

**OFFICE OF THE
TOWN MANAGER**



Richard D. Carney
Municipal Office Building
100 Maple Avenue
Voice: 508-841-8508
Fax: 508-842-0587
dmorgado@th.ci.shrewsbury.ma.us

Town of Shrewsbury
MASSACHUSETTS 01545-5398

June 2, 2008

To: Board of Selectmen
Finance Committee

From: Daniel J. Morgado

Re: Retirement Valuation Study

Attached is the most valuation report recently received by the Retirement Board. Our funding ratio has increased from 71.3% to 77.0%.

Due to an improvement in the funding ratio it is possible to reduce the FY 2010 appropriation and still meet the 2022 funding goal. My recommendation is that we level fund the appropriation in FY 2010 placing additional funding into the system in the event the 1/1/2010 valuation realizes any erosion which in turn would cause for the FY 2011 appropriation to increase dramatically.

Ms. Thompson and I are available to answer any questions.

Cc Mary Thompson

**Shrewsbury Retirement System
as of January 1, 2008
Primary Results Comparison**

	January 1, 2006	January 1, 2008	Change as a Percent (Annualized)	FY 2010
Actives	615	648	2.6%	
Retirees and Beneficiaries	195	191	-1.0%	
Inactives (Refunds)	137	112	-9.6%	
Disabled	30	30	0.0%	
Total	977	981	0.2%	
Total Payroll	19,896,839	22,402,987	6.1%	23,411,121
Average Annual Salary	32,353	34,573	3.4%	
Average Past Service	9.5	9.7		
Average Attained Age	44.7	44.5		
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Employee Normal Cost	1,586,468	1,819,080	7.1%	1,930,266
% of Payroll	8.0%	8.1%		8.2%
Employer Normal Cost	873,568	946,660	4.1%	959,932
% of Payroll	4.4%	4.2%		4.1%
Administrative Expense	85,000	100,000	8.5%	104,500
% of Payroll	0.4%	0.4%		0.4%
Total Normal Cost	2,545,036	2,865,740	6.1%	2,994,698
% of Payroll	12.8%	12.8%		12.8%
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Total Actuarial Accrued Liability	75,979,303	85,256,692	5.9%	
Assets - Market Value	54,782,535	67,257,220	10.8%	
Assets - Actuarial Value	54,147,807	65,665,411	10.1%	
Funded Ratio	71.3%	77.0%	4.0%	
<i>Market Based</i>	72.1%	78.9%	4.6%	
Total Unfunded Accrued Liability	21,831,496	19,591,281	-5.3%	
Expected Unfunded Accrued Liability		22,212,082		
(Gain)/Loss		(2,620,801)		
Asset (Gain)/Loss		(1,691,701)		
Liability (Gain)/Loss		(929,100)		
Salary Increases		(1,302,488)		
New Participants		954,065		
Active - Retirements		(1,106,820)		
Active - Terminations		(103,907)		
Active - Mortality		(69,280)		
Active - Disabilities		153,724		
Inactive - Mortality and data adjustments		416,206		
Other, including data changes, service purchases, etc.		129,400		

**Shrewsbury Retirement System
as of
January 1, 2008
Analysis of Funding Alternatives**

	<u>FY 2009</u>	<u>FY 2010</u>
Employer Appropriations under current funding schedule	\$3,119,214	\$3,231,124
As a percent of pay	14.4%	14.2%
<u>Option A</u>		
Employer Normal Cost	\$1,046,660	\$1,064,432
Total Unfunded Accrued Liabilities	\$19,591,281	
Prior Active unfunded accrued liability	22,212,082	
14 years remaining as of January 1, 2008 (2022)		
8.500% interest and 4.5% increasing payments	2,002,310	2,092,414
Unfunded liability for current (gains)/losses	(2,620,801)	
14 years remaining as of January 1, 2008 (2022)		
8.500% interest and 4.5% increasing payments	(236,252)	(246,884)
Total Required Employer Appropriations	2,812,717	2,909,962
with interest adjustment for the complete contribution on July 1.	2,949,178	3,051,140
As a percent of pay	13.2%	13.0%
<i>If FY 2009 appropriation unchanged:</i>	3,119,214	3,033,535
<u>Option B</u>		
Employer Normal Cost	\$1,046,660	\$1,064,432
Total Unfunded Accrued Liabilities	\$19,591,281	
Total unfunded accrued liability	19,591,281	
14 years remaining as of January 1, 2008 (2022)		
8.500% interest and 2.5% increasing payments	1,973,167	2,022,496
Total Required Employer Appropriations	3,019,827	3,086,928
with interest adjustment for the complete contribution on July 1.	3,166,335	3,236,691
As a percent of pay	14.1%	13.8%
<i>If FY 2009 appropriation unchanged:</i>	3,119,214	3,242,101

Shrewsbury Retirement System
as of
January 1, 2008
Analysis of Funding Alternatives

	<u>FY 2009</u>	<u>FY 2010</u>
Employer Appropriations under current funding schedule	\$3,119,214	\$3,231,124
As a percent of pay	14.4%	14.2%
 <u>Option C</u>		
Employer Normal Cost	\$1,046,660	\$1,064,432
Total Unfunded Accrued Liabilities	\$19,591,281	
Initial unfunded accrued liability	19,591,281	
13 years remaining as of January 1, 2008 (2021)		
8.500% interest and 4.5% increasing payments	1,869,473	1,953,599
Total Required Employer Appropriations	2,916,133	3,018,031
with interest adjustment for the complete contribution on July 1.	3,057,611	3,164,452
As a percent of pay	13.6%	13.5%
<i>If FY 2009 appropriation unchanged:</i>	3,119,214	3,157,662
 <u>Option D</u>		
Employer Normal Cost	\$1,046,660	\$1,064,432
Total Unfunded Accrued Liabilities	\$19,591,281	
Initial unfunded accrued liability	19,591,281	
12 years remaining as of January 1, 2008 (2020)		
8.500% interest and 4.5% increasing payments	1,990,493	2,080,065
Total Required Employer Appropriations	3,037,153	3,144,497
with interest adjustment for the complete contribution on July 1.	3,184,502	3,297,053
As a percent of pay	14.2%	14.1%
<i>If FY 2009 appropriation unchanged:</i>	3,119,214	3,304,769

Actuarial Value of Assets

The actuarial value of assets is determined by projecting the market value of assets as of the beginning of the prior plan year with the assumed rate of return during that year (8.5%) and accounting for deposits and disbursements with interest at the assumed rate of return. An adjustment is then applied to recognize the difference between the actual investment return and expected return over a five year period. This preliminary actuarial value is not allowed to differ from the market value of assets by more than 10%. The calculation of the actuarial value of assets as of January 1, 2008 is presented in Table V.

Table V

	<u>January 1, 2008</u>
(1) Market value at January 1, 2007	\$61,142,741
(2) 2007 Contributions	\$5,368,806
(3) 2007 Payments	(\$4,921,131)
(4) Net interest adjustment at 8.5% on (1), (2), and (3) to December 31, 2007	\$5,216,159
(5) Expected market value on January 1, 2008	\$66,806,575
(1) + (2) + (3) + (4)	
(6) Actual market value on January 1, 2008	\$67,257,220
(7) 2007 (Gain) / Loss	(\$450,645)
(8) 80% of 2007 (Gain) / Loss	(\$360,516)
(9) 2006 (Gain) / Loss	(\$1,927,585)
(10) 60% of 2006 (Gain) / Loss	(\$1,156,551)
(11) 2005 (Gain) / Loss	\$236,959
(12) 40% of 2005 (Gain) / Loss	\$94,783
(13) 2004 (Gain) / Loss	(\$847,628)
(14) 20% of 2004 (Gain) / Loss	(\$169,526)
(15) Actuarial value on January 1, 2008, (6) + (8) + (10) + (12) + (14) but not less than 90% nor greater than 110% of (6)	\$65,665,411 \$65,665,411
(16) Ratio of actuarial value to market value	97.63%
(17) Actuarial Value Return for 2006	8.63%
(18) Actuarial Value Return for 2007	11.26%
(19) Market Value Return for 2006	12.03%
(20) Market Value Return for 2007	9.23%

Town of Shrewsbury Retirement System

Asset Values

