid out of appropriation for Paving Division	331 50	
		<u>\$959 00</u>

Boylston street, Brookline avenue to Fenway, regulated.

Labor, teaming and materials furnished by the city,		\$8,277 82
Amount paid to Peter Gilligan, paving		721 22
		<u>\$8,999 04</u>

Brattle street, unfinished work from 1898.

Materials furnished by the city		\$153 83
Amount retained from H. Gore & Co., for work done in 1898, under contract		50 36
		<u>\$204 19</u>

Castle square and Chandler street, repaved with large granite blocks on a gravel base with gravel joints.

Labor, teaming and materials furnished by the city,		\$3,551 71
Amount paid out of appropriation for Street Improvements, General	\$3,474 96	
Amount paid out of appropriation for Paving Division	76 75	
		<u>\$3,551 71</u>

Causeway and Commercial streets, repaved with large granite blocks and regulated.

Labor, teaming and materials furnished by the city,		\$967 59
Amount paid out of appropriation for Street Improvements, General	\$888 12	
Amount paid out of appropriation for Paving Division	79 47	
		<u>\$967 59</u>

Commercial street, State to Clinton street, unfinished work from 1898.

Materials furnished by the city	\$496 02
Amount paid to H. Gore & Co., paving	2,789 19
Amount paid to Perrin and Carter, concrete base	2,104 73
	<u>\$5,389 94</u>

Congress street, A to C street, paved with large granite blocks on a gravel base, with gravel joints.

Labor, teaming and materials furnished by the city	\$5,257 70
Amount paid to W. H. Glenn, paving	1,694 60
	<u>\$6,952 30</u>

Amount paid out of appropriation for Street Improvements, General	\$2,504 15
Amount paid out of appropriation for Paving Division	3,814 59
Amount paid out of appropriation for Street Improvements, Ward 13	633 56
	<u>\$6,952 30</u>

Dartmouth street, Warren to Columbus avenue, repaved with old blocks and regulated.

Labor, teaming and materials furnished by the city	\$1,552 84
Amount paid to J. F. Cullen, paving	568 13
	<u>\$2,120 97</u>

Amount paid out of appropriation for Street Improvements, General	\$1,868 17
Amount paid out of appropriation for Paving Division	252 80
	<u>\$2,120 97</u>

Dudley street, repaved.

Labor and teaming furnished by the city	<u>\$496 50</u>
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Exeter street, resurfaced.

Labor, teaming and materials furnished by the city,	\$3,221 60
Amount paid out of appropriation for Street Improvements, General	\$2,049 79
Amount paid out of appropriation for Paving Division	1,171 81
	<u>\$3,221 60</u>

Falcon street, resurfaced and regulated.

Labor, teaming and materials furnished by the city,	\$3,907 42
Amount paid out of appropriation for Street Improvements, General	\$3,646 80
Amount paid out of appropriation for Paving Division	260 62
	<u>\$3,907 42</u>

Hanover street, Washington to Court street, unfinished work from 1898.

Amount retained from H. Gore & Co. for work done in 1898 under contract \$311 85

Harrison avenue, near Dudley street, repaved.

Labor and teaming furnished by the city \$951 50

Hayward place, unfinished work from 1898.

Materials furnished by the city \$92 69

Huckins street, resurfaced and regulated.

Labor and materials furnished by the city \$465 00

Huntington avenue, Copley square to Exeter street and Gainsborough to Hemenway street, resurfaced.

Labor, teaming and materials furnished by the city, \$4,636 14

Amount paid out of appropriation for Street Improvements, General . . \$3,266 15

Amount paid out of appropriation for Paving Division 1,369 99

\$4,636 14

Massachusetts avenue, Beacon street to Columbus avenue, resurfaced.

Labor, teaming and materials furnished by the city, \$4,376 57

Amount paid out of appropriation for Street Improvements, General . . \$3,581 94

Amount paid out of appropriation for Paving Division 794 63

\$4,376 57

Neponset avenue.

Labor, teaming and materials furnished by the city, \$421 88

Amount paid to Quincy and Boston Street Railway Company, building retaining wall 1,500 00

Amount paid to James Dolan, paving 120 00

\$2,041 88

Amount paid out of appropriation for

Street Improvements, General . . \$1,900 55

Amount paid out of appropriation for Paving Division 141 33

\$2,041 88

Northfield street, resurfaced and regulated.

Labor, teaming and materials furnished by the city, \$4,454 91

Amount paid to Bay State Contracting Company 523 90

\$4,978 81

Amount paid out of appropriation for

Street Improvements, General . . \$3,133 79

Amount paid out of appropriation for Paving Division 1,845 02

\$4,978 81

STREET DEPARTMENT — PAVING DIVISION. 71

Park street, Centre to Montview street, macadamized and regulated.

Labor, teaming and materials furnished by the city,	\$3,445 02
Amount paid to James Dolan, paving	349 30

\$3,794 32

Amount paid out of appropriation for Street Improvements, General	\$3,345 82
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Amount paid out of appropriation for Street Improvements, Ward 23	145 09
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Amount paid out of appropriation for Paving Division	303 41
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\$3,794 32

Pleasant street, Savin Hill avenue to Freeport street, resurfaced and regulated.

Labor, teaming and materials furnished by the city,	\$4,488 98
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Amount paid out of appropriation for Street Improvements, General	\$2,940 83
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Amount paid out of appropriation for Paving Division	1,151 27
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Amount paid out of appropriation for Street Improvements, Ward 16	396 88
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\$4,488 98

St. James avenue, Berkeley street to Huntington avenue, resurfaced.

Labor, teaming and materials furnished by the city,	\$3,233 11
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Amount paid out of appropriation for Street Improvements, General	\$3,097 76
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Amount paid out of appropriation for Paving Division	135 35
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\$3,233 11

St. Stephen street, from Gainsborough street, resurfaced and regulated.

Labor, teaming and materials furnished by the city,	\$885 48
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Amount paid out of appropriation for Street Improvements, General	\$818 50
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Amount paid out of appropriation for Paving Division	66 98
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\$885 48

Third street, B to D street, resurfaced and regulated.

Labor, teaming and materials furnished by the city,	\$4,441 62
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Amount paid to Glenn & Hartnett	1,198 54
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\$5,640 16

Amount paid out of appropriation for Street Improvements, General	\$1,104 94
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Amount paid out of appropriation for Paving Division	4,535 22
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\$5,640 16

Tremont street, Boylston to Pleasant street, unfinished work from 1898.

Labor, teaming and materials furnished by the city,	\$1,294 57
Amount paid to H. Gore & Co., paving,	715 36
	<hr/>
	<u>\$2,009 93</u>

Tremont street, Weston to Hammond street, unfinished work from 1898.

Materials furnished by the city	\$116 85
Amount retained from James Doherty & Co. for work done in 1898, under contract	125 48
	<hr/>
	<u>\$242 33</u>

West Concord street, Tremont to Washington street, resurfaced and regulated.

Labor, teaming and materials furnished by the city,	\$4,116 90
Amount paid out of appropriation for Street Improvements, General	\$2,314 29
Amount paid out of appropriation for Paving Division	1,802 61
	<hr/>
	<u>\$4,116 90</u>

West Newton street, Washington to Tremont street, resurfaced and regulated.

Labor, teaming and materials furnished by the city,	\$2,157 59
Amount paid out of appropriation for Street Improvements, General	\$1,816 78
Amount paid out of appropriation for Street Improvements, Ward 12	340 81
	<hr/>
	<u>\$2,157 59</u>

Winchester street, Pleasant to Ferdinand street, repaved with granite blocks, and regulated.

Labor, teaming and materials furnished by the city	\$2,098 18
Amount paid to Peter Gilligan, paving	1,402 30
	<hr/>
	\$3,500 48
Amount paid out of appropriation for Street Improvements, General	\$3,383 95
Amount paid out of appropriation for Paving Division	116 53
	<hr/>
	<u>\$3,500 48</u>

STREET IMPROVEMENTS, WARD 4.

Alford street, Main street to drawbridge, repaved and regulated; and from the drawbridge to Everett line, resurfaced, unfinished work from 1898.

STREET DEPARTMENT — PAVING DIVISION. 73

Labor, teaming and materials furnished by the city	\$4,519 10
Amount paid to P. Brennan & Co., paving . . .	1,439 38
	\$5,958 48

Amount paid out of appropriation for	
Street Improvements, Ward 4 . . . \$5,305 55	
Amount paid out of appropriation for	
Street Improvements, General . . . 652 93	
	\$5,958 48

Mill street, Rutherford avenue to Essex street, unfinished work from 1898.

Materials furnished by the city	\$183 00
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STREET IMPROVEMENTS, WARD 5.

Mt. Vernon avenue, repaired.

Labor, teaming and materials furnished by the city	\$131 49
Amount paid out of appropriation for	
Street Improvements, Ward 5 . . . \$117 99	
Amount paid out of appropriation for	
Street Improvements, General . . . 13 50	
	\$131 49

STREET IMPROVEMENTS, WARD 8.

Merrimac street, Pitts to Causeway street, repaved and regulated.

Labor, teaming and materials furnished by the city	\$1,937 77
Amount paid out of appropriation for	
Street Improvements, Ward 8 . . . \$1,336 30	
Amount paid out of appropriation for	
Street Improvements, General . . . 601 47	
	\$1,937 77

STREET IMPROVEMENTS, WARD 9.

Malden street, Washington to Meander street, resurfaced, unfinished work from 1898.

Labor, teaming and materials furnished by the city	\$1,067 05
Shawmut avenue , Lucas street to a point 250 feet northerly, asphalted and regulated, unfinished work from 1898.	
Amount retained from Boston Asphalt Co., for work done in 1898, under contract . . .	\$147 83
Amount retained from H. Gore & Co., for work done in 1898, under contract	55 91
	\$203 74

STREET IMPROVEMENTS, WARD 10.

West Newton street, Huntington avenue to the bridge, resurfaced and regulated.

Labor, teaming and materials furnished by the city,	\$1,311 43
Amount paid to Peter Gilligan, paving	103 00
	<hr/>
	\$1,414 43

Amount paid out of appropriation for Street Improvements, Ward 10	\$696 49	-
Amount paid out of appropriation for Street Improvements, General	717 94	
	<hr/>	\$1,414 43
		<hr/>

STREET IMPROVEMENTS, WARD 12.

Northampton street, Columbus avenue to railroad, macadamized and regulated. (Unfinished work from 1898.)

Labor, teaming and materials furnished by the city,	\$2,502 14
Amount paid out of appropriation for Street Improvements, Ward 12	\$981 41
Amount paid out of appropriation for Street Improvements, General	1,454 48
Amount paid out of appropriation for Paving Division	66 25
	<hr/>
	\$2,502 14
	<hr/>

Wellington street, Columbus avenue to N.Y., N.H. and H. R.R., Providence Div. (Unfinished work from 1898.)

Rolling	\$133 33
Amount paid to Barnes-Ruffin Co., paving	317 66
	<hr/>
	\$450 99
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STREET IMPROVEMENTS, WARD 13.

B street, unfinished work from 1898.

Amount paid to William Higgins, paving	\$138 40
	<hr/>

Dorchester avenue, unfinished work from 1898.

Amount paid to Higgins & McGovern, paving	\$120 90
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STREET IMPROVEMENTS, WARD 14.

East Fourth street, H to N street, unfinished work from 1898.

Labor, teaming and materials furnished by the city,	\$339 33
Amount paid to Redmond McDonough, paving	267 80
	<hr/>
	\$607 13
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STREET IMPROVEMENTS, WARD 15.

Broadway, Dorchester street to St. John's Church, asphalted,
unfinished work from 1898.

Labor, teaming and materials furnished by the city,	\$185 55
Amount paid to Boston Asphalt Co., asphalt- ing	5,453 70
Amount paid to H. Gore & Co., paving	1,013 97
	<hr/>
	\$6,653 22

Amount paid out of appropriation for Street Improvements, Ward 15	\$3,073 46
Amount paid out of appropriation for Street Improvements, General	3,493 02
Amount paid out of appropriation for Street Improvements, Ward 14	86 74
	<hr/>
	\$6,653 22

Loring street, unfinished work from 1898.

Materials furnished by the city	\$101 50
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STREET IMPROVEMENTS, WARD 16.

Bird street, Magnolia to Virginia street, resurfaced.

Labor, teaming and materials furnished by the city	\$1,242 72
	<hr/>

Burgess street, resurfaced.

Labor, teaming and materials furnished by the city	\$312 45
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Ceylon street, resurfaced.

Labor, teaming and materials furnished by the city	\$300 91
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Clifton street, East Cottage to Batchelder street,
resurfaced.

Labor, teaming and materials furnished by the city	\$426 03
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Cunningham street, resurfaced.

Labor, teaming and materials furnished by the city	\$514 35
	<hr/>

Dacia street, resurfaced.

Labor, teaming and materials furnished by the city	\$534 73
	<hr/>

Norfolk avenue, resurfaced.

Labor, teaming and materials furnished by the city	\$1,166 02
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Robin Hood street, repaired.

Labor, teaming and materials furnished by the city	\$90 92
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Wayland street, unfinished work from 1898.

Materials furnished by the city	<u>\$40 50</u>
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STREET IMPROVEMENTS, WARD 17.

Norfolk avenue, resurfaced and regulated.

Labor, teaming and materials furnished by the city	\$6,539 35
Amount paid to J. F. Cullen, paving	695 14
	<u>\$7,234 49</u>

Amount paid out of appropriation for Street Improvements, Ward 17	\$2,983 77
Amount paid out of appropriation for Street Improvements, General	4,250 72
	<u>\$7,234 49</u>

STREET IMPROVEMENTS, WARD 19.

Brookline avenue, Francis street to Longwood avenue, resurfaced.

Labor, teaming and materials furnished by the city,	\$2,911 47
Amount paid out of appropriation for Street Improvements, Ward 19	\$2,817 08
Amount paid out of appropriation for Paving Division	94 39
	<u>\$2,911 47</u>

Parker street, unfinished work from 1898.

Labor, teaming and materials furnished by the city	\$3,642 34
Amount paid to J. Doherty & Co., paving	928 39
	<u>\$4,570 73</u>

Wait street, unfinished work from 1898.

Labor and materials furnished by the city	\$152 85
Amount paid to Barnes, Ruffin Co., paving	111 31
	<u>\$264 16</u>

STREET IMPROVEMENTS, WARD 22.

Sunnyside street, resurfaced.

Labor, teaming and materials furnished by the city,	\$1,595 66
Amount paid out of appropriation for Street Improvements, Ward 22	\$873 71
Amount paid out of appropriation for Street Improvements, General	721 95
	<u>\$1,595 66</u>

STREET IMPROVEMENTS, WARD 23.

South Fairview street , unfinished work from 1898.	
Materials furnished by the city	\$216 00
South Walter street , unfinished work from 1898.	
Materials furnished by the city	\$216 00
Weld street , unfinished work from 1898.	
Materials furnished by the city	\$81 00

STREET IMPROVEMENTS, WARD 25.

Brooks street , repaired.	
Labor furnished by the city	\$70 00
Foster street , resurfaced.	
Labor, teaming and materials furnished by the city,	\$917 32
Amount paid out of appropriation for Street Improvements, Ward 25 . . . \$800 90	
Amount paid out of appropriation for Paving Division 116 42	
	<u>\$917 32</u>
Lanark road , unfinished work from 1898.	
Labor furnished by the city	\$229 15
Sutherland road , resurfaced.	
Labor, teaming and materials furnished by the city,	\$653 35
Amount paid to Barnes, Ruffin Co.	59 70
	<u>\$713 05</u>

SUMMARY OF EXPENDITURES UNDER
SPECIAL APPROPRIATIONS.

Atlantic avenue, Oliver street to Dewey square . . .	\$54,471 91
Atlantic street, Ward 15	299 50
Blackstone street, Hanover street, across North street	10,868 57
Brooks street, Ward 25, construction	32,000 00
Buildings, Chelsea street	1,920 91
Capen street, laying-out	3,624 33
Charles street, Fruit to Allen street	8,707 12
Congress street, Atlantic avenue to the bridge . . .	13,199 75
Devonshire street, Milk to Water street	4,014 19
Federal street, Dewey square to Milk street	31,466 07
Freeport street, Ward 24, retaining wall	348 50
Genesee and Oswego streets, asphaltting	8,104 19
Harrison avenue, Kneeland to Bennet street	10,064 50
Kingston street, Beach to Bedford street	13,598 17
Leverett street, Minot street to Craigie's bridge . . .	18,231 03
Milton street, Ward 8, asphaltting	2,211 49
Prescott street, East Boston, construction	6,860 84
Princeton street, East Boston, construction	10,725 00
Retaining wall, Marcella and Centre streets	7 60
Talbot avenue, completion of	37,785 11
Washington street, Grove Hall to Columbia road . . .	6,047 46
<i>Carried forward,</i>	<u>\$274,556 24</u>

<i>Brought forward,</i>	\$274,556 24
Abolishment of Grade Crossings :	
Boston street and Dorchester avenue	463 00
Charlestown bridge	13,545 38
Charlestown street	37,172 50
Rapid Transit	1,234 94
South Union Station :	
Atlantic avenue and Dewey square	39,168 46
Dorchester avenue	28,498 81
Summer-street extension	3,488 01
Street Improvements, General :	
Arlington street	597 37
Beacon street	2,157 13
Belvidere street	3,456 15
Berkeley street	959 00
Boylston street	8,999 04
Brattle street	204 19
Castle square and Chandler street	3,551 71
Causeway and Commercial streets	967 59
Commercial street	5,389 94
Congress street	6,952 30
Dartmouth street	2,120 97
Dudley street	496 50
Exeter street	3,221 60
Falcon street	3,907 42
Hanover street	311 85
Harrison avenue	951 50
Hayward place	92 69
Huckins street	465 00
Huntington avenue	4,636 14
Massachusetts avenue	4,376 57
Neponset avenue	2,041 88
Northfield street	4,978 81
Park street	3,794 32
Pleasant street	4,488 98
St. James avenue	3,233 11
St. Stephen street	885 48
Third street	5,640 16
Tremont street, Boylston to Pleasant street	2,009 93
Tremont street, Weston to Hammond street	242 33
West Concord street	4,116 90
West Newton street, Washington to Tremont street	2,157 59
Winchester street	3,500 48
Street Improvements, Ward 4 :	
Alford street	5,958 48
Mill street	183 00
Street Improvements, Ward 5 :	
Mt. Vernon avenue	131 49
Street Improvements, Ward 8 :	
Merrimac street	1,937 77
<i>Carried forward,</i>	\$497,242 71

STREET DEPARTMENT — PAVING DIVISION. 79

<i>Brought forward,</i>	\$497,242 71
Street Improvements, Ward 9 :	
Malden street	1,067 05
Shawmut avenue	203 74
Street Improvements, Ward 10 :	
West Newton street, Huntington avenue to bridge	1,414 43
Street Improvements, Ward 12 :	
Northampton street	2,502 14
Wellington street	450 99
Street Improvements, Ward 13 :	
B street	138 40
Dorchester avenue	120 90
Street Improvements, Ward 14 :	
East Fourth street	607 13
Street Improvements, Ward 15 :	
Broadway, Dorchester street to St. John's Church	6,653 22
Loring street	101 50
Street Improvements, Ward 16 :	
Bird street	1,242 72
Burgess street	312 45
Ceylon street	300 91
Clifton street	426 03
Cunningham street	514 35
Dacia street	534 73
Norfolk avenue	1,166 02
Robin Hood street	90 92
Wayland street	40 50
Street Improvements, Ward 17 :	
Norfolk avenue	7,234 49
Street Improvements, Ward 19 :	
Brookline avenue	2,911 47
Parker street	4,570 73
Wait street	264 16
Street Improvements, Ward 22 :	
Sunnyside street	1,595 66
Street Improvements, Ward 23 :	
South Fairview street	216 00
South Walter street	216 00
Weld street	81 00
Street Improvements, Ward 25 :	
Brooks street	70 00
Foster street	917 32
Lanark road	229 15
Sutherland road	713 05
	<hr/>
	\$534,149 87
Less amount paid out of appropriation for Paving Division	39,801 18
	<hr/> <hr/>
	\$494,348 69

*BLUE HILL AND OTHER AVENUES.***Blue Hill avenue, Walk Hill to River street.**

Labor, teaming and materials furnished by the city,	\$9,372 42
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Columbus avenue.

Labor, teaming and materials furnished by the city,	\$2,499 51
Amount paid to Jones & Meehan, paving	1,890 63
Amount paid to D. E. Lynch, paving	1,194 96
	<hr/> <hr/>
	\$5,585 10

Commonwealth avenue.

Labor, teaming and materials furnished by the city,	\$161,188 60
Amount paid to Michael Kiernan, quarrying, cutting and delivering stone	10,597 42
Amount paid to Michael Kiernan, quarrying, cutting and delivering stone	14,078 76
Amount paid to Michael Kiernan, paving	1,917 53
Amount paid to Michael Kiernan, labor	2,488 42
Amount paid to A. McMurtry & Sons, quarrying, cutting and delivering stone	13,360 40
Amount paid to A. McMurtry & Sons, quarrying, cutting and delivering stone	7,550 06
Amount paid to A. McMurtry & Sons, quarrying, cutting and delivering stone	3,111 00
Amount paid to A. McMurtry & Sons, filling	1,856 00
Amount paid to A. McMurtry & Sons, labor	665 93
Amount paid to Barnes, Ruffin Company, paving	3,065 43
Amount paid to Bernard Malone, filling	3,804 00
Amount paid to F. R. Kimball, filling	5,761 00
Amount paid to P. J. Dinn & Co., iron fence	1,243 82
	<hr/> <hr/>
	\$230,688 37

Commonwealth avenue, Chestnut Hill avenue to Newton line.

Amount paid to J. A. Whittemore's Sons, construction work	\$867 35
Labor furnished by the city	408 00
	<hr/>

\$1,275 35

Amount paid out of appropriation for Blue Hill and Other Avenues	\$408 00
Amount paid out of appropriation for Laying-Out and Construction of Highways	867 35
	<hr/>

\$1,275 35

*SUMMARY OF EXPENDITURES FOR BLUE
HILL AND OTHER AVENUES.*

Blue Hill avenue, Walk Hill to River street	\$9,372 42
Columbus avenue	5,585 10
Commonwealth avenue	230,688 37
Commonwealth avenue, Chestnut Hill avenue to Newton line	1,275 35
	<hr/>
	\$246,921 24
Less amount paid out of appropriation for Laying- out and Construction of Highways	867 35
	<hr/>
	<u>\$246,053 89</u>

*LAYING OUT AND CONSTRUCTION OF
HIGHWAYS.*

Alford street , Mystic river to Everett line.	
Labor	\$13 00
	<hr/>
Andrews street , East Canton to East Dedham street.	
Labor, teaming and materials furnished by the city,	\$391 11
Amount paid to Simpson Bros. Corporation, as- phalting	\$1,077 55
	<hr/>
	<u>\$1,468 66</u>
Angell street , Blue Hill avenue to Canterbury street.	
Labor, teaming and materials furnished by the city,	\$3,511 69
Amount paid to James Doherty & Co., construc- tion work	2,200 30
	<hr/>
	<u>\$5,711 99</u>
Astor street , Massachusetts avenue to Hemenway street.	
Labor, teaming and materials furnished by the city,	\$4,772 08
Amount paid to P. McGovern, construction work,	2,109 02
	<hr/>
	<u>\$6,881 10</u>
Athelwold street , at corner School street.	
Labor, teaming and materials furnished by the city,	\$271 18
Amount paid to Collins & Ham, paving	150 00
	<hr/>
	<u>\$421 18</u>
B street , line of original low water to Congress street.	
Labor furnished by the city	\$53 75
	<hr/>

Belmore terrace, Boylston street to Boylston terrace.

Material furnished by the city	\$7 11
Amount retained from Patrick O'Hara & Co., for work done in 1898, under contract	84 65
	<u>\$91 76</u>

Belvidere street, Dalton to West Newton street.

Labor, teaming and materials furnished by the city,	\$2,328 35
Amount paid to Collins & Ham, construction work,	1,374 11
Amount paid to William Gilligan, filling	614 00
Amount paid to William H. Ryan & Co., building bulkhead	538 40
	<u>\$4,854 86</u>

Bernard street, Harvard street to Talbot avenue.

Labor, teaming and materials furnished by the city,	\$106 02
Amount paid to James Doherty & Co.	65 67
	<u>\$171 69</u>

Burt street, Washington to Ashmont street.

Labor, teaming and materials furnished by the city,	\$2,614 58
Amount paid to Collins & Ham, construction work,	1,391 31
	<u>\$4,005 89</u>

Canal street, Haymarket square to Causeway street.

Labor, teaming and materials furnished by the city,	\$3,948 50
Amount paid to Jones & Meehan, construction work	3,613 74
Amount paid to Simpson Bros. Corporation, artifi- cial stone sidewalks	2,188 76
Amount paid to W. A. Murtfeldt Co., artificial stone sidewalks	589 35
	<u>*\$10,340 35</u>

Carlos street, Lauriat to Chapman avenue.

Labor, teaming and materials, furnished by the city,	\$164 18
	<u>\$164 18</u>

Chamblert street, Magnolia to Hartford street.

Materials furnished by the city	\$40 12
Amount paid to W. A. Murtfeldt Co., arti- ficial stone sidewalks	343 50
Amount retained from John Connors, for work done in 1898, under contract	57 11
	<u>\$440 73</u>

*Includes \$104.27 paid by Boston Elevated Railway Company.

Chester street , Commonwealth to Brighton avenue.	
Labor, teaming and materials, furnished by the city,	\$2,666 26
Amount paid to John C. Newborg, artificial stone sidewalks	164 40
Amount paid to James Doherty & Co., construc- tion work	1,100 69
	<hr/>
	<u>\$3,931 35</u>

Chiswick road , Englewood to Chestnut Hill avenue.	
Labor, teaming and materials, furnished by the city,	\$6,937 36
Amount paid to Collins & Ham, construction work,	4,023 14
	<hr/>
	<u>\$10,960 50</u>

Columbia road.	
Labor, teaming and materials, furnished by the city,	\$63,627 37
Amount paid to H. P. Nawn, construction work, between Blue Hill avenue and Stanwood street,	915 39
Amount paid to H. P. Nawn, construction work, between Stanwood and Glendale streets	16,055 63
Amount paid to J. C. Coleman & Son, construc- tion work, between Glendale street and Edward Everett square	14,286 87
Amount paid to J. C. Coleman & Son, construc- tion work, at Edward Everett square	2,754 67
Amount paid to J. C. Coleman & Son, construc- tion work, between Hancock and Dudley streets,	3,678 04
Amount paid to D. F. O'Connell, abutments and piers of bridge	20,398 04
Amount paid to Simon J. Donovan, filling	22,515 81
Amount paid to Simon J. Donovan, building cul- vert and grading	83,375 59
Amount paid to J. J. Sullivan, filling between Mt. Vernon and Mercer streets	2,986 80
Amount paid to Philip Doherty, construction work between Dorchester avenue and Buttonwood street	1,911 04
Amount paid to J. S. Jacobs & Son, filling between Mercer and Mt. Vernon streets	8,306 76
Amount paid to M. A. Meaney, filling	591 44
	<hr/>
	<u>\$241,403 45</u>

Devon street , Blue Hill avenue to Columbia road.	
Labor, teaming and materials, furnished by the city,	\$6,959 20
Amount paid to John Connors, construction work,	3,586 05
Amount paid to Patrick Lyons, artificial stone sidewalks	4,161 80
	<hr/>
	<u>\$14,707 05</u>

Elizabeth street, Norfolk to Astoria street.

Amount retained from Collins & Ham for work done in 1898, under contract	\$38 53
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Execution of Court.

Amount paid on Execution of Court to Quimby and Ferguson	\$737 55
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Fairmount street, Washington to Morton street.

Labor, teaming and materials furnished by the city	\$368 36
Amount paid to James McGovern, construction work	1,048 33
	<u>\$1,416 69</u>

Forest Hills street, Washington street to Glen road.

Labor	\$3 50
Advertising	12 88
	<u>\$16 38</u>

Fowler street, Glenway to Glenwood street.

Labor, teaming and materials furnished by the city	\$3,922 20
Amount paid to Barnes-Ruffin Company, artificial stone sidewalks	1,613 00
Amount paid to Collins & Ham, construction work,	1,339 86
	<u>\$6,875 06</u>

Francis street, Huntington to Brookline avenue.

Labor, teaming and materials furnished by the city	\$6,327 65
Amount paid to James Doherty & Co., construction work	3,421 26
	<u>\$9,748 91</u>

Hamilton street, Bowdoin street to Homes avenue.

Labor, teaming and materials furnished by the city	\$3,047 57
Amount paid to James McGovern, construction work	1,236 18
	<u>\$4,283 75</u>

Harold street, Munroe street to Walnut avenue.

Labor, teaming and materials furnished by the city	\$3,246 47
Amount paid to Patrick McGovern, construction work	1,546 69
Amount paid to Patrick McGovern, retaining wall and fence	360 00
	<u>\$5,153 16</u>

Hewins street, Columbia road to Erie street.

Labor, teaming and materials furnished by the city	\$111 19
Amount paid to Philip Doherty, construction work,	295 57
	<hr/>
	\$406 76
	<hr/>

Homes avenue, Bowdoin to Topliff street.

Labor and advertising	\$44 13
	<hr/>

Idaho street, from River street, 870 feet northerly.

Labor, teaming and materials furnished by the city	\$3,822 96
Amount paid to James McGovern, construction work	1,879 38
	<hr/>
	\$5,702 34
	<hr/>

Ipswich street, Boylston road to Boylston street.

Labor, teaming and materials furnished by the city,	\$11,582 25
Amount paid to Collins & Ham, construction work,	4,639 34
Amount paid to Collins & Ham, building fence	1,206 95
Amount paid to King Bridge Company, building superstructure to bridge	13,850 00
Amount paid to Osborn & Co., mill and shop inspection of material	101 70
	<hr/>
	\$31,380 24
Amount paid by Bridge Division	919 39
	<hr/>
	\$32,299 63
	<hr/>

Jersey street, Audubon road to Brookline avenue.

Labor and advertising furnished by the city	\$41 06
	<hr/>

Josephine street, Geneva avenue to Ditson street.

Amount retained from J. J. Nawn for work done in 1896, under contract	\$194 43
	<hr/>

Leeds street, Woodward street to Dorchester avenue.

Advertising	\$6 43
	<hr/>

Leedsville street, Dorchester avenue to Adams street.

Labor	\$1 50
Amount retained from Collins & Ham, for work done in 1898, under contract	85 26
	<hr/>
	\$86 76
	<hr/>

Leroy street, Geneva avenue to Ditson street.

Labor	\$4 62
Amount retained from Philip Doherty for work done in 1898, under contract	49 55
	<hr/>
	\$54 17
	<hr/>

Lonsdale street, Dorchester avenue to Adams street.

Labor, teaming and materials furnished by the city,	\$619 44
Amount paid to Barnes-Ruffin Company, construction work	709 35
Amount paid to Barnes-Ruffin Company, artificial stone sidewalks	1,564 55
Amount paid to P. O'Hara & Co., construction work	340 01
Amount paid to J. C. Newborg	1,608 05
	<hr/>
	<u>\$4,841 40</u>

Malvern street, Brighton avenue to Ashford street.

Labor	\$1 50
Amount retained from James Doherty & Co., for work done in 1898, under contract	84 56
	<hr/>
	<u>\$86 06</u>

Maryland street, Savin Hill avenue to Bay street.

Labor, teaming and materials furnished by the city,	\$1,128 42
Amount paid to Philip Doherty, construction work,	896 70
	<hr/>
	<u>\$2,025 12</u>

Mellen street, Ocean to Montague street.

Labor and materials furnished by the city	\$98 10
Amount retained from Collins & Ham for work done in 1898, under contract	283 99
	<hr/>
	<u>\$382 09</u>

Merlin street, Athelwold to Park street.

Labor and advertising	\$314 87
Amount retained from Patrick McGovern for work done in 1898, under contract	314 69
	<hr/>
	<u>\$629 56</u>

Middleton street, Norfolk street about 600 feet northerly.

Labor and materials furnished by the city	\$2,477 46
Amount paid to Philip Doherty, construction work,	1,427 15
	<hr/>
	<u>\$3,904 61</u>

Millet street, Park to Athelwold street.

Advertising	\$6 43
	<hr/>

Nightingale street, Talbot avenue to Bernard street.

Labor and materials furnished by the city	\$99 82
Amount retained from James Doherty & Co., for work done in 1898, under contract	234 89
	<hr/>

Carried forward,\$334 71

STREET DEPARTMENT — PAVING DIVISION. 87

<i>Brought forward,</i>	\$334 71
Amount paid to Simpson Brothers Corporation, artificial stone sidewalks	243 18
Amount paid to John C. Newborg, artificial stone sidewalks	15 42
	\$593 31
	\$593 31

North Harvard street, Western avenue to Charles River.

Labor, teaming and materials furnished by the city,	\$6,543 42
Amount paid to Geo. H. Wentworth & Co., con- struction work	3,482 80
	\$10,026 22
	\$10,026 22

Oakley street, Bowdoin street to Geneva avenue.

Amount retained from John Connors for work done in 1898, under contract	\$66 35
	\$66 35

Orkney road, Sutherland to Strathmore road.

Labor and materials furnished by the city	\$3,930 85
Amount paid to Daniel E. Lynch, construction work	1,153 02
Amount paid to Simpson Brothers Corporation, artificial stone sidewalks	184 80
	\$5,268 67
	\$5,268 67

Peterborough street, Audubon road to Fairhaven street.

Labor and materials furnished by the city	\$8,034 87
Amount paid to James Doherty & Co., construction work	4,497 74
	\$12,532 61
	\$12,532 61

Peverell street, Sawyer avenue to Salcombe street.

Labor and materials furnished by the city	\$1,296 54
Amount paid to Collins & Ham, construction work	1,108 21
	\$2,404 75
	\$2,404 75

Rosseter street, Bullard street to Bowdoin avenue.

Labor and materials furnished by the city	\$229 72
Amount paid to R. L. Barrett, building retaining walls and fences	502 48
Amount retained from Patrick O'Hara & Co., for work done in 1898, under contract	85 49
	\$817 69
	\$817 69

Ruggles street, Parker street to Back Bay Fens.

Labor and materials furnished by the city	\$225 92
Amount retained from Doherty & Connors for work done in 1898, under contract	278 09
	<hr/>
	\$504 01
	<hr/>

St. Stephen street, from Bryant street, 800 feet towards Gainsborough street.

Labor, teaming and materials furnished by the city,	\$6,805 77
Amount paid to James Doherty & Co., construction work	1,785 20
	<hr/>
	\$8,590 97
	<hr/>

School street, at corner Athelwold street.

Labor and materials furnished by the city	\$214 07
Amount paid to Collins & Ham, paving	125 00
	<hr/>
	\$339 07
	<hr/>

Shirley street, Massachusetts to Norfolk avenue.

Labor, teaming and materials furnished by the city,	\$4,576 03
Amount paid to John F. Cullen, construction work,	3,330 08
	<hr/>
	\$7,906 11
	<hr/>

Spencer street, Wheatland to Talbot avenue.

Labor and materials furnished by the city	\$2,659 65
Amount paid to James McGovern, construction work	1,185 64
	<hr/>
	\$3,845 29
	<hr/>

Spencer street, Athelwold to Park street.

Labor and materials furnished by the city	\$1,094 08
Amount paid to James McGovern, construction work	748 37
	<hr/>
	\$1,842 45
	<hr/>

Spring street, Centre to Gardner street.

Labor, teaming and materials furnished by the city,	\$4,754 52
Amount paid to N.Y., N.H. & H. R.R.	3,010 72
	<hr/>
	\$7,765 24
	<hr/>

Stanley street, Quincy to Bellevue street.

Labor and materials furnished by the city	\$1,696 52
Amount paid to James Doherty & Co., construction work	1,197 60
	<hr/>
	\$2,894 12
	<hr/>

Stuart street , Dartmouth street to Trinity place.	
Amount retained from Collins & Ham, for work done in 1898, under contract	\$38 35
<hr/>	
Telford street , Western avenue to Charles river reservation.	
Stone	\$4 76
Amount retained from James Doherty & Co., for work done in 1898, under contract	28 45
<hr/>	
\$33 21	
<hr/>	
Thane street , Athelwold to Park street.	
Labor and materials furnished by the city	\$781 55
Amount paid to Philip Doherty, construction work,	525 15
Amount paid to Barnes-Ruffin Co., artificial stone sidewalks	320 44
<hr/>	
\$1,627 14	
<hr/>	
Tonawanda street , Geneva avenue to Greenbrier street.	
Labor and materials furnished by the city	\$43 93
Amount retained from Philip Doherty for work done in 1898, under contract	376 37
<hr/>	
\$420 30	
<hr/>	
Trinity place , St. James avenue to Stuart street.	
Labor and materials furnished by the city	\$540 07
Amount paid to Barber Asphalt Paving Co., asphaltting	3,516 09
<hr/>	
\$4,056 16	
<hr/>	
Vancouver street , Huntington avenue to Ruggles street.	
Labor	\$1 50
Amount retained from Doherty & Connors for work done in 1898, under contract	101 17
<hr/>	
\$102 67	
<hr/>	
Waterlow street , Harvard to Harvard street.	
Labor	\$36 94
Amount retained from James Doherty & Co., for work done in 1898, under contract	60 02
Amount paid to John C. Newborg, artificial stone sidewalks	40 42
<hr/>	
\$137 38	
<hr/>	
Wensley street , Heath street, 720 feet westerly.	
Labor and materials furnished by the city	\$4,117 40
Amount paid to Collins & Ham, construction work,	2,470 15
<hr/>	
\$6,587 55	
<hr/>	

West Selden street, Morton to Manchester street.

Labor and materials furnished by the city	\$1,017 81
Amount paid to James McGovern, construction work	2,473 50
	<hr/>
	<u>\$3,491 31</u>

Woodlawn street, Hyde Park avenue to Forest Hills Cemetery.

Labor and materials furnished by the city	\$4,740 81
Amount paid to Thomas A. Dolan, construction work	1,837 29
	<hr/>
	<u>\$6,578 10</u>

Worthington street, Longwood avenue to Back Bay Fens.

Labor, teaming and materials furnished by the city,	\$3,667 98
Amount paid to J. C. Coleman & Son, filling	5,636 55
	<hr/>
	<u>\$9,304 53</u>

Public alley 101, Richmond to Cross street.

Labor and materials furnished by the city	\$1,355 65
Amount paid to Patrick McGovern, construction work	1,044 23
	<hr/>
	<u>\$2,399 88</u>

Public alley 102, Marshall street to Creek square.

Labor and materials furnished by the city	\$183 22
Amount paid to Jones & Meehan, construction work,	830 56
	<hr/>
	<u>\$1,013 78</u>

Public alley 301, River to Pinckney street.

Signs	\$3 60
Advertising	35
	<hr/>
	<u>\$3 95</u>

Public alley 401, Irvington to Garrison street.

Labor, teaming and materials furnished by the city,	\$1,336 96
Amount paid to Simpson Brothers Corporation, asphaltting and regulating	1,885 19
	<hr/>
	<u>\$3,222 15</u>

Public alley 402, Garrison to West Newton street.

Labor, teaming and materials furnished by the city,	\$1,263 47
Amount paid to Simpson Brothers Corporation, asphaltting and regulating	1,501 02
	<hr/>
	<u>\$2,764 49</u>

Public alley 403, West Newton to Cumberland street.

Labor, teaming and materials furnished by the city	\$1,057 29
Amount paid to Simpson Brothers Corporation, asphalting and regulating	1,423 07
	<hr/>
	\$2,480 36
	<hr/>

Public alley 404, Cumberland street to Public alley 405.

Labor, teaming and materials furnished by the city	\$1,330 01
Amount paid to Simpson Brothers Corporation, asphalting and regulating	1,844 74
	<hr/>
	\$3,174 75
	<hr/>

Public alley 405, Huntington avenue to St. Botolph street.

Labor, teaming and materials furnished by the city	\$600 15
Amounts paid to Simpson Brothers Corporation, asphalting and regulating	690 79
	<hr/>
	\$1,290 94
	<hr/>

Public alley, 414 Massachusetts avenue to Hereford street.

Amount paid to W. A. Murtfeldt Co., artificial stone sidewalks	\$9 72
Signs	3 60
Advertising	35
	<hr/>
	\$13 67
	<hr/>

Public alley 415, Hereford to Gloucester street.

Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
	<hr/>

Public alley 416, Gloucester to Fairfield street.

Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
	<hr/>

Public alley 417, Fairfield to Exeter street.

Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
	<hr/>

Public alley 418, Exeter to Dartmouth street.

Labor and materials furnished by the city	\$84 90
Amount paid to H. Gore & Co., paving	168 22
	<hr/>
	\$253 12
	<hr/>

Public alley 419, Dartmouth to Clarendon street.	
Labor and materials furnished by the city	\$247 60
Amount paid to Simpson Brothers Corporation, asphalting and regulating	1,564 80
	<hr/>
	\$1,812 40
<hr/>	
Public alley 420, Clarendon to Berkeley street.	
Labor and materials furnished by the city	\$38 44
Amount paid to H. Gore & Co., paving	80 85
	<hr/>
	\$119 29
<hr/>	
Public alley 421, Berkeley to Arlington street.	
Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
<hr/>	
Public alley 430, Massachusetts avenue to Hereford street.	
Materials furnished by the city	\$133 54
Amount paid to Peter Gilligan, paving	133 00
	<hr/>
	\$266 54
<hr/>	
Public alley 431, Hereford to Gloucester street.	
Labor and materials furnished by the city	\$305 79
Amount paid to Simpson Brothers Corporation, asphalting and regulating	953 67
	<hr/>
	\$1,259 46
<hr/>	
Public alley 432, Gloucester to Fairfield street.	
Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
<hr/>	
Public alley 433, Fairfield to Exeter street.	
Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
<hr/>	
Public alley 434, Exeter to Dartmouth street.	
Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
<hr/>	
Public alley 435, Dartmouth to Clarendon street.	
Signs	\$3 60
Advertising	34
	<hr/>
	\$3 94
<hr/>	

Public alley 436, Clarendon to Berkeley street.

Signs	\$3 60
Advertising	34
Teaming	7 50
	<hr/>
	\$11 44
	<hr/>

Public alley 437, Berkeley to Arlington street.

Labor and materials furnished by the city	\$261 21
Amount retained from Barber Asphalt Paving Co., for work done in 1898, under contract	490 97
	<hr/>
	\$752 18
	<hr/>

Public alley 438, Arlington to Berkeley street.

Signs	\$3 60
	<hr/>

Public alley 439, Clarendon to Dartmouth street.

Signs	\$3 60
	<hr/>

Public alley 440, Dartmouth to Exeter street.

Signs	\$3 60
	<hr/>

Public alley 441, Exeter to Fairfield street.

Signs	\$3 60
	<hr/>

Public alley 442, Fairfield to Gloucester street.

Signs	\$3 60
	<hr/>

Public alley 443, Gloucester to Hereford street.

Signs	\$3 60
	<hr/>

Public alley 444, Hereford street to Massachusetts avenue

	\$3 60
	<hr/>

Public alley 701, Tremont street to Shawmut avenue.

Labor and materials furnished by the city	\$1,399 57
Amount paid to Barber Asphalt Paving Co., asphalting and regulating	3,077 46
	<hr/>
	\$4,477 03
	<hr/>

Public alley 702, Worcester to Springfield street.

Labor and materials furnished by the city	\$212 86
Amount paid to Jones & Meehan, asphalting and regulating	818 90
	<hr/>
	\$1,031 76
	<hr/>

Public alley 703, from Public alley 702.

Labor and materials furnished by the city	\$223 66
Amount paid to Jones & Meehan, asphalting and regulating	597 64
	<hr/>
	\$821 30
	<hr/>

SUMMARY OF EXPENDITURES.

LAYING-OUT AND CONSTRUCTION OF HIGHWAYS.

TOTAL AMOUNT EXPENDED.

Alford street	\$13 00
Andrews street	1,468 66
Angell street	5,711 99
Astor street	6,881 10
Athelwold street	421 18
B street	53 75
Belmore terrace	91 76
Belvidere street	4,854 86
Bernard street	171 69
Burt street	4,005 89
Canal street	10,340 35
Carlos street	164 18
Chamblet street	440 73
Chester street	3,931 35
Chiswick road	10,960 50
Columbia road	241,403 45
Devon street	14,707 05
Elizabeth street	38 53
Execution of court	737 55
Fairmount street	1,416 69
Forest Hills street	16 38
Fowler street	6,875 06
Francis street	9,748 91
Hamilton street	4,283 75
Harold street	5,153 16
Hewins street	406 76
Homes avenue	44 13
Idaho street	5,702 34
Ipswich street	32,299 63
Jersey street	41 06
Josephine street	194 43
Leeds street	6 43
Leedsville street	86 76
Leroy street	54 17
Lonsdale street	4,841 40
Malvern street	86 06
Maryland street	2,025 12
Mellen street	382 09
Merlin street	629 56
Middleton street	3,904 61
Millet street	6 43
Nightingale street	593 31
North Harvard street	10,026 22

Carried forward,\$395,222 03

<i>Brought forward,</i>	\$395,222 03
Oakley street	66 35
Orkney road	5,268 67
Peterborough street	12,532 61
Peverell street	2,404 75
Rosseter street	817 69
Ruggles street	504 01
St. Stephen street	8,590 97
School street	339 07
Shirley street	7,906 11
Spencer street, Talbot to Wheatland avenue	3,845 29
Spencer street, Athelwold to Park street	1,842 45
Spring street	7,765 24
Stanley street	2,894 12
Stuart street	38 35
Telford street	33 21
Thane street	1,627 14
Tonawanda street	420 30
Trinity place	4,056 16
Vancouver street	102 67
Waterlow street	137 38
Wensley street	6,587 55
West Selden street	3,491 31
Woodlawn street	6,578 10
Worthington street	9,304 53
Public alley 101	2,399 88
Public alley 102	1,013 78
Public alley 301	3 95
Public alley 401	3,222 15
Public alley 402	2,764 49
Public alley 403	2,480 36
Public alley 404	3,174 75
Public alley 405	1,290 94
Public alley 414	13 67
Public alley 415	3 94
Public alley 416	3 94
Public alley 417	3 94
Public alley 418	253 12
Public alley 419	1,812 40
Public alley 420	119 29
Public alley 421	3 94
Public alley 430	266 54
Public alley 431	1,259 46
Public alley 432	3 94
Public alley 433	3 94
Public alley 434	3 94
Public alley 435	3 94
Public alley 436	11 44
Public alley 437	752 18

Carried forward,

\$503,245 98

<i>Brought forward,</i>		\$503,245 98
Public alley 438		3 60
Public alley 439		3 60
Public alley 440		3 60
Public alley 441		3 60
Public alley 442		3 60
Public alley 443		3 60
Public alley 444		3 60
Public alley 701		4,477 03
Public alley 702		1,031 76
Public alley 703		821 30
		<hr/>
		\$509,601 27
Amount included in cost for Blue Hill and Other Avenues	\$867 35	
Amount included in cost for Laying- Out and Construction of Highways, Dorchester	448 73	
Amount included in cost for Laying- Out and Construction of Highways, Roxbury and West Roxbury	293 66	
Amount included in cost for Laying- Out and Construction of Highways, East Boston	21 00	
Amount included in cost for Laying- Out and Construction of Highways, Brighton	18 50	
	<hr/>	1,649 24
		<hr/>
		\$511,250 51
Less amount paid by Bridge Division,		919 39
		<hr/>
		<u>\$510,331 12</u>

*LAYING-OUT AND CONSTRUCTION OF
HIGHWAYS, EAST BOSTON.*

Ashley street , Breed to Walley street.		
Labor		\$149 50
Advertising		17 24
Amount paid to H. & D. Burnett, filling		1,122 00
		<hr/>
		\$1,288 74
Amount paid out of appropriation for Laying-Out and Construction of Highways, East Boston	\$1,267 74	
Amount paid Out of appropriation for Laying-out and Construction of Highways	21 00	
	<hr/>	<u>\$1,288 74</u>

Bennington street, Chelsea street to Belle Isle Inlet.

Labor	\$755 25
Advertising	17 24
Amount paid to John Cavanagh & Son Building Moving Co., moving building	20 00
Amount paid to W. F. Hedrington, filling	918 54
	<hr/>
	\$1,711 03
	<hr/>

Public alley 2001, Marginal to Webster street.

Labor and materials furnished by the city	\$277 93
Amount paid to Ward & Conlin, paving	305 20
	<hr/>
	\$583 13
	<hr/>

SUMMARY OF EXPENDITURES.

LAYING-OUT AND CONSTRUCTION OF HIGHWAYS,
EAST BOSTON.

TOTAL AMOUNT EXPENDED.

Ashley street	\$1,288 74
Bennington street	1,711 03
Public alley 2001	583 13
	<hr/>
	\$3,582 90
Less amount paid out of appropriation for Laying-Out and Construction of Highways	21 00
	<hr/>
	\$3,561 90
	<hr/>

*LAYING-OUT AND CONSTRUCTION OF
HIGHWAYS, BRIGHTON.*

Cambridge street, Brighton avenue to Washington street.

Labor and materials furnished by the city	\$10,856 26
Amount paid to J. L. Bryne & Co., construction work	3,797 85
Amount paid to J. L. Bryne & Co., rock excavation	1,644 75
	<hr/>
	\$16,298 86
Amount paid out of appropriation for Laying-Out and Construction of Highways, Brighton	\$16,280 36
Amount paid out of appropriation for Laying-Out and Construction of Highways	18 50
	<hr/>
	\$16,298 86
	<hr/>

*SUMMARY OF EXPENDITURES.*LAYING-OUT AND CONSTRUCTION OF HIGHWAYS,
BRIGHTON.

TOTAL AMOUNT EXPENDED.

Cambridge street	\$16,298 86
Less amount paid out of appropriation for Laying- Out and Construction of Highways	18 50
	<u>\$16,280 86</u>

*LAYING-OUT AND CONSTRUCTION OF HIGH-
WAYS, DORCHESTER.***Alexander street**, southwardly over Oleander street.

Labor and materials furnished by the city	\$2,306 39
Amount paid to James McGovern, construction work,	785 01
	<u>\$3,091 40</u>

Amount paid out of appropriation for
Laying-Out and Construction of
Highways, Dorchester \$3,077 02

Amount paid out of appropriation for Laying-Out and Construction of Highways.	14 38
	<u>\$3,091 40</u>

Annabel street, Columbia road to Sumner street.

Labor	\$69 00
Advertising	36 79
	<u>\$105 79</u>

Atherstone street, Fuller to Bailey street.

Labor and materials furnished by the city	\$1,347 35
Amount paid to Philip Doherty, construction work,	666 84
	<u>\$2,014 19</u>

Amount paid out of appropriation for
Laying-Out and Construction of
Highways, Dorchester \$1,946 43

Amount paid out of appropriation for Laying-Out and Construction of Highways	67 76
	<u>\$2,014 19</u>

Barry Street, Quincy to Richfield street.

Labor	\$40 50
Advertising	5 54
	<u>\$46 04</u>

Boston street, Mt. Vernon street to Columbia road.

Labor, teaming and materials furnished by the city,		\$465 54
Amount paid out of appropriation for Laying-Out and Construction of Highways, Dorchester	\$461 79	
Amount paid out of appropriation for Laying-Out and Construction of Highways	3 75	
	<hr/>	<u>\$465 54</u>

Callender street, Tucker to Don street.

Labor		\$120 46
Advertising		36 56
Lumber		97 88
		<hr/>
		\$254 90

Amount paid out of appropriation for Laying-Out and Construction of Highways, Dorchester	\$118 25	
Amount paid out of appropriation for Laying-Out and Construction of Highways	136 65	
	<hr/>	<u>\$254 90</u>

Draper street, Robinson to Bowdoin street.

Labor		<u>\$8 25</u>
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Edison Green, Dorchester avenue to Pond street.

Labor		\$101 85
Advertising		25 42
		<hr/>
		<u>\$127 27</u>

Edwin street, Dorchester avenue to Shawmut park.

Labor and materials furnished by the city		\$3,936 10
Amount paid to Philip Doherty, construction work,		1,711 28
Amount paid to Patrick Lyons, artificial stone sidewalks		1,615 84
		<hr/>
		\$7,263 22

Amount paid out of appropriation for Laying-Out and Construction of Highways, Dorchester	\$7,221 24	
Amount paid out of appropriation for Laying-Out and Construction of Highways	41 98	
	<hr/>	<u>\$7,263 22</u>

Esmond street, Blue Hill avenue to Harvard street.

Labor and materials furnished by the city		<u>\$80 39</u>
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Florida street, King to Templeton street.

Labor and materials furnished by the city	\$2,933 46
Amount paid to Philip Doherty, construction work,	1,728 35
	<u>\$4,661 81</u>

Amount paid out of appropriation for
Laying-Out and Construction of
Highways, Dorchester \$4,630 64

Amount paid out of appropriation for Laying-Out and Construction of Highways	31 17
	<u>\$4,661 81</u>

Fowler street, Glenway to McLellan street.

Labor	\$4 25
Advertising	5 54
	<u>\$9 79</u>

Geneva avenue, Bowdoin street to Columbia road.

Labor	<u>\$7 50</u>
-----------------	---------------

Gibson street, Dorchester avenue to Adams street.

Labor	<u>\$418 40</u>
-----------------	-----------------

Lauriat avenue, Ballou avenue to Norfolk street.

Labor and materials furnished by the city	\$395 04
Amount paid to Timothy F. Bradley, construction work	2,234 58
	<u>\$2,629 62</u>

Leonard street, Duncan to Adams street.

Lumber	<u>\$16 75</u>
------------------	----------------

Montague street, Ashmont to Roslin street.

Labor	\$4 75
Advertising	13 20
	<u>\$17 95</u>

Nottingham street, Bullard street to Bowdoin avenue.

Labor	\$5 00
Advertising	5 55
	<u>\$10 55</u>

Rockford street, Dudley to Clifton street.

Advertising	<u>\$5 54</u>
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Rozella street, Adams to Muzzy street.

Labor and material furnished by the city	\$1,188 42
Amount paid to Timothy F. Bradley, construction work	519 14
	<u>\$1,707 56</u>

Shafter street , Waterlow to Faxon street.	
Labor	\$49 00
Advertising	13 20
	<hr/>
	\$62 20
	<hr/>

Thane street , Athelwold to School street.	
Labor	\$7 00
	<hr/>

Van Winkle street , Dorchester avenue to N.Y., N.H. & H.R.R., Plymouth Div., Shawmut Branch Railroad.	
Labor	\$117 30
Advertising	13 57
	<hr/>
	\$130 87

Amount paid out of appropriation for Laying-Out and Construction of High- ways, Dorchester	\$0 70	
Amount paid out of appropriation for Laying-Out and Construction of High- ways	130 17	
	<hr/>	\$130 87
		<hr/>

Wainwright street , Centre street to Welles avenue.	
Labor	\$12 00
	<hr/>

Waldeck street , Melville avenue to Tonawanda street.	
Labor and materials furnished by the city	\$6,729 97
Amount paid to John F. Cullen, construction work	3,957 35
	<hr/>
	\$10,687 32
	<hr/>

Warner street , Harvard to Park street.	
Labor	\$43 88
Advertising	28 23
	<hr/>
	\$72 11
	<hr/>

Woodcliff street , Howard avenue, 200 feet eastwardly.	
Labor	\$10 00
Advertising	13 57
	<hr/>
	\$23 57

Amount paid out of appropriation for Laying-Out and Construction of High- ways, Dorchester	\$0 70	
Amount paid out of appropriation for Laying-Out and Construction of High- ways	22 87	
	<hr/>	\$23 57
		<hr/>

SUMMARY OF EXPENDITURES.

LAYING-OUT AND CONSTRUCTION OF HIGHWAYS.

TOTAL AMOUNT EXPENDED.

Alexander street	\$3,091 40
Annabel street	105 79
Atherstone street	2,014 19
Barry street	46 04
Boston street	465 54
Callender street	254 90
Draper street	8 25
Edison Green	127 27
Edwin street	7,263 22
Esmond street	80 39
Florida street	4,661 81
Fowler street	9 79
Geneva avenue	7 50
Gibson street	413 40
Lauriat avenue	2,629 62
Leonard street	16 75
Montague street	17 95
Nottingham street	10 55
Rockford street	5 54
Rozella street	1,707 56
Shafter street	62 20
Thane street	7 00
Van Winkle street	130 87
Wainwright street	12 00
Waldeck street	10,687 32
Warner street	72 11
Woodcliff street	23 57
	<hr/>
	\$33,932 53
Amount paid out of appropriation for Laying-Out and Construction of Highways	448 73
	<hr/>
	<u>\$33,483 80</u>

LAYING-OUT AND CONSTRUCTION OF HIGHWAYS, ROXBURY AND WEST ROXBURY.

Aberdeen street , Beacon street to Brookline Branch, Boston & Albany Railroad.	
Labor	<u>\$55 25</u>
Albany and Northampton streets , at their junction.	
Labor and materials furnished by the city	\$200 20
Amount paid to H. Gore & Co., paving	149 92
	<hr/>
	<u>\$350 12</u>

Amory street , School to Bragdon street.	
Labor and materials furnished by the city	\$3,841 38
Amount paid to Patrick McGovern, construction work	2,099 84
	<hr/>
	\$5,941 22
Amount paid out of appropriation for Laying-Out and Construction of Highways, Roxbury and West Roxbury . \$5,747 23	
Amount paid out of appropriation for Laying-Out and Construction of Highways	193 99
	<hr/>
	<u>\$5,941 22</u>
Blandford street , Commonwealth avenue to Boston & Albany Railroad.	
Labor	\$114 40
Advertising	4 50
	<hr/>
	\$118 90
Amount paid out of appropriation for Laying-Out and Construction of Highways, Roxbury and West Roxbury . \$108 25	
Amount paid out of appropriation for Laying-Out and Construction of Highways	10 65
	<hr/>
	<u>\$118 90</u>
Bragdon street , Columbus avenue to Amory street.	
Labor and materials furnished by the city	\$2,480 71
Amount paid to Thomas A. Dolan, construction work	999 61
	<hr/>
	\$3,480 32
Amount paid out of appropriation for Laying-Out and Construction of Highways, Roxbury and West Roxbury . \$3,413 44	
Amount paid out of appropriation for Laying-Out and Construction of Highways	66 88
	<hr/>
	<u>\$3,480 32</u>
Congreve street , South to Centre street.	
Labor and materials furnished by the city	\$2,994 03
Amount paid to William Finneran, construction work	627 81
	<hr/>
	<u>\$3,621 84</u>
Cummington street , Blandford to Avon street.	
Labor	\$126 80
Advertising	4 50
	<hr/>
	\$131 30

Amount paid out of appropriation for Laying-Out and Construction of High- ways, Roxbury and West Roxbury	\$115 00	
Amount paid out of appropriation for Laying-Out and Construction of High- ways	16 30	<u> </u>
		<u>\$131 30</u>
Custer street , Woodman street to Arnold Arboretum.		
Labor		\$23 50
Advertising		12 39
		<u> </u>
		<u>\$35 89</u>
Dresden street , Boylston street to Spring Park avenue.		
Labor		\$62 25
Advertising		47 37
		<u> </u>
		<u>\$109 62</u>
Hubbard street , Chestnut avenue to Lamartine street.		
Labor and materials furnished by the city		\$1,519 79
Amount paid to Thomas Minton, construction work,		402 25
		<u> </u>
		<u>\$1,922 04</u>
Newburg street , Beech street to Belgrade avenue.		
Labor, teaming and materials furnished by the city,		\$2,696 21
Amount paid to James Doherty & Co., construction work		566 64
		<u> </u>
		<u>\$3,262 85</u>
Amount paid out of appropriation for Laying-Out and Construction of High- ways, Roxbury and West Roxbury	\$3,257 01	
Amount paid out of appropriation for Laying-Out and Construction of High- ways	5 84	<u> </u>
		<u>\$3,262 85</u>
Oakview terrace , from Centre street.		
Labor and materials furnished by the city		\$1,206 44
Amount paid to Collins & Ham, construction work,		1,221 02
		<u> </u>
		<u>\$2,427 46</u>
Pontiac street , Hillside to Tremont street.		
Labor		<u>\$285 00</u>
Queensberry street , Audubon road to Audubon road.		
Labor, teaming and materials furnished by the city,		<u>\$1,765 93</u>



EXCHANGE STREET, BETWEEN STATE STREET AND DOCK SQUARE.

Rowe street, Ashland to Sharon street.	
Labor	\$129 75
Advertising	22 77
Amount paid to Philip Doherty, construction work,	265 20
	<hr/>
	\$417 72
	<hr/>
Seymour street, Canterbury street to Brown avenue.	
Labor	\$138 75
Advertising	16 78
	<hr/>
	\$155 53
	<hr/>
South street, Jamaica street to Arborway.	
Labor	\$32 25
Advertising	4 75
	<hr/>
	\$37 00
	<hr/>
Stratford street, Anawan to Clement avenue.	
Labor	\$36 50
	<hr/>
Williams street, Washington to Call street.	
Labor	\$4 75
Advertising	2 19
	<hr/>
	\$6 94
	<hr/>
Public alley 901, Hemenway to Hemenway street.	
Labor and material furnished by the city	\$166 60
	<hr/>
Public alley 905, west from Massachusetts avenue, between Commonwealth avenue and Marlborough street, and to Marl- borough street.	
Labor	\$3 60
	<hr/>

SUMMARY OF EXPENDITURES

FOR LAYING-OUT AND CONSTRUCTION OF HIGH-
WAYS.

ROXBURY AND WEST ROXBURY.

Aberdeen street	\$55 25
Albany and Northampton streets (at their junction),	350 12
Amory street	5,941 22
Blandford street	118 90
Bragdon street	3,480 32
Congreve street	3,621 84
Cumington street	131 30
Custer street	35 89
	<hr/>
<i>Carried forward,</i>	\$13,734 84

<i>Brought forward,</i>	\$13,734 84
Dresden street	109 62
Hubbard street	1,922 04
Newburg street	3,262 85
Oakview terrace	2,427 46
Pontiac street	285 00
Queensberry street	1,765 93
Rowe street	417 72
Seymour street	155 53
South street	37 00
Stratford street	36 50
Williams street	6 94
Public alley 901	166 60
Public alley 905	3 60
	<hr/>
	\$24,331 63
Less amount paid out of appropriation for Laying- out and Construction of Highways	293 66
	<hr/>
	<u>\$24,037 97</u>

NEW EDGESTONE.

The following tables show the amount of new edgestone set during the year:

CITY PROPER.

*Wards 6, 7, 8, 9, 10, 11, 12, 17 and 18, in whole or in part.
(Paving Districts Nos. 8, 9 and 10.)*

	Lin. feet.
Blackwood and Albemarle streets	378
Beacon street	180
Harcourt street	278
Massachusetts avenue	192
Sundry streets in small quantities	382
	<hr/>
	<u>1,410</u>

ROXBURY.

*Wards 16, 17, 18, 19, 21 and 22, in whole or in part. (Pav-
ing District No. 7.)*

	Lin. feet.
Blue Hill avenue	284
Burke street	565
Burrell and Batchelder streets	447
Cheney street	206
Harrishoff street	317
Heath street	149
Howland street	140
	<hr/>
<i>Carried forward,</i>	2,108

<i>Brought forward,</i>	2,108
Huckins street	590
Homestead street	174
Humboldt avenue	327
Hollander street	348
Hartnett street	884
Forbes and Centre streets	549
Montana street	167
Munroe street	121
Minden street	113
Queensberry street	168
Round Hill street	231
Ruthven street	187
Schiller street	138
Tremont street	391
Waumbeck street	190
Wyman street	141
Wabeno street	163
Sundry streets in small quantities	1,144
	<hr/>
	8,134
	<hr/> <hr/>

EAST BOSTON.

Wards 1 and 2. (Paving District No. 2.)

	Lin. feet.
Brooks street	377
Maverick street	122
Prescott street	924
Paris street	172
Shelby street	167
West Eagle street	148
White street	520
Sundry streets in small quantities	285
	<hr/>
	2,715
	<hr/> <hr/>

DORCHESTER.

Wards 16, 20 and 24, in whole or in part. (Paving District No. 6.)

	Lin. feet.
Blue Hill avenue	107
Bellevue street	100
Clarkson street	320
Dorchester avenue	223
Elmo street	676
Edson street	230
Glendale street	199
Hamilton street	277
	<hr/>

Carried forward, 2,132

<i>Brought forward,</i>	2,132
Harbor View street	259
McLellan street	346
Milton and Rockwell streets	111
Neponset avenue	206
Standish street	292
Stanwood street	212
Talbot avenue	900
Van Winkle street	358
Wales street	154
Washington street	158
Sundry streets in small quantities	1,690
	<hr/>
	<u>6,818</u>

BRIGHTON.

Ward 25. (Paving District No. 4.)

	Lin. feet.
Commonwealth avenue	290
Sundry streets in small quantities	149
	<hr/>
	<u>439</u>

WEST ROXBURY.

Wards 22 and 23, in whole or in part. (Paving District No. 5.)

	Lin. feet.
Birch street	156
Boylston street	374
Hyde Park aven�e	100
Jamaica and Woodman streets	131
Perkins street	155
Park and Centre streets	124
School street	132
Washington street	741
Weld avenue	352
	<hr/>
	<u>2,265</u>

SOUTH BOSTON.

Wards 13, 14, 15 and 16, in whole or in part. (Paving District No. 1.)

	Lin. feet.
Sundry streets in small quantities	308

CHARLESTOWN.

Wards 3, 4 and 5. (Paving District No. 3.)

	Lin. feet.
Sundry streets in small quantities	111

RECAPITULATION.

	Lin. feet.
City Proper	1,410
Roxbury	8,134
South Boston	308
East Boston	2,715
Dorchester	6,818
West Roxbury	2,265
Charlestown	111
Brighton	439
	<u>22,200</u>

New Edgestones. (First setting.) Linear feet.

YEAR.	City Proper.	Roxbury.	South Boston.	East Boston.	Dorchester.	West Roxbury.	Brighton.	Charlestown.	Back Bay.	Total.
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
1894.....	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
1896.....	1,697	20,111	3,855	807	21,367	2,498	8,507	791	41,917	101,550
1897.....	5,097	14,241	2,311	1,691	37,205	5,228	1,086	.....	.....	66,859
1898.....	1,281	13,252	1,259	918	50,124	2,185	5,909	.....	.....	74,928
1899.....	1,410	8,134	308	2,715	6,818	2,265	439	111	.....	22,200
Totals.....	32,967	175,293	36,081	25,431	202,847	41,445	36,649	7,295	41,917	599,745

NEW BRICK SIDEWALKS.

The following tables show the number of square yards of brick sidewalks laid during the year :

CITY PROPER.

*Wards 6, 7, 8, 9, 10, 11, 12, 17 and 18, in whole or in part.
(Paving Districts Nos. 8 and 10.)*

	Sq. yds.
Albemarle street	124
Beacon street	733
Columbus avenue	901
<i>Carried forward,</i>	<u>1,758</u>

<i>Brought forward,</i>	1,758
Belvidere street	1,025
Dartmouth street	611
Dalton street	171
Exeter street	159
Harcourt street	196
Hereford street	118
Kingston street	647
Massachusetts avenue	148
Winchester street	591
	<hr/>
	5,424
	<hr/>

ROXBURY.

Wards 16, 17, 18, 19, 21 and 22, in whole or in part. (Paving District No. 7.)

	Sq. yds.
Burke street	361
Copeland street	108
Columbus avenue	153
Crawford street	180
Heath street	303
Haskins street	106
Humboldt avenue	279
Georgia street	860
Hartwell street	306
Highland avenue	328
Linwood street	506
Linwood square	353
Parker street	664
Round Hill street	158
Schuyler street	151
Tremont street	198
Thornton street	247
Vine street	137
Washington street	243
Warren place	502
Whitney street	398
West Cottage street	643
Wyman street	125
Sundry streets in small quantities	1,007
	<hr/>
	8,316
	<hr/>

SOUTH BOSTON.

Wards 13, 14, 15 and 16, in whole or in part. (Paving District No. 1.)

	Sq. yds.
West Seventh street	1,228
West Third street	1,948
Sundry streets in small quantities	908
	<hr/>
	4,084
	<hr/>

EAST BOSTON.

Wards 1 and 2. (Paving District No. 2.)

	Sq. yds.
Brooks street	468
Blackinton street	118
Lamson street	131
Paris street	150
Prescott street	1,173
Shelby street	175
White street	498
West Eagle street	346
Sundry streets in small quantities	444
	<hr/>
	<u>3,503</u>

DORCHESTER.

Ward 24. (District No. 6.)

	Sq. yds.
Brent street	757
Dorchester avenue	170
East Cottage street	160
Geneva avenue	175
Hartford street	185
Neponset avenue	105
Quincy street	100
Washington street	182
Sundry streets in small quantities	776
	<hr/>
	<u>2,610</u>

WEST ROXBURY.

Ward 23. (Districts Nos. 5 and 11.)

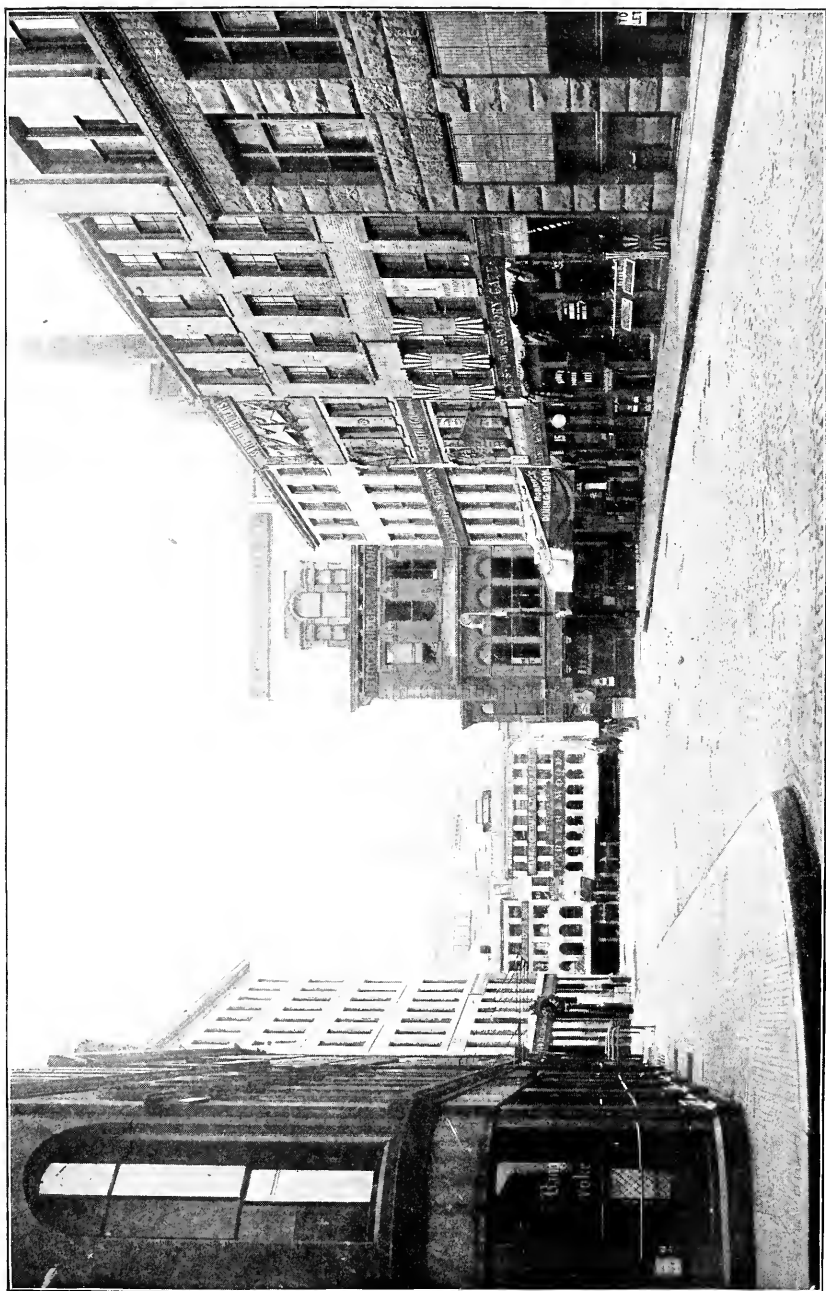
	Sq. yds.
Brandon street	140
Danforth street	150
Wenham street	97
Sundry streets in small quantities	1,061
	<hr/>
	<u>1,448</u>

RECAPITULATION.

	Sq. yds.
City Proper	5,424
Roxbury	8,316
South Boston	4,084
East Boston	3,503
Dorchester	2,610
West Roxbury	1,448
	<hr/>
	<u>25,385</u>

New Brick Sidewalks.*First laying. Square yards.*

YEAR.	City Proper.	Roxbury.	South Boston.	East Boston.	Dorchester.	West Roxbury.	Brighton	Charlestown.	Back Bay.	Total.
1891	3,881	9,098	3,628	2,176	1,478	967	377	120	.....	21,725
1892	10,423	20,231	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	834	.....	437	.....	19,615
1895	4,103	6,246	1,946	1,151	2,146	1,734	2,908	408	.....	20,632
1896	1,044	15,897	2,314	881	2,616	542	.....	288	5,073	28,155
1897	17,287	21,596	13,460	16,125	2,995	1,855	2,128	14,454	.....	89,900
1898	10,121	13,783	4,487	6,453	4,723	1,225	216	4,653	.....	45,661
1899	5,424	8,316	4,084	3,503	2,610	1,448	.....	.....	.....	25,385
Totals.....	54,784	112,612	37,850	46,948	29,895	11,860	6,697	23,986	5,073	329,705



MERCHANTS' ROW, FROM STATE STREET.

Next cross-town street below Exchange and Devonshire streets. This picture shows narrow outlet into North street. In addition to this obstruction Faneuil Hall square is on all week days crowded with market teams.

Public Alleys.

Accepted under Chapter 323 of the Acts of 1891, and Amendments, and Chapter 298 of the Acts of 1898.

DATE.	Number.	Dis- trict.	Location.	Length, feet.
July 13, 1899,	102,	C. P.,	Marshall st. to Creek sq., Hancock row	194.5
			<i>Between Marlborough street and Commonwealth avenue.</i>	
Jan. 15, 1900	422,	"	Arlington st. to Berkeley st.	596
"	423,	"	Berkeley st. to Clarendon st.	548
"	424,	"	Clarendon st. to Dartmouth st.	548
"	426,	"	Exeter st. to Fairfield st.	600
"	427,	"	Fairfield st. to Gloucester st.	500
"	428,	"	Gloucester st. to Hereford st.	375
"	429,	"	Hereford st. to Massachusetts ave... <i>Between Newbury and Boylston sts.</i>	640
Oct. 13, 1899,	438,	"	Arlington st. to Berkeley st.	596
"	439,	"	Clarendon st. to Dartmouth st.	548
"	440,	"	Dartmouth st. to Exeter st.	528
"	441,	"	Exeter st. to Fairfield st.	600
"	442,	"	Fairfield st. to Gloucester st.	500
"	443,	"	Gloucester st. to Hereford st.	375
"	444,	"	Hereford st., west	521.5
Feb. 17, 1899,	701,	"	Shawmut ave. to Tremont st., be- Union Park and Upton sts.	627.6
July 25, 1899,	702,	"	Worcester st. to W. Springfield st., between Newland and Tremont sts ,	205.44
"	703,	"	Newland st. to Public alley 702, between Worcester and W. Spring- field sts.,	192
Mar. 23, 1899,	901,	Rox.,	Between Hemenway st. and the Fenway, and Boylston st. and the Westland entrance	783.34
Oct. 19, 1899,	905,	"	West from Massachusetts ave. and Marlborough st, and to Marlbor- ough st.	341
				9,819.38

The records of the Street Commissioners for the year 1899 show the following results :

Streets laid out or extended	34,793.66	feet.
Streets widened and relocated	867,348	square feet.
Streets discontinued	220	square feet.
Increase in mileage	6.589	miles.
Public alleys	9,819.38 ft.	= 1.859 miles.

Streets Laid Out or Extended and Ordered to be Constructed.

DATE.	Street.	Location.	Length. Lin. ft.
1899.	<i>City Proper.</i>		
June 9,	Andrews st. . . .	E. Canton st. to Dedham st.	200
Oct. 13,	Province ct. . . .	From Province st.	163
Nov. 15,	Aberdeen st. . .	Beacon st. to Brookline Branch, B. & A. R.R.	370.4
	<i>Roxbury.</i>		
May 31,	Gainsborough st.	St. Stephen st. to Hemenway st. . .	786.14
Oct. 17,	Echo st.	Columbus ave. to Centre st.	144.68
Nov. 15,	Pontiac st.	Hillside st. to Tremont st.	918.66
Nov. 22,	Cardington st.,	Cobden st. to Fenner st.	218.98
Nov. 22,	Dunford st. . . .	Cobden st. to Fenner st.	187.08
Dec. 22,	Carlow st.	Albany st. to Chadwick st.	251.36
	<i>Dorchester.</i>		
April 24,	Waldeck st. . . .	Melville ave. to Tonawanda st. . .	1,615.75
April 27,	Lauriat ave. . . .	Tucker st. to Norfolk st.	435.97
June 12,	Montague st. . .	Ashmont st. to Roslin st.	330.70
July 16,	Draper st.	Robinson st. to Bowdoin st.	1,718.00
June 26,	Esmond st.	Blue Hill ave. to Harvard st. . . .	1,493.00
July 13,	Edison Green . .	Dorchester ave. to Pond st.	846.10
July 14,	Warner st.	Harvard st. to Park st.	815.75
Aug. 1,	Rozella st.	Adams st. to Muzzy st.	305.70
Aug. 5,	Spencer st.	Athelwold st. to Harvard st.	322.63
Aug. 25,	Moseley st.	Crescent ave. to Columbia road . .	1,008.00 ⁴
Aug. 25,	Wainwright st.	Centre st. to Welles ave.	810.00
Sept. 1,	Barry st.	Quincy st. to Richfield st.	1,291.85
Sept. 1,	Conrad st.	From Sumner st.	224.09
Sept. 11,	Nottingham st.	Bullard st. to Bowdoin st.	650.27
Sept. 18,	Annabel st . . .	Columbia road to Sumner st.	409.93
Sept. 27,	Fowler st.	Glenway st. to McLellan st.	337.48
Sept. 29,	Thane st.	Athelwold st. to Harvard st.	326.73
Sept. 25,	Rockford st. . .	Dudley st. to Clifton st.	589.61
Oct. 10,	Leonard st . . .	Duncan st. to Adams st.	461.93
Oct. 17,	Seaborn st. . . .	Centre st. to Kenwood st.	423.51
Nov. 6,	Bird-st.	Columbia road to Hancock st. . . .	319.50
Nov. 6,	Templeton st. .	Dorchester ave. to Adams st.	2,088.51
Nov. 15,	Normandy st. . .	Lawrence ave. to Grove st.	265.99
Nov. 16,	Shepton st. . . .	Dorchester ave. to Florida st. . . .	1,040.12
	<i>West Roxbury.</i>		
June 22,	Congreve st. . .	South st. to Centre st.	1,402.87
July 17,	Oakview st. . . .	From Centre st.	850.00
July 20,	Williams st. . . .	Over location N.Y., N.H. & H.R.R.	66.48
Aug. 4,	Dresden st. . . .	Boylston st. to Spring Park ave. . .	378.74
Sept. 9,	Stratford st. . . .	Anawan ave. to Clement ave.	962.50
Sept. 25,	Rowe st.	Ashland st. to Sharon st.	431.09
Sept. 25,	Seymour st. . . .	Canterbury st. to Brown ave. . . .	1,140.00
Sept. 27,	Custer st.	Woodsman st. to Arboretum.	504.22
Nov. 6,	Railroad st. . . .	Corey st. to Willow st.	852.62
Dec. 6,	Westbourne st.	Cornell st. to Beech st.	595.44
		<i>Carried forward</i>	28,555.28

Streets Laid Out or Extended and Ordered to be Constructed.—
Concluded.

DATE.	Street.	Location.	Length. Lin. ft.
1899.	<i>South Boston.</i>	<i>Brought forward.....</i>	28,555.28
Nov. 6,	Dixfield st.	Old Harbor st. to Covington st.	284.00
Dec. 6,	B st.	Low-water st. to Congress st.	1,139.62
	<i>East Boston.</i>		
Nov. 3,	Wordsworth st.	Saratoga st. to Pope st.	1,194.93
			31,173.83 ft. or, 5.907 miles.

Streets Widened, Relocated or Ordered to be Constructed.

STREET.	Location.	Date.	Widen- ing. sq. ft.	Discon- tinu- ance. sq. ft.
		1899.		
Boylston st., C. P. ..	Tremont st. to Park sq.,	Oct. 19,	59	53
Chambers st., C. P. .	At Ashland st.	Sept. 28,	.....
Swett st., C.P. & S.B.	Massachusetts ave. to Dorchester ave.	Nov. 6,	43,092	
Cambridge st., Bri..	Brighton ave. to Wash- ington st.	July 17,	56,401	
Tremont st., Bri....	Washington st. to New- ton line.	Oct. 6,	36,929	
Alford st., Chsn....	Mystic river to Everett line	Aug. 2,	31,002	
Athelwold st., Dor.,	Corner School st.	Mar. 17,	789	
Centre ave., Dor. ...	At Centre st.	Aug. 4,	447	
Gibson st., Dor.	Dorchester ave. to Adams st.	Nov. 20,	21,240	
Hancock st., Dor....	Columbia road to Win- ter st.	Nov. 15,	31,028	
Lauriat ave., Dor. ..	Ballou st. to Tucker st.,	April 27,		
Bennington st., E.B.,	Chelsea st. to Belle Isle inlet	June 27,	507,406	
Albany and North- ampton sts., Rox..	At their junction	April 28,	137	
Brookline ave., Rox.,	Longwood entrance to Back Bay Fens.	Oct. 13,	43,300	
L st., S. B. ....	.....	May 19,	25,023	
Corinth st., W. R. ..	.....	Sept. 25,	11,341	
Perkins st., W. R. .:	Centre st. to Jamaica- way	Sept. 25,	15,269	
South st., W. R.	Jamaica st. to Arbor- way	April 3,	29,261	167
Washington st., W.R.	Morton st. to Tower st.,	Nov. 3,	13,001	
Williams st., W. R..	Washington st. to Call st.	July 20,	1,623	
			867,348	220

*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.

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 in 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 tool-house.

On the Almhouse 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-avenue 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 Brush Hill road, containing 64,523 square feet, hired by the town of Dorchester for 999 years.

Gravel lot on Morton street, Ward 23, containing about one-third 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 Chestnut 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, carriage 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 Centre street, West Roxbury, buildings containing engines, stone-crushers, tools, etc., on leased land.

On Rosseter street, Dorchester, buildings containing engines, stone-crushers, tools, etc., on leased land.

On Heath street, Roxbury, buildings containing engines, stone-crushers, tools etc., on leased land.

On Revere street, wharf for storing paving-blocks, etc.

Wharf on Chelsea street, East Boston, containing 61,000 square feet, with buildings purchased in 1897 for \$15,000.

Permits have been issued from this office during the year ending January 31, 1900, as follows :

STREET OPENINGS.

	Permits.	Feet.
American Telephone and Telegraph Company.....	27	912
Auxiliary Fire Alarm Company.....	3	130
Automatic Fire Alarm Company.....	2	1,075
Boston Fire Department.....	29	1,704
Boston Lamp Department.....	632	3,445
Boston Park Department.....	4	3,725
Boston Police Department.....	5	45
Boston Public Buildings Department.....	3	40
Boston Street Department (Sewer Division).....	300	23,600
Boston Water Department.....	2,871	159,341
Boston Water Department (Income Division).....	60	1,085
Boston Wire Department.....	1	160
Boston & Albany Railroad Company.....	3	65
Boston & Maine Railroad.....	28	854
Boston Electric Light Company.....	384	32,872
Boston Elevated Railway Company.....	371	188,121
Boston Gas Light Company.....	489	29,863
Boston Low Tension Wire Association.....	10	1,245
Boston Pneumatic Transit Company.....	3	610
Boston, Revere Beach & Lynn Railroad.....	1	45
Brookline Gas Light Company.....	250	41,643
Charlestown Gas and Electric Company.....	39	6,518
Church Green Light and Power Company.....	1	20
Dorchester Gas Light Company.....	376	26,865
Edison Electric Illuminating Company.....	399	27,739
Eastern Cold Storage Company.....	19	3,135
East Boston Gas Light Company.....	103	4,740
Fitchburg Railroad Company.....	7	985
Jamaica Plain Gas Company.....	108	2,973
Lynn & Boston Railroad Company.....	5	358
Massachusetts Pipe Line Company.....	51	39,546
<i>Carried forward</i>	6,584	608,459

	Permits.	Feet.
<i>Brought forward</i>	6,584	608,459
Metropolitan Water Commission.....	16	900
Massachusetts Telephone and Telegraph Company...	8	6,740
New England Telephone and Telegraph Company....	410	70,861
New England Telegraph Company.....	16	2,790
Newtonville & Watertown Street Railway Company..	2	312
New York, New Haven & Hartford R.R. Company...	6	1,425
Norfolk Suburban Street Railway Company.....	1	2,500
Postal Telegraph Cable Company.....	24	4,914
Quincy & Boston Street Railway Company.....	1	100
Quincy Market Cold Storage Company.....	80	1,854
Roxbury Gas Light Company.....	228	13,455
South Boston Gas Light Company.....	193	29,796
Simpson Brothers Corporation.....	76	8,098
Standard Oil Company.....	27	331
West Roxbury & Roslindale Street Railway Company,	11	27,961
Western Union Telegraph Company.....	25	5,109
Miscellaneous.....	3,848	147,307
Emergency permits, Class A.....	1,967	
Emergency permits, Class A, returned, 1,622.....		9,732
Total	13,523	942,644

Total number of feet opened was 942,794 lineal feet.
 Making a total length of openings, 178.55 miles.

Permits other than for street openings have been granted as follows :

Advertising by man wearing hat and coat	5
Cleaning snow from roofs	156
Dumping snow in public alleys	248
Driving cattle	9
Erecting, removing, and repairing awnings	3,293
Erecting and repairing buildings	5,932
Feeding horses on the street	754
Moving buildings	26
Loading and unloading goods on sidewalks	565
Pedlers, two different classes	1,548
Placing signs flat on buildings	1,696
Painting signs or notices on obstruction fences	4
Raising and lowering safes, etc.	323
Selling from areas	75
Selling from buildings	147
Farmers' wagon stands	373
Special permits for various purposes	112
Special permits for June 17 and July 4	200
Extension of permits	400
Emergencies, Class B	307

Permits to Project Electric Lamps and Signs, as follows :

Boston Electric Light Company	81
Brookline Gas Light Company	1
Edison Electric Illuminating Company	39
Kitson Hydro Carbon Light and Heating Company	58
Suburban Light and Power Company	37
Washington Incandescent Company	19
Total	16,408



FANEUIL HALL SQUARE, SHOWING NARROW CONTINUATION OF MERCHANTS' ROW INTO NORTH STREET.

Total number of permits for street openings	13,532
Total number of permits for all other purposes	16,408
Grand total	<u>29,940</u>

Five hundred letters, postal cards and notices have been sent to storekeepers and householders in connection with selling fruit, etc., from doorways, windows, and areas.

There have been 9,863 notices sent to the various foremen during the year, directing them to repair defects in the public streets which had been reported by the police and others, also 577 letters and notices to private parties, departments and corporations to repair the streets where they had received permits, and the resurfacing, etc., had been improperly done, and to owners of estates where coal-holes or sidewalk lights were defective.

There have been 2,740 notices sent to departments, corporations and owners of abutting estates on streets where improvements were about to be made.

Six hundred and sixty-four notices have been sent to departments and corporations at the request of the Assistant City Engineer, calling for changes in various ways on account of street improvements.

There have been 303 new bonds filed during the year, a large percentage of which have been guaranteed by surety companies, which is considered a great improvement.

On April 12, 1899, the charge for permits was discontinued. From February 1 to that time the sum of one thousand five hundred and forty-three dollars (\$1,543) had been received and deposited with the City Collector, as per receipts on file.

INSPECTORS.

The Street Inspectors have been engaged in inspecting locations where permits have been granted for street openings, etc., and where defects were found the parties making said openings have been notified, and required to place the streets at such points in a condition satisfactory to the Superintendent of Streets.

Four thousand six hundred notices were sent by the Superintendent of Inspectors regarding the defects.

Inspectors have been detailed to serve on work done by the various corporations at all times while their work has been in progress, and a report required from them in writing giving the particulars of the work and its condition.

Street numbering has been carried on as follows :

During the year 365 whole streets were numbered or renumbered, parts of streets were numbered in 1,262 cases, and 14,775 metallic figures were supplied.

The appending table explains the work done by districts, and in addition gives the number of estates numbered, and the number of changes made necessary by renumbering or other cause.

Particular attention was given to Dorchester and West Roxbury districts during the past year, as it was found upon investigation that the public convenience demanded extensive numbering in these growing sections.

The Board of Assessors, Water Department, and Post Office officials were promptly notified of all changes in street numbering, in order that residents might be spared inconvenience.

	Whole streets Numbered.	Whole streets Renumbered.	Parts of streets Numbered.	Estates Num- bered.	Numbers changed.	Metallic Num- bers supplied.	Total streets Numbered and Renun- bered.
East Boston.....	12	9	55	342	140	954	21
Charlestown		1	17	58	24	129	1
City Proper.....	1	6	93	389	100	1,015	7
South Boston			39	75		207	
Dorchester	91	81	471	2,231	755	5,310	172
Roxbury	8	15	259	768	185	2,012	23
West Roxbury.....	97	29	176	1,753	186	4,440	126
Brighton	11	8	92	263	38	708	19
Totals.....	220	149	1,202	5,879	1,428	14,775	369

There are now listed 252 streets to be numbered or renumbered, and this work will be started at the earliest opportunity. In the meantime it has been found necessary to re-index all plans and maps on file in this office, so that any one required may be produced at a moment's notice.

APPENDIX D.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE
SANITARY DIVISION.

ROOMS 917-920 TREMONT BUILDING,
BOSTON, February 1, 1900.

BENJ. W. WELLS, ESQ.,

Superintendent of Streets:

DEAR SIR, — The following is the report of the expenditures, income and operation of the Sanitary Division of the Street Department, for the financial year ending January 31, 1900.

Respectfully submitted,

PATRICK O'SHEA,

Deputy Superintendent.

The work of the Sanitary Division, including the removal of house offal, waste and rubbish, and of house dirt and ashes accumulated from the burning of materials for heating buildings and for domestic purposes, was for the past year greater than that of any year since its organization.

The method of collecting ashes by what is known as the block system has been continued in the section of the city north of Massachusetts avenue.

The cost of disposing of refuse collected daily is constantly increasing; owing to the undesirable character of much of it for use as filling it is difficult to obtain suitable dumping places. The only available dumps are so far distant from the points of collection that the expense of hauling is abnormally increased. In fact, the economic disposal of this kind of refuse, namely, ashes, is becoming a serious problem, and unless it can be made of commercial value in the near future, it will be necessary to secure additional dumping places on the water front, so that it may be towed to sea.

Through the ready co-operation of the householders, after receiving circulars explaining its object, we have been able to put in practice the further separation of the refuse called ashes, and known in the Division as the third separation, by which all papers and light combustible waste are put into a receptacle by themselves.

This material is hauled in special carts designed for the purpose to the new Utilization Plant on Atlantic avenue, where it is sorted, the merchantable portion disposed of, and what is worthless consumed in an unoffensive and sanitary manner.

The plant of the City Refuse Utilization Company has been in successful operation since January, 1899, and was designed to utilize all combustible refuse collected in the city proper north of Massachusetts avenue. It is obvious that the disposal of clean ashes, separated from lighter, but more bulky, refuse, such as paper, etc., is a comparatively easy matter to handle. In the short time that it has been tested, most satisfactory results have been obtained, and I would recommend its extension to other sections of the city, where smaller and less expensive plants might be centrally located for treating refuse of this kind.

To this further separation there was objection from householders in some sections of the district, and it also made a more profitable field for the scavengers to ply their vocation, so that it became necessary to detail two special police officers who greatly assisted in carrying out the work.

The principal improvements have been the establishment of the Garbage Plant at the Calf Pasture to which 200 tons of offal collected daily by the city teams is now carted and disposed of in a sanitary manner. Since the establishment of this plant, March 4, 1899, the sale of offal to farmers has entirely ceased, and the former practice of dumping the offal at sea which has been such a source of annoyance to neighboring shore towns has been entirely discontinued.

When the new system of disposing of the garbage was put into operation it was necessary to build an additional dumping-station at the Albany-street yard for the convenience of dumping the offal. The expense incurred was \$5,500.

The two Barney dumping boats used for conveying the refuse to sea have been put in good condition, extensive repairs having been made upon them. December 21, 1899, a stable and plant was established at East Boston, and the city is now collecting in that district the refuse which was formerly collected there by contract.

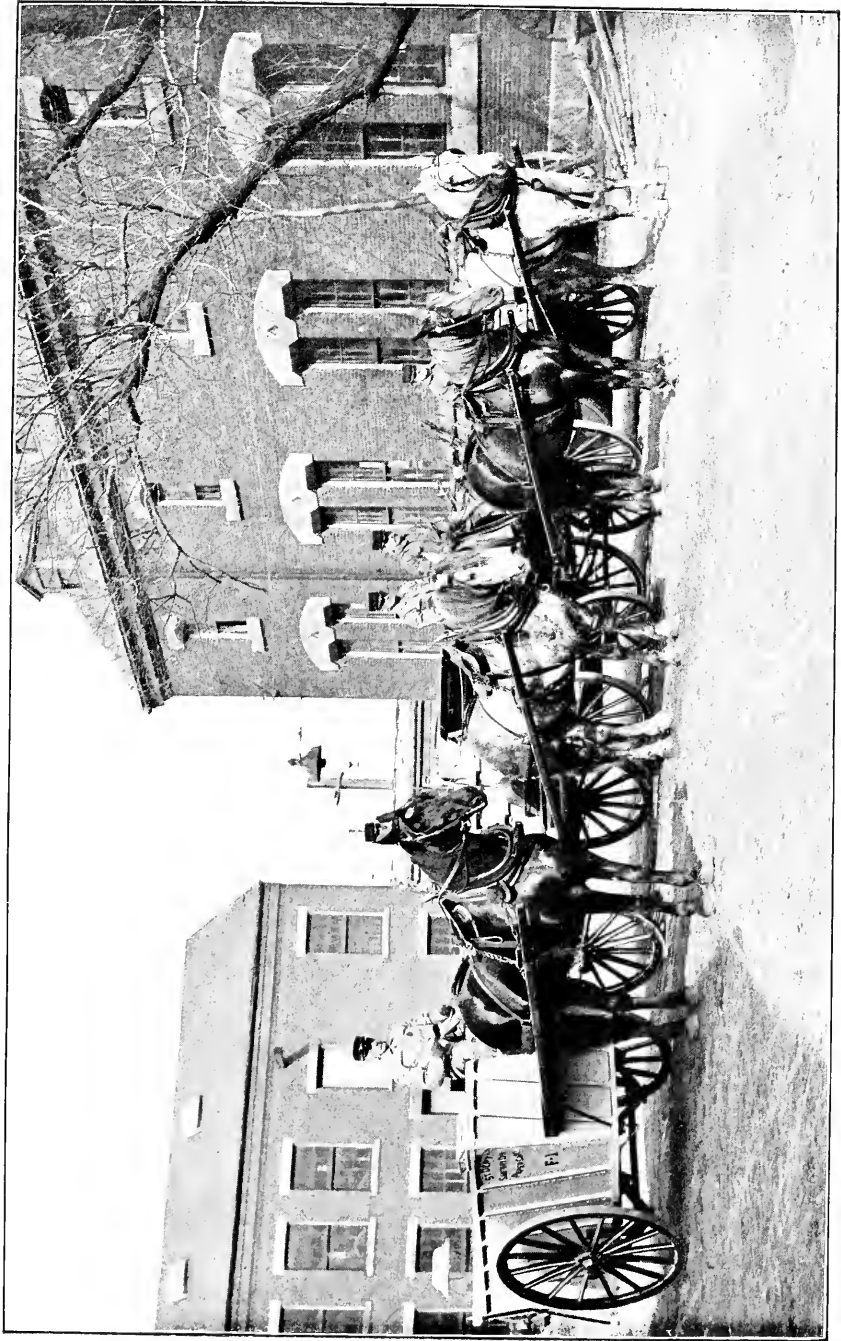
I wish to renew my recommendation for the purchase of a new dumping boat, as one of the boats has been in service for over twenty years, and is practically worn out; the growing scarcity of suitable dumping-places is a further reason for its purchase, as more material will have to be towed to sea in the future than in the past. I recommend, also, that suitable wharf property be secured, for the same reason. Stables and sheds have been kept in good repair, so far as our means for such work would allow.

The work of cleaning the private alleys and passageways in which the city abounds, and which are too narrow for a horse and cart to enter, is the duty of the abutters who are part owners therein, but on the ground, I suppose, that "that which is everybody's business is nobody's business," they are generally allowed to remain in a filthy condition, and are a constant menace to public health. Consequently, although it is not considered part of our duty, and has not been heretofore systematically carried out, I have no hesitation in saying that the money expended in its execution last year could not have been put to better use.

I believe that this Division should be charged with the duty, and ample appropriation made therefor.

The horses, carts and harnesses in charge of the department are in excellent condition, and a new hospital at the South yard for the proper treatment of sick horses has been built.

Twelve new carts for hauling refuse have been built in the shops of the Division during the past year.



STREET DEPARTMENT EXHIBIT,— BOSTON HORSE SHOW, 1899.

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

1895	\$432,778 52
1896	476,807 34
1897	492,670 56
1898	508,152 88
1899	567,107 81

Comparative Table, showing Net Cost of Maintenance of the Sanitary Division to the City of Boston.

	Expended.	Income.	Net cost to the city.
1895	\$432,778 52	\$42,985 53	\$389,792 99
1896	477,241 54	36,146 77	441,094 77
1897	492,670 56	34,430 48	458,240 08
1898	508,152 88	28,269 90	479,882 98
1899	567,107 81	13,548 03	553,559 78

HOUSE OFFAL.

There are employed in the removal of house offal 212 men and 92 wagons. The offal is removed from dwelling-houses twice a week during the summer, and once a week during the winter months, and from hotels, markets and restaurants daily. The men are required to enter yards, collect the offal, empty into wagons and deliver to scows located as follows:

On Albany street, foot of East Canton; Fort Hill wharf on Atlantic avenue.

Four sections of the city are done by contract, as follows:

The collection of house offal in East Boston, by T. Mulligan; Dorchester District, by John Bradley; Brighton District and a portion of West Roxbury, by George T. Barnes.

The revenue received from the sale of house offal for the past five years has been as follows:

1895	\$27,374 47
1896	21,884 11
1897	17,416 75
1898	10,982 25
1899	489 00

March 4, 1899, was the last day on which offal was sold by the city.

The following table shows the number of loads of house offal collected and removed in the last five (5) years:

Year.	<i>Amount of House Offal Removed.</i>	No. of Loads.
1895		51,327
1896		56,402
1897		56,783
1898		57,764
1899		59,956

Each load of offal is equivalent to fifty-six (56) cubic feet, and has a maximum weight of one and a quarter (1 $\frac{1}{4}$) tons at certain seasons of the year.

Of the amount of 59,956 loads, collected during the year 1899, 3,740 were collected by the East Boston contractor; 1,491 by the Brighton contractor, 6,710 by the Dorchester contractor, and 796 loads by the West Roxbury contractor, leaving 47,219 loads collected by the city teams.

The collection of this material is attended to in winter by an average regular force of 71 city offal carts and 162 men, and on contract work 21 offal carts and 50 men, making a total of 92 offal carts and 212 men.

The disposal has been made during the year in the following manner: The offal from the markets and that from other sections of the city was put on board scows and towed to the plant of the New England Sanitary Product Company, located on a point of land in Dorchester Bay known as the Cow Pasture; this included the collections in the sections of the city known as the City Proper, Roxbury, a part of West Roxbury, South Boston and Charlestown; that of East Boston was collected by contract and removed to Revere; that of Brighton was collected by contract and disposed of outside of the district; and that in Dorchester was collected by a contractor and sold to farmers, and a portion of West Roxbury was collected by contract and removed to Needham.

Under the contract of the New England Sanitary Product Company, for the utilization of the offal collected in the city daily, about 76 per cent. of the total daily collection was sent to either Fort Hill or Albany street wharves, and there deposited on scows owned by this company.

Out of the 59,956 loads collected during the past year in the city and suburbs, 13,618 loads, or 23 per cent., was fed to hogs, and 45,566 loads, or 76 per cent., carried in scows to the plant of the New England Sanitary Product Company.

Collection and Disposal of Offal.

YEAR.	Total amount collected.	Amount sold.	Amount dumped on scow and towed to sea or wasted.	Per cent. wasted on total collected.	Amount of receipts from sales.
1895 ¹	41,480 loads	36,620 loads	4,860 loads	12 per cent.	\$27,374 47
1896 ²	45,844 "	35,549 "	10,295 "	22 "	21,187 76
1897 ³	46,071 "	32,495 "	13,576 "	29 "	17,416 75
1898 ⁴	45,703 "	20,463 "	23,652 "	51 "	10,982 25
1899 ⁵	47,219 "	881 "	772 "	.015 "	489 00

¹ 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.

² In East Boston, 3,786 loads; Brighton, 1,362 loads; Dorchester, 4,707 loads; West Roxbury, 703 loads, — total, 10,558 loads, collected during 1896 not included in above table.

³ In East Boston, 3,720 loads; Brighton, 1,520 loads; Dorchester, 4,712 loads; West Roxbury, 760 loads, — total, 10,712 loads, collected during 1897 not included in above table.

⁴ In East Boston, 3,726 loads; Brighton, 1,472 loads; Dorchester, 6,058 loads; West Roxbury, 805 loads, — total, 12,061 loads, collected during 1898 not included in above table.

⁵ In East Boston, 3,740 loads; Brighton, 1,491 loads; Dorchester, 6,710 loads; West Roxbury, 796 loads, — total, 12,737 loads, collected during 1899 not included in above table.

March 4, 1899, the last day for the sale of swill.

The following table shows the full force engaged in the collection of offal alone throughout the entire city:

The Force Employed.

CITY FORCE.	No.	Hired Teams.	CONTRACTORS' TEAMS.				Total.
			East Boston.	Brighton.	Dorchester.	West Roxbury.	
Sub-foremen	7	.....	.....	.....	.....	.....	7
Inspectors.....	1	.....	1	1	1	1	5
Offal clerk.....	1	.....	.....	.....	.....	.....	1
Teamsters.....	68	3	6	4	8	3	92
Helpers.....	70	3	6	4	16	3	102
Dumpers.....	4	.....	.....	.....	.....	.....	4
Tallyman	1	.....	.....	.....	.....	.....	1
Totals	152	6	13	9	25	7	212

The money received from the sale of house offal was deposited monthly with the City Collector until March 5, 1899, as the sale of offal ceased March 4, 1899.

HOUSE DIRT, ASHES, WASTE AND RUBBISH.

In the collection of house dirt and ashes there are employed 399 men and 169 carts. This material is removed from hotels, tenement houses and stores daily; from dwelling houses once a week.

The City Ordinances of 1898 (chapter 38, section 1) 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 amount collected last year 26 per cent. was carried to sea.

The collection of house dirt and ashes in four sections of the city was done by contract, as follows: South Dorchester, by Denis Flynn, and North Dorchester by Patrick J. Lyons; East Boston, by W. F. Hedrington, and a part of West Roxbury by John J. Moore.

Of the 329,096 loads of ashes collected during the past year 207,782 loads, or 63 per cent., were deposited on low lands in the outlying districts of the city, 84,127 loads, or 26 per cent., were towed to sea, and the balance, 37,187 loads, or 11 per cent., were collected by contractors and used on low lands for filling; 19,815 loads of waste and rubbish were collected, of which amount, 16,926 loads, or 86 per cent., were delivered at the plant of the City Refuse Utilization Company on Atlantic avenue, 2,718 loads, or 13 per cent., being burned or buried on the various dumps and 172 loads, or .01 per cent., carried to sea.

Good results were made in the collection of store sweepings of what is known as the business section of the city, the occupants in

stores, etc., being requested, by the distribution of printed notices, to put out all waste material previous to 7.30 A.M., so that the collectors could remove it while the streets were passable, much annoyance and inconvenience which had previously existed being in a large measure prevented.

Several 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 kept 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 the work be not unnecessarily delayed, the following circular was issued :

Notice is hereby given that the new plant erected for the incineration of combustible waste will be in operation at an early date, and the following regulations in regard to the three separations of refuse will be enforced by this department :

1. Ashes must be kept free from all other refuse matter and in metallic vessels.

2. House offal or garbage must be kept free from all other refuse matter (except food cans and food bottles) and in suitable vessels.

3. All other refuse, such as paper, rags, excelsior, straw, mattresses, old clothes, pasteboard boxes, carpets, etc., must be kept free from ashes and garbage and in suitable vessels, or in bundles firmly fastened so as to prevent the rubbish from being scattered in handling, and must be protected from the weather until collected by the proper authorities.

The above rules must be complied with, or refuse will not be removed.

The removal of ashes and other refuse is governed by the following provisions of law :

ACTS OF 1892, CHAPTER 419, SECTION 112.

All receptacles for ashes, waste and other substances, liable, by spontaneous combustion or otherwise, to cause a fire, shall be made of incombustible material, satisfactory to the inspector. Every building used as a tenement or lodging house shall have outside, and appurtenant to it, a suitable space, satisfactory to the inspector, for the temporary deposit of garbage and other refuse matter.

REVISED ORDINANCES OF 1892, CHAPTER 43, SECTION 14.

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

REVISED ORDINANCES OF 1892, CHAPTER 43, SECTION 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.

BENJAMIN W. WELLS,
Superintendent of Streets.

PATRICK O'SHEA,
Deputy Supt. Sanitary Division.

January, 1890.

It will be noted that the circular also requires a third separation, viz., that all refuse other than household ashes or offal be placed in a third receptacle. This was done to dispose of the combustible waste by the City Refuse Utilization Company.

The annual spring cleaning of the entire city was more than usually effectual this year, about 5,000 loads being taken from yards, areas and back alleys, passageways were also thoroughly cleaned. The following notice was issued to the public:

CITY OF BOSTON.

Notice to Housekeepers and Tenants.

Housekeepers and other occupants of dwellings are requested to place their house and cellar dirt and sweepings in the streets opposite their premises between the hours of sunrise and 2 o'clock P.M., of the following days: Monday, May 1; Tuesday, May 2; Wednesday, May 3; Thursday, May 4; Friday, May 5; when they will be removed by the city carts. After which times no person will be allowed to place any dirt, ashes, filth or rubbish of any kind whatever in any of the ways, streets or places of the city, without a permit from the Superintendent of Streets.

Dirt of any kind not to be placed in the streets on Saturday.

BENJAMIN W. WELLS,
Superintendent of Streets.

CITY HALL, BOSTON, 1899.

Special Notice.

On and after above-named days, ashes, etc., in order to be removed by city carts, must be placed in receptacles not larger than an ordinary flour barrel, and in a position on a level with the grade of the adjoining sidewalk.

Vault filth, offal, bricks and mortar, gravel and earth, garden rakings and shrubbery are not included in the above, and will not be removed by the city if placed in the streets.

NOTE.—This circular, printed in English, Hebrew and Italian, was posted in prominent places by the regular bill-posting companies, and for a week was also carried on the sides of all the wagons and carts owned by this division.

REMOVAL OF HOUSE DIRT, ASHES, WASTE AND RUBBISH.

The removal of house dirt, ashes, waste and rubbish has been attended to during the year by a minimum force of three hundred and ninety-nine men and one hundred and forty-nine carts, also by five carts with the East Boston contractor, twelve carts with Dorchester contractors, and three carts with the West Roxbury contractor.

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 HOUSE DIRT AND ASHES REMOVED.

Year.		No. of Loads of 44 cubic feet.
1895	House dirt and ashes, <i>including</i> waste and rubbish,	336,886
1896	“ “ “ “ “ “ “ “ “	363,975
1897	“ “ “ “ “ “ “ “ “	1,389,098
1898	“ “ “ “ “ “ “ “ “	1,394,937
1899	“ “ “ “ <i>exclusive of</i> “ “ “	1, 2 329,096

¹ Previous to the year 1897, each load of ashes contained about 44 cubic feet. During the year 1897 all the ash carts owned by the city were equipped with side-boards, increasing their capacity to 54 cubic feet, but for the purpose of comparison the old basis has been used.

² Previous to the year 1899, waste and rubbish was treated the same as ashes in loads removed.

AMOUNT OF WASTE AND RUBBISH REMOVED.

	Number of Loads		
	Ash Cart.	Paper Cart.	Market Wagon.
1899	1,892	14,903	3,020

The following table shows the force engaged in this collection throughout the entire city:

The Force Employed.

CITY TEAMS.	No.	Hired Teams.	CONTRACTORS' TEAMS.				Total.
			North Dorchester.	South Dorchester.	East Boston.	West Roxbury.	
Sub-foremen	7						7
Inspectors	10		1			1	13
Tallymen	4						4
Teamsters	118	31	7	5		3	169
Helpers	136	31	7	5	5	3	187
Dumpers	19						19
Totals	294	62	15	10	11	7	399

Material Collected by Districts.

DISTRICTS.	South Boston.	East Boston.	Charlestown.	Brighton.	W. Roxbury.	Dorchester.	Roxbury.	South End and Back Bay.	North and West Ends.	Total Loads.
House dirt and ashes.	27,807	14,832	19,455	12,588	26,438	29,654	52,475	77,278	68,569	329,096
Waste and rubbish . . .	269	39	259				1,136	10,471	7,641	19,815
House offal.	3,808	3,740	2,812	1,491	3,286	6,710	7,648	19,991	10,470	59,956
Totals	31,884	18,611	22,526	14,079	29,724	36,364	61,259	107,740	86,680	408,867

Number of Loads of Material Collected from January 31, 1894, to February 1, 1900.

YEARS.	Waste and Rubbish.	Ashes.	Offal.	Total Loads.
1895		336,886	51,327	388,213
1896		363,975	56,402	420,377
1897		389,098	56,783	445,881
1898		394,937	57,764	452,701
1899	³ 19,815	¹ 329,096	² 59,956	408,867

¹ William F. Hedrington, East Boston, collected	13,222	Loads.
Patrick J. Lyons, North Dorchester, collected	18,510	"
Denis Flynn, South Dorchester, collected	11,144	"
John J. Moore, part of West Roxbury, collected	7,610	"

² Thomas Mulligan, East Boston, collected	50,486	Loads.
George T. Barnes, Brighton, collected	3,740	"
John Bradley, Dorchester, collected	1,491	"
George T. Barnes, part of West Roxbury, collected	6,710	"
	796	"

³ This was the first year that an account of the number of loads of waste and rubbish was kept; heretofore no separation was called for by the division.

Comparative Statement of Number of Loads of Ashes Collected During Sixteen Weeks of the Summer and Sixteen Weeks of the Winter.

Summer.	Loads.	Winter.	Loads.	Difference for Winter.	Loads.
April 26, 1895, to Aug. 15, 1895.....	94,671	Oct. 18, 1895, to Feb. 6, 1896.....	121,873	1895	27,202
“ 30, 1896, “ “ 13, 1896.....	101,135	“ 16, 1896, “ Jan. 28, 1897.....	117,214	1896	16,079
“ 29, 1897, “ “ 19, 1897.....	109,366	“ 15, 1897, “ “ 27, 1898.....	126,057	1897	16,691
“ 29, 1898, “ “ 18, 1898.....	110,931	“ 7, 1898, “ “ 26, 1899.....	129,208	1898	18,277
“ 28, 1899, “ “ 17, 1899.....	189,994	“ 6, 1899, “ “ 25, 1900.....	2107,586	1899	17,592

Previous to the year 1899, waste and rubbish was included in loads of ashes collected.
 15,273 paper cart loads of waste and rubbish not included.
 885 market wagon “ “ “ “ “ “
 2893 “ “ “ “ “ “
 4,843 paper cart “ “ “ “ “ “

Disposition of Material Collected.

WHERE DUMPED.	Loads of House Dirt and Ashes.	Loads of Waste and Rubbish.	Loads of House Offal.	Loads of Street Sweepings, Street-Clean- ing Division.	Loads of Cess- pool Matter, Sewer Division.	Total Loads.
Swett st., J. C. Cobb.....	25,933	813	.....	.....	.....	26,746
Alford st., Park Dept.....	17,221	180	.....	.....	.....	17,401
Commonwealth ave., Mr. Carter...	17,090	217	.....	.....	.....	17,307
Norfolk ave., J. J. Nawn.....	15,376	666	.....	.....	.....	16,042
First st., E. Cambridge, J. T. Scully.	14,270	.....	.....	.....	.....	14,270
Ward st., Sewall-Day Co.....	12,894	588	.....	.....	.....	13,482
Centre st., O. Nawn.....	9,844	.....	.....	.....	.....	9,844
D st., Commonwealth of Mass.....	8,886	56	.....	.....	.....	8,942
Williams st., Mr. Parkinson.....	6,480	.....	.....	.....	.....	6,480
Maverick st., E. Boston Land Co...	6,179	.....	.....	.....	.....	6,179
Worthington st., Metropolitan Water Power Co.....	5,621	.....	.....	.....	.....	5,621
E. Ninth st., H. J. Bowen, Ag't...	5,262	25	.....	.....	.....	5,287
Harold st., John Stone.....	5,259	.....	.....	.....	.....	5,259
Mercer st., D. Benshimol.....	4,733	32	.....	.....	.....	4,765
P st., City Engineer.....	3,963	16	.....	.....	.....	3,979
Francis st., J. C. Spillane.....	3,860	.....	.....	.....	.....	3,860
St. Mark's st., P. J. Brady.	3,768	.....	.....	.....	.....	3,768
Gardner st., Gordon Dexter.....	3,159	.....	.....	.....	.....	3,159
Columbus ave.....	3,074	.....	.....	.....	.....	3,074
Border st., George McQuesten.....	2,509	.....	.....	.....	.....	2,509
Bay st., Mr. Everett.....	2,345	.....	.....	.....	.....	2,345
Chelsea st., Patrick Haley.....	2,325	.....	.....	.....	.....	2,325
Rutherford ave., B. & M. R.R. Co..	2,249	27	.....	.....	.....	2,276
Atlantic ave., City Refuse Utiliza- tion Co.....	.....	16,926	.....	.....	.....	16,926
Various places, city teams.....	25,482	97	753	.....	.....	26,332
Various places, contracts.....	37,187	.....	.....	.....	.....	37,187
At sea by scows.....	84,127	172	19	32,658	3,789	120,765
Sold to farmers.....	.....	.....	881	.....	.....	881
New England Sanitary Product Co. ....	.....	.....	45,566	.....	.....	45,566
E. Boston, by Thos. Mulligan.....	.....	.....	3,740	.....	.....	3,740
Brighton, by Geo. T. Barnes.....	.....	.....	1,491	.....	.....	1,491
West Roxbury, by Geo. T. Barnes. ....	.....	.....	796	.....	.....	796
Dorchester, by John Bradley.....	.....	.....	6,710	.....	.....	6,710
Totals.	¹ 329,096	² 19,815	³ 59,956	32,658	3,789	445,314

¹ 1,406 ash carts without side-boards included.

² 1,892 ash carts with side-boards; 14,903 paper carts; 3,020 market wagons.

³ 34,483 wooden wagons; 25,473 iron wagons.

Cost of Hired Teams, Including Contracts.
MATERIAL COLLECTED.

	AMOUNT EXPENDED.			NUMBER OF LOADS.			
	Ashes.	Offal.	Total.	Ashes.	Waste and Rubbish.	Offal.	Total.
1.— South Boston.....	\$5,025 00	\$5 00	\$5,030 00	9,720	94	2	9,816
{ East Boston, by hired teams.....	7,299 13	8,000 00	15,299 13	977	39	.....	1,016
{ " " contract.....	947 50	652 50	1,600 00	113,222	.....	5 3,740	16,962
3.— Charlestown.....	5,095 00	3,000 00	8,095 00	1,707	75	255	2,037
4.— Brighton.....	3,112 50	562 50	3,675 00	8,428	.....	71,491	9,919
{ West Roxbury, by District 7.....	2,391 67	1,800 00	4,191 67	5,532	.....	261	5,793
{ " " south of Pond,	8,095 00	4,980 00	13,075 00	2 7,610	.....	6 796	8,406
6.— Dorchester.....	10,612 50	1,752 50	12,365 00	3-4 29,654	.....	8 6,710	36,364
7.— Roxbury.....	12,390 00	355 00	12,745 00	18,369	8	734	19,111
8 and 9.— South End and Back Bay.....	8,737 50	2 50	8,740 00	14,557	415	249	15,221
10.— North and West Ends.....	\$63,705 80	\$21,110 00	\$84,815 80	13,131	723	1	13,855
Totals.....				122,907	1,354	14,239	138,500

CONTRACTS.

Ashes.	Offal.
1 William Hedington.....	5 Thomas Mulligan.....
2 John J. Moore.....	6 George T. Barnes.....
3 Patrick J. Lyons.....	7 " " ".....
4 Denis Flynn.....	8 John Bradley.....
	Offal.
	\$8,000 00
	3,000 00
	1,800 00
	4,980 00

Final disposition of all material collected from February 1, 1899, to February 1, 1900, together with the portion of street sweepings and cesspool dirt, disposed of for other divisions by the Sanitary Division, is shown in the following table:

	Amount Collected.	Deposited on low lands.	Towed to sea.	Plant of N. E. Sanitary Product Co.	Plant of City Refuse Utilization Co.	Collected by Contractors.	Sold to farmers.
	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>
House dirt and ashes.....	329,096	207,782	84,127	.....	.....	37,187	
Waste and rubbish.....	19,815	2,717	172	.....	16,926		
House offal.....	59,956	753	19	45,566	.....	12,737	881
Street sweepings.	32,658	.....	32,658				
Cesspool dirt.....	3,789	.....	3,789				
Total.....	445,314	211,252	120,765	45,566	16,926	49,924	881

¹ This amount is included in the amount collected, 59,956. Of the amount 12,737 loads, 3,740 were collected in East Boston, 6,710 in Dorchester, 1,491 in Brighton and 796 in West Roxbury.

DIVISION OF AMOUNT EXPENDED.

	Hired Teams.	Contractors.	Total.
Ashes.....	\$45,920 00	\$9,690 80	\$55,610 80
Offal.....	3,330 00	17,780 00	21,110 00
Total.....	\$49,250 00	\$27,470 80	\$76,720 80

The total expenditures of the Division, including work done for other divisions and paid for by them, was	\$606,272 65
Less amount so repaid	39,164 84
	<u>\$567,107 81</u>
Cash paid and bills rendered to City Collector	19,377 92
	<u>Net cost of maintenance of Sanitary Division, February 1, 1899, to January 31, 1900</u>
	<u>\$547,729 89</u>

Details of expenditures, income and operation will be found on the succeeding pages.

FINANCIAL STATEMENT.

Amount of appropriation	\$570,000 00
Total amount expended	567,107 81
	<u>Balance unexpended</u>
	<u>\$2,892 19</u>

INCOME.

Amounts 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, 1900.

STREET DEPARTMENT — SANITARY DIVISION. 133

Moneys Deposited with City Collector.

From sale of house offal	\$489 00	
From sale of scow privileges	1,273 80	
From painting signs	34 80	
		\$1,797 60

Bills Deposited with City Collector.

For the removal of engine ashes	\$15,458 77	
For the sale of manure	374 25	
For the letting of scow privileges	16 30	
For the letting of Fort Hill Wharf	750 00	
For the sale of buildings, Gibson street	981 00	
		17,580 32
		<u>\$19,377 92</u>
Amount collected by the Collector		<u>\$13,548 03</u>

Objects of Expenditures.

ITEMS.	Total amount expended.	Amount paid by other Divisions.	Amount charged to Sanitary Division.
Salary of Deputy Superintendent.....	\$2,925 00		\$2,925 00
Salaries of clerks and messengers.....	7,452 47		7,452 47
Salaries of foremen.....	8,362 20	\$295 78	8,066 42
For labor in removing dirt and ashes.....	145,713 22	18,726 10	126,987 12
For labor, sub-foremen and inspectors, collecting house dirt and ashes.....	15,390 22	1,408 35	13,981 87
For extra teams collecting house dirt and ashes.....	45,920 00		45,920 00
For collecting house dirt and ashes in East Boston.....	7,299 13		7,299 13
For collecting house dirt and ashes in W. Roxbury, south of Pond, May, Arborway and Morton streets.....	2,391 67		2,391 67
For collecting house dirt and ashes in Dorchester, south of Park, School and Harvard streets.....	4,000 00		4,000 00
For collecting house dirt and ashes in Dorchester, north of Park, School and Harvard streets.....	4,095 00		4,095 00
For disposition of ashes.....	747 23		747 23
For ash stock, consisting of shovels, cart covers, etc.....	293 85		293 85
For labor removing house offal, For labor, sub-foremen and inspectors, removing house offal.....	82,007 63	10,266 94	71,740 69
For extra teams, removing house offal.....	9,523 46	1,019 96	8,503 50
	3,330 00		3,330 00
<i>Carried forward</i>	\$339,451 08	\$31,717 13	\$307,733 95

Objects of Expenditures. — *Continued.*

ITEMS.	Total amount expended.	Amount paid by other Divisions.	Amount charged to Sanitary Division.
<i>Brought forward</i>	\$339,451 08	\$31,717 13	\$307,733 95
For removing house offal in East Boston.....	8,000 00	.....	8,000 00
For removing house offal in Brighton.....	3,000 00	.....	3,000 00
For removing house offal in W. Roxbury, south of Pond, May, Arborway and Morton streets.....	1,800 00	.....	1,800 00
For removing house offal in Dorchester.....	4,980 00	.....	4,980 00
For offal stock, consisting of wagons, buckets, etc.....	961 59	.....	961 59
For disposition of offal.....	61,608 96	.....	61,608 96
For disposition of waste and rubbish.....	9,560 97	.....	9,560 97
For labor of men employed in stables and yards.....	24,197 20	1,711 55	22,485 65
For allowed time, holidays....	23,064 29	617 56	22,446 73
For grain.....	17,555 59	437 50	17,118 09
For hay and straw.....	11,414 75	927 55	10,487 20
For medical attendance and allowed time on account of injured men.....	1,894 00	116 50	1,777 50
For horses.....	9,831 00	.....	9,831 00
For veterinary services and medicines.....	2,007 35	.....	2,007 35
For stable stock, consisting of sponges, currycombs, brushes, etc.....	1,505 22	.....	1,505 22
For miscellaneous stable supplies.....	196 29	.....	196 29
Board, use and clipping of horses.....	967 54	.....	967 54
For outside horseshoeing.....	2,195 87	90 50	2,105 37
For outside blacksmithing....	58 85	.....	58 85
For outside wheelwrighting...	11 05	.....	11 05
For labor, stock and tools, blacksmith shop.....	9,070 22	793 77	8,276 45
For labor, stock, etc., wheelwright shop.....	13,420 38	704 38	12,716 00
For labor, stock, etc., harness shop.....	6,321 93	398 71	5,923 22
For labor, stock, etc., paint shop.....	9,124 82	923 03	8,201 79
For labor, stock, etc., horse-shoeing shop, South Yard ..	3,734 16	218 04	3,516 12
For labor, stock, etc., horse-shoeing shop, West Yard ...	2,618 60	55 00	2,563 60
For rental, towage, etc.....	25,551 28	254 85	25,296 43
For repairs on stables and sheds.....	3,173 21	198 77	2,974 44
For outside harness work.....	8 90	.....	8 90
For fuel.....	837 56	.....	837 56
<i>Carried forward</i>	\$598,122 66	\$39,164 84	\$558,957 82

Objects of Expenditures. — *Concluded.*

ITEMS.	Total amount expended.	Amount paid by other Divisions.	Amount charged to Sanitary Division.
<i>Brought forward</i>	\$598,122 66	\$39,164 84	\$558,957 82
For gas	809 76	.....	809 76
For electric light.....	511 00	.....	511 00
For printing.....	1,787 87	.....	1,787 87
For stationery.....	1,005 63	.....	1,005 63
For advertising.....	420 16	.....	420 16
For rents	1,535 33	.....	1,535 33
For tolls and fares.....	274 59	.....	274 59
For telephones	1,068 36	.....	1,068 36
For office items and expenses..	658 03	.....	658 03
For damages caused by city teams.....	79 26	.....	79 26
Totals.....	\$606,272 65	\$39,164 84	\$567,107 81

Recapitulation of Expenditures.

Weekly pay-rolls, foremen and laborers	\$344,162 38	
“ “ clerks	5,697 47	
		\$349,859 85
Monthly pay-roll, deputy and clerk	4,680 00	
“ “ dumping-boats	1,755 00	
		6,435 00
Monthly teaming-roll		49,250 00
“ bills and special drafts for stock, etc., including monthly pay-rolls of Sewer Division for towboat, etc.		200,727 80
		<u>\$606,272 65</u>

INCOME.

From board and care of horses, rent, removing snow, and for repairing vehicles of :		
Paving Division	\$16,091 25	
Street Cleaning Division	11,681 27	
Sewer Division	6,467 71	
Street Watering Division	813 10	
Central Office	439 00	
Bridge Division	182 27	
Ferry “	118 54	
County of Suffolk	1,365 05	
Street Department Buildings, Chelsea street, Public Buildings Department, Repairs Division	1,273 24	
Water Department	615 70	
Board of Health	96 21	
	21 50	
		<u>\$39,164 84</u>
Deducted from weekly pay-rolls	\$37,799 79	
“ “ monthly bills	1,365 05	
		<u>\$39,164 84</u>
Net cost of maintenance, Sanitary Division, for the year 1899-1900		<u>\$567,107 81</u>

Extraordinary Expenses Included in Above.

Rent of wharf on Atlantic avenue leased from Jacob Hecht, April 1, 1898	\$2,500 02
Payments made under contract of the New England Sanitary Product Company	47,600 00
Payments made under contract, City Refuse Utilization Company	4,881 54
Payments made under contract, wharf, Albany street	5,476 00
“ “ dredging, Eastern Dredging Company	1,476 66
	<hr/>
	<u>\$61,934 22</u>

Total Cost of Removal of House-dirt, Ashes, Waste, Rubbish and House-offal.**ASHES, WASTE AND RUBBISH ACCOUNT.**

Expended for labor as per pay-rolls	\$161,103 44
“ “ hired teams per pay-rolls	45,920 09
“ “ disposition of ashes	747 23
Expended for disposition of waste and rubbish	9,560 97
Expended for stock as per ledger accounts	112,527 11
“ on contract, East Boston	7,299 13
“ “ “ part of West Roxbury,	2,391 67
“ “ “ Dorchester	8,095 00
	<hr/>
	<u>\$347,644 55</u>

HOUSE-OFFAL ACCOUNT.

Expended for labor as per pay-rolls	\$91,531 09
“ “ hired teams per pay-rolls	3,330 00
“ “ disposition of offal	61,608 96
“ “ stock, etc., as per ledger	65,638 38
“ on contract, East Boston	8,000 00
“ “ “ Brighton	3,000 00
“ “ “ part of West Roxbury,	1,800 00
“ “ “ Dorchester	4,980 00
	<hr/>
	239,888 43
Salaries, Deputy Superintendent, clerks and foremen	18,739 67
	<hr/>
Total	<u>\$606,272 65</u>

Comparative Table showing the Cost of Collecting Ashes, Waste, Rubbish and Offal, and Disposing of same at Various Dumps.

Cost per cart-load, including administration expenses	\$1 38
“ “ “ minus “ “	1 34
“ “ “ of ashes, hired teams and contracts	51
“ “ “ “ labor, hired teams and contracts	89
“ “ “ “ offal, “ “ “ “	2 73
“ “ “ “ hired teams and contracts	1 48
“ “ dumping-boat load to transport garbage to sea	85 38
“ “ cart-load “ “ “ “	23

The cost in comparison to other years is due to the fact that this was the first year for the third separation of material collected by this division, and the new methods adopted for the disposal of waste, rubbish and offal.

STREET DEPARTMENT — SANITARY DIVISION. 137

Amount Expended for the Collection of House-dirt, Ashes and House-offal, Labor, Hired Teams and Contracts.

DISTRICTS.	Expended for Collecting.	
	Ashes.	Offal.
1 — South Boston.....	\$16,240 88	\$8,413 30
2 — East Boston	8,193 58	8,463 17
3 — Charlestown	14,602 43	6,930 90
4 — Brighton	7,844 85	3,405 55
5 — West Roxbury.....	14,565 53	7,347 86
6 — Dorchester	8,523 29	5,411 15
7 — Roxbury	34,680 55	18,699 09
8-9 — South End and Back Bay	71,205 24	38,828 34
10 — West and North Ends.....	47,952 89	15,141 73
Total	\$223,809 24	\$112,641 09

Maintenance of Dumping Boats, Amount Expended.

For towing by department towboat	\$5,662 17	
“ “ “ hired “	2,378 00	\$8,040 17
For repairs on Fort Hill Wharf	\$43 32	
“ “ “ dumping-boats	2,571 33	
“ “ “ both by division employees	2,063 61	4,678 26
For rents	\$4,000 00	
“ disinfectants	543 92	
“ dredging	216 66	
“ telephone	111 92	
“ fuel	56 84	
“ salt	43 75	
“ kerosene oil, lime, and paint	16 21	
“ rope, hose and canvas	53 09	
“ electric light	8 75	
“ office supplies and bond	47 38	5,098 52
For labor:		
foreman	\$1,755 00	
crew, dumper, etc.	8,042 94	
holidays	391 94	10,189 88
		\$28,006 83
Number of trips to sea by department towboats,	288	
Number of trips to sea by hired towboats	40	
		328
Number of loads of garbage carried to sea		120,765
Cost per cart-load of garbage carried to sea		\$0 23
Cost per boat-load of garbage carried to sea		\$85 38

Contracts.

OBJECT.	Contractor.	Price.	CONTRACTS.	
			Commenced.	Ends.
Removal of ashes, East Boston.....	William F. Hedrington.....	\$7,300 00	February 1, 1899.	December 20, 1899.
" " part of West Roxbury.....	John J. Moore.....	{ 2,100 00	April 10, 1897.....	April 15, 1899.
" " North Dorchester.....	Patrick J. Lyons.....	{ 2,300 00	April 10, 1899.....	April 10, 1901.
" " South Dorchester.....	Denis Flynn.....	3,645 00	April 1, 1898.....	April 1, 1900.
" " house offal, East Boston.....	Thomas Mulligan.....	3,850 00	April 10, 1897.....	May 10, 1900.
" " Brighton.....	George T. Barnes.....	8,000 00	January 1, 1899.....	February 23, 1901.
" " part of West Roxbury.....	George T. Barnes.....	3,000 00	June 1, 1898.....	June 1, 1901.
" " Dorchester.....	John Bradley.....	1,800 00	April 1, 1898.....	April 1, 1901.
Lease of wharf, Atlantic avenue.....	Jacob H. Hecht.....	4,980 00	May 11, 1897.....	May 12, 1900.
Destruction of house offal.....	New England Sanitary Product Company.....	{ 10,000 00	March 1, 1898.....	March 1, 1903.
Destruction of waste and rubbish.....	The City Refuse Utiliza- tion Company.....	{ 11,500 00	March 1, 1903.....	March 1, 1908.
Building platform over dock, Albany street.....	Thomas E. Ruggles.....	47,400 00	June 1, 1898.....	June 1, 1908.
		5,500 00	December 1, 1898.	December 1, 1908.
		5,476 00	January 16, 1899.	Work completed.

Material Sold by Contract.

OBJECT.	Contractor.	Price.	Payments made to City Collector.
Manure of horses at South Yard.....	G. A. Safford.....	\$2.00 a horse per year.	\$260 00
" " West and Charlestown Yards.....	Geo. P. Winn.....	\$2.00 " " " "	205 83
" " Highland Yard.....	J. A. Budlong & Son.....	\$1.00 " " " "	74 75

DIVISION REPAIR SHOPS.

Located at the South End yards, situated at No. 650 Albany street. At these shops all of the repairs on carriages, carts, wagons, etc., are made, together with the painting of the 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 SHOP.

Cost to maintain during the past year the sum of \$13,420.38, of which amount \$4,855.91 was expended for labor and \$8,546.47 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. There was also a certain amount of repairs and alterations made on the stables and sheds, together with the repairing of Fort Hill Wharf and the Barney dumping-boats. 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, sleds, etc.:

Paving Division	\$3,090 50
Sewer Division	930 55
Street Cleaning Division	40
Street Watering Division	145 28
Bridge Division	18 54
Central Office Division	220 66
Ferry Division	14 26
Public Buildings Department, Repairs Division,	56 45
County of Suffolk	20 24
Laying-Out and Construction of Highways	40 70
Abolishment of Grade Crossings	15 39
Street Department Buildings, Chelsea street	919 04
	<hr/>
	\$5,472 01
	<hr/> <hr/>

This leaves a net cost of \$7,948.37 for the repairs and construction of all work of this character for the Sanitary Division.

There are employed in this shop five wheelwrights and one helper.

BLACKSMITH SHOP.

Cost to maintain during the past year the sum of \$9,070.22, of which amount \$5,826.42 was expended for labor and \$3,243.80 for stock. The carts, wagons and other vehicles of the Division were properly overhauled when in need of repairs. Of the above amount expended in maintaining these shops the following amounts were charged off to the several divisions for repairing, altering and

putting in good condition their carts, wagons, watering-carts, sleds, etc.:

Paving Division	\$1,282 95
Sewer Division	1,402 70
Street Cleaning Division	11 73
Street Watering Division	224 69
Bridge Division	74 82
Central Office	97 50
Ferry Division	31 49
Public Buildings Department, Repairs Division,	57 13
Water Department	34 27
County of Suffolk	81 41
Street Department Buildings, Chelsea street .	11 12
	<hr/>
	<u>\$3,309 81</u>

This leaves a net cost of \$5,760.41 for the repairs and construction of all work of this character for the Sanitary Division.

There are employed in this shop six blacksmiths and three helpers.

PAIN T SHOP.

Cost to maintain \$9,124.82, of which amount \$7,164.97 was expended on labor and \$1,959.85 for stock. The work done by this shop was the painting and lettering of that which was either built or repaired in the wheelwright or blacksmith shops, together with 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.:

Paving Division	\$3,069 64
Sewer Division	1,109 94
Street Cleaning Division	749 76
Street Watering Division	284 07
Bridge Division	50 02
Central Office	120 57
Ferry Division	57 08
Public Buildings Department, Repairs Division . .	103 76
Water Department	45 71
County of Suffolk	15 97
Laying-Out and Construction of Highways	92 50
Abolishment of Grade Crossings	14 00
Street Department Buildings, Chelsea street . . .	206 08
	<hr/>
	<u>\$5,919 10</u>

Leaving the balance, \$3,205.72, as the cost of this work for the Sanitary Division.

This shop employs seven painters and three helpers.

HARNES S SHOP.

Cost to maintain \$6,321.93, of which amount \$3,704.11 was expended for labor, and \$2,617.82 on stock; part of the work sent to the blacksmith and wheelwright shops was also repaired here, such as Goddard and Concord buggies, leather seats for wagons, etc., together with all the new pieces of harness made for the several divisions. The entire lot of old and new harness, stable blankets, horse

and cart covers owned by the Sanitary Division has during the year been overhauled and repaired 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:

Paving Division	\$197 65
Sewer Division	981 50
Street Cleaning Division	100 58
Bridge Division	11 93
Street Watering Division	112 06
Central Office	61 05
County of Suffolk	20 68
Public Buildings Department, Repairs Division	23 86
Ferry Division	15 71
Water Department	10 47
	<u>\$1,535 49</u>

Leaving balance, \$4,786.44, as the net cost of work done for the Sanitary Division.

This shop employs three harness-makers and four helpers.

HORSESHOEING SHOPS.

Cost to maintain during the past year: South Yard, \$3,734.16; West Yard, \$2,618.60; of which amount \$2,877.63 was expended for labor at South Yard and \$1,819.18 at West Yard, and for stock at South Yard \$856.53, and for West Yard \$799.42. 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 different stables of this division, and of other divisions of this department, are shod at these shops, and for which the several divisions were charged the following amounts:

	South Yard.	West Yard.
Paving Division	\$208 50	\$2 50
Sewer Division	569 50	226 50
Street Cleaning Division	1,034 00	753 75
Central Office		180 00
County of Suffolk		106 75
Public Buildings Department, Repairs Division	58 75	10 75
Board of Health		21 50
	<u>\$1,870 75</u>	<u>\$1,301 75</u>

Leaving balance of \$1,926.41, South Yard, as the cost to the Sanitary Division for this class of work.

Leaving balance of \$1,316.85, West Yard, as the cost to the Sanitary Division for this class of work.

These shops employ three horseshoers at South Yard and two at West Yard.

	Division Shops.	Outside Shops.
Stock	\$1,655 95	
Labor	4,696 81	
	<u>\$6,352 76</u>	<u>\$2,195 87</u>

KIND AND STYLE.	DIVISIONS.								TOTAL.
	Sanitary Division.	Street Cleaning Division.	Sewer Division.	Paving Division.	Central Office.	County of Suffolk.	Public Buildings Department, Repairs Division.	Board of Health.	
New shoes	5,605	2,702	1,123	321	299	159	112	36	10,357
Bar shoes	132	14	56	1	.....	.....	.....	.....	203
Resets	718	339	170	38	10	12	4	.....	1,291
Leathers	2,486	1,205	518	161	84	19	50	14	4,537

Average cost per shoe, 47 cents. West Yard, average cost per shoe, 52 cents. South Yard, average cost per shoe, 43 cents.

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 Wheelwright Shop of the Sanitary Division.

From January 26, 1899, to January 25, 1900.

KIND.	DIVISIONS.								OUTSIDE DEPARTMENTS.		Total.
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Street Watering.	Bridge.	Ferry.	Central Office.	Public Buildings, Repairs Div.	County of Suffolk	
Carts . . . . .	.....	.....	257	.....	.....	.....	.....	.....	.....	.....	257
Half-moon carts	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	14
Double tip carts	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Iron tip carts	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	26
Single tip carts	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
Paper carts	1	.....	28	.....	.....	.....	.....	.....	.....	.....	6
Street watering	1	.....	.....	.....	5	.....	.....	.....	.....	.....	6
Express wagons	6	26	5	1	.....	3	.....	.....	1	.....	42
Paper wagons	.....	.....	6	2	.....	.....	.....	.....	.....	.....	8
Offal wagons	.....	.....	117	.....	.....	.....	.....	.....	.....	.....	117
New paper carts	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	12
Double jiggers	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Single jiggers	.....	7	3	.....	.....	.....	.....	.....	.....	.....	10
Sleighs	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3
Double runner pungs	1	2	.....	.....	.....	.....	.....	.....	.....	.....	14
Offal sleds	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	31
Ash sleds	9	.....	31	.....	.....	.....	.....	.....	.....	.....	45
Goddard buggies	9	20	11	.....	2	.....	1	.....	1	.....	10
Box buggies	3	3	1	.....	1	.....	2	.....	.....	.....	84
Concord buggies	18	25	29	.....	4	.....	2	6	.....	.....	1
Stanhope buggies	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Emergency trucks	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2
Stone trucks	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Two-seated wagon	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....
Democrat wagon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sweeping machines	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Sectional rollers	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Steam rollers	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Hose carriage	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Patrol carts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Sand sprinklers	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	3
Prison vans	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	3
Cesspool wagons	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	5
Emergency wagons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	73	106	516	3	8	7	3	9	3	3	731

Table showing the Number and Variety of Vehicles, etc., belonging to the Several Divisions of the Street Department and Others, on which Repairs were made at the Blacksmith Shop of the Sanitary Division.

From January 26, 1899, to January 25, 1900.

KIND.	DIVISIONS								OUTSIDE DEPARTMENTS.			Total.
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Street Watering.	Bridge.	Ferry.	Central Office.	Public Buildings, Repairs Div.	Water Department.	County of Suffolk	
Carts.....			320									320
Half-moon carts.....		22										22
Double tip carts.....	1											1
Iron tip carts.....	2	2										4
Single tip carts.....	34											34
Paper carts.....			45									45
Street watering carts.....	1				11							12
Express wagons.....	9	38	3	1		3			4			58
Paper wagons.....			12	3								15
Offal wagons.....			195									195
New paper carts.....			12									12
Double jiggers.....	3											3
Single jiggers.....	1											1
Sleighs.....	1	10	3									14
Double runner pungs.....	3	1										4
Offal sleds.....			9									9
Ash sleds.....			30									30
Goddard buggies.....	9	20	10		2			2	1			44
Box buggies.....	3	4	2		1	1		1				12
Concord buggies.....	17	32	38			6	1	9				103
Stanhope buggies.....		1						2				3
Emergency trucks.....												
Stone trucks.....	3											3
Two-seated wagons.....		2							1			3
Democrat wagon.....												
Sweeping machines.....												
Sectional rollers.....	3											3
Hose carriages.....		1										1
Patrol carts.....	1			1								2
Sand sprinklers.....			1									1
Prison vans.....											4	4
Cesspool wagons.....		4										4
Emergency wagons.....			1						1			2
Totals.....	91	137	681	5	14	10	1	14	6	1	4	964

Table showing the Numbers and Variety of Vehicles, etc., belonging to the Several Divisions of the Street Department and Others, on which Work was Performed by the Paint Shop of the Sanitary Division.

From January 26, 1899, to January 25, 1900.

KIND.	DIVISIONS.							OUTSIDE DEPARTMENTS.			Total.	
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Street Watering.	Bridge.	Ferry.	Central Office.	Public Buildings, Repairs Div.	Water Department.		County of Suffolk
Carts.....	21		166	49								236
Half-moon carts.....		11										11
Double tip carts.....	1											1
Iron tip carts.....				1								1
Single tip carts.....												
Paper carts.....			25									25
Street watering carts.....				6	5							11
Express wagons.....	7	28	3	1		2			2			43
Paper wagons.....			3	1								4
Offal wagons.....			95									95
New paper carts.....			12									12
Double jiggers.....	3											3
Single jiggers.....	1											1
Sleighs.....	1	9	2									12
Double-runner pungs.....	1	2										3
Offal sleds.....			13									13
Ash sleds.....			37									37
Goddard buggies.....	10	18	10	2	2		1	1	1			45
Box buggies.....	2	2	1	2	2			4				13
Concord buggies.....	17	29	29	6		5	2	8		1		97
Stanhope buggies.....								1				1
Emergency trucks.....			1									1
Stone trucks.....	3											3
Two-seated wagons.....		2							1			3
Democrat wagons.....										1		1
Sweeping machines.....				11								11
Sectional rollers.....	2											2
Hose carriage.....		1										1
Patrol carts.....				3								3
Sand sprinklers.....			1									1
Prison vans.....											2	2
Cesspool wagons.....		5										5
Emergency wagons.....										1		1
Totals.....	69	107	398	82	9	7	3	14	4	3	2	698

STREET DEPARTMENT — SANITARY DIVISION. 147

Table showing the Number and Variety of Signs built and painted for the Several Divisions of the Street Department by the Paint Shop of the Sanitary Division.

From January 26, 1899, to January 25, 1900.

	Paving Division.	Sanitary Division.	Total.
Style No. 1	3	.....	3
“ 3	572	.....	572
“ 4	75	.....	75
“ 5	38	.....	38
“ 6	47	.....	47
“ 7	113	.....	113
“ 8	9	.....	9
“ 9	8	4	12
“ 10	367	.....	367
“ 11	27	.....	27
Special	18	.....	18
Total	1,277	4	1,281

Table showing the Number of Articles and the Variety of Work Performed for the Several Divisions of the Street Department, and Others at the Harness Shop of the Sanitary Division.

From January 26, 1899, to January 25, 1900.

KIND.	DIVISIONS.									OUTSIDE DEPARTMENTS.	Total.	
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Street Watering.	Bridge.	Ferry.	Central Office.	Public Buildings, Repairs Division.	Water Dept.		County of Suffolk.
Harness, parts of, repaired.....	6	115	553	3	8	.....	.....	8	.....	1	1	695
Harness, new parts made.....	.....	1	111	.....	.....	.....	.....	1	.....	.....	.....	113
Harness, new.....	.....	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	13
Buggies repaired, Goddard.....	9	18	10	1	2	.....	1	1	1	.....	.....	43
Buggies repaired, box	1	2	1	1	2	.....	.....	1	.....	.....	.....	8
Buggies repaired, Concord.....	11	17	21	6	.....	5	2	6	.....	2	.....	70
Buggies repaired, Stanhope.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Sleighs repaired	1	6	1	.....	.....	1	.....	.....	.....	.....	.....	9
Wagons repaired, express.....	5	17	3	.....	.....	.....	.....	.....	2	.....	.....	27
Wagons repaired, two-seated.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	2
Carts repaired, half-moons.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Carts repaired, cesspool .....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Carts repaired, street watering..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Horses numbered	15	16	40	19	.....	.....	.....	.....	.....	.....	.....	90
Horses renumbered.....	2	1	.....	.....	.....	1	.....	.....	.....	.....	.....	4
<i>Carried forward</i>	51	197	753	30	12	7	3	18	4	3	1	1079

Work of Harness Shop. — *Concluded.*

KIND.	DIVISIONS.								OUTSIDE DEPARTMENTS.			Total.
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Street Watering.	Bridge.	Ferry.	Central Office.	Public Buildings, Repairs Division.	Water Dept.	County of Suffolk.	
<i>Brought forward</i>	51	197	753	30	12	7	3	18	4	3	1	1079
Saddle parts made		3	99									102
Collar pads made			74									74
Sweat collars made		3	50									53
Muzzles made			1									1
New halters made			8					1				9
Carriage boots made								1				1
Weight straps made		5	3		2							10
Hame straps made (single)		1	108									109
Hame straps made (double)		1	66									67
Carriage covers made			2									2
Leather for oil covers made			49									49
Carpet blankets made			41									41
Stable blankets made		6	105		5			1				117
Street blankets made			12									12
Robes repaired		1	3		1							5
Whips repaired			3		1			3				7
Cart covers repaired			94									94
Oil covers repaired			12									12
Harness blacked and oiled			218									218
Prison vans repaired											1	1
Hose for water cart				1								1
Carriage pulls	1											1
Leather seat for tip cart	1											1
Hooks covered			1									1
New shaft girths			70	1	1							72
Safety straps, pairs of		1	39									40
Shoe boil boots			3									3
Tag straps, new	1		20	5								26
Dust covers			50									50
Surcingles			37					1				38
Poultice boots			2									2
Fly nets repaired			1					2				3
Total	54	218	1924	37	22	7	3	27	4	3	2	2301

Hay and Grain.

Account of Hay, Grain and Straw Fed Out and Used from February 1, 1899, to February 1, 1900.

YARDS.	MATERIAL.	Bales.	Bushels.	Pounds.	Total Cost.	Cost per Horse per Day.	Lbs. per Horse per Day.	Horses. Divisions:
South Boston Yard.	Hay	678	.....	136,612	\$1,001 65	\$0.155065	213,772	Sanitary.
	Oats .....	.....	3,240	103,680	1,180 10	.182370	162,240	6,340
	Shorts .....	.....	.....	1,500	15 25	1.0000	1,500	Average per day.
	Straw	57	.....	12,300	57 02	0.4600	10,640	17
	Carrots .....	.....	.....	3,050	22 87	0.3345	3,050	
	Salt.....	.....	.....	.....	75	0.2270	6340	
	English Vegetable Food, 2 bbls.....	.....	.....	.....	30 00	0.0000	.....
Totals.....	.....	735	3,240	257,142	\$2,307 64	\$0.362524	403,542	
East Boston Yard.	Hay	64	.....	9,203	\$87 43	\$0.2170	22,117	Sanitary. St. Cleaning.
	Oats .....	.....	340	10,880	124 70	.30113	26,442	252
	Shorts .....	.....	.....	200	2 00	0.0100	200	413
	Straw	1½	.....	308	2 76	0.0090	308	Average per day.
	Carrots .....	.....	.....	.....	.....	0.413	413	Sanitary. St. Cleaning.
	Salt.....	.....	.....	.....	50	0.0000	.....	252
	English Vegetable Food.....	.....	.....	.....	.....	.....	.....	161
Totals.....	.....	65½	340	20,591	\$217 39	\$0.52413	46,454	364

Hay and Grain.—Continued.
Account of Hay, Grain and Straw Fed Out and Used from February 1, 1899, to February 1, 1900.

YARDS.	MATERIAL.	Bales.	Bushels.	Pounds.	Total Cost.	Cost per Horse per Day.	Lbs. per Horse per Day.	Horses. Divisions :
Charlestown Yard.	Hay.....	776	.....	141,284	\$1,041 39	\$0.114358	155219	Sanitary. St. Cleaning.
	Oats.....	.....	4,350	139,200	1,604 50	.179672	159672	5,695
	Shorts.....	.....	.....	2,900	26 05	2600	2900	9,071
	Straw.....	.....	139	28,086	153 32	.019671	9671	Average per day.
	Carrots.....	.....	.....	2,825	21 18	2118	2825	Sanitary. St. Cleaning.
	Salt.....	.....	.....	.....	75	9671	9671	15
	English Vegetable Food, 1½ bbls.....	.....	.....	.....	22 50	3250	.....	9
Totals.....	.....	915	4,350	314,895	\$2,869 69	\$0.315768	346481	.....
Roxbury Yard.	Hay.....	1,321	.....	289,726	\$2,154 87	\$0.1014727	148662	Sanitary. St. Cleaning.
	Oats.....	.....	10,867	347,766	3,951 06	.1930076	1730076	18,536
	Shorts.....	.....	.....	4,300	42 25	4200	4300	St. Watering, 56
	Straw.....	.....	242	47,884	227 20	.012644	27932	20,076
	Carrots.....	.....	.....	8,325	62 43	6243	8325	Average per day.
	Salt.....	.....	.....	.....	7 50	750	20076	San., 50
	English Vegetable Food, 3½ bbls.....	.....	.....	.....	52 50	5250	.....	St. Watering, 364
Totals.....	.....	1,563	10,867	698,001	\$6,497 81	\$0.327349	341547	.....

Hay and Grain.— Concluded.
Amount of Hay, Grain and Straw Fed Out and Used from February 1, 1899, to February 1, 1900.

YARDS.	MATERIAL.	Bales.	Bushels.	Pounds.	Total Cost.	Cost per Horse per Day.	Lbs. per Horse per Day.	Horses. Divisions:	
South Yard.	Hay.....	2,383	507,099	\$3,751 37	\$0.1226873	17,137.25	Sanitary. 29,022	
	Oats.....	.....	16,860 ³ / ₂	539,740	6,069 99	.2052235	18,733.64	
	Shorts.....	.....	.....	13,200	127 70	.127716	1,334.00
	Straw.....	326	.....	65,614	327 84	.29032	2,902.2	
	Carrots.....	.....	.....	.....	.....	.0129032	2,290.22
	Salt.....	.....	.....	.....	3 00	.....	.....
	English Vegetable Food, 7 bbls.....	.....	.....	.....	105 00	.....	.....
Totals.....	2,709	16,860 ³ / ₂	1,125,653	\$10,384 90	\$0.3522729	382,281.7		
West Yard.	Hay.....	1,974	416,645	\$3,060 02	\$0.14246	19,341.9	Sanitary. Purchased but not assigned, 1,211 Supt. of Sts. Rep. Div. 1,834 413 21,854 Average per day. San., 49 Purchased but not assigned, 3 Supt. Sts., 5 Rep. Div., 1	
	Oats.....	.....	9,977	319,264	3,607 25	.1021854	14,333.64	
	Shorts.....	.....	.....	5,400	47 60	.02460	5,400
	Straw.....	291	.....	62,359	337 51	.011854	21,854	
	Carrots.....	.....	.....	3,170	23 77	.21854	21,854
	Salt.....	.....	.....	.....	42 60	.....	.....
	English Vegetable Food, 6 bbls.....	.....	.....	.....	90 00	.....	.....
	Totals.....	2,265	9,977	806,838	\$7,208 75	\$0.3221534	362,093.4		

Recapitulation.

MATERIAL.	Pounds.	Cost.	HORSES PER DAY.		Number of Horses Fed.
			Cost.	Fed out, Pounds.	
Hay.....	1,500,569	\$11,096 73	\$0.1286861	17,85377	78,241
Oats.....	1,460,530	16,537 60	0.19 50116	16,52114	5,021
Shorts.....	27,500	260 85	26085	27500	1,834
Straw.....	217,151	1,105 35	0.01 23729	86776	1,211
Carrots.....	17,370	130 25	13025	17370	413
Salt.....	.....	55 10	86776	86776	56
English Vegetable Food, 20 bbls.,	.....	300 00	30000	.....	.....
Totals.....	3,223,120	\$29,485 88	\$0.3384289	371,2408	86,776

78,241 Sanitary horses (average per day).....	211	{ \$0.3384289 371,2408 = }
5,021 Street Cleaning horses (average per day).....	13	
1,834 Superintendent of Streets horses (average per day).....	5	
1,211 Purchased but not assigned (average per day).....	3	
413 Repairs Division horses (average per day).....	1	
56 Street Watering Division horses (average per day).....	364	
		{ \$20,585 75 1,706 10 623 18 411 49 140 33 19 03 }
		\$29,485 88

PLANT AND PROPERTY IN CHARGE OF SANITARY DIVISION.

SOUTH CITY STABLES, SHOPS AND SHEDS.

Situated on Albany street, opposite Newton street. The lot belonged to the city before being used for this purpose, and contains 90,780 feet.

The stable and buildings connected therewith are of brick. There are also on the premises five wooden sheds, used for storing wagons, etc. The stable is two stories high, with French roof, and has accommodations for 100 horses. Twenty-three horses are kept in sheds. Total original cost, exclusive of land, \$79,089.23. In 1899 a veterinary hospital was built and equipped for the purpose of caring for sick and disabled horses.

Connected with stables are blacksmith, wheelwright, paint and harness-makers' shops, in which the wagons, carts, harnesses, etc., used by the department are constructed and kept in repair; also a horseshoeing shop for shoeing the horses of the department located in this section of the city.

OFFAL DEPOTS.

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 contains 39,511 feet, and belonged to the city before being used for this purpose. Total original cost of building, \$18,578.89. March 1, 1900, this building was partly demolished for the purpose of building a run-way to new wharf erected for the dumping of offal on the scows of the New England Sanitary Product Company. Cost of constructing new wharf and run, about \$6,000.

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 90 horses, in stables and sheds. The lot contains about 45,152 square feet. On May 11, 1896, a horseshoeing shop was established for the purpose of shoeing the horses of the department stabled in this section of the city.

HIGHLAND STABLE.

With accommodations for 72 horses, on the old Almshouse lot, Highland street, containing 81,082 square feet. A part of this stable and adjoining lot is used by the Paving Division. There is on this lot a brick stable built in 1873, which cost \$88,594.13. On this lot is an offal shed, erected in 1875, at a cost of \$1,160.12.

April 1, 1897, the offal shed, erected in 1875, was abandoned and renovated for the purpose of storing wagons and carts.

CHARLESTOWN STABLE.

With accommodations for 25 horses, is situated on Rutherford avenue; lot contains 17,300 square feet of land; stable built in 1875, cost, \$5,083.07; sheds and outbuildings built in 1879.

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 convey this stuff to sea and to the plant of the New England Sanitary Product Co.; cost of constructing platform and dredging dock, \$6,219.33. There are two dumping-boats, known as the Barney dumping-scows, 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.

HECHT'S WHARF.

Situated at 466 to 470 Atlantic avenue, containing about 35,460 square feet; placed in charge of the Sanitary Division under a lease dated March 1, 1898, and extending for a period of ten years. This wharf adjoins and is next to Fort Hill Wharf, and is occupied in part by the New England Sanitary Product Company as a berth for their scows; also by the buildings of the City Utilization Company for the disposal of waste and rubbish.

EAST BOSTON STABLE.

Stable and sheds with accommodations for 15 horses is located at 492 Chelsea street. Lot contains 61,000 feet of land, occupied jointly by Paving, Sewer, Street Cleaning and Sanitary Divisions.

NEW ENGLAND PRODUCT COMPANY PLANT.

Situated on Pumping Station lot, Cow Pasture, Old Harbor Point, Dorchester.

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. Land sold in November, 1899.

The Sanitary Division cared for the horses of the Street Cleaning Division located at Rutherford avenue, Highland street and Chelsea street, bearing a proportionate share of the cost of maintaining both of these stables.

NUMBER OF CARTS AND WAGONS COLLECTING HOUSE DIRT AND ASHES, WASTE, RUBBISH AND OFFAL.

Offal wagons in use by the Sanitary Division,	{ wood, 67 }	} 101
	{ iron, 34 }	
" " " " Thos. Mulligan, East Boston . . . . .	. . . . .	6
" " " " George T. Barnes, Brighton . . . . .	. . . . .	5
" " " " John Bradley, Dorchester,	{ wood, 10 }	} 11
	{ iron, 1 }	
" " " " G. T. Barnes, West Roxbury . . . . .	. . . . .	3

STREET DEPARTMENT — SANITARY DIVISION. 155

Ash carts in use by the Sanitary Division	162
“ “ “ “ “ Wm. F. Hedrington, East Boston	7
“ “ “ “ “ J. J. Moore, West Roxbury	3
“ “ “ “ “ Patrick J. Lyons, Dorchester	8
“ “ “ “ “ Denis Flynn, Dorchester	5
	—185
Market wagons in use by the Sanitary Division	12
Paper carts	30
	— 42
	—
Total	353
Ash and offal sleds	178

ORGANIZATION.

1 deputy superintendent.	5 feeders.
5 clerks.	6 messengers.
7 foremen.	12 stablemen.
1 captain of scows.	8 yardmen.
14 sub-foremen.	21 dumpers.
18 inspectors.	2 dumping-boat men.
38 mechanics.	254 ash-cart drivers and helpers.
5 tallymen, or aids.	138 offal-cart drivers and helpers.
7 watchmen.	Total, 542 employees.

APPENDIX E.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE SEWER DIVISION.

MR. BENJ. W. WELLS,

Superintendent of Streets :

30 TREMONT STREET.

DEAR SIR, — I respectfully submit report of expenses, income and operation of the Sewer Division for the financial year ending January 31, 1900.

Yours truly,

CHARLES R. CUTTER,
Deputy Superintendent.

The Sewer Division has charge of the following work, viz. :

First. Construction and maintenance of all sewerage works, including main drainage works.

Second. Construction and maintenance of the channels of Stony brook.

Third. Preparation of plans, and the engineering and supervision required in the construction and maintenance of sewerage works.

Fourth. Investigation of complaints in regard to defective sewerage and drainage.

Fifth. The granting of permits to drain-layers and others to make connections.

Sixth. The preparation of plans for the assessment of sewer construction. (See page 164, Report of 1898.)

The following table shows the maintenance appropriation of this division for the past ten (10) years :

1890	.	.	.	.	.	\$347,000 00
1891	.	.	.	.	.	350,000 00
1892	.	.	.	.	.	350,000 00
1893	.	.	.	.	.	350,000 00
1894	.	.	.	.	.	320,000 00
1895	.	.	.	.	.	300,000 00
1896	.	.	.	.	.	280,000 00
1897	.	.	.	.	.	300,000 00
1898	.	.	.	.	.	350,000 00
1899	.	.	.	.	.	350,000 00

A general statement of the work done during 1899, and work necessary to be done, is given in the succeeding pages :

SOUTH BOSTON.

The most important work completed in South Boston the past year, which has been recommended for a number of years, was the Kemp-street overflow, thereby affording a much needed overflow for the South Boston intercepting sewer.

The building of the house sewer in K street, between Ninth street and Columbia road, removes the great nuisance of house sewage being dumped directly into the Dorchester bay, as houses on this street were connected directly with the overflow, with no connection whatever with the intercepting sewer.

As the Yacht Club buildings fronting on Columbia road at City Point were occupied last summer we were obliged to build a short piece of house sewer connecting directly with the intercepting sewer at O street, thereby preventing the usual nuisance at water fronts.

E-street sewer, between First street and Summer-street extension, has been started, and will afford an outlet for sewers built last year in Summer-street extension.

The K-street overflow, from Columbia road to tide water, has been rebuilt, as the same was in a bad condition, the Park Department having recommended this for the past two years.

The rebuilding of the A-street overflow at Russell's dock has been started, and will give temporary relief to a large area until such time as money is available to rebuild sewers in this vicinity.

As regards recommendations for future sewer buildings the Blake-street sewer should be kept in mind; and as the New York, New Haven & Hartford Railroad will, in all probability, start to build a permanent road-bed here this year, this sewer should be attended to as soon as possible.

As we have started on the sewer system in Commonwealth lands, and the completion of same will require many years, this part of South Boston can be recommended yearly. This district will in a short time be a centre for storage warehouses.

The A-street sewer, which is much too small in time of heavy storm should also receive our attention.

The filling on Columbia road is nearing completion, and it may be advisable to build sewers in this road during the coming year.

ROXBURY.

A sewer and surface drain has been built in that portion of Jersey street, between Boylston street and Peterborough street, the sewer forming the connecting link between Peterborough-street sewer and Boylston street, and allowing the Peterborough-street sewer to be put to use. These sewers and surface drains form a part of the general system for the Fenway lands, but the surface drain still discharges on to private land and will continue to do so until extended to a connection with the Muddy-river conduit in Brookline avenue.

Work on Halleck-street sewer has been discontinued, only the worst parts having been rebuilt.

A surface drain should be built in Smith and Whitney streets, as cellars have been flooded during heavy rains. The sewers are too small, and it will be better to build a surface drain to the channel of Stony brook in Parker street, than to enlarge the sewers.

The sewers in Round Hill street and Gay Head street are too small and too shallow (in places not more than 18 inches between the surface of the street and top of pipe) and without the necessary number of manholes. These sewers were built by private parties, without inspection by the city, and have never been accepted by this division. Larger and deeper sewers are needed here.

In the easterly part of Roxbury sewers built have been mostly pipe sewers, of which the following may be mentioned, namely, Linden Park-street sewer which carries off the drainage of quite a number of houses which have been draining into the old Stony-brook channel.

Rebuilding of Chesterfield street sewer which was in very bad condition.

The sewer on Swett and Atkinson streets, which the Fire Department were anxious to have built to drain their new stable.

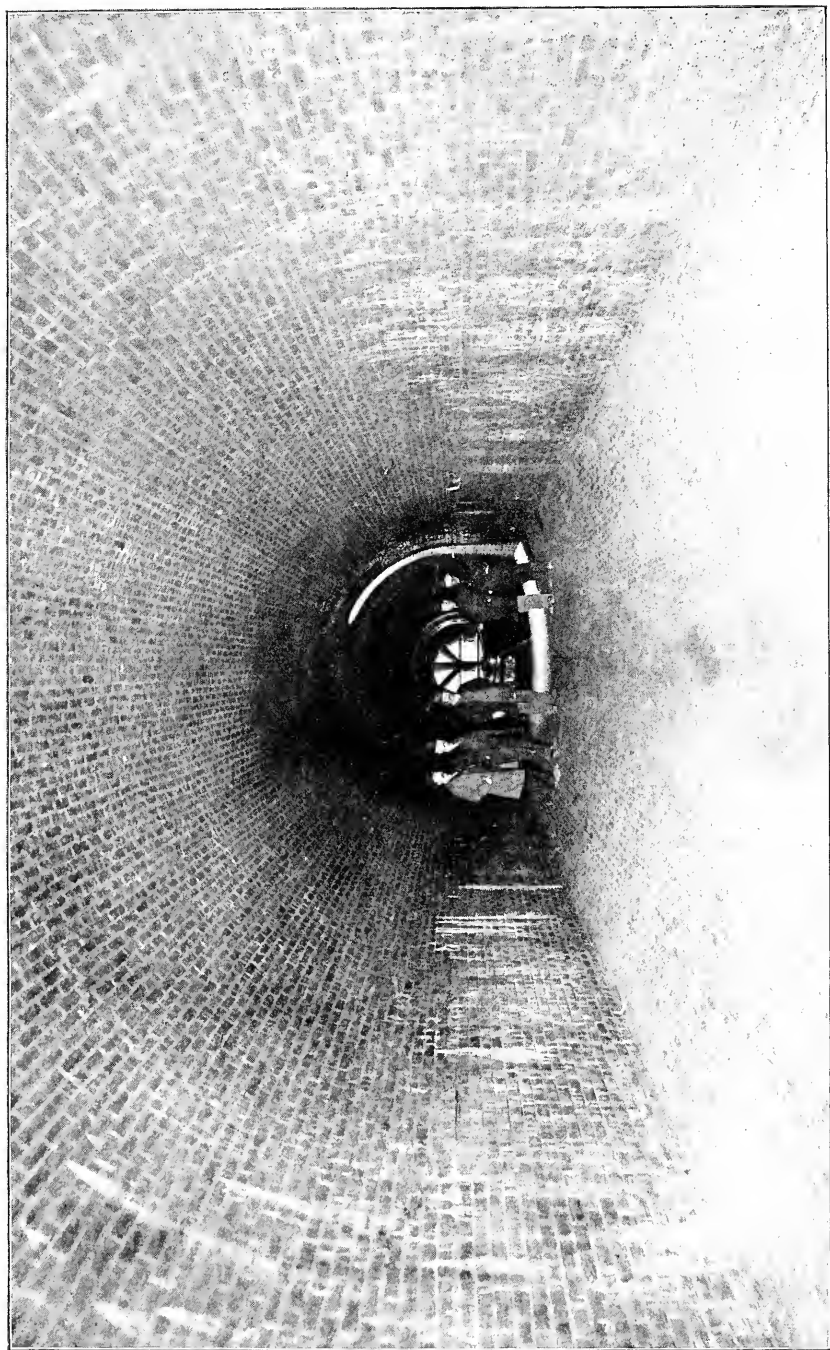
During the coming year this latter district should receive our attention, as there are many requests for sewers and surface drains for the development of this business district.

Ruggles-street sewer is in a broken-down condition, and complaints are constantly being received from abutting property owners asserting that they are flooded during every heavy rain-storm. Complaints are also received of the sewer in Cottage terrace and Marshfield street.

A beginning should also be made on the rebuilding of the sewer system for the Sherman-street district, a matter which has been called to the attention of this division for many years.

Last year an Act was introduced in the Massachusetts Legislature requesting the city of Boston and the town of Brookline to prepare a report for the relief of Muddy river. A report has been prepared by this office advocating the construction of a conduit for intercepting the foul flow from surface drains and sewer overflows, and conveying the same directly to Charles river, so as to preserve the purity of the water in the Muddy river and Fenway ponds. This is accompanied by an estimate of the probable cost of this plan and a study of the apportionment of the same between the town of Brookline and the city of Boston. This will be a very expensive piece of work, and money should be provided for it by an Act of the Legislature, which should also at the same time settle the apportionment of cost.

At the outlet of Stony brook into the Fens ponds a similar problem is presented. These ponds from the outlet of the Commissioner's channel to Charles river form a part of the channel of Stony brook, and are necessarily fouled by the flow of Stony brook during the early part of every storm, when the first wash



TENEAN CREEK CONDUIT.
An important piece of surface drainage work in Dorchester. View near the outlet.

from the streets and the populous district through which Stony brook flows come down.

A plan has been prepared by this office for a by-pass foul-flow channel to carry this water directly to Charles river without admixture with the water of the Fens ponds. This will also be a very expensive undertaking, and it may not be necessary to carry out the whole of it for a few years. It is the opinion of the City Engineer that if that portion of it were built between the outlet of the Commissioner's channel and the gate-house on the old channel of Stony brook, that it would prove sufficient for the present, as it would allow of the foul flow being turned through the 7 feet covered wooden channel which extends from this gate-house to Charles river. At least this portion of the plan should be carried out during the coming year.

DORCHESTER.

As might have been inferred from the reports of this division for the last years the question of "surface drain" (*i.e.*, conduits for surface water) has rather overshadowed that of "house sewers" for the year 1899.

The comparative lengths of the surface drains built, as compared with that of house sewers, is perhaps as 22,000 to 18,700; or in the proportion of 10 to 8½.

This proportion will probably not diminish for a number of years; inasmuch as this district has been pretty well filled up with house sewers, and will only need them where new settlements for population are made; whereas the subject of surface drains has only been forced upon the city within a few years, and owing to the increased amount of sewerage diverted to the pumping station, it is becoming imperatively necessary to relieve the pumps by the building of surface drains.

It is generally out of the question or inexpedient to construct a portion of a surface drain at the upper end, where perhaps most of the people live, and where alone the street improvements systematically take in the storm water, without at the same time providing a well-built outlet at the lower end.

If this is not done the effect is sure to be to overcrowd the lower end with surface water brought down much more quickly than before, so that the lands are inundated and cellars are flooded, causing claims for damage against the city.

To briefly recapitulate what has been accomplished during the last year the following works are mentioned:

Tenean creek, North Branch. This has been practically completed in good working order, with sizes in this district from 14 feet by 12 feet to 4 feet 6 inches by 4 feet 6 inches; so that it now takes all the surface drainage from those districts that have been most troubled in Dorchester; as well as furnishing in its lower part an outlet for Tenean creek, South Branch.

Tenean creek, South Branch. This much needed improvement has been much extended during the last year. To the 1,855

feet of 6-foot *surface drain* built in 1898, we have added during the last year 1,239 feet, making 3,094 feet in all to date.

To the 3,225 feet of 3-foot 4-inch by 5-foot *house sewer* previously built we have added during the last year 684 feet, making 3,909 feet in all to date.

To the 800 feet of *supplementary house sewer* previously built in Rosemont road we have added 575 feet, making 1,375 feet in all to date.

In **Florida street** we have built this year 947 feet of 3-foot 6-inch circular surface conduit, and 930 feet of supplementary pipe house sewer.

A very considerable proportion of the great surface drain or brook channel here has been built in the same trench with the large house sewer, which is especially needed in this district for the purpose of tapping and relieving the overloaded tunnel in Centre street. This kind of construction is familiarly known as the "Siamese Twins" method of building; the two conduits being side by side, although perhaps at a different level, and being separated by only one thickness of masonry.

Much has been done by surface drains to relieve flooding on Edwin, Templeton, Florida, Lonsdale, Mallet and Shepton streets; but considerable remains to be done before the just demands of the inhabitants of this district are satisfied, particularly on Wrentham (formerly Shelton) and Ashmont streets, etc.

Gratifying progress has been made on the house sewers for this branch, the large main sewer being built, as before mentioned, largely in the same trench with the surface drains.

Although the final connection in full form has not yet been made with the Centre-street tunnel, yet a sufficient connection has been made at the corner of Brent and Wainwright streets to give a certain amount of relief to that tunnel, by taking a part of the excess of water backward through the old Wainwright-street (formerly Carlisle street) sewer.

On the north branch the conduit has been completed from Park street through to Charles street, also to Geneva avenue, which latter has permitted the building of an overflow from the Geneva-avenue sewer at Tonawanda street, thereby doing away with the flooding which occurred at this point at every heavy rain storm.

The extension of Tenean creek, from Charles street to Westville street, is a much-needed improvement, and should receive our immediate attention.

It is highly desirable that a complete finish should be made during the coming year of both surface drains and house sewers for the territory drained by this branch. This will give a completeness to our work and stop all further complaints. The territory is quite thickly settled, and although it is not the fault of the city that streets were laid out and built in advance of proper drainage, yet this situation confronts us there now; and the only satisfactory solution of the problem will be to finish up everything in as good shape as if the city had had a chance to design it beforehand.

Mattapan brook. The proposed extension of the Blue Hill avenue boulevard from Walk Hill street to the Neponset river has necessarily involved the construction of the lower end of a conduit to carry the waters of Mattapan brook, perhaps a little in advance of the needs of civilization or dense settlement.

At any rate we have constructed here about 1,675 feet of a 6-foot 6-inch brick conduit; the foundation for which is mostly in solid rock, and therefore while of a very substantial, yet also of an expensive character.

Owing to the delay in formulating the plans for the grade crossing of the N. Y., N. H. & H. R.R., Midland Division, at their Mattapan station, we have been obliged to defer the continuation of this conduit upward until another season.

The depth of the upper end of the conduit as now built is not less than 21 feet below the surface, owing to the necessity of passing the conduit under the new tracks of the railroad, which are to be very considerably depressed.

This depth has been slightly exceeded (and in solid rock) by the part already built below there; and in fact the average depth of digging for the whole job as now built will not fall much short of 16 feet.

In connection with the building of the surface drain above spoken of in Blue Hill avenue, it has been found desirable to build a considerable portion of the house sewers required for this portion of the Blue Hill avenue boulevard. Accordingly 2,372 feet of 12-inch, 15-inch and 18-inch pipe sewer have been constructed.

This is wholly in that part of Blue Hill avenue south of the N. Y., N. H. & H. R.R., Midland Division.

It is to be hoped that the complications relating to the Mattapan grade crossing will be settled early in the year, and this will give us a chance to complete the whole of the surface drainage and house sewers that are needed for the Blue Hill avenue boulevard.

Next after that would come naturally the extension of the Mattapan brook conduit upward, from Blue Hill avenue, parallel with and not far from the track of the N.Y., N.H. & H. R.R., Midland Division, as far as Morton street, at the corner of Selden street; thus giving a proper outlet to the somewhat expensive system of surface drains that we have constructed on Selden street, Capen street, and other streets in that immediate vicinity, where we have added this year 309 feet to the 3,160 feet built in 1898, making a total length of 3,469 feet; varying from 3-foot 6-inch brick conduit to 10-inch pipe.

As this territory is, however, in a very undeveloped condition money could be saved at present by simply ditching the brook along the lines of the takings, building only masonry structures at the street crossings.

Richmond-street brook. A small beginning has been made at improving the surface drainage in the neighborhood of Richmond street.

This is an old and thickly settled neighborhood, and probably

the people will never be satisfied until they get such a system of surface drains as will enable them to have a proper number of catch-basins.

If the money is available this would be a very meritorious place to spend it.

Davenport brook. No work of any consequence has been accomplished on this brook during the last year, but the conditions on the upper part of this brook, say in the neighborhood of Armandine, Ashmont, Burt, Bailey and Fuller streets, Dorchester avenue and Van Winkle street, are such as to invite speedy attention.

The old brook has been filled up, buried out of sight, carried to one side and tortured in every conceivable way, so that its existence would hardly be suspected in a dry time, although whenever it rains heavily it makes itself very disagreeably conspicuous.

It happens luckily that just below Van Winkle street there is a steep gradient or fall in the brook which would give good clearance to the waters of a conduit built above that point down into the open channel of the brook, without involving the quite expensive and formidable undertaking of building a channel below there to the Neponset river.

The expense therefore of improving the upper part of the brook will be only what is required in each place, without any-thing additional for an outlet.

Oakland brook. This brook, which drains the large extent of valley west of Blue Hill avenue, at Mattapan, will need eventually extensive improvements; but the progress of settlement in these somewhat rugged and undrained lands is not so great as to call for immediate attention.

In the neighborhood of Callender and Willowwood streets, near Dorchester station on the N. Y., N. H. & H. R. R., Midland Division, the improvements of former seasons have been perseveringly followed up.

On Callender street there have been built more than 1,600 feet of surface and catch-basin drains, etc., including 617 feet of 10-foot brick conduit (which added to the 200 feet of 1898, makes 817 feet in all to date); besides 11 catch-basins and 7 inlets.

Besides this there have been built 1,736 feet of large pipe and brick surface drains, and 1,889 feet of open ditch in the adjacent territory; all for the purpose of remedying the disastrous flowage of this part of the Canterbury branch of Stony brook.

As mentioned last year the above-named open ditches should be supplemented by permanent covered drains, as soon as convenient.

On the **Oakland Garden Fork** of Stony brook we added 444 feet of brick and pipe conduit to the 288 feet built in 1898, giving 732 feet in all, and 263 feet of 24-inch pipe surface drain.

In this connection the speedy building is urged of about 580 feet of brick conduit in Millet street and Wheatland avenue, being the connecting link between the lower conduit built in Talbot

avenue and New England avenue in 1898-99, and the upper concrete conduit built in Spencer street, from Park street, and in Wheatland avenue in 1894.

Until this is done the brook will always overflow here in storms, causing damage to the streets, and probably eventually to the cellars in the immediate neighborhood.

It is true that 320 feet of conduit would make the connection with the old brook channel at Millet-street culvert; but if we once commenced to build this connection it would be a pity not to build the whole system.

It is quite desirable that, at an early date, the outlet for what has been built should be carried down from the track of the N. Y., N. H. & H. R.R., Midland Division, to the Franklin park ditch, to afford an outlet for surface drains in this vicinity, and incidentally to relieve the Talbot-avenue sewer.

The Park Commissioners have also petitioned for a brick conduit to carry the waters now flowing around Franklin field in their open ditch. This improvement would start at our 10-foot conduit at the corner of Lyons and Callender streets, and run upwards through Lyons street and the border of Franklin field, to the culvert crossing Talbot avenue, not far from Blue Hill avenue, and thence to Franklin Park at Canterbury street boundary near Angell and Calder streets.

As this improvement would be almost entirely for the benefit of Franklin field (as we can get along for the present with things as they now exist) it would seem reasonable that a part, at least, of the cost should be defrayed from the appropriation of the Park Commission.

A 24-inch pipe surface drain should be extended from Kilton street, across Harvard street and across the railroad, in order to carry the water from the conduit built last year from Elmo street through Greenwich street, nearly down to Harvard street to connect with the 24-inch pipe now laid in West Park street. The water from this conduit has at the present time practically no outlet except from the ditches on both sides of the railroad track. The 24-inch pipe mentioned in Kilton street will serve for the present time, and in future, when the district is developed and the flow consequently increased, the main channel can be built on the westerly side of the railroad through the brook conduit near Harvard street to connect with the main conduit of the branch where it crosses Bernard street, a few hundred feet south of Talbot avenue. By adopting this expedient two difficult crossings of the railroad track will be avoided, and the expenditure of a considerable sum of money will be put off until such time in the future as the 24-inch pipe shows itself inadequate to carry the flow, thereby saving on the interest account.

The 2,075 feet of pipe catch-basin drain built this year in Waldeck street is worthy of mention; especially as giving a finish to a fine residential territory, otherwise sorely lacking.

The North Branch of "**Fine Neck creek**," crossing Neponset avenue, near Blackwell street, also Newhall street and crossing Ashmont street, near Train street, deserves attention.

The Park Department has recently improved that part of this water-course which is in the "Neponset playground," below Neponset avenue. The improvement should be extended upwards, as in the past several complaints have been filed, caused by the condition of the brook and some of the culverts.

The Central-avenue and Sanford-street brook. This brook should be improved, as at present a number of catch-basins, which have been built on Sanford street, are connected with the house sewer, sending storm water to the pumps; and very little water flows through the old pipe which was laid in 1886.

The extension of the culvert under Blue Hill avenue, near Talbot avenue, should be continued down Blue Hill avenue to the open channel in Franklin field, as it has been the cause of many complaints in the past.

Among the most conspicuous and desirable undertakings of the year may be mentioned that of Talbot avenue for purposes of surface drainage; so as to enable the roadway of this long neglected boulevard to be thoroughly macadamized, with curbed sidewalks, and electric car tracks in the centre of the roadway. To this end there was built about 2,600 feet of surface and catch-basin drains; and as the old brick sewer has to be extensively cleaned at intervals there were also built a "by-pass" or supplementary sewer of 15-inch pipe, about 1,680 feet in length, in which the sewage can flow temporarily while the old sewer is being cleaned; as well as a "settling tank" 72 feet long, to catch the gravel and sand brought down in storms.

Although the work was not done or paid for by the city, and its amount does not show as an offset to the city's expenditures, it is nevertheless a matter of interest and congratulation that about 2,140 feet of pipe sewers were built by private parties in Harwood, Harvest, Lucerne and Ashton streets, in the tract of land just south of Lauriat avenue, and just east of Blue Hill avenue, thus opening quite an extensive territory for building purposes.

More than this, not less than 5,500 feet of sewers were built by the owners of the "Ward Estate," on the tract of land just north of Lauriat avenue, and east of Blue Hill avenue, thus putting even more land into the market. As this is all good, and mostly very good, high land, it is an advantage to the whole city, as increasing the area available for good homesteads for citizens of moderate means.

The sewer outlet for the northern half of Savin Hill has been completed, and will afford drainage for all property in this vicinity.

A start has been made on the Ceylon-street sewer, and on the completion of the same a suitable outlet for a large part of Columbia road will be available. This structure will be a brick conduit for storm water, with 12-inch and 18-inch pipes for house sewage on the sides.



BLUE HILL AVENUE, DORCHESTER, SURFACE DRAINAGE.
This surface drain will outlet into the Neponset river at Mattapan square.

For the next year's work I have selected, from the 27 house sewers hitherto petitioned for, the following nine streets as being of special importance, viz. :

Street.	Limits.	Length.
Blue Hill avenue	River street to Walk Hill street. . . .	3,750 feet.
Monson street. . .	Sturbridge street to Temple street. .	525 "
Morton street. . .	Blue Hill avenue to Norfolk street. .	1,560 "
Norfolk street. . .	Nelson street to Stanton avenue. . . .	1,060 "
River street. . . .	Washington street to Idaho street. . .	1,855 "
Selden street. . . .	Nelson street to Milton avenue.	1,425 "
Shepton street. . .	Dorchester avenue to Florida street. .	1,040 "
Tucker street. . .	Callender street to Lauriat avenue. . .	370 "
Avondale place. . .	.....	3,420 "

As a street is about to be laid out under Columbia road, at Crescent avenue station, which will serve as a location for a proposed storm-water conduit for the relief of the Crescent avenue district, I think it advisable to recommend the building of said conduit as soon as possible.

The separation of the system tributary to Talbot avenue sewer should be started during the coming year, and we are constantly receiving complaints from this district.

The intercepting sewer in private way off Dorchester avenue, near Freeport street, is in a bad condition, and should be attended to immediately.

EAST BOSTON.

Sewers have been built in Chelsea street, between Chelsea bridge and Curtis street, also in Curtis, Pope and Chaucer streets, and connection made with the Metropolitan sewer, near Chelsea street.

In building the brick sewer in Chelsea street the ground was found to be completely saturated with petroleum from the adjacent oil-works, and this has percolated through the masonry of the sewer, and caused so much gas to accumulate in the sewer that the Metropolitan Sewerage Commission fearing trouble to their work sealed off the connection. The only remedy which suggests itself is to ventilate this sewer thoroughly by means of shafts, as the ventilation from the manhole covers is liable to be interrupted by ice and snow, and to apply Portland concrete wash to the inside of the brick work to render it more impervious to the oil. A brick shaft for ventilating has been built on a location granted by the Standard Oil Company, and connected with the sewer and is proving very efficient in carrying off this gas. Three other ventilating pipes of iron have been planned to be placed on the summits of the connecting system, in order to establish a circulation. These shafts will be made to resemble trolley poles and placed on the curb line, and as they will be thirty-five feet high

no complaints are likely to be received on account of them. The foundations are already in, and these pipes will be set up as soon as the base plate castings are received from the foundry. When the system of ventilation is completed the work of rendering the sewer impervious to oil will be attempted.

A new culvert has been built under Bennington street, near Trumbull street, and extended to and across the location of the Boston, Revere Beach & Lynn Railroad, under an arrangement with the railroad authorities.

A small piece of the Bennington-street boulevard sewer system (about 1,300 feet) has also been built, between Leverett avenue and the Boston, Revere Beach & Lynn Railroad.

The most important sewerage work needed in East Boston is the building of three lines of intercepting sewer to intercept the sewage from the northerly shore of the island on Chelsea creek, the easterly shore facing toward Winthrop, and the sewage of Breed's Island. These three interceptors were not included in the plans of the Metropolitan Sewerage Commission, and have never been built, and although East Boston territory is included in the assessment made by the Metropolitan Apportionment Commission, only a part of East Boston enjoys the benefit of the Metropolitan intercepting system.

There is considerable complaint of nuisance still existing from the discharge of sewage on to the flats around the northerly portion of the island, and this state of things must continue until these interceptors are built. The three would cost a large amount of money, probably about \$1,000,000, and there would seem to be a legitimate reason for asking for a loan for this special purpose outside of the regular sewerage loan, and outside of the debt limit. This would follow the precedent established in the case of all intercepting sewers, all of which have been built on long time loans, and would seem to be right in principle, as the benefit of these sewers will be enjoyed for all time.

With the amount of money available out of the \$1,000,000 loan for sewer building this year it is not likely that any can be applied to this purpose.

Sewers are needed in East Boston parkway with an outlet to the Metropolitan sewer near Bremen and Prescott streets.

Sewers in Chelsea and Bennington streets, from Eagle square to Putnam street, should be rebuilt on a larger size.

The Putnam-street outlet at Condor street should also be rebuilt. This has been broken down, and has been a nuisance as well as a menace to health for several years. It should be rebuilt so as to convey the sewage to the deep water of the channel of Chelsea creek, without spilling any on the flats, as this is the best disposition that can be made of it until the intercepting sewers, previously mentioned, for this portion of the island can be built.

If money can be provided for this object the Porter-street overflow should also be rebuilt, as it is practically all broken to pieces. This would be an expensive piece of work, as it should either be

rebuilt of wood in a much more substantial manner than previously, or of brick on a pile foundation and protected by an embankment of earth filling.

BRIGHTON.

The sewer and surface drain system for Commonwealth avenue, between Warren street and Chestnut Hill avenue, has been completed, and outlets built in Washington street and in Sutherland road and private land, both of which connect with the Brookline sewerage system.

The large brook conduit has been built from Fairbanks street to Oak square, to carry the Oak square branch of the Faneuil Valley brook. As the part of Brighton, in the vicinity of Oak square, is developing rapidly, this conduit has been built large enough to serve for the district when fully developed. The other branch of the brook coming down from Chandler's pond and Lake street, and crossing Washington street, near Fairbanks street, should also be improved, and the covered brook conduit built from the junction with the first-named conduit up-stream at least as far as Rogers park, which would enable the Park Commission to properly drain and improve this playground; but inasmuch as this portion of Brighton territory is largely rural, and a portion of the water-shed being in Newton, and more particularly as there seems to be nothing at present to cause any such rapid development as is taking place around Oak square and Bigelow Hill, it would seem more reasonable to build a conduit large enough to care for the brook under the existing conditions, and for a reasonable period in the future, and not expend the large amount of money necessary to build a conduit suitable for the district when the same shall have become completely developed.

The Oak-square conduit and also the Lake-street branch discussed above are improvements upon the head waters of the Faneuil Valley brook. They will of course result in precipitating the storm-flow of the brook more quickly into the lower reaches, and as the outlet to the whole system at the iron bridge of the Boston & Albany Railroad over North Beacon street is already inadequate to carry the flow of the brook, the building of these improvements makes it even more imperative than before that an adequate outlet should be constructed, as flooding at this point is sure to take place.

The storm-water conduit should also be built for Shepard-street brook from Charles river to Shannon street. The lower part of this will connect with the outlet for the Faneuil Valley brook at the railroad bridge as described above. This Shepard-street brook has been taken into the sewer system in several places, and the channel at intermediate points has been obstructed. At every storm lasting one or two hours cellars are flooded, and much inconvenience caused to property owners. Takings for this brook conduit have been made, and work can proceed whenever there is sufficient money for the purpose.

Salt Creek brook conduit should also be continued if practical

from a financial point of view, from its present ending, about 350 feet north of Commonwealth avenue to the Charles river, but if the money for this is not available it should be constructed at least from the Charles river across the tracks of the Boston & Albany Railroad. The railroad company is constantly filling and building new freight tracks at this point in order to develop the Beacon Park property into a freight yard, and the longer this work is delayed the more expensive it will be. There are already something like twenty tracks across at this point.

WEST ROXBURY.

A conduit should be built for Goldsmith brook from the present ending near Jamaica street to the Arborway, and also one for Kirk-street brook. A surface drain should be built in Baker street, from Gardner street to Spring-street brook, and a conduit built to improve the condition of this brook.

A sewer should be built in Gardner street from the Metropolitan sewer near Charles river to Spring street, and in Spring street to Centre street. This sewer and the surface drain last mentioned should certainly be built during the coming summer as both are necessary; the first to drain the surface water from around the location of the new school-house on Gardner street, and the sewer to take the drainage of the school-house. This was promised to the School Committee, and they were assured that the work would be done in time for the school to be occupied in September of 1900. The sewer will also take a large portion, but not all of the pollution which now finds its way into the Spring-street brook, and thence into Charles river. This is a menace to public health, as several municipalities derive their water supply from the river below this point.

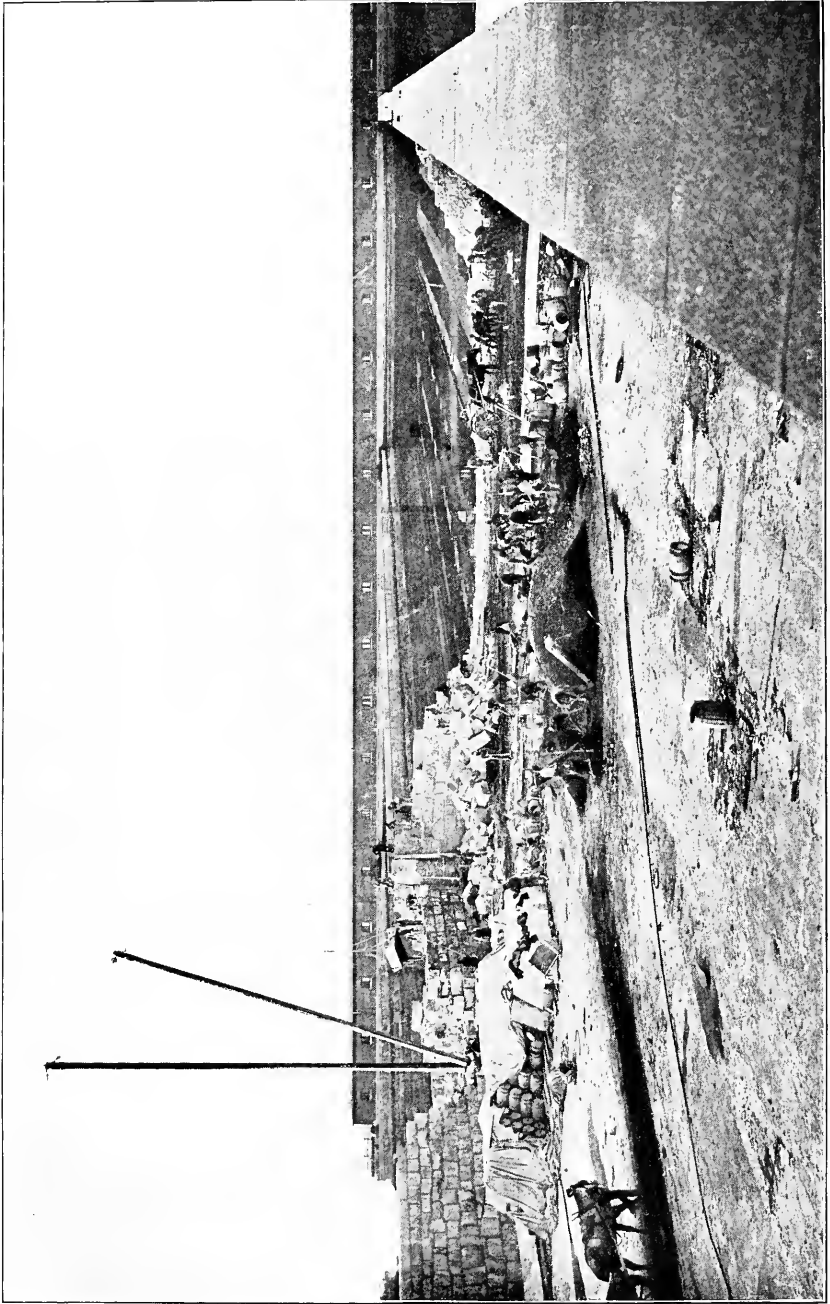
Culverts and surface drains are needed in Temple, Perham and Dent streets.

The area bounded by New York, New Haven & Hartford Railroad and Beech and Washington streets, is now quite thickly settled, and every street in this section should have sewers and surface drains.

CHARLESTOWN.

The Beach-street outlet has been connected with the Metropolitan sewer and a new overflow outlet built, thus completing all connections with the Metropolitan sewer in Charlestown, except the Beacham-street district, so called. The sewers in this district are very leaky, and should be rebuilt in the near future on the separate system. It is possible that some of the existing sewers may be utilized for surface drainage, but in only few instances.

The sewers in Main and Cambridge streets, from Beach street to Somerville line, should be rebuilt of larger size and at greater depth. The sewers in Rutherford avenue, from the outlet to Cambridge street, should be rebuilt; also the sewer in Tibbets Town-way. The sewer in Tufts street is in poor condition; and a sewer is needed in Concord street, from Monument square to Bunker Hill street.



MOON ISLAND. EXTENSION OF RESERVOIRS. BASIN 3 UNDER CONSTRUCTION.

CITY PROPER.

The Canal-street relief-sewer is now being constructed in Haverhill street, and is rapidly nearing completion. When the turn into Traverse street is made one of the most difficult sections of the work will be encountered, that is the crossing of the tracks that lead into the subway. Driving the 30 feet piles necessary in the construction adds to the complication.

The sewer in South street is completed to Harvard street. This affords an outlet for the Harvard-street sewer through South and Kneeland streets under the Terminal Company tracks to Fort Point Channel at Mt. Washington avenue. The Harvard-street outlet, below South street, is abandoned.

The regulator at Oswego street and Albany street is nearly completed. When this is done the machinery can be set up in the district regulator in Dewey square and the Dover-street regulator abandoned.

The sewer system in Charlestown street has been completed. The building of this sewer has afforded an outlet into the Canal-street relief sewer for the Beverly street sewer, which has been in bad condition for a long time and should be rebuilt.

The surface drain which the New York, New Haven & Hartford Railroad Company is building along the side of their tracks will cut about two feet into the arch of the intercepting sewer in Lehigh street. To obviate this difficulty the interceptor is to be cut off and rebuilt with a wider and flatter section, allowing the surface drain to pass over it without change of grade. This work will probably be done at once by this division and paid for by the railroad.

Changes in the sewer system necessitated by the relocation of the tracks of the Boston & Albany Railroad and the New York, New Haven & Hartford Railroad have been completed, the rebuilding of the Way-street sewer being the principal change.

The sewer in Hanover street to drain the siphon at Washington street into the Canal-street relief sewer at Cross street has not been built. If the subway in Hanover street is built this sewer should be built into the structure.

Sewers should be rebuilt in North street, India street, Milk street and adjoining streets, Fayette street, Salem street and in Commercial street at Clark street.

The sewer in Essex street should be rebuilt between Kingston street and Chauncey street.

The outlets to the sewers in the Back Bay district have been found to be too small and, although it has been recommended in several reports to enlarge them, the work has not been done.

Moon Island.

The work of extending the reservoir has progressed to such an extent that although the whole work on the reservoir proper is not completed, it is in use and admits of, if necessary, a storage to its full capacity of fifty million gallons per tide or one hundred million gallons per day.

A portion of the work remaining to be done is the setting up of the flushing sewer gates, the machinery for operating the same, and the buildings in which it is to be installed. The iron work for the above has been delayed, owing to the difficulty in procuring such material at the present time.

The new method of flushing the extended portion of the reservoir cannot be put in operation until this work is done. A portion of the rip-rap and slope paving protecting the roadway embankment at the southerly end of the reservoir, a small amount of excavation on the slope of the hill east of the reservoir, the grading and ballasting of the roadways and the loaming of the slopes remain to be done.

It was considered necessary to strengthen the old division walls of the reservoir, one-third of this work has been done, the remainder being left, on account of the season, until spring.

The sea-wall at the north-easterly end of the island, as originally laid out, has been completed.

The work of paving, grading and building a parapet wall on the out-fall sewer embankment, necessitated by the damage done by the storm of November 27, 1898, is practically completed.

There should be built in the gate-house, at the dead end of the out-fall sewer, a relief-gate, which would work automatically, to prevent any sudden backing up of the out-fall sewer while the reservoir is being discharged. If this should occur it might cause a flooding at the pumping station, and it might happen at night if the gateman on duty was suddenly incapacitated by sickness or other cause.

A ventilating pipe should also be put in connecting with the chamber below the gate-house floor, to relieve the air pressure caused by a discharge of the reservoir at a high stage of the tide.

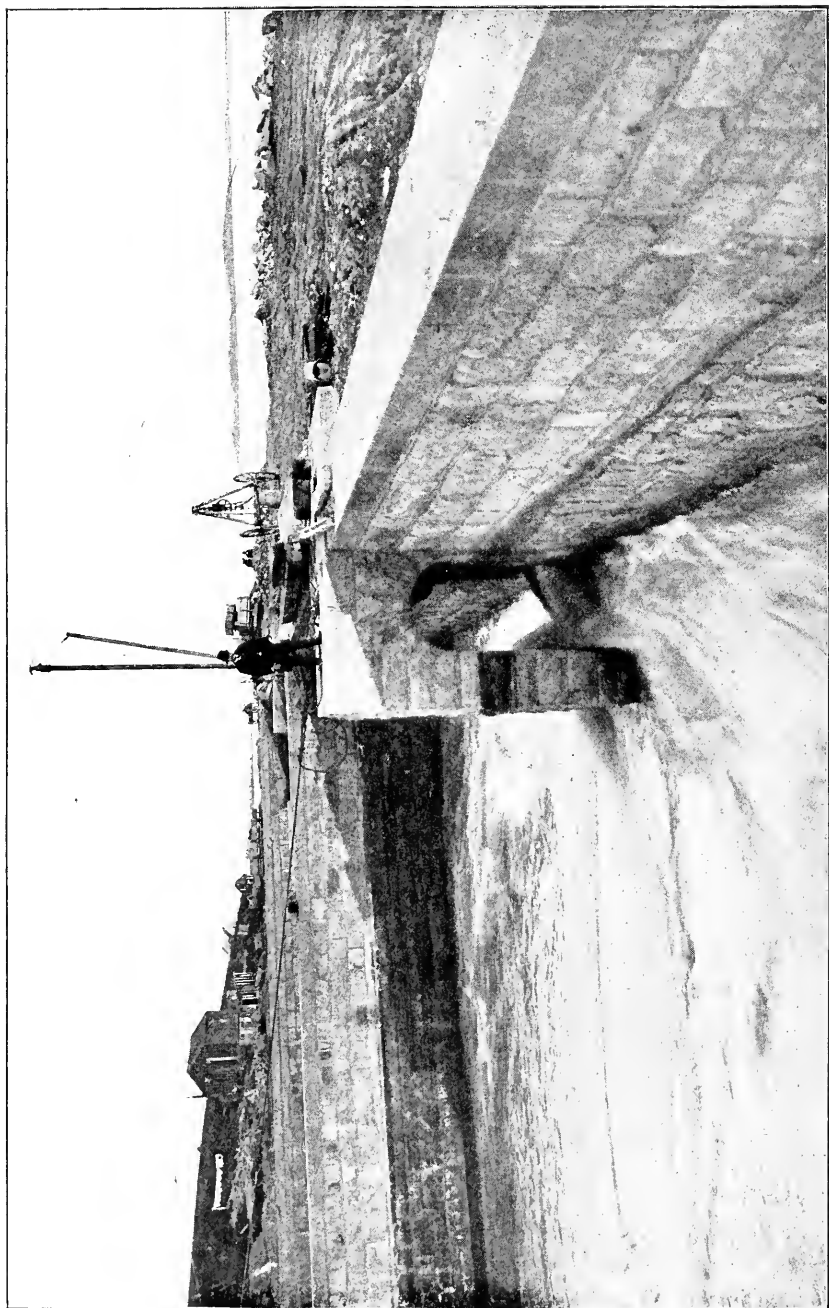
It seems advisable, before completing the work in progress, to devise some method of handling at this point an amount of sewage beyond the capacity of the present extension,

If the proposed design for a high-level sewer is adopted, and constructed by the State, it will be several years before it will be in operation, and the increase in the amount of sewage received before such work is completed, may necessitate the handling here of an amount larger than our present capacity, and we should be able to handle an amount equal at least to the capacity of the tunnel.

The recommendations made in last year's report, on which no action has been taken, are herewith supplemented.

On account of the damage done at the sewer outlet, by storm of November 27, 1898, and the liability of recurrence, it is advisable to extend the sea-wall for a short distance on the opposite side of the gate-house, to allow for filling on all sides of the foundation, except the face, to insure the stability of it in the future.

The bluff on the north-easterly side of the island, which is over one hundred feet in height, washes and furrows badly each year, carrying large quantities of material to the foot of the slope. Now that the sea-wall is built on this side of the island, with a



MOON ISLAND, EXTENSION OF RESERVOIRS. DISCHARGE FROM FLUSHING SEWERS.

fill behind it to an established grade, it will be necessary to grade the bluff to such a slope that a sod can be grown on it to protect it from the action of the rains and frost, or the grade of the filling at its base cannot be maintained, and will always present an unsightly appearance.

A portion of the rip-rap around the island should be relaid as the action of the ice, together with the storms, has moved it so much in places that the ballast beneath it is liable to be washed, and endanger the embankment in which the out-fall sewer is built.

The wharf at the Island should be extended about forty-five feet, and a channel dredged from it to deep water. The department boat cannot land at the wharf if the water is below half-tide. A run should be built alongside the wharf, so the small boat can be launched under any conditions of weather. The old boat and house for same were carried away by the storm of November 27, 1898.

An automatic tide gauge should be set up at the wharf, so that a continuous and correct record of the height of the tide can be preserved. Aside from the need of it in connection with the works, its usefulness is demonstrated by the repeated requests for such information by the different city departments and others.

A registering gauge should also be placed at the east end of the tunnel, to obtain data in regard to the waves that occur there, so that the cause of the same may be determined if possible.

The lack of facilities for keeping the out-fall sewer clean has long been felt; and I would recommend laying a six-inch water pipe from the gate-house to the connection chamber, with hydrants on it, so that salt water may be used for the purpose.

The old stable, which should have been replaced long ago, cannot be used with economy any longer. Aside from its tumble-down condition it will not properly accommodate the horses, and there is no chance to get the wagons under cover. A new stable should be built with proper accommodations, and in keeping with the other buildings on the island.

During the summer season the island is becoming quite a favorite place for visitors in carriages, and on bicycles, not only to see the work, but to get the sea breezes, and the fine view of the harbor that may be had from the top of the hill. If the proposed boulevard in Quincy and Squantum becomes a reality the number will increase, and a driveway around the Island and to the top of the hill, with grounds about the reservoir graded in proper shape, would greatly add to the appearance of the plant, and the pleasure of the public.

Main Drainage.

Work on Moon Island has progressed during the past year very rapidly, and at the present time the four basins are completed and in use. During the ensuing year it is intended to finish the work upon the basins and the grading and planting and laying of rip-rap as well as to clean up in general.

A new stable should be built at Moon Island, as recommended in the past.

The building of a four flat tenement house for the accommodation of the men working on the Island is recommended, as it is especially desirable that the night force should have their homes near their work. This was the original design, and it should be started and completed in the near future. Studies should be made for the extension of the reservoirs and for handling the sewage. In changing the city to the separate system regard should be had for the purification and handling of sewage in the future.

At the pumping station, Cow Pasture, work has proceeded on the alteration and repairs of the engines, and we have increased the pumping capacity of the plant very materially. A new iron floor has been put in, and the station at the present time will compare favorably with any other in the country in efficiency and appearance. During the past two years studies have been made for a new 72,000,000 gallons per day pumping-engine, and during the month of December, 1899, the contract was let to the I. P. Morris Company of Philadelphia. Work will at once proceed upon the pump, and the apparatus will be in operation by February 1, 1902.

During this year the division has begun to operate under the new eight-hour law. This will increase the labor of the division, and more money will have to be appropriated if the same amount of work is to be done with the present force of men.

The equipment of the division is in first-class condition, and we are working on an average of 1,000 men per day.

Stony Brook.

At the close of the working season of 1898 the Stony-brook channel was completed from Boylston Station to the Back Bay Fens, with the exception of a short section in the old gate-house yard. Work on this section which had been suspended February 9, 1899, was resumed March 6 by a small force from the South End yard, and by the middle of April the stone work for the fore-bay had been removed, and work on the conduit proper commenced. This was pushed without interruption until it was completed in August, making the conduit continuous from Boylston street to the Fens.

The chief difficulty here — that of handling the brook water in the portion near Columbus avenue, where there was no chance to flume it around — was overcome by building a coffer-dam in three sections, fitting the lower end of the dam, as nearly as possible, to the inequalities of the rock bottom, then bolting the sections together and filling between the walls of the dam with a stiff clay and running a double line of sand-bags around the bottom. The fourth side was formed by the ledge on the south side, and the dam successfully withstood two rain-storms which raised the water to a depth of nearly eight feet on the outside, an ordinary hand-

pump being sufficient to keep the interior dry at all times. One side wall and about two-thirds in width of the bottom for a length of about thirty feet were built inside the dam; also a wall running lengthwise and about five feet high. This dam was then removed, the water turned beyond the wall, and the rest of the bottom and the other side wall completed.

Beyond this point the water was flumed around the work, as there was room to do so, and at the end section, the side away from the flume and a partition wall were first built, the water turned through this part, as at the beginning, and the final connection made.

While this work was going on the Legislature authorized a loan of \$350,000 for the extension of the conduit south of Boylston street. Construction was commenced on this portion the last of June, and has been carried on up to the present by the department force.

The first section of this work, between Boylston street and Boylston Station, was an extremely difficult piece to build on account of the railroad embankment on one side. It was carried through without accident by opening up the trench in short sections only. On account of the low elevation at which the established grade of many streets in West Roxbury has been fixed by the Board of Survey, it has been found necessary to lower the hydraulic gradient line for Stony brook considerably below that recommended by the Stony Brook Commissioners in their report of 1886, and the change in grade was made at Boylston avenue.

A careful study was made of the problem of extending the Commissioners channel to the Hyde Park line, and it was deemed advisable to recommend the lowering of the grade of the brook and the division of the channel into two parts, in order to secure the same capacity upon a flatter hydraulic gradient. These recommendations were adopted, and the channel as designed in Boylston avenue (a channel 9 feet by 9 feet 6 inches) has been built as far as Cornwall street, where a temporary connection has been made with the old brook channel. A conduit of the same size as that below Boylston street, namely, 15 feet 6 inches by 17 feet has been designed to be built in the old channel of the brook, the 9 feet by 9 feet 6 inches channel being just large enough to make up the deficiency in the capacity of the former channel, due to the flattening of the hydraulic gradient. The turning of the brook through the temporary connection at Cornwall street, thence into the 9 feet by 9 feet 6 inches channel in Boylston avenue has eliminated the problem of carrying the brook water from that portion of the old channel between Boylston avenue and Cornwall street, and work is now progressing on this part of the channel.

The original design was to build the 9 feet by 9 feet 6 inches auxiliary channel the whole length of Boylston avenue, making the connection with the main channel at Green street, and this design may yet be carried out, or if the season and other conditions seem favorable a single channel may be built from

Cornwall street up the old bed of the brook to Green street. In this case this channel would have to be $15\frac{1}{2}$ feet by 20 feet. This question will be settled next summer when construction reaches Cornwall street. During the progress of the work the coming season additional surveys, borings, etc., should be made, and plans prepared for carrying the work on south of Green street, especially between Green and Washington streets, where considerable difficulty will be encountered in securing an unobjectionable location for the conduit. The old channel of the brook from the Boston Belting Company's premises down to the Back Bay Fens should be rebuilt this coming year if possible, as the masonry of the channels is in such condition that a dangerous cave-in may be expected any time in the streets forming the roof of the channel. It is only a question of time when some serious accident will occur. Reports and estimates have been made upon this channel frequently, and a plan devised for rebuilding the old channel, and also providing house sewerage at the same time for all the buildings which abut upon this portion of the brook, and from which more or less pollution, almost unavoidably, finds its way into the brook channel.

SEWER LEGISLATION.

SECTION 1. Section 1, of chapter 426 of the Acts of the year 1897, as amended by chapter 257 of the Acts of the year 1898, is hereby further amended by striking out the whole of said section and inserting in place thereof, the following: SECTION 1. The board or boards authorized to make appropriations for the City of Boston, by a majority vote of the members of such board or boards, approved by the City Council of said city by the affirmative vote of two-thirds of all the members of each branch thereof, taken by a call of the yeas and nays, or, if there should be no such board or boards, then said City Council by such two-thirds vote, may annually appropriate, to be met by the issue of bonds as hereinafter provided, sums not exceeding \$1,000,000 in any one year for constructing sewerage works in said city, and shall also appropriate, to be met by the annual income and taxes of said city, sums for maintaining and operating the sewerage works, and such sums as the City Treasurer of said city shall each year determine to be the amount to be used for interest on the bonds issued for sewerage works, and also the amount to be used for the sinking-funds for bonds issued for sewerage works, which with all other amounts so used, and their accumulations, will pay all such bonds at maturity; and there shall also be used for said sinking-funds all premiums received from the sale of said bonds, and all amounts received for breach of any contract for constructing sewerage works, or for securities deposited as security for making such contracts and declared to be forfeited to the city, or for sales of property. All sewers, drains, pumping stations, and other works for the collection or disposal of sewage, or surface or ground water in said city shall be included in the term "sewerage work" as used in this act, and no such work shall hereafter be constructed in said city, except under authority of this act, unless the same has been ordered to be constructed before the passage thereof.

SECT. 2. Section 5 of said chapter 426 is hereby amended by inserting in the ninth line after the word "Middlesex" the word or for the County of Suffolk—and by inserting at the end of said section the words: In any case where a petition is filed by the Mayor in the County of Middlesex the cause shall be transferred to the County of Suffolk, if the owner, within thirty days after the filing of said petition shall file in the office of the Clerk of Courts for the County of Middlesex a statement in writing that he desires said cause to be tried in the County of Suffolk—so as to read as follows: Section 5. Said city shall pay all damages sustained by the owner of any land, water-course, right or easement taken by said Board, or injured in any manner, or by any person in doing any act or thing under section 4 of this act, the same to be agreed upon by said Board with the approval of the Mayor and said owner, and if they cannot agree the damages shall, on the petition of said owner or Mayor, be determined by a jury of the Superior Court for the County of Middlesex or for the County of Suffolk in the manner provided by law with respect to lands taken for highways in said city of Boston, and costs shall be taxed and execution issued in favor of the prevailing party as in civil cases. Any person whose water rights are thus taken or injured may apply as aforesaid within three years from the time of such taking or injury, and not afterwards. In any case where a petition is filed by the Mayor in the County of Middlesex the cause shall be transferred to the County of Suffolk if the owner, within thirty days after the filing of said petition, shall file in the office of the Clerk of Courts for the County of Middlesex a statement in writing that he desires said cause to be tried in the County of Suffolk.

SECT. 3. Section 7 of said chapter is hereby amended by striking out the whole of said section and inserting in place thereof the following: Section 7. The Board of Street Commissioners of said city at any time within two years after any new sewer or drain for the collection or disposal of sewage or of surface or ground water is completed, shall assess upon the several estates especially benefited by such sewer or drain, a proportional part of the cost thereof, not exceeding in amount the sum of \$4 per lineal foot. Any such assessment which shall be found to be invalid and is unpaid, or which shall have been recovered back, may be re-assessed by said Board to the amount for which, and to the person to whom, the original assessment ought to have been made. Every such re-assessment and every such original assessment shall be a lien upon the estate assessed or re-assessed for two years after such assessment or re-assessment, and shall be collected and paid into the city treasury in conformity with the provisions of sections 16 and 17 of chapter 323 of the Acts of the year 1891, and acts in amendment thereof and addition thereto. Said Board may assess upon any estate heretofore or hereafter connected with a public sewer a reasonable part of the cost of construction thereof; provided that no owner of the estate has paid for such sewer or has paid any assessment for its construction. Every such assessment may be revised and corrected by said Board of Street Commissioners and such assessments and revised and corrected assessments shall be subject to an appeal to the Superior Court in the manner provided for appeals from the Board of Assessors in the case of taxes, and they shall not be affected by the provisions of the statute requiring the filing of a list of estates liable to taxation as a pre-requisite to an appeal.

SECT. 4. All votes heretofore passed by the City Council or by the Board of Estimate and Apportionment of the City of Boston under the provisions of chapter 426 of the Acts of the year 1897, and of chapter 257 of the Acts of the year 1898, authorizing the issue of bonds of said city for the construction of sewerage works, are hereby ratified and confirmed; and all bonds heretofore or hereafter issued as authorized by said votes shall be legal obligations of said city, and the interest and sinking-fund requirements thereof shall be paid from the income and taxes of said city. The Treasurer of said city, upon request of the Mayor, shall issue bonds of said city outside the debt limit thereof, payable in five years from their date, to the amount required to repay all sewerage charges collected by said city under the provisions of section 7 of chapter 426 of the Acts of the year 1897, prior to the date thereof and use the proceeds of such bonds to repay said sewerage charges and for no other purpose. The Mayor of said city may authorize the transfer of any loans or parts of any loans heretofore made or authorized, and not required to meet any contract, except loans for sewerage works, water-works or subways, to an amount not exceeding \$350,000, to meet the expenses of operating and maintaining said sewerage works until the first day of February in the year 1900; and the Treasurer of said city shall thereupon hold the proceeds of the loans or parts of the loans so authorized, and use the same to meet said expenses. The Board of Assessors of said city shall include in the assessments of taxes, tax lists and warrants for the current year, in addition to the amounts already authorized to be inserted therein, the further sum of \$122,669.88, to meet the interest and sinking-fund requirements for the current year of the bonds for the construction of sewerage works, issued prior to said first day of February.

SECT. 5. This act shall take effect on its passage.

The following is the decision of the Supreme Judicial Court in the cases of *J. Montgomery Sears, Joseph H. Beale and Frank Brewster et al., Trustees vs. the Board of Street Commissioners of Boston*, regarding the constitutionality of the Sewer Assessment Statute (chapter 426) of 1897:

KNOWLTON, J. These are petitions for a writ of *certiorari* to quash an alleged illegal assessment of sewer charges upon property of the several petitioners. The law under which the respondent assumed to act in determining these charges is Statute 1897, chapter 426, of which sections 7 and 8 are as follows:

SECTION 7. The Board of Street Commissioners with the approval of the Mayor, shall annually, before the first day of July, determine just and equitable sewerage charges to be paid by estates in said city for the construction, maintenance and operation of the sewerage works, taking into consideration in determining the charges the necessity of the works as caused by each estate; the amount of use thereof, if any, by the estate or its occupants, the benefit received therefrom by the estate, the amount of any assessment for a sewer paid by any owner of the estate, the length of time which has elapsed since such payment, and the use, if any, that has heretofore been made of the sewerage works by the occupants of the estate, and such other matters as they shall deem just and proper. The determination of such charges as aforesaid shall be final in all cases, and

the amount thereof as determined for each estate shall be a lien thereon until paid, and said Board shall notify the Board of Assessors of said city of the amount thereof forthwith after it has been determined, and the same shall be included in the next tax bill on the estate transmitted by said Board to the Collector, or in a tax bill therefor, if no other tax bill is issued for such estate, and be collected as part of the taxes on the estate.

SECTION 8. All sewers and connections ordered to be made in constructing any way under the authority of chapter 323 of the Acts of the year 1891, and of acts in amendment thereof or addition thereto, shall be deemed to be constructed under the authority of this act, and the expenses therefor shall not be considered in determining the assessable cost of the work to be assessed under the authority of said acts.

The petitioners contend that these provisions of the statute are unconstitutional, and the most important questions in the cases arise on this contention.

It is evident that these provisions cannot stand as authorizing an assessment of a general tax, because the assessment called for is not proportional and equal. The statute not only directs an assessment upon a particular class of property, instead of on all taxable property, but it expressly requires in determining the charges the consideration of facts pertaining to particular estates in their relation to the charges, and to previous assessments, which prevent the making of a proportional assessment, viewing it as a general tax, and not as an assessment of benefits.

If we treat the determination of these charges as a local and special assessment upon particular estates we have to consider the principles on which such taxation is founded. It is well established that taxation of this kind is permissible under the constitution of this Commonwealth and under the constitution of the United States only when founded upon special and peculiar benefits to the property from the expenditure on account of which the tax is laid, and then only to an amount not exceeding such special and peculiar benefits. *City of Boston vs. Boston and Albany Railroad Company*, 170 Mass. 95 101; *Weed vs. Boston*, 172 Mass. 28; *Proprietors of Mount Auburn Cemetery vs. City of Cambridge*, 150 Mass. 12-14; *Village of Norwood vs. Baker*, 19 Sup. Ct. 187; *Sears vs. Aldermen of Boston*, 53 N. E. Rep. 138. Several of the questions now before us were considered in length in the recent case last cited, and it is unnecessary to repeat the discussion of them.

Does this statute prescribe taxation upon these estates for special and peculiar benefits only; or does it purport to authorize taxation on other grounds than special benefits, and for amounts larger than the amounts of such benefits?

It directs the Street Commissioners annually to "determine just and equitable sewer charges to be paid by estates in said city," etc. It requires them to take into consideration several subjects in determining these charges, one of which is the benefit received by the estate, and others of which possibly have some

relation to the benefit received, and it then authorized them to consider "such other matters as they shall deem just and proper."

The benefits to be considered in taxing each estate are not in terms those that are special and peculiar, but so far as the language goes may be those that it receives in common with the other estates in the city, and with the inhabitants generally. The fact that the charges to be determined are for the construction, maintenance and operation of the sewerage works of the whole city gives some force to the possibility of a construction which includes all benefits; but whether this construction should be adopted or not the charges may be determined on any grounds which the Street Commissioners deemed just and proper, and may not be founded in any great degree, if at all, upon special and peculiar benefits, and may in any particular case largely exceed such benefits.

This fact in itself is enough to bring the statute within the prohibition of the constitution, inasmuch as it purports to authorize a taking of property to pay a charge which is not founded on a special benefit or equivalent received by the estate or its owner. Such a taking would be without due process of law. *Village of Norwood vs. Baker*, 19 Sup. Ct. 187; *New Brunswick Rubber Company vs. Commissioners of Streets*, 9 Vroom, 190; *Barnes vs. Dyer*, 56 Vt. 469; *Thomas vs. Gain*, 35 Mich. 155.

The general tenor of this section seems at variance with the law in regard to special taxation. It seems designed to group together a great variety of expenses, including all that are connected with the administration of the Sewer Department in the city of Boston, many of which are proper subjects for general taxation only, and to assess them all upon real estate.

In determining the charge to be made upon any particular estate, it is clear that most of the expenses to be reimbursed would be found to have been incurred in ways that could bring no special or peculiar benefit to that estate. The cost of constructing and maintaining sewers remote from it could confer no benefit. In two of these cases it appears by averments of the petition, which are not denied in the answer, that the estates of the petitioner have previously paid special assessments made by the city for the construction of sewers into which the estates drain, and in one of them it appears, in like manner, that no sewers have been constructed under the Statute of 1897, chapter 426, and no repairs made under the provisions of said act upon sewers already existing, with which the estates of the petitioner have or can have any connection, or from the use of which said estates derive any benefit. Where lands have paid assessments for special benefits from the construction of all sewers by whose operation they are affected, it cannot be said that they receive an additional special and peculiar benefit from the general oversight and operation of the sewers of Boston such as to subject them to a second special assessment. Expenses of this kind should be made the subject of general taxation. The grouping of these various expenses would seem to make it difficult, if not impracticable, under this

statute, to make assessments of special and peculiar benefits directly received by particular estates from the construction of sewers near them. Indeed, it appears from the testimony that the Street Commissioners did not attempt to make assessments in accordance with the principles recognized as correct by the courts.

They adopted a scheme, and applied it to the estates generally throughout the city, by which they charged, as a special tax, three and one-half cents per hundred dollars of valuation of the land, exclusive of buildings, together with one-half of the charge made for the use of water on the estate, with certain deductions from the charge for the use of water where the use was of a peculiar kind, like the manufacture of steam. This item of three and one-half cents per hundred dollars of valuation of land was made up of one and one-half cents per hundred dollars for general construction, which means construction in any part of the system of sewers, and two cents per hundred dollars for general maintenance, which means the expense of salaries, care of the sewers, coal and other things pertaining to the management and operation of the system.

That such expenses are proper subjects for general taxation, and not for special assessments, has often been decided. *Hammett vs. Philadelphia*, 65 Penn St. 146; *Washing Avenue*, 69 Penn St. 352; *Appeal of City of Williamsport*, 41 Atl. Rep. 476; *Dietz vs. Neenah*, 91 Wis. 422-427; *Dyar vs. Farmington*, 70 Me. 527; *Hansom vs. Omaha*, 11 Neb. 37.

In *Erie vs. Russell*, 148 Penn. St. 384, the Court says :

“ Why should a sewer, demanded and constructed by the city, and paid for by assessments on the property fronting on the street under which it is laid, be maintained and reconstructed, on the order of the municipality, at the expense of such property? It was made by the action of the city a part of its system of sewerage, which is as necessary for the health of its people as its paved streets are for their use. Its construction was at the expense of the abutting property, and properly so, in discharge of the obligation arising from particular benefits conferred. It is now a constituent of the general system ordained by the city for the convenience and health of its inhabitants. This system confers benefits which are general. It is a public necessity, and the expense of maintaining it should be provided for by general taxation.” [See *Child vs. Boston*, 4 Allen, 41-52; *Emery vs. Lowell*, 104 Mass. 13-16.

In *Sears vs. Aldermen of Boston*, this court held, with some hesitation, that watering streets, which before the passage of a statute on the subject, was generally done at the expense of the abutters, conferred a direct and special benefit upon abutting property occupied for business or residence. Some other Courts have held to the contrary. See *City of Chicago vs. Blair*, 149, 111, 310; *New York Life Insurance Co. vs. Prost*, 71 Fed. Rep. 1815. But in that case the relation of the expenditure to the abutting property was very different from that of the expenditure for salaries and other expenses of maintaining a sewer department

to property whose owners have previously paid assessments for the special benefits to be received from the use of the sewers. In assessing such benefits when the sewers were constructed it was assumed that the sewers would be kept in operation for the benefit of the public, and that owners of property assessed would only be called upon to contribute as general taxpayers their property share of the expenses of operating them. It is probable that most estates which drain into sewers in Boston were specially assessed when the sewers were constructed. Because the statute purports to give the Street Commissioners power to levy special assessments on real estate upon other grounds than the receipt of special benefits, and for expenditures which, as against such property, are not proper subjects for special taxation, we are of the opinion that the statute is unconstitutional.

It is also contended by the petitioners that the statute gives owners of property no opportunity of being heard upon their liability to assessment. It is well established that the determination of the amount of taxes for special benefits to real estate by any tribunal to which the Legislature delegates the power is a *quasi* judicial proceeding, which cannot take final effect unless persons to be assessed have an opportunity to be heard. *New London Northern Railroad Company vs. Boston and Albany Railroad Company*, 102 Mass. 386; *Parsons vs. District of Columbia*, 170 U. S. 45, 52, 54; *Hagar vs. Reclamation District*, 111 U. S. 701-709; *Falbrook Irrigation District vs. Bradley*, 164 U. S. 112-175; *Stuart vs. Palmer*, 74 N. Y. 189; *Remson vs. Wheeler*, 105 N. Y. 573; *matter of Trustees of Union College*, 129 N. Y. 308; *Dietz vs. Neenah*, 91 Wis. 422-427; *Butler vs. Supervisors*, 26 Mich. 22; *Thomas vs. Gunn*, 35 Mich. 135; *Campbell vs. Diggins*, 83 Ind. 473; *Ulman vs. Baltimore*, 72 Md. 587. But if a party has a right to appeal, or to be heard upon an application for an abatement, it is sufficient. *Weed vs. Boston*, 172 Mass. 28; *Palmer vs. McMahan*, 133 U. S. 660; *County of Redwood vs. Winona, etc. Company*, 40 Minn. 512. See also *Sawyer vs. State Board of Health*, 125 Mass. 186; *Philadelphia vs. Miller*, 49 Penn. St. 400; *Cleveland vs. Tripp*, 13 R. I. 50.

This statute makes no express provision for a notice or a hearing. It declares that "the determining of such charges as aforesaid (that is, by the Street Commissioner) shall be final in all cases," and provides for a notification of the determination to the Board of Assessors, and for the collection of the amount as a tax. In view of this language it is difficult to see how the statute gives by implication an opportunity to be heard at any stage of the proceedings. But, as we hold this section of the statute unconstitutional on other grounds, it is unnecessary to determine this question. In each case the order must be, writ of *certiorari* to issue.

FINANCIAL STATEMENT.

By the enactment of chapter 450, of the Acts of 1899, on June 1, 1899, the assessments for construction of sewers were obliged to be made on a new basis, and this division was required to furnish the data for all construction made since May 22, 1897.

This work has been carried on with the regular force and in connection with the regular work of the main office, and to date the Street Commissioners have been furnished plans giving all information for the assessment of 170,370 feet of sewers, costing \$613,580.

Bills for sewer assessments, amounting to \$1,421.86, have been deposited for collection, representing those estates assessed under chapter 456 of the Acts of 1889, and amendments thereto, which have been connected with the public sewers during the year.

There remain on the books of this division, at 5 per cent. interest, \$23,126.51, representing the assessments under the Acts of 1889, and amendments thereto, for those 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 about 17.4 per cent. of the total assessments made under those acts.

Entrance fees to the amount of \$4,641.80 have been collected from estates upon which no sewer assessment was ever paid, in accordance with chapter 38, section 10, of the Revised Ordinances.

Three thousand three hundred and eighty-one (3,381) permits have been issued to licensed drain-layers to make connections with the public sewers, and the work done under these permits has been inspected, and a record of the same made on the plans of this division, in accordance with the provisions of chapter 38, sections 6 and 10 of the Revised Ordinances of 1898.

The following tables and statements will show the amount of money expended and work done during the year :

Financial Statement.

APPROPRIATIONS.	Balances on hand February 1, 1899.	Appropriations during the year.	Total Credits.	Expenditures during the year.	Balances on hand January 31, 1900.
Street Department, Sewer Division.....	.....	\$347,133 64	\$347,133 64	\$347,133 64	
Sewerage Works.....	\$44,426 50	1,100,000 00	1,144,426 50	1,086,893 33	\$57,533 17
Stony Brook Improvement.....	46,673 24	.....	46,673 24	46,673 24	
Stony Brook Improvement (Chap. 397, Acts 1899).....	.....	350,000 00	350,000 00	151,518 65	198,481 35
Dam from Mayerick street to Prescott street, East Boston (\$3,000, all transferred).					
Totals.....	\$91,099 74	\$1,797,133 64	\$1,888,233 38	\$1,632,218 86	\$256,014 52

OBJECTS OF EXPENDITURE.

STREET DEPARTMENT, SEWER DIVISION.

Improved Sewerage Maintenance.

Pumping-station, inside	\$53,059 56	
Pumping-station, outside	13,999 54	
Engines and boilers	990 76	
Main and intercepting sewers	16,582 05	
Moon Island	11,468 50	
Laying telephone cable to Pump- ing-station	239 80	
Towboat	\$9,575 68	
Less paid by Sanitary Division	5,196 55	
	<u>4,379 13</u>	\$100,719 34

Pumping Station, Forest-avenue Section, Dorchester.

Maintenance	7,888 85
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Stony Brook.

Maintenance	\$8,643 08
Watching weirs	1,147 87
	<u>9,790 95</u>

Miscellaneous Maintenance Charges.

Office expenses, Administration, Permit and Assessment Offices, including salaries	23,598 32	
Office expenses and salaries, Engineering Office, not included elsewhere	21,876 24	
Current expenses of yards and lockers	32,590 54	
Current expenses of stables, including cost of horses, vehicles, harnesses, etc.	\$36,402 51	
Less amount earned by department teams	15,936 58	
	<u>20,465 93</u>	
Repairing catch-basins	8,968 57	
Repairing sewers	6,744 51	
Cleaning and flushing sewers	12,121 69	
Cleaning catch-basins	36,212 45	
Repairing streets	967 18	
Repairing and cleaning culverts and surface drains not included in the Stony-brook sys- tem	2,380 15	
Examining condition of sewers and catch- basins	7,840 42	
Work for departments and others	248 12	
House connections	5,213 73	
Damages and claims	416 05	
Holidays	9,608 35	
Travelling and incidental expenses	3,148 57	
Repairing department buildings, stables and yards	1,724 09	
General repairs	1,866 92	
Hardware, tools and blacksmithing	5,142 49	
Rubber goods	2,863 34	
General supplies	1,884 27	
	<u>\$324,281 07</u>	
<i>Carried forward</i>		\$324,281 07

<i>Brought forward</i>		\$324,281 07
New catch-basins:		
South Boston	\$700 23	
East Boston	660 68	
Brighton	1,607 90	
West Roxbury	563 91	
Dorchester	4,819 24	
Roxbury	2,300 33	
City Proper	4,517 09	
	<hr/>	15,259 38
Engines and boilers and repairs		400 80
New manholes		731 24
Betterments and assessments		665 99
Sewers rebuilt and repaired from maintenance:		
D and Anchor streets outlet	\$305 95	
B street outlet	180 27	
Salt Creek sewer	522 53	
Huntington avenue sewer	385 17	
Browning-avenue sewer	217 29	
Talbot-avenue relief sewer	2,314 60	
Ashley-avenue sewer	1,135 28	
Havre-street sewer	1,109 29	
Centre-street relief sewer	160 50	
Lauriat avenue connection, Board of Survey street	104 75	
Moutview street connection, sewer and cul- vert	16 77	
Ventilators, Chelsea and Pope streets	289 78	
	<hr/>	6,742 18
Telephones, not included elsewhere		1,043 50
		<hr/>
Less decrease in stock at yards		\$349,124 16
		1,990 52
		<hr/>
Total maintenance		<u>\$347,133 64</u>

SEWERAGE WORKS.

Improved Sewerage Construction.

Pumping-station, new coal run	\$577 71	
Pumping-station, partition around electric light engine	958 19	
Pumping-station, engine-house floor	8,630 75	
Pumping-engines	51,300 10	
Air-pumps	250 00	
Moon Island reservoir	163,037 25	
Moon Island, sea-wall	13,664 17	
Moon Island, repairing damage caused by storm of November 27, 1898	4,447 79	
Moon Island, engineering expenses, including salaries	9,686 48	
Main and intercepting sewers, stock	1,304 59	
	<hr/>	\$253,857 03

Sewer Construction.

As per tables on pages 189 to 225.

South Boston	\$33,938 17	
East Boston	39,573 55	
Charlestown	15,878 96	
Brighton	130,557 70	
West Roxbury	54,237 71	
Dorchester	309,837 15	
Roxbury	63,044 96	
City	62,324 36	
	<hr/>	710,202 56
<i>Carried forward</i>		\$964,149 59

STREET DEPARTMENT — SEWER DIVISION. 185

Brought forward \$964,149 59

Miscellaneous Construction Charges.

Office expenses, Administration, Permit and Assessment offices, including salaries	\$22,525 92
Office expenses, Engineering office, including salaries	64,233 81
Holidays on construction work	19,202 64
Work for departments and others	2,863 62
Damages and claims	894 07
Engines and boilers	106 62
Rubber goods	1,563 32
General supplies	1,688 88
Hardware, tools and blacksmithing	6,262 83
New manholes	276 63
Sundries, incidentals and travelling expenses	4,067 94
Preliminary advertising on construction not yet begun	27 39
	123,713 67

Less water charged off to sewer construction \$1,087,863 26
969 93

Total, sewerage works \$1,086,893 33

Stony Brook Improvement.

Building conduit between Columbus avenue and gate-house,	\$31,392 60
Building conduit, Boylston avenue	142,933 35
Engineering salaries and expenses, office rent, etc.	16,297 33
Holidays	7,568 61
Total	\$198,191 89

RECAPITULATION.

Street Department, Sewer Division	\$347,133 64
Sewerage works	1,086,893 33
Stony brook improvement	\$46,673 24
Stony brook improvement, chapter 397, Acts of 1899	151,518 65
	198,191 89
	\$1,632,218 86

Summary of Sewer Construction for the Twelve Months Ending January 31, 1900.

DISTRICT.	Built by the City by Contract or Day Labor.	Built by Private Parties.	Total length built during the 12 months ending Jan. 31, 1900.
	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
City Proper	3,596.27	551.52	4,147.79
East Boston	5,148.87	.....	5,148.87
Charlestown	668.18	797.04	1,465.22
South Boston	1,943.30	188.10	2,131.40
Roxbury	8,909.26	1,944.69	10,853.95
West Roxbury	10,301.08	899.61	11,200.69
Dorchester	45,509.46	11,594.84	57,104.30
Brighton	23,695.73	1,979.25	25,674.98
Total	99,772.15	17,955.05	117,727.20

Summary of Sewer Construction, for Five Years, Previous to February 1, 1900.

	1895.	1896.	1897.	1898.	1899.
	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
Built by the city by contract or by day labor . . .	139,200.09	116,008.25	134,324.93	203,139.68	99,772.15
Built by private parties . . .	36,287.35	37,825.92	38,969.14	9,325.99	17,955.05
Total number of feet built.....	175,487.44	153,834.17	173,294.07	212,465.67	117,727.20

Schedule of Sewers Built to Date in the City of Boston, February 1, 1900.

	Total length built during the 12 months ending Jan. 31, 1900.	Length rebuilt and abandoned during the 12 months ending Jan. 31, 1900.	Additional length for 12 months ending Jan. 31, 1900.	
	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Miles.</i>
City Proper	4,147.79	1,813.00	2,334.79	0.44
East Boston.....	5,148.87	231.00	4,917.87	0.93
Charlestown.....	1,465.22	797.04	668.18	0.13
South Boston.....	2,131.40	510.40	1,621.00	0.31
Roxbury.....	10,853.95	619.22	10,234.73	1.94
West Roxbury.....	11,200.69	124.00	11,076.69	2.10
Dorchester	57,104.30	344.65	56,759.65	10.75
Brighton	25,674.98	.....	25,674.98	4.86
Totals.....	117,727.20	4,439.31	113,287.89	21.46
Length built previous to January 31, 1899.....				489.20
Total				510.66
Length of intercepting sewer.....				24.12
Total				534.78

Catch-basins built, February 1, 1899, to January 31, 1900.

	Day Labor.	Contract.	Total.
City Proper.....	45	2	47
Roxbury.....	13	4	17
Dorchester.....	111	126	237
West Roxbury.....	1	24	25
Brighton.....	49	16	65
Charlestown.....	3	—	3
East Boston.....	9	—	9
South Boston.....	9	—	9
Totals	240	172	412

826,138 linear feet sewers flushed.

826 cubic yards material removed from sewers.

6,953 catch-basins cleaned; 21,110 cubic yards removed.

MAIN DRAINAGE STATION.

Report of sludge received in and removed from the Deposit Sewer, for twelve months ending January 31, 1900 :

1899.	RECEIVED.	1899.	REMOVED.
February.....	930 cubic yards.	February....	510 cubic yards.
March.....	900 " "	March.....	850 " "
April.....	1,450 " "	April.....	680 " "
May.....	1,308 " "	May.....	680 " "
June.....	1,417 " "	June.....	765 " "
July.....	740 " "	July.....	680 " "
August.....	931 " "	August.....	680 " "
September...	815 " "	September...	1,064 " "
October.....	876 " "	October.....	595 " "
November....	222 " "	November...	935 " "
December....	973 " "	December...	1,105 " "
1900.		1900.	
January.....	1,449 " "	January.....	680 " "
	12,011 cubic yards.		9,224 cubic yards.

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.

Sewer yard, on Columbus avenue, Roxbury.

Sewer yard, with buildings, on Rutherford avenue, Charlestown.

Sewer yard, with buildings, on Chelsea street, East Boston.

Sewer yard, with buildings, on Massachusetts avenue, near Albany street, South End.

Sewer yard, with buildings, on Western avenue, Brighton.

Sewer yard, with buildings, on Revere street, West End.

Sewer yard, with buildings, Old Harbor and Ninth streets, South Boston.

Sewer yard, with buildings, Child and South streets, West Roxbury.

Land and buildings at pumping-station, Old Harbor Point, with roadway (Mt. Vernon street).

Land, buildings and reservoirs at Moon Island and Squantum.

Street Department — Sewer Division — Pumping Station, Dorchester.

Report of Pumping done during the year, from February 1, 1899, to January 31, 1900, inclusive.

	ENGINE NO. 1.		ENGINE NO. 2.		ENGINE NO. 3.		ENGINE NO. 4.		Total gallons pumped.	Daily average amount pumped.	Daily average amount of coal used.	Per cent. of ashes and clinkers.	Gallons pumped per pound of coal used.	Average lift.	Duty in ft. lbs. per 100 pounds coal used.	Rainfall.
	Pumping time.	Gallons pumped.	Pumping time.	Gallons pumped.	Pumping time.	Gallons pumped.	Pumping time.	Gallons pumped.								
1899.																
February..	423 00	568,205,886	633 15	851,916,142	640 54	954,542,740	423 37	582,150,360	2,956,815,106	105,600,539	43,967	11.4	2,418	35.5	72,143,593	1.98
March.....	644 16	859,671,834	706 15	951,351,411	477 48	721,415,232	697 40	998,108,157	3,530,546,634	113,888,600	47,506	11.8	2,397	36.9	74,108,816	6.04
April.....	628 30	847,349,401	65 00	87,675,949	508 25	738,085,564	707 20	1,021,769,100	2,694,880,014	89,829,333	34,160	13.2	2,629	35.0	77,478,228	1.68
May.....	318 45	406,107,458	472 35	567,001,447	742 30	1,085,925,411	483 33	677,137,399	2,736,171,715	88,286,184	33,677	11.8	2,620	34.2	76,980,115	1.01
June.....	340 10	448,865,559	136 00	163,062,646	705 55	1,014,949,838	602 10	841,854,823	2,468,072,866	82,269,095	30,186	11.5	2,725	34.9	80,061,650	2.51
July.....	292 40	381,259,552	78 35	99,468,337	734 10	1,067,704,594	728 35	1,055,063,010	2,603,525,473	83,984,692	30,143	11.6	2,781	35.1	82,600,439	3.77
August.....	296 10	392,854,161	61 25	79,767,522	723 20	1,076,105,056	724 05	1,074,271,589	2,622,998,328	84,612,849	29,348	13.6	2,883	35.3	85,810,701	2.40
September,	140 25	179,898,736	128 15	166,535,409	692 10	1,005,430,035	713 00	1,022,388,629	2,374,312,809	79,143,760	28,000	14.4	2,826	35.7	84,884,172	5.75
October....	152 20	200,376,085	123 35	157,262,917	731 15	1,083,239,673	732 35	1,080,686,213	2,521,564,888	81,340,802	28,767	14.6	2,827	35.2	83,353,702	2.85
November,	148 30	193,438,335	408 45	516,371,200	711 20	1,135,534,211	706 35	1,105,829,066	2,951,372,752	98,379,091	36,480	16.9	2,696	35.1	79,427,402	1.72
December,	481 10	638,997,216	352 55	461,020,660	80 20	128,414,757	727 15	1,099,722,408	2,328,155,101	75,101,777	32,477	15.2	2,312	36.4	70,299,957	1.66
1900.																
January...	392 40	527,321,925	719 30	965,090,626	.....	.....	740 00	1,186,066,232	2,688,678,803	86,731,574	36,383	13.3	2,383	35.3	70,531,029	3.66
Totals and averages.	4,238 30	5,644,546,078	3,886 05	5,066,724,266	6,748 07	10,010,747,111	7,986 25	11,745,077,006	32,477,094,480	89,097,358	34,237	13.2	2,624	35.3	78,139,970	35.08

South Boston.

Sewers built between February 1, 1899, and February 1, 1900, by the City, by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
A st.	Opposite Binford st.	3.00	5 ft. X 4 ft., wooden over- flow	Just started. Day labor	\$658 50
Bullock	C st. and D st.	45.00	5 ft. X 4 ft., wooden	Built in 1898	45 74
D st. and Anchor st.	E st. and tide-water			Day labor. Cost shown under maintenance.	
Dorchester ave.					
Dexter and El- lery sts.	W. First st. and Summer-st. extension			Built in 1898	888 75
E st.	Dorchester ave. and Ames st., Bowen st. and Fifth st.	271.00	2 ft. 6 in. X 3 ft. 9 in., brick,	Day labor	6,171 23
Dorr st.	Eighth st. and tide-water	99.25	12-in. pipe	Built in 1897	17 92
E st.	Ninth st. and tide-water	60.00	36-in. iron pipe	Day labor	242 82
H st.		220.13	3 ft. X 3 ft., brick	Built in 1898	178 48
K st.				Day labor; rebuilding, }	2,217 79
Overflow				Built in 1897	13 56
Fourth st.	Ninth st. and point 600 ft. southerly	347.48	12-in. pipe	Day labor	1,923 74
K st.	Tide-water and Mt. Washing- ton ave.	230.27	10 ft. 3 in. X 6 ft. 3 in., brick,	Built in 1898	10 07
Peters st.	Tide-water and Sixth st.			Day labor; rebuilding.	18,751 11
Kemp st.				Built in 1898	762 72
Q-st. outlet					

South Boston .— Concluded.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Passageway off A st.....	.....	.....	.....	Built in 1898.....	\$34 27
Summer-st. ex- tenston	E st. and L-st. bridge.....	.....	.....	Built in 1898.....	246 30

Sewers built between February 1, 1899, and February 1, 1900, in streets laid out under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

Columbia road...	O st. and Q st.....	{ 306.00 364.17	12-in. pipe..... 12 in. X 12 in., wooden box,	Day labor..... Day labor.....	\$1,775 17
					<u>\$33,938 17</u>

Sewers built between February 1, 1899, and February 1, 1900, by Private Parties.

Acadia st.....	E. First st. and E. Second st.	188.10	12-in. pipe.		
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East Boston.

Sewers built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Brooke st.....	Overflow at Bremen st.....	.....	.....	Built in 1897.....	\$108 00
Chaucer st.....	Curtis st. and Moore st.....	{ 514.67	{	Day labor.....	1,545 24
		{ 104.95	{ 12-in. pipe.....		
Chelsea st.....	Chelsea Bridge and Curtis st.	{	{ 3 ft. 6 in. X 3 ft. 8 1/2 in. brick	Day labor.....	6,733 24
		{ 155.00	{ 1 regulator manhole.....		
Chelsea st.....	Curtis st. and Eagle square..	{ 359.52	{ 1 overflow manhole.....	Day labor.....	1,884 73
Falcon st.....	Meridian st. and Border st..	{ 77.52	{ 3 ft. 6 in. X 3 ft. 8 1/2 in. brick,	Built in 1898.....	21 08
Curtis st.....	Chelsea st. and Chaucer st..	{	{ 24-in. pipe.....	Day labor.....	3,768 71
Eagle square.....	Connection with Metropolitan	{	{ 15-in. pipe.....		
	sewer.....	{ 366.75	{	Built in 1898.....	888 10
Havre st.....	Decatur street and 350 feet	{	{ 12-in. pipe.....	Day labor; 231 feet re-	
	easterly.....	{	{	built; cost shown under	
		{ 200.16	{ 15-in. pipe.....	maintenance.	
Pope st.....	Saratoga st. and Byron st.....	{ 1,121.57	{ 12-in. pipe.....	Day labor.....	5,861 83
Saratoga st.....	Ford st. and 250 ft. westerly.	{ 255.98	{ 12-in. pipe.....	Contract.....	479 00
Saratoga st.....	Austin ave. and easterly.....	{	{	Built in 1898.....	135 17
Summer st.....	Seaver st. and Lamson st.....	{	{	Built in 1898.....	267 93
Marginal-st. e x-	.....	{	{	Built in 1898.....	91 95
tension.....	.....	{	{	

Sewers built between February 1, 1899, and February 1, 1900, by the City, in streets laid out under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

Bennington-street	Chelsea st. and Belle Isle inlet	{ 1,301.14	{ 12-in. pipe.....	Contract.....	17,317 29
boulevard.....		{ 190.30	{ 5 ft. X 6 ft., brick culvert,	Day labor.....	
Bennington-street		{	{	Contract.....	
boulevard, out-		{ 319.46	{ 24-in. pipe.....	Contract.....	
let in Leverett	Swan st. and Bennington st..	{	{		
ave.....		{	{		

Surface drains built between February 1, 1899, and February 1, 1900, by Private Parties.

Alford st.	Arlington st. and Main st.	444.14	12-in. pipe.	Rebuilding; built by Mass. Pipe Line.	
<i>Sewers built between February 1, 1899, and February 1, 1900, by Private Parties.</i>					
Lynde st.	Union st. and Arrow st.	{ 201.25 144.15 7.50 }	{ 15-in. pipe 12-in. pipe 18-in. pipe }	Rebuilding; built by B. & M. R.R.	

Brighton.

Sewers built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Empire.	North Harvard st. and Sorrento st.			Built in 1898.	\$239 93
Cypress road.	Dustin st. and Murdock st.			Built in 1898.	10 58
Sparhawk st.	Murdock st. and Cambridge st.			Built in 1898.	65 91
Lanark road.	Sutherland road and Kinross road.			Built in 1898.	38 00
Commonwealth av.	Warren st. and Chestnut Hill ave.	{ 4,758.02 645.29 3,767.32 }	{ 10-in. pipe 12-in. pipe 10-in. pipe }	Day labor. Contract.	75,701 07
Commonwealth ave., outlet in Washington st.,	Brookline line and Commonwealth ave.	1,078.55	12-in. pipe.	Day labor.	

Brighton. — *Continued.*
Sewers built between February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Kilsyth road.....	Colliston road and 75 ft. west	.....	.....	Built in 1898.....	\$6 20
Kinross road.....	Sutherland road and Com- monwealth ave.....	.....	.....	Built in 1898.....	133 94
Kilsyth road and private land....	Colliston road and Suther- land road.....	422.83	12-in. pipe.....	Day labor.....	1,074 69
Private land, Park- man, Brooks and Bigelow.....	.....	.....	.....	Built in 1895 and 1896,	782 34
Sutherland road..	Commonwealth ave. and Kin- ross road.....	647.70	12-in. pipe.....	Day labor.....	2,795 11
Leicester st.....	Chestnut Hill ave. to Engle- wood ave.....	.....	.....	Built in 1898.....	69 83
Sutherland road..	.....	.....	.....	Built in 1898.....	22 42
Harriet st. and private land....	Faneuil st. and Parsons st....	.....	.....	Built in 1898.....	580 03
Hardwick st....	Bigelow st. and Dunboy st....	.....	.....	.....	76 65
Cambridge st....	Seattle st. and N. Harvard st..	.....	.....	Built in 1898.....	4 87
Cambridge st....	Seattle st. and Charles river,	.....	.....	Built in 1898.....	292 38
Home ave.....	.....	.....	.....	Built in 1896.....	252 72
Washington st... Lanark road.....	Nantasket ave. and Common- wealth ave.....	.....	.....	Built in 1898.....	28 31
Selkirk road.....	Englewood ave. and Kilsyth road.....	.....	.....	Built in 1898.....	48 94
Allston sq.....	Sutherland and Chiswick roads	.....	.....	Built in 1898.....	13 80
Hano st.....	Everett st. and Cambridge st.,	.....	.....	Built in 1896.....	1,210 96
				.....	151 03

Severs built between February 1, 1899, and February 1, 1900, by the City, in streets laid out under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

Cambridge st.	Brighton ave. and Washington st.	100.00	18-in. pipe	Day labor.	\$37 00
Malvern st.	Brighton ave. and Ashford st.			Built in 1897.	679 84
Chiswick road ...	Chestnut Hill ave. and Englewood ave.			Built in 1898.	275 67
North Harvard st.,	Ayr road and Sutherland road.	{ 308.17	{ 10-in. pipe, sewer.	Built in 1898.	1,018 03
Orkney road.	Brighton ave. and Commonwealth ave.	{ 100.00	{ 6-in. pipe, house-drain. }	Contract.	2,781 44
Chester.				Built in 1898.	228 10

Surface drains built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Commonwealth ave.	Warren st. and Chestnut Hill ave.	{ 298.11 409.27 2,143.73 976.00 36.00	{ 24-in. pipe. 18-in. pipe. 12-in. pipe. 10-in. pipe. 12-in. iron pipe. 46 catch-basins.	Day labor.	Cost included in sewers built by the city.
Commonwealth ave., outlet in private land, Corey road and Washington st.,	Brookline line and Commonwealth ave.	{ 942.23 1,515.66 160.00	{ 10-in. pipe. 12-in. pipe. 24-in. pipe. 27 catch-basins.	Contract.	
		{ 1,231.05 103.00 43.00	{ 24-in. pipe. 18-in. pipe. 10-in. pipe. 3 catch-basins.	Day labor.	

Brighton.— *Concluded.*
Surface drains built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Faneuil Valley conduit in Faneuil st.....	Fairbanks st. and Oak sq....	1,696.52	5 ft., circular brick.....	Contract.....	\$23,497 88
Faneuil Valley conduit in private land and Fairbanks st....		32.80	3 ft. X 2 ft. 9 in., brick....		
Kilsyth road and private land...	Main brook and Faneuil st..	420.00	5 ft., circular brick.....	Day labor	{ Cost shown in sewers built by the city 1,455 23
Private land.....	Colliston road and Sutherland road.....	477.50	30-in. pipe.....	Day labor	
Strathmore road,	Commonwealth ave. and Chiswick road.....	.....	.....	.....	4,955 00 340 95
Salt Creek brook, Shepard brook Improvement..	Englewood ave. and Commonwealth ave.....	462.15	30-in. pipe.....	Day labor	
Sutherland road brook in Sutherland road and Commonwealth ave.....	.....	.....	.....	Built in 1898.....	2,250 00
	Outlet in private land and westerly side of Commonwealth ave., near Glendon ave.....	834.08	30-in. pipe	Land damages; not yet started	
				Day labor	8,702 80

Culverts built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Brooks-st. extension in Charles river reservation.....	86.75	2 ft. X 2 ft., wood.....	Day labor.....	\$197 94
Culvert, Commonwealth ave.....	.....	.....	Built in 1898.....	538 11
				<u>\$180,557 70</u>

Sewers built between February 1, 1899, and February 1, 1900, by Private Parties.

Bagnal st.....	174.87	12-in. pipe.		
Hobson st.....	578.87	15-in. pipe.		
Proposed st.....	439.94	12-in. pipe.		
Richardson st.....	494.30	12-in. pipe.		
	291.27	10-in. pipe.		

West Roxbury.

Sewers built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Argyle and Marion sts. and private land.....	.....	.....	.....	\$573 55
Beech st.....	.....	.....	.....	14 36
Bellevue ave.....	700.00	20-in. pipe.....	Contract.....	3,147 13
Fletcher st.....	250.00	15-in. pipe.....	Built in 1898.....	339 62
Farguhar st.....	730.00	12-in. pipe.....	Built in 1898.....	163 80

West Roxbury. — *Continued.*
Sewers built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Calder st.....	Blue Hill ave. and Canterbury st.....	74.95	6-in. pipe house drain....	Day labor	\$670 15
Temple and Perham sts. and outlet.....	Sherwood st. and Brown ave.	1,184.12	12-in. pipe.....	Contract.....	8,862 80
Garden st.....	Florence st. and end of street	349.36	12-in. pipe.....	Built in 1898.....	101 50
Harrison st.....	Newbern st. and Sedgwick st.	357.92	12-in. pipe.....	Contract.....	9 66
John A. Andrew st.	Walter st. and Fairview st.	502.13	12-in. pipe.....	Day labor.....	954 57
Jones st.....	Centre st. and Montview st. ....	.....	12-in. pipe.....	Built in 1898.....	2,714 67
Park st.....	St. John st. and 150 feet northerly.....	155.73	10-in. pipe.....	Day labor.....	32 93
Private land	Anson st. and St. Mark st.....	.....	.....	Built in 1898.....	72 42
Percy st.....	.....	.....	.....	Built in 1898.....	11 38
Private land at Parental School .....	.....	.....	.....	Built in 1898.....	56 79
Private land and Rosemary st.....	.....	.....	.....	Built in 1898.....	180 94
South st.....	Congreve st. and 380 feet westerly.....	32.00	12-in. pipe.....	Day labor.....	682 83
St. Mark st.....	Percy st. and South st.....	.....	.....	Built in 1898.....	25 60
South and Congreve sts.....	Fletcher st. and Centre st.....	1,360.32	12-in. pipe.....	Day labor.....	3,833 84
Wachusett st.....	Walk Hill st. and Varney st.	85.05	12-in. pipe.....	Contract.....	888 43
Weld and Corey sts.....	Metropolitan sewer and Vermont st.....	481.89	12-in. pipe.....	Day labor.....	4,256 65
Walter st.....	Outlet near Proctor st. and Mendum st.....	.....	.....	Built in 1898.....	48 74

Walter st.....	Sewer in private land and Ashfield st.....	.....	Built in 1898.....	87 57
Proctor-st. outlet	.....	.....	Built in 1898.....	95 83
Sherwood st.....	.....	.....	Built in 1898.....	39 52
Westbourne st.....	.....	.....	Built in 1898.....	18 73

Sewers built between February 1, 1899, and February 1, 1900, in Streets laid out under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

Angell st.....	Blue Hill ave. to Canterbury st.....	90.00	10-in. pipe, catch-basin drain.....	Built in 1898.....	\$84 60
Congreve st.....	South st. and Centre st.....	60.00	8 catch-basins.....	Contract.....	1,020 50
Custer st.....	Arnold Arboretum and Woodman st.....	46.00	6-in. pipe, house drain ..	Contract.....	489 07
Dresden st.....	Boylston st. and Spring Park ave.....	37.25 11.00	10-in. pipe, catch-basin drain.....	Contract.....	122 83
Hubbard st.....	Lamartine st. and Chestnut ave.....	17.00 42.20 15.00	6-in. pipe, house drain... 1 catch-basin..... 12-in. pipe, sewer.....	Contract.....	145 26
Oakview terrace..	Centre st. and end of street.	23.00 86.50	10-in. pipe, catch-basin drain..... 3 catch-basins.....	Contract.....	954 29
Newburg st.....	Belgrade ave. and Beech st.....	23.00	10-in. pipe, catch-basin drain.....	Built in 1898.....	653 49
Woodlawn st.....	.....	.....	6-in. pipe, house sewer..	Built in 1898.....	36 42
	.....	.....	4 catch-basins.....	.....	.....

West Roxbury.—Continued.
Surface drains built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Franklin Park brook in Calder st. and private land	Blue Hill ave. and Canterbury st.	595.16	4 ft., circular brick conduit.....	Day labor.....	\$7,234 16
Goldsmith brook. Keyes and Lee sts.	Goldsmith brook conduit and Child st.	618.00	3 ft. 6 in., circular brick conduit.....	Built in 1898.....	3,069 30
Spaulding st. Neponset ave. Branch of Stony brook in Ashland and Rowe sts. and private land.....	Child st.	14.50	18-in. pipe.....	Day labor.....	10,849 22
Private land..... Private land.....	.....	.....	.....	Built in 1898.....	91 08
.....	Ashland st. and Sharon st.	152.00	3 ft., circular brick conduit.....	Contract.....	292 63
.....	May st. to Arborway..... Corey, Hastings, Centre and Montview sts.....	.....	.....	.....	60 85
.....	.....	.....	.....	Land damages; construction not yet begun.....	1,000 00
					\$54,237 71

Sewers built between February 1, 1899, and February 1, 1900, by Private Parties.

Dixwell st.....				
Glade ave.....				
Irving st.....				
Columbus ave. and School st. Glen road and 300 feet southerly.....	321.75	12-in. pipe.....		
Anawan ave. and Pelton st..	299.00	12-in. pipe.....		
	277.96	12-in. pipe.....		

Sewers built between February 1, 1899, and February 1, 1900, by the City of Boston, by Contract or Day Labor, under the direction of the Stony Brook Improvement Office.

Boylston ave.....				
Boylston ave. at Cornwall st....				
Private land.....				
About 200 feet north of Corn- wall st.....	68.00	42 in. X 54 in., brick.....		Rebuilt
.....	{	48-in. iron pipe.....		Rebuilt
.....	8.00	42 in. X 54 in., brick, Bell- mouth		Rebuilt
Boylston st. and Boylston ave.	400.00	2 ft. X 3 ft. 6 in., brick...		Roxbury low level sewer

Cost shown
under Stony
brook.

Surface drains built between February 1, 1899, and February 1, 1900, by the City of Boston, by Contract or Day Labor, under the direction of the Stony Brook Improvement Office.

Stony brook.....				
Stony brook gate-house and existing channel.....				
	{	15 ft. 6 in. X 17 ft., brick.		Old gate-house.....
	407.00	15 ft. 6 in. X 17 ft., brick.		Boylston Station.....
	{	9 ft. X 9 ft. 6 in., brick...		.....
	1,128.00			

Cost shown
under Stony
brook.

Dorchester.

Sewers built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Barry st.	Hamilton st. and 400 ft. ....	.....	.....	Built in 1898.	\$15 08
Bowdoin st.	Sewer near Quincy st. and Draper st. ....	.....	.....	Built in 1898.	459 93
Bowdoin st.	Hamilton st. and Cottage pk.	232.00	12-in. pipe.	Day labor. All rock.	1,902 75
Ditson st. ....	.....	.....	.....	Built in 1898.	7 50
Stanwood st.	Blue Hill ave. and easterly. ....	.....	.....	Built in 1898.	163 24
Browning ave. . .	Bernard st. and Talbot ave. . .	344.65	12-in. pipe.	Day labor; rebuilding.	} Cost shown under main- tenance.
Dorchester ave. . .	Mt. Vernon st. and Columbia road.	Built in 1898. ....		54 90
Eaton sq. ....	.....	.....	.....	Built in 1898.	18 97
Bullard st.	Rosseter st. and Nottingham st.	223.30	12-in. pipe.	Day labor.	366 42
Devon-st. outlet in private land. .	(To Lawrence ave.) . . . . .	.....	.....	Built in 1897.	826 72
Devon-st. outlet in private land. .	(To Richfield st.) . . . . .	.....	.....	Built in 1897.	400 00
Burrell st.	Batchelder st. and Clifton st.	196.50	12-in. pipe.	Contract.	466 17
Elmo and Green- wood sts. ....	.....	.....	.....	Built in 1897.	52 86

Ceylon st.....	Quincy st. and Columbia road	50.00	5 ft., brick, C. B. drain...	Day labor; just started.	3,637 77
Elmo.....	Main sewer and west to Erie st.	97.00	18-in. pipe.....	Built in 1897.....	2 97
Faxon st.....	Trescott st. and Washing- ton st.....	97.00	12-in. pipe.....	Contract.....	823 74
Harvard ave.....	Washington st. and Har- vard st.....	25.25	12-in. pipe.....	Brick reducer; day labor.....	566 41
Geneva-ave. over- flow.....	At Tonawanda st.....	42.81 9.12	4 ft. X 3 ft. 6 in., brick . 6 ft. X 3 ft. 9 in. to 4 ft. X 3 ft. 6 in.....	Day labor.....	1,352 12
Grove st.....	Blue Hill ave. and Normandy st.....	604.29	12-in. pipe.....	Built in 1898.....	20 08
Roland pk.....	Winter st. and Downer ct., Hancock st. & westerly end.	441.73	12-in. pipe.....	Contract; some rock.. Built in 1898.....	1,602 28 145 74
Hancock st. and Downer ct.....	Magnolia sq. and point 200 ft. south.....	33.64	12-in. pipe.....	Day labor.....	553 67
Magnolia sq.	Existing sewer and Milton st.	.....	.....	Built in 1898.....	26 24
Magnolia st.	Sydney st. and Savin Hill ave.	1,811.60	18-in. pipe.....	Day labor.....	17,004 63
Malvern st.....	Dacia st. and Perth st.	149.65	12-in. pipe.....	Day labor.....	245 30
Private land and Endleigh st....	Raven st.....	.....	12-in. pipe.....	Built in 1898.....	31 49
Quincy st.....	Wesley ave. and Evandale ter.	125.64	.....	Contract; much rock.. Built in 1898.....	1,887 73 91 78
Raven st.....	.....	.....	.....	.....	.....
Savin Hill ave....	.....	.....	.....	.....	.....
Trescott st.....	.....	.....	.....	.....	.....
Private land of Romsey st.....	.....	.....	.....	Built in 1898.....	194 71

Columbia road, part of section 4	At Upham's Corner and Ed- ward Everett square	59.50	10-in. pipe, C. B. drain .. 2 catch-basins.....	Day labor	
Columbia road, section 4	Dudley st. and Edward Ever- ett square	204.49	12-in. pipe.....	Built in '97 and '98 ..	
Devon st.	Columbia road and Blue Hill ave.....	237.00	12-in. pipe, C. B. drain ..	Contract; some rock..	3,151 27
		114.00	10-in. pipe, C. B. drain ..		
Edison Green.....	Dorchester ave. and Pond st.	285.00	6-in. pipe, house drain ..	Day labor.....	1,160 44
		75.00	11 catch-basins.....		
Esmond st.	Harvard st. and Blue Hill ave.	61.40	12-in. pipe.....	Contract.....	1,643 19
		254.44	10-in. pipe, C. B. drain ..		
Homes ave	Bowdoin st. and Topliff st. ..	496.07	6-in. pipe, house drain ..	Contract.....	640 18
		67.00	4 catch-basins.....		
Nottingham st. ...	Bullard st. and Bowdoin ave.	251.00	12-in. pipe, C. B. drain ..	Contract	224 44
		327.00	7 catch-basins.....		
Fowler st.	Glenway and Greenwood sts.	76.00	12-in. pipe, C. B. drain ..	Built in 1898.....	395 42
Merlin st.	Athelwold st. and Park st. ...	372.00	10-in. pipe, C. B. drain ..		
Peverell st.	Sawyer ave. and Salcombe st.,	49.55	6-in. pipe, house drain ..	Built in 1898.....	10 50
		166.00	6 catch-basins.....		
			12-in. pipe.....	Built in 1898.....	6 50
			10-in. pipe, C. B. drain ..		
			6-in. pipe, house drain ..		
			3 catch-basins.....		

Dorchester. — *Concluded.*

Sewers built between February 1, 1899, and February 1, 1900, by the City, in streets laid out under Chapter 323 of the Acts of 1899, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Rockford st.	Clifton st. and Dudley st.	{ 34.00 64.00 }	10-in. pipe, C. B. drain... 6-in. pipe, house drain... 4 catch-basins.....	Day labor.....	\$495 76
Hamilton st. and outlet.....	.....	.....	.....	Built in 1898.....	639 35
Stanley st.....	Quincy st. and Bellevue st.....	.....	.....	Built in 1898.....	156 35
Rosseter st.....	.....	.....	.....	Built in 1898.....	52 50
Shafter st.....	Waterlow st. and Faxon st.....	{ 330.62 34 00 234.00 }	12-in. pipe..... 10-in. pipe, C. B. drain... 6-in. pipe, house drain... 4 catch-basins.....	Contract.....	1,583 11
Maryland st.....	Savin Hill ^l ave. and Bay st.....	.....	.....	Built in 1898.....	4 47
Thane st.....	.....	{ 264.44 108.55 }	10-in. pipe, C. B. drain... 10-in. pipe, C. B. drain... 5 catch-basins.....	Built in 1898.....	16 55
Warner st.....	Park st. and Harvard st.....	{ 60.60 34.60 110.00 }	12-in. pipe..... 10-in. pipe, C. B. drain... 6-in. pipe, house drain... 2 catch-basins.....	Contract.....	623 78
Woodcliff st.....	Howard ave., easterly.....	.....	.....	Day labor.....	571 19
Waterlow st. and outlet.....	.....	.....	.....	Built in 1898.....	52 45

Nightingale st. . . . .	.....	.....	Built in 1898.	190 72
Hewins st. . . . .	.....	333.30	Built in 1898.	135 13
Fowler st.	Glenway st. and McClellan st.,	24.00	} Contract	1,163 10
		182.00		
			

Surface drains built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Park st.	Kilton st. and N. Y., N. H. & H. R. R.	167.92	24-in. pipe.	Day labor.	Cost shown under Canterbury Branch. \$1,288 39 28,325 16
Park st.	Spencer st. and Kilton st.	94.80	24-in. pipe.	Day labor.	
Tenean creek.	Charles st. and Josephine st.	217.00	Open ditch.	Day labor.	
Tenean creek.	Park st. and Charles st.	60.23 8.34 154.30	8 ft. X 6 ft. 6 in., brick. 5 ft. 3 in. X 5 ft. 3 in., brick } 3 ft. 6 in. X 3 ft. 6 in., brick }	Contract.	

Sewers built between February 1, 1899, and February 1, 1900, by Private Parties.

Browning ave.	Bernard st. and Talbot ave.	970.15	12-in. pipe.
Carmen st.	Existing sewer and Kilton st.	232.69	12-in. pipe.
Columbia ave.	Locust st. and Mt. Vernon st.	567.20	12-in. pipe.
Kilton st.	Faxon st. and existing sewer, 450 feet, south.	453.96	12-in. pipe.
Quincy st.	Dacia st. and Blue Hill ave.	125.00	10-in. pipe.
Quincy st.	Mascoma st. and Magnolia st.	169.45	10-in. pipe.
Quincy st.	Mascoma st. and Howard ave.	312.65	24-in. pipe.
Trent st.	Coleman st. and Clarkson st.	173.60	12-in. pipe.

South Dorchester.
Sewers built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Blackwell and Bowman sts....	.....	.....	.....	Built in 1898.....	\$17 38
Adams st.....	.....	5.00	12-in. pipe.....	Contract; much rock..	2,614 21
Private land and Richmond st..	.....	121.80	6-in. pipe, house drain ..		
Centre st.....	.....	.....	.....	Built in 1898.....	99 37
Corbet st....	Elm lawn and Summit, east'ly	771.86	12-in. pipe.....	Contract; much rock..	1,555 75
Nelson st....	Hopkins st. and Norfolk st..	.....	.....	Built in 1898.....	158 08
Centre st....	Norfolk st. and existing sewer	300.00	.....	Contract; some rock...	863 99
Corbet st....	Dorchester and Centre aves..	.....	.....	Built in 1898.....	77 83
Fuller st....	Morton st. and Hopkins st..	.....	.....	Day labor.....	159 40
Don st....	Morton st. and 300 feet west.	207.07	12-in. pipe.....	.....	.....
Evelyn and Norfolk sts	Lauriat ave. and Callender st.	.....	.....	.....	.....
Hopkins st....	.....	315.80	12-in. pipe.....	Built in 1898.....	159 89
Lyons st....	Evans st. and Corbet st....	.....	.....	Contract; very much rock.....	1,666 54
Huntoon st....	.....	102.92	12-in. pipe.....	Built in 1898.....	11 36
Malvern st....	Butler st. and Medway st....	.....	.....	Contract; considerable rock.....	894 62
Maxwell st....	Adams st. and Milton st....	.....	.....	Built in 1898.....	26 24
Norfolk and Walk Hill sts	Capen st. and Nelson st....	160.00	12-in. pipe.....	Day labor; much rock,	592 42
Morton st....	.....	.....	.....	Built in 1898.....	96 57
Oak Ridge st....	Lower Mills, main sewer and Oak ridge st....	2.75	15-in. pipe.....	Contract; much rock..	753 30
	Morton st. and Codman st....	101.90	12-in. pipe.....		

Rosemont st., outlet in Centre st.	Centre st. and private land..	683.90	3 ft. 4 in. X 5 ft., brick..	Day labor; much rock,	33,338 39
Private land.....	Centre st. and Rosemont road,	6.00	reducer.....		
Rosemont road...	Adams st. and Dorchester ave.	25.00	24-in. iron pipe.....		
Sewer Yard.....	Gibson st. and sewer yard stable.....	7.00	20-in. iron pipe.....		
Torrey st.....	Washington and Learned sts.	6.00	18-in. pipe.....		
Talbot ave.....	New Eng. ave. and Millet st.	686.45	12-in. pipe.....		
Mascot ave., Jones ave. and private land.....	.....	401.83	10-in. pipe.....		
Talbot ave.....	Washington st. and Blue Hill ave.....	190.00	8-in. pipe.....	Day labor.	91 45
Lauriat st.....	.....	299.58	12-in. pipe.....	Built in 1898.....	
Tileston ave.....	.....		15-in. pipe.....	Contract. Cost shown with Canterbury branch.	267 20
Train st.....	.....	1,682.21	12-in. pipe.....		
Wessex, Weyanoke and Bushnell sts.....	.....	203.10	2 ft. 6 in. X 3 ft., brick..	Day labor.....	10,276 77
Walk Hill.....	.....	22.50	5 ft. 4 in. X 9 ft., brick settling tank.....		
Mountain ave. and Dumas st.....	.....	50.00	12-in. pipe.....	Built in 1898.....	13 18
White terrace....	.....	279.85	12-in. pipe.....	Day labor.....	300 99
Massasoit ave....	.....	696.65	.....	Day labor.....	1,216 80
Ferdale st.....	.....		.....	Built in 1897.....	225 79
Melbourne st.....	.....		.....	Built in 1898.....	2,109 29
Richmond and Butler sts.....	.....		.....	Built in 1898.....	265 26
	.....		.....	Built in 1898.....	152 10
	.....		.....	Built in 1898.....	76 51
	.....		.....	Built in 1898.....	7 46
	.....		.....	Built in 1898.....	9 15
	.....		.....	Built in 1898.....	147 87

South Dorchester. — *Continued.*
Sewers built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Coffey and Ashmont sts. and private land....	Built in 1897.....	\$774 88
River, Fremont and Norfolk sts	Built in 1897.....	34 40
Chapman ave....	Built in 1898.....	6 90
Evans st.....	Built in 1898.....	202 64

Sewers built between February 1, 1899, and February 1, 1900, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 413 of the Acts of 1893, or Special Acts referring thereto.

Atherstone st....	Bailey and Fuller sts.....	55.00 359.90 21.80	6-in. pipe, house drain... 12-in. pipe, C. B. drain... 10-in. pipe, C. B. drain... 3 catch-basins.....	Contract.....	\$839 96
Blue Hill ave....	Neponset river and Walk Hill st.....	42.80 1,485.00 550.00	18-in. pipe, sewer..... 15-in. pipe, sewer..... 12-in. pipe, sewer.....	Day labor; much rock..	49,620 22
Callender st.....	Don and Lyons sts.....	177.20 403.10 617.49 16.00 31.00	12-in. pipe, sewer..... 8-in. pipe, house drain... 10-ft. diameter, brick conduit..... 12-in. pipe, C. B. drain... 10-in. pipe, C. B. drain...	Very much rock..... Contract..... Deep cut.....	21,760 57

Callender st.	Don st. and Tucker st.	361.38	10-in. pipe, C. B. drain .. 11 catch-basins.	Contract; much rock.	2,992 99
Edwin st.	Florida st. and Dorchester ave.	103.00 224.62 62.75	7 drop inlets. 15-in. pipe, C. B. drain .. 12-in. pipe, C. B. drain .. 10-in. pipe, C. B. drain ..		
Edwin st.	Florida st. and Dorchester ave.	156.00 72.00	4 catch-basins. 2 drop inlets. 6-in. pipe, house drain .. 4-in. iron pipe, house drain.	Day labor.	1,021 80
Florida st.	King st. and Templeton st.	175.42 221.00 187.09	12-in. pipe, sewer .. 6-in. pipe, house drain .. 3 ft. 6 in. diameter, brick conduit.		
Florida st.	King st. and Templeton st.	39.00 50.00 53.74	24-in. pipe, C. B. drain .. 12-in. pipe, C. B. drain .. 10-in. pipe, C. B. drain ..	Contract.	3,066 21
Florida st.	King st. and Templeton st.	725.78 31.29 26.00 760.33	4 catch-basins. 15-in. pipe, sewer. 12-in. pipe, sewer. 10-in. pipe, sewer. 3 ft. 6 in. diameter, brick conduit.		
Idaho st. and outlet in private land	Idaho st. and outlet in private land	10.00 10.00	12-in. pipe, C. B. drain .. 10-in. pipe, C. B. drain ..	Day labor.	5,850 80
Spencer st.	Spencer st. ....	.....	.....
Lauriat ave.	Tucker st. and Blue Hill ave. ....	.....	.....	Built in 1898. Built in 1898. Built in 1896. Built in 1898.	1,438 94 23 25 14 27 101 40
Fairmount st.	Fairmount st. ....	.....	.....

South Dorchester. — *Continued.*

Sewers built between February 1, 1899, and February 1, 1900, 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.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Lauriat ave. and outlet in	Norfolk st. and Tucker st.	479.24	12-in. pipe, sewer.	Contract; considerable rock.	\$9,327 79
Bernard st.	Norfolk st. and Southern ave., Bernard st. and private land, Southern ave. and New Eng-land ave.	225.17 36.00	10-in. pipe, sewer. 12-in. and 16-in., iron pipe sewer.		
Southern ave.		624.78	30-in. pipe, C. B. drain.		
Private land.		870.00	24-in. pipe, C. B. drain.		
		193.00	15-in. pipe, C. B. drain.		
		156.95	12-in. pipe, C. B. drain.		
		90.00	10-in. pipe, C. B. drain.		
		.....	2 catch-basins.		
		.....	2 drop inlets.		
			
Lonsdale st.	Adams st. and Dorchester ave. . . . .	.....	.....	Built in 1898.	10 00
Mellen st.	Ocean st. and Montague st.	325.00	6-in. pipe, house drain.	Built in 1898.	6 70
Middleton st.	Norfolk st. and Wildwood st.	261.00	6-in. pipe, house drain.	Day labor; some rock,	654 82
Rozella st.	Adams st. and Muzzey st.	34.00	10-in. pipe, C. B. drain.	Contract.	592 02
		.....	3 catch-basins.		
		144.00	6-in. pipe, house drain.		
		252.19	30-in. pipe, C. B. drain.		
		58.82	15-in. pipe, C. B. drain.		
		22.92	12-in. pipe, C. B. drain.		
		56.26	10-in. pipe, C. B. drain.		
		.....	5 catch-basins.	Day labor.	930 02
Seaborn st.	Centre st. and Kenwood st. . . . .	.....	.....

Wainwright st..	Centre st. and Welles ave....	16.00	10-in. pipe, C. B. drain... 1 catch-basin.....	Contract.....	745 94
Wainwright st..	Centre st. and Welles ave....	25.30	3 ft. X 4 ft. 10 in., brick sewer.....	Day labor.....	
		57.35	36 in. X 30 in., brick sewer.....		
Waldeck st.....	Tonawanda st. and Melville ave.....	141.02	12-in. pipe, sewer.....	Contract.....	4,762 19
		446.47	6-in. pipe, house drain...		
		691.00	18-in. pipe, C. B. drain...		
		515.90	15-in. pipe, C. B. drain...		
		692.71	12-in. pipe, C. B. drain...		
Waldeck st.....	Linsey st. and Stratford st....	61.76	10-in. pipe, C. B. drain...	Contract.....	
		114.70	10 catch-basins.....		
West Selden st. and outlet....	.....	.....	10-in. pipe, C. B. drain... 2 catch-basins.....	Contract.....	2,900 18
		.....	.....	Built in 1898.....	

Surface drains built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Adams st.....	Park st. and Gibson st.....	11.70	5 ft. X 4 ft. 4 in., brick overflow.....	Day labor.....	\$118 53
		9.20	3 ft. X 3 ft., brick cham- ber.....		
Ashmont st. and private land..	Waldorf st. and Montague st.	87.00	30-in. pipe.....	Built in 1897.....	668 47
Boston Water Dept. Yard...		44.00	12-in. pipe.....		
	Tencan creek and Gibson st.	.....	2 catch-basins.....		
		92.00	18-in., pipe.....	Day labor.....	104.90

South Dorchester. — *Continued.*
Surface Drains built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Canterbury } branch of } Stony brook. }	Harvard st. and Callender st.	751.22	Open ditch.....	Day labor.....	
	Lauriat ave. and Callender st.	295.78 321.69 12.10 143.28 8.00	3 ft. 6 in. diameter, brick } Open ditch..... } 7 ft. X 5 ft. 8 in., brick. } 5 ft. 6 in. diameter, brick } 5 ft. 6 in. diameter to 5 } ft. 8 in. X 4 ft., reducer } 5 ft. 8 in. X 4 ft., brick.. }	Day labor.....	
Oakland Garden } Fork of Canter- } bury Branch } of Stony brook }	Bernard st. and Millet st.	475.45 2.50 65.74 63.06 35.55 2.00 26.00	4 ft. diameter, brick..... } 3 ft. 6 in. diameter, brick } 24-in. pipe..... } 18-in. pipe..... } 15-in. pipe..... } 12-in. pipe..... } 30-in. pipe..... }	Contract.....	41,207 63
	Private land, } near Lyons st. }	Callender st. and Lauriat ave.	300.00 817.00 767.19 131.95	Open ditch..... } 30-in. pipe..... } 30-in. pipe..... }		Day labor.....
Willowwood st. } Willowwood st. } Private land.... }	Lauriat ave. and Dumas st. ...	241.41	24-in. pipe.....	Day labor.....	
	Dumas st. and Ballou ave. ...	348.60	2 ft. 6 in. X 3 ft. 6 in., brick	Day labor.....	
Dorchester ave. }	Willowwood st. and Mountain ave.....	16.00	2 ft. 8 in. X 3 ft. 6 in. to } 2 ft. 6 in. X 3 ft. 6 in., } reducer..... }		Contract.....		3,336 43
	Dorchester st. and Gibson st.				

Dorchester ave... Davenport brook improvement..	Rosemont st. and Lonsdale st.	252.56	18-in. pipe.....	Day labor.....	189 13
Mattapan brook in Selden st.	Nelson st. and passageway ..	{ 5.43 6.32 66.27 104.89 126.42 43.53 }	{ 3 ft. 6 in. diameter brick, 3 ft. diameter brick..... 15-in. pipe..... 12-in. pipe..... 10-in. pipe..... 8 catch-basins..... 5 ft. X 5 ft. wooden box, }	Land damages; con- struction not yet be- gun.....	100 00
Passageway..... Capen st..... Private land..... Mattapan brook..	Selden st. and Capen st..... Passageway and Norfolk st.. Passageway and Fairmount st.. Neponset river and Fremont st.....	{ 1,609.58 51.73 296.94 24.83 }	{ 6 ft. 6 in. diameter brick, 24-in. pipe..... 18-in. pipe..... 12-in. pipe..... 2 catch-basins..... }	Contract.....	6,187 18
Private land.....	Old culvert and Richmond st.	{	{	Very much rock; deep cut.....	Cost shown under Blue Hill ave.
Private land.....	Catch-basin near Butler st...	{	{	Day labor.....	404 94
Private land.....	Burt st. and Bailey st.....	.....	.....	Land damages; con- struction not yet be- gun.....	150 00
Rosemont-st. out- let in private land.....	Dix st. and Centre court.....	1,238.80	6 ft. X 6 ft. brick.....	Much rock; day labor,	Cost shown under sew- ers built by the city.
Centre court.....	Private land and Centre st..	7.00	4 ft. X 2 ft. 8 in. overflow		
Centre st.....	Centre ct. and private land..	11.00	30-in. iron pipe.....		
Private land.....	Centre st. and Rosemont road	12.00	12 in. pipe.....		
Rosemont road...	Adams st. and Dorchester av.	.....	.....	Day labor.....	164 90
Sewer Yard.....	Tenean creek and Gibson st..	{ 148.13 }	{ 15-in. pipe..... 2 catch-basins..... }		
		{ 643.52 150.70 823.00 122.85 866.62 }	{ 24-in. pipe..... 18-in. pipe..... 15-in. pipe..... 12-in. pipe..... 10-in. pipe..... 34 catch-basins..... 2 drop inlets..... }	Day labor.....	Cost shown under sew- ers built by the city.
Talbot ave.....	Blue Hill ave. and Washing- ton st.....			Day labor.....	

South Dorchester.—Continued.

Some built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Toneau creek....	Gibson st. and Centro st....	40.00	6 ft. X 6 ft., brick.....	Day labor.....	Cost shown on Dorchester sheet.
Toneau creek....	Park st. and 304 ft. southerly,	122.00	4 ft. X 4 ft., wooden box,)	Day labor.....	
		10.00	18-in. pipe.....)	Piling.....	
		8.00	12-in. pipe.....)	Day labor.....	
		172.00	18-in. pipe.....)		
Toneau creek....	Park st. and Tremblet st....	91.95	15-in. pipe.....)		
Toneau creek in Ashmont st....	Adams st. and Bruce st....	46.35	15-in. pipe.....)		
		26.94	12-in. pipe.....)	Day labor.....	
			3 catch-basins.....)		

Gilbert built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Ashmont st.....	Adams st. and Bruce st....	52.65	18-in. pipe.....	Day labor.....	\$369,837 15
Talbot ave.....	Blue Hill ave and Washington st.....	10.00	30-in. pipe.....	Day labor.....	

Sewers built between February 1, 1899, and February 1, 1900, by Private Parties.

Ashton st.....	Lauriat ave. and Morton st..	612.30	12-in. pipe.....	Contract (private).
Ashton st.....	Lauriat ave. and Callender st..	967.00	12-in. pipe.....	{ Contract (private).
Callender st.....	Existing sewer and Blue Hill ave.....	110.00	10-in. pipe.....	{ Contract (private).
Floyd st.....	Existing sewer and Callender st.....	244.00	18-in. pipe.....	{ Contract (private).
Harvest st.....	Willowwood and Lucerne sts..	256.00	12-in. pipe.....	{ Contract (private).
Harwood st.....	Willowwood and Summit sts..	293.00	10-in. pipe.....	{ Contract (private).
Lithgow st.....	Summit and Lucerne st.....	800.00	12-in. pipe.....	{ Contract (private).
Lucerne st.....	Washington st. and Talbot ave.....	206.00	10-in. pipe.....	Contract (private).
Lucerne st.....	Lauriat ave. and Harvest st..	186.70	12-in. pipe.....	Contract (private).
Silloyay st.....	Lauriat ave. and Stratton st..	418.52	12-in. pipe.....	Contract (private).
Spencer st.....	Melville ave. and Mather st..	345.40	12-in. pipe.....	Contract (private).
Stratton st.....	Existing sewer and Park st..	524.61	12-in. pipe.....	Contract (private).
	Existing sewer and Lucerne st	574.90	12-in. pipe.....	Contract (private).
		1,161.00	12-in. pipe.....	{ Contract (private).
		123.00	10-in. pipe.....	{ Contract (private).
		318.51	12-in. pipe.....	Contract (private).....
		95.20	10-in. pipe.....	Contract (private).....
		1,354.00	12-in. pipe.....	Contract (private).....

Roxbury.

Sewers built between February 1, 1889, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Allegany st. Darling st. (first contract)	Parker st. westerly	625.00	12-in. pipe, sewer	Contract; much rock.	\$1,697 63
Darling st. Benton st.	Calumet st. and Hillside st. .. Calumet st. and Hillside st. .. Columbus ave. and Tremont st.	270.29 127.00	12-in. pipe, sewer	Contract; all rock. } Contract. }	1,559 87
Fellows st. Parker Hill ave.	Webber st. and Hunneman st. ....	.....	.....	Built in 1898	29 15
Highland ave. Kenwood road ...	Existing sewer and Dorr st. Vila st. and Huntington ave. ....	.....	.....	Built in 1898	4 02
Passageway	Hemenway st. and Massachusetts ave. Harrison ave. and Reed st. ....	.....	.....	Built in 1897	4 00
Fairweather st. Notre Dame st. ....	.....	.....	.....	Built in 1898	9 82
and passageway .....	.....	.....	.....	Built in 1898	503 81
Newark st. Adams place	(From Cedar st.) .....	.....	.....	Built in 1898	46 13
Haskins st. Smith st. ....	.....	.....	.....	Built in 1898	271 26
Private land off .....	.....	.....	.....	Built in 1898	1,419 58
Lamont st. Walpole st. ....	.....	.....	.....	Built in 1898	1,613 15
Passageway	Peterborough and Queensberry sts.	79.00 179.82	18-in. pipe	Built in 1898	31 92
	.....		12-in. pipe	Built in 1898	140 44
	.....		.....	Built in 1898	21 53
	.....		.....	Built in 1898	92 29
	.....		.....	Built in 1897	215 07
	.....		.....	Day labor	1,408 98

Halleck st.	253.29	3 ft. 9 in. circular, brick..	Day labor	8,210 31
Ruggles st.	94.50	3 ft. 6 in. X 3 ft. 8 1/2 in., brick	Rebuilding	
Riverway and Brookline ave.	240.00	18-in. pipe, sewer.....	Day labor	Cost shown under surface drains
	166.00	6-in. pipe, house drain...		3,991 72
	20.00	10-in. pipe, C. B. drain...		
	31.00	18-in. pipe, sewer.....		
Fisher ave. and Estey st.	14.73	24-in. pipe, sewer.....		
	319.15	24-in. pipe, sewer.....		
	299.82	12-in. pipe, sewer.....		
	196.27	10-in. pipe, sewer.....		
	5.00	Brick reducer.....		
Smith st.	41.82	15-in. pipe, sewer.....	Day labor; overflow...	128 20
Conant st.	4.00	15-in. pipe, sewer.....	Day labor; overflow..	104 98
Bucknam st. and Fisher ave.	9.00	12-in. pipe, sewer.....		
	4.50	24-in. pipe, sewer.....		
	152.36	18-in. pipe, sewer.....		1,539 21
	450.83	10-in. pipe, sewer.....		3,452 46
	98.27	12-in. pipe.....	Contract; all rock.....	
Beech Glen st. ...	232.73	12-in. pipe.....	Day labor; rebuilding.	955 73
Chesterfield st. ...	469.60	12-in. pipe.....	Contract; some rock...	1,621 01
	600.80	18-in. pipe.....	Day labor; some rock..	4,067 92
	.....	.....	Built in 1898.....	79 67
	304.84	10-in. pipe.....	Day labor; iron pipe across Stony brook..	894 89
	151.53	12-in. pipe.....	Contract.....	98 00
	323.90	12-in. pipe.....	Day labor; rock.....	2,939 28
	246.78	12-in. pipe.....	Day labor.....	1,064 43
	352.10	12-in. pipe.....	Day labor.....	65 58
	.....	.....	Built in 1898.....	880 76
	110.00	12-in. pipe.....	Day labor; rock.....	74 62
	.....	.....	Built in 1898.....	25 25
	.....	.....	Built in 1898.....	
Ruggles st. and Prentiss st. ...				
Bogers ave and Halleck st. ...				
Kenwood road and Brookline ave. outlet for Francis st. ...				
Ellingwood st. and Mellen st. ...				
St. Alphonsus st. and Phillips st.				
Huntington ave. and Whitney st.				
Lawn st. and Hayden st.				
Highland st. and Fort ave. ...				
Massachusetts ave. and point 230 feet west.				
Hollander st. and Townsend st. ...				
Harold st. and Humboldt ave. ...				
Gay st. and 150 feet northwest.				
Simmons st. and Linden ave. ...				
Existing sewer and Prentiss place				
Warren st., easterly.				
Hilton st. and Atkinson st. ...				
Sweet st. and V et'y Hospital.				
Existing sewer and Walnutav.				
Waunbeck st.				
Sonoma st.				

Roxbury. — *Continued.*

Sewers built between February 1, 1899, and February 1, 1900, by the City, in streets laid out 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.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Jersey st.....	Boylston st. and Peterborough st.....	29.36 286.58	3 ft. 9 in., circular brick, C. B. drain..... 3 ft. 6 in., circular brick, C. B. drain.....	Day labor.....	\$11,996 31
Public Alley No. 901.....	Hemenway st. and Homerway st.....	315.00 16.00	18-in. pipe, sewer..... 8-in. pipe, house drain..	Day labor.....	1,120 08
Shirley st.....	Norfolk st. and Massachusetts ave.....	452.00 100.00	12-in. pipe, sewer..... 6-in. pipe, house drain.. 4 catch-basins.....	Built in 1898..... Built in 1898.....	327 46 21 13
Bragdon st.....	Boylston st. and Andubon road.....	.....	.....	Built in 1897.....	120 61
Astor st.....	School st. and Bragdon st... Massachusetts ave. and Parker st.....	.....	.....	Built in 1898..... Built in 1898.....	96 27 122 99
Francis st., Vila st. and Kenwood road.....	.....	.....	.....	Built in 1898.....	293 27

St. Stephens st. . . . .	.....	.....	Built in 1898.	242 59
Wensley st. . . . .	.....	.....	Built in 1898.	329 23
Hemenway st. . . . .	.....	.....	Built in 1898.	116 96
Echo st.	{ 10.00	{ 10-in. pipe, C. B. drain. . . . .	.....	157 36
Columbus ave. boulevard. . . . .	.....	{ 1 catch-basin.	Built in 1895-1898.	4,125 83

Surface Drains built between February 1, 1899, and February 1, 1900, by the City, either by Contract or Day Labor.

Riverway and Brookline ave.	Kenwood road and Brookline sewer, outlet for Francis st.	{ 5.0 401.30 316.14 417.88 22.27 64.00	24-in. pipe. 30-in. circular brick. 24-in. pipe. 20-in. pipe. 15-in. pipe. 10-in. pipe.	Contract. \$850 67 Day labor. 4,663 37
Heath st.	Huntington ave. and S. Huntington ave.	{		

Sewers built between February 1, 1899, to February 1, 1900, by the City, under the direction of the Stony Brook Improvement Office.

Columbus ave.	At Heath st.	Regulator and tide gate, built in 1898.	\$265 92
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Roxbury. — *Concluded.*

Surface Drains built between February 1, 1899, and February 1, 1900, by the City, under the direction of the Stony Brook Improvement Office.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Tremont and Linden Park sts...	Roxbury Crossing and Hampshire st.....	built in 1898.....	\$132 24
Colburn st.....	Huntington ave. and Heath st.....	766.79	12-in. pipe.	Private parties.	
Harrishoff st.....	Harold st. and Humboldt ave.	646.67	12-in. pipe.....	Rock.	
Highland st.....	Dorr st. and Millmont st....	179.55	12-in. pipe.		
Privatest., known as No. 1342.....	Hutchins st. and Seaver st....	351.68	12-in. pipe.....		
					\$63,944 96

City Proper — *Continued.*

Sewers built between February 1, 1892, and February 1, 1900, by the City, either by Contract or Day Labor.

LOCALITY.		Length in Feet.	Dimensions and Materials.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Boylston st.....	Washington st. and Tremont st.	243.87	15-in pipe, sewer.....	Day labor; rebuilt.....	\$858 75
Kneeland st., Sec. 2.....	.....	.....	.....	Built in 1898.....	27 00
Congress st.....	Gilbert place and harbor line.	167.58	3 ft. X 3 ft., wood.....	Day labor; piles by contract.....	567 84
Dorchester ave.....	Summer st. and Mt. Washington ave.....	.....	.....	Built in 1898.....	400 91
Eastern ave.....	Commercial st. and So. ferry.	69.58	12-in. pipe, sewer.....	Day labor.....	.....
		5.06	8-in. pipe, house drain... }		
		10.51	6-in. pipe, house drain... }		
		12.00	12-in. pipe, C. B. drain... }		
		16.00	10-in. pipe, C. B. drain... }		
		.....	2 catch-basins.....		
		.....	2 drop inlets.....		
		7 00	{ 12-in. iron pipe, C. B. drain }	Day labor.....	91 71
		.....	{ 1 catch-basin..... }	Built in 1898.....	130 37
		.....	.....	Built in 1898.....	857 84
		.....	.....	Built in 1898.....	18 63
		.....	.....	Built in 1898.....	42 20
		.....	.....	Built in 1898.....	7 20
		.....	.....	Built in 1898.....	11 71
Andrews st.....	East Dedham st. and East Canton st.....	.....	.....	Day labor.....	490 95
Public Alley 102..	Marshall st. and Creek sq....	.....	.....	Day labor.....	91 71
Belvidere st.....	Dalton st. and West Newton st.	.....	.....	Built in 1898.....	130 37
Ipswich st.....	.....	.....	.....	Built in 1898.....	857 84
Public Alley 405..	Public Alley.....	.....	.....	Built in 1898.....	18 63
Public Alley 402..	Public Alley.....	.....	.....	Built in 1898.....	42 20
Public Alley 403..	Public Alley.....	.....	.....	Built in 1898.....	7 20
Public Alley 404..	Public Alley.....	.....	.....	Built in 1898.....	11 71

STREET DEPARTMENT — SEWER DIVISION.

Public Alley 101..	Richmond st. and Cross st. . .	16.00	{ 10-in. pipe, C. B. drain. 2 catch-basins. }	Contract.	647 70
Public Alley 431..	Gloucester st. and Hereford st.	10.00	{ 1 manhole. 10-in. pipe, C. B. drain. 2 catch-basins. }	Contract.	385 75
Public Alley 419..	Clarendon st. and Dartmouth st.	6.00	{ 1 manhole.	Contract.	75 80
Public Alley 701..	Shawmut ave. and Tremont st.	24.00	{ 22-in. X 31-in. brick sewer	Day labor; rebuilding.	517 21
Public Alley 702..	W o r c e s t e r st. and West Springfield st.	6.00	{ 10-in. X 27 in., brick sewer		
Public Alley 703..	Newland st. and Public Alley No. 702.	27.16	{ 10-in. pipe, C. B. drain. 3 catch-basins. }	Contract.	180 77
Charlestown st. . .	Haymarket sq. and Causeway sts.	11.68	{ 1 catch-basin.	Contract.	148 31
		650.17	{ 10-in. pipe.		
		91.00	{ 30-in. X 36-in. brick sewer	Day labor.	12,758 17
		10.00	{ 18-in. pipe, sewer.		
		173.48	{ 8-in. pipe, house drain. 6-in. pipe, house drain. }		
		40.00	{ 10-in. pipe, C. B. drain. 6 catch-basins. }		
Dorchester ave. . .	South of Mt. Washington ave.	65.43	{ 30-in. X 36-in., brick.	Contract.	1,517 65
		331.82	{ 15-in. pipe.		
		332.72	{ 12-in. pipe.	Day labor.	
		215.87	{ 10-in. pipe.		
Albemarle st.	St. Botolph and Railroad sts.	138.97	{ 6 catch-basins. 10-in. pipe, C. B. drain. }	Contract. Cost shown under catch-basins.	
			{ 2 catch-basins. }		\$62,324 36

City Proper. — *Concluded.*
Sewers built between February 1, 1899, and February 1, 1900, by Private Parties.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Buckingham st...	Dartmouth st. and Columbus ave.....	37.00	18-in. pipe.....	Rebuilt by N.Y., N.H. & H. R.R. Co.....	
Atlantic ave.....	Beach st. and East st.....	127.52	12-in. pipe, sewer.....	Rebuilt by B. E. R'y Co.....	
Castle st.....	Tremont st. and Shawmut ave.....	92.00	{ 10-in. pipe..... } { 2 catch-basins..... }	Changes by N.Y., N.H. & H. R.R. Co.....	
Way st.....	Albany st. and Harrison ave.	92.00	12-in. pipe, sewer.....	Rebuilt by N.Y., N.H. & H. R.R. Co.....	
Stevens st.....	Lincoln pl. and Shawmut ave.	203.00	12-in. pipe, sewer.....	Rebuilt.....	

Roxbury.

Sewers abandoned or rebuilt between February 1, 1899, and February 1, 1900.

Heath st.....	At South Huntington ave. . .	40.00	15-in. pipe, C. B. drain. . .	Abandoned.
Halleck st.....	Ruggles to Prentiss st.....	346.50	42-in. X 48-in., brick and wood.	Rebuilt.
Chesterfield st. . .	Mass. ave. and point 230 ft. westerly.	232.72	12-in. pipe.	Rebuilt; day labor.
SOUTH BOSTON.				
K-st. overflow. . . .	Ninth st. and tide-water.	280.13	3 ft. brick and iron pipe. . .	Rebuilt; day labor.
Kemp st.	Tide-water and Mt. Washing- ton ave.	230.27	10 ft. 3 in. X 6 ft. 3 in. brick.	Rebuilt; day labor.
DORCHESTER.				
Browning ave.	Talbot ave. and Bernard st. . .	344.65	12-in. pipe.	Rebuilt; day labor.
EAST BOSTON.				
Hayre st.	Decatur st. and 350 ft. easterly.	231.00	12-in. pipe.	Rebuilt; day labor.
CHARLESTOWN.				
Alford st.	Arlington st. and Main st. . . .	444.14	12-in. pipe.	Rebuilt by Mass. Pipe Line.
LYNDE.				
Lynde st.	Union st. and Arrow st.	201.25 144.15 7.50	15-in. pipe. 12-in. pipe. 18-in. pipe.	Rebuilt by B. & M.R.R.

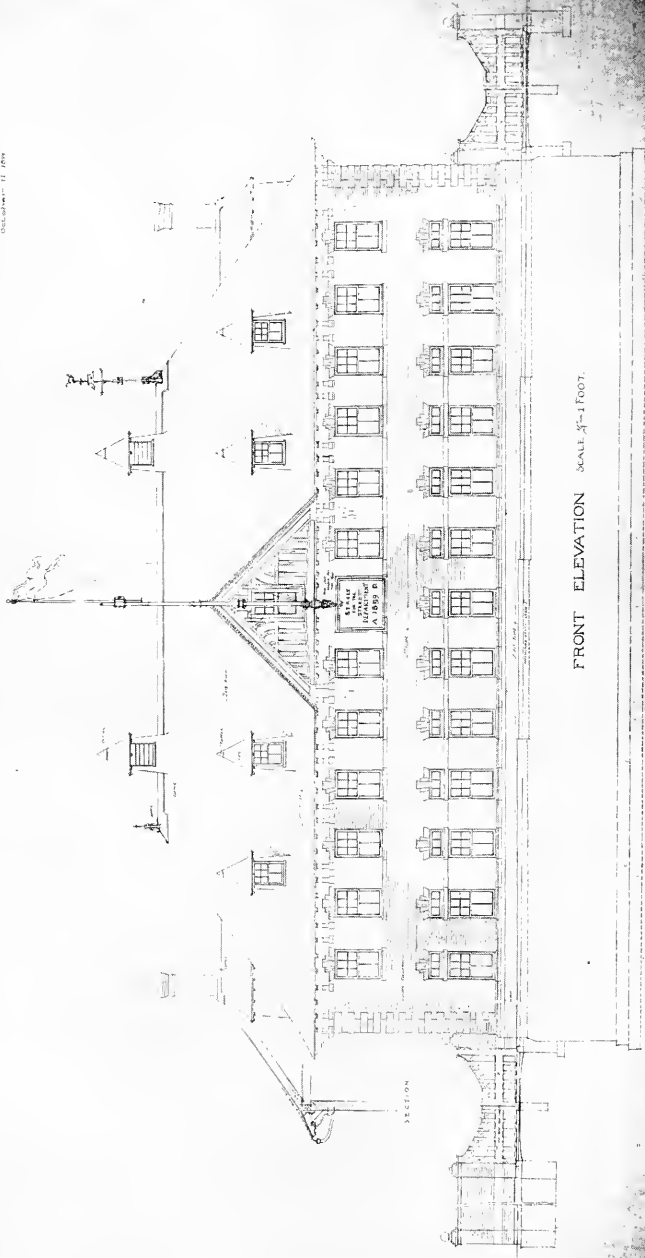
City Proper.

Sewers abandoned or rebuilt between February 1, 1899, and February 1, 1900.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1899-1900.
Built in	Between				
Cross st.....	Salem st. and Endicott st.....	132.00	30 in. x 32 in., wood sewer	} Canal-st. relief sewer rebuilt..... Abandoned..... Oswego-st. regulator.. Rebuilt..... Rebuilt..... Rebuilt..... Rebuilt..... Rebuilt.....	
Endicott st.....	Cross st. and Stillman st.....	85.00	2 ft. x 2 ft., wood sewer..		
Stillman st.....	Endicott st. and Charlestown st.	229.00	2 ft. x 2 ft., wood sewer..		
Haverhill st.....	Charlestown st. and Traverse st.	49.00	12-in. pipe, sewer.....		
Haverhill st.....	Charlestown st. and Traverse st.	74.00	3 ft. x 3 ft., wood sewer..		
Railroad yard....	Harvard st. to sea wall.....	744.00	4 ft. x 4 ft., wood sewer..		
Albany st.....	At Oswego st.....	10.00	2 ft. x 2 ft., wood sewer..		
Public alley No. 701.....	.....	24.00	20 in. x 27 in., brick sewer }	
Buckingham st..	.....	6.00	22 in. x 31 in., brick sewer }	
Atlantic ave....	Near Columbus ave.....	37.00	16 in. x 18 in., brick sewer		
Way st.....	Beach st. and East st.....	128.00	2 ft. x 2 ft., wood sewer..		
Stevens st.....	Albany st. and Harrison ave....	92.00	2 ft. x 2 ft., wood sewer..		
WEST ROXBURY.	Lincoln pl. and Shawmut ave..	203.00	10 in. x 12 in., brick and slate sewer.....		
Boylston ave....	About 200 feet north of Corn- wall st.....	68.00	42 in. x 54 in., brick.....	Rebuilt.....	
Boylston ave. at Cornwall st....	{ 48.00 8.00 }	48-in. iron pipe..... 42 in. x 54 in., brick, } bellmouth.....	Rebuilt.....	

6

CITY OF BOSTON
STABLE FOR THE STREET DEPT
EAST BOSTON MASS
FRANKLIN LESTER
ESQ ARCHT
E. S. MORGAN
PHILADELPHIA
ARCHITECTURAL DIV
DECEMBER 11 1898



FRONT ELEVATION SCALE 3/8"=1 FOOT.

PROPOSED NEW STABLE, EAST BOSTON.

APPENDIX F.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE STREET-CLEANING DIVISION.

921, 922, 923 TREMONT BUILDING,
BOSTON, February 1, 1900.

MR. BENJ. W. WELLS,

Superintendent of Streets, City Hall, Boston:

DEAR SIR,—I have the honor to submit herewith the annual report of the Street-Cleaning Division of the Street Department, for the financial year ending January 31, 1900.

The regular work of the division has been enlarged in scope by cleaning many of the macadamized streets of the Dorchester and Brighton Districts, and the care of the public alleys laid out under chapter 298 of the Acts of 1898. This work in itself is an added expense to the division.

During the year two police officers have been detailed by the Police Board at the suggestion of the Superintendent of Streets for special duty pertaining to the enforcement of the rules of the Board of Health and City Ordinances. The officers have rendered excellent service, resulting in a more cleanly condition in congested sections, although this result was partly obtained through the conviction of one hundred and fifty-two persons in the Municipal Court, paying in fines the amount of \$610.01.

The headquarters of the push-cart patrol system have again been moved to commodious and cheerful quarters on Columbus avenue. It was very necessary to have some sort of a station in this, the central part of the city, on account of the large number of tools that were required down-town during the snow season. It is admirably adapted for the use of the push-cart patrol men, and has been made a sort of base of supplies for distribution of tools and material to adjacent districts.

A new street-cleaning district has been established in East Boston, and is now in thorough running order, giving the much desired and needed service.

A new district should be established in Dorchester, as at the present time the Paving Division is not able to cope with the paving work and do the street-cleaning also. While it has been possible to send the South Boston force to care for the paved streets in Dorchester, in doing this the service in South Boston has suffered to some extent.

The stables in charge of this division are in a dilapidated condition, especially at the West Yard and in South Boston. As it is

probable that we will soon move from the South Boston stables now leased by the city no renovation should be undertaken, but the wooden stables at the West Yard should be put in good condition as soon as possible.

The shops at the South Yard should be equipped with modern machinery and facilities for steam and electric power. The working equipment of the stables is in good order and needs only slight additions.

The hand-sweeping force has accomplished all that was expected of it, and should be further extended.

Respectfully submitted,

JOSHUA ATWOOD, 3d,

Deputy Superintendent.

FINANCIAL STATEMENT.

Appropriation, 1899-1900	\$315,000 00
Revenue, Boston Elevated Railway Company	137 88
Transferred from Surplus Revenue	7,813 27
	<hr/>
Total amount of appropriation	\$322,951 15
Total amount of expenditures	<u>\$322,951 15</u>

OBJECTS OF EXPENDITURES.

Superintendence.

Salary of Superintendent	\$3,000 00
Office pay-rolls	4,560 42
Stationery	268 27
Printing	602 89
Board of horses, not mentioned elsewhere	765 88
Telephone service	566 49
	<hr/>
	<u>\$9,763 95</u>

CLEANING STREETS.

Including Cost of Sweeping, Loading and Removal of Street Dirt.

District 1. South Boston	\$16,075 73
Districts 2-3. East Boston and Charlestown	12,360 63
District 2. East Boston	221 39
District 7. Roxbury	13,349 93
District 8. South End:	
Day gang	13,292 69
Night gang	37,940 75
District 9. Back Bay	6,266 07
District 10. West End and North End	19,363 47
	<hr/>
Total cost of cleaning streets	<u>\$118,870 66</u>

On December 26, 1899, East Boston, whose main thoroughfares had, up to that time, been cared for by the Charlestown force, became a separate district, in charge of a foreman and seven laborers.

HAND SWEEPING.

District 10. West End and North End.

Bag carriers and push carts	\$19,437 03
Piling dirt	2,252 89
Snow work, not mentioned elsewhere	5,083 33
Teaming, patrolling, helpers	3,843 75
Dump	509 63
Miscellaneous	87 10
Superintendence	1,454 94
	<hr/>
	<u>\$32,668 67</u>

The district covered by the Hand Sweeping Force represents an area of 200,166 square yards of granite and asphalt pavement.

CLEANING GUTTERS.

Including Cost of Sweeping, Loading and Removal of Street Dirt.

District 1. South Boston	\$2,466 46
Districts 2-3. East Boston and Charlestown	4,728 85
District 2. East Boston	47 94
District 7. Roxbury	5,307 75
District 8. South End:	
Day gang	3,282 55
Night gang	163 61
District 9. Back Bay	4,441 45
District 10. West End and North End	—
	<hr/>
Total cost of cleaning gutters	<u>\$20,438 61</u>

Total length of gutters cleaned, 3,201.18 miles.

Average cost per mile (including pro rata cost of dump) \$6.27.

COST OF MAINTAINING DUMPS.

District 1. South Boston	\$521 85
Districts 2-3. East Boston and Charlestown	516 60
District 2. East Boston	—
District 7. Roxbury	494 73
District 8. South End:	
Day gang	511 36
Night gang	549 10
District 9. Back Bay	439 43
District 10. West End and North End	526 75
	<hr/>
Total cost of dumps	<u>\$3,559 82</u>

REMOVING SNOW.

Including Labor on Crossings, in Streets, Carting of Snow, etc.

District	1.	South Boston	\$1,256 64
Districts	2-3.	East Boston and Charlestown	1,857 17
District	2.	East Boston	341 02
District	7.	Roxbury	3,169 43
District	8.	South End:	
		Day gang	1,862 56
		Night gang	10,886 95
District	9.	Back Bay	2,855 48
District	10.	West End and North End	4,556 27
Total cost. (See Hand Sweeping and Crossings),			<u>\$26,785 52</u>

MISCELLANEOUS WORK.

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.

District	1.	South Boston	\$217 21
Districts	2-3.	East Boston and Charlestown	784 72
District	2.	East Boston	2 10
District	7.	Roxbury	538 76
District	8.	South End:	
		Day gang	270 78
		Night gang	490 62
District	9.	Back Bay	734 32
District	10.	West End and North End	153 92
Brighton			708 58
Total cost			<u>\$3,901 01</u>

PATROLLING BY DISTRICTS.

This Includes the Cost of Picking Up and the Removal of Refuse Papers, etc., from the Streets.

Cost of paper patrol	\$922 60
--------------------------------	----------

PUSH-CART PATROL SYSTEM.

Superintendence, inspection, etc.	\$3,938 17
Push-carts, including labor and teaming	30,004 45
Total cost	<u>\$33,942 62</u>

Recapitulation of Expenses, Exclusive of Superintendence, Stable and Yard Expenses, Stock and Miscellaneous Accounts.

DISTRICTS.	Cleaning Streets.	Hand Sweeping.	Cleaning Gutters.	Dump.	Snow.	Miscellaneous Work.	Crossings.	Team Patrolling.	Public Alleys.	Push Cart Patrol System.	Total.
1.....	\$16,075 73	.....	\$2,406 46	\$621 85	\$1,256 64	\$217 21	.....	.....	.....	.....	\$20,537 89
2-3.....	12,360 63	.....	4,728 85	516 00	1,857 17	784 72	.....	.....	.....	.....	20,247 97
2.....	221 39	.....	47 94	.....	341 02	2 10	.....	.....	.....	.....	612 45
7.....	13,349 93	.....	5,307 75	494 73	3,169 43	538 76	.....	.....	.....	.....	22,860 60
8, Day gang.....	13,292 69	.....	3,282 55	511 36	1,862 56	270 78	.....	.....	.....	.....	19,219 94
8, Night gang.....	37,940 75	.....	163 61	549 10	10,886 95	490 62	.....	.....	.....	.....	50,081 03
9.....	6,266 07	.....	4,441 45	439 43	2,855 48	734 32	.....	.....	.....	.....	14,736 75
10.....	19,363 47	.....	.....	526 75	4,556 27	153 92	.....	.....	.....	.....	24,600 41
Brighton.....	.....	.....	.....	.....	.....	708 58	.....	.....	.....	.....	708 58
Hand sweeping.....	.....	\$32,668 67	.....	.....	.....	.....	.....	.....	.....	.....	32,668 67
Crossings.....	.....	.....	.....	.....	.....	.....	\$3,929 28	.....	.....	.....	3,929 28
Team patrolling.....	.....	.....	.....	.....	.....	.....	.....	\$922 60	.....	.....	922 60
Public alleys.....	.....	.....	.....	.....	.....	.....	.....	.....	\$118 73	.....	118 73
Push-cart patrol system.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$33,942 62	33,942 62
Total.....	\$118,870 66	\$32,668 67	\$20,438 61	\$3,559 82	\$26,785 52	\$3,901 01	\$3,929 28	\$922 60	\$118 73	\$33,942 62	\$245,137 52

STABLE AND YARD EXPENSES.

Including the cost of the South End, West End, Roxbury, South Boston, Charlestown and East Boston Stables, as follows:

Superintendence of stables	\$1,361 56
Labor, including the cost of feeders, hostlers, broom-makers, watchmen, yardmen, messenger, etc.	21,100 58
Cart and carriage repairs	6,082 74
Harness repairs	1,065 86
Horseshoeing	2,856 90
Sweeping machine repairs	2,975 78
Stable and shed repairs	552 44
Street-car tickets and ferry-passes	550 00
Tool repairs	121 54
Veterinary services and medicine	910 20
Board and care of horses, not mentioned elsewhere	346 37
Hay and grain in stock and paid for	700 32
Total	<u>\$38,624 29</u>

STOCK ACCOUNT.

Broom stock purchased	\$4,041 17
Carts and carriages purchased	320 00
Harnesses and horse furnishings purchased	492 76
Horses purchased	3,450 50
Tools purchased	684 29
Bag carriers, etc.	17 20
Patrol stock and maintenance of same	2,165 75
Total	<u>\$11,171 67</u>

MISCELLANEOUS.

Holidays	\$16,560 52
Scow (cost of disposal at sea of 32,658 loads of street dirt)	5,178 32
Sundries	2,747 42
Royalty on sweeping machines	600 00
Annuity	300 00
Repairs, Old Public Library Building	126 21
Repairs, Patrol System Station, 95 Columbus avenue,	118 96
Total	<u>\$25,631 43</u>

GENERAL RECAPITULATION OF EXPENSES.

Superintendence	\$9,763 95
Cleaning streets	118,870 66
Hand sweeping	32,668 67
Cleaning gutters	20,438 61
Maintaining dumps	3,559 82
Removal of snow and ice	26,785 52
Miscellaneous work	3,901 01
Cleaning crossings	3,929 28
Paper patrol	922 60
Cleaning public alleys	118 73
Patrol system, push-carts	33,942 62
Stable and yard expenses	38,624 29
Stock account	11,171 67
Miscellaneous	25,631 43
Total	<u>\$330,328 86</u>

STREET DEPARTMENT—STREET CLEANING DIVISION. 235

Of the above amount, the sum of \$2,164.64 was paid by other departments and divisions for work done; and in March one week's pay-roll, amounting to \$5,213.07, was charged to the Paving Division Appropriation for the Removal of Snow, thus making the net expenses of this division, as shown in the financial statement, \$322,951.15.

INCOME.

Amount of the bills deposited with the City Collector during the financial year ending January 31, 1900, \$7,683 50

Table showing the Cost per Mile of Cleaning the Streets in each District, Exclusive of Supervision and Other Expenses.

DISTRICTS.	Miles of Streets Cleaned.	Cost of Cleaning.	Pro Rata Cost of Dump.	Total Cost.	Cost per Mile.	
1	1,328.97	\$16,075 73	\$452 41	\$16,528 14	\$12 43	
2-3.....	1,107.40	12,360 63	373 64	12,734 27	11 49	
2	21.42	221 39	.....	221 39	10 33
7	904.04	13,349 93	353 97	13,703 90	15 15	
8 {	Day gang.....	1,207.77	13,292 69	410 29	13,702 98	11 34
	Night gang.....	4,948.52	37,940 75	546 72	38,487 47	7 77
9	482.57	6,266 07	257 15	6,523 22	13 51	
10	2,049.74	19,363 47	526 75	19,890 22	9 70	
	12,050.43	\$118,870 66	\$2,920 93	\$121,791 59		

Average cost per mile of cleaning streets in eight districts, exclusive of supervision, \$10.10.

Table showing the Cost per Mile of Cleaning the Streets in each District, Including Supervision, Labor, Yard and Stable Expenses.

DISTRICTS.	Miles of Streets Cleaned.	Cost of Cleaning Streets.	49% of the Total Cost of Super- vision.	58% of the Total Cost of Yard and Stable Ex- penses.	Total Expenses.	Total Cost per Mile.	
1	1,328.97	\$16,528 14	\$649 25	\$2,985 04	\$20,162 43	\$15 17	
2-3.....	1,107.40	12,734 27	500 24	2,299 85	15,534 36	14 02	
2	21.42	221 39	8 71	39 98	270 08	12 60	
7	904 04	13,703 90	538 33	2,474 97	16,717 20	18 49	
8 {	Day gang....	1,207.77	13,702 98	538 30	2,474 79	16,716 07	13 84
	Night gang...	4,948.52	38,487 47	1,511 89	6,950 93	46,950 29	9 48
9	482.57	6,523 22	256 26	1,178 12	7,957 60	16 49	
10	2,049.74	19,890 22	781 35	3,592 22	24,263 79	11 83	
	12,050.43	\$121,791 59	\$4,784 33	\$21,995 90	\$148,571 82		

Average cost per mile of cleaning the streets in eight districts, including supervision, etc., \$12.32.

Table showing the Number of Loads of Street-dirt Removed.

DISTRICTS.	Number of loads of dirt removed.	Cost per load of cleaning streets and removing to dumps, including foreman's superintendence.
1.....	23,738	\$0 78
2-3.....	12,978	1 31
2.....	221	1 22
7.....	14,497	1 28
8 { Day gang.....	9,947	1 66
{ Night gang.....	20,377	1 86
9.....	6,605	1 62
10.....	11,162	1 73
	99,525	Barrel and bag loads.
Removed by hand-sweeping force.....	7,177	107,057
Removed by push-cart, patrol system.....	5,900	92,449
Removed by district push-carts.....		7,347
Removed by paper patrol.....	139	
Totals.....	112,741	206,853

Total number of cart-loads removed 112,741
 Total number of barrel and bag loads removed 206,853

Thirty-two thousand six hundred and fifty-eight loads of this dirt (or 28 per cent.) were delivered at the dumping-scow, the towing of which to sea cost sixteen cents per load.

PUBLIC WASTE-BARRELS.

Total number of waste-barrels emptied 16,527
 Total number of subway barrels emptied 1,882
18,409

FORCE EMPLOYED.

Deputy Superintendent 1
 Office clerk 1
 Office messengers 2
 Office boy 1
 Employees in the division, not including the above 373
 Entire force 378
 Average force employed during the year 371

APPENDIX G.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE STREET WATERING DIVISION.440-441 TREMONT BUILDING,
BOSTON, February 1, 1900.Mr. BENJ. W. WELLS, *Superintendent of Streets*:

DEAR SIR, — I herewith respectfully submit the annual report of the Street Watering Division for the year ending January 31, 1900: Street sprinkling was commenced on March 30 in the Back Bay, and in all other sections April 15, and continued uninterruptedly until November 30. From November 30 up to date some work has been done in the Back Bay and City Proper as weather permitted.

The weather was exceptionally dry during the year, a fact attested by the working of carts on 205 days from April 1 to December 1, and so much above the average in dryness that the supervising force was put to its greatest exertions. Seldom has the division been put to the test of the past season, and the year's work is a matter for great satisfaction.

The miles of streets watered were 413.59, and the number of carts employed in the work was 231. This is an increase in the streets of 3.68 miles, and 34 in the number of carts over last year. The increase in the number of carts was chiefly in the West Roxbury and Dorchester districts where the assessment went into effect for the first time, and in the City Proper where the conditions around the Union Stations required an increase in the force.

ASSESSMENT DISTRICTS.

The experience acquired in 1898 in the application of the Street Watering Act suggested that the city should be divided into assessment districts formed according to the service required in different parts of the city. Such divisions were accordingly made as follows:

STREET WATERING DISTRICTS.		Rate of Assessment per Linear Foot of Frontage.
District 1.	Back Bay	7 cents
District 2.	City Proper and South End	6 "
District 3.	South Boston	} 5 "
	East Boston	
	Charlestown	
	Brighton	
	Part of West Roxbury	
	Part of Dorchester	
	Roxbury	} 4 "
District 4.	Ward 23 and Ward 24	

The assessment district system may be said to be the correct principle upon which to proceed with street sprinkling. Some sections must, of course, receive more service than others. The central portion of the city, for instance, requires more frequent watering than the outlying districts, and the difficulty in rendering the service in narrow and congested streets increases the expense. Obviously, the assessment should be higher in such cases. The assessment district system has settled, permanently, I think, the street watering question to the satisfaction of the abutters.

ESTIMATED INCOME BY DISTRICTS.

	Amount.
District 1	\$16,843 05
District 2	32,254 44
District 3	117,901 55
District 4	30,474 56
Total	<u>\$197,473 60</u>

The constitutionality of the Street Watering Act, chapter 419 of the Acts of 1897, was determined since the last report. As stated in the last report, the case was brought by Joshua M. Sears *vs.* the Board of Aldermen and the Superintendent of Streets in a writ of *certiorari* to quash alleged illegal assessments. Two questions were involved (1) the constitutionality of the act as a method of taxation by assessment, (2) the constitutionality of the mode of assessment. The Supreme Court held that the act and mode of assessment were constitutional. The text of the act and amendment and the decision of the Court is as follows:

ACTS OF 1897, CHAPTER 419.

SECTION 1. Any city may annually appropriate money for watering the public ways or certain public ways or portions thereof within its limits, at the expense, in whole or in part, of the city, and may determine that certain other public ways or portions thereof shall be watered at the expense, in whole or in part, of the abutters thereon.

SECT. 2. If a city shall determine that the streets or certain streets or portions of streets within its limits shall be watered, in whole or in part, at the expense of the abutters, the expense of the watering of such streets or portions of streets for that municipal year, and the proportion of such expense to be borne by abutters, and the rate to be assessed upon each linear foot of frontage of estates upon such streets or portions thereof, shall be estimated and determined by the Board of Aldermen, and the expense so determined of such watering to be borne by the abutters shall be assessed in the manner hereinafter provided, upon the estates abutting upon such streets or portions of streets, in proportion to the number of linear feet of each estate upon the street or portion thereof so watered.

SECT. 3. The amount of such assessments upon each estate shall be determined in accordance with the provisions of Section 2 of this Act, by the Board of Aldermen, or according as the Board of Aldermen may designate, by the Board of Public Works, Board of Street Commissioners, or Superintendent of Streets, or by any other officer; and such board or officer shall within a reasonable time after the first day of May of that municipal year, make or cause to be made a list of

the streets or portions of streets which the city has determined shall be watered, which list shall specify each estate abutting upon such street or portion thereof, the number of linear feet of each estate upon such street or portion thereof, the amount per such linear foot of the assessment so authorized, and the amount of such assessment on each estate, and shall certify and commit said list to the Board of Assessors of taxes of the city.

SECT. 4. The Board of Assessors shall assess and include in the tax list and warrant for that municipal year committed by them to the Collector of Taxes the assessment upon each estate, as specified in the list committed to said board under the provisions of Section 3 of this Act, and such assessment shall be included in the tax bill issued for the annual tax on such estate for that municipal year, or, in case there shall be no such annual tax bill by reason of an estate being exempted from taxation, a bill shall be issued for such assessment in the same manner as if it was an annual tax bill, and such assessment shall be a lien upon each such estate, and shall be levied, collected, reassessed to the person to whom such assessment ought to have been made, paid, apportioned, bear interest, and become payable in the same manner as, and shall be a part of, the tax for that year on such estate; but any abatement of any such assessment shall be made only by the Board of Assessors, upon a certificate recommending such abatement from the board or officer designated under the provisions of Section 3 of this Act to make and certify the list to the assessors.

SECT. 5. Chapter one hundred and seventy-nine of the Acts of the year eighteen hundred and ninety-one is hereby repealed; but such repeal shall not affect any act done, any right accrued and established, any liability incurred, any proceeding pending, or any assessments made for the expense of watering streets, or the right to make such assessments under the provisions of said chapter one hundred and seventy-nine for the expense of watering streets, prior to the passage of this Act.

SECT. 6. This Act shall take effect upon its passage.

ACTS OF 1899, CHAPTER 366.

SECTION 1. The Board of Aldermen of the City of Boston may divide the territory of said city into two or more street watering districts, and the same shall continue until changed or abolished by said board; and may provide that the owners of estates abutting upon public ways or parts thereof in any or all of said districts shall pay an assessment of a certain specified sum per linear foot of their estates so abutting, to be used for watering each way or part thereof to the same extent in the same district, and may provide that any of such districts shall be watered at the expense of the city.

SECT. 2. The Board of Assessors of said city shall determine the amount of each assessment required to be paid for each estate in a district, in accordance with the assessment provided for as aforesaid, for that district.

SECT. 3. Any person aggrieved by any charge for watering streets by the city may, on application to the Board of Street Commissioners within one month after notice of such charge has been given to him, have such charge considered by said board, and the board, if such action is required to make the charge reasonable, shall abate a part or the whole thereof, and if the charge has been paid

the treasurer of the city shall, on the certificate of the board stating the amount abated, repay such amount.

SECT. 4. The provisions of chapter four hundred and nineteen of the Acts of the year eighteen hundred and ninety-seven, relating to the watering of streets in cities, shall, so far as they are applicable and not inconsistent with this act, apply to the collection of assessments for watering streets under the provisions of this act.

SECT. 5. This act shall take effect upon its passage.

Joshua M. Sears *vs.* the Board of Aldermen and the Superintendent of Streets of the City of Boston regarding assessments of street watering :

KNOWLTON, J. This is a petition for a writ of *certiorari* to quash alleged illegal assessments laid to meet the cost of watering streets in the City of Boston, under the statute of 1897, c. 419.

The first and most important question in the case is whether this statute is constitutional. The right of the Legislature to raise money by taxation is founded upon c. 1, § 1, Art. XIV. of the Constitution of the Commonwealth. Under this article there is authority "to impose and levy reasonable duties and excises upon any produce, goods, wares, merchandise, and commodities, etc." This authority we need not consider in the present case. Secondly, there is authority "to impose and levy proportional and reasonable assessments, rates and taxes upon all the inhabitants of and persons resident of estates lying within the said Commonwealth." The watering of streets in thickly settled portions of cities is such a public benefit that it legitimately may be provided for at the public expense. So far as it promotes the comfort, convenience and prosperity of the public generally as distinguished from land owners it should be provided for by general taxation, which involves the assessment of proportional and reasonable taxes upon all persons and property within the city. The statute purports to authorize every city not only to "appropriate money for watering the public ways or portions thereof within its limits at the expense in whole or in part of the city," but also to "determine that certain other public ways or portions thereof shall be watered at the expense, in whole or in part of the abutters thereon." St. 1897 c. 419, § 1. This last provision calls for another kind of taxation which is local and special. Such taxation, under the Constitution, can only exist when there is a special or peculiar benefit to certain real estate, different from that which is received by the inhabitants generally.

The owners of the land upon which such an assessment is made must pay the same share of the general taxes in proportion to the value of their property that other persons pay. As the Constitution requires that taxes shall be proportional and reasonable, this additional special tax can be justified only where there is a special benefit to property from the expenditure on account of which the assessment is made. *Wright vs. Boston*, 9 Cush. 233-234; *Mount Auburn Cemetery vs. Cambridge*, 150 Mass. 12-14; *Durgan vs. Boston*, 12 Allen, 223-237; *Boston vs. Boston & Albany Railroad Company*, 170 Mass. 95; *Norwood vs. New York & New England Railroad Company*, 161 Mass. 259-264; *Village of Norwood vs. Baker*, 19 Sup. Ct. Rep. 187; *Stuart vs. Palmer*, 74 N. Y. 189; *Sharp vs. Spear*, 4 Hill, 82; *Hammett vs. Philadelphia*, 65 Penn. St. 146-157; *Tide Water Company vs. Coster* 18 N. J. Eq. 527; *City of Norfolk vs. Chamberlain*, 89 Va. 196-213; *Nichols vs. Bridgeport*, 23 Conn. 189; *Thomas vs. Gain*, 35 Mich. 162; *Taylor vs. Palmer*, 31

Cal. 254; *Sheehan vs. Good Samaritan Hospital*, 50 Mo. 155. In the last analysis the assessment is not laid as a part of the burden of public expenditure put upon the land, for the burdens which are strictly public are to be shared proportionately by all the people, according to the value of their taxable property. It is rather in the nature of a diminution of that which at first is a public burden, by subtracting from it the amount of the special enhancement of value of private property from the expenditure of public money in part for its benefit. It is taxation in the sense that it is a distribution of that which is originally a public burden, growing out of the expenditure primarily for a public purpose.

It is a grave question whether the benefit that comes to abutting property from the watering of the streets in front of it is such an improvement to the property that it can be made the subject of an assessment upon it. There must be a real substantial enhancement of value growing out of a public work to warrant an assessment upon it. The watering of streets produces only transitory effects, and makes no permanent change in the condition of the property. It greatly promotes the health and comfort of the people generally who use the streets from time to time, but its greatest benefit is to the abutting estates as places for residence or the transaction of business.

Indeed, so much more important to the occupants than to the general public have been the benefits from watering streets, that until lately the expense of the work in this commonwealth has usually been borne by the abutters, who have procured the watering to be done by private contractors. If a special benefit, accruing from day to day, which very materially increases the rental value of real estate by reason of the proximity of the property to the place where the beneficial work is done, can be treated as an improvement within the reason of the rule which permits special assessments, then such assessments may be made to pay the expense of watering streets. With some hesitation we hold that there is an improvement of private property when this work is done by a city, which may warrant an assessment upon the abutters.

It was so held in *State vs. Reis*, 38 Minn. 371, and in *Reimkin vs. Fuehring*, 130 Ind. 382, although the cases generally which upheld such assessments relate to improvements of a permanent character. Many improvements, from which real estate receives an incidental advantage, are held to justify only general taxation. *Hammett vs. Philadelphia*, 65 Penn. St. 146; *Washington avenue*, 69 Penn. St. 352. *Erie vs. Russell*, 148 Penn. St. 384-386; *Dyar vs. Farmington*, 70 Me. 527; *McCloskey vs. Chamberlain*, 37 N. J. L. 388; *Dietz vs. Neenah*, 91 Wis. 422-427.

Treating the watering of a street in a city as a work which may cause a direct, special and peculiar benefit to abutting estates and thus enhance their value so long as it continues, we come to the question whether the mode of assessment directed by this statute is within the constitutional power of the Legislature. Section 2 of the statute is as follows: "If a city shall determine that the streets, or certain streets, or portions of streets, within its limits shall be watered in whole or in part at the expense of the abutters, the expense of the watering of such streets, or portions of streets, for that municipal year, and the proportion of such expense to be borne by abutters, and the rate to be assessed upon each linear foot of frontage of estate upon such streets, or portions thereof, shall be

estimated by the Board of Aldermen, and the expense so determined of such watering to be borne by the abutters, shall be assessed in the manner hereinafter provided, upon the estates abutting on such streets, or portions of streets, in proportion to the number of linear feet of such estate upon the street or portion thereof, so watered." Section 3 provides for a determination of the amount of the assessments either by the Board of Aldermen or by that one of several other specified boards of public officers, which the Aldermen may designate. Section 4 declares that each assessment shall be a lien upon the estate on which it is laid, and directs the collection of assessments in like manner as other taxes are collected, and provides for abatements.

It is now established by the highest judicial authority that such assessments cannot be so laid upon any estate as to be in substantial excess of the benefit received. The case of *Village of Norwood vs. Baker*, 19 Sup. Ct. Rep. 187, contains an elaborate discussion of the subject with a citation of authorities for many of the states, and holds that a local assessment for an amount in substantial excess of the benefit received is in violation of the Fourteenth Amendment to the Constitution of the United States, inasmuch as it would deprive one of his property without compensation, and so without due process of law. The authority of this court is controlling in all state courts, and if it were not it is in accordance with sound principles and with the great weight of authority in other courts. The principles which have often been stated by this court lead to the same result. *Boston vs. Boston and Albany Railroad Company*, 170 Mass. 95-101, and cases cited. The case of *Kingman*, petitioner, 153 Mass. 566, dealt with a legislative distribution of public burdens among different political sub-divisions of the Commonwealth, and the language in it must be construed in reference to the facts to which it relates. The right to apportion public burdens among cities, towns and counties, as it deems reasonable in reference to benefits and to other considerations, which are not capable of exact estimation in money, is within the power of the Legislature under the first part of c. 1, § 1, Art. IV. of the Constitution, and is not the same as the right to impose and levy taxes upon individuals.

It is of the same nature as the right to create, change or abolish cities, towns or other political subdivisions of the Commonwealth.

While these assessments must be founded upon benefits, the courts have generally recognized the difficulty and in many cases the impracticability of attempting to estimate benefits to estates one by one without some rule or principle of general application which will make the assessments reasonable and proportional, according to the benefits. Accordingly, the determination of such a rule or principle by the Legislature itself, or by the tribunal appointed by the Legislature to make the assessments, has commonly been upheld by the courts. If, however, its effect plainly is to make an assessment upon any estate substantially in excess of the benefit received, it is set aside.

Weed vs. Boston, 171 Mass. 51 N. E. Rep. 204. *Village of Norwood vs. Baker*, *ubi supra*. Assessments of special taxes by an estimate of the particular benefits to each lot, by measurement of the amount of frontage upon the street or sewer, by the measurement of the area of the lots, and by the valuation of the property, have all been sustained. *Springfield vs. Gay*, 12 Allen, 612. *Dorgan vs. Boston*, 12 Allen, 233; *Downer vs. Boston*, 7 Cush. 277; *Wright vs.*

Boston, 9 Cush. 233; *Workman vs. Worcester*, 118 Mass. 168; *Keith vs. Boston*, 120 Mass. 108; *Snow vs. Fitchburg*, 136 Mass. 183; *Howe vs. Cambridge*, 114 Mass. 388. *Chapin vs. Worcester*, 124 Mass. 464; *Codman vs. Johnson*, 104 Mass. 491. *Leominster vs. Conant*, 139 Mass. 384. But, as we have already intimated, the only ground on which they can properly rest is that they are methods reasonably determined upon, by the tribunals charged with the duty of determining, in reference to the ascertainment of the benefits actually received by the different estates on which assessments are to be laid. It may be that, in the light of recent decisions, some of these cases would have been decided differently, but in general they rest on sound principles, on the ground already stated. Most of our cases and our statutes assume under the Constitution that these assessments, like other taxes, are to be reasonable, and, in a general sense, proportional.

Under the present statute it is implied that the Board of Aldermen and the tribunal making assessments will proceed upon correct principles, and assess according to the benefits received, unless the requirement that the assessments are to be "in proportion to the number of linear feet of each estate upon the street or portion thereof so watered" is objectionable as founded upon a wrong principle. Such requirements in regard to ordinary estates fronting upon streets and sewers have often been upheld.

On the other hand, in reference to estates differently situated, they sometimes would call for assessments far beyond any benefit received, and would therefore be unconstitutional and void. *Weed vs. Boston*, *ubi supra*. No facts appear in the present case to show that this rule is not proper in its application to the petitioner's estates, as the method of determining benefits with such approximation to accuracy as can reasonably be required. There may be unoccupied lands in the city which are so situated that they could receive no substantial benefit, either actually or potentially, from the watering of adjacent streets, so long as they remain in their present condition.

Assessments made upon such lands might be void; but as the case does not disclose such we have no occasion to consider them. We see no reason why the Legislature may not authorize a city to water some of its streets at the public expense, and to assess benefits for the watering of others upon abutters, as it deems best. As a result some land-owners get the benefit of watering streets adjacent to their estates without paying for the special benefit.

But perfect equality in the distribution of public burdens is not attainable. We are, therefore, of the opinion that in its application to the facts of the present case the statute is constitutional.

If the Aldermen might cause some of the streets to be watered at the expense of the city, and others to be watered at the expense of the abutters, it is not shown that their determination in regard to it was improper.

Although the proceedings were in some respects informal, we see no fatal error in them. We are inclined to agree with the petitioner's counsel in his contention that the determination of the expense of watering streets to be watered in whole or in part at the expense of the abutters, and the proportion of such expense to be borne by the abutters, and the rate to be assessed upon each linear foot of frontage of estates upon which such streets, or portions thereof, is to be by the Board of Aldermen, and cannot be delegated

to any other board or tribunal. But we are also of opinion that the action of the Superintendent of Streets in making these assessments and reporting them to the Board of Aldermen, with the communication of the Mayor, and the subsequent order making an appropriation, taken in connection with the previous orders, are equivalent to an original determination of these matters by the Aldermen themselves. The petitioner shows no such error as to entitle him to a writ of *certiorari*.

Petition dismissed.

Four years ago (1895) 112 carts had watered 301.92 miles of streets during the year at an expense of \$76,424.70. The work during that year, in fact until 1898, was restricted to macadam streets. In 1896 a small increase of territory occurred, and the same number of carts were operated at an expense of \$71,211.81. In the report of 1896 the assumption by this division of the care of paved streets was urged, and although it was impossible to carry out the recommendations in 1897, they were practically adopted later in the application of the Street Watering Act in 1898. During the last four years the force of carts has increased from 112 to 231, and the miles of streets watered from 301.92 to 413.59. The subscription method of watering paved streets has been abolished, and every accepted street within the city limits is now sprinkled regularly and systematically. The permanency of this complete service is assured by the establishment of equitable watering assessment districts.

Very respectfully,

THOS. J. FINNERAN,

Deputy Superintendent.

FINANCIAL STATEMENT.

Appropriation (authorized to expend in anticipation of, and to be met by, assessments)	\$175,000 00
Expenditures	174,625 97
	<hr/>
Balance	<u>\$374 03</u>

ASSESSMENTS.

Deposited with the City Collector	\$198,311 66
Abatements to January 31, 1900	3,028 10
Collections to January 31, 1900	151,913 55
Uncollected January 31, 1900	43,370 01

OBJECTS OF EXPENDITURES.

Salaries and labor	\$14,207 50
Teaming	141,730 75
Water-posts, repairs, etc.	5,642 91
Board of horses	831 82
Shoeing and clipping	197 00
Veterinary services and medicine	80 85
Harnesses	50 00
Telephones	280 00
	<hr/>
<i>Carried forward</i>	\$163,020 83

STREET DEPARTMENT—STREET WATERING DIVISION. 245

<i>Brought forward</i>	\$163,020 83
Bicycles, repairs, etc.	751 87
Printing	43 33
Stationery	176 03
Vehicles, repairs, etc.	1,660 50
Horse, purchase of	200 00
Electric car sprinkler	415 00
Assessments, expense of levying	7,768 94
General supplies	589 47
Total	\$174,625 97

Objects of Expenditures, Classified by Districts, from February 1, 1899, to January 31, 1900.

No.	DISTRICTS.	Teaming.	Labor.	Maintenance.	Totals.
1.....	South Boston.....	\$11,338 50	\$915 25	\$2,153 24	\$14,406 99
2.....	East Boston.....	7,850 00	460 25	1,399 60	9,709 85
3.....	Charlestown.....	7,132 50	460 25	1,291 94	8,884 69
4.....	Brighton.....	11,527 50	460 25	2,045 58	14,033 33
5.....	West Roxbury.....	18,179 25	920 50	3,337 52	22,437 27
6.....	Dorchester.....	19,525 00	918 75	3,768 17	24,211 92
7.....	Roxbury.....	23,408 75	889 00	3,983 48	28,281 23
8.....	Back Bay.....	13,574 25	715 58	1,830 25	16,120 08
9.....	South End.....	10,545 00	906 50	1,722 59	13,174 09
10.....	City Proper.....	18,650 00	1,379 00	3,337 52	23,366 52
	Totals.....	\$141,730 75	\$8,025 33	\$24,869 89	\$174,625 97

Distribution of Carts, showing Entire Amount of Work done.

No.	DISTRICT.	Hired Carts.	Number Miles Covered.	Average per Cart.
1	South Boston.....	20	38.34	1.92
2	East Boston.....	13	26.87	2.07
3	Charlestown.....	12	22.29	1.86
4	Brighton.....	19	33.23	1.75
5	West Roxbury.....	31	63.58	2.05
6	Dorchester.....	35	74.72	2.14
7	Roxbury.....	37	81.12	2.19
8	Back Bay.....	17	21.44	1.26
9	South End.....	16	19.56	1.22
10	City Proper.....	31	32.44	1.05
	Totals.....	231	413.59	1.79

The number of carts shows an increase of 34 over last year, and the streets an increase of 3.64 miles. Of the increase in carts West Roxbury, Ward 23, had 8, and Dorchester, Ward 24, 8, because of the extension of assessment work to these sections, enabling the division to improve the service to the kind given all other sections. In 1898 these sections were watered free, and the service was restricted of necessity in the frequency of the wettings. The only other notable increase in the number of carts was in the City Proper, where 5 had to be added to the force because of the service required around both Union stations.

Location of Water Posts by Districts.

DISTRICTS.	Year.				Increase over 1898.	Electric hydrants.
	1891.	1897.	1898.	1899.		
South Boston.....	23	28	35	38	3	
East Boston.....	16	34	41	42	1	
Charlestown.....	19	20	20	21	1	
Brighton.....	25	44	47	50	3	
West Roxbury....	50	67	75	86	11	
Dorchester.....	61	83	88	99	11	
Roxbury.....	53	68	76	80	4	
City Proper.....	24	53	69	74	5	5
Totals.....	271	397	451	490	39	5

NOTE.— An increase of 219 water-posts since 1891.

The division is indebted to Mr. J. W. Smith, Local Forecast Official, for daily weather reports.

Acknowledgment is also made of the prompt assistance rendered by the Water Department, in the erection and repair of stand-pipes.

APPENDIX H.

REPORT OF THE COMMISSIONERS FOR THE BOSTON
AND CAMBRIDGE BRIDGES.

CRAIGIE BRIDGE.

New timbers and trusses have been placed under pier to keep draw-tender's house in place; new timbers on engine-house pier to support new shafting that was put in to move the draw; repaired houses on Cambridge end of bridge, put new gutters on engine-house, and had paving repaired where necessary.

The draw is in very bad condition and had to be repaired quite often. The three-inch planking on the surface of the draw was partly renewed and the roadway surface was sheathed three times with two-inch spruce. The draw-tender and assistants do all ordinary repairs and keep the sidewalks and piers free from snow and ice.

Next year a large portion of this bridge surface will need repaving and the sidewalks on Boston end should be relaid, the fences and draw painted, the pier connecting with draw-tender's house repaired, also draw-pier down-stream rebuilt.

HARVARD BRIDGE.

In April of this year the roadway for the entire length of the bridge was newly sheathed, and consequently there was a smooth surface all summer.

The iron spans and panels on the outside of the bridge, and draw and some of the girders underneath the bridge, Cambridge end, have been painted; in 1897 a portion of the iron work on the Boston end of the bridge was painted; next year we expect to finish painting the iron work where needed.

In April a new contract was made for one year with the Welsbach Street Lighting Company. They have taken off the old globes and replaced them by putting on more ornamental ones and adjusting springs to them. By doing so the lights have been improved very much. This company lights the Boston end of the bridge. The Cambridge Electric Light Company lights the Cambridge end and draw with incandescent lights. They give good satisfaction.

The draw-tender and his assistants do all ordinary repairs, clean the electric light globes once a week, keep the sidewalks and draw piers free from snow and ice in winter, and keep the electric machinery to move the draw in good order. They have also painted the inside of the house and the gates to draw. The bridge is cleaned once a week.

In April, 1900, the sheathing for the entire length of the bridge

will have to be renewed. We found that after about seven months' wear we have to keep repairing it. In taking up the old plank on roadway we saved the best ones and kept them for patching; in that way there was quite a saving. If the travel increases the next two years as it has in the past two years, it will be necessary to sheathe the roadway twice a year.

PRISON POINT BRIDGE.

New timbers have been placed under the draw, renewed the planking and sheathed it with two-inch spruce three times. The timbers under the sidewalks and the covering on the surface were so decayed that it was necessary to remove them and put in their place two new sidewalks; the fences on bridge were repaired; the draw-tender does all ordinary repairs, removes the snow and ice from bridge and piers and sweeps the bridge at other times.

This bridge and draw is in very bad condition; we are looking forward to the time when the Boston & Maine Railroad Company will build the overhead street and bridge as they are required to do under the decree of the Superior Court abolishing the grade crossings in this vicinity.

WEST BOSTON BRIDGE.

The paving on the roadway for the entire length of the bridge was unsafe for travel; early in the spring it was repaired, only doing what was absolutely necessary to prevent accidents. The under plank of the draw was repaired and the whole surface sheathed.

The bridge was closed to travel October 19. The new temporary bridge to take the place of the old one was opened for travel on the above date, the first car going over it at 10.30 P.M. This new bridge so far has given good satisfaction; the travel over it seems to be increasing since it was first opened. The roadways being sheathed with two-inch spruce gives a better surface for teams than the old bridge did with its uneven surface of paving. This new bridge has two flap draws, one opposite the old one, the other in the centre of the bridge between the park wall on the Boston side and First street on the Cambridge side. The length of this temporary bridge is 2,248 feet; it is 47 feet 2 inches wide; the roadway is 36 feet wide, with one sidewalk 10 feet wide; there are two draws with four leaves each; the draw wing opening is 36 feet. The draw now in use is raised by electricity. It will be necessary to renew the sheathing on the bridge every year. It is lighted by 11 arc lights; the bridge is cleaned every week; the draw-tender and assistants keep the sidewalks and piers free from snow and ice, and the electrical machinery to move the draw in good order, and do all ordinary repairs.

The engine, boiler and machinery to move the old draw have been taken out and a cylinder stove substituted, making a large saving in coal.

The draw pier from the temporary bridge to the small house on the pier has been replanked and new timbers put in where necessary.

CAMBRIDGE-STREET BRIDGE.

The surface of the bridge and draw were in bad condition; the plank under the sheathing being decayed, we removed them and put in place four-inch and three-inch spruce, and sheathed the whole with two-inch spruce; put new flaps to draw, shingled the two

houses on the pier, built a small house ten feet by six feet, one story, for storage and coal; the houses were painted inside and outside by the men on the bridge.

Heretofore on the bridge there was a single track with a switch at each end of the bridge, travel was very much impeded and passengers in cars found a great deal of fault; the Boston Elevated Railway Company asked permission to lay a double track; we granted their request, they agreeing to strengthen the draw at their own expense, which they did by putting hard pine timber under each leaf of draw. This bridge and draw are very old and have to be looked after very carefully so no accidents will occur. The water-ways to the pier will have to be replanked next spring.

The draw-tenders and assistants sweep the bridge and piers and do all ordinary repairs.

ESSEX-STREET BRIDGE.

The draw was replanked with three-inch spruce and sheathed with two-inch spruce.

The whole length of the bridge was sheathed with two-inch spruce, and the guard to the bridge repaired. There has been such an increased amount of travel from Brookline over this bridge this last summer and fall, caused by the Cambridge Park Commissioners filling their low lands just off the bridge on the Cambridge side and requiring a great many teams to be employed, that it will make it necessary to sheathe the whole surface of the bridge its entire length next spring, also to sheathe the up-stream draw pier. The draw-tenders sweep the bridge every week, and do all ordinary repairs.

NORTH HARVARD-STREET BRIDGE.

Attention is again called to the necessity of a new bridge to take the place of this old and worn-out one; we are continually patching it to make it secure for travel. This new bridge when built should be of iron or steel, strong and ornamental, and as wide as the roadways connecting with it. It is in a very prominent place, the Cambridge park on one side with a broad avenue leading to the colleges; on the Boston side with a boulevard and speedway along the banks of the Charles river, just finished by the Metropolitan Park Commission; a fine avenue just completed by the Boston Street Department from the bridge to Brighton; other improvements have been made, notably at Soldiers' Field; the very artistic fence surrounding the field, and inside the enclosure good buildings have been erected and still other changes are being made to beautify the places in the vicinity of the bridge, and it seems to me that all there is now required to make it complete is this new bridge.

WESTERN-AVENUE BRIDGE TO CAMBRIDGE.

Where it was necessary the under-flooring on the bridge was removed and new spruce plank put in place. The whole bridge was then sheathed with two-inch spruce. The Boston Elevated Railway Company asked permission to put a double track over this bridge, agreeing to make everything satisfactory to the Commissioners; the request was granted, they placing under the draw four hard pine timbers without cost to the two cities. When examining the bridge near the draw we found the most important timbers to sustain the

bridge at the Boston end were all decayed; they were replaced by putting in new hard pine timbers. To forward this work mechanics worked day and night. The Boston Elevated Railway Company paid a portion of this expense. The bridge is in about the same condition as Cambridge-street bridge. The water-ways to the pier will have to be replanked next spring.

The draw-tenders and assistants keep the bridge and piers clean and do all ordinary repairs.

IN GENERAL.

The usual statement is appended showing the number of draw openings and the number of vessels which passed through.

The amount of revenue received for rents, dockage, repairs to Boston Elevated Railway Company's tracks, etc., during the year has been \$1,426.90, one-half of which has been paid to each city.

Advantage was taken last fall of the low price of spruce plank, and over fifty thousand feet of two-inch spruce was bought and placed on the different bridges for use.

The following is a statement of the payments made by the City of Boston on account of the Boston and Cambridge Bridges from February 1, 1899, to January 31, 1900 :

Amount of appropriation for financial year of 1899-1900, \$16,000 00	
Expended to January 31, 1900	15,998 18
Unexpended balance February 1, 1900	<u>\$1 82</u>

Revenue, February 1, 1899, to January 31, 1900.

Date.	L. B. 4 Pages.	Received from	Total.	One-half Boston to City Collector.	One-half Cambridge to W. J. Marvin, Commissioner.
1899.					
February 11	270	Boston Elevated Railway Co.	\$200 00	\$100 00	\$100 00
May 17	305	Wharfage Rents, etc.	241 00	120 50	120 50
August 28	345	Boston Elevated Railway Co.	731 90	365 95	365 95
November 29	380	Rents—Miller, Fox.	54 00	27 00	27 00
1900.					
January 29	418	N. E. Tel. & Tel. Co.	200 00	100 00	100 00
		Totals	\$1,426 90	\$713 45	\$713 45

Classification of Expenditures.

Object of Expenditures, Feb. 1, 1899, to Jan. 31, 1900.	Canal or Craigie's.	Harvard.	Prison Point.	West Boston.	Cambridge Street.	Essex Street.	North Harvard Street.	Western Avenue to Cambridge.	General Account.	Totals.
Salaries of draw-tenders and others.....	\$1,842 87	\$1,240 00	\$482 11	\$1,394 71	\$461 63	\$670 00	\$500 00	\$461 63	\$250 00	\$7,402 95
Electric light.....	259 12	630 00	.....	464 06	50 75	184 75	.....	51 57	.....	1,640 25
Replanking roadway.....	1,497 60	.....	.....	.....	.....	.....	.....	.....	.....	1,497 00
General repairs.....	339 98	94 54	133 62	105 89	99 48	96 46	2 75	215 65	.....	1,079 17
Lumber.....	271 47	32 63	136 48	36 14	154 84	147 89	36 84	96 63	.....	912 92
Inspection.....	110 00	92 50	82 50	92 50	65 00	65 00	.....	35 00	.....	542 50
Gas light.....	.....	480 00	.....	.....	.....	.....	.....	.....	.....	480 00
Iron work.....	131 94	20 21	87 84	35 96	26 46	51 48	3 35	52 05	.....	409 29
Cleaning bridges.....	159 17	75 00	.....	134 08	.....	.....	.....	.....	.....	368 25
Fuel.....	140 82	13 80	.....	94 75	9 39	13 47	11 77	.....	.....	284 09
Paint and painting.....	.....	258 75	.....	.....	.....	.....	1 08	.....	.....	259 83
Watering roadways.....	121 88	.....	.....	121 87	.....	.....	.....	.....	.....	243 75
Sundries.....	35 61	75 08	8 88	35 92	4 52	27 15	8 56	.....	.....	195 72
Paving.....	1 50	.....	.....	173 05	.....	.....	.....	.....	.....	174 55
Tools and hardware.....	29 36	3 94	30 52	26 67	22 80	18 20	18 41	5 73	.....	155 63
Electric current.....	.....	150 00	.....	.....	.....	.....	.....	.....	.....	150 00
Claims for damages.....	.....	77 50	.....	.....	.....	.....	.....	.....	.....	77 50
Water tax, 1899.....	16 00	.....	5 50	11 00	.....	.....	.....	.....	.....	32 50
Travelling expenses.....	.....	.....	.....	.....	.....	.....	.....	.....	50 00	50 00
Telephone.....	.....	.....	.....	.....	.....	.....	.....	.....	15 10	15 10
Printing.....	.....	.....	.....	.....	.....	.....	.....	.....	14 08	14 08
Stationery.....	.....	.....	.....	.....	.....	.....	.....	.....	13 10	13 10
Totals.....	\$3,450 72	\$4,841 04	\$967 45	\$2,726 60	\$894 87	\$1,274 20	\$582 76	\$918 26	\$342 28	\$15,998 18

Number of Times the Draws in the Boston and Cambridge Bridges have been Opened, and the Number of Vessels which have Passed Through for the Year Beginning February 1, 1899, and Ending January 31, 1900.

DATE.	CANAL OR CRAIGIE'S.		HARVARD.		PRISON POINT.		WEST BOSTON.		CAMBRIDGE STREET.		ESSEX STREET.		NORTH HARVARD STREET.		WESTERN AVENUE TO CAMBRIDGE.	
	Number of draw openings.	Number of vessels passing through.	Number of draw openings.	Number of vessels passing through.	Number of draw openings.	Number of vessels passing through.	Number of draw openings.	Number of vessels passing through.	Number of draw openings.	Number of vessels passing through.	Number of draw openings.	Number of vessels passing through.	Number of draw openings.	Number of vessels passing through.	Number of draw openings.	Number of vessels passing through.
February, 1899.....	77	127	23	24	22	41	32	54	4	8	5	8	2	3	2	5
March.....	188	338	90	108	41	65	83	162	48	105	56	97	33	66	37	85
April.....	245	366	115	155	72	105	95	176	81	143	76	137	54	111	60	118
May.....	320	504	177	196	39	51	158	244	106	169	113	188	58	87	78	121
June.....	300	448	141	158	66	105	105	178	66	113	75	127	35	62	54	97
July.....	320	516	138	239	59	91	177	329	96	171	118	283	53	88	86	150
August.....	300	446	163	198	65	106	212	494	72	129	83	141	47	92	68	121
September.....	238	332	132	180	30	43	109	185	64	115	28	55	75	143	54	101
October.....	304	439	143	168	27	40	124	190	73	115	85	131	42	63	58	88
November.....	320	459	138	165	31	52	105	173	75	123	86	134	54	94	75	151
December.....	247	371	123	134	41	66	87	146	57	163	66	116	36	67	43	79
January, 1900.....	141	206	52	61	50	84	37	65	12	22	25	35	4	6	8	14
Totals.....	3,000	4,552	1,435	1,786	543	849	1,324	2,396	754	1,316	816	1,452	493	882	623	1,130

APPENDIX I.

CITY OF BOSTON, ENGINEERING DEPARTMENT,
50 CITY HALL, February 1, 1900.

MR. BENJ. W. WELLS, *Superintendent of Streets*:

SIR,—I herewith submit the following report of the work done under my direction for the Street Department during the year ending January 31, 1900.

In general, the construction of assessment streets and boulevards, and the laying of new street paving has been supervised, the repairs of asphalt pavement, not under guaranty, superintended, the grading of street railway tracks determined, numerous estimates for street improvements made, and many miscellaneous matters reported upon and attended to upon your request.

LENGTHS, AREAS, ETC., OF ACCEPTED STREETS.

The tables showing lengths and areas of paving on accepted streets have been brought up to February 1, 1900, and tables giving statistical details of the asphalt pavement in the city, and the cost of repairing the same have been prepared.

ASPHALT STREETS.

All repairs on asphalt streets paid for by the city have been supervised, and the patches measured for payment. The patches are carefully located in all cases, so that they may be identified, and where suitable plans are on file in this office they have been plotted. Trenches cut in asphalt roads by city departments or corporations are made under permit from the Permit Office, and the repairs are made by the company which originally put down the pavement, at the expense of the party making the opening. Asphalt streets laid under a maintenance guaranty for a term of years have been looked after, and the companies giving the guaranty have been notified when repairs were required. The cost of repairing asphalt has been 24.7 cents per square yard for the year. The recommendation is repeated that rates for doing this work, for a term of years, be made with the several companies.

A List of Streets Paved with Sheet Asphalt and having a Maintenance Guarantee, February 1, 1900.

TRINIDAD ASPHALT.

City Proper.

NAME.	Limits.	Base.	Length feet.	Length miles.	Area.	Guarantee expires.
Albany st.	80 ft. north of Broadway across Way st.	Concrete	105	.020	397	Aug. 17, 1904
Andrews st.	E. Dedham st. to E. Canton st.	Concrete	216	.041	312	Oct. 22, 1909
Battorymarch st.	Milk st. to Liberty sq.	Concrete	150	.028	466	Sept. 28, 1901
Beacon st.	150 f. from west curb line of Gloucester st. to 68 ft. beyond west line of Gloucester st.	Concrete	218	.041	1,183	June 16, 1903
Bond st.	Hanson st. to Milford st.	Concrete	192	.036	426	July 1, 1900
Boylston st.	Easterly side Berkeley st. across Clarendon st.	Concrete	656	.124	3,869	Oct. 4, 1902
Brimmer st.	Beacon st. to Pinckney st.	Concrete	1,087	.206	3,300	Aug. 31, 1900
Broadway	Albany st. to 105 ft. west of Albany st.	Concrete	105	.020	467	Nov. 11, 1904
Castle st.	Castle sq. easterly	Concrete	45	.009	427	Aug. 27, 1904
Cazenove st.	For 45 ft. from Columbus ave.	Concrete	272	.051	604	July 1, 1900
Chambers st.	Brighton st. to Charles st.	Cob. & Conc.	706	.134	1,804	Oct. 31, 1909
Charles st.	Easterly side Fruit st. across Allen st.	Cob. & Conc.	180	.034	740	July 15, 1904
Columbus ave.	B. & A. R.R. bridge to Chandler st.	Cob. & Conc.	903	.171	5,418	Nov. 7, 1901
Columbus ave.	Massachusetts ave. to 304 ft. south of Camden st.	Cob. & Conc.	205	.039	604	Sept. 27, 1902
Cooper st.	Endicott st. to Charlestown st.	Cob. & Conc.	338	.064	734	May 25, 1901
Corning st.	Washington st. to Shawmut ave.	Cob. & Conc.	127	.024	580	May 16, 1904
Dartmouth st.	Buckingham st. to B. & A. R.R. bridge	Cob. & Conc.	262	.050	786	Oct. 1, 1909
Devonshire st.	Milk st. to Water st.	Cob. & Conc.	470	.089	924	Aug. 14, 1900
Ednboro' st.	Essex st. to Beach st.	Cob. & Conc.	318	.060	1,078	Oct. 26, 1909
Endicott st.	Cooper st. across Thacher st.	Cob. & Conc.	37	.007	107	June 1, 1904
Ferdinand st.	At Castle sq.	Cob. & Conc.				

Harrison ave.	22 ft. south of Kneeland st. to 22 ft. north of Harvard st.	Cob. & Conc.	249	.047	885	Nov. 16, 1909
Harrison ave.	E. Newton st. to E. Springfield st.	Cob. & Conc.	928	.176	2,681	Aug. 14, 1900
Kilby st.	State st. to Milk st. including Liberty sq.	Cob. & Conc.	640	.121	4,059	Sept. 28, 1903
Laconia st.	Washington st. to Harrison ave.	Concrete	330	.063	727	June 18, 1901
LaGrange st.	Tremont st. toward Washington st.	Concrete	181	.034	355	Oct. 23, 1902
Lincoln pl.	Worcester st. to W. Springfield st.	Concrete	217	.041	313	Aug. 17, 1902
N. Margin st.	Stillman st. to Thacher st.	Concrete	515	.098	1,154	Sept. 10, 1900
Parkman st.	North Anderson st. across Blossom st.	Concrete	241	.046	550	Oct. 14, 1903
Pinckney st.	Charles st. across Brimmer st.	Concrete	271	.051	723	Aug. 31, 1900
Pine st.	Washington st. to Harrison ave.	Concrete	419	.079	597	June 18, 1901
Public Alley 401.	Between Irvington st. and Garrison st.	Concrete	350	.066	362	Oct. 2, 1909
" 402.	Between Garrison st. and W. Newton st.	Concrete	358	.068	374	Sept. 30, 1909
" 403.	Between W. Newton st. and Cumberland st.	Concrete	355	.067	370	Sept. 29, 1909
" 419.	Between Beacon and Marlborough st., Clarendon to Dartmouth st.	Concrete	575	.109	511	Sept. 28, 1909
" 431.	Between Commonwealth ave. and Newbury st. Hereford to 83 ft. west of Gloucester st.	Concrete	312	.059	277	Sept. 25, 1909
" 437.	Berkeley st. to Arlington st.	Concrete	631	.120	561	Dec. 10, 1908
" 701.	130 ft. east of Tremont st. to Shawmut ave.	Concrete	521	.099	611	Nov. 8, 1909
Spring st.	Poplar to Leverett st.	Cobble	447	.085	908	May 20, 1900
Stevens st.	Lincoln pl. toward Shawmut ave.	Concrete	16	.003	22	Aug. 17, 1902
Tilveston st.	Salem st. to Unity st.	Concrete	163	.031	124	Aug. 14, 1900
Tremont st.	At Castle sq.	Concrete	60	.011	771	Aug. 27, 1904
Trinity pl.	St. James st. across Stuart st.	Concrete	398	.075	1,150	Sept. 18, 1909
Unity st.	Charter st. to Tileston st.	Concrete	330	.062	500	Oct. 6, 1902
Water st.	Liberty sq. to Broad st.	Concrete	252	.048	682	Oct. 10, 1901
Wiget st.	Salem st. to N. Margin st.	Concrete	259	.049	240	Sept. 25, 1902
Totals. ....	.....	.....	15,610	2.956	43,884	

Charlestown.

NAME.	Limits.	Base.	Length, feet.	Length, miles.	Area.	Guarantee expires.
Bunker Hill st.	At Tufts st.	Concrete .....	.....	.....	150	Nov. 3, 1902
Corey st.	124 ft. north of Moulton st. to Moulton st.	Concrete	124	.024	276	Nov. 3, 1902
Moulton st.	Easterly side Corey st. to Vine st.	Concrete	81	.015	243	Nov. 3, 1902
Moulton st.	Vine st. to Bunker Hill.	Concrete	130	.025	390	Nov. 3, 1902
Rutherford ave.	Devons st. 128 ft. westerly.	Concrete	128	.024	284	Nov. 5, 1902
Tufts st.	Bunker Hill st. 141 feet northerly.	Concrete	141	.027	415	Nov. 3, 1902
Vine st.	Bunker Hill across Moulton st.	Concrete	105	.031	670	Nov. 3, 1902
Totals .....	.....	.....	769	.146	2,428	

Roxbury.

Cabot st.	East side Vernon st. to Linden Park st.	Concrete	484	.091	1,390	Aug. 30, 1902
Columbus ave.	301 ft. south of Camden st. across Terry st.	Concrete	2,640	.500	15,840	Nov. 7, 1901
Public Alley 404.	66 ft. south of Cumberland st. to Public Alley 405.	Concrete	534	.101	533	Oct. 5, 1909
" 405.	94 ft. east of Huntington ave. to 62 ft. west of St. Botolph st.	Concrete	100	.019	89	Oct. 5, 1909
Totals .....	.....	.....	3,758	.711	17,852	

SICILIAN ROCK ASPHALT.
City Proper.

Acton st.....	Washington st. to Bradford st.....	Concrete	259	.049	352	Nov. 1, 1901
Albany st.....	Easterly side Stoughton, across East Concord st.....	Concrete	285	.054	1,710	Nov. 8, 1902
Avery st.....	Washington st. to Mason st.....	Concrete	360	.008	275	Oct. 18, 1902
Barton st.....	Leverett st. to Milton st.....	Concrete	427	.081	723	Aug. 14, 1900
Bradford st.....	Waltham st. to Shawmut ave.....	Concrete	600	.114	1,270	Sept. 11, 1902
Cobb st.....	Washington st. to Shawmut ave.....	Concrete	347	.066	1,041	Sept. 16, 1902
Exeter pl.....	Chauncey st. to Harrison ave.....	Concrete	170	.032	387	Oct. 20, 1902
Fabin st.....	Newland st. to Ivanhoe st.....	Concrete	421	.080	615	Sept. 10, 1900
Hamburg st.....	Mystic st. to Harrison ave.....	Concrete	383	.072	597	Oct. 1, 1901
Hanover st.....	Tilston st., across Charter st.....	Concrete	315	.060	934	May 14, 1901
Huntington ave.....	B. & A. R.R. bridge to Cumberland st.....	Concrete	1,591	.301	8,840	Oct. 12, 1901
Kingston st.....	Beach st. to Essex st.....	Concrete	492	.093	1,859	Aug. 9, 1909
Mayo st.....	Castle st. to Cobb st.....	Concrete	251	.047	418	Sept. 11, 1902
Meander st.....	E. Dedham st. to Malden st.....	Concrete	307	.058	437	Sept. 3, 1901
Mystic st.....	Malden st. to E. Dedham st.....	Concrete	204	.039	226	Oct. 20, 1901
Mystic st.....	E. Dedham st. to E. Canton st.....	Concrete	215	.041	335	Oct. 20, 1901
Mystic st.....	E. Canton st. to E. Brookline st.....	Concrete	216	.041	337	Oct. 20, 1901
North Marguin st.....	Thacher st. toward Endicott st.....	Concrete	205	.039	518	Nov. 19, 1902
Norwich st.....	Mystic st. to Meander st.....	Concrete	221	.042	339	Sept. 24, 1901
Ohio st.....	Washington st. to Shawmut ave.....	Concrete	343	.065	277	July 30, 1901
Prince st.....	Hanover st. to Bennett ave.....	Concrete	293	.055	654	July 1, 1900
Shawmut av.....	132 ft. south of Castle st., across Cherry st.....	Concrete	327	.002	945	Sept. 19, 1903
Taylor st.....	Dwight st. to Millford st.....	Concrete	196	.037	274	May 29, 1901
Whitmore st.....	Kneeland st. to Harvard st.....	Concrete	249	.047	445	Aug. 14, 1900
Total.....	.....	.....	8,677	1.643	23,808	

Charlestown.

Warren st.....	Winthrop st. to Soley st.....	Concrete	127	.024	365	Sept. 10, 1900
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South Boston.

NAME.	Limits.	Base.	Length, feet.	Length, miles.	Area.	Guarantee expires.
Athens st.	W. Second st. to A st.	Concrete	617	.117	916	Oct. 9, 1900
East Broadway	Front of Lincoln School	Concrete	180	.034	1,000	Oct. 7, 1902
K st.	E. Sixth st. to E. Eighth st.	Concrete	566	.107	1,083	May 20, 1901
West Broadway	N. Y., N. H., & H. R.R., Midland Div., bridge to E st. (4-ft. gutters)	Concrete	448	.085	1,487	Oct. 5, 1902
West Broadway	150 ft. west of F st. to 267 ft. east of F street.	Concrete	410	.078	1,544	Oct. 28, 1902
West Broadway	267 ft. east of F st. to 44 ft. west of Dorchester st.	Concrete	410	.078	1,818	Dec. 15, 1903
Total			2,221	.421	7,848	

Roxbury.

Columbus ave.	Terry st. to 61 ft. north of Station st.	Concrete	884	.168	5,304	Oct. 23, 1901
Huntington ave.	Easterly side Cumberland st. to Massachusetts ave.	Concrete	747	.141	4,150	Oct. 12, 1901
Huntington ave.	Massachusetts ave. to Gainsborough st.	Concrete	587	.111	3,372	Oct. 12, 1901
Total			2,218	.420	12,826	

Brighton.

Cottage Farm	Bridge over the B. & A. R.R., northerly roadway	Concrete	140	.027	778	June 25, 1901
Cottage Farm	Southerly roadway	Concrete	140	.027	778	Oct. 29, 1901
Total			140	.027	1,556	

SEYSSEL ASPHALT.

Genesee st.....	Harrison ave. to Albany st.....	Concrete	505	.096	1,122	July 12, 1904
Mason st.....	444 ft. south of West st. to Avery st.....	Concrete	123	.023	265	Nov. 23, 1904
Milton st.....	Brighton st. to Spring st.....	Concrete	308	.058	274	Sept. 8, 1909
Oswego st.....	Harrison ave. to Albany st.....	Concrete	506	.096	1,068	July 22, 1904
Paul st.....	Emerald st. to Village st.....	Concrete	133	.025	236	Oct. 23, 1902
Paul st.....	Village st. to Tremont st.....	Concrete	276	.052	456	Oct. 23, 1902
Pelham st.....	Washington st. to Shawmut ave.....	Concrete	320	.061	693	Oct. 12, 1902
Public Alley 102.....	23 ft. south of Marshall st. to Creek sq.....	Concrete	182	.034	184	Nov. 11, 1909
" 702.....	Worcester st. to W. Springfield st.....	Concrete	222	.042	222	Nov. 9, 1909
" 703.....	Between Newland st. and Public Alley 702..	Concrete	116	.022	103	Nov. 9, 1909
Waterford st.....	Washington st. to Shawmut ave.....	Concrete	316	.060	544	Nov. 13, 1902
Total.....	.....	.....	3,007	.569	5,167	

ASPHALTINA.

Hayward pl.....	Washington st. to Harrison ave.....	Concrete	260	.049	578	Nov. 7, 1903
Massachusetts ave.....	Columbus ave. to Tremont st., northerly roadway.....	Concrete	267	.051	1,622	Oct. 11, 1902
Total.....	.....	.....	527	.100	2,200	

SUMMARY.

Trinidad asphalt.....	20,137 feet, or 3,813 miles, or 64,164 square yards
Sicilian rock asphalt.....	13,256 " " 2,511 " " 46,038 " "
Seyssel rock asphalt.....	3,007 " " 0,569 " " 5,167 " "
Asphaltina.....	527 " " 0,100 " " 2,200 " "
Total sheet asphalt under maintenance guarantee, February 1, 1900.....	36,927 feet, or 6,993 miles, or 117,569 square yard.

Cost of Asphalt Patching, 1899.

Work done by Barber Asphalt Paving Company.

TRINIDAD ASPHALT.

NAME.	Year laid.	Base.	Length in miles.	Total yards in street.	Yards resurfaced.	Cost of patching.	Cost per square yard of surface.
Liberty sq., part east of Kilby st.	1881	Concrete.	.....	505	1.42	\$3 55	\$.007
Court sq., westerly side.	1881	Concrete.	.064	950	60.91	152 27	.160
Doane st., Kilby st. to Broad st.	1881	Concrete.	.059	624	37.52	93 80	.150
Congress sq., intersection.	1883	Concrete.	.004	37	17.68	44 20	1.194
N. Bennett st., Hanover st. to Salem st.	1883	Cobble	.105	920	244.10	610 25	.663
Albany st., E. Concord st. toward Massachusetts ave.	1884	Concrete.	.085	2,700	417.38	1,043 48	.387
Endicott st., Cooper st. across Thacher st.	1884	Cobble	.....	Resurfaced	on	Concrete	base, 1899
Ash st., Bennett st. to Nassau st.	1887	Concrete.	.044	427	40.08	100 20	.235
Bennett st., Washington st. and Harrison ave.	1887	Concrete.	.034	350	9.12	22 80	.065
Central st., Kilby st. to Broad st.	1887	Concrete.	.059	869	98.55	246 37	.283
Cooper st., N. Margin st. across Endicott st.	1887	Concrete.	.037	597	135.99	339 98	.569
Exchange pl., Congress st. to Kilby st.	1887	Concrete.	.046	678	52.70	131 75	.194
Poplar st., Spring st. to Charles st.	1887	Cobble	.109	1,192	161.80	404 50	.339
Tilston st., 155 ft. west of Hanover st. across Unity st.	1887	Cobble	.048	346	122.59	306 47	.886
Wiggin st., Tilston st. to N. Bennett st.	1887	Cobble	.020	119	35.54	88 85	.747
W. Sixth st., between C st. and D st.	1887	Concrete.	.017	305	58.74	146 85	.481
Brattle sq., Brattle st. to Elm st.	1888	Concrete.	.053	670	16.29	40 73	.061
D st., Fifth st. to Gold st.	1889	Concrete.	.024	448	14.66	36 65	.082
Water st., Congress st. to Kilby st.	1889	Concrete.	.048	694	113.54	283 85	.409
Austin st., Charlestown, Seminary pl. to Lawrence st.	1891	Concrete.	.027	421	33.55	83 87	.199
Beacon st., Charles st. across Arlington st.	1891	Concrete.	.165	3,800	264.95	662 38	.174
Cabot st., Tremont st. to Ruggles st.	1891	Concrete.	.234	3,571	444.12	1,110 30	.311
Court st., Washington st. to Court sq.	1891	Concrete.	.044	642	28.97	72 42	.112
Hollis st., Tremont st. to Washington st.	1891	Block	.052	521	36.49	91 23	.175
Hudson st., Beach st. 90 ft. north of Curve st.	1891	Concrete.	.206	3,938	279.53	698 82	.178

Moon st., North sq. to Lewis st.....	1891	Cobble .....	.034	384	29.88	74 70	.194
Rogers st., Dorechester st. to Preble st.....	1891	Cobble .....	.068	480	10.26	25 65	.053
Sun Court st., Moon st. to North st.....	1891	Cobble .....	.029	218	41.68	104 20	.478
Warrenton st.....	1891	Cobble and Concrete..	.216	2,497	348.69	871 73	.349
Beacon st., Dartmouth st. to within 150 ft. of Gloucester st.....	1892	Cobble and Concrete..	.330	9,277	483.22	1,208 05	.130
Brighton st., Levereett st. to Allen st.....	1892	Cobble .....	.160	1,737	497.96	1,169 90	.674
Cherry st., Washington st. to Shawmut ave.....	1892	Concrete...	.063	594			.174
Clark st., Hanover st. to North st.....	1892	Cobble .....	.060	614	42.63	106 57	
Davis st., Washington st. to Harrison ave.....	1892	Concrete...	.061	646			.004
Groton st., Washington st. to Shawmut ave.....	1892	Concrete...	.063	558	1.00	2 50	.241
Hanover ave., Hanover st. to North st.....	1892	Cobble .....	.058	266	25.67	64 17	.194
Malcolm st., Mt. Vernon st. to Chestnut st.....	1892	.....	.049	290	22.48	56 20	
Massachusetts ave., Columbus ave. to Washington st. (southerly roadway)	1892	Concrete...	.174	5,549	587.77	1,469 43	.265
Poplar st., Chambers st. across Spring st.....	1892	Cobble .....	.115	1,250	52.72	131 80	.105
Stillman st., Endicott st. across North Margin st...	1892	Cobble .....	.032	453	12.85	32 12	.071
Stoddard st., Howard st. to Court st.....	1892	Cobble .....	.026	150			.517
Thacher st., Charlestown to Endicott st.....	1892	Concrete...	.638	562	* 131.51	290 58	.018
Cabot st., easterly side of Ruggles st. to Vernon st...	1892	Concrete...	.137	2,988	21.59	53 97	.051
E st., W. Third st. to Bolton st.....	1892	Concrete...	.021	410	8.29	20 73	
W. Third st., west of E st. across E st.....	1892	Concrete...	.035	769			.430
Columbus ave., B. & A. R.R. to Massachusetts ave...	1892	Concrete...	.663	15,000	2,579.51	6,448 78	.006
Harrison ave.....	1892	Concrete...	.144	995	104.16	260 40	
Arch st., Franklin st. to Milk st.....	1893	Concrete...	.081	1,267	2.83	7 08	.029
Beacon st., 68 ft. south of Gloucester st. to Massa- chusetts ave.....	1893	Concrete...	.193	5,391	62.06	155 15	.048
Parmerter st., Hanover st. to Salem st.....	1893	Concrete...	.053	764	14.55	36 37	
			4.547	78,433	7,777.54	\$19,405 65	

* Part surface heater work.

Average cost, \$0.247.

Prices paid for entire renewal, \$2.50 per square yard.

Prices paid for surfacing patches, \$2 per square yard.

Work done by the Boston Asphalt Company.

SICILIAN ROCK.

NAME.	Year laid.	Base.	Length miles.	Total yards in street.	Yards resurfaced.	Cost of patching.	Cost per square yard of surface.
Athens st., B st. to C st.....	1892	Concrete...	.098	746			.170
W. Broadway, between Dorchester ave. and A st....	1892	Concrete...	.068	2,000	136.13	\$340 32	.071
Decatur st., Washington st. to Harrison ave.....	1892	Concrete...	.070	781	22.03	55 08	
Motte st., Washington st. to Harrison ave.....	1892	Concrete...	.063	516			.094
Broadway, Gardner pl. 150 ft. easterly.....	1893	Concrete...	.028	648	24.36	60 90	.009
Dwight st., Shawmut ave. to Tremont st.....	1893	Concrete...	.136	2,075	7.59	18 97	
			.463	6,766	190.11	\$475 27	

Price paid entire renewal, \$2.50 per square yard. Average cost, \$0.070 per square yard.

Work done by Simpson Bros. Corporation.

TAR CONCRETE.

NAME.	Year laid.	Base.	Length miles.	Total yards in street.	Yards resurfaced.	Cost of patching.	Cost per square yard of surface.
Harris st., Hanover st. to North st.....	Cobble.....	.056	425	72.83	\$109 25	\$0.257

Price paid, \$1.50 per square yard.

Measurements have also been made on asphalt patching ordered by the Street Department, required by resetting edgestones for artificial stone sidewalks, resetting crosswalks, etc., which are not included in these tables.

Comparative Cost, for the Year 1899, of Patching Asphalt Pavements, having no Maintenance Guarantee.

TRINIDAD ASPHALT.

PAVEMENT LAID.	Area square yards.	Cost.	Average cost per yard.
1881	2,079	\$249 62	\$0.1200
1883	957	654 45	.6839
1884	2,700	1,043 48	.3864
1887	4,883	1,787 77	.3661
1888*	1,665	301 13	.1808
1889	1,142	320 50	.2806
1891†	16,472	3,795 30	.2304
1892	26,113	4,606 02	.1764
1893	7,422	198 60	.0268

* Not including Columbus avenue.

† Harrison avenue, part of which has been resurfaced, included in 1888.

SICILIAN ROCK ASPHALT.

PAVEMENT LAID.	Area square yards.	Cost.	Average cost per yard.
1892	4,043	\$395 40	\$0.0979
1893	2,723	79 87	.0293

PAVING.

Street paving has been supervised in all cases where requested.

Granite block pavement on a concrete base, laid with pitch and pebble joints, 30,883 square yards.

Granite block pavement on a gravel base, laid with pitch and pebble joints, 963 square yards.

Granite block pavement on a gravel base, laid with gravel joints, 14,794 square yards.

Trinidad lake asphalt, with a binder course of asphaltic cement concrete, on an American cement concrete base, 4,041 square yards, at an average cost of about \$3.00 per square yard for five years guaranty and \$3.25 per square yard for ten years guaranty, exclusive of cost of preparing road-bed for the concrete base.

Trinidad lake asphalt, with a binder course of asphaltic cement concrete, on an American *Portland* cement concrete base, 2,595 square yards, 1,843 square yards in Charles street from Fruit street across Allen street, costing \$3.25 per square yard, and 752 square yards in Devonshire street, between Milk and Water streets, costing \$3.65 per square yard for ten years guaranty, exclusive of cost of preparing road-bed for the concrete base.

Trinidad *land* asphalt, with a binder course of asphaltic cement

concrete, on an American cement concrete base, 2,500 square yards. This asphalt was laid on Public Alleys numbered 401 to 405 inclusive, 419 and 431, the cost per square yard cannot be definitely stated, as the price paid was a lump sum, which included the cost of considerable other work, exclusive of the cost of preparing the road-bed for the concrete base.

Sicilian rock asphalt, on an American cement concrete base, 1,817 square yards, at an average cost of about \$3.00 for five years' guaranty, and \$3.25 for ten years' guaranty, exclusive of the cost of preparing the road-bed for the concrete base.

Seyssel rock asphalt, on an American cement concrete base, 3,221 square yards, at an average cost of about \$3.00 for five years guaranty, and \$3.25 for ten years guaranty, exclusive of the cost of preparing the road-bed for the concrete base.

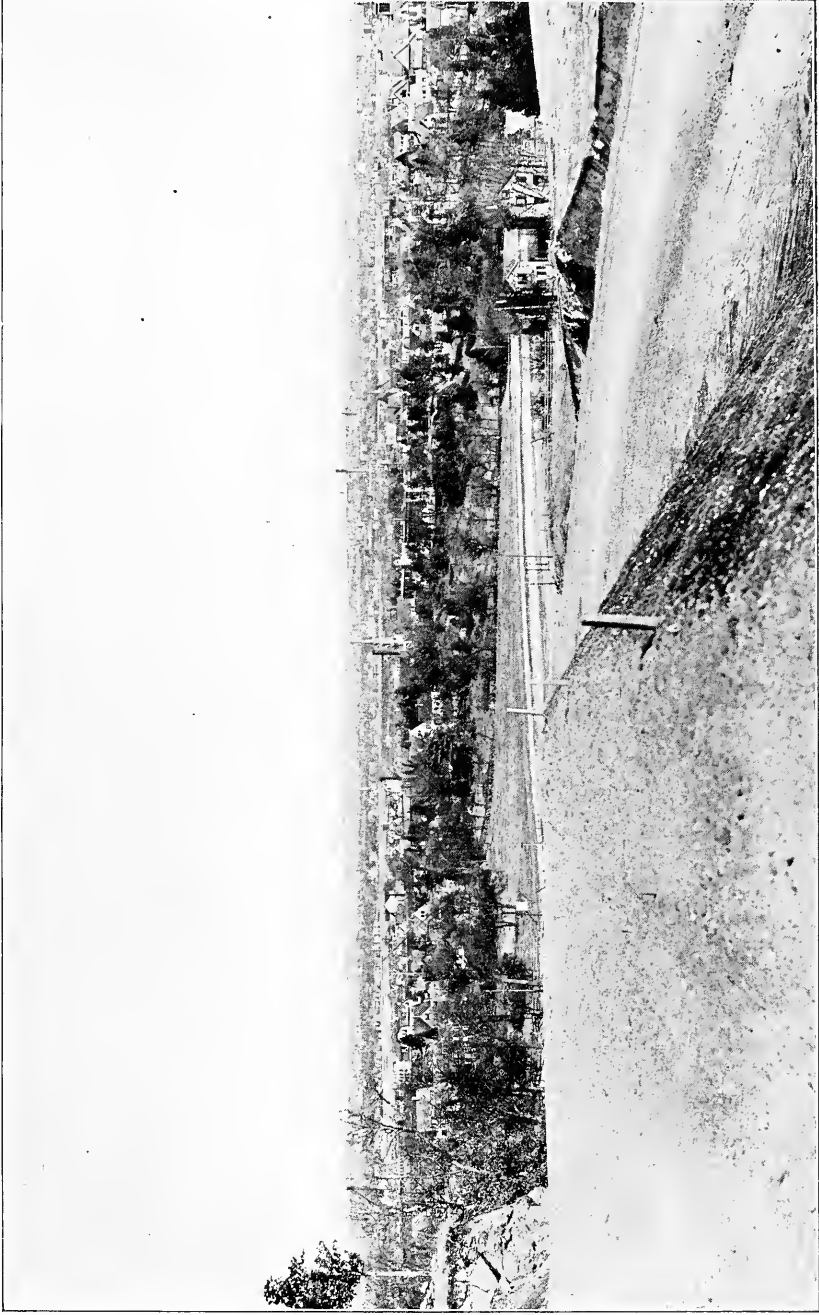
All asphalt pavement laid during season of 1899, was laid with a maintenance guaranty for *ten* (10) years, except that on Genesee, Mason and Oswego streets the guaranty is for five years.

Edgestones set, 93,325 linear feet; gutter paving laid, 30,527 square yards; brick sidewalks laid, 26,163 square yards; crushed stone sidewalks constructed, 38,860 square yards; artificial stone sidewalks, 80,972 square feet; flagging crosswalks laid, 5,033 square yards; macadam surface (6 inches), 83,933 square yards; Telford base (8 inches), macadam (4 inches), 29,456 square yards.

Endicott street, from Cooper street across Thacher street, was paved with 1½ inches of Trinidad lake asphalt, with 1½ inches of bituminous concrete binder on a 6-inch American cement concrete base, by the Barber Asphalt Paving Company. The old pavement was removed and roadway excavated by the Street Department. The edgestones were reset, flagging crosswalks and brick sidewalks relaid by Patrick McGovern. Former pavement was asphalt on cobblestones.

Mason street, from 450 feet west of West street to about 120 feet westerly, was paved with 2½ inches of Seyssel natural rock asphalt, on a 6-inch American cement concrete base, by Jones & Meehan. The old pavement was removed and roadway excavated by the Street Department; edgestones were reset and brick sidewalks relaid by Jones & Meehan. Former pavement was old granite blocks.

Park street, from Tremont street to Beacon street, was repaved and newly macadamized, the sidewalk on the Common side of the street was removed, the edgestones on that side being set one foot from the bases of the iron fence to form a wheel guard; on the other side of the street the sidewalk was widened about two feet, making it twelve feet wide, by this means the roadway was also widened about six feet. The roadway was graded and macadamized, edgestones reset, granite block paving, flagging crosswalks and brick sidewalks relaid by W. H. Glenn & Co. Three new catch-basins were built, one was rebuilt, and three were abandoned and sealed up. Former pavement was old granite blocks and macadam.



COMMONWEALTH AVENUE, NEAR WARREN STREET, SHOWING UPPER AND LOWER ROADWAYS UNDER CONSTRUCTION. RESERVED SPACE FOR ELECTRIC CARS AT FOOT OF SLOPE. VIEW FROM UPPER ROADWAY LOOKING TOWARDS CAMBRIDGE.

The following streets were repaved under appropriations made by the Board of Apportionment:

Atlantic avenue (including the tracks of the Boston Elevated Railway Company and Union Freight Railroad), from Dewey square to Oliver street, was paved with large granite blocks on a 6-inch American cement concrete base with pitch and pebble joints. The old pavement was removed and roadway excavated by the Street Department, concrete base laid by The Metropolitan Contracting Company. In the portion from Dewey square across Congress street the roadway paving was laid, edgestones set, brick sidewalks and flagging crosswalks laid by Jones & Meehan; in the portion from Congress street to Oliver street similar work was done by Patrick McGovern. The Boston Elevated Railway Company and Union Freight Railroad, by agreement, paid for the portions within their tracks. Former pavement was old granite blocks on gravel bed with gravel joints. One new catch-basin was built.

Blackstone street, from Hanover street across North street, was paved with large granite blocks on a 6-inch American cement concrete base with pitch and pebble joints. The old pavement was removed and roadway excavated by the Street Department; concrete base was laid by the Metropolitan Contracting Company. Roadway paving was laid, edgestones set, brick sidewalks and flagging crosswalks laid by Patrick McGovern & Co. Former pavement was old granite blocks on gravel bed with gravel joints.

Charles street, from Fruit street across Allen street, exclusive of the tracks of the Boston Elevated Railway Company, was paved with 1½ inches of Trinidad lake asphalt with 1½ inches of bituminous concrete binder on a 6-inch American Portland cement concrete base, by the Barber Asphalt Paving Company. The old pavement was removed, roadway excavated, edgestones set, flagging crosswalks and brick sidewalks laid by the Street Department. Former pavement was large granite blocks on gravel bed, with pitch and pebble joints.

Congress street, from Atlantic avenue to the old sea-wall, was paved with Philadelphia size granite blocks, on a 6-inch American cement concrete base, with pitch and pebble joints. The old pavement was removed and roadway excavated by the Street Department; concrete base, roadway paving, flagging crosswalks, and brick sidewalks were laid, and edgestones set by Jones & Meehan. Two catch-basins were rebuilt, and four abandoned ones sealed up. Former pavement was old granite blocks on gravel bed with gravel joints.

Devonshire street, from Milk street to Water street, was paved with 2 inches of Trinidad lake asphalt, with 1½ inches of bituminous concrete binder on an American Portland cement concrete base of varying thickness, by the Barber Asphalt Paving Company. The old block pavement was removed and former concrete base cleaned by the Street Department. Upon this existing concrete base was deposited sufficient new concrete to bring the base to the proper grade and crown for the new pave-

ment; several corporation trenches were found from which the former base had been removed and not replaced. These trenches were excavated to a depth of six inches below the top of old concrete and filled with the new concrete. Flagging crosswalks and brick sidewalks were laid and edgestones reset by the Street Department. Former pavement was granite blocks on a concrete base.

Federal street, from Dewey square to Milk street, including the tracks of the Boston Elevated Railway Company, was paved with large granite blocks on a 6-inch American cement concrete base, with pitch and pebble joints. The old pavement was removed and roadway excavated by the Street Department; concrete base, roadway paving, flagging crosswalks, brick sidewalks, were laid and edgestones set by Patrick McGovern. The Boston Elevated Railway Company, by agreement, paid for the portion within its tracks. Former pavement was old granite blocks on a gravel bed with gravel joints.

Genesee street, from Harrison avenue to Albany street, was paved with 2½ inches of Seyssel natural rock asphalt, on a 6-inch American cement concrete base, by Jones & Meehan. The old pavement was removed and roadway excavated by the Street Department; edgestones were reset, granite block paving and brick sidewalks relaid by Jones & Meehan. Two square granite catch-basin frames were removed and cast-iron D frames substituted. Former pavement was fire bricks on a gravel bed, laid in 1891.

Harrison avenue, from about 20 feet south of Kneeland street, to about 20 feet north of Harvard street, including the tracks of the Boston Elevated Railway Company, was paved with 1½ inches of Trinidad lake asphalt with 1½ inches of bituminous concrete binder, on a 6-inch American cement concrete base, by the Barber Asphalt Paving Company. The 20 feet at Kneeland and at Harvard streets was paved with large granite blocks on a 6-inch American cement concrete base with pitch and pebble joints, by Patrick McGovern, except that the Barber Asphalt Paving Company laid the concrete base; from north side of Harvard street to north side of Bennet street the roadway was paved with large granite blocks on gravel bed with gravel joints, except that in front of the Fire Department ladder-house about 127 square yards of paving was laid with pitch and pebble joints, by Patrick McGovern. The old pavement was removed and roadway excavated by the Street Department; edgestones were set, flagging crosswalks and brick sidewalks laid by Patrick McGovern. Six square granite catch-basin frames were removed and cast-iron D frames substituted. The Boston Elevated Railway Company, by agreement, paid for the portion within its tracks. By changing the line of edgestones the roadway was widened about 1.5 feet, it now being 32 feet between the edgestones. Former pavement was old granite blocks on gravel bed with gravel joints.

Kingston street, from Essex street to Beach street, was paved with 2 inches of Sicilian rock asphalt on a 6-inch American cement concrete base, by the Boston Asphalt Company. From Bedford street across Essex street, including the tracks of the Boston Elevated Railway Company, was paved with Philadelphia size granite blocks on a 6-inch American cement concrete base, with pitch and pebble joints, by H. Gore & Co. The old pavement was removed and roadway excavated by the Street Department, edgestones were set, flagging crosswalks and brick sidewalks laid by H. Gore & Co. Former pavement was old granite blocks on a gravel bed with gravel joints.

Leverett street, from Craigie's bridge to Causeway street, including the tracks of the Boston Elevated Railway Company, roadway paved with large granite blocks on gravel bed with gravel joints, tracks paved with Philadelphia size granite blocks on gravel bed with gravel joints. The old pavement was removed and roadway excavated by the Street Department; granite block paving was laid, edgestones set, flagging crosswalks and brick sidewalks laid by Jones & Meehan. Former pavement was old granite blocks on gravel bed, with gravel joints. The Boston Elevated Railway Company, by agreement, paid for the portion within its tracks.

Milton street, from Brighton street to Spring street, was paved with 2 inches of Seyssel, natural rock, asphalt on a 6-inch American cement concrete base, by Jones & Meehan. The old pavement was removed and roadway excavated by the Street Department; edgestones were set and brick sidewalks laid by Jones & Meehan. By changing the line of edgestones the roadway was widened about 1 foot, it now being 8 feet between the edgestones. Former pavement was old cobble stones.

Oswego street, from Harrison avenue to Albany street, was paved with 2½ inches of Seyssel, natural rock asphalt, on a 6-inch American cement concrete base, by Jones & Meehan. The old pavement was removed and roadway excavated by the Street Department; edgestones were reset, granite block paving and brick sidewalks relaid by Jones & Meehan. Former pavement was of red bricks laid in 1891.

ASSESSMENT STREETS.

The following streets were constructed under chapter 323 of the Acts of 1891, and acts in amendment thereof or in addition thereto.

The cost of the work herein given is the cost of the work done, and materials furnished, by the contractor and does not include the cost of materials furnished by the city.

Albany street, northwesterly corner at Northampton street, was widened by taking 137 square feet of land from the corner estate. The contract for doing the necessary work in connection with this widening was awarded to H. Gore & Co. Work under this contract was begun October 16, 1899, and completed Novem-

ber 22, 1899, at a cost of \$149.92. The work consisted of repaving roadway with granite blocks, setting new edgestones, and paving brick sidewalks.

Alexander street; Alexander street southerly is about 611 feet long. The contract for constructing the surface of this street was awarded to James McGovern. Work under this contract was begun October 25, 1899, and suspended November 25, 1899.

Amory street, School street to Bragdon street, is about 725 feet long. The contract for constructing the surface of this street was awarded to Patrick McGovern. Work under this contract was begun May 1, 1899, and completed December 21, 1899, at a cost of \$2,210.36. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, gutter blocks and straight edgestones were furnished by the city and hauled to the site of the work by the contractor. Circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Andrews street, East Canton street to East Dedham street, is about 216 feet long. The contract for constructing the surface of this street was awarded to the Barber Asphalt Paving Company. Work under this contract was begun September 26, 1899, and completed October 22, 1899, at a cost of \$1,077.55. It is an asphalt road with brick sidewalks. The roadway is paved with 1½ inches of Trinidad lake asphalt, with 1½ inches of bituminous concrete binder on a 6-inch American cement concrete base. New edgestones and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; new bricks and gutter blocks were furnished on the work by the city.

Angell street, Blue Hill avenue to Canterbury street, is about 877 feet long. The contract for constructing the surface of this street was awarded to James Doherty & Co., November 2, 1898. Work under this contract was begun April 17, 1899, and completed June 10, 1899, at a cost of \$2,316.11. It is a 6-inch macadam road with brick sidewalks. Crushed stone, gutter blocks and edgestones were furnished by the city and hauled to the site of the work by the contractor; bricks for sidewalks were furnished, on the work, by the city; flagging for crosswalks was furnished by the contractor.

Annabel street, Columbia road to Sumner street, is about 429 feet long. The contract for constructing the surface of this street was awarded to James McGovern. Work under this contract was begun November 14, 1899, and suspended December 21, 1899, only the rough grading being done.

Ashley street, Breed street to Walley street, is about 641 feet long. A contract for filling this street to sub-grade was made with H. & D. Burnett on November 20, 1899, at the rate of 44 cents per cubic yard, measured in place. Work under this contract was begun December 4, 1899, and is not yet completed.



COMMONWEALTH AVENUE AT ABERDEEN LINE. SHOWING UPPER AND LOWER ROADWAYS UNDER CONSTRUCTION. RESERVED SPACE FOR ELECTRIC CARS IN CENTRE AT FOOT OF SLOPE.

Astor street, Massachusetts avenue to Hemenway street, is about 890 feet long. The contract for constructing this street was awarded to Patrick McGovern, November 5, 1898. Work under this contract was begun May 26, 1899, and completed August 18, 1899, at a cost of \$2,220.02. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, gutter blocks and straight edgestones were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished, on the work, by the city. Flagging for crosswalks was furnished by the contractor.

Athelwold street, at School street, was widened by taking 789 square feet of land from the corner estates. The contract for doing the necessary work in connection with this widening was awarded to Collins & Ham. Work under this contract was begun July 5, 1899, and completed July 17, 1899, at a cost of \$150. The work done was to build a 6-inch macadam roadway and crushed stone sidewalk, set edgestones and pave granite block gutters. All stock required was furnished by the city and hauled to the site of the work by the contractor, except that the city furnished the circular edgestones on the work.

Atherstone street, Fuller street to Bailey street, is about 314 feet long. The contract for constructing the surface of this street was awarded to Philip Doherty. Work under this contract was begun August 19, 1899, and completed October 26, 1899, at a cost of \$701.94. It is a 6-inch macadam road with artificial stone sidewalks (3.5 feet wide and loam space about 2 feet wide. Cost of sidewalks not included in above cost). Crushed stone, gutter blocks and straight edgestones were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor. Artificial stone sidewalks were built at Numbers 1 and 5 by H. Johnson & Co., and at Number 10 by Patrick Lyons. On the remainder of the street the sidewalks had been previously constructed.

Belvidere street, West Newton street to Dalton street, is about 507 feet long. A contract for filling this street to subgrade was awarded to William Gilligan, at the rate of 40 cents per cubic yard in place. Work under this contract was begun January 25, 1899, and completed May 9, 1899, 1,535 cubic yards of filling being deposited, costing \$614.

Another contract for building wooden bulkhead and fence was awarded to Wm. H. Ryan & Co. Work under this contract was begun April 4, 1899, and completed April 29, 1899, at a total cost of \$538.40. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun May 24, 1899, and completed July 11, 1899, at a cost of \$1,619.59. It is a 6-inch macadam road with brick sidewalks. Crushed stone, gutter blocks and straight edgestones were furnished by the city and hauled to the site of the work by

the contractor; circular edgestones and bricks for sidewalks were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Bennington street, Chelsea street to Belle Isle inlet, is about 10,621 feet long. A contract for depositing about 82,000 cubic yards of filling in this street was awarded to Jones & Meehan, November 20, 1899, at the rate of 53 cents per cubic yard measured in place. Work under this contract was begun January 16, 1900, and is being carried on at the present time.

Blandford street, Commonwealth avenue to the Boston and Albany Railroad, is about 399 feet long. A contract for depositing about 15,000 cubic yards of filling in this street was awarded to the Boston and Albany Railroad Co., December 27, 1899, at the rate of 45 cents per cubic yard measured in the bank. Work under this contract was begun January 3, 1900, and is still in progress.

Bragdon street, Columbus avenue to Amory street, is about 622 feet long. A contract for constructing the surface of this street was awarded to Thomas A. Dolan. Work under this contract was begun September 28, 1899, and completed October 14, 1899, at a cost of \$1,052.22. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor. Flagging for crosswalks was furnished by the contractor.

Burt street, Washington street to Ashmont street, is about 1,365 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun August 17, 1898, and completed May 22, 1899, at a cost of \$3,831.24. It is a 6-inch macadam road with brick sidewalks. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones and bricks were furnished, on the street, by the city; flagging for crosswalks was furnished by the contractor.

Cambridge street, Brighton avenue to Washington street, is about 3,642 feet long. The contract for constructing the surface of this street was awarded to J. L. Bryne & Co. Work under this contract was begun October 26, 1899, and suspended December 23, 1899.

Canal street, Haymarket square to Causeway street, is about 1,097 feet long. The contract for paving and regulating this street, including the tracks of the Boston Elevated Railway Company, was awarded to Jones & Meehan. Work under this contract was begun October 15, 1898, and completed May 15, 1899, at a cost of \$11,588.95, not including cost of granolithic sidewalks. This street was widened on the northeasterly side about twenty-five feet, making it 75 feet wide between street lines. It was constructed in the following manner: Northeasterly, sidewalks 10 feet wide, paved with brick; roadway 50 feet wide,



COMMONWEALTH AVENUE, AT ENTRANCE TO CHESTNUT HILL RESERVOIR.



COMMONWEALTH AVENUE, NORTH OF WALLINGFORD ROAD.

paved with large granite blocks on a 6-inch American cement concrete base, with pitch and pebble joints; southwesterly sidewalks 15 feet wide, paved with artificial stone, sidewalks with granite edgestones. Straight edgestones, granite paving blocks and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones and bricks for sidewalks were furnished on the work by the city.

The artificial stone sidewalk from Haymarket square to Market street, 2,946.75 square feet, was laid by W. A. Murtfeldt Company, at a cost of \$589.35; from Market street to Causeway street, 10,943.78 square feet, by Simpson Brothers Corporation, at a cost of \$2,188.76.

The Boston Elevated Railway Company, by agreement, paid for the portion of the work within its tracks.

Charlestown street, Haymarket square to Causeway street, is about 1,056 feet long. The contract for paving and regulating this street, including the tracks of the Boston Elevated Railway Company, was awarded to the Metropolitan Contracting Company. Work under this contract was begun July 31, 1899, and completed November 23, 1899, at a cost of \$16,883.78. This street was widened on the westerly side about 42 feet, making it 92 feet wide between street lines. It was constructed in the following manner: Two sidewalks, each 12 feet wide, paved with bricks; roadway 68 feet wide, paved with large granite blocks on a 6-inch American cement concrete base with pitch and pebble joints; brick sidewalks with granite edgestones. Straight edgestones, granite paving blocks and flagging for crosswalks were furnished by the city, and hauled to the site of the work by the contractor. Circular edgestones and bricks for sidewalks were furnished on the work by the city. The Boston Elevated Railway Company, by agreement, paid for the portion of the work within its tracks.

Chester street, Brighton avenue to Commonwealth avenue, is about 650 feet long. The contract for constructing the surface of this street was awarded to James Doherty & Co. Work under this contract was begun June 1, 1899, and completed August 3, 1899, at a cost of \$1,158.62, not including the artificial stone sidewalk on easterly side. It is a 6-inch macadam road, with crushed stone sidewalks on the westerly side. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor. The artificial stone sidewalk (easterly side) was laid by J. C. Newborg.

Chiswick road, Chestnut Hill avenue to Englewood avenue, is about 2,046 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun September 10, 1899, and suspended December 28, 1899.

Congreve street, South street to Centre street, is about 1,409

feet long. The contract for constructing the surface of this street was awarded to William Finneran. Work under this contract was begun November 4, 1899, and suspended January 1, 1900.

Cummington street, Blandford street to Avon street, is about 1,186 feet long. A contract for depositing about 54,000 cubic yards of filling in this street was awarded to the Boston & Albany Railroad Company, December 27, 1899, at the rate of 45 cents per cubic yard measured in the bank. Work under this contract was begun January 3, 1900, and is still in progress.

Devon street, Blue Hill avenue to Columbia road, is about 1,860 feet long. The contract for constructing the surface of this street was awarded to John Connors. Work under this contract was begun June 12, 1899, and completed September 8, 1899, at a cost of \$3,774.79, not including cost of artificial stone sidewalks. It is a 6-inch macadam road with artificial stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor. The artificial stone sidewalks were laid by Patrick Lyons at a cost of \$4,161.80.

Edwin street, Dorchester avenue to Florida street, is about 1,188 feet long. The contract for constructing the surface of this street was awarded to Philip Doherty. Work under this contract was begun September 28, 1899, and completed December 8, 1899, at a cost of \$1,801.35, not including cost of artificial stone sidewalks. It is a 6-inch macadam road with artificial stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor. A contract for laying the artificial stone sidewalks was awarded to Patrick Lyons. Work under this contract was begun October 30, 1899, and suspended November 24, 1899.

Florida street, King street to Templeton street, is about 1,133 feet long. The contract for constructing the surface of this street was awarded to Philip Doherty. Work under this contract was begun October 30, 1899, and suspended December 27, 1899.

Fowler street, Greenwood street to Glenway street, is about 874 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham, November 2, 1898. Work under this contract was begun April 24, 1899, and completed June 5, 1899, at a cost of \$1,410.38, not including the cost of artificial stone sidewalks. It is a 6-inch macadam road with artificial stone sidewalks 4.5 feet wide and loam spaces 2 feet wide, bounded by granite edgestones. Crushed stone, straight edgestones and gutter blocks, were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was



COLUMBIA ROAD, AT ITS EASTERLY END, BETWEEN O AND P STREETS, NEAR CITY POINT, SOUTH BOSTON, SHOWING YACHT CLUB HOUSES ON THE RIGHT.

furnished by the contractor. A contract for laying artificial stone sidewalks was awarded to Barnes-Ruffin Company. Work under this contract was begun June 12, 1899, and completed July 27, 1899, at a cost of \$1,613.

Francis street, Huntington avenue to Brookline avenue, is about 1,455 feet long. The contract for constructing the surface of this street was awarded to James Doherty & Co, November 5, 1898. Work under this contract was begun May 1, 1899, and completed June 28, 1899, at a cost of \$3,601.33. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Hamilton street, Bowdoin street to Homes avenue, is about 944 feet long. The contract for constructing the surface of this street was awarded to James McGovern. Work under this contract was begun October 26, 1898, and completed June 15, 1899, at a cost of \$1,869.64. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Harold street, Munroe street to Walnut avenue, is about 748 feet long. A contract for constructing the surface of this street was awarded to Patrick McGovern. Work under this contract was begun November 21, 1898, and completed June 15, 1899, at a cost of \$1,628.10. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor. A retaining wall and fence was built in front of Harriet V. Sanderson estate by Patrick McGovern, costing \$360.

Hewins street, Columbia road to Erie street, is about 701 feet long. A contract for constructing the surface of this street was awarded to Philip Doherty. Work under this contract was begun September 13, 1898, and completed May 17, 1899, at a cost of \$1,432.05. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Hubbard street, Chestnut avenue to Lamartine street, is about 449 feet long. A contract for constructing the surface of this street was awarded to Thomas Minton. Work under this contract was begun November 20, 1899, and suspended December 27, 1899.

Idaho street, River street to Manchester street, is about 867

feet long. The contract for constructing the surface of this street was awarded to James McGovern. Work under this contract was begun July 20, 1899, and completed October 12, 1899, at a cost of \$1,978.30. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

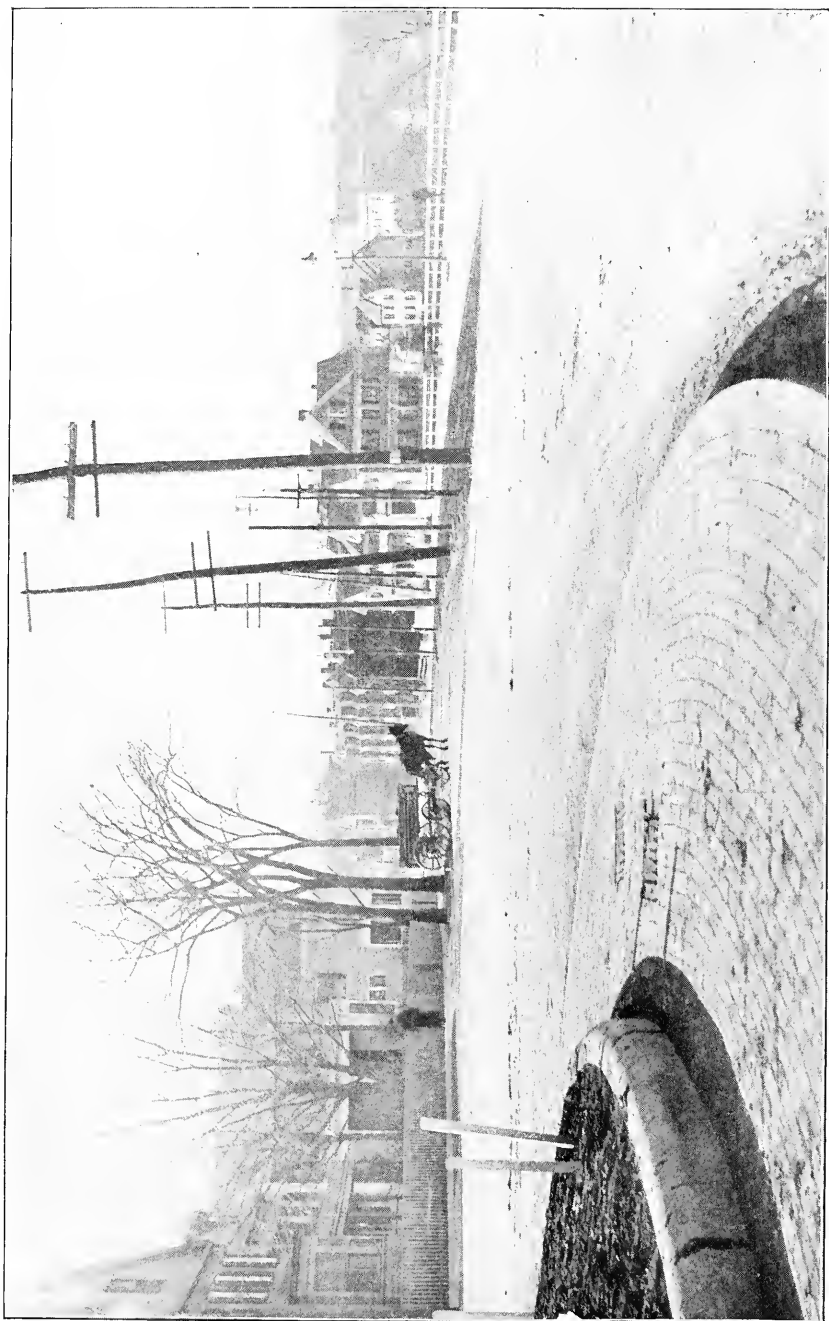
Ipswich street, Boylston road to Boylston street, is about 2,366 feet long. A contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun August 16, 1899, and suspended December 8, 1899.

Lauriat avenue, Ballou avenue to Norfolk street, is about 769 feet long. The contract for constructing the surface of this street was awarded to Timothy F. Bradley. Work under this contract was begun August 22, 1899, and suspended November 25, 1899.

Lonsdale street, Dorchester avenue to Adams street. (See report of Superintendent of Streets for 1898, page 261.) When work was suspended December 28, 1898, the macadam roadway required a small amount of rolling, which was done early in season of 1899. The cost of the contract work for constructing the surface of this street was \$3,490.53, not including cost of artificial stone sidewalks. It is a 6-inch macadam road with artificial stone sidewalks. Crushed stone and straight edgestones were furnished by the city and hauled to the site of the work by the contractor; circular edgestones and gutter blocks were furnished on the work by the city; flagging for crosswalks was furnished by the contractor. Artificial stone sidewalks were laid on north side (9,977.5 square feet), by John C. Newborg, costing \$1,895.73; on south side (10,228.6 square feet), by the Barnes-Ruffin Company, costing \$1,943.43.

Maryland street, Savin Hill avenue to Bay street, is about 474 feet long. The contract for constructing the surface of this street was awarded to Philip Doherty. Work under this contract was begun October 18, 1898, and completed May 10, 1899, at a cost of \$1,250.05. It is a 6-inch macadam road with brick sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones and bricks for sidewalks were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Middleton street, Norfolk street northerly, is about 593 feet long. A contract for constructing the surface of this street was awarded to Philip Doherty, November 14, 1898. Work under this contract was begun April 3, 1899, and completed August 19, 1899, at a cost of \$1,502.26. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were



COLUMBIA ROAD, AT EDWARD EVERETT SQUARE, COMPLETE WITH EXCEPTION OF REMOVING POLES AND PLACING TRACKS IN CENTRE.

furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Newburg street, Beech street to Belgrade avenue, is about 1,980 feet long. The contract for constructing the surface of this street was awarded to James Doherty & Co. Work under this contract was begun November 14, 1899, and suspended December 16, 1899.

Northampton street, at Albany street. (See Albany street.)

North Harvard street, Western avenue to Charles river, is about 2,573 feet long. The contract for constructing the surface of this street was awarded to Geo. H. Wentworth & Co. Work under this contract was begun October 4, 1898, and completed June 23, 1899, at a cost of \$15,142.31. It is a Telford (8-inch) macadam (4-inch) road with crushed stone sidewalks. Crushed stone, stone for Telford base, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Oakview terrace, Centre street southeasterly, is about 861 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun November 9, 1899, and suspended January 24, 1900.

Orkney road, Strathmore road to Sutherland road, is about 841 feet long. The contract for constructing the surface of this street was awarded to Daniel E. Lynch. Work under this contract was begun May 2, 1899, and suspended October 16, 1899.

Peterborough street, Audubon road to Audubon road (see report of Superintendent of Streets for 1897, page 373), is about 1,833 feet long. The contract for constructing the surface of this street was awarded to James Doherty & Co. Work under this contract was begun July 19, 1899, and completed September 27, 1899, at a cost of \$4,734.46. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Peverell street, Sawyer avenue to Salcombe street, is about 486 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun August 25, 1898, and completed May 22, 1899, at a cost of \$2,399.94. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Pontiac street, Hillside street to Tremont street is about 919 feet long and 40 feet wide, and is to be cut through a solid ledge

for about 420 feet. The work of excavating the ledge was commenced January 19, 1900, by the Paving Division, and is still in progress.

Public Alley No. 101, District No. 2, Richmond street to Cross street, between Fulton and Commercial streets, is about 385 feet long, and averages 15.5 feet wide. A contract for paving and regulating this alley was awarded to Patrick McGovern. Work under this contract was begun August 28, 1899, and completed September 16, 1899, at a cost of \$1,044.23. This alley is paved with large granite blocks on a gravel bed with pitch and pebble joints, and is without edgestones or sidewalks. The paving blocks were furnished by the city and hauled to the site of the work by the contractor.

Public Alley No. 102, District No. 2, Marshall street to Creek square, is about 205 feet long and averages 10.5 feet wide. The contract for paving with asphalt and regulating this alley was awarded to Jones & Meehan. Work under this contract was begun October 10, 1899, and completed November 11, 1899, at a cost of \$874.27. This alley was paved with 2 inches of Seyssel natural rock asphalt on a 6-inch American cement concrete base, with edgestones and brick sidewalks for about half its length on one side. The paving blocks and edgestones required were furnished by the city and hauled to the site of the work by the contractors. Bricks for sidewalk were furnished on the work by the city.

Public Alleys Nos. 401, 402, 403 and 404, District No. 5, between Huntington avenue and St. Botolph street, from Irvington street to Public Alley No. 405; and **Public Alley No. 405**, District No. 5, from Huntington avenue to St. Botolph street. These alleys are respectively 490, 486, 466, 587, and 236 feet long, and each 16 feet wide. The contract for paving with asphalt and granite blocks and regulating these alleys was awarded to Simpson Brothers Corporation. Work under this contract was begun August 9, 1899, and completed October 11, 1899, at a cost for each alley, as follows: No. 401, \$1,885.19; No. 402, \$1,501.02; No. 403, \$1,423.07; No. 404, \$1,844.74; No. 405, \$690.79. These alleys were paved with 1½ inches of Trinidad land asphalt with 1½ inches of bituminous concrete binder on a 6-inch American cement concrete base, and also with granite blocks on gravel base with gravel joints where too steep for asphalt. These alleys, except No. 405, were constructed with a roadway, 8 feet wide, two brick sidewalks each four feet wide, bounded by granite edgestones. Two turn-outs were constructed in each alley, excepting No. 405, 30 feet long and 14 feet wide, so that two teams may pass. Alley No. 405 was constructed with a roadway 8 feet wide, and brick sidewalk on northerly side 5 feet wide and on southerly side 3 feet wide, each bounded by granite edgestones. Paving blocks, straight edgestones and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones and bricks for sidewalks were furnished on the work by the city.

Public Alley No. 418, District No. 5, between Beacon and Marlborough streets, from Dartmouth street to Exeter street, is about 528 feet long and 16 feet wide. A contract for repairing the granite block pavement and brick sidewalks in this alley was awarded to H. Gore & Co. Work was begun August 30, 1899, and completed September 6, 1899, at a cost of \$168.22.

Public Alley No. 419, District No. 5, between Beacon and Marlborough streets, from Clarendon street to Dartmouth street, is about 548 feet long and 16 feet wide. The contract for paving with asphalt and regulating this alley was awarded to Simpson Brothers Corporation. Work under this contract was begun August 8, 1899, and completed October 2, 1899, at a cost of \$1,564.80. This alley was paved with $1\frac{1}{2}$ inches of Trinidad land asphalt, with $1\frac{1}{2}$ inches of bituminous concrete binder on a 6-inch American cement concrete base. This alley was constructed with a roadway 8 feet wide, and two brick sidewalks each 4 feet wide, with granite edgestones. Paving blocks, edgestones and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; bricks for sidewalks were furnished on the work by the city.

Public Alley No. 420, District No. 5, between Beacon and Marlborough streets, from Berkeley street to Clarendon street, is about 548 feet long and 16 feet wide. A contract for repairing the brick sidewalks in this alley was awarded to H. Gore & Co. Work was begun August 29, 1899, and completed September 1, 1899, at a cost of \$80.85.

Public Alley No. 431, District No. 5, between Commonwealth street and Newbury street, from Hereford street to Gloucester street, is about 375 feet long and 16 feet wide. The contract for paving with asphalt and granite blocks and regulating this alley was awarded to Simpson Brothers Corporation. Work under this contract was begun August 7, 1899, and completed September 30, 1899, at a cost of \$953.67. This alley was paved with $1\frac{1}{2}$ inches of Trinidad land asphalt, with $1\frac{1}{2}$ inches of bituminous concrete binder on a 6-inch American cement concrete base, and with granite blocks on a gravel bed, with gravel joints where too steep for asphalt. It has a roadway 8 feet wide, and two brick sidewalks each 4 feet wide, with granite edgestones. Paving blocks, edgestones and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; bricks for sidewalks were furnished on the work by the city.

Public Alley No. 701, District No. 8, between Union Park and Upton streets, from Shawmut avenue to Tremont street, is about 628 feet long and 20 feet wide. The contract for paving with asphalt and granite blocks and regulating this alley was awarded to the Barber Asphalt Paving Company. Work under this contract was begun September 16, 1899, and completed November 8, 1899, at a cost of \$3,077.46. This alley was paved with $1\frac{1}{2}$ inches of Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder, on a 6-inch American cement concrete base,

and with granite blocks on a gravel bed with gravel joints where too steep for asphalt. It has a roadway in part 9 feet wide, and in part 13 feet wide, with brick sidewalk northerly side 3.5 feet wide, and southerly side in part 3.5 feet wide and in part 7.5 feet wide, with granite edgestones: the wide sidewalks were built to protect the trees on the alley. Paving blocks, edgestones and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; bricks for sidewalks were furnished on the work by the city.

Public Alley No. 702, District No. 8, West Springfield street to Worcester street, is about 205 feet long and 15 feet wide. The contract for paving with asphalt and regulating this alley was awarded to Jones & Meehan. Work under this contract was begun September 29, 1899, and completed November 9, 1899, at a cost of \$862. This alley was paved with 2 inches of Seyssel natural rock asphalt on a 6-inch American cement concrete base. It has a roadway 9 feet wide, and two brick sidewalks each 3 feet wide, with granite edgestones. Granite blocks, edgestones and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; bricks for sidewalks were furnished on the work by the city.

Public Alley No. 703, District No. 8; **Public Alley No. 702** to Newland street, is about 192 feet long and 10 feet wide. The contract for paving with asphalt and granite blocks and regulating this alley was awarded to Jones & Meehan. Work under this contract was begun October 2, 1899, and completed November 9, 1899, at a cost of \$629.10. This alley was paved with 2 inches of Seyssel natural rock asphalt on a 6-inch American cement concrete base and with granite blocks on a gravel bed with gravel joints where too steep for asphalt. It has a roadway 8 feet wide; the edgestones are placed 1 foot from the building line, and are backed up with concrete. Paving blocks, edgestones and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor.

Public Alley No. 2001, Webster street to Marginal street, is about 240 feet long, and for a distance of 65 feet from Webster street it is 10 feet wide; from this point 60 feet further it is 5 feet wide, and for the remaining distance of 115 feet it is 4.5 feet wide. The contract for paving and regulating this alley was awarded to Ward & Conlin. Work under this contract was begun September 25, 1899, and completed October 14, 1899, at a cost of \$305.20. This alley was paved with second-hand granite blocks (removed from Devonshire street) on a gravel bed with gravel joints for 125 feet from Webster street; the remaining distance was paved with bricks, except for a distance of 10 feet, which is occupied by a flight of wooden steps about 9 feet in height. These steps were repaired, as was also a board fence extending about 60 feet from Marginal street on the northwesterly side of alley. The difference in elevation of Marginal and Webster streets is 28 feet.

Rosseter street, Bullard street to Bowdoin avenue. (See report

of Superintendent of Streets for 1898, page 262.) Work on retaining wall was completed June 26, 1899. On account of making an opening in fence at estate of T. F. Badlam, the cost was increased \$28.18, making a total cost for retaining walls and fences of \$1,303.18.

Rowe street, Ashland street to Sharon street, is about 475 feet long. A contract for constructing the surface of this street was awarded to Philip Doherty. Work under this contract was begun December 7, 1899, and suspended December 23, 1899.

Rozella street, Adams street to Muzzy street, is about 322 feet long. The contract for constructing the surface of this street and for rebuilding the retaining wall at the Mary Hemenway School was awarded to T. F. Bradley. Work under this contract was begun November 27, 1899, and the work of rebuilding the retaining wall is still in progress.

St. Stephen street: St. Stephen street to Bryant street is about 803 feet long. (See report of Superintendent of Streets for 1898, page 262.) The contract for constructing the surface of this street was awarded to James Doherty & Co. Work under this contract was begun June 27, 1899, and completed August 8, 1899, at a cost of \$1,879.16. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, gutter blocks and straight edgestones were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

School street, at Athelwold street, was widened by taking 548 square feet of land from the corner estate. The contract for doing the necessary work in connection with this widening was awarded to Collins & Ham. Work under this contract was begun July 5, 1899, and completed July 17, 1899, at a cost of \$125. The work done was to build a 6-inch macadam roadway and crushed stone sidewalks, set edgestones and pave granite block gutters. All stock required was furnished by the city and hauled to the site of the work by the contractors.

Seymour street, Canterbury street to Brown avenue, is about 1,150 feet long. The contract for constructing the surface of this street was awarded to T. F. Welch. Work under this contract was begun December 5, 1899, and suspended December 21, 1899.

Shirley street, Massachusetts avenue to Norfolk avenue, is about 877 feet long. The contract for constructing the surface of this street was awarded to J. F. Cullen. Work under this contract was begun June 26, 1899, and completed October 10, 1899, at a cost of \$3,505.35. It is a 6-inch macadam road, with brick sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones and bricks were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Spencer street, Athelwold street to Park street, is about 480

feet long. The contract for constructing the surface of this street was awarded to James McGovern. Work under this contract was begun June 26, 1899, and completed August 3, 1899, at a cost of \$787.76. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Spencer street, Wheatland avenue to Talbot avenue, is about 625 feet long. The contract for constructing the surface of this street was awarded to James McGovern. Work under this contract was begun November 20, 1898, and completed May 25, 1899, at a cost of \$1,500.54. It is a 6-inch macadam roadway with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Stanley street, Quincy street to Bellevue street, is about 375 feet long. The contract for constructing the surface of this street was awarded to James Doherty & Co. Work under this contract was begun May 28, 1899, and completed July 17, 1899, at a cost of \$1,260.63. It is a 6-inch macadam road with brick sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones and bricks for sidewalks were furnished on the work by the city; flagging for crosswalks was furnished by the contractor.

Thane street, Athelwold street to Park street, is about 479 feet long. The contract for constructing the surface of this street was awarded to Philip Doherty. Work under this contract was begun June 29, 1899, and completed August 3, 1899, at a cost of \$552.79 (not including cost of artificial stone sidewalks). It is a 6-inch macadam road with artificial stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the contractor. Artificial stone sidewalks were laid by the Barnes-Ruffin Company from Park street 81 feet on the easterly side and 140 feet on the westerly side, in all 1,440.2 square feet, costing \$320.44. The remaining artificial stone sidewalks had been constructed before the street was laid out.

Trinity place, St. James avenue across Stuart street, is about 398 feet long. The contract for paving with asphalt and regulating this street was awarded to the Barber Asphalt Paving Co. Work under this contract was begun August 21, 1899, and completed September 28, 1899, at a cost of \$3,516.09. It is an asphalt road with brick sidewalks. The roadway is paved with 1½ inches of Trinidad lake asphalt, with 1½ inches of bituminous

concrete binder on a 6-inch American cement concrete base. New edgestones, granite blocks, and flagging for crosswalks were furnished by the city and hauled to the site of the work by the contractor; bricks for sidewalks were furnished on the work by the city.

Waldeck street, Melville avenue to Tonawanda street, is about 1,635 feet long. The contract for constructing the surface of this street was awarded to J. F. Cullen. Work under this contract was begun September 29, 1899, and completed December 5, 1899, at a cost of \$4,207. It is a 6-inch macadam road, with crushed stone, tar concrete and artificial stone sidewalks. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city; flagging for crosswalks was furnished by the city. The street was constructed in the following manner: Part between Melville avenue and Park street, 781 feet long and 40 feet wide, has roadway (including gutters) 26 feet wide; two crushed stone sidewalks, each 7 feet wide, bounded by granite edgestones. In this part there is 179 linear feet of artificial stone sidewalk which was constructed before the street was laid out. Part between Park street and Tonawanda street, 854 feet long and 50 feet wide, has a roadway 26 feet wide (including gutters), two tar concrete walks each 6 feet wide, and two loam spaces each 6 feet wide, bounded by granite edgestones; these loam spaces were sodded about 2 feet in width back of the edgestones. The tar concrete sidewalks were constructed before the street was laid out.

Wensley street, Heath street across Bickford avenue, is about 720 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun May 10, 1899, and completed November 14, 1899, at a cost of \$2,600.16 (including the cost of furnishing and laying 472 linear feet of ground water drain 4 inches in size). It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones, and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edgestones were furnished on the work by the city. Flagging for crosswalks was furnished by the contractor.

West Selden street, Morton street to Manchester street, is about 3,424 feet long. The contract for constructing the surface of this street was awarded to James McGovern. Work under this contract was begun July 21, 1899, and is still being carried on.

Woodlawn street, Hyde Park avenue to Forest Hills Cemetery, is about 1,068 feet long. The contract for constructing the surface of this street was awarded to Thomas A. Dolan. Work under this contract was begun July 24, 1899, and completed November 13, 1899, at a cost of \$1,933.99. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city and hauled to the site of the work by the contractor; circular edge-

stones were furnished on the work by the city; flagging for cross-walks was furnished by the contractor.

Worthington street, Fenway to Longwood avenue. is about 1,151 feet long. A contract for filling this street to sub grade was awarded to J. C. Coleman & Son, at the rate of 44 cents per cubic yard measured in the fill. Work under this contract was begun July 27, 1899, and completed December 30, 1899: 17,251 cubic yards were paid for at 44 cents per cubic yard, equal to \$7,590.44.

MISCELLANEOUS.

Contracts were awarded on the following streets, but at the end of the season no work had been done:

Aberdeen street, Beacon street to Brookline branch of Boston and Albany Railroad.

Callender street, Tucker street across Don street.

Custer street, Woodman street to Arnold Arboretum.

Dresden street, Boylston street to Spring Park avenue.

Edison green, Dorchester avenue to Pond street.

Esmond street, Blue Hill avenue to Harvard street.

Shafter street, Waterlow street to Faxon street.

Warner street, Harvard street to Park street.

Plans have been prepared of the following "new streets" on which the work of construction has not been commenced:

Barry street, Quincy street to Richfield street.

Boston street, Mt. Vernon street to Columbia road.

Draper street, Robinson street to Bowdoin street.

Fowler street, Glenway street to McLellan street.

Jersey street, Brookline avenue to Audubon road.

Montague street, Ashmont street to Roslin street.

Public Alley No. 901, Hemenway street to another part of Hemenway street.

South street, Jamaica street to Arborway.

Stratford street, Anawan street to Clement avenue.

Wainwright street, Centre street to Welles avenue.

Williams street, Washington street to Call street.

Woodcliff street, Howard avenue about 214 feet easterly.

GRADING STREET RAILWAY TRACKS.

The grades for tracks in the following streets have been determined. On streets marked ** the surveys were made and levels taken by the companies:

(Boston Elevated Railway Company.)

Atlantic avenue, Dewey square to Oliver street.

Atlantic avenue, Dewey square to Kneeland street.

Boston street, Edward Everett square to Washburn street.

Boylston street, Ipswich street to Brookline avenue.

Cambridge street, Brighton avenue across Washington street.

Cambridge street, North Harvard street to Charles river.

Causeway street, Prince street to Haverhill street.

Charlestown street, Haymarket square to Charlestown bridge.

Columbia road, Blue Hill avenue to Edward Everett square.

Commercial street, Prince street to Hull street.

Dewey square.

Federal street, Dewey square to Milk street.

Ipswich street, Boylston road to Boylston street.

Kingston street, Bedford street to Essex street.

Leverett street, Causeway street to Craigie's bridge.

Talbot avenue, Norfolk street to Blue Hill avenue.

Washington street, Blue Hill avenue to Glenarm street.

(*West Roxbury and Roslindale Street Railway Company.*)

** **Ashland street**, South street to 1,100 feet east of Sutton street.

** **Spring street**, Gardner street to Dedham line.

(*Union Freight Railroad Company.*)

Atlantic avenue, Dewey square to Oliver street.

Atlantic avenue, Dewey square to Kneeland street.

Causeway street, Prince street to Haverhill street.

Commercial street, Prince street to Hull street.

Dewey square.

Total length of single track grades 16.9 miles.

PLANS AND SPECIFICATIONS.

Aberdeen street, plan and specification of retaining wall, fence and bulkhead.

Belvidere street, plan and specifications for wooden bulkhead and fence.

Burt street, plan and specifications for iron fence on culvert.

Castle square, plan with elevations.

Columbia road, plan of retaining wall and steps at Hamilton street.

Edward Everett square, plan and specifications for park curb.

Fairmount street, plan and specifications for ground water drain.

Freeport street, plan and specifications for iron fence on wall at Dorchester Yacht Club.

Harold street, plan and specifications for retaining wall and iron fence.

Haverhill street, plan of sidewalk southwesterly side leading from Haymarket square.

Ipswich street, plan and specifications for concrete bulkhead and fence along location of Boston and Albany Railroad.

Rozella street, plan and specifications for retaining wall and granite steps.

Wensley street, plan and specifications for ground water drains.

A set of plans showing the improved pavement in the central part of the city has been prepared for the use of the Permit Office, the object being to show the location of all openings made in this class of pavement. These openings have been plotted from the inspectors' notes upon request.

COLUMBIA ROAD.

Columbia road construction has been completed from Blue Hill avenue to Edward Everett square, with the exception of the bridge by which the Midland Division of the New York, New Haven and Hartford Railroad will cross the road; this work has not been commenced.

BRIDGE OVER THE RAILROAD AND COLUMBIA AVENUE.

The work under the contract with Mr. Dennis F. O'Connell, dated October 10, 1898, was finished in June at a cost of \$25,773.44. This work consisted of building two abutments and a pier. The southerly wing wall of the west abutment was left unfinished, as it was necessary to leave Carson street unobstructed until other means of access to Mt. Vernon street east of the railroad can be provided.

The foundations rest on a hard clay or sand bottom at Grade 2.5 above city base for the West abutment and at Grade 2 for the East abutment and pier. The foundations below a grade 3 feet below the grade of the surface in front are of American cement concrete, and above that grade the abutments and pier are of granite ashlar and rubble backing with cut stone parapets and coping. The walls are well ballasted with quarry chips.

ROAD SURFACING.

The section of road between Dorchester avenue and Buttonwood street has been completed. The work was done under a contract with Philip Doherty, dated June 14, 1899, and was finished August 30, 1899, at a cost of \$1,911.04.

BRIDGE OVER SHOREHAM STREET.

This bridge is to be built to carry Columbia road over Shoreham street, a traffic street to connect Mt. Vernon street with Carson street. It will be parallel with the railroad and 100 feet distant from it. Its grade will be the same as the existing streets, and the crossing of the Parkway by a traffic street at this point will be avoided.

Under a contract with Mr. Michael A. Meany the excavation across Columbia road above the grade of Shoreham street was completed on January 1, 1900, at a cost of \$591.44.

Plans have been prepared for the construction of the bridge, but the work of erection awaits the completion of a proposed storm water sewer at this point.

FILLING.

The section of Columbia road between the bridge over the railroad and Mercer street, South Boston, also so much of the proposed Columbia avenue as lies east of the old location of the New York, New Haven and Hartford Railroad have been filled to grade. For this work there were three contracts. Under a contract with Mr. J. J. Sullivan, dated December 24, 1898, there were brought from the excavation near Story street, South Boston, 4,978 cubic yards at a cost of \$2,986.80. Under a contract with John S. Jacobs & Son, dated October 20, 1898, there were brought from the site of the new high school building on Thomas Park 25,811 cubic yards at a cost of \$9,233.85.

The larger part of the filling was done under a contract with Mr. Simon J. Donovan, dated December 28, 1898. The work was finished in October, and there were deposited 116,471 cubic yards at 69½ cents per cubic yard. This contract included the construction of an extension of the culvert under the railroad to the bay outside the slope of the new filling. This culvert is of wood on a pile foundation; it is 250 feet in length and 4 feet by 5 feet 8 inches inside. The total amount paid under the contract was \$83,375.59.

Under the contract with Mr. Simon J. Donovan for filling that portion of Columbia road between Atlantic and I streets, dated October 25, 1898, there have been deposited 71,109 cubic yards. The work is not yet completed.

Commonwealth avenue, Warren street to Chestnut Hill avenue, cross-section plans for estimating amount of rock excavation under five contracts, aggregating 45,857.4 cubic yards costing \$64,634.84, which includes the cost of loading and hauling 9,851.7 cubic yards to the crusher and loading 19,436.7 cubic yards into city teams at foot of ledge. This work was begun in September, 1898. Plans and specifications were also prepared for two retaining walls, one near Summit avenue and one near Sutherland road; these walls were not built.

During the year the reconstruction of Commonwealth avenue from Brighton avenue to Chestnut Hill avenue has been under way and is nearly completed as far as Chiswick road.

CONGRESS STREET, SOUTH BOSTON.

On Congress street, between B and C streets, a roadway about 40 feet in width has been paved with granite blocks on a gravel base, granite edgestones have been set on the southerly side of the street, and two catch-basins have been built. The paving of

this short portion of Congress street in connection with the work done by the Commonwealth, and that under the decree abolishing the grade crossing on this street has provided a continuous thoroughfare paved with granite from Atlantic avenue to South Boston by way of the L-street bridge.

Lines and grades have been furnished for the construction of Talbot avenue, which is now completed. Some work has been done on Blue Hill avenue, between Walk Hill street and Mattapan.

Two hundred and six petitions to lay artificial stone sidewalks have been reported upon to the Superintendent of Streets.

The amount of edgestone required for one hundred and forty-nine estates has been furnished to the Paving Division.

In seventy-three cases the Paving Division has been notified of the necessity of resetting edgestone on account of artificial stone sidewalks to be laid.

Forty-two petitions for permits to construct coal-holes, bulk-heads and sidewalk areas, have been examined and reported upon.

Ninety-one petitions, calling for eighty-seven catch-basins, were referred by the Sewer Division and reported upon.

Locations were furnished the Sewer Division, for construction purposes, of nine hundred and forty-three catch-basins on one hundred and sixty different streets.

DUMPING WHARF FOR THE SANITARY DIVISION.

The high platform and runway at the Sanitary Wharf on Albany street was completed in March by Thomas E. Ruggles, at a cost of \$5,476.

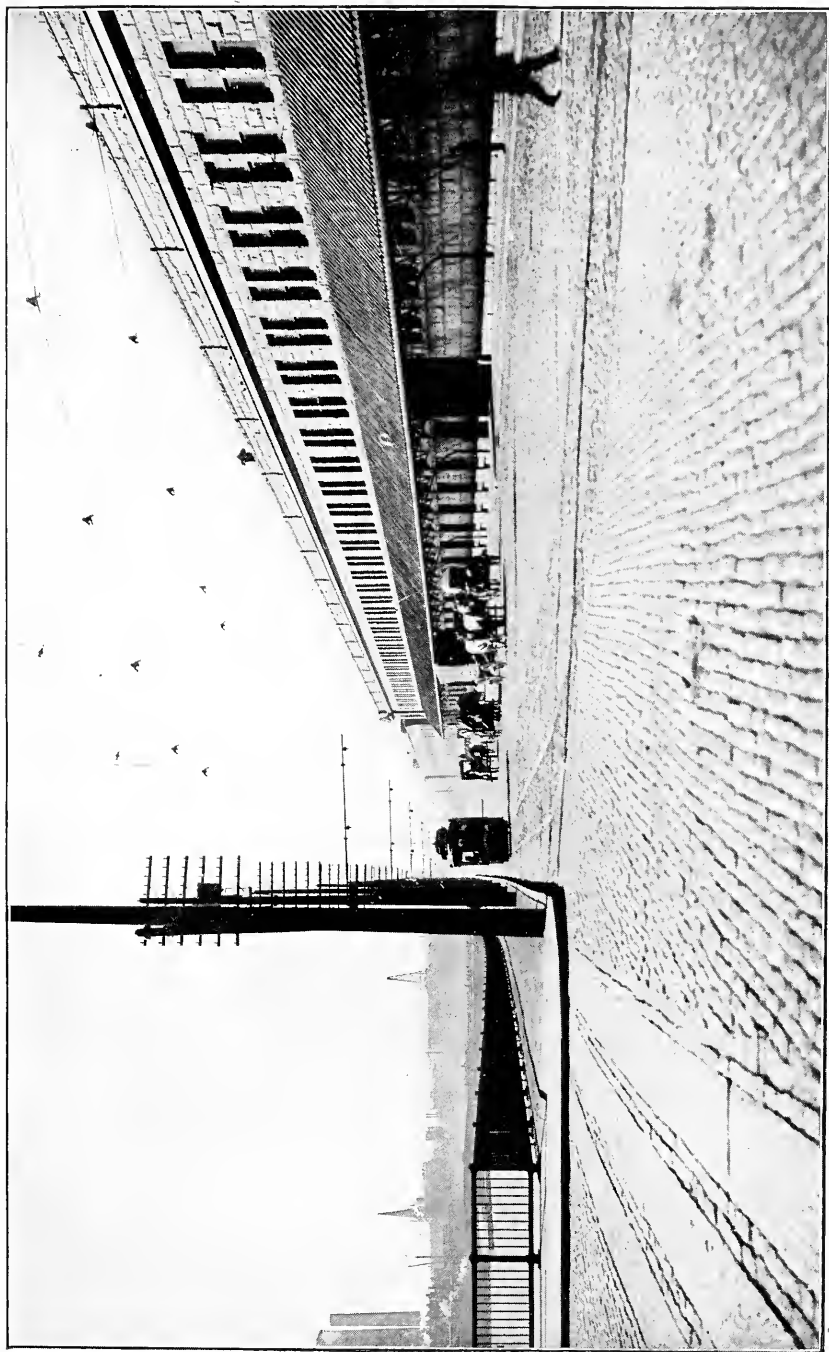
EAST BOSTON FERRIES.

New drop. — The northerly drop for the East Boston landing of the South Ferry was completed and put in commission February 4, 1899, at a cost for contract work of \$5,775.

CHARLESGATE BRIDGE OVER IPSWICH STREET.

Under a contract with the King Bridge Co., of Cleveland, Ohio, dated March 25, 1899, the steel work was completed on January 2, 1900. A contract has been made for the erection of the ornamental railing of the same design as that on the bridge over the railroad.

As the season was too far advanced to permit of laying cement concrete, when the steel work was finished, the laying of the concrete and asphalt floor of this bridge has been deferred until spring, and a temporary wooden floor has been constructed to allow of the bridge being used during the winter.



DORCHESTER AVENUE, REAR OF TERMINAL STATION, SEA WALL AND NEW STREET CONSTRUCTED TO TAKE PLACE OF FEDERAL STREET AND GIVE THROUGHFARE TO SOUTH BOSTON.

SOUTH UNION STATION.

The portion of the paving on the westerly half of Dorchester-avenue extension, between the southerly end of the new station and Federal-street bridge, which was not laid in 1898, has been completed. The entire length of the new avenue, on which was laid a temporary granite pavement on fresh fillings in 1898, has been repaved, and the edgestone reset. The sidewalk on the harbor side of the avenue has been paved with brick, and an iron railing built on the sea wall for its entire length.

The paving on Summer-street extension, between Dewey square and the harbor line, has been relaid, and a bulkhead carrying a plank sidewalk has been built along the property of the Boston Electric Light Company.

Early in the season the narrow strip of paving on Atlantic avenue in front of the express buildings, which could not be laid when the other paving was done around the station, was completed and the edgestone set.

The work of paving Atlantic avenue, between Dewey square and Kneeland street, with pitch and pebble joints and on a concrete base, was commenced early in November, 1899. This work had been delayed until almost the close of the season, because of the special track-work of the Boston Elevated Railway and the Union Freight Railroad in Dewey square. As soon, however, as any of this material was in position the work of concreting and paving was carried on day and night whenever the weather and temperature would permit. With the exception of a small area at Beach street, where the special track-work was not ready, all of the paving between the tracks and westerly of the tracks on Atlantic avenue has been put on a concrete base, the paving laid with pitch and pebble joints, the edgestones set and the westerly sidewalk laid with brick or artificial stone. The work in Dewey square has also been completed with the exception of two small areas adjoining Summer and Federal streets. A small refuge island has been built in the square, surrounded by granite edge stone and paved with brick.

Respectfully submitted,

WILLIAM JACKSON,
City Engineer.

APPENDIX J.

REPORT OF THE CHIEF SMOKE INSPECTOR.

64 PEMBERTON SQUARE, BOSTON, February 1, 1900.

MR. BENJ. W. WELLS,

Superintendent of Streets :

DEAR SIR, — I herewith submit a report of the work performed under chapter 389, Acts of 1895, section 116; chapter 175, Acts of 1897; and section 99, chapter 47, Revised Ordinances, 1898, relative to the smoke nuisance in this city.

The severe storm of November, 1898, when a number of barges used in the coal-carrying trade were lost at sea, increased the cost of transportation, which, together with the specially keen competition among the coal-dealers of this city for the past two years, has from time to time greatly augmented the quantity of low-grade bituminous coals brought to this market.

So familiar are the observers with the condition of the various stacks throughout the city when using their regular fuel that a change is readily noticed and reported; these complaints, on investigation, were found to be due in the main to the coal, and it required considerable efforts on our part to keep the soft-coal nuisance within bounds, and accept from the consumers the excuse that they were paying for and supposed they were getting the best grade coal.

The use of these low-grade bituminous coals by stationary plants has only obtained within the past few years, and is indirectly due to the comparatively low prices quoted on contracts. At these prices it has been almost impossible for the dealers to carry out the conditions of the contract without entailing a loss; hence the introduction of a cheaper fuel.

As the contracts for coal with steam-users are generally made during the summer months for the year, and with a view of placing the responsibility for these conditions, which became very noticeable from time to time, the following letter was issued and sent to the coal-dealers throughout the city, and was also published in the daily press:

It is reported that owing to competition in the coal business at the present time, importations of lower grades of soft coal may be expected to fill orders on contracts now being made. I desire at this time to call your attention to the law which authorizes this department to take action in preventing smoke nuisances, and to the fact that this law will be rigidly enforced, and all violations vigorously looked out for. During the past winter, when the situation as regards coal became extreme,

owing to natural causes which could not be overcome, this department waived for a time its objection to the use of certain low-grade coals, as the higher grades were not to be obtained. Such action, however, cannot apply to the present situation.

Your attention is called to this matter now, so that there may be no cause for complaint on your part later on in the event of trouble, and that your customers may be fully advised as to the action which this department will certainly take unless proper coal is used.

Yours very truly,

(Signed)

BENJ. W. WELLS,
Superintendent of Streets.

The use of these low-grade coals which go with low-priced contracts are in the end costly and troublesome. It has been demonstrated that the increase in consumption will average from 15 to 40 per cent., which will materially offset the reduction in price, not taking into consideration the disadvantages so far as results are concerned and the increased emission of smoke.

This condition exists largely in plants equipped with smoke preventers, the owners of which feel that with the present equipment they can burn this fuel without creating a nuisance, but as these cheaper grades of soft coal contain so much volatile or gaseous matter the devices have been unable to control the smoke satisfactorily, and I have been obliged several times during the past six months to caution them.

The shipments of high-grade bituminous coals the past two months have been very scarce, due partly to strikes among the miners and the inability of the railroads to furnish transportation from the mines to tide-water; it is also stated that the demand for this fuel has increased, owing to the prosperous condition of the country; be that as it may it has resulted in the introduction of some very smoky coals into this city, and our entire time has been taken up in asking the co-operation of the engineers and owners to see that extra care was exercised in stoking, and in some cases insisting upon using a mixture of hard coal. Some plants adopted hard coal entirely.

The present situation is one of the worst in the history of the coal trade in this city, with very little hope of relief in sight. Were it not for the open weather many of the steam-users would have been put to serious inconveniences, as a soft-coal famine could not have been avoided.

While we have anticipated this stringency in the soft-coal market we have asked and are receiving the hearty co-operation of many of the steam users in keeping the smoke within bounds.

There is a somewhat false impression regarding the use of soft coal in this city, many believing that its use is prohibited. This is not so, as under the present statute laws a chimney is allowed to emit "dark or thick-gray" smoke for five minutes continuously at any one time during the day, or 25 per cent. of any continuous period of twelve hours.

Any person, however, who is annoyed or suffers from an adjoining chimney, can, upon complaint, be given relief under section 116, chapter 175, Acts of 1897.

Take the present situation, when for the past two months considerable low-grade coals have been used, it is safe to say, that very few places could be found where the present statute law is being

substantially violated. Technical violations it is true have been found, but it is a question if the alleged violators could be fined, or that an injunction would be granted against them under the law, without a complaint showing the existence of a nuisance.

It is therefore evident that the present law is not satisfactory, inasmuch as the emission of smoke for a much shorter period than the law allows is a nuisance, and the statutes should be so amended, that its provisions when enforced would contribute to the comforts and good health of the community.

This has been brought very forcibly to my attention several times the past two years, when chimneys have been pointed out to me as nuisances by adjoining owners, who refused, however, to enter complaint or even allow their name to be used, and after spending considerable time taking observations I have found that the present law was being complied with. This reluctance of those who suffer most to enter complaint I find to be one of the chief obstacles to a more rigid enforcement of the present laws.

In other cities, particularly in the West, where the average coals used are of a much lower grade than that used in Boston, the laws governing the emission of smoke are more stringent, and allow no such liberal standard as here.

In Cincinnati, O., the emission of dense smoke (no time given) is declared a nuisance.

In Pittsburg, Penn., the emission of smoke (kind not specified) is not allowed over three minutes at any one time.

In Denver, Col., the emission of dense dark or gray smoke is not allowed for more than two minutes continuously, or during more than 12 per cent. of a continuous period of twelve hours.

The leniency of our present statute law is such that so long as soft coal is used it will be taken advantage of by those who are unwilling to be subjected to any extra expense.

The use of coke, made from the coal drawn from the mines of the Dominion Coal Company in Nova Scotia, and which is one of the by-products of the New England Gas and Coke Company, Everett, Mass., was adopted in a number of boiler plants the latter part of June, but was shortly after abandoned. The reasons given by engineers were many, and while it is claimed this fuel is being used successfully on locomotives, its use in stationary plants, so far, has not been a success.

Its adoption, however, on locomotives attached to local trains, and also on the shifters, will be gladly welcomed by the residents alongside, or even near the line of the railroad, as it will remove a nuisance over which the present laws give no jurisdiction.

The Everett plant at the present time is operating about 300 ovens, which represents an out-put of about 1,200 tons per day. This is being distributed to some of the steam railroads, and large shipments are sent to manufacturers throughout New England. For domestic purposes, between 30 and 40 tons are being distributed daily in this city and suburbs.

The ordinance relative to the equipment of new boilers with smoke preventers or the burning of anthracite coal is being rigidly enforced, and during the past six weeks visits were made to 115 plants, a large number of which are used only at this season of the year for heating purposes, and who at the time the permit was obtained agreed to burn anthracite coal. Of this number, 6 were found using soft coal, but their attention being called to their

agreement they immediately complied with the requirements of the ordinance.

One hundred and ninety-eight short observations of one and two firings and twenty long observations, lasting from two to nine hours were taken on various chimneys throughout the city; three of these latter observations were made at the request of owners of steam plants, who having equipped their boiler or boilers with smoke devices, desired the city to inform them if the chimney was complying with the present law.

These short observations, taken by the observers as they go over the various districts, as a rule, show a change in the condition of the chimney, and are immediately investigated. This method enables me to keep in close touch with the condition of the various plants from day to day.

The importations of Nova Scotia coal recorded at the port of Boston for the year ending January 31, 1900, shows 240,543 tons as against 20,247 tons for the year ending January 31, 1899. This coal is in the main used at the gas works at Everett, although, during the past six weeks, large quantities were used in this city for steaming purposes, no other soft coal being obtainable.

A weekly weather record of the temperature, humidity, character of the day, direction and miles per hour of the wind, and also the general precipitation, showing the nature of the same, when it began and ended, is compiled at this office, and a copy of the same is filed at the Central Office.

Several requests have been answered from distant cities, and from some of the cities of this Commonwealth, regarding our laws and ordinances governing and regulating this nuisance.

During the past year the steam plants of the Boston Electric Light Company at foot of Summer street and also Ferdinand street were abandoned. The power formerly supplied by these two plants is now supplied from their new plant, foot of L street, South Boston.

Some new devices for controlling the smoke were also applied during the year. R. Marston & Co., Brattle street, equipped their Babcock & Wilcox boiler with the "American Stoker," an under-feed arrangement. This appliance, so far, seems to absolutely control the smoke. One boiler at the Chestnut Hill Pumping Station of the Metropolitan Water Works is also equipped with this type of smoke preventer, and will be placed under an additional boiler in a few months.

The Edison Electric Illuminating Company, Atlantic avenue, is installing four new boilers, and is equipping them with the Babcock & Wilcox "Chain Grate Stoker." The equipment is not as yet complete.

At the plant of the Boston Elevated Railway Company, Albany street, two new boilers are being equipped with the "Brooks Furnace," a foreign patent; these boilers are also connected with a separate chimney, with a view of determining its effectiveness in controlling the smoke. While this appliance has been in operation for some time, the experiments so far show that to meet the requirements of this plant, it would be necessary to make some changes, and these are being made from time to time.

COAL IMPORTATIONS.

MONTH.	Tons.	Value.
February, 1899	8,299	\$12,869
March	2,051	3,692
April	4,671	7,978
May	8,555	8,555
June	8,326	8,326
July	12,259	12,259
August	8,328	8,328
September	25,777	25,784
October	33,290	33,290
November	21,206	24,572
December	62,390	92,729
January, 1900	45,391	60,922
Total	240,543	\$299,304

BOILER APPLICATIONS.

During the past year 438 applications for boiler permits were received from the Building Department, and disposed of as follows:

Signed to use hard coal	368
Adopted smoke devices	40
Gas and other engines	22
Applications withdrawn	4
Soft coal and screenings	1
Screenings and shavings	1
Relocation	1
Furnace	1

438

SPECIAL REPORTS.

March 3. Report with observations on plant of the Best Baking Company, Cottage terrace, Ward 17.

March 24. Report on complaint against chimney of estate, 77 Milk street.

April 24. Report on complaint against plant of the Boston Post-office.

May 16. Report with observation on plant of the Eastern Cold Storage Company, 40-44 North street.

May 22. Report on condition of plant of the Boston Elevated Railway Company, Albany street.

June 1. Report on complaint against plant of the Creamer-Wing Laundry Company, West Newton street.

June 1. Report on complaint against chimney of M. A. Hatch, 695 Tremont street.

June 8. Report on complaint against plant of the Monks Building, 35 Congress street.

June 14. Report with observations on plant of the Norfolk Manufacturing Company, 37-49 Norfolk avenue.

June 20. Report on complaint against chimney connected with bake-ovens at Merello's Bakery, 1260 Washington street.

June 29. Report on complaint against plant of estate, 66 State street.

July 10. Report with observations on complaint against plant of the Niles Building, 27 School street.

July 10. Report with observations on complaint against plant of Boston Elevated Railway Company, Freeport street, Dorchester.

August 10. Report on complaint against plant of T. D. Cook & Company, 661 Columbia road.

September 7. Report with observations on plant of the Eastern Cold Storage Company, 40-44 North street.

September 22. Report on complaint against plant of M. A. Dyer, 4 North avenue.

October 27. Report on complaint against plant of the Edison Electric Illuminating Company, Atlantic avenue.

December 19. Report with observations on plant of the Quincy Market Cold Storage Company, Richmond street.

January 5, 1900. Report on complaint against Suburban Electric Light Company, Hawley street.

SUMMARY.

The following is a brief summary of the work for the year ending January 31, 1900:

Number of boiler permits acted upon	438
Number of objection notices sent	53
Number of short observations taken	198
Number of observations lasting from two to nine hours	20
Number of special reports made	19
Number of complaints received	13
Number of special requests for observation	2

Respectfully submitted,

THOMAS F. KELLEY,
Chief Inspector.

APPENDIX K.

REPORT OF THE CIVIL SERVICE CLERK.

Boston, February 1, 1900.

MR. BENJ. W. WELLS,

Superintendent of Streets :

DEAR SIR, — I submit herewith a report of the work performed by me in connection with the Civil Service Commission together with a statement of the force employed and eligible for employment for the year ending January 31, 1900.

One hundred and thirty-four applications were made upon the State Commission for 264 men of various grades of labor, and of this number fifteen were for promotions and two for reinstatement.

Four hundred and twenty-five names were submitted, from which 261 were selected and appointed, sixteen of whom were veterans, and forty-five persons were appointed provisionally under Civil Service Rule 36.

Of the fifteen applications for promotions fourteen were granted, one having failed to pass the non-competitive examination.

Eighty-six transfers were made from other city departments all of which the State Commission approved.

Thirty were from the Bath Department, seventeen from Park Department, seventeen from Public Buildings Department, Repairs Division, six from Water Department, five from Lamp Department, four from Street Commissioners, three from Public Grounds Department, and one each from Transit, Cemetery, Police and Fire Departments.

Notices for the discharge of 264 men were forwarded to the Civil Service Commission.

The records of the department show that there are now 3,487 persons eligible for employment in the several divisions, and of that number 3,235 were upon the January 1900 pay-rolls.

Grade and Number of Employees.

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridges.	Street Watering.	
Superintendent.....	1								1
Deputies.....		1	1	1	1	1	1	1	7
Purchasing Agent.....	1								1
Clerks.....	1	8	16	5	1	3	2	2	38
Messengers.....	1	11	5	6	4		5	1	33
Civil Engineers.....		2	14					1	17
Draughtsmen.....			17						17
Instrument men.....		10	11					1	22
Rodmen.....		10	57					1	68
Aids or tallymen.....		8	8	5	3				24
Axemen.....			3						3
Inspectors.....		54	50	18	1			1	124
Foremen.....		10	10	7	9	5	1		42
Sub-foremen.....		21	11	14	15		2		63
Superintendent of Inspectors.....	1								1
Blacksmiths and assistants.....		20	2	9	5	2			38
Boiler-makers.....						1			1
Bracers and assistants.....			21						21
Boys.....	1	10	20		1		1	1	34
Broom-makers.....		1			1				2
Bridge-cleaners.....							1		1
Captains.....				1		12			13
Carpenters and assistants.....		25	8		3	2	13		51
Calkers.....							1		1
Concrete-washer.....			1						1
Concrete-mixer.....			3						3
Coal-passers.....			3						3
Chief of draws and bridges.....							1		1
Cooper.....					1				1
Chief drawtender.....							1		1
Drawtenders.....							18		18
Assistant drawtenders.....							50		50
Deck hands.....						25			25
Dumpers.....				21	8				29
<i>Carried forward</i>	5	192	261	87	53	51	97	9	755

Grade and Number of Employees. — *Continued.*

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Street Watering.	
<i>Brought forward</i>	5	192	261	57	53	51	97	9	755
Chief engineer (steam).....			1						1
Engineer and assistants.....		20	34			14	8		76
Electrician.....						1			1
Farmer.....		1	1						2
Feeders.....				5	2				7
Firemen.....			4			22			26
Gate-men.....			3			18			21
Harness-makers and assistants.....		3		7	1				11
Horseshoers.....				6					6
Hostlers.....			2				2		4
Iron-workers.....			1						1
Janitors.....			2		1	10			13
Janitresses.....						5			5
Joiners.....						3			3
Laborers and helpers.....		544	542	208	236	5			1,535
Lamplighters.....						2			2
Ledgemen.....			75						75
Machinists and assistants.....			3			8			11
Mariner.....		1							1
Masons (stone and brick).....		1	46						47
Masons' tenders.....			5						5
Mate.....			1						1
Measurers.....		3					1		4
Oilers.....			6			6			12
Pavers and assistants.....		39							39
Painters.....		2		10		1	6		19
Pattern-maker.....		1							1
Pilots.....			1			12			13
Pipe-layers.....			4						4
Plumber.....							1		1
Powdermen.....		4							4
Quarrymen.....		1							1
Riggers.....			1						1
Rammer.....		1							1
<i>Carried forward</i>	5	813	993	323	293	158	115	9	2,709

Grade and Number of Employees. — *Concluded.*

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Cleaning Street.	Ferry.	Bridge.	Street Watering.	
<i>Brought forward</i>	5	813	993	323	293	158	115	9	2,709
Sailors.....			5						5
Steam-drillers.....		10							10
Stenographers.....	1	1	1						3
Stonecutters.....		27	5						32
Store-keepers.....			1			1			2
Stablemen.....		14	3	11	5		1		34
Tar-boiler.....		1							1
Teamsters.....		74	9	186	64		2		335
Tollmen.....						11			11
Tool-temperer.....			1						1
Watchmen.....		17	11	6	3	8	2		47
Weighers.....		7	2						9
Wharfingers and assistants.....		3	1						4
Wheelwrights.....				6					6
Wood-workers.....			1						1
Yardmen.....		8	3	8	3		2		24
Veterinary's assistant.....					1				1
Total.....	6	975	1,036	540	369	178	122	9	3,235

Table showing Transfers made from Various City Departments to the Several Divisions.

DIVISIONS.	DEPARTMENTS.											
	Bath.	Park.	Public Grounds.	Water.	Street Commissioners.	Public Buildings, Repairs Division.	Transit.	Cemetery.	Lamp.	Police.	Fire.	Total.
Paving.....	7	6		1		4					1	19
Sewer.....	5	3		1	3	2		1	1			16
Sanitary.....	3	4		1		4	1		2	1		16
Street-Cleaning.....	5	4	2	2		4						17
Ferry.....	9		1	1		2			1			14
Bridge.....	1					1			1			3
Street-Watering.....					1							1
Central Office.....												
Total.....	30	17	3	6	4	17	1	1	5	1	1	86

Table showing the Number of Applications for Various Grades of Men made upon the Civil Service Commission for the Year ending January 31, 1900.

DIVISIONS.	Applications.	Number applied for.	Number submitted by C. S. C.	Number appointed.	Provisional appointment included in four previous columns.	Reinstatements included in four previous columns.	Veterans appointed included in four previous columns.
Paving.....	26	64	79	66	32	.....	5
Sewer.....	49	89	146	93	11	2	5
Sanitary.....	20	43	86	41	1	.....	1
Street-Cleaning.....	14	27	49	25	.....	.....	1
Ferry.....	10	18	31	15	.....	.....	1
Bridge.....	9	13	18	15	1	.....	3
Street-Watering.....	4	9	15	5	.....	.....	.....
Central Office.....	1	1	1	1	.....	.....	.....
Total.....	133	264	425	261	45	2	16

The above table includes fifteen persons that were promoted, one of whom failed in the non-competitive examination; also sixteen veterans, two as clerks, three assistant draw-tenders, one gateman, one tallyman, five mechanics and four laborers.

Two requisitions were made for reinstating two discharged employees.

Sixty-one requisitions that were made are not included in above table, one of which was for a transfer from another city department.

Respectfully submitted,

M. J. MURRAY,

Civil Service Clerk.

APPENDIX L.

FORMER SUPERINTENDENTS AND DOCUMENT
NUMBERS OF ANNUAL REPORTS.**Bridge Department before 1891.***Previous to 1886, under charge of City Engineer.*

NAME.	Year.
Bartholomew M. Young	1886 to 1889
James H. Nugent	1889 to 1891

Bridge Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report	1886	1887	29
“ “	1887	1888	26
“ “	1888	1889	29
“ “	1889	1890	22
“ “	1890	1891	*

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Paving Department before 1891.

NAME.	Year.
Enoch Patterson, Superintendent Streets and Drains	1827 to 1831
Zephaniah Sampson, “ “	1831 to 1846
Thomas Hunting, Superintendent	1846 to 1853
Alfred T. Turner, “	1853 to 1864
Charles Harris, “	1864 to 1883
Nehemiah T. Merritt, “	1883
James J. Flynn, “	1883
Charles Harris, “	1884
Michael Meehan, “	1884 to 1886
John W. McDonald, “	1886 to 1889
J. Edwin Jones, “	1889 to 1891

Paving Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Quarterly report . . . . .	. . . . .	1851	6
“ “ . . . . .	. . . . .	1851	29
Annual report	1851	1852	2
“ “	1852	1853	6
“ “	1853	1854	6
“ “	1854	1855	5
“ “	1855	1856	3
“ “	1856	1857	3
“ “	1857	1858	3
“ “	1858	1859	5
“ “	1859	1860	6
“ “	1860	1861	5
“ “	1861	1862	4
“ “	1862	1863	3
“ “	1863	1864	3
“ “	1864	1865	7
“ “	1865	1866	3
“ “	1866	1867	6
“ “	1867	1868	9
“ “	1868	1869	14
“ “	1869	1870	13
“ “	1870	1871	12
“ “	1871	1872	16
“ “	1872	1873	21
“ “	1873	1874	25
“ “	1874	1875	27
“ “	1875	1876	30
“ “	1876	1877	38
“ “	1877	1878	29
“ “	1878	1879	24
“ “	1879	1880	24
“ “	1880	1881	48
“ “	1881	1882	51
“ “	1882	1883	47
“ “	1883	1884	46
“ “	1884	1885	97
“ “	1885	1886	30
“ “	1886	1887	16
“ “	1887	1888	23
“ “	1888	1889	30
“ “	1889	1890	19
“ “	1890	1891	*

*Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Sewer Department before 1891.

NAME.	Year.
Enoch Patterson, Superintendent	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 A. Moses, "	1883 to 1885
Thomas J. Young, "	1885 to 1887
Seth Perkins, "	1887 to 1889
Charles Morton, "	1889 to 1891

Sewer Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. Doc.
Annual report	1859	1861	11
" "	1860	1861	12
" "	1861	1862	12
" "	1862	1863	13
" "	1863	1864	11
" "	1864	1865	5
" "	1865	1866	6
" "	1866	1867	8
" "	1867	1868	13
" "	1868	1869	11
" "	1869	1870	3
" "	1870	1871	11
" "	1871	1872	10
" "	1872	1873	13
" "	1873	1874	12
" "	1874	1875	17
" "	1875	1876	11
" "	1876	1877	13
" "	1877	1878	15
" "	1878	1879	11
" "	1879	1880	16
" "	1880	1881	19
" "	1881	1882	18
" "	1882	1883	16
" "	1883	1884	43
" "	1884	1885	
" "	1885	1886	58
" "	1886	1887	69
" "	1887	1888	81
" "	1888	1889	129
" "	1889	1890	14
" "	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Health Department before 1891.*Sanitary.*

NAME.	Year.
Ezra Forristall, Superintendent	1853 to 1854
Joseph W. Coburn, "	1854 to 1855
Ezra Forristall, "	1855 to 1869
George W. Forristall "	1869 to 1890

Health Department before 1891.*Sanitary.*

NAME OF DOCUMENT.	Year.	Pub. Year.	No. of Doc.
Annual report	1853	1854	7
" "	1854	1855	6
" "	1855	1856	4
" "	1856	1857	4
" "	1857	1858	4
" "	1858	1859	4
" "	1859	1860	5
" "	1860	1861	6
" "	1861	1862	5
" "	1862	1863	5
" "	1863	1864	4
" "	1864	1865	4
" "	1865	1866	8
" "	1866	1867	7
" "	1867	1868	8
" "	1868	1869	12
" "	1869	1870	4
" "	1870	1871	10
" "	1871	1872	17
" "	1872	1873	40
Annual report from 1873 to 1884, inclusive; the Superintendent's report was embodied in the report of the Board of Health	1885	1886	45
Annual report	1886	1887	22
" "	1887	1888	16
" "	1888	1889	23
" "	1889	1890	21
" "	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

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. { June 14, 1871, to { Jan. 31, 1883. { March 28, 1883, to { present time.
Ezra Parmenter, Commissioner for Cambridge,	
William J. Marvin, Commissioner for Cambridge,	

NOTE.—Harvard bridge added in 1892. Essex street, Cambridge street, North Harvard street and Western avenue bridges to Cambridge were transferred from Street Department July 1, 1898.

Commissioners of Cambridge Bridges before 1891.

(West Boston, Canal and Prison Point.)

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report	1871	1872	19
“ “	1872	1873	12
“ “	1873	1874	16
“ “	1874	1875	23
“ “	1875	1876	20
“ “	1876	1877	12
“ “	1877	1878	10
“ “	1878	1879	8
“ “	1879	1880	12
“ “	1880	1881	8
“ “	1881	1882	15
“ “	1882	1883	15
“ “	1883	1884	19
“ “	1884	1885	8
“ “	1885	1886	12
“ “	1886	1887	19
“ “	1887	1888	25
“ “	1888	1889	22
“ “	1889	1890	20
“ “	1890	1891	*

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Ferry Department before 1895.

NAME.	Year.
Board of Ferry Directors	1870
William J. Burke, Superintendent	1891
Thomas Kellough	May 1, 1895.
	1891
	May 1, 1895.

Ferry Department before 1895.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report	1870	1871	41
" "	1871	1872	55
" "	1872	1873	81
" "	1873	1874	42
" "	1874	1875	65
" "	1875	1876	51
" "	1876	1877	53
" "	1877	1878	49
" "	1878	1879	60
" "	1879	1880	74
" "	1880	1881	77
" "	1881	1882	72
" "	1882	1883	93
" "	1883	1884	76
" "	1884	1885	72
" "	1885	1886	28
" "	1886	1887	12
" "	1887	1888	10
" "	1888	1889	3
" "	1889	1890	4
" "	1890	1891	*
" "	1891	1892	12
" "	1892	1893	11
" "	1893	1894	11
" "	1894	1895	-11

* Published in annual report, Executive Department, Part I., City Document No. 1, 1897.

Street Department since 1891.

Superintendent.

Henry H. Carter, Member of American Society Civil Engineers.

Resigned December 8, 1894.

Charles R. Cutter, *Acting Superintendent from December 8, 1894, to January 14, 1895.*
Member of the Boston Society Civil Engineers.

Bertrand T. Wheeler, *Superintendent from January 14, 1895, to February 4, 1896.*
Member of the Boston Society Civil Engineers.

Benjamin W. Wells, *Superintendent from February 4, 1896, to the present time.*

BRIDGE DIVISION.—John A. McLaughlin, *Deputy Superintendent until June 1, 1895.*

BRIDGE DIVISION.—John P. Wise, *Deputy Superintendent from June 1, 1895, to February 14, 1896.*

BRIDGE DIVISION.—William H. Carberry, *Deputy Superintendent from February 14, 1896, to the present time.*

FERRY DIVISION.—Thomas Kellough, *Deputy Superintendent from July 1, 1895, to February 14, 1896.*

FERRY DIVISION.—William F. McClellan, *Deputy Superintendent from February 14, 1896, to the present time.*

PAVING DIVISION.—Charles R. Cutter, *Deputy Superintendent until January 24, 1895.*

- PAVING DIVISION.—Darius N. Payson, *Deputy Superintendent from January 24, 1895, to March 1, 1896.*
- PAVING DIVISION.—John L. Kelly, *Deputy Superintendent from March 1, 1896, 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, 1895.*
- SANITARY DIVISION.—Charles A. Young, *Deputy Superintendent from February, 1895, to March 1, 1896.*
- SANITARY DIVISION.—Patrick O'Shea, *Deputy Superintendent from March 1, 1896, to the present time.*
- SEWER DIVISION.—Henry W. Sanborn, *Deputy Superintendent until July 10, 1896.*
Member Philadelphia Society Civil Engineers.
- SEWER DIVISION.—Charles R. Cutter, *Deputy Superintendent from July 10, 1896, to the present time.*
Member of the Boston Society of Civil Engineers.
- STREET CLEANING DIVISION.—Philip A. Jackson, *Deputy Superintendent until March 22, 1895.*
- STREET CLEANING DIVISION.—Benjamin M. Cram, *Deputy Superintendent from March 22, 1895, to March 1, 1896.*
- STREET CLEANING DIVISION.—Joshua Atwood, 3d, *Deputy Superintendent from March 1, 1896, to the present time.*
Member of the Boston Society of Civil Engineers.
- STREET WATERING DIVISION.—M. Edwin Libby, *Deputy Superintendent from March 6, 1895, to March 1, 1896.*
- STREET WATERING DIVISION.—Thomas J. Finneran, *Deputy Superintendent from March 1, 1896, 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, *from January 14, 1895, to February 4, 1896.*
Benjamin W. Wells, *from February 4, 1896, to the present time.*
William J. Marvin, *Commissioner for Cambridge.*

¹ Died January 12, 1894.

Street Department.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report, Executive Dept. Part II.	1891	1892	36
“ “ “ “ “	1892	1893	34
“ “ “ “ “	1893	1894	34
“ “ “ “ “	1894	1895	34
“ “ “ “ “	1895	1896	29
“ “ “ “ “	1896	1897	29
“ “ “ “ “	1897	1898	34
“ “ “ “ “	1898	1899	35
“ “ “ “ “	1899	1900	38

