CITY OF NEWTON
CONTRIBUTORY RETIREMENT SYSTEM

Actuarial Valuation Report

January 1, 2007

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Report Summary:

Highlights	**January 1, 2006**	**January 1, 2007**
Contributions		
Funding Schedule FY 2008	$11,747,762	$11,747,762
Funding Schedule FY 2009	12,175,990	12,843,635
Funded Ratios		
GAS No. 25	66.2%	66.1%
Participants		
Actives	1,666	1,682
Retirees and Beneficiaries	1,163	1,143
Vested	0	0
Inactives	561	598
Disabled	154	156
Total	3,544	3,579
Payroll		
Payroll of Active Members	$71,278,135	$74,197,265
Average Payroll	42,784	44,113
Normal Cost		
Employer	2,532,368	2,792,077
Employee	5,661,058	5,981,441
Administrative Expenses	0	0
Total	8,193,426	8,773,518
Actuarial Accrued Liabilities		
Actives	164,017,037	174,596,731
Retirees, Beneficiaries, Disabilities and Inactives	216,005,499	227,660,914
Total	382,732,277	402,257,645
Actuarial Value of Assets	253,420,995	265,700,539
Unfunded Actuarial Accrued Liabilities	$129,311,282	$136,557,106

Introduction

This report presents the findings of an actuarial valuation as of January 1, 2007, of Newton Contributory Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2007.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the City of Newton Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2007.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last year, the total unfunded actuarial accrued liability increased by 5.6% to $136,557,106. The increase is the result of net unfavorable actuarial experience during the preceding year. The actuarial value of assets for 2006 had a return of 8.17%. The sources of the (gain)/loss are as follows:

Investment	(651,946)
Salary Increases	1,312,355
New Participants	337,644
Active - Retirements	(969,621)
Active - Terminations	96,776
Active - Mortality	(111,571)
Active - Disabilities	1,333,811
Inactive - Mortality and data adjustments	3,825,695
Contribution Gain	(984,842)
Other	817,240
Total (gain)/loss	5,005,540

Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	January 1, 2006	January 1, 2007
Superannuation	$5,810,056	$6,294,379
Termination	1,073,429	1,137,040
Death	371,899	395,026
Disability	938,042	947,073
Administrative Expenses	0	0
Total Normal Cost	8,193,426	8,773,518
% of Pay	11.5%	11.8%
Employee Contributions	5,661,058	5,981,441
% of Pay	7.9%	8.1%
Employer Normal Cost	$2,532,368	$2,792,077
% of Pay	3.6%	3.8%

Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits earned by the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	January 1, 2006	January 1, 2007
Actives		
Superannuations	$155,144,137	$164,786,280
Termination	(2,429,541)	(2,618,057)
Death	3,954,343	4,166,763
Disability	7,348,098	8,261,745
Retirees and Inactives		
Retirees and Beneficiaries	174,506,529	177,116,840
Vested	0	0
Terminated (Refund)	2,709,741	2,926,495
Disabled	41,498,970	46,575,555
Total	$382,732,277	$402,257,645

Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference betwee the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	January 1, 2006	January 1, 2007
Actives		
Superannuation	$206,525,289	$219,422,841
Termination	6,779,446	7,045,474
Death	7,147,569	7,522,023
Disability	16,743,377	17,650,879
Retirees and Inactives		
Retirees and Beneficiaries	174,506,529	177,116,840
Vested	0	0
Terminated (Refund)	2,709,741	2,926,495
Disabled	41,498,970	46,575,555
Total	$455,910,921	$479,302,131

Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	January 1, 2006	January 1, 2007
Cash equivalents	$17,845,069	$3,213,691
Short term investments	545	65
Fixed income securities	56,376,557	52,787,765
Equities	125,451,602	139,559,318
International	29,170,303	36,620,803
Real Estate	16,494,220	21,229,685
Venture Capital	0	0
Other	0	13,366,560
Accounts receivable	938,281	377,912
Accounts payable	(353,412)	(209,957)
Accrued income	0	0
Total Market Value	$245,923,166	$266,945,842
Total Actuarial Value	$253,420,995	$265,700,539

Actuarial Value of Assets

For actuarial purposes, the assets are valued using a method which reflects the market value of assets though gradual recognition of any unrealized appreciation or depreciation in assets beyond the 8% return. The following table shows the development of valuation assets:

(1) Assets for valuation purposes, January 1, 2006	$253,420,995
(2) Cash flow during year without regard to investment income and expenses	
(a) Benefit payouts and refunds	($26,449,781)
(b) City contributions	$10,654,960
(c) Member contributions	$6,407,985
(d) Net transfers and reimbursements	$1,301,031
(e) Net cash flow	($8,085,805)
(3) Expected investment income and expenses	$19,950,247
(4) Preliminary Asset Value (1 + 2 + 3)	$265,285,438
(5) Market value, January 1, 2007	$266,945,842
(6) Preliminary asset value	$265,285,438
(7) Unrecognized appreciation (5 - 6)	$1,660,404
(8) Adjustment (7 x 25%)	$415,101
(9) Adjusted asset value (4 + 8)	$265,700,539
(10) Assets for valuation purposes, January 1, 2007 (adjusted asset value limited to 120% of market value of assets)	$265,700,539
(11) Ratio of actuarial value to market value	99.5%
(12) The investment rate of return for year ending, January 1, 2007 (based on the adjusted asset value)	8.17%

Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

Table VI

	January 1, 2006	January 1, 2007
Actuarial Accrued Liability	$382,732,277	$402,257,645
Actuarial Assets	253,420,995	265,700,539
Unfunded Actuarial Accrued Liability	$129,311,282	$136,557,106
Funded Status	66.2%	66.1%

Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2028, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2028
  $ 136,557,106 over 21 years with 4.5% increasing payments
- Interest adjustment for payments deposited semiannually.

The pension appropriation is shown in Table VII.

Table VII

	January 1, 2006	January 1, 2007
Normal cost	$2,532,368	$2,792,077
Amortization payment of the prior accrued liability	8,128,259	8,862,629
Total cost	$10,660,627	$11,654,706
% of Pay	15.0%	15.7%
Fiscal 2008 cost	$11,747,762	$11,747,761
Fiscal 2009 cost	$12,175,990	$12,843,635

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.5% per year. The employee contribution rate is expected to increase to 10.5% by 2028 as members contributing base percentages 5%, 7%, and 8% are replaced by new members, whose base contribution is 9%. Payments are assumed to be made at the beginning of the year.

The employer total cost is expected to increase during the next 21 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost represents 15.8% of payroll, decreasing to 14.1% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 1.4% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

Appropriation Forecast

Fiscal Year Ending	Payroll*	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %**
2008	$74,197,265	$5,981,441	$2,957,432	$8,790,330	$11,747,762	15.8	66.1
2009	$77,536,142	$6,345,140	$2,990,384	$9,853,251	$12,843,635	16.6	66.8
2010	$81,025,268	$6,729,460	$3,020,312	$10,296,647	$13,316,959	16.4	67.7
2011	$84,671,405	$7,135,520	$3,046,878	$10,759,996	$13,806,874	16.3	68.6
2012	$88,481,619	$7,564,498	$3,069,719	$11,244,196	$14,313,915	16.2	69.5
2013	$92,463,291	$8,017,634	$3,088,446	$11,750,185	$14,838,631	16.0	70.5
2014	$96,624,140	$8,496,235	$3,102,642	$12,278,943	$15,381,585	15.9	71.6
2015	$100,972,226	$9,001,674	$3,111,862	$12,831,495	$15,943,357	15.8	72.8
2016	$105,515,976	$9,535,398	$3,115,628	$13,408,913	$16,524,541	15.7	74.0
2017	$110,264,195	$10,098,928	$3,113,432	$14,012,314	$17,125,746	15.5	75.3
2018	$115,226,084	$10,693,867	$3,104,729	$14,642,868	$17,747,597	15.4	76.8
2019	$120,411,257	$11,321,900	$3,088,939	$15,301,797	$18,390,736	15.3	78.3
2020	$125,829,764	$11,984,801	$3,065,440	$15,990,378	$19,055,818	15.1	80.0
2021	$131,492,103	$12,684,436	$3,033,570	$16,709,945	$19,743,515	15.0	81.7
2022	$137,409,248	$13,422,770	$2,992,626	$17,461,892	$20,454,518	14.9	83.6
2023	$143,592,664	$14,201,867	$2,941,853	$18,247,678	$21,189,531	14.8	85.6
2024	$150,054,334	$15,023,902	$2,880,451	$19,068,823	$21,949,274	14.6	87.7
2025	$156,806,779	$15,891,161	$2,807,565	$19,926,920	$22,734,485	14.5	89.9
2026	$163,863,084	$16,806,050	$2,722,286	$20,823,631	$23,545,917	14.4	92.3
2027	$171,236,923	$17,771,100	$2,623,647	$21,760,695	$24,384,342	14.2	94.7
2028	$178,942,585	$18,788,971	$2,510,618	$22,739,926	$25,250,544	14.1	97.3
2029	$186,995,001	$19,634,475	$2,623,596	$0	$2,623,596	1.4	100.0
2030	$195,409,776	$20,518,026	$2,741,658	$0	$2,741,658	1.4	100.0
2031	$204,203,216	$21,441,338	$2,865,032	$0	$2,865,032	1.4	100.0
2032	$213,392,361	$22,406,198	$2,993,959	$0	$2,993,959	1.4	100.0
2033	$222,995,017	$23,414,477	$3,128,687	$0	$3,128,687	1.4	100.0
2034	$233,029,793	$24,468,128	$3,269,478	$0	$3,269,478	1.4	100.0
2035	$243,516,133	$25,569,194	$3,416,605	$0	$3,416,605	1.4	100.0
2036	$254,474,359	$26,719,808	$3,570,352	$0	$3,570,352	1.4	100.0
2037	$265,925,705	$27,922,199	$3,731,018	$0	$3,731,018	1.4	100.0
2038	$277,892,362	$29,178,698	$3,898,913	$0	$3,898,913	1.4	100.0
2039	$290,397,518	$30,491,739	$4,074,364	$0	$4,074,364	1.4	100.0

* Calendar basis

** Beginning of Fiscal Year

GASB Statements No. 25 and No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to $0. The required disclosure information is shown in Table VIII.

Table VIII

		January 1, 2006	January 1, 2007
(1)	Actuarial Accrued Liability	$382,732,277	$402,257,645
(2)	Actuarial Value of Assets	253,420,995	265,700,539
(3)	Unfunded Actuarial Accrued Liability	129,311,282	136,557,106
(4)	Funded Ratio (2)/(1)	66.2%	66.1%
(5)	Covered Payroll	$71,278,135	$74,197,265
(6)	UAAL as a percentage of payroll: (3)/(5)	181.4%	184.0%
(7)	Annual Required Contribution (ARC)	$10,668,000	$11,747,761
(8)	Net Pension Obligation	$0	$0

PERAC Annual Statement
APPENDIX PAGE 3
ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by Buck Consultants as of January 1, 2007.

The normal cost for employees on that date was:	$5,981,441	8.1% of pay
The normal cost for the employer was:	2,792,077	3.8% of pay

The actuarial liability for active members was:	$174,596,731
The actuarial liability for retired members was:	227,660,914
Total actuarial accrued liability:	402,257,645
System assets as of that date:	265,700,539
Unfunded actuarial accrued liability:	$136,557,106

The ratio of system's assets to total actuarial liability was 66.1%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	8.0%
Rate of Salary Increase:	4.75%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a percent of Covered Payroll (b-a)/c
01/01/07	$265,700,539	$402,257,645	$136,557,106	66.1%	$74,197,265	184.0%
01/01/06	253,420,995	382,732,277	129,311,282	66.2%	71,278,135	181.4%
01/01/05	244,266,000	361,080,000	116,814,000	67.6%	69,702,000	168.0%
01/01/04	233,888,000	350,688,000	116,800,000	66.7%	68,327,000	171.0%
01/01/03	227,126,000	338,172,000	111,046,000	67.2%	64,636,000	172.0%
01/01/02	228,239,000	306,123,000	77,884,000	74.6%	61,438,000	127.0%
01/01/01	219,102,000	268,660,000	49,558,000	81.6%	60,769,000	82.0%
01/01/00	201,766,000	256,096,000	54,330,000	78.8%	54,975,000	99.0%
01/01/99	176,284,000	239,946,000	63,662,000	73.5%	50,845,000	125.0%

Attach Copy of Current Approved Funding Schedule

EXHIBITS

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Age/Service Distribution with Salary as of January 1, 2007

Attained Age	Average Salary <5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
20-24	58	0	0	0	0	0	0	0	0	58
	23,836	0	0	0	0	0	0	0	0	23,836
25-29	191	15	0	0	0	0	0	0	0	206
	29,676	46,012	0	0	0	0	0	0	0	30,865
30-34	90	54	2	0	0	0	0	0	0	146
	40,909	51,093	56,824	0	0	0	0	0	0	44,894
35-39	60	46	15	3	0	0	0	0	0	124
	41,700	50,536	60,653	34,847	0	0	0	0	0	47,105
40-44	48	50	24	35	10	0	0	0	0	167
	33,738	46,944	57,559	54,355	57,050	0	0	0	0	46,832
45-49	45	46	25	26	40	12	0	0	0	194
	29,368	36,829	49,193	55,001	57,702	59,180	0	0	0	44,813
50-54	71	47	19	28	53	43	11	1	0	273
	32,787	39,582	56,625	54,581	57,578	65,794	59,411	44,292	0	48,978
55-59	41	46	34	29	21	31	37	21	0	260
	35,546	38,930	43,748	45,867	55,173	65,268	60,921	56,293	0	48,784
60-64	18	24	21	30	19	14	25	16	2	169
	36,487	36,274	39,697	45,845	48,741	51,303	69,959	50,667	53,815	47,621
65-69	5	14	8	9	15	5	4	1	1	62
	39,287	37,977	37,617	42,275	44,020	43,350	50,602	45,626	52,116	41,721
70+	0	2	3	4	0	4	1	3	6	23
	0	21,523	42,206	27,528	0	31,678	58,271	39,294	45,673	37,247
Total Employees	627	344	151	164	158	109	78	42	9	1,682
Average Salary	33,196	43,348	49,399	49,764	54,906	60,774	63,042	52,396	48,198	44,113

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Retiree Distribution as of January 1, 2007

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	1	1	0	5,709	5,709
35-39	0	1	1	0	7,140	7,140
40-44	0	0	0	0	0	0
45-49	1	4	5	14,520	22,053	36,573
50-54	6	5	11	100,051	37,522	137,573
55-59	43	19	62	1,501,558	334,705	1,836,263
60-64	79	43	122	2,680,029	640,104	3,320,133
65-69	82	77	159	2,768,293	1,188,606	3,956,898
70-74	67	75	142	1,933,005	1,203,000	3,136,005
75-79	91	111	202	2,067,121	1,374,675	3,441,796
80-84	73	139	212	1,456,490	1,629,745	3,086,235
85-89	31	108	139	476,268	1,083,665	1,559,933
90-94	7	46	53	79,608	353,101	432,709
95-99	2	32	34	4,639	233,761	238,400
Total	482	661	1,143	13,081,582	8,113,786	21,195,367
Average (Age/Payment)	72.3	78.4	75.8	27,140	12,275	18,544
Frequency Percent	42.2	57.8	100	61.7	38.3	100

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Disabled Retiree Distribution as of January 1, 2007

Attained Age	Number of Employees			Total Payments		
	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	0	1	29,147	0	29,147
40-44	2	0	2	38,103	0	38,103
45-49	6	4	10	247,113	89,233	336,346
50-54	10	2	12	293,308	71,158	364,466
55-59	29	2	31	1,035,743	33,114	1,068,857
60-64	25	0	25	816,483	0	816,483
65-69	19	0	19	672,805	0	672,805
70-74	29	1	30	671,011	857	671,868
75-79	17	0	17	398,215	0	398,215
80-84	4	0	4	48,960	0	48,960
85-89	4	0	4	66,689	0	66,689
90-94	0	0	0	0	0	0
95-99	1	0	1	18,984	0	18,984
Total	147	9	156	4,336,561	194,362	4,530,922
Average (Age/Payment)	68.0	60.5	67.5	22,458	19,279	22,236
Frequency Percent	93.0	7.0	100.0	94.0	6.0	100.0

EXHIBIT 4 - CASHFLOW FORECAST:

The following is a 30 year forecast of benefit payments net of state reimbursable COLA payments, Contribution Income and Investment Returns.

Plan Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2007	$26,913,419	$5,981,441	$11,747,762	$21,518,053	$12,333,837
2008	28,053,498	6,345,140	12,843,635	21,857,578	12,992,855
2009	29,285,361	6,729,460	13,316,959	22,886,723	13,647,781
2010	30,567,228	7,135,520	13,806,874	23,968,276	14,343,442
2011	31,851,212	7,564,498	14,313,915	25,107,473	15,134,674
2012	33,161,628	8,017,634	14,838,631	26,311,114	16,005,751
2013	34,382,925	8,496,235	15,381,585	27,590,231	17,085,126
2014	35,595,371	9,001,674	15,943,357	28,958,454	18,308,114
2015	36,752,488	9,535,398	16,524,541	30,429,219	19,736,670
2016	37,874,313	10,098,928	17,125,746	32,018,314	21,368,674
2017	38,971,308	10,693,867	17,747,597	33,741,739	23,211,895
2018	40,100,076	11,321,900	18,390,736	35,614,312	25,226,872
2019	41,261,539	11,984,801	19,055,818	37,649,889	27,428,969
2020	42,456,642	12,684,436	19,743,515	39,863,558	29,834,867
2021	43,686,360	13,422,770	20,454,518	42,271,747	32,462,676
2022	44,951,695	14,201,867	21,189,531	44,892,345	35,332,048
2023	46,253,680	15,023,902	21,949,274	47,744,816	38,464,312
2024	47,593,376	15,891,161	22,734,485	50,850,341	41,882,611
2025	48,971,875	16,806,050	23,545,917	54,231,960	45,612,053
2026	50,390,300	17,771,100	24,384,342	57,914,729	49,679,870
2027	51,849,810	18,788,971	25,250,544	61,925,893	54,115,598
2028	53,351,592	19,634,475	2,623,596	65,921,950	34,828,429
2029	54,896,872	20,518,026	2,741,658	68,720,602	37,083,414
2030	56,486,910	21,441,338	2,865,032	71,701,183	39,520,643
2031	58,123,002	22,406,198	2,993,959	74,878,367	42,155,522
2032	59,806,482	23,414,477	3,128,687	78,268,070	45,004,752
2033	61,538,723	24,468,128	3,269,478	81,887,547	48,086,431
2034	63,321,136	25,569,194	3,416,605	85,755,508	51,420,171
2035	65,155,175	26,719,808	3,570,352	89,892,236	55,027,221
2036	67,342,019	27,922,199	3,731,018	94,307,965	58,619,164

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2007, and does not take into account any subsequent changes.

1. Administration

Each of the 107 contributory retirement systems for public employees of the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

(i) Group 1: Most general employees in State and local government

(ii) Group 2: Certain specified hazardous duty positions

(iii) Group 3: State police officers and inspectors

(iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

3. Salary

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. Member Contributions

Member contributions vary depending upon date hired as follows:

Date of Hire	Member Contribution Rate
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later plus	9.0% of Salary
1979 and Later	2.0% of Salary in excess of $30,000

5. Average Salary

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.)

6. Creditable Service

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. Service Retirement

a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

(i) completion of 20 years of service

(ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member

(iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table:

Age at Retirement	Percentage of Average Salary Group 1	Group 2	Group 4
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

8. Deferred Vested Retirement

a. Eligibility:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus $648.48 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. Ordinary Disability

a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55).

b. Benefit Amount:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55. If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55, he will receive not less than the superannuation allowance to which he is entitled.

11. Survivor Benefits

a. Occupational Death:

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of $250 per month to the surviving spouse, plus $120 for the first child, plus $90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of $250 per month plus $120 for the first child and $90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is $12,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

(i) Option A – Life annuity

(ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member

(iii) Option C – Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. Valuation Date

January 1, 2007.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.0% per annum.

5. Salary Scale

It is assumed that salaries including longevity will increase at of 3% per year from 2007 to 2008, 4% per year from 2009 to 2012. Starting in 2013 the annual increases will be 4.75% and 5.25% for groups 1 and 4, respectively.

6. Cost-of-Living Increases

Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and $12,000 per year.

7. Value of Investments

Assets held by the fund are valued at market value as reported by the Public Employees' Retirement Administration Commission (PERAC). Actuarial assets equal preliminary asset value plus 25% of the difference between market value and preliminary asset value. Preliminary asset value is the previous years' actuarial asset amount increased by net cash flow and expected investment income. The result must be within 20% of market value.

8. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

Service	General Employees	Police and Fire Employees
0	0.1500	0.0150
10	0.0540	0.0150
20	0.0200	0.0000
30	0.0000	0.0000

9. Annual Rate of Mortality

It is assumed that both pre-retirement and post retirement mortality are represented by the RP-2000 Mortality Table for males and females. Mortality for disabled members is represented by the RP-2000 Mortality Table set forward two years for all disabled members.

10. Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages:

Age	Male General Employees	Female General Employees	Male and Female Police and Fire Employees
50	0.0100	0.0150	0.02000
51	0.0100	0.0150	0.02000
52	0.0100	0.0200	0.02000
53	0.0100	0.0250	0.05000
54	0.0200	0.0250	0.07500
55	0.0200	0.0550	0.15000
56	0.0250	0.0650	0.10000
57	0.0250	0.0650	0.10000
58	0.0500	0.0650	0.10000
59	0.0650	0.0650	0.15000
60	0.1200	0.0500	0.20000
61	0.2000	0.1300	0.20000
62	0.3000	0.1500	0.25000
63	0.2500	0.1250	0.25000
64	0.2200	0.1800	0.30000
65	0.4000	0.1500	1.00000
66	0.2500	0.2000	1.00000
67	0.2500	0.2000	1.00000
68	0.3000	0.2500	1.00000
69	0.3000	0.2000	1.00000
70	1.0000	1.0000	1.00000

11. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

Attained Age	General Employees	Police and Fire Employees
20	0.0001	0.0010
30	0.0003	0.0030
40	0.0010	0.0030
50	0.0019	0.0125

In addition, it is assumed for the general employees that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

12. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

13. Administrative Expenses

No provision is made for anticipated administrative expenses.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. Actuarial Accrued Liability

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the City of Newton Retirement System contributing as of January 1, 2007, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

Buck Consultants, LLC

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Daniel W. Sherman, ASA, MAAA
Enrolled Actuary No. 05-4086

July 2007

BREAKOUTS

Breakouts

Code	Department	Participants	Payroll	Normal Cost	Amortization of Unfunded Liability	FYE 2009 Appropriation
001	M.I.S.	10	$ 687,528	$ 25,905	$ 81,416	$ 107,321
002	Personnel	8	506,795	19,095	54,978	74,073
003	Human Services	8	419,145	15,793	30,642	46,435
005	Jackson Homestead	5	259,009	9,759	10,379	20,138
006	Executive	6	519,162	19,561	40,630	60,191
007	Comptroller	6	420,115	15,829	85,514	101,343
008	Retirement	2	158,434	5,970	29,666	35,636
009	Assessing	15	977,684	36,838	134,074	170,912
010	Purchasing	8	389,948	14,693	16,643	31,336
011	Treasury	10	516,175	19,449	43,088	62,537
012	Law	10	795,937	29,990	121,195	151,185
013	City Clerk	4	169,689	6,394	27,370	33,764
014	Clerk of the Board	5	273,672	10,312	49,636	59,948
015	Board of Aldermen	19	185,250	6,980	21,316	28,296
016	Building (Group 1)	21	1,173,158	44,203	237,633	281,836
016	Building (Group 2 & 4)	3	140,898	6,602	17,678	24,280
017	Elections	5	242,761	9,147	39,898	49,045
018	Planning	13	792,202	29,849	87,992	117,841
018F	Community Development	15	899,992	33,911	130,813	164,724
018P	Community Preservation	1	49,473	1,864	301	2,165
019	Fire (Group 1)	1	55,259	2,082	3,768	5,850
019	Fire (Group 2 & 4)	181	10,872,784	509,433	1,794,123	2,303,556

Breakouts

Code	Department	Participants	Payroll	Normal Cost	Amortization of Unfunded Liability	FYE 2009 Appropriation
019A	Fire - Civilian Personnel	5	$ 264,760	$ 9,976	$ 54,918	$ 64,894
020	Police (Group 1)	1	49,221	1,855	870	2,725
020	Police (Group 2 & 4)	144	10,081,511	472,359	1,792,805	2,265,164
020A	Police - Civilian Personnel (Group 1)	29	1,427,921	53,802	150,538	204,340
021	Police School Traffic Supervisors	19	500,137	18,845	120,451	139,296
023	Inspectional Services (Group 1)	9	580,187	21,861	66,134	87,995
023	Inspectional Services (Group 2 & 4)	2	127,578	5,978	32,391	38,369
025	Health	41	1,889,290	71,186	183,357	254,543
026	Veterans	3	189,501	7,140	31,137	38,277
027	Library	66	2,900,053	109,270	464,049	573,319
028	School Custodian	85	3,950,406	148,846	571,132	719,978
029	School Cafeteria	76	1,204,472	45,383	118,926	164,309
030	School Teacher Aides	462	11,672,525	439,804	483,940	923,744
031	School Clerical	119	6,143,560	231,482	802,278	1,033,760
031A	School Committee	3	14,625	551	1,774	2,325
032	Recreation	35	1,870,893	70,493	435,683	506,176
032A	Recreation - Judy Anderson	1	47,169	1,777	8,267	10,044
033	Engineering	16	1,059,760	39,930	126,414	166,344
034	Public Works	127	5,815,049	219,104	805,703	1,024,807
034A	Storm Water Management	5	235,750	8,885	40,447	49,332
035	Water/Sewer	16	821,822	30,965	78,823	109,788
035S	Sewer Personnel	21	892,710	33,636	156,084	189,720
035W	Water Personnel	22	928,705	34,992	145,659	180,651
036	Newton Housing Authority	19	1,024,590	38,605	122,718	161,323
	TOTAL	1,682	$ 74,197,265	$ 2,990,384	$ 9,853,251	$ 12,843,635