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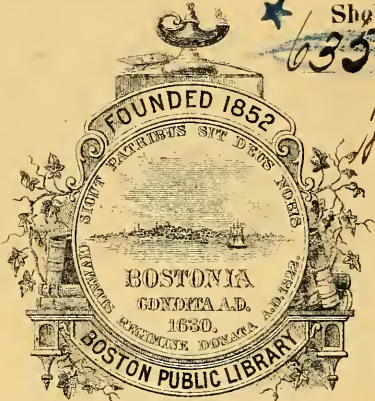
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ANNUAL REPORT

OF THE

COCHITUATE WATER BOARD,

FOR 1850.

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BOSTON:

1850.

JOHN H. EASTBURN, CITY PRINTER.

Ex. 6357.20.

v. 6

E. S. Chesbrough

July 24, 1856

In Common Council, December 12, 1850.

Laid on the table, and ordered to be printed.

Attest:

W. P. GREGG, *Clerk C. C.*

*To the Honorable the Board of Mayor and Aldermen and
the Common Council.*

GENTLEMEN :

In conformity with the 14th section of the ordinance of Dec. 31, 1849, establishing the Cochituate Water Board; the following report is made.

The receipts of the Water Department from January 4, 1850, to the 4th instant have been for Water Rates, - - - - - \$97,943 14
All other sources, - - - - - 7,171 20

Total number of Water Takers from January 4th, to December 5th, 13,463, not including those who are cut off.

The total number of water takers whose supply was cut off for non-payment of rates is 496, of these 335 afterwards paid and had the water let on again; leaving 161 still cut off.

For a detailed account of the above receipts for water and the different classes of water takers, see Appendix A. For receipts from other sources, see Appendix B.

The expenditures of the department during the same period, have been for the extension of the works to East Boston, - - - - - \$283,715 82

Expended last year on the same account,
by the WATER COMMISSIONERS, - - - 29,170 40

Probable amount required for completing the same, say - - - - - 30,000 00

\$342,886 22

This amount includes not only the cost of taking the 20 inch main to East Boston, but also that of the Reservoir, lands and distribution. For further details see Appendix C.

The expenditures for all other purposes, including the settlement of land claims and damages, salaries, wages, repairs of aqueduct and pipes, completing the Beacon Hill Reservoir and maintaining the receiving and compensating reservoirs in the country, &c., &c., have been, - - - - - \$47,095 28

For further details, see Appendix D.

The total amount expended by the City to Dec. 4th, on account of the Water Works, not including interest paid by the Treasurer, is - - - \$4,321,794 26
See Appendix E.

The total estimated value of water used for City purposes, and bringing in no revenue, is \$2,405 20. This does not include anything for fire hydrants and fountains, which are of undoubted importance to the City; but the value of which there is no rule for estimating.

For a detailed account of City Buildings, &c., supplied with water, see statement F in the Appendix.

The total length of distribution pipes laid since January 4th, is

In Boston proper, - - -	260 feet.
“ South Boston, - - -	1 mile 1702 “
“ East Boston, including length of main from the Haymarket Square, - - - -	12 miles 1146 “
Amount,	<hr/> 13 miles 3108 feet.

The total length laid from the commencement of the works to the present time, in all parts of the City and

in Brookline, Roxbury, Charlestown and Chelsea is 96 miles 4301 feet. This does not include the service pipes, of which there are 15,143 in number, an increase of 1812 since last year.

The number of fire hydrants now established, is

In the City proper,	-	-	-	-	-	791
“ South Boston,	-	-	-	-	-	154
“ East Boston,	-	-	-	-	-	35
“ Brookline,	-	-	-	-	-	1
“ Roxbury,	-	-	-	-	-	5
“ Charlestown,	-	-	-	-	-	11
“ Chelsea,	-	-	-	-	-	8
						1005
					Total,	- - - 1005

The extension of the works to East Boston has progressed very nearly to completion; and it is believed the Cochituate water will be introduced into the Reservoir on Eagle Hill by or before the close of the current year.

The main pipe for the supply of East Boston is 20 inches in diameter, and commences at the Haymarket Square. It crosses Charles River on the lower side of the Warren Bridge partly on independent pile work, passing the draw by means of an inverted Syphon which leaves sufficient space for the largest class of vessels that can pass this bridge. Thence it passes through the Square and Chelsea street in Charlestown, and thence across Mystic River on independent pile work by the upper side of Chelsea Bridge. In passing this stream, two inverted Syphons were placed opposite the draws in Chelsea Bridge, one near the Charlestown shore, and the other near the Chelsea shore. The latter leaves a clear space of 50 feet, which is considerably more than

the width of the draw opposite. The enlargement was made on account of the possibility of a larger class of vessels being built at Medford than has been constructed there heretofore. The main then passes along the Salem Turnpike and through Williams and Marginal Streets in Chelsea, and about 400 feet beyond the grounds of the U. S. Marine Hospital it turns and crosses Chelsea Creek to the Reservoir on Eagle Hill. The channel of this creek is passed by a flexible pipe, instead of a pile bridge and Syphon near the East Boston Free Bridge, as was originally contemplated.

This change was made with the concurrence of the Water Committee, and it is believed will result in a saving of \$30,000 in the first cost of the work, besides shortening the length of the main 1 1-5 miles, and consequently making a material increase in its capacity to discharge water into the East Boston Reservoir. This reservoir is 30 feet deep, and will hold, when filled to a level 3 feet below its top, 5,591,816 wine gallons.

To the main pipe there has been attached 11 fire hydrants in Charlestown and 8 in Chelsea. These are to be used only on the occurrence of fires, and not for any other purposes.

During the year two general examinations of the interior of the aqueduct have been made. On the upper portion of the line a great many small leaks into the aqueduct exist. Those have been there, with but little exception, from the commencement, and it was impossible to keep them out at first, without very great expense, and serious delay in the completion of the work. As similar springs were known to exist in some portions of the Croton Aqueduct, without injuring the stability of that structure, it was believed that they would be equally harmless here; and the result of our experience

thus far, confirms this belief. Occasionally a spring is known to bring in sand or other material from the outside of the conduit. Whenever this occurs, it is deemed important to stop the spring; but in no case so far, has there been any difficulty; and those places which at first caused some anxiety on this account, have ceased to do so.

Several portions of the aqueduct were built on puddled embankments. Though a very economical mode of construction, it was looked upon as somewhat of an experiment. But the result shows that where these embankments were made of sand and gravel the aqueduct has already come to a firm bearing, and has given very little trouble with regard to repairs. Where the aqueduct was built upon puddled clay the result has not been so satisfactory; but even with these it has not been necessary to make any repairs during the year, except in one place; and then the amount expended was very small.

The external structures along the line of the works are all in good order. The excessive rains of the past season have washed the embankments very little. Owing to the lateness of the season at which the Beacon Hill reservoir was finished last year, it was not advisable to point the joints of the masonry then. This caused some leakage, which, though trifling in amount, gave an unsightly appearance to portions of the structure. During the past season, the pointing or cementing, of the joints has been thoroughly done; and the leakage has almost entirely disappeared.

Of about thirty claims for land and damages to land, &c., remaining unsettled when the late Water Commissioners left the work, we regret to say that only about one half have been adjusted since; and most of those

still unsettled are very difficult cases. Nothing but tedious legal processes can bring them to an end, unless the City will submit to what we think very exorbitant demands. A few of these claims are in a fair way to be settled by the close of the current year; but we fear that about ten will have to be left for our successors in office to adjust.

The amount of water wasted from Lake Cochituate, and not allowed to enter the aqueduct at all, since January 4th, cannot be estimated very accurately; but enough is known to enable us to state that it is a little over an average of 15,000,000 wine gallons for every day. No estimate has yet been made of the entire quantity consumed in the City; but occasional trials show that the daily draught from the Brookline reservoir varies from 4,000,000 to 6,000,000 gallons. This would show that the Lake might have supplied during the past season an average of 20,000,000 gallons, could it all have been saved. This, however, was not the case, the capacity of the Lake for retaining the large quantities which occasionally fell in a few days, being insufficient.

Notwithstanding the experience of this and of last year satisfactorily shows the safety of the estimate of the Commissioners of 1845, that the Lake may be relied upon to furnish 10,000,000 gallons a day, we think that its capacity for supplying the City in dry seasons should not be estimated beyond this amount. The average daily consumption by the City during the next year when the Cochituate water will be introduced into East Boston, will probably be near 6,000,000 gallons,—or 60 per cent. of the estimated reliable capacity of the Lake. This naturally suggests that at no very distant day 10,000,000 gallons will be required. In the mean-

time it should be remembered that much over 6,000,000 gallons a day cannot be drawn from the Brookline Reservoir, through the pipes already laid, without injuriously affecting the service in the elevated portions of the City. This will make it necessary to enforce rigidly the regulations of the 27th section of the new water ordinance, in order to prevent any unnecessary waste. As one means of doing this, the introduction of Water Meters has been commenced. But these are so expensive, that no practical benefit can be derived from them except in cases where large quantities of water are consumed. The great amount of waste will be found to arise from carelessness in private houses, stores and offices.

The compensating reservoirs were filled to overflowing in the spring, and have undoubtedly supplied as much water as it was necessary for the City to furnish to the Mills at Billerica and below. No complaint whatever on this account has come to the knowledge of the Board.

In view of the Water Tariff, and the Water Ordinance, which are to take effect from the first proximo, we do not deem it advisable to include in this report any further "opinions and recommendations."

Which is respectfully submitted.

E. S. CHESBROUGH,	}	<i>Cochituate Water Board.</i>
W. S. WHITWELL,		
J. AVERY RICHARDS,		

Boston, Dec. 10, 1850.

APPENDIX.

A

STATEMENT showing the number of Houses, Stores, Steam Engines, &c., in the City of Boston, supplied with Cochituate Water to the 5th of December, 1850,—with the amount of Water Rates paid for 1850.

1	Boarding House,	-	-	\$45 00	\$45 00	
1	do.	-	-	26 00	26 00	
1	do.	-	-	25 00	25 00	
1	do.	-	-	24 00	24 00	
1	do.	-	-	22 00	22 00	
3	do.	-	-	20 00	60 00	
1	do.	-	-	18 00	18 00	
1	do.	-	-	17 90	17 90	
1	do.	-	-	16 00	16 00	
1	do.	-	-	15 50	15 50	
						\$269 40
357	Dwelling Houses,	-	-	15 00	5,355 00	
6	do.	-	-	14 50	87 00	
46	do.	-	-	14 00	644 00	
1	do.	-	-	13 75	13 75	
8	do.	-	-	13 50	108 00	
1	do.	-	-	13 40	13 40	
67	do.	-	-	13 00	871 00	
8	do.	-	-	12 50	100 00	
65	do.	-	-	12 00	780 00	
1	do.	-	-	11 60	11 60	
9	do.	-	-	11 50	103 50	
						269 40
<i>Amounts carried forward,</i>					8,087 25	269 40

<i>Amounts brought forward,</i>				\$8,087 25	\$269 40
1	Dwelling House,	-	\$11 40	11 40	
2	do.	- -	11 25	22 50	
2	do.	- -	11 20	22 40	
1	do.	- -	11 17	11 17	
57	do.	- -	11 00	627 00	
3	do.	- -	10 60	31 80	
20	do.	- -	10 50	210 00	
1	do.	- -	10 40	10 40	
504	do.	- -	10 00	5,040 00	
1	do.	- -	9 60	9 60	
32	do.	- -	9 50	304 00	
6	do.	- -	9 40	56 40	
4	do.	- -	9 30	37 20	
1	do.	- -	9 20	9 20	
2	do.	- -	9 17	18 34	
108	do.	- -	9 00	972 00	
3	do.	- -	8 75	26 25	
1	do.	- -	8 70	8 70	
1	do.	- -	8 67	8 67	
12	do.	- -	8 60	103 20	
31	do.	- -	8 50	263 50	
10	do.	- -	8 40	84 00	
1	do.	- -	8 33	8 33	
1	do.	- -	8 25	8 25	
2	do.	- -	8 20	16 40	
160	do.	- -	8 00	1,280 00	
2	do.	- -	7 92	15 84	
7	do.	- -	7 80	54 60	
1	do.	- -	7 74	7 74	
14	do.	- -	7 60	106 40	
52	do.	- -	7 50	390 00	
15	do.	- -	7 40	111 00	
2	do.	- -	7 34	14 68	
1	do.	- -	7 30	7 30	
9	do.	- -	7 20	64 80	
1	do.	- -	7 08	7 08	
114	do.	- -	7 00	798 00	
15	do.	- -	6 80	102 00	
1	do.	- -	6 75	6 75	
10	do.	- -	6 67	66 70	
30	do.	- -	6 60	198 00	
<i>Amounts carried forward,</i>				19,238 85	269 40

<i>Amounts brought forward,</i>		\$19,238 85	\$269 40
45	Dwelling Houses, -	\$6 50	292 50
29	do. - -	6 40	185 60
2	do. - -	6 37	12 74
2	do. - -	6 30	12 60
1	do. - -	6 33	6 33
4	do. - -	6 25	25 00
19	do. - -	6 20	117 80
1	do. - -	6 05	6 05
263	do. - -	6 00	1,578 00
1	do. - -	5 94	5 94
1	do. - -	5 84	5 84
5	do. - -	5 83	29 15
31	do. - -	5 80	179 80
1	do. - -	5 63	5 63
1	do. - -	5 62	5 62
54	do. - -	5 60	302 40
90	do. - -	5 50	495 00
72	do. - -	5 40	388 80
3	do. - -	5 33	15 99
1	do. - -	5 32	5 32
1	do. - -	5 30	5 30
2	do. - -	5 25	10 50
52	do. - -	5 20	270 40
1	do. - -	5 17	5 17
7083	do. - -	5 00	35,415 00
1	do. - -	4 94	4 94
1	do. - -	4 80	4 80
1	do. - -	4 67	4 67
27	do. - -	4 58	123 66
6	do. - -	4 50	27 00
2	do. - -	4 40	8 80
1	do. - -	4 38	4 38
2	do. - -	4 30	8 60
1	do. - -	4 25	4 25
41	do. - -	4 17	170 97
1	do. - -	4 13	4 13
1	do. - -	4 08	4 08
2	do. - -	4 00	8 00
98	do. - -	3 75	367 50
2	do. - -	3 72	7 44
1	do. - -	3 67	3 67

Amounts carried forward,

59,378 22

269 40

<i>Amounts brought forward,</i>				\$59,378 22	\$269 40
1	Dwelling House,	-	\$3 63	3 63	
1	do.	-	3 55	3 55	
3	do.	-	3 50	10 50	
2	do.	-	3 34	6 68	
101	do.	-	3 33	336 33	
1	do.	-	3 27	3 27	
1	do.	-	3 17	3 17	
12	do.	-	3 00	36 00	
91	do.	-	2 92	265 72	
1	do.	-	2 87	2 87	
3	do.	-	2 75	8 25	
1	do.	-	2 70	2 70	
1	do.	-	2 67	2 67	
110	do.	-	2 50	297 50	
1	do.	-	2 33	2 33	
1	do.	-	2 16	2 16	
82	do.	-	2 08	170 56	
6	do.	-	2 00	12 00	
84	do.	-	1 67	140 28	
2	do.	-	1 66	3 32	
1	do.	-	1 64	1 64	
1	do.	-	1 50	1 50	
1	do.	-	1 45	1 45	
1	do.	-	1 33	1 33	
80	do.	-	1 25	100 00	
1	do.	-	1 17	1 17	
2	do.	-	1 10	2 20	
1	do.	-	1 08	1 08	
2	do.	-	1 00	2 00	
44	do.	-	0 83	36 52	
1	do.	-	0 67	0 67	
1	do.	-	0 63	0 63	
1	do.	-	0 55	0 55	
1	do.	-	0 50	0 50	
1	do.	-	0 42	0 42	
				<hr/>	60,843 37
1	Store,	-	50 00	50 00	
2	do.	-	30 00	60 00	
1	do.	-	27 50	27 50	
1	do.	-	24 50	24 50	
1	do.	-	22 92	22 92	
<i>Amounts carried forward,</i>				<hr/>	184,92 61,112 77

<i>Amounts brought forward,</i>				\$184 92	\$61,112 77
1	Store,	-	-	\$17 50	17 50
1	do.	-	-	16 50	16 50
6	do.	-	-	15 00	90 00
1	do.	-	-	14 50	14 50
1	do.	-	-	14 00	14 00
2	do.	-	-	13 00	26 00
1	do.	-	-	12 67	12 67
3	do.	-	-	12 50	37 50
1	do.	-	-	12 16	12 16
7	do.	-	-	12 00	84 00
4	do.	-	-	11 00	44 00
1	do.	-	-	10 50	10 50
1	do.	-	-	10 40	10 40
27	do.	-	-	10 00	270 00
1	do.	-	-	10 25	10 25
2	do.	-	-	9 50	19 00
18	do.	-	-	9 00	162 00
5	do.	-	-	8 75	43 75
1	do.	-	-	8 64	8 64
2	do.	-	-	8 50	17 00
1	do.	-	-	8 33	8 33
10	do.	-	-	8 00	80 00
40	do.	-	-	7 50	300 00
1	do.	-	-	7 25	7 25
24	do.	-	-	7 00	168 00
4	do.	-	-	6 75	27 00
9	do.	-	-	6 50	58 50
4	do.	-	-	6 25	25 00
83	do.	-	-	6 00	498 00
5	do.	-	-	5 75	28 75
1	do.	-	-	5 62	5 62
16	do.	-	-	5 50	88 00
1	do.	-	-	5 25	5 25
1	do.	-	-	5 17	5 17
1	do.	-	-	5 12	5 12
298	do.	-	-	5 00	1,490 00
2	do.	-	-	4 87	9 74
3	do.	-	-	4 75	14 25
1	do.	-	-	4 62	4 62
1	do.	-	-	4 58	4 58
32	do.	-	-	4 50	144 00
<i>Amounts carried forward,</i>				4,082 47	61,112 77

<i>Amounts brought forward,</i>				\$4,082 47	\$61,112 77
1	Store,	-	-	4 40	4 40
1	do.	-	-	4 37	4 37
1	do.	-	-	4 33	4 33
10	do.	-	-	4 25	42 50
1	do.	-	-	4 20	4 20
1	do.	-	-	4 17	4 17
91	do.	-	-	4 00	364 00
1	do.	-	-	3 87	3 87
18	do.	-	-	3 75	67 50
1	do.	-	-	3 63	3 63
2	do.	-	-	3 62	7 24
1	do.	-	-	3 60	3 60
45	do.	-	-	3 50	157 50
1	do.	-	-	3 38	3 38
2	do.	-	-	3 37	6 74
1	do.	-	-	3 34	3 34
8	do.	-	-	3 33	26 64
17	do.	-	-	3 25	55 25
1	do.	-	-	3 23	3 23
2	do.	-	-	3 12	6 24
791	do.	-	-	3 00	2,373 00
6	do.	-	-	2 92	17 52
1	do.	-	-	2 81	2 81
6	do.	-	-	2 75	16 50
6	do.	-	-	2 67	16 02
2	do.	-	-	2 60	5 20
15	do.	-	-	2 50	37 50
1	do.	-	-	2 44	2 44
2	do.	-	-	2 33	4 66
14	do.	-	-	2 25	31 50
1	do.	-	-	2 17	2 17
2	do.	-	-	2 08	4 16
22	do.	-	-	2 00	44 00
6	do.	-	-	1 75	10 50
1	do.	-	-	1 67	1 67
10	do.	-	-	1 50	15 00
1	do.	-	-	1 33	1 33
1	do.	-	-	1 30	1 30
13	do.	-	-	1 25	16 25
1	do.	-	-	1 17	1 17
1	do.	-	-	1 08	1 08
<i>Amounts carried forward,</i>				7,464 34	61,112 77

<i>Amounts brought forward,</i>				\$7,464 38	\$61,112 77
6	Stores,	-	-	\$1 00	6 00
1	do.	-	-	0 83	0 83
2	do.	-	-	0 75	1 50
1	do.	-	-	0 63	0 63
1	do.	-	-	0 58	0 58
4	do.	-	-	0 50	2 00
1	do.	-	-	0 42	0 42
				<hr/>	
					7,476 34
2	Shops,	-	-	10 00	20 00
1	do.	-	-	8 00	8 00
3	do.	-	-	6 00	18 00
30	do.	-	-	5 00	150 00
1	do.	-	-	4 00	4 00
1	do.	-	-	3 75	3 75
1	do.	-	-	3 50	3 50
181	do.	-	-	3 00	543 00
1	do.	-	-	2 75	2 75
4	do.	-	-	2 50	10 00
1	do.	-	-	2 34	2 34
3	do.	-	-	2 25	6 75
13	do.	-	-	2 00	26 00
3	do.	-	-	1 75	5 25
1	do.	-	-	1 67	1 67
10	do.	-	-	1 50	15 00
1	do.	-	-	1 25	1 25
4	do.	-	-	1 00	4 00
2	do.	-	-	0 75	1 50
2	do.	-	-	0 50	1 00
				<hr/>	
					827 76
1	Office,	-	-	30 00	30 00
2	do.	-	-	10 00	20 00
1	do.	-	-	9 00	9 00
2	do.	-	-	8 00	16 00
2	do.	-	-	7 50	15 00
4	do.	-	-	6 00	24 00
1	do.	-	-	5 63	5 63
5	do.	-	-	5 00	25 00
2	do.	-	-	4 50	9 00
1	do.	-	-	4 17	4 17
1	do.	-	-	4 12	4 12
1	do.	-	-	3 33	3 33
				<hr/>	
<i>Amounts carried forward,</i>				165 25	69,416 87

<i>Amounts brought forward,</i>				\$165 25	\$69,416 87
27	Offices,	-	-	\$3 00	81 00
3	do.	-	-	0 75	0 75
1	do.	-	-	2 00	6 00
					<hr/>
					253 00
1	Bank,	-	-	40 00	40 00
1	do.	-	-	27 00	27 00
1	do.	-	-	25 00	25 00
1	do.	-	-	20 00	20 00
1	do.	-	-	16 75	16 75
1	do.	-	-	11 00	11 00
1	do.	-	-	10 00	10 00
1	do.	-	-	5 00	5 00
1	do.	-	-	3 00	3 00
1	do.	-	-	1 05	1 05
1	do.	-	-	0 75	0 75
					<hr/>
					159 55
1	Hotel,	-	-	285 00	285 00
1	do.	-	-	225 00	225 00
1	do.	-	-	200 00	200 00
1	do.	-	-	115 00	115 00
1	do.	-	-	111 25	111 25
1	do.	-	-	100 00	100 00
1	do.	-	-	75 00	75 00
1	do.	-	-	65 00	65 00
1	do.	-	-	60 00	60 00
1	do.	-	-	55 00	55 00
2	do.	-	-	50 00	100 00
6	do.	-	-	45 00	270 00
1	do.	-	-	43 00	43 00
1	do.	-	-	35 00	35 00
4	do.	-	-	30 00	120 00
1	do.	-	-	28 40	28 40
1	do.	-	-	28 00	28 00
1	do.	-	-	26 00	26 00
1	do.	-	-	25 00	25 00
1	do.	-	-	24 00	24 00
1	do.	-	-	22 00	22 00
1	do.	-	-	21 00	21 00
3	do.	-	-	20 00	60 00
2	do.	-	-	18 00	36 00
26	do.	-	-	15 00	390 00
					<hr/>
<i>Amounts carried forward,</i>				2,519 65	69,829 42

<i>Amount brought forward,</i>			\$2,519 65	\$69,829 42
1	Hotel,	- -	\$13 33	13 33
1	do.	- -	10 00	10 00
1	do.	- -	6 25	6 25
			<hr/>	2,549 23
1	Restorator,	- -	30 00	30 00
1	do.	- -	20 00	20 00
2	do.	- -	15 00	30 00
2	do.	- -	12 00	24 00
1	do.	- -	10 00	10 00
9	do.	- -	8 00	72 00
1	do.	- -	6 00	6 00
30	do.	- -	5 00	150 00
1	do.	- -	4 17	4 17
2	do.	- -	3 75	7 50
2	do.	- -	2 92	5 84
2	do.	- -	2 00	4 00
2	do.	- -	1 67	3 34
			<hr/>	366 85
1	Eating House,	- -	15 00	15 00
4	do.	- -	12 00	48 00
4	do.	- -	10 00	40 00
1	do.	- -	6 00	6 00
1	do.	- -	5 00	5 00
1	do.	- -	2 25	2 25
			<hr/>	116 25
1	Saloon,	- -	45 00	45 00
1	do.	- -	15 00	15 00
4	do.	- -	8 00	32 00
1	do.	- -	7 50	7 50
1	do.	- -	7 00	7 00
1	do.	- -	6 00	6 00
40	do.	- -	5 00	200 00
1	do.	- -	4 58	4 58
1	do.	- -	3 33	3 33
2	do.	- -	3 00	6 00
2	do.	- -	2 50	5 00
1	do.	- -	2 92	2 92
1	do.	- -	2 00	2 00
			<hr/>	336 33
3	Bowling Saloons,	- -	10 00	30 00
1	do.	- -	9 67	9 67
<i>Amounts carried forward,</i>			<hr/>	<hr/>
			39 67	73,198 08

<i>Amounts brought forward,</i>				\$39 67	\$73,198 08
2	Bowling Saloons,	-	\$8 00	16 00	
4	do.	-	5 00	20 00	
4	do.	-	3 75	3 75	
1	do.	-	2 08	2 08	
				<hr/>	81 50
7	Oyster Shops,	-	5 00	35 00	
1	do.	-	4 17	4 17	
4	do.	-	3 00	12 00	
1	do.	-	1 50	1 50	
				<hr/>	52 67
Faneuil Hall Market,			322 92	322 92	
Beach Street do			50 00	50 00	
				<hr/>	372 92
1	Bath House,	-	135 00	135 00	
1	do.	-	50 00	50 00	
1	do.	-	45 00	45 00	
1	do.	-	40 00	40 00	
1	do.	-	37 50	37 50	
1	do.	-	30 00	30 00	
1	do.	-	29 00	29 00	
1	do.	-	25 00	25 00	
1	do.	-	15 00	15 00	
				<hr/>	406 50
4	Cellars,	-	5 00	20 00	
26	do.	-	3 00	78 00	
1	do.	-	3 25	3 25	
1	do.	-	2 00	2 00	
1	do.	-	1 50	1 50	
				<hr/>	104 75
1	Stable,	-	84 00	84 00	
1	do.	-	76 00	76 00	
1	do.	-	72 00	72 00	
1	do.	-	64 00	64 00	
1	do.	-	63 00	63 00	
2	do.	-	54 00	108 00	
1	do.	-	52 00	52 00	
1	do.	-	51 00	51 00	
2	do.	-	49 00	98 00	
1	do.	-	48 00	48 00	
3	do.	-	44 00	132 00	
1	do.	-	40 00	40 00	
				<hr/>	
<i>Amounts carried forward,</i>				888 00	74,216 42

<i>Amount brought forward,</i>				\$888 00	\$74,216 42
1	Stable,	-	-	\$35 00	35 00
4	do.	-	-	34 00	136 00
3	do.	-	-	32 00	96 00
1	do.	-	-	31 25	31 25
1	do.	-	-	31 00	31 00
1	do.	-	-	30 25	30 25
1	do.	-	-	29 33	29 33
1	do.	-	-	29 00	29 00
4	do.	-	-	28 00	112 00
4	do.	-	-	27 00	108 00
6	do.	-	-	26 00	156 00
2	do.	-	-	25 00	50 00
6	do.	-	-	24 00	144 00
1	do.	-	-	22 00	22 00
1	do.	-	-	21 00	21 00
2	do.	-	-	20 00	40 00
6	do.	-	-	19 00	114 00
4	do.	-	-	18 00	72 00
3	do.	-	-	17 00	51 00
7	do.	-	-	16 00	112 00
1	do.	-	-	15 25	15 25
6	do.	-	-	15 00	90 00
9	do.	-	-	14 00	126 00
1	do.	-	-	13 50	13 50
7	do.	-	-	13 00	91 00
15	do.	-	-	12 00	180 00
16	do.	-	-	11 00	176 00
1	do.	-	-	10 67	10 67
22	do.	-	-	10 00	220 00
2	do.	-	-	9 75	19 50
26	do.	-	-	9 00	234 00
32	do.	-	-	8 00	256 00
31	do.	-	-	7 00	217 00
3	do.	-	-	6 67	20 01
30	do.	-	-	6 00	180 00
3	do.	-	-	5 33	15 99
3	do.	-	-	5 00	15 00
3	do.	-	-	4 67	14 01
1	do.	-	-	4 50	4 50
2	do.	-	-	4 17	8 34
1	do.	-	-	4 15	4 15
<i>Amounts carried forward,</i>				<hr/> 4,218 75	<hr/> 74,216 42

<i>Amounts brought forward,</i>				\$4,218 75	\$74,216 42
1	Stable,	-	-	\$4 08	4 08
6	do.	-	-	4 00	24 00
1	do.	-	-	3 50	3 50
2	do.	-	-	3 33	6 66
9	do.	-	-	3 00	27 00
3	do.	-	-	2 50	7 50
1	do.	-	-	2 25	2 25
4	do.	-	-	2 00	8 00
1	do.	-	-	1 75	1 75
1	do.	-	-	1 67	1 67
1	do.	-	-	1 17	1 17
				<hr/>	
					4,306 33
1	Printing Office,	-	-	27 30	27 30
1	do.	-	-	25 50	25 50
1	do.	-	-	20 90	20 90
2	do.	-	-	20 00	40 00
1	do.	-	-	18 42	18 42
1	do.	-	-	15 00	15 00
3	do.	-	-	14 00	42 00
5	do.	-	-	12 00	60 00
2	do.	-	-	10 00	20 00
1	do.	-	-	8 00	8 00
13	do.	-	-	6 00	78 00
2	do.	-	-	5 00	10 00
2	do.	-	-	3 00	6 00
1	do.	-	-	1 00	1 00
1	do.	-	-	0 75	0 75
				<hr/>	
					372 87
1	Bakery,	-	-	37 50	37 50
1	do.	-	-	13 50	13 50
1	do.	-	-	12 00	12 00
3	do.	-	-	9 00	27 00
2	do.	-	-	8 00	16 00
13	do.	-	-	5 00	65 00
1	do.	-	-	4 00	4 00
13	do.	-	-	3 00	39 00
				<hr/>	
					214 00
2	Churches,	-	-	20 00	40 00
11	do.	-	-	5 00	55 00
1	do.	-	-	2 08	2 08
1	do.	-	-	1 67	1 67
				<hr/>	
					98 75
<i>Amount carried forward,</i>					<hr/>
					79,208 37

<i>Amount brought forward,</i>				\$79,208 37
1	Institution for the Blind,	\$30 00	\$30 00	
1	Asylum, - -	25 00	25 00	
1	School, - -	15 00	15 00	
1	do. - -	6 00	6 00	
1	do. - -	5 00	5 00	
2	do. - -	3 00	6 00	
				87 00
1	Theatre, - -	20 00	20 00	
	Melodeon, - -	16 00	16 00	
	Tremont Temple, -	15 00	15 00	
1	Museum, - -	13 00	13 00	
1	Hall, - -	8 00	8 00	
1	do. - -	5 00	5 00	
	Masonic Temple, -	5 00	5 00	
1	Hall, - -	2 50	2 50	
				84 50
1	Club Room, - -	15 00	15 00	
1	do. - -	5 00	5 00	
1	Gymnasium, - -	5 00	5 00	
1	Game House, - -	5 00	5 00	
1	Billiard Room, - -	5 00	5 00	
1	do. - -	4 17	4 17	
				39 17
1	Hospital, - -	75 00	75 00	
1	Medical College, -	20 00	20 00	
1	Custom House, -	100 00	100 00	
1	Post Office, - -	20 00	20 00	
1	State House, - -	20 00	20 00	
				235 00
1	Fountain, - -	25 00	25 00	
4	do. - -	15 00	60 00	
6	do. - -	10 00	60 00	
1	do. - -	9 00	9 00	
1	do. - -	8 50	8 50	
1	do. - -	6 50	6 50	
1	do. - -	5 83	5 83	
5	do. - -	5 00	25 00	
				199 83
3	Hose, - -	10 00	30 00	
1	do. - -	6 00	6 00	
1	do. - -	5 33	5 33	
				41 33
<i>Amounts carried forward.</i>			41 33	79,853 87

<i>Amounts brought forward,</i>				\$41 33	\$79,853 87
1189	Hose,	-	-	\$3 00	3,567 00
7	do.	-	-	1 50	10 50
1	do.	-	-	1 25	1 25
				<hr/>	3,620 08
1	Distillery,	-	-	120 00	120 00
2	do.	-	-	72 00	144 00
1	do.	-	-	58 41	58 41
1	do.	-	-	37 91	37 91
4	do.	-	-	36 00	144 00
				<hr/>	504 32
1	Brewery,	-	-	40 00	40 00
1	do.	-	-	30 00	30 00
3	do.	-	-	15 00	45 00
1	do.	-	-	11 00	11 00
2	do.	-	-	10 00	20 00
				<hr/>	146 00
1	Dye House,	-	-	30 00	30 00
1	do.	-	-	20 00	20 00
1	do.	-	-	17 50	17 50
1	Bleachery,	-	-	8 00	8 00
1	do.	-	-	5 00	5 00
				<hr/>	80 50
1	Iron Works,	-	-	200 00	200 00
1	Turpentine Works,	-	-	48 00	48 00
1	do	-	-	42 00	42 00
1	do	-	-	18 00	18 00
1	Bacon Works	-	-	5 00	5 00
1	Chemical Works,	-	-	1 67	1 67
1	Packing House,	-	-	10 00	10 00
1	do	-	-	5 00	5 00
				<hr/>	329 67
1	Wharf,	-	-	5 00	5 00
1	do.	-	-	3 00	3 00
1	Carriage Shed,	-	-	7 00	7 00
				<hr/>	15 00
1	Boston Gas Light Co.,			300 00	300 00
1	Railroad Co.	-	-	1,023 25	1,023 25
1	do	-	-	530 00	530 00
1	do	-	-	455 00	455 00
1	do	-	-	305 00	305 00
				<hr/>	<hr/>
<i>Amounts carried forward,</i>				2,313 25	84,849 44

<i>Amounts brought forward,</i>		\$2,313 25	\$84,849 44
1	Railroad Co., -	\$307 93	307 93
1	do. -	120 00	120 00
1	do. -	70 00	70 00
2	Freight Depots, -	10 00	20 00
			<hr/>
			2,831 18
	East Boston Ferry Co.,	388 23	388 23
	Chelsea, -	266 19	266 19
1	Steamboat, -	100 00	100 00
1	do. -	92 00	92 00
1	do. -	80 00	80 00
1	do. -	60 00	60 00
1	do. -	57 00	57 00
1	do. -	33 33	33 33
1	do. -	25 00	25 00
1	do. -	20 00	20 00
			<hr/>
			1,121 75
1	Factory, -	69 48	69 48
1	do. -	23 00	23 00
1	do. -	22 00	22 00
1	do. -	20 00	20 00
1	do. -	13 50	13 50
1	do. -	13 00	13 00
4	do. -	10 00	40 00
2	do. -	9 00	18 00
3	do. -	8 00	24 00
2	do. -	6 00	12 00
1	do. -	5 83	5 83
2	do. -	5 00	10 00
1	do. -	3 75	3 75
1	do. -	3 00	3 00
			<hr/>
			277 56
1	Foundry, -	10 00	10 00
1	do. -	8 33	8 33
1	do. -	5 00	5 00
			<hr/>
			23 33
1	Steam. Engine, -	1,700 00	1,700 00
1	do. -	950 00	950 00
1	do. -	109 00	109 00
1	do. -	104 88	104 88
1	do. -	83 43	83 43
1	do. -	76 65	76 65
			<hr/>
<i>Amounts carried forward,</i>		3,023 96	89,103 26

<i>Amounts brought forward,</i>				\$3,023 96	\$89,103 26
1	Steam Engine,	-	\$75 57	75 57	
1	do.	-	70 35	70 35	
1	do.	-	55 00	55 00	
1	do.	-	53 88	53 88	
1	do.	-	49 08	49 08	
1	do.	-	40 00	40 00	
1	do.	-	39 60	39 60	
1	do.	-	36 00	36 00	
1	do.	-	35 46	35 46	
1	do.	-	34 92	34 92	
1	do.	-	34 62	34 62	
1	do.	-	31 50	31 50	
1	do.	-	30 00	30 00	
1	do.	-	28 43	28 43	
1	do.	-	27 75	27 75	
1	do.	-	27 50	27 50	
1	do.	-	25 95	25 95	
1	do.	-	24 90	24 90	
1	do.	-	24 00	24 00	
1	do.	-	23 25	23 25	
1	do.	-	22 38	22 38	
1	do.	-	21 58	21 58	
1	do.	-	21 39	21 39	
1	do.	-	19 40	19 40	
2	do.	-	15 00	30 00	
2	do.	-	10 00	20 00	
1	do.	-	9 59	9 59	
1	do.	-	8 00	8 00	
1	do.	-	7 50	7 50	
1	do.	-	6 70	6 70	
1	do.	-	5 07	5 07	
1	do.	-	5 00	5 00	
					3,968 33
1	Shop and Engine,	-	91 80	91 80	
1	do.	do.	86 00	86 00	
1	do.	do.	75 66	75 66	
1	do.	do.	64 74	64 74	
1	do.	do.	54 00	54 00	
1	do.	do.	49 80	49 80	
1	do.	do.	48 24	48 24	
1	do.	do.	48 00	48 00	
<i>Amounts carried forward.</i>				518 24	93,071 59

<i>Amounts brought forward,</i>				\$518 24	\$93,071 59
1	Shop and Engine,	\$44 55	44 55		
1	do. do. -	39 00	39 00		
1	do. do. -	36 00	36 00		
1	do. do. -	35 25	35 25		
1	do. do. -	33 54	33 54		
1	do. do. -	28 87	28 87		
1	do. do. -	23 50	23 50		
1	do. do. -	23 30	53 30		
1	do. do. -	18 00	18 00		
				<hr/>	800 25
1	Factory and Engine,	75 00	75 00		
1	do. do. -	57 33	57 33		
1	do. do. -	56 76	56 76		
1	do. do. -	39 00	39 00		
1	do. do. -	30 00	30 00		
1	do. do. -	15 00	15 00		
1	do. do. -	10 00	10 00		
1	do. do. -	9 17	9 17		
				<hr/>	292 26
1	Foundry and Engine,	289 71	289 71		
1	do. do. -	100 00	100 00		
1	do. do. -	56 70	56 70		
				<hr/>	446 41
Contractors for supplying					
	Shipping, - -	1,089 85			1,089 85
Shipping, by Marine					
	Water Agent, -	481 20			481 20
	Street Waterers, -	353 17			353 17
	East Boston Tank, -	208 31			208 31
	Building purposes, -	120 10			120 10
1	Sugar House, -	1,080 00			1,080 00
				<hr/>	
Amount of Water Rates, - - -					<u>97,943 14</u>

B

RECEIPTS, of the Cochituate Water Board, other than Water Rates, from January 4th, 1850, to December 5th.

March	7.	For articles sold by Mr. Vannevar at the Lake, - - -	\$ 46 47
"	20.	" Engine Boiler, - - -	140 60
"	20.	" Compass, - - -	20 00
April	18.	" Sundry articles, - - -	6 00
"	18.	" " " - - -	126 26
"	23.	" Shutting off water, repairs and laying pipe, - - -	172 10
May	3.	" Sundries, - - -	1 90
"	15.	" Shutting off water, - - -	20 92
June	12.	" Steam Engine and Boilers, -	450 00
"	28.	" Shutting off water, lead pipe and laying pipe, - - -	139 14
July	15.	" Grass in Needham, - - -	3 00
Sept.	3.	" Part pay for a level, - - -	50 00
"	3.	" Old hose used for supplying shipping, - - -	150 00
"	4.	" Shutting off water, lead pipe and laying pipe, - - -	51 42
"	30.	" Shutting off water, lead pipe and laying pipe, - - -	63 90
Oct.	8.	" Engineer's office and fixtures, at Newton, - - -	350 38
"	12.	" Office stove, - - -	12 00
"	18.	" Iron pipe, - - -	2 40
"	25.	" Steam Engine, - - -	200 00
Nov.	7.	" " " - - -	250 00
"	12.	" Shutting off water, lead pipe and laying pipe, - - -	189 85
"	18.	" Iron pipe, - - -	3,171 34
"	22.	" Engine and boiler and balance for level, - - -	115 00
"	23.	" Amount received of City of Roxbury for raising Tre- mont road, - - -	1,000 00
			<hr/>
			\$6,732 68
Rents and Grass, \$411 52. Timber and Barn, \$27 00, - - -			438 52
			<hr/>
			<u>\$7,171 20</u>

C

STATEMENT of Expenditures for the Extension to East Boston, from January 4th, to December 5th, 1850.

Blacksmith's Shop, - - - -	\$1,063 49
Lanterns, - - - -	30 71
Proving Yard, - - - -	1,952 41
Plumbing Shop, - - - -	282 19
Traveling Expenses, - - - -	438 18
Composition Castings, - - - -	726 85
Wages, (previous to November 5th,) - - - -	7,859 78
Salaries, - - - -	5,328 34
Iron Pipe, - - - -	122,065 19
Stop Cocks, - - - -	5,461 56
Carting, - - - -	3,563 53
Printing, - - - -	100 00
Proving Press, - - - -	53 29
Paving, - - - -	917 77
Tools, - - - -	87 16
Hydrants, - - - -	3,692 87
Oil, - - - -	156 50
East Boston Reservoir, - - - -	29,448 77
Lead, - - - -	9,875 30
Lead Pipe, - - - -	6,665 87
Fuel, - - - -	59 98
Excavation, - - - -	7,855 22
Laying Pipe, - - - -	6,705 36
Repairs, - - - -	319 61
Boxes, - - - -	5,401 31
Wages and contingencies for November, - - - -	6,424 52
Damages, - - - -	976 93
Ferriage, - - - -	513 39
Syphons, - - - -	13,867 95
Bridging, - - - -	37,817 21
Land and Water Rights, - - - -	4,750 00
	<hr/>
	284,461 24
CR.	
Iron Pipe, - - - -	718 07
Lead, - - - -	27 35
	<hr/>
	745 42
	<hr/>
	283,715 82
	<hr/>

D

STATEMENT of all Expenditures made by the Cochituate Water Board, from January 5th, to December 5th, 1850, except those for the Extension to East Boston.

Blacksmith Shop, - - - -	\$163 09
Lanterns, - - - -	1 40
Proving Yard, - - - -	219 59
Plumbing Shop, - - - -	548 69
Traveling Expenses, - - - -	488 87
Composition Castings, - - - -	66 17
Wages, - - - -	6,726 29
Salaries, - - - -	11,012 81
Iron Pipe, - - - -	922 17
Stop Cocks, - - - -	117 80
Carting, - - - -	908 72
Printing, - - - -	136 28
Proving Press, - - - -	5 31
Paving, - - - -	451 26
Tools, - - - -	6 00
Hydrants, - - - -	384 57
Oil, - - - -	9 59
Lead, - - - -	50 00
Lead Pipe, - - - -	1,786 44
Fuel, - - - -	16 00
Repairs, - - - -	293 45
Water Meter, - - - -	100 00
Fountains, - - - -	461 32
Whitehall Reservoir, - - - -	69 82
Office Expenses, - - - -	552 91
Incidental Expenses, - - - -	387 04
Beacon Hill Reservoir, - - - -	5,072 02
Supplying Shipping, - - - -	261 08
Stationery, - - - -	84 96
Taxes, - - - -	1,097 45
Aqueduct Repairs and Expenses, - - - -	2,259 03
Temporary Lead Pipe, East Boston, - - - -	746 21
<i>Amount carried forward,</i>	<u>35,406 34</u>

<i>Amount brought forward,</i>					\$35,406 34
Land Damages.	-	-	-	-	1,565 57
Rents,	-	-	-	-	271 66
Damages,	-	-	-	-	3,096 79
South Boston Reservoir,	-	-	-	-	413 02
Land and Water Rights,	-	-	-	-	7,023 05
Repairing Stop Cocks,	-	-	-	-	70 04
Repairing Hydrants,	-	-	-	-	261 69
Brookline Reservoir,	-	-	-	-	776 38
Marlboro' Reservoir,	-	-	-	-	250 57
					<hr/>
					49,135 11
CR.					
Damages,	-	-	-		371 93
Land and Water Rights,	-	-	-		142 00
Iron Pipe,	-	-	-		888 64
Stop Cocks,	-	-	-		399 33
Wages,	-	-	-		17 50
Marlboro' Reservoir,	-	-	-		18 22
Lead,	-	-	-		55 91
Whitehall Reservoir,	-	-	-		146 30
					<hr/>
					2,039 83
					<hr/>
					\$47,095 28
					<hr/> <hr/>

E

STATEMENT shewing net Disbursements on account of the Water Works to December 5th, 1850.

Total net disbursements by Water Commissioners to January 5th, 1850, as per Auditor's report for 1849-50, page 102,	-	\$3,997,715 84
Total amount of disbursements by Cochituate Water Board to December 5th, 1850, on account of Extension to East Boston, as per Appendix C,	- -	283,715 82
Total do. by the same, to Dec. 5th, 1850, on all other accounts, as per Appendix D.	- -	47,095 28
		<u>\$330,811 10</u>

From which should be deducted the amount received as per Appendix B, viz :

Less amount credited to sundry accounts included in Appendix D,

		<u>438 52</u>	
		6,732 68	
			<u>324,078 42</u>
Total net disbursements by Water Commissioners and Water Board,	-		<u>\$4,321,794 26</u>

F

STATEMENT of the number of City Buildings, and other Public Places supplied with Cochituate Water to the 5th of December, 1850, with the value of the same, based upon the tariff of 1849.

1 Latin School, - -	\$10 00	\$10 00	
1 English High School,	10 00	10 00	
20 Grammar Schools, -	10 00	200 00	
161 Primary Schools, -	5 00	805 00	
		<hr/>	\$1,025 00
11 Engine Houses, -	15 00	165 00	
1 Hook and Ladder House,	15 00	15 00	
4 Hose Carriage Houses,	15 00	60 00	
		<hr/>	240 00
1 City Stable (Harrison Av.)	60 00	60 00	
1 do (Commercial st.)	28 00	28 00	
		<hr/>	88 00
5 Watch Houses, - -	5 00		25 00
House of Correction, -	404 20		404 20
Lunatic Hospital, -	137 00		137 00
House of Industry, -	135 00		135 00
House of Reformation,	28 00		28 00
Jail, - - - -	30 00		30 00
Court House, - -	75 00		75 00
Faneuil Hall Market, (Urinals,) &c.) -	75 00		75 00
Offal Station, - -	50 00		50 00
City Hall, - -	35 00		35 00
Faneuil Hall, - -	25 00		25 00
City Building, - -	15 00		15 00
Probate Office, - -	10 00		10 00
Armory, - - - -	5 00		5 00
Office at City Scales, -	3 00		3 00
			<hr/>
	Amount,		<u>\$2,405 20</u>

1852

MAP

NO. 784.

BOSTON WATER WORKS

prepared under the direction

OF THE

COCHITUCATE WATER BOARD

THOMAS WETMORE PRES'

HENRY B. ROGERS, JAMES W. SEVER
SAMUEL A. ELIOT, JOHN H. WILKINS
JONATHAN PRESTON, JOHN T. HEARD

Scale 1/25000

Scale 1/25000

E. S. Cheabrough, City Engineer

1852



W H A M
SAXONVILLE

W A Y L A N D

W E S T O N

W A Y L A N D

W A T E R

WATERVILLE VILLAGE

NEWTON CORNER

ANDREWS DALE

WEST NEWTON

NEWTONVILLE

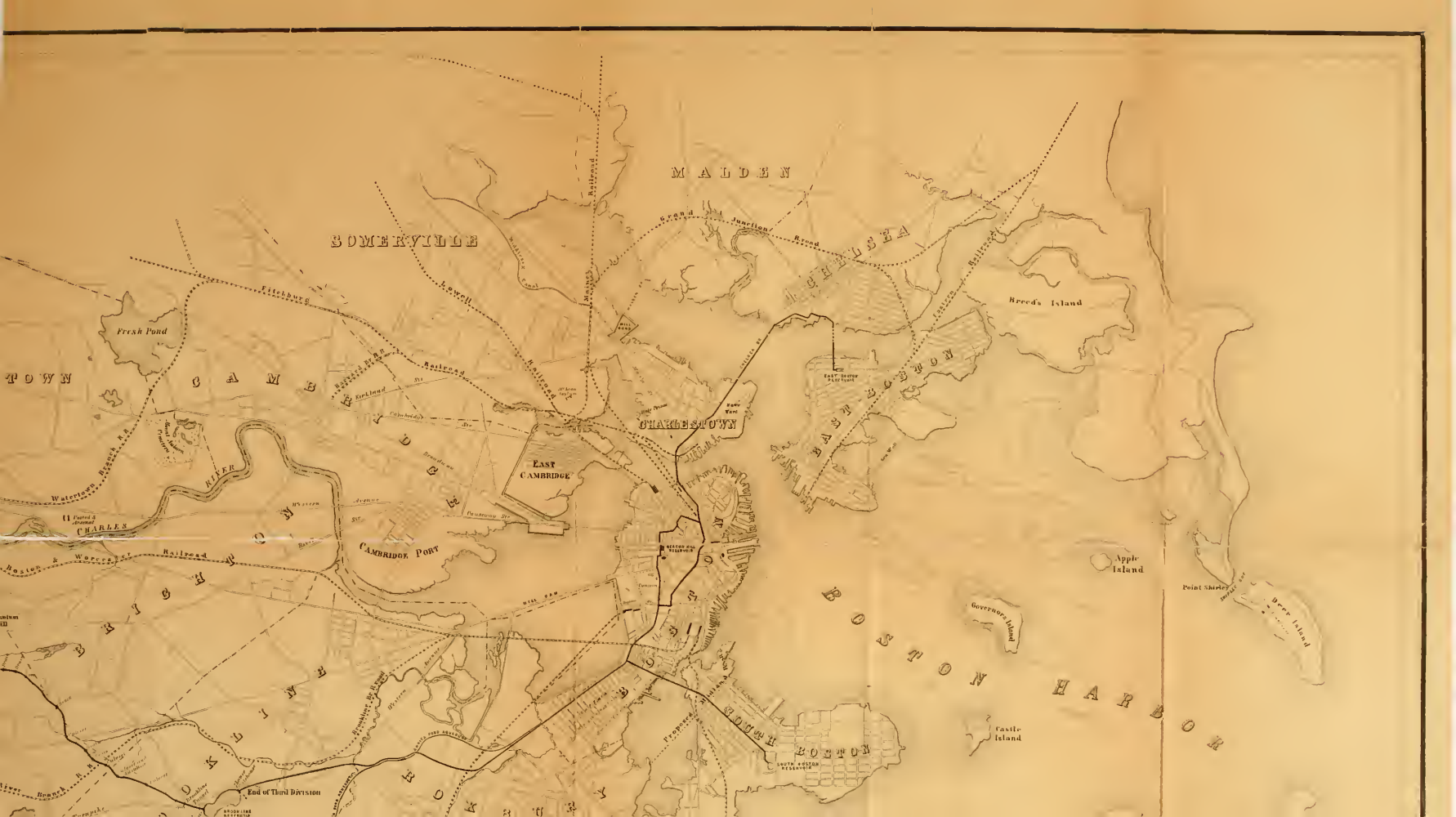
LOWER FALLS

AQUEDUCT

End of Second Division

Charles



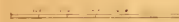




Expla

The Figures along the Line of the
of Hundred feet from the contour
From the Brookline Reservoir to
side by side
Most of this Map is a Compilation
City of Boston

Horizontal Scale 3200 feet in an inch



U R D

LAKE COCHITUATE
DATE MARK
ROAD TO COCHITUATE

ROAD TO MATICE
Gravel Road

ROAD TO
LETTER ROAD

STECKE'S BROOK
WATER
WATER

ROAD
Gravel Road

WATER
Gravel Road

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Gravel Road

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WATER
Gravel Road

SECTION 1

SECTION 2

SECTION 3

SECTION 4

SECTION 5

SECTION 6

SECTION 7

SECTION 8

SECTION 9

SECTION 10

Base Line 5.09 below Coping
of Dry Dock, Charleston

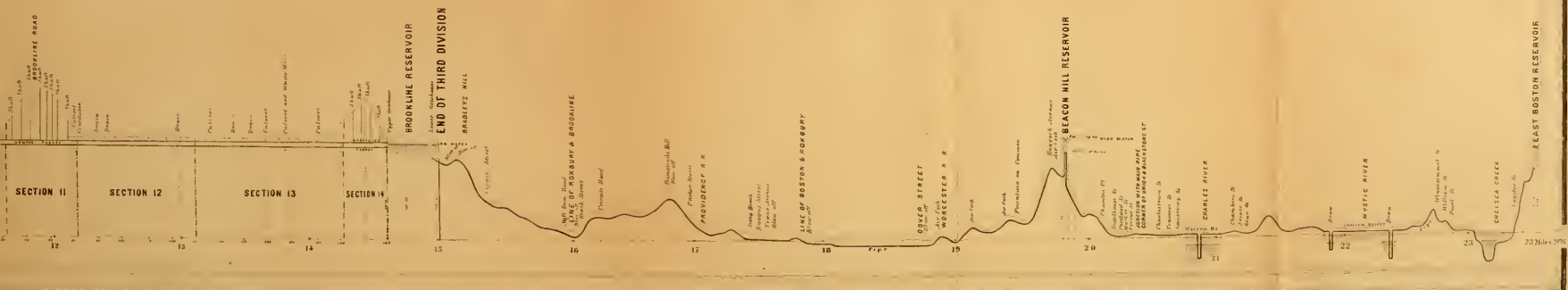
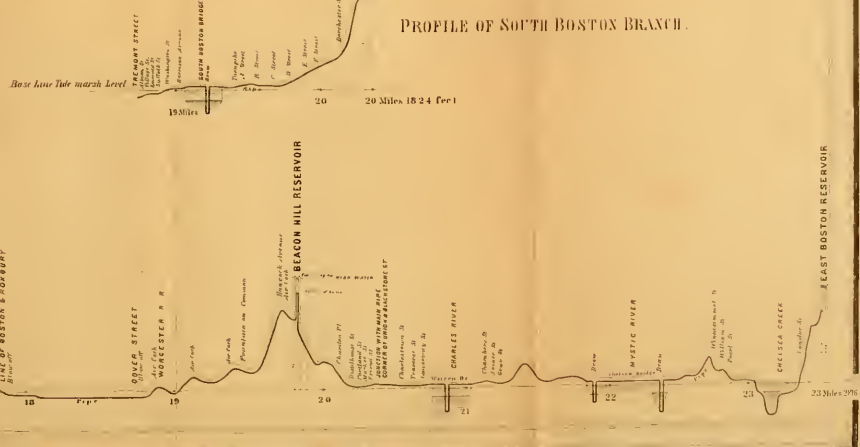
1 Mile

Base Line Tide mark Level

11



ation
 Aqueduct denote the number
 increment of each Division
 Boston Street there are two mains
 from Plans not prepared for the



FRAGILE

DO NOT
PHOTOCOPY

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in Microtext