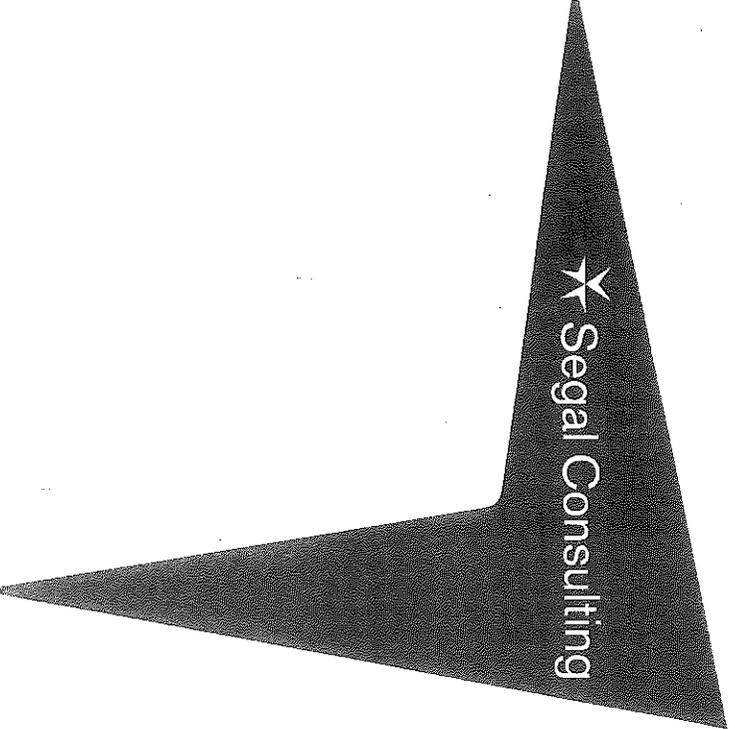


**Town of Needham Contributory
Retirement System**

**Actuarial Valuation and Review as of
January 1, 2013**

The logo for Segal Consulting is a dark grey, stylized shape resembling a right-angled triangle with a notch at the top. The text "Segal Consulting" is written in white, sans-serif font, positioned vertically within the right-hand side of the shape. A small white star icon is located to the left of the text.

★ Segal Consulting



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January 8, 2014

Retirement Board

Town of Needham Contributory Retirement System

1471 Highland Avenue

Needham, MA 02492-2605

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2013. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2014 and later years and analyzes the preceding years' experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the staff of the Town of Needham Contributory Retirement System. That assistance is gratefully acknowledged.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

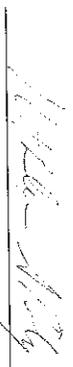
The actuarial calculations were directed under the supervision of Kathleen A. Riley, FSA, MAAA, EA. She is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of her knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in her opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:



Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary



William J. Connolly, FCA, MAAA, EA
Consulting Actuary

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SECTION 1: Valuation Summary for the Town of Needham Contributory Retirement System

Purpose

This report has been prepared by Segal Consulting to present a valuation of the Town of Needham Contributory Retirement System as of January 1, 2013. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of M.G.L. Chapter 32;
- > The characteristics of covered active participants, inactive participants, and retired participants and beneficiaries as of January 1, 2013;
- > The assets of the Plan as of December 31, 2012;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

1. The actuarial valuation report as of January 1, 2013 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected.
2. During the 2012 plan year, the market value rate of return was 13.22%, compared to the assumed rate of return of 8.00%. Because the actuarial value of assets gradually recognizes market value fluctuations over a five-year period, the actuarial rate of return for the 2012 plan year was 0.48%. The actuarial value of assets as of December 31, 2012 was \$112.1 million, or 98.1% of the market value of assets of \$114.3 million reported in the Annual Statement. As of December 31, 2011, the actuarial value of assets was 110.4% of the market value.
3. As indicated in Section 2, the total unrecognized investment gain as of December 31, 2012 is \$2,153,344. This investment gain will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment losses derived from future experience. Because the unrecognized gain is relatively small, the deferred gains are not reflected in the funding schedule in Section 3, Exhibit F.

SECTION 1: Valuation Summary for the Town of Needham Contributory Retirement System

4. With this valuation, the percentage of accidental disability retirees who are assumed to die from the same cause as their disability is 20% for Group 1 and 2 employees and 60% for Group 4 employees.
5. With this valuation, we have set the liability for inactive vested participants equal to the greater of the employee's annuity savings fund or the present value of a deferred annuity.
6. Members hired on or after April 2, 2012 are covered by the provisions of Chapter 32 as amended by Chapter 176 of the Acts of 2011 and Chapter 139 of the Acts of 2012.
7. The unfunded liability has increased by \$14.3 million from \$42.5 million as of January 1, 2012 to \$56.8 million as of January 1, 2013. The unfunded liability was expected to increase to \$42.6 million. The difference between the expected unfunded liability of \$42.6 million and the actual unfunded liability of \$56.8 million is attributable to an investment loss on an actuarial basis of \$8.5 million and an experience loss of \$5.7 million.
8. The contribution for fiscal 2014 is equal to the previously budgeted amount of \$5,420,454. The results of this valuation will first be reflected in the fiscal 2015 appropriation of \$6,178,881. The amortization payments for fiscal 2015 and later are calculated to increase 4.5% per year, and to fully fund the System by 2030. Funding Schedule 1 in Exhibit F of Section 3 shows the appropriation through fiscal 2030 based on this schedule.

In addition, we have prepared additional funding schedules based on the following alternative assumptions:

- > Reset the actuarial value of assets to equal to market value of assets. Changing this assumption decreases the unfunded liability by \$2.2 million.
- > Lower the investment return assumption to 7.75% and the salary increase assumption to 4.5% for Group 1 and 2 employees and to 5.0% for Group 4 employees. Changing these assumptions increases the unfunded liability by \$3.5 million and increases the normal cost by \$83,000.
- > Decrease the investment return assumption to 7.75% and lower the salary scale assumption to 4.25% for Group 1 and 2 employees and to 4.75% for Group 4 employees. Changing these assumptions increases the unfunded liability by \$2.7 million and decreases the normal cost by \$36,000.

The funding schedules based on these alternative assumptions are shown in Exhibit F of Section 3.

SECTION 1: Valuation Summary for the Town of Needham Contributory Retirement System

Summary of Key Valuation Results

	2013	2012
Contributions for fiscal year beginning July 1:		
Recommended for fiscal 2014 and 2013	\$5,420,454	\$4,997,421
Recommended for fiscal 2015 and 2014	6,178,881	5,420,454

Funding elements for plan year beginning January 1:		
Normal cost, including administrative expenses	\$4,348,413	\$4,395,590
Market value of assets	114,284,852	103,632,771
Actuarial value of assets	112,131,508	114,445,376
Actuarial accrued liability	168,935,280	156,914,866
Unfunded actuarial accrued liability	56,803,772	42,469,490

GASB 25/27 for fiscal year beginning July 1:		
Annual required contributions (ARC)	\$5,420,454	\$4,997,421
Actual contributions	--	4,997,421
Percentage of ARC contributed	--	100.0%
Funded ratio	66.38%	72.93%

Demographic data for plan year beginning January 1:		
Number of retired participants and beneficiaries	471	473
Number of inactive participants entitled to a return of their employee contributions	112	127
Number of inactive participants with a vested right to a deferred or immediate benefit	21	--*
Number of active participants	646	644
Total payroll**	\$31,597,470	\$28,963,004
Average payroll	48,912	44,974

Note: 2012 results are based on the January 1, 2012 valuation report prepared by Buck Consultants, LLC.

** Included with inactive participants entitled to a return of their employee contributions.*

*** 2012 is annualized 2011 payroll; 2013 is projected 2013 payroll.*

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, inactive participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups. More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A and B.

CHART 1

Participant Population: 2010 – 2012

Year Ended December 31	Active Participants	Inactive Participants	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
2010	631	107	487	0.94
2011	644	127	473	0.93
2012	646	133	471	0.93

A historical perspective of how the participant population has changed over the past three valuations can be seen in this chart.

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 646 active participants with an average age of 48.2, average years of service of 11.2 years and average payroll of \$48,912.

Among the active participants, there were none with unknown age and/or service information.

Inactive Participants

In this year's valuation, there were 21 participants with a vested right to a deferred or immediate vested benefit and 112 participants entitled to a return of their employee contributions.

These graphs show a distribution of active participants by age and by years of service.

CHART 2

Distribution of Active Participants by Age as of December 31, 2012

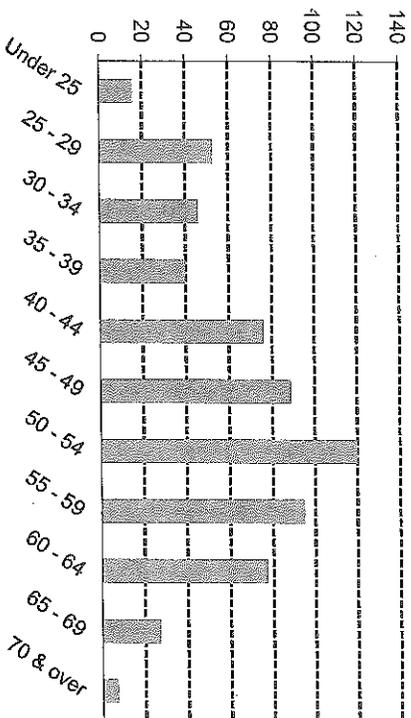
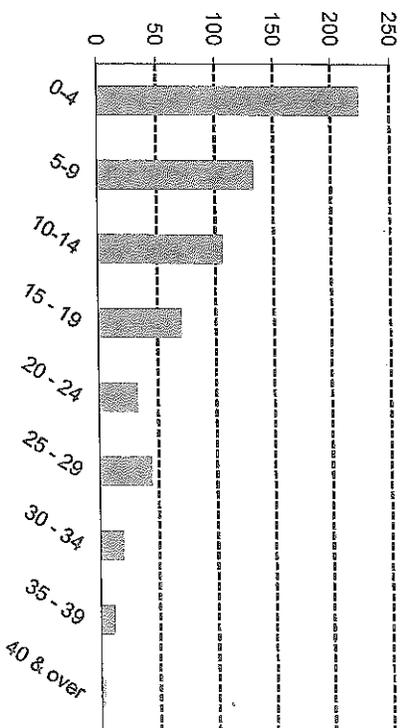


CHART 3

Distribution of Active Participants by Years of Service as of December 31, 2012



SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

Retired Participants and Beneficiaries

As of December 31, 2012, 413 retired participants and 58 beneficiaries were receiving total monthly benefits of \$830,317. For comparison, in the previous valuation, there were 473 retired participants and beneficiaries receiving monthly benefits of \$795,995.

Please note the above figures and the amounts in Chart 4 include COLAs reimbursed by the Commonwealth. However, the liabilities in this report exclude COLAs reimbursed by the Commonwealth.

CHART 4

Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of December 31, 2012

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

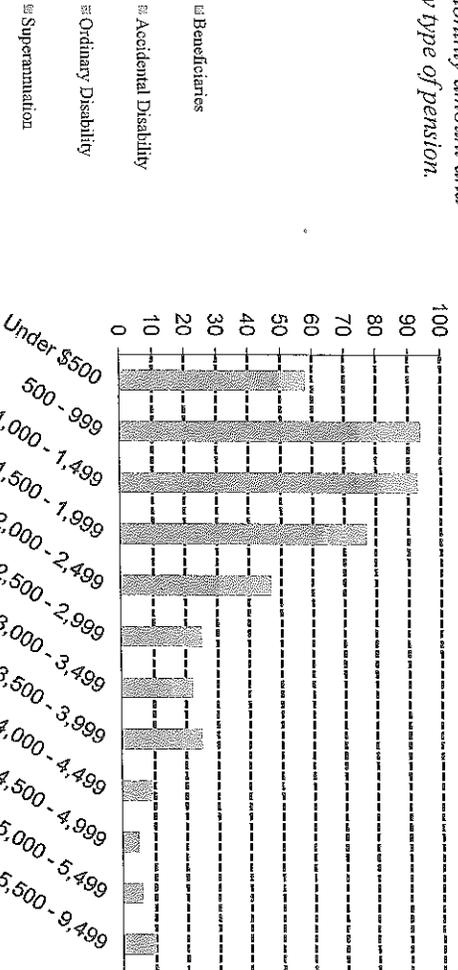
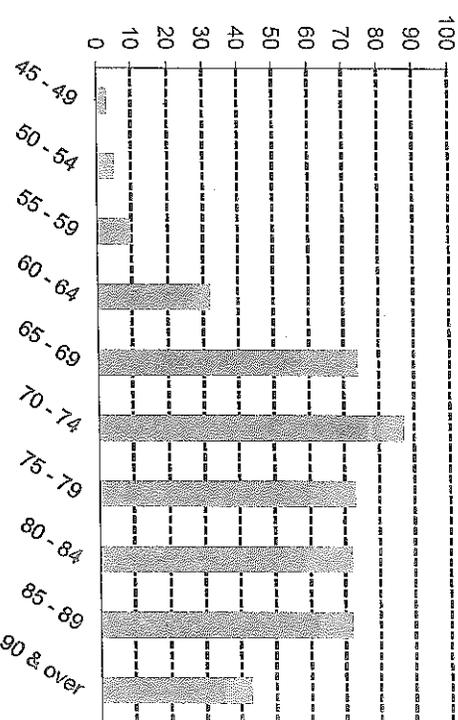


CHART 5

Distribution of Retired Participants and Beneficiaries by Type and by Age as of December 31, 2012



SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

B. FINANCIAL INFORMATION

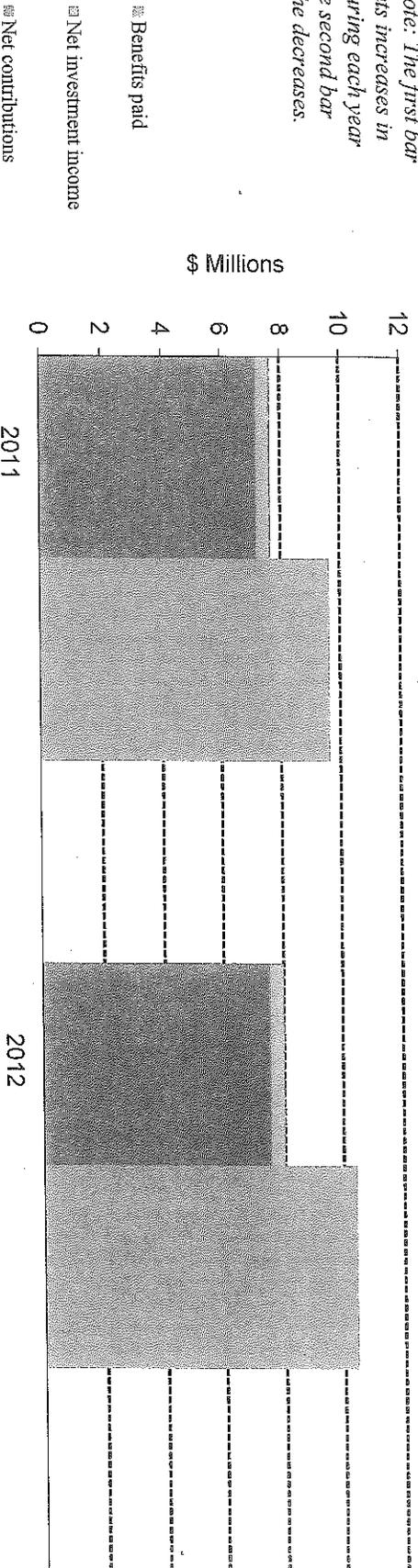
Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits C and D.

CHART 6

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2011 – 2012

The chart depicts the components of changes in the actuarial value of assets over the last two years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.



SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7

Determination of Actuarial Value of Assets for Year Ended December 31, 2012

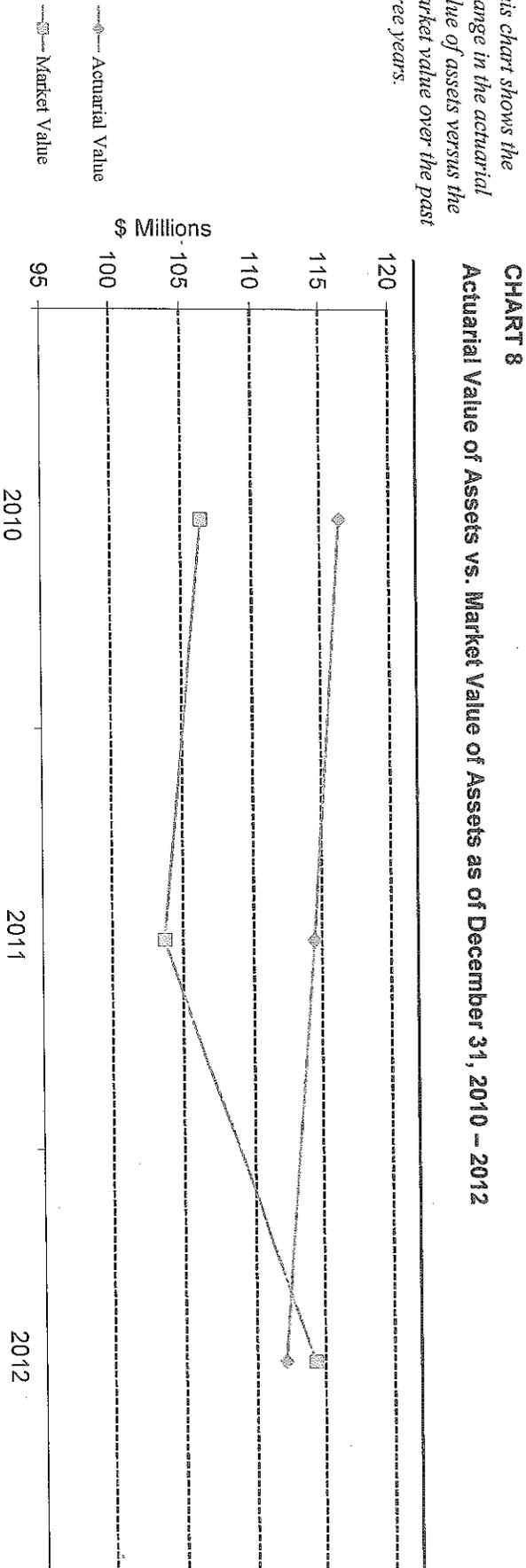
1. Market value of assets, December 31, 2012	Original Amount	Unrecognized Return	\$114,284,852
2. Calculation of unrecognized return*			
(a) Year ended December 31, 2012	\$5,330,652	\$4,264,521	
(b) Year ended December 31, 2011	-8,802,734	-5,281,640	
(c) Year ended December 31, 2010	4,522,713	1,809,085	
(d) Year ended December 31, 2009	6,806,891	1,361,378	
(e) Year ended December 31, 2008	-46,034,008	0	
(f) Total unrecognized return		2,153,344	
3. Preliminary actuarial value: (1) - (2f)		112,131,508	
4. Adjustment to be within 20% corridor		0	
5. Final actuarial value of assets as of December 31, 2012: (3) + (4)		\$112,131,508	
6. Actuarial value as a percentage of market value: (5) ÷ (1)		98.1%	
7. Amount deferred for future recognition: (1) - (5)		\$2,153,344	

* Unrecognized return is the difference between the total return and expected return on a market value basis and is recognized over a five-year period.

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

Both the actuarial value and market value of assets are representations of the Town of Needham Contributory Retirement System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Town of Needham Contributory Retirement System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

CHART 8
Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2010 – 2012



SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The net experience loss for the year ending December 31, 2012 is \$14,232,899. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 9

Actuarial Experience for Year Ended December 31, 2012

1. Net loss from investments*	-\$8,500,306
2. Net gain from administrative expenses	10,354
3. Net loss from other experience**	<u>-5,742,947</u>
4. Net experience loss: (1) + (2) + (3)	-\$14,232,899

* Details in Chart 10

** Details in Chart 13

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Needham's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets is 8.00%. The actual rate of return on an actuarial basis for the 2012 plan year was 0.48%.

Since the actual return for the year was less than the assumed return, the Town of Needham Contributory Retirement System experienced an actuarial loss during the year ended December 31, 2012 with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

CHART 10

Actuarial Value Investment Experience for Year Ended December 31, 2012

1. Actual return	\$541,125
2. Average value of assets	113,017,879
3. Actual rate of return: (1) ÷ (2)	0.48%
4. Assumed rate of return	8.00%
5. Expected return: (2) x (4)	\$9,041,431
6. Actuarial gain/(loss): (1) - (5)	<u>-\$8,500,306</u>

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last three years.

Based upon this experience and future expectations, we have maintained the assumed rate of return of 8.00%. We will continue to monitor the Plan's investment returns and discuss any future recommendations with the Board.

CHART 11

Investment Return – Actuarial Value vs. Market Value: 2010 - 2012

Year Ended December 31	Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent
2010	--*	2.58%	--*	12.74%
2011	\$419,144	0.36	-399,618	-0.38
2012	<u>541,125</u>	0.48	<u>13,507,074</u>	13.22
Total	\$960,269		\$13,107,456	

* Information not available.

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

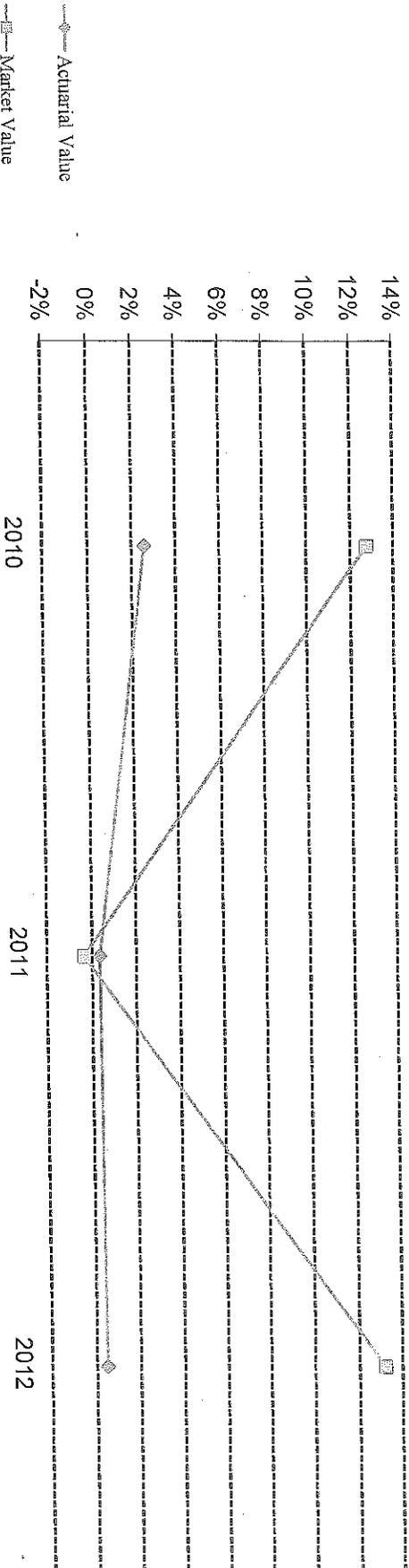
Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

Administrative Expenses
 Administrative expenses for the year ended December 31, 2012 totaled \$198,470 compared to the assumption of \$200,000. This resulted in a gain of \$10,354 for the year. We have maintained the assumption of \$200,000 for the current year.

This chart illustrates how this leveling effect has actually worked over the years 2010 - 2012.

CHART 12

Market and Actuarial Rates of Return for Years Ended December 31, 2010 - 2012



SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation.

These include:

- > the extent of turnover among the participants,
- > retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),
- > the number of disability retirements, and
- > salary increases different than assumed.

The net loss from this other experience for the year ended December 31, 2012 amounted to \$5,742,947, which is 3.4% of the actuarial accrued liability.

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability.

The preliminary recommended contribution is based on a 17-year (increasing 4.5% per year) amortization of the unfunded actuarial accrued liability.

The contribution for fiscal 2014 is equal to the previously budgeted amount of \$5,420,454. The results of this valuation will first be reflected in the fiscal 2015 appropriation of \$6,178,881. The amortization payments for fiscal 2015 and later are calculated to increase 4.5% per year, and to fully fund the System by 2030. Schedule 1 in Exhibit F of Section 3 shows the appropriation through fiscal 2030 based on this schedule.

The chart compares this valuation's recommended contribution with the prior valuation.

**CHART 13
Recommended Contribution**

	Year Beginning January 1			
	2013	2012		
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	\$4,148,413	13.13%	\$4,195,590	14.00%
2. Administrative expenses	200,000	0.63%	200,000	0.66%
3. Expected employee contributions	<u>-2,945,798</u>	<u>-9.32%</u>	<u>-2,458,692</u>	<u>-8.20%</u>
4. Employer normal cost: (1) + (2) + (3)	\$1,402,615	4.44%	\$1,936,898	6.46%
5. Actuarial accrued liability	168,935,280		156,914,866	
6. Actuarial value of assets	<u>112,131,508</u>		<u>114,445,376</u>	
7. Unfunded/(overfunded) actuarial accrued liability: (5) - (6)	\$56,803,772		\$42,469,490	
8. Employer normal cost projected to July 1, 2013 and 2012	1,426,950	4.44%	2,012,883	6.60%
9. Projected unfunded actuarial accrued liability	59,032,212		44,135,589	
10. Payment on projected unfunded actuarial accrued liability	4,461,269	13.88%	3,197,458	10.48%
11. Preliminary recommended contribution: (8) + (10)	<u>\$5,888,219</u>	<u>18.32%</u>	<u>\$5,210,341</u>	<u>17.08%</u>
12. Budgeted appropriation	\$5,420,454	16.86%	\$4,997,421	16.39%
13. Projected payroll	\$32,145,670		\$30,496,790	

Note: Recommended contributions are assumed to be paid on July 1.

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

In addition, we have prepared additional funding schedules based on the following alternative assumptions:

- > Reset the actuarial value of assets to equal to the market value of assets. Changing this assumption decreases the unfunded liability by \$2.2 million.
- > Lower the investment return assumption to 7.75% and the salary increase assumption to 4.5% for Group 1 and 2 employees and to 5.0% for Group 4 employees. Changing these assumptions increases the unfunded accrued liability by \$3.5 million and increases the normal cost by \$83,000
- > Decrease the investment return assumption to 7.75% and lower the salary scale assumption to 4.25% for Group 1 and 2 employees and to 4.75% for Group 4 employees. Changing these assumptions increases the unfunded liability by \$2.7 million and decreases the normal cost by \$336,000.

The funding schedules based on these alternative assumptions are shown in Exhibit F of Section 3.

SECTION 2: Valuation Results for the Town of Needham Contributory Retirement System

E. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to the GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of the GASB reporting requirements. Chart 14 below presents a graphical representation of this information for the Plan.

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the

actuarial value of assets to the actuarial accrued liabilities of the Plan as calculated under the GASB Standards. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

Although the GASB requires that the actuarial value of assets be used to determine the funded ratio, Chart 15 shows the funded ratio calculated using both the actuarial value of assets (66.38%) and the market value of assets (67.65%).

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits II, III, and IV.

These graphs show key GASB factors.

CHART 14
Required Versus Actual Contributions

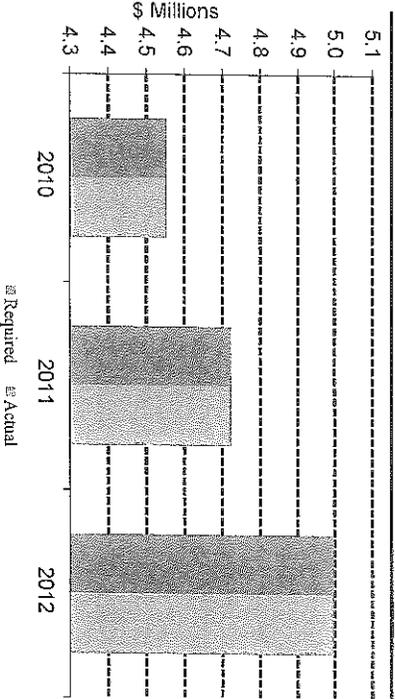
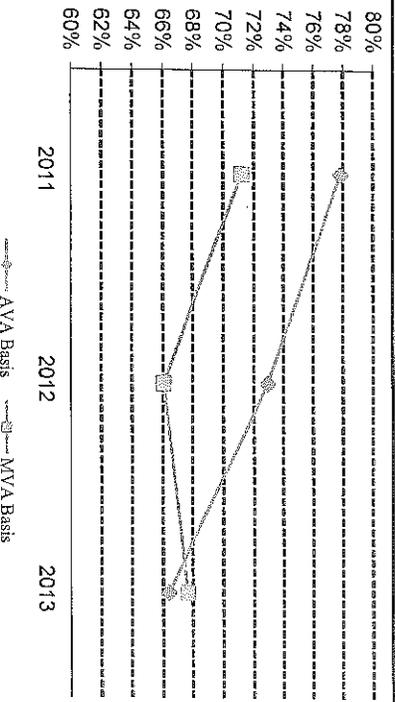


CHART 15
Funded Ratio



SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT A

Table of Plan Coverage

Category	Year Ended December 31		Change From Prior Year
	2012	2011	
Active participants in valuation:			
Number	646	644	0.3%
Average age	48.2	- *	N/A
Average years of service	11.2	--*	N/A
Total payroll**	\$31,597,470	\$28,963,004	9.1%
Average payroll**	48,912	44,974	8.7%
Member contributions	27,096,169	--**	N/A
Number of inactive participants entitled to a return of their employee contributions	112	127	N/A
Number of inactive participants with a vested right to a deferred or immediate benefit.	21	--***	N/A
Retired participants:			
Number in pay status	382	435	N/A
Average age	76.9	77.4	N/A
Average monthly benefit	\$1,752	\$1,596	N/A
Number in suspended status	0	0	N/A
Disabled participants:			
Number in pay status	31	38	-18.4%
Average age	67.3	67.4	N/A
Average monthly benefit	\$2,926	\$2,678	N/A
Number in suspended status	0	0	N/A
Beneficiaries in pay status:	58	--****	N/A

* Information not available.

** 2011 is annualized 2011 payroll; 2012 is projected 2013 payroll.

*** Included with inactive participants entitled to a return of their employer contributions.

**** Included with retirees.

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT B

Participants in Active Service as of December 31, 2012
By Age, Years of Service, and Average Payroll

Age	Years of Service										
	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 25	16	16	--	--	--	--	--	--	--	--	
	\$27,641	\$27,641	--	--	--	--	--	--	--	--	
25 - 29	53	47	6	--	--	--	--	--	--	--	
	\$34,954	\$32,433	\$54,704	--	--	--	--	--	--	--	
30 - 34	46	28	13	4	1	--	--	--	--	--	
	\$50,275	\$40,167	\$68,185	\$58,779	\$66,464	--	--	--	--	--	
35 - 39	40	8	15	15	2	--	--	--	--	--	
	\$51,818	\$36,734	\$47,916	\$58,230	\$93,322	--	--	--	--	--	
40 - 44	76	28	13	15	17	3	--	--	--	--	
	\$54,039	\$32,124	\$58,485	\$69,606	\$69,026	\$76,567	--	--	--	--	
45 - 49	89	32	18	15	9	8	7	--	--	--	
	\$48,845	\$36,652	\$41,001	\$54,914	\$66,445	\$67,820	\$67,429	--	--	--	
50 - 54	120	31	28	20	14	9	15	3	--	--	
	\$48,235	\$35,448	\$35,236	\$44,373	\$48,804	\$75,251	\$83,050	\$69,670	--	--	
55 - 59	95	21	19	18	11	4	13	6	3	--	
	\$53,530	\$45,832	\$43,666	\$43,465	\$60,009	\$60,299	\$65,886	\$88,849	\$73,297	--	
60 - 64	77	12	13	13	10	8	4	8	7	2	
	\$53,031	\$37,463	\$42,856	\$32,684	\$42,082	\$57,224	\$74,992	\$78,043	\$86,143	\$122,943	
65 - 69	27	1	6	4	7	--	5	3	1	--	
	\$42,664	\$15,176	\$48,696	\$34,624	\$33,719	--	\$51,073	\$58,707	\$38,564	--	
70 & over	7	--	2	2	--	1	--	--	1	1	
	\$50,609	--	\$64,851	\$45,100	--	\$23,565	--	--	\$776	\$110,021	
Total	646	224	133	106	71	33	44	20	12	3	
	\$48,912	\$35,641	\$46,819	\$49,998	\$56,687	\$65,820	\$71,127	\$77,128	\$71,853	\$118,635	

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT C

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended December 31, 2012	Year Ended December 31, 2011
Net assets at actuarial value at the beginning of the year	\$114,445,376	\$116,465,717
Contribution income:		
Employer contributions	\$4,997,421	\$4,722,775
Employee contributions	2,764,061	2,683,104
Other contributions	1,253	11,468
Less administrative expenses	<u>-198,470</u>	<u>-196,963</u>
Net contribution income	\$7,564,265	\$7,220,384
Net investment income	<u>541,125</u>	<u>419,144</u>
Total income available for benefits	\$8,105,390	\$7,639,528
Less benefit payments:		
Pensions	-\$9,720,834	-\$9,370,117
Net 3(8)(c) reimbursements	-220,553	-175,786
Refunds, annuities, & Option B refunds	-477,870	-130,366
Workers Compensation settlements	<u>0</u>	<u>16,400</u>
Net benefit payments	-\$10,419,258	-\$9,659,869
Change in reserve for future benefits	-\$2,313,868	-\$2,020,341
Net assets at actuarial value at the end of the year	\$112,131,508	\$114,445,376

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT D

Development of the Fund Through December 31, 2012

Year Ended December 31	Employer Contributions	Employee Contributions	Other Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2011	\$4,722,775	\$2,683,104	\$11,468	\$419,144	\$196,963	\$9,659,869	\$114,445,376
2012	4,997,421	2,764,061	1,253	541,125	198,470	10,419,258	112,131,508

* Net of investment fees

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT E

Development of Unfunded Actuarial Accrued Liability and (Gain)/Loss

1. Unfunded actuarial accrued liability at beginning of year		\$42,469,491
2. Normal cost at beginning of year		4,395,590
3. Total contributions		-7,762,735
4. Interest		
(a) For whole year on (1) + (2)	\$3,749,206	
(b) For half year on (3)	<u>-280,679</u>	
(c) Total interest		<u>3,468,527</u>
5. Expected unfunded actuarial accrued liability		\$42,570,873
6. Changes due to:		
(a) Investment loss	\$8,500,306	
(b) Experience loss	5,732,593	
(c) Total changes		<u>14,232,899</u>
7. Unfunded actuarial accrued liability at end of year		<u>\$56,803,772</u>

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT F
Funding Schedules

Funding Schedule 1 – 8% Investment Return Assumption and Actuarial Value of Assets

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization Payment	(4) Total Plan Cost: (2) + (3)	(5) Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year	(6) Percent Increase in Total Cost
2014	\$1,426,950	\$3,993,504	\$5,420,454	\$59,032,212	--
2015	1,476,893	4,701,988	6,178,881	59,441,804	13.99%
2016	1,528,584	4,913,577	6,442,161	59,119,001	4.26%
2017	1,582,084	5,134,688	6,716,772	58,541,858	4.26%
2018	1,637,457	5,365,749	7,003,206	57,679,743	4.26%
2019	1,694,768	5,607,208	7,301,976	56,499,113	4.27%
2020	1,754,085	5,859,532	7,613,617	54,963,257	4.27%
2021	1,815,478	6,123,211	7,938,689	53,032,023	4.27%
2022	1,879,020	6,398,756	8,277,776	50,661,517	4.27%
2023	1,944,786	6,686,700	8,631,486	47,803,782	4.27%
2024	2,012,854	6,987,602	9,000,456	44,406,449	4.27%
2025	2,083,304	7,302,044	9,385,348	40,412,355	4.28%
2026	2,156,220	7,630,635	9,786,855	35,759,136	4.28%
2027	2,231,688	7,974,014	10,205,702	30,378,781	4.28%
2028	2,309,797	8,332,845	10,642,642	24,197,148	4.28%
2029	2,390,640	8,707,823	11,098,463	17,133,448	4.28%
2030	2,474,312	9,099,675	11,573,987	9,099,675	4.28%

Notes: Recommended contributions are assumed to be paid on July 1.
 Normal cost and expenses are assumed to increase at 3.5% per year.
 Assumes amortization payments increase at 4.5% per year.
 Assumes contribution of budgeted amount for fiscal year 2014.

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT F (Continued)

Funding Schedule 2 – 8% Investment Return Assumption and Market Value of Assets

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization Payment	(4) Total Plan Cost: (2) + (3)	(5) Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year	(6) Percent Increase in Total Cost
2014	\$1,426,950	\$3,993,504	\$5,420,454	\$56,794,391	--
2015	1,476,893	4,510,810	5,987,703	57,024,958	10.46%
2016	1,528,584	4,713,796	6,242,380	56,715,280	4.25%
2017	1,582,084	4,925,917	6,508,001	56,161,603	4.26%
2018	1,637,457	5,147,583	6,785,040	55,334,541	4.26%
2019	1,694,768	5,379,224	7,073,992	54,201,914	4.26%
2020	1,754,085	5,621,290	7,375,375	52,728,505	4.26%
2021	1,815,478	5,874,248	7,689,726	50,875,793	4.26%
2022	1,879,020	6,138,589	8,017,609	48,601,669	4.26%
2023	1,944,786	6,414,825	8,359,611	45,860,127	4.27%
2024	2,012,854	6,703,492	8,716,346	42,600,926	4.27%
2025	2,083,304	7,005,150	9,088,454	38,769,228	4.27%
2026	2,156,220	7,320,381	9,476,601	34,305,205	4.27%
2027	2,231,688	7,649,799	9,881,487	29,143,610	4.27%
2028	2,309,797	7,994,040	10,303,837	23,213,316	4.27%
2029	2,390,640	8,353,772	10,744,412	16,436,819	4.28%
2030	2,474,312	8,729,691	11,204,003	8,729,691	4.28%

Notes: Recommended contributions are assumed to be paid on July 1.
 Normal cost and expenses are assumed to increase at 3.5% per year.
 Assumes amortization payments increase at 4.50% per year.
 Assumes contribution of budgeted amount for fiscal year 2014.

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT F (Continued)

Funding Schedule 3 – 7.75% Investment Return and Market Value of Assets; 4.5%/5.0% Salary Scale Assumption

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization Payment	(4) Total Plan Cost: (2) + (3)	(5) Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year	(6) Percent Increase in Total Cost
2014	\$1,511,724	\$3,908,730	\$5,420,454	\$60,314,489	--
2015	1,564,634	4,732,151	6,296,785	60,777,205	16.17%
2016	1,619,396	4,945,097	6,564,493	60,388,546	4.25%
2017	1,676,075	5,167,627	6,843,702	59,740,316	4.25%
2018	1,734,738	5,400,170	7,134,908	58,802,073	4.26%
2019	1,795,454	5,643,178	7,438,632	57,540,550	4.26%
2020	1,858,295	5,897,121	7,755,416	55,919,419	4.26%
2021	1,923,335	6,162,491	8,085,826	53,899,026	4.26%
2022	1,990,652	6,439,803	8,430,455	51,436,116	4.26%
2023	2,060,325	6,729,594	8,789,919	48,483,527	4.26%
2024	2,132,436	7,032,426	9,164,862	44,989,862	4.27%
2025	2,207,071	7,348,885	9,555,956	40,899,137	4.27%
2026	2,284,318	7,679,585	9,963,903	36,150,396	4.27%
2027	2,364,269	8,025,166	10,389,435	30,677,299	4.27%
2028	2,447,018	8,386,299	10,833,317	24,407,673	4.27%
2029	2,532,664	8,763,682	11,296,346	17,263,031	4.27%
2030	2,621,307	9,158,048	11,779,355	9,158,048	4.28%

Notes: Recommended contributions are assumed to be paid on July 1.
 Normal cost and expenses are assumed to increase at 3.5% per year.
 Assumes amortization payments increase at 4.50% per year.
 Assumes contribution of budgeted amount for fiscal year 2014.

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT F (Continued)

Funding Schedule 4 – 7.75% Investment Return and Market Value of Assets; 4.25%/4.75% Salary Scale Assumption

(1) Fiscal Year Ended June 30	(2) Employer Normal Cost	(3) Amortization Payment	(4) Total Plan Cost: (2) + (3)	(5) Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year	(6) Percent Increase in Total Cost
2014	\$1,390,345	\$4,030,109	\$5,420,454	\$59,547,985	--
2015	1,439,007	4,657,662	6,096,669	59,820,511	12.48%
2016	1,489,372	4,867,257	6,356,629	59,437,970	4.26%
2017	1,541,500	5,086,283	6,627,783	58,799,944	4.27%
2018	1,595,453	5,315,166	6,910,619	57,876,469	4.27%
2019	1,651,294	5,554,348	7,205,642	56,634,804	4.27%
2020	1,709,089	5,804,294	7,513,383	55,039,191	4.27%
2021	1,768,907	6,065,487	7,834,394	53,050,601	4.27%
2022	1,830,819	6,338,434	8,169,253	50,626,460	4.27%
2023	1,894,898	6,623,664	8,518,562	47,720,348	4.28%
2024	1,961,219	6,921,729	8,882,948	44,281,677	4.28%
2025	2,029,862	7,233,206	9,263,068	40,255,344	4.28%
2026	2,100,907	7,558,701	9,659,608	35,581,353	4.28%
2027	2,174,439	7,898,842	10,073,281	30,194,408	4.28%
2028	2,250,544	8,254,290	10,504,834	24,023,472	4.28%
2029	2,329,313	8,625,733	10,955,046	16,991,293	4.29%
2030	2,410,839	9,013,891	11,424,730	9,013,891	4.29%

Notes: Recommended contributions are assumed to be paid on July 1.

Normal cost and expenses are assumed to increase at 3.5% per year.

Assumes amortization payments increase at 4.50% per year.

Assumes contribution of budgeted amount for fiscal year 2014.

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

EXHIBIT G

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or actuarial

assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal cost:

The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial accrued liability

for actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial accrued liability

for pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded actuarial accrued

liability:

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There are many approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

SECTION 3: Supplemental Information for the Town of Needham Contributory Retirement System

Amortization of the unfunded actuarial accrued liability:

Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

Investment return:

The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

1. Retired participants as of the valuation date (including 58 beneficiaries in pay status)	471
2. Participants active during the year ended December 31, 2012 with total contributions of \$27,096,169 and total payroll of \$31,597,470	646
3. Inactive participants with a vested right to a deferred or immediate benefit as of December 31, 2012	21
4. Inactive participants with a right to a return of their employee contributions as of December 31, 2012	112

The actuarial factors as of the valuation date are as follows:

1. Normal cost, including administrative expenses	\$4,348,413
2. Expected employee contributions	-2,945,798
3. Employer normal cost: (1) + (2)	1,402,615
4. Actuarial accrued liability	168,935,280
Retired participants and beneficiaries	\$84,749,529
Active participants	81,135,221
Inactive participants with vested rights	3,050,530
5. Actuarial value of assets (\$114,284,852 at market value as reported in the Annual Statement)	112,131,508
6. Unfunded actuarial accrued liability: (4) - (5)	56,803,772

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

The actuarial factors projected to July 1, 2013 are as follows:

1. Employer normal cost projected to July 1, 2013	\$1,426,950
2. Projected unfunded actuarial accrued liability	59,032,212
3. Payment on projected unfunded actuarial accrued liability	4,461,269
4. Preliminary recommended contribution: (1) + (3)	5,888,219
5. Budgeted appropriation	5,420,454
6. Projected payroll	\$32,145,670
7. Total budgeted appropriation as a percentage of projected payroll: (5) ÷ (6)	16.86%

Note: Recommended contributions are assumed to be paid on July 1.

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended December 31	Annual Required Contributions	Actual Contributions	Percentage Contributed
2011	\$4,722,775	\$4,722,775	100%
2012	4,997,421	4,997,421	100%

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

EXHIBIT III

Supplementary Information Required by the GASB -- Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/Overfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)
01/01/2003	\$76,356,568	\$108,537,756	\$32,181,188	70.35%	\$21,380,463	150.52%
01/01/2004	82,910,726	113,426,667	30,515,941	73.10%	21,633,442	141.06%
01/01/2005	89,965,920	119,994,011	30,028,091	74.98%	23,585,296	127.32%
01/01/2007	102,235,876	128,668,586	26,432,710	79.46%	26,120,560	101.20%
01/01/2009	102,420,630	139,054,020	36,633,390	73.66%	28,012,825	130.77%
01/01/2010	115,771,921	148,011,244	32,239,323	78.22%	30,285,518	106.45%
01/01/2011	116,465,717	149,577,973	33,112,256	77.86%	28,057,204	118.02%
01/01/2012	114,445,376	156,914,866	42,469,490	72.93%	28,963,004	146.63%
01/01/2013	112,131,508	168,935,280	56,803,772	66.38%	31,597,470	179.77%

* Not less than zero

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

EXHIBIT IV

Supplementary Information Required by the GASB

Valuation date	January 1, 2013
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Amortization payments increase 4.5% per year
Remaining amortization period	17 years remaining as of January 1, 2013
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the actuarial value, and is recognized over a five - year period, further adjusted, if necessary, to be within 20% of the market value.

Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases	4.75% for Group 1 employees and 5.25% for Group 4 employees
Cost of living adjustments	3.00% of first \$12,000 of retirement income

Plan membership:	
Retired participants and beneficiaries receiving benefits	471
Inactive participants entitled to a return of their employee contributions	112
Inactive participants with a vested right to a deferred or immediate benefit	21
Active participants	<u>646</u>
Total	1,250

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

EXHIBIT V

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy:

RP-2000 Employee Mortality Table projected 22 years using Scale AA

Disabled:

RP-2000 Healthy Annuitant Mortality Table, set forward 2 years

The above mortality assumptions were determined to contain provision appropriate to reasonably reflect future mortality improvement, based on a review of mortality experience of the plan.

Termination Rates before Retirement:

Age	Groups 1 and 2 - Rate (%)		
	Male	Female	Disability
20	0.02	0.01	0.01
25	0.03	0.02	0.02
30	0.04	0.02	0.03
35	0.07	0.04	0.06
40	0.09	0.05	0.10
45	0.11	0.08	0.16
50	0.14	0.11	0.19
55	0.24	0.23	0.25
60	0.47	0.45	0.28

Notes: 55% of the disability rates shown represent accidental disability.
 20% of the accidental disabilities will die from the same cause as the disability.
 55% of the death rates shown represent accidental death.

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

Age	Group 4 - Rate (%)		Disability
	Mortality		
	Male	Female	
20	0.02	0.01	0.10
25	0.03	0.02	0.20
30	0.04	0.02	0.30
35	0.07	0.04	0.30
40	0.09	0.05	0.30
45	0.11	0.08	1.00
50	0.14	0.11	1.25
55	0.25	0.23	1.20
60	0.47	0.45	0.85

Notes: 90% of the disability rates shown represent accidental disability.
 60% of the accidental disabilities will die from the same cause as the disability.
 90% of the death rates shown represent accidental death.

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

Years of Service	Rate per year (%)	
	Groups 1 and 2	Group 4
0	15.0	1.5
1	12.0	1.5
2	10.0	1.5
3	9.0	1.5
4	8.0	1.5
5	7.6	1.5
6	7.5	1.5
7	6.7	1.5
8	6.3	1.5
9	5.9	1.5
10	5.4	1.5
11	5.0	0.0
12	4.6	0.0
13	4.1	0.0
14	3.7	0.0
15	3.3	0.0
16-20	2.0	0.0
21-29	1.0	0.0
30+	0.0	0.0

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

Retirement Rates:	Rate per year (%)			
	Groups 1 and 2		Group 4	
	Age	Male	Female	Age
50	1.0	1.5	45	1.0
51	1.0	1.5	46	1.0
52	1.0	2.0	47	1.0
53	1.0	2.5	48	1.0
54	2.0	2.5	49	1.0
55	2.0	5.5	50	2.0
56	2.5	6.5	51	2.0
57	2.5	6.5	52	2.0
58	5.0	6.5	53	5.0
59	6.5	6.5	54	7.5
60	12.0	5.0	55	15.0
61	20.0	13.0	56	10.0
62	30.0	15.0	57	10.0
63	25.0	12.5	58	10.0
64	22.0	18.0	59	15.0
65	40.0	15.0	60	20.0
66	25.0	20.0	61	20.0
67	25.0	20.0	62	25.0
68	30.0	25.0	63	25.0
69	30.0	20.0	64	30.0
70	100.0	100.0	65	100.0

Retirement Age for Inactive Vested Participants:

Age 65 for Group 1 and 2 employees and Age 55 for Group 4 employees

Unknown Data for Participants:

Same as those exhibited by participants with similar known characteristics.

Age of Spouse:

Females three years younger than males.

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

Percent Married: 80%

Benefit Election: All participants are assumed to elect Option A.

Net Investment Return: 8.00%

Salary Increases: 4.75% for Group 1 and 2 employees and 5.25% for Group 4 employees

Interest on Employee Contributions: 3.50%

Administrative Expenses: \$200,000 for calendar 2013, increasing 3.50% per year

2012 Salary: 2012 salary equal to salaries provided in the data, except for new hires where salaries were annualized based on date of hire.

Total Service: Total creditable service reported in the data.

Actuarial Value of Assets: Market value of assets as reported in the System's Annual Statement less unrecognized return in each of the last five years. Unrecognized return is equal to the difference between the actual market value return and the expected market value return and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method. Entry Age is the age of the participant less Total Service as defined above. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary. Normal Cost is determined using the plan of benefits applicable to each participant.

Changes in Assumptions: The percentage of accidental disability retirees who are assumed to die from the same cause as their disability is 20% for Group 1 and 2 employees and 60% for Group 4 employees. The liability for inactive vested participants is equal to the greater of the employee's annuity savings fund or the present value of a deferred annuity.

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

**EXHIBIT VI
Summary of Plan Provisions**

This exhibit summarizes the major provisions of Chapter 32 of the Laws of Massachusetts.

Plan Year: January 1 – December 31

Retirement Benefits

Employees covered by the Contributory Retirement Law are classified into one of four groups depending on job classification. Group 1 comprises most positions in state and local government. It is the general category of public employees. Group 4 comprises mainly police and firefighters. Group 2 is for other specified hazardous occupations. (Officers and inspectors of the State Police are classified as Group 3.)

For employees hired prior to April 2, 2012, the annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the following table based on the age of the member at retirement:

Percent	Age Last Birthday at Date of Retirement		
	Group 1 65 or over	Group 2 60 or over	Group 4 55 or over
2.5	64	59	54
2.4	63	58	53
2.3	62	57	52
2.2	61	56	51
2.1	60	55	50
2.0	59	--	49
1.9	58	--	48
1.8	57	--	47
1.7	56	--	46
1.6	55	--	45
1.5			

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last three years of creditable service prior to retirement.

For employees hired on April 2, 2012 or later, the annual amount of the retirement allowance is based on the member's final five-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the following tables based on the age and years of creditable service of the member at retirement:

For members with less than 30 years of creditable service:

Percent	Age Last Birthday at Date of Retirement		
	Group 1 67 or over	Group 2 62 or over	Group 4 57 or over
2.50	66	61	56
2.35	65	60	55
2.20	64	59	54
2.05	63	58	53
1.90	62	57	52
1.75	61	56	51
1.60	60	55	50
1.45			

For members with 30 years of creditable service or greater:

Percent	Age Last Birthday at Date of Retirement		
	Group 1 67 or over	Group 2 62 or over	Group 4 57 or over
2.500	66	61	56
2.375	65	60	55
2.250	64	59	54
2.125	63	58	53
2.000	62	57	52
1.875	61	56	51
1.750	60	55	50
1.625			

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

A member's final five-year average salary is defined as the greater of the highest consecutive five-year average annual rate of regular compensation and the average annual rate of regular compensation received during the last five years of creditable service prior to retirement.

For employees who became members after January 1, 2011, regular compensation is limited to 64% of the federal limit found in 26 U.S.C. 401(a)(17). In addition, regular compensation for members who retire after April 2, 2012 will be limited to prohibit "spiking" of a member's salary to increase the retirement benefit.

For all employees, the maximum annual amount of the retirement allowance is 80 percent of the member's final average salary. Any member who is a veteran also receives an additional yearly retirement allowance of \$15 per year of creditable service, not exceeding \$300. The veteran allowance is paid in addition to the 80 percent maximum.

Employee Contributions

<u>Date of Hire</u>	<u>Contribution Rate</u>
Prior to January 1, 1975	5%
January 1, 1975 – December 31, 1983	7%
January 1, 1984 – June 30, 1996	8%
July 1, 1996 onward	9%

In addition, employees hired after December 31, 1978 contribute an additional 2 percent of salary in excess of \$30,000.

Employees hired after 1983 who voluntarily withdraw their contributions with less than 10 ten years of credited service receive 3% interest on their contributions.

Employees in Group 1 hired on or after April 2, 2012 with 30 years of creditable service or greater will pay a base contribution rate of 6%.

Retirement Benefits (Superannuation)

Members of Group 1, 2 or 4 hired prior to April 2, 2012 may retire upon the attainment of age 55. For retirement at ages below 55, twenty years of creditable service is required.

SECTION 4: Reporting Information for the Town of Needham Contributory Retirement System

Members hired prior to April 2, 2012 who terminate before age 55 with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the System).

Members of Group 1 hired April 2, 2012 or later may retire upon the attainment of age 60. Members of Group 2 or 4 hired April 2, 2012 or later may retire upon the attainment of age 55. Members of Group 4 may retire upon attainment of age 50 with ten years of creditable service.

Members hired April 2, 2012 or later who terminate before age 55 (60 for members of Group 1) with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (60 for members of Group 1) provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the System.

Ordinary Disability Benefits

A member who is unable to perform his or her job due to a non-occupational disability will receive a retirement allowance if he or she has ten or more years of creditable service and has not reached age 55. The annual amount of such allowance shall be determined as if the member retired for superannuation at age 55 (age 60 for Group 1 members hired on or after April 2, 2012), based on the amount of creditable service at the date of disability. For veterans, there is a minimum benefit of 50 percent of the member's most recent year's pay plus an annuity based on his or her own contributions.

Accidental Disability Benefit

For a job-connected disability, the benefit is 72 percent of the member's most recent annual pay plus an annuity based on his or her own contributions, plus additional amounts for surviving children. Benefits are capped at 75 percent of annual rate of regular compensation for employees who become members after January 1, 1988.

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Death Benefits

In general, the beneficiary of an employee who dies in active service will receive a refund of the employee's own contributions. Alternatively, if the employee were eligible to retire on the date of death, a spouse's benefit will be paid equal to the amount the employee would have received under Option C. The surviving spouse of a member who dies with two or more years of credited service has the option of a refund of the employee's contributions or a monthly benefit regardless of eligibility to retire, if they were married for at least one year. There is also a minimum widow's pension of \$500 per month, and there are additional amounts for surviving children.

If an employee's death is job-connected, the spouse will receive 72 percent of the member's most recent annual pay, in addition to a refund of the member's accumulated deductions, plus additional amounts for surviving children. However, in accordance with Section 100 of Chapter 32, the surviving spouse of a police officer, firefighter or corrections officer is killed in the line of duty will be eligible to receive an annual benefit equal to the maximum salary held by the member at the time of death.

Upon the death of a job-connected disability retiree who retired prior to November 7, 1996 and could not elect an Option C benefit, a surviving spouse will receive an allowance of \$9,000 per year if the member dies for a reason unrelated to the cause of the disability.

"Heart And Lung Law" And Cancer Presumption

Any case of hypertension or heart disease resulting in total or partial disability or death to a uniformed fireman, permanent member of a police department, or certain employees of a county correctional facility is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. Any case of disease of the lungs or respiratory tract resulting in total disability or death to a uniformed fireman is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. There is an additional presumption for uniformed firemen that certain types of cancer are job-related if onset occurs while actively employed or within five years of retirement.

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Options

Members may elect to receive a full retirement allowance payable for life under Option A. Under Option B a member may elect to receive a lower monthly allowance in exchange for a guarantee that at the time of death any contributions not expended for annuity payments will be refunded to the beneficiary. Option C allows the member to take a lesser retirement allowance in exchange for providing a survivor with two-thirds of the lesser amount. Option C pensioners will have benefits converted from a reduced to a full retirement if the beneficiary predeceases the retiree.

Post-Retirement Benefits

The Board has adopted the provisions of Section 51 of Chapter 127 of the Acts of 1999, which provide that the Retirement Board may approve an annual COLA in excess of the Consumer Price Index but not to exceed a 3% COLA on the first \$12,000 of a retirement allowance. Cost-of-living increases granted prior to July 1, 1998 are reimbursed by the Commonwealth and not reflected in this report.

Changes in Plan Provisions

Members hired on or after April 2, 2012 are covered by the provisions of Chapter 32 as amended by Chapter 176 of the Acts of 2011 and Chapter 139 of the Acts of 2012.