

JUNE 30, 2012
POST RETIREMENT BENEFITS ANALYSIS
OF
THE TOWN OF SHREWSBURY

February 2013

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SECTION I - OVERVIEW

The Town of Shrewsbury has engaged Sherman Actuarial Services to prepare an actuarial valuation of their post-retirement benefits program as of June 30, 2012. This valuation was performed using employee census data, enrollment data, claims, premiums, participant contributions and plan provision information provided by personnel of the Town of Shrewsbury. SAS did not audit these data, although they were reviewed for reasonableness. The results of the valuation are dependent on the accuracy of the data.

The purposes of the valuation are to analyze the current funded position of the Town's post-retirement benefits program, determine the level of contributions necessary to assure sound funding and provide reporting and disclosure information for financial statements, governmental agencies and other interested parties. This valuation report contains information required by the Government Accounting Standards Board's Statements Nos. 43 and 45, respectively entitled "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans" and "Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions." Liabilities have been determined based on a 4% discount rate. According to GASB principles, if the benefits are not pre-funded, the rate earned by the General Asset Account must be used. To estimate that impact the effect of fully prefunding the obligation, we have used an alternative discount rate of 8%. Since they are on a prefunding approach, the Light and Cable disclosures and forecasts are based on an 8% discount rate

Section II provides a summary of the principal valuation results. Section V provides a projection of funding amounts.

This report is based on the participant data as of June 30, 2012, the plan provisions and the health plans offered as of July 1, 2012.

The actuarial assumptions were modified for the 2012 actuarial valuation. The mortality table was changed to reflect expected improvements. The healthcare trend rate beyond 2016 was lowered to 4.5%.

While the actuary believes that the assumptions are reasonable for financial reporting purposes, it should be understood that there is a range of assumptions that could be deemed reasonable that would yield different results. Moreover, while the actuary considers the assumption set to be reasonable based on prior plan experience, it should be understood that future plan experience may differ considerably from what has been assumed.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the pension area. Based on over twenty years of performing FAS 106 valuations of similar complexity, Mr. Sherman is qualified by experience in retiree medical valuation. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The costs and actuarial exhibits presented in this report have been prepared in accordance with Generally Accepted Accounting Practices and the requirements of GASB 45. I am available to answer questions about this report.

Respectfully Submitted,

SHERMAN ACTUARIAL SERVICES, LLC

Daniel Sherman, ASA, MAAA, EA
CEO

Date

SECTION II – REQUIRED INFORMATION

	Pay-as-you-go 4%	Full prefunding 8%	Full prefunding 8%
	June 30, 2012	June 30, 2012	June 30, 2012
a) Actuarial valuation date	June 30, 2012	June 30, 2012	June 30, 2012
b) Actuarial Value of Assets	\$ 187,844	\$ 187,844	\$ 1,013,475
c) Actuarial Accrued Liability			
Active participants	\$ 39,769,509	\$ 17,723,890	\$ 1,658,294
Retired participants	28,304,897	19,168,434	1,664,793
Total AAL	<u>\$ 68,074,406</u>	<u>\$ 36,892,324</u>	<u>\$ 3,323,087</u>
d) Unfunded Actuarial Liability "UAL" [c - b]	\$ 67,886,562	\$ 36,704,480	\$ 2,309,612
e) Funded ratio [b / c]	0.3%	0.5%	30.5%
f) Annual covered payroll	\$ 54,804,649	\$ 54,804,649	\$ 4,809,897
g) UAL as percentage of covered payroll	123.9%	67.0%	48.0%
h) Normal Cost for fiscal year 2012	\$ 4,042,710	\$ 1,539,949	\$ 78,022
i) Amortization of UAL for fiscal year 2012 *	\$ 2,262,885	\$ 2,005,999	\$ 234,869
j) Interest to the middle of the fiscal year	\$ 0	\$ 0	\$ 0
k) Annual Required Contribution "ARC" for fiscal year 2012 [h + i + j]	\$ 6,305,595	\$ 3,545,948	\$ 312,891
l) Expected claims cost	\$ 1,962,351	\$ 1,962,351	\$ 198,703

* 30-year amortization, increasing 4% per year for the Town

12-year amortization, increasing 4% per year for Light and Cable

SECTION III - MEMBERSHIP DATA AND MEDICAL PREMIUM

Monthly Premiums effective July 1, 2012

Health benefits are available to employees and retirees through a number of plans.

Plan	Gross Premium	Cost Sharing
BCBS EPO (individual)	\$603.00	60/40
BCBS EPO (family)	\$1,620.00	60/40
Fallon Senior Plan (individual)	\$267.00	75/25
Fallon Directcare (individual)	\$485.00	78/22
Fallon Directcare (family)	\$1,305.00	78/22
Fallon Selectcare (individual)	\$521.00	73/27
Fallon Selectcare (family)	\$1,404.00	73/27
Harvard Pilgram EPO (individual)	\$586.00	60/40
Harvard Pilgram EPO (family)	\$1,529.00	60/40
Harvard Pilgram Medicare Enhanced (individual)	\$378.00	50/50
Harvard Pilgram PPO (individual)	\$1,562.00	50/50
Harvard Pilgram PPO (family)	\$3,469.00	50/50
BCBS Managed Blue (individual)	\$402.00	60/40
BCBS Managed Blue (family)	\$804.00	60/40
Medicare HMO Blue (individual)		
Medex 3 (individual)	\$424.00	50/50
Medex 3 (family)	\$848.00	50/50
Tufts Medicare Plus (individual)	\$317.00	60/40
Tufts POS (individual)	\$1,562.00	50/50
Tufts POS (family)	\$3,469.00	50/50
Tufts Navigator (individual)	\$620.00	60/40
Tufts Navigator (family)	\$1,623.00	60/40
Tufts Medicare Preferred (individual)	\$226.00	75/25
Tufts Medicare Preferred (family)	\$226.00	75/25

SECTION III - MEMBERSHIP DATA AND DEPARTMENT RESULTS

Number of Employees	Public Buildings	Sewer	Water	Electric	CATV	School	All Others	Total
Actives	19	4	12	32	30	667	182	946
Retired	21	2	12	27	6	348	120	536
Total	40	6	24	59	36	1,015	302	1,482
Accrued Liability	@ 4%							
Active	1,317,641	342,520	1,051,164	2,098,754	1,343,780	25,681,249	11,376,935	43,212,043
Retired	1,673,550	32,680	643,889	1,880,851	527,983	15,821,700	10,133,078	30,713,731
Total	2,991,191	375,200	1,695,053	3,979,605	1,871,763	41,502,949	21,510,013	73,925,774
Assets	8,254	1,035	4,677	993,694	367,986	114,523	59,355	1,549,524
Unfunded Accrued Liability	2,982,937	374,165	1,690,376	2,985,911	1,503,777	41,388,426	21,450,658	72,376,250
Annual Required Contribution								
Normal Cost with interest	38,250	11,082	9,411	90,789	112,296	3,191,566	792,401	4,245,795
Amortization of UAL with interest	99,431	12,472	56,346	248,826	125,315	1,379,614	715,022	2,637,026
Total - FYE12	137,681	23,554	65,757	339,615	237,611	4,571,180	1,507,423	6,882,821
Expected Claims Costs	124,980	3,575	56,267	143,248	45,962	1,139,787	647,235	2,161,054
Accrued Liability	@ 8%							
Active	719,877	167,573	539,175	1,062,507	595,787	10,924,017	5,373,248	19,382,184
Retired	1,139,682	26,232	456,400	1,304,494	360,299	10,883,592	6,662,528	20,833,227
Total	1,859,559	193,805	995,575	2,367,001	956,086	21,807,609	12,035,776	40,215,411
Assets	9,468	987	5,069	993,694	367,986	111,037	61,282	1,549,524
Unfunded Accrued Liability	1,850,091	192,818	990,506	1,373,307	588,100	21,696,572	11,974,494	38,665,887
Annual Required Contribution								
Normal Cost with interest	16,740	4,593	3,902	36,083	41,939	1,227,707	208,985	1,539,949
Amortization of UAL with interest	101,112	10,538	54,134	139,654	59,805	1,185,776	654,439	2,005,999
Total - FYE12	117,852	15,131	58,036	175,737	101,744	2,413,483	863,424	3,545,948
Expected Claims Costs	124,980	3,575	56,267	143,248	45,962	1,139,787	647,235	2,161,054

SECTION IV – REQUIRED SUPPLEMENTARY INFORMATION

TOWN - SCHEDULE OF FUNDING PROGRESS - 4.0%

Actuarial Valuation Date	(a) Actuarial Value of Assets	(b) Actuarial Accrued Liability (AAL)	(b) - (a) Unfunded AAL (UAL)	(a) / (b) Funded Ratio	Covered Payroll	[(b)-(a)] / (c) UAL as Percentage of Covered Payroll
July 1, 2007	0	72,976,092	72,976,092	0.00%	52,977,722	137.7%
June 30, 2010	0	89,913,036	89,913,036	0.00%	58,901,418	152.7%
June 30, 2012	187,844	68,074,406	67,886,562	0.28%	54,804,649	123.9%

LIGHT - SCHEDULE OF FUNDING PROGRESS - 8.0%

Actuarial Valuation Date	(a) Actuarial Value of Assets	(b) Actuarial Accrued Liability (AAL)	(b) - (a) Unfunded AAL (UAL)	(a) / (b) Funded Ratio	Covered Payroll	[(b)-(a)] / (c) UAL as Percentage of Covered Payroll
December 31, 2012	993,694	2,367,001	1,373,307	41.98%	2,669,154	51.5%

CABLE - SCHEDULE OF FUNDING PROGRESS - 8.0%

Actuarial Valuation Date	(a) Actuarial Value of Assets	(b) Actuarial Accrued Liability (AAL)	(b) - (a) Unfunded AAL (UAL)	(a) / (b) Funded Ratio	Covered Payroll	[(b)-(a)] / (c) UAL as Percentage of Covered Payroll
December 31, 2012	367,986	956,086	588,100	38.49%	2,140,743	27.5%

Prior to 2012, the discount rate was 3.5%

SECTION V – NET OPEB OBLIGATION

GASB Statement No. 45 requires the development of Annual OPEB Cost and Net OPEB Obligation (NOO). This development is shown in the following table.

Town

Year Ending June 30	Annual Required Contribution	Interest on NOO	Amortization of NOO	Annual OPEB Cost (1)+(2)-(3)	Contribution	Change in NOO (4)-(5)	NOO Balance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2009	6,699,898	0	0	6,699,898	1,503,566	5,196,332	5,196,332
2010	7,210,567	181,872	150,149	7,178,844	1,903,118	5,275,726	10,472,058
2011	7,273,809	366,522	302,591	7,209,878	1,747,999	5,461,879	15,933,937
2012	6,282,041	557,688	460,413	6,379,316	2,157,560	4,221,756	20,155,693
2013	6,553,481	806,228	671,856	6,687,853			

Sewer

Year Ending June 30	Annual Required Contribution	Interest on NOO	Amortization of NOO	Annual OPEB Cost (1)+(2)-(3)	Contribution	Change in NOO (4)-(5)	NOO Balance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2009	21,451	0	0	21,451	4,763	16,688	16,688
2010	30,635	584	482	30,533	9,016	21,517	38,205
2011	28,509	1,337	1,104	28,276	8,652	19,624	57,829
2012	23,554	2,024	1,671	23,907	4,284	19,623	77,452
2013	24,552	3,098	2,582	25,068			

Light

Year Ending December 31	Annual Required Contribution	Interest on NOO	Amortization of NOO	Annual OPEB Cost (1)+(2)-(3)	Contribution	Change in NOO (4)-(5)	NOO Balance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2009	222,113	0	0	222,113	111,263	110,850	110,850
2010	191,782	3,880	3,203	191,105	71,874	119,231	230,081
2011	194,643	8,053	6,648	193,238	77,770	115,468	345,549
2012	175,737	12,094	9,985	177,846	350,053	(172,207)	173,342
2013	182,947	13,867	17,627	179,187			

SECTION V – NET OPEB OBLIGATION

Cable

Year Ending December 31	Annual Required Contribution	Interest on NOO	Amortization of NOO	Annual OPEB Cost (1)+(2)-(3)	Contribution	Change in NOO (4)-(5)	NOO Balance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2009	191,135	0	0	191,135	13,129	178,006	178,006
2010	192,873	6,230	5,144	191,787	4,938	186,849	364,855
2011	192,888	12,770	10,543	190,661	7,257	183,404	548,259
2012	101,744	19,189	15,842	105,091	151,214	(46,123)	502,136
2013	106,023	40,171	51,063	95,131			

Total

Year Ending	Annual Required Contribution	Interest on NOO	Amortization of NOO	Annual OPEB Cost (1)+(2)-(3)	Contribution	Change in NOO (4)-(5)	NOO Balance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2009	7,134,597	0	0	7,134,597	1,632,721	5,501,876	5,501,876
2010	7,625,857	192,566	158,978	7,592,269	1,988,946	5,603,323	11,105,199
2011	7,689,849	388,682	320,886	7,622,053	1,841,678	5,780,375	16,885,574
2012	6,583,076	590,995	487,911	6,686,160	2,663,111	4,023,049	20,908,623
2013	6,867,002	863,364	743,128	6,987,238	0	0	0

SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

The Government Accounting Standards Board's Statement No. 45 "Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions" outlines various requirements of a funding schedule that will amortize the unfunded actuarial liability and cover normal costs. Amortization of the unfunded actuarial liability is to be based on a schedule that extends no longer than 30 years. The contribution towards the amortization of the unfunded actuarial liability may be made in level payments or in payments increasing at the same rate as salary increases.

In the amortization schedules shown on the following pages, the amortization of the unfunded accrued liability is increasing at 4.0% for 30 years. The normal cost is expected to increase at the same rate as the assumed ultimate health care trend rate. The contributions were computed assuming that the contribution is paid at the end of the fiscal year. Projected benefit payments/employer contributions reflect only the benefit for those individuals now employed or retired, not any future entrants. .

Paragraph 12 of GASB 45 stipulates that valuations must be performed at least biennially. The following projections are intended only to illustrate long-term implications of Full Prefunding versus Partial Prefunding.

SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

TOWN - 4%

Fiscal Year	Amortization			
<u>Ending In</u>	<u>Normal Cost</u>	<u>of UAL</u>	<u>ARC</u>	<u>Pay-as-You-Go</u>
2012	4,042,710	2,262,885	6,305,595	1,971,844
2013	4,204,418	2,474,573	6,678,991	2,090,539
2014	4,372,595	2,649,723	7,022,318	2,229,614
2015	4,547,499	2,833,004	7,380,503	2,380,728
2016	4,729,399	3,024,561	7,753,960	2,379,825
2017	4,918,575	3,230,242	8,148,817	2,516,623
2018	5,115,318	3,446,097	8,561,415	2,787,816
2019	5,319,931	3,668,139	8,988,070	2,932,132
2020	5,532,728	3,901,294	9,434,022	3,140,454
2021	5,754,037	4,144,076	9,898,113	3,338,414
2022	5,984,198	4,397,531	10,381,729	3,557,970
2023	6,223,566	4,661,650	10,885,216	3,819,641
2024	6,472,509	4,935,725	11,408,234	3,991,525
2025	6,731,409	5,223,605	11,955,014	4,171,143
2026	7,000,665	5,525,926	12,526,591	4,358,845
2027	7,280,692	5,843,353	13,124,045	4,554,993
2028	7,571,920	6,176,576	13,748,496	4,759,967
2029	7,874,797	6,526,319	14,401,116	4,974,166
2030	8,189,789	6,893,333	15,083,122	5,198,003
2031	8,517,381	7,278,404	15,795,785	5,431,914
2032	8,858,076	7,682,351	16,540,427	5,676,350
2033	9,212,399	8,106,026	17,318,425	5,931,785
2034	9,580,895	8,550,320	18,131,215	6,198,716
2035	9,964,131	9,016,159	18,980,290	6,477,658
2036	10,362,696	9,504,510	19,867,206	6,769,153
2037	10,777,204	10,016,381	20,793,585	7,073,764
2038	11,208,292	10,552,821	21,761,113	7,392,084
2039	11,656,624	11,114,924	22,771,548	7,724,728
2040	12,122,889	11,703,830	23,826,719	8,072,340
2041	12,607,805	12,320,725	24,928,530	8,435,596
2042	13,112,117	12,966,846	26,078,963	8,815,197
2043	13,636,602	13,643,482	27,280,084	9,211,881

* The contributions were computed assuming that the contribution is paid at the end of the fiscal year.

SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

TOWN – 8%

Fiscal Year	Amortization			
<u>Ending In</u>	<u>Normal Cost</u>	<u>of UAL</u>	<u>ARC</u>	<u>Pay-as-You-Go</u>
2012	1,539,949	2,005,999	3,545,948	1,971,844
2013	1,609,247	2,086,239	3,695,486	2,090,539
2014	1,681,663	2,169,689	3,851,352	2,229,614
2015	1,757,338	2,256,477	4,013,815	2,380,728
2016	1,836,418	2,346,736	4,183,154	2,379,825
2017	1,919,057	2,440,605	4,359,662	2,516,623
2018	2,005,415	2,538,229	4,543,644	2,787,816
2019	2,095,659	2,639,758	4,735,417	2,932,132
2020	2,189,964	2,745,348	4,935,312	3,140,454
2021	2,288,512	2,855,162	5,143,674	3,338,414
2022	2,391,495	2,969,368	5,360,863	3,557,970
2023	2,499,112	3,088,143	5,587,255	3,819,641
2024	2,611,572	3,211,669	5,823,241	3,991,525
2025	2,729,093	3,340,136	6,069,229	4,171,143
2026	2,851,902	3,473,741	6,325,643	4,358,845
2027	2,980,238	3,612,691	6,592,929	4,554,993
2028	3,114,349	3,757,199	6,871,548	4,759,967
2029	3,254,495	3,907,487	7,161,982	4,974,166
2030	3,400,947	4,063,786	7,464,733	5,198,003
2031	3,553,990	4,226,337	7,780,327	5,431,914
2032	3,713,920	4,395,390	8,109,310	5,676,350
2033	3,881,046	4,571,206	8,452,252	5,931,785
2034	4,055,693	4,754,054	8,809,747	6,198,716
2035	4,238,199	4,944,216	9,182,415	6,477,658
2036	4,428,918	5,141,985	9,570,903	6,769,153
2037	4,628,219	5,347,664	9,975,883	7,073,764
2038	4,836,489	5,561,571	10,398,060	7,392,084
2039	5,054,131	5,784,034	10,838,165	7,724,728
2040	5,281,567	6,015,395	11,296,962	8,072,340
2041	5,519,238	6,256,011	11,775,249	8,435,596
2042	5,767,604	-	5,767,604	8,815,197
2043	6,027,146	-	6,027,146	9,211,881

* The contributions were computed assuming that the contribution is paid at the end of the fiscal year.

SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

LIGHT – 8%

Fiscal Year		Amortization		
<u>Ending In</u>	<u>Normal Cost</u>	<u>of UAL</u>	<u>ARC</u>	<u>Pay-as-You-Go</u>
2012	36,083	139,654	175,737	143,248
2013	37,707	145,240	182,947	156,029
2014	39,404	151,050	190,454	158,355
2015	41,177	157,092	198,269	171,323
2016	43,030	163,376	206,406	197,109
2017	44,966	169,911	214,877	194,779
2018	46,989	176,707	223,696	193,320
2019	49,104	183,775	232,879	203,385
2020	51,314	191,126	242,440	199,374
2021	53,623	198,771	252,394	202,620
2022	56,036	206,722	262,758	210,903
2023	58,558	214,991	273,549	221,752
2024	61,193	-	61,193	231,730
2025	63,947	-	63,947	242,158
2026	66,825	-	66,825	253,055
2027	69,832	-	69,832	264,443
2028	72,974	-	72,974	276,343
2029	76,258	-	76,258	288,778
2030	79,690	-	79,690	301,773
2031	83,276	-	83,276	315,353
2032	87,023	-	87,023	329,544
2033	90,939	-	90,939	344,373
2034	95,031	-	95,031	359,870
2035	99,307	-	99,307	376,064
2036	103,776	-	103,776	392,987
2037	108,446	-	108,446	410,672
2038	113,326	-	113,326	429,152
2039	118,426	-	118,426	448,464
2040	123,755	-	123,755	468,645
2041	129,324	-	129,324	489,734
2042	135,144	-	135,144	511,772
2043	141,225	-	141,225	534,801

* The contributions were computed assuming that the contribution is paid at the middle of the fiscal year.

SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

CABLE – 8%

Fiscal Year		Amortization		
<u>Ending In</u>	<u>Normal Cost</u>	<u>of UAL</u>	<u>ARC</u>	<u>Pay-as-You-Go</u>
2012	41,939	59,805	101,744	45,961
2013	43,826	62,197	106,023	44,325
2014	45,798	64,685	110,483	49,104
2015	47,859	67,272	115,131	46,247
2016	50,013	69,963	119,976	55,178
2017	52,264	72,762	125,026	60,977
2018	54,616	75,672	130,288	58,664
2019	57,074	78,699	135,773	71,778
2020	59,642	81,847	141,489	82,200
2021	62,326	85,121	147,447	86,315
2022	65,131	88,526	153,657	94,122
2023	68,062	92,067	160,129	104,422
2024	71,125	-	71,125	109,121
2025	74,326	-	74,326	114,032
2026	77,671	-	77,671	119,163
2027	81,166	-	81,166	124,525
2028	84,818	-	84,818	130,129
2029	88,635	-	88,635	135,985
2030	92,624	-	92,624	142,104
2031	96,792	-	96,792	148,499
2032	101,148	-	101,148	155,181
2033	105,700	-	105,700	162,164
2034	110,457	-	110,457	169,462
2035	115,428	-	115,428	177,088
2036	120,622	-	120,622	185,057
2037	126,050	-	126,050	193,384
2038	131,722	-	131,722	202,086
2039	137,649	-	137,649	211,180
2040	143,843	-	143,843	220,683
2041	150,316	-	150,316	230,614
2042	157,080	-	157,080	240,992
2043	164,149	-	164,149	251,836

* The contributions were computed assuming that the contribution is paid at the middle of the fiscal year.

SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS

TOWN OF SHREWSBURY, ALL GROUPS

- Medical Plan Selection:*** Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65. At age 65, they are assumed to switch to a blend of Medicare plans similar to the current blend of Medicare-eligible retirees.
- Current retirees over age 65 remain in their current medical plan until death.
- Post-65 payments for future retirees: Similar to the pre-65 payments, a weighted average is used, but only Medicare plans are considered because of the adoption of Section 18 of MGL Chapter 32B.
- Spouse's age:*** Husbands are assumed to be 3 years older than their wives.
- Marital status:*** 65% of employees are assumed to have a covered spouse at retirement.
- Age-based Morbidity:*** Per capita costs are adjusted to reflect expected cost increases related to age. The increase in the net incurred claims was assumed to be:

<u>Age</u>	<u>Annual Increase</u>
49 and below	2.6%
50-54	3.2%
55-59	3.4%
60-64	3.7%
65-69	3.2%
70-74	2.4%
75-79	1.8%
80 and over	0.0%

- Pre-Age 65 Retirees:*** Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65. Current active employees who are assumed to retire prior to age 65 are valued with a weighted-average premium. This weighted-average premium is based on the medical plan coverage of current retirees under age 65. Age weighting is not used for teachers.

Post-Age 65 Retirees:

Current retirees over age 65 remain in their current medical plan until death for purposes of measuring their contributions. It is assumed that future retirees are Medicare eligible. It is furthermore assumed that all current retirees over 65 will participate in the Medicare Supplement plan in the same proportion as current retirees over 65. Per capita costs were developed from the monthly costs. Amounts to be received in the future for the Medicare Part D Retiree Drug Subsidy are not reflected in the valuation.

Termination Benefit:

75% of current active teachers and 75% of current active non-teachers over age 50 with at least 10 years of service are expected to elect medical coverage starting at age 65.

Medical Plan Costs:

The estimated gross per capita incurred claim costs for 2012-13 at age 64 and 65 are \$12,374 and \$3,423, respectively. Medicare eligible employees' per capita claims costs at age 65 is \$3,072.

It is assumed that future retirees participate in the same manner as current retirees. Employee cost sharing is based on current rates. The cost sharing varies by medical plan. Future cost sharing is based on the weighted average of the current cost sharing of retirees and beneficiaries.

SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS

GROUPS 1 AND 2 (NON-TEACHERS)

SEPARATIONS FROM ACTIVE SERVICE: Teacher separations are based on the same rates used by the Massachusetts Teachers Retirement Board. School department participants not in the Shrewsbury Retirement System were assumed to be Teachers.

Representative values of the assumed annual rates of withdrawal and vesting, disability, death and service retirement are as follows for non-Teachers:

Age	Disability	Service Retirement		Years of Service	Rates of Withdrawal
		Male	Female		
25	.0002			0	.150
30	.0003			1	.120
35	.0006			2	.100
40	.0010			3	.090
45	.0015			4	.080
50	.0019	.01	.015	5	.076
55	.0024	.02	.055	10	.054
60	.0028	.12	.050	15	.033
62	.0030	.30	.150	20	.022
65	.0030	.40	.150	25	.010
69		.30	.200	30+	.000

Mortality: 2008 IRS Static Mortality. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS
GROUPS 1 AND 2 (TEACHERS)

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, disability, death and service retirement are as follows:

Age	Disability	Years of Service	Rates of Withdrawal
25	.0002	0	.150
30	.0003	1	.120
35	.0006	2	.100
40	.0010	3	.090
45	.0015	4	.080
50	.0019	5	.076
55	.0024	10	.054
60	.0028	15	.033
62	.0030	20	.020
65	.0030	25	.010
69		30+	.000

Age	Male Service Retirement		Female Service Retirement	
	<20	20+	<20	20+
50	0.00	0.01	0.00	0.01
55	0.02	0.03	0.02	0.04
60	0.12	0.20	0.12	0.16
61	0.15	0.30	0.15	0.20
62	0.18	0.35	0.18	0.25
63	0.15	0.35	0.15	0.25
64	0.25	0.30	0.25	0.30
65	0.40	0.50	0.40	0.40
66	0.40	0.30	0.40	0.30
67	0.40	0.30	0.40	0.25
68	0.40	0.30	0.40	0.35
69	0.40	0.40	0.40	0.35
70	1.00	1.00	1.00	1.00

Teachers electing the increased benefit under Chapter 114 of the Acts of 2000 were assumed to have higher rates of retirement from ages 54 to 62 if their service was greater than 30 years. These rates are the same for males and females. The rate at age 54 is 0.035. The rate increases to 0.06 at age 55, 0.18 at age 56, and 0.30 at age 57. The rate for ages 58, 59, and 62 is 0.40. The rate for ages 60 and 61 is 0.35.

Mortality: The RP-2000 Combined Healthy Table with Projection Scale AA until 2007. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS

GROUP 4

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of disability, service retirement, and withdrawal are as follows:

Age	Disability	Service Retirements	Years of Service	Rates of Withdrawal
25	0.20%		0	15.0%
30	0.30		1	15.0
35	0.30		2	15.0
40	0.30		3	15.0
45	1.00	1.0%	4	15.0
50	1.25	2.0	5	15.0
55	1.20	15.0	6	15.0
60	0.85	20.0	7	15.0
62	0.75	25.0	8	15.0
65	0.00	100.0	9	15.0
69			10	15.0
			11+	0.0

Mortality: 2008 IRS Static Mortality. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

SCHEDULE B - SUMMARY OF PROGRAM PROVISIONS

- Eligibility:**
- Retirement:** Age 55 with 10 years of service, or 20 years of service. Eligible for immediate commencement of Medical Insurance and Life Insurance benefits.
 - Termination:** Age 50 with 10 years of service. Eligible for deferred commencement of Medical Insurance and Life Insurance benefits at age 65.
 - Disability:** Under age 55 with 10 years of service. Eligible for immediate commencement of Medical Insurance and Life Insurance benefits.
- Benefit Types:**
- Medical Insurance:** Medical and prescription drug benefits are provided to all eligible retirees through a variety of plans as summarized in Section III.
 - Life Insurance:** The Town of Shrewsbury contributes \$4.24 per month for retirees receiving life insurance.
- Duration of Benefits:** Lifetime.
- Dependent Coverage:** Spouse benefits are payable for the lifetime of the spouse.
- MGL Chapter 32B, Section 18A:** All Medicare-eligible retirees and spouses are required to transfer to a Medicare supplemental plan.
- Retiree Contributions:** Retirees pay a variable portion of their post-retirement medical costs. The percentage varies by plan. Cost sharing for widows is 50%.

SCHEDULE C – CONSIDERATION OF HEALTH CARE REFORM***Summary of Effects of Selected Provisions***

Early Retiree Reinsurance Program – Effective 6/1/2010: Due to the short-term nature of the payments expected to be received under this program, there is no impact on long-term GASB 45 liabilities.

Removal of Lifetime Maximum: This does not apply since the current medical plans have no lifetime maximums.

Medicare Advantage Plans - Effective 1/1/2011: The law provides for reductions to the amounts that would be provided to Medicare Advantage plans starting in 2011. Although Shrewsbury has two Medicare Advantage plans, the impact was deemed immaterial.

Expansion of Child Coverage to Age 26: Since few retirees cover children on retiree health plans, this provision will likely have a relatively small effect on the gross benefit cost. We have not reflected the impact of this cost.

Medicare Part D Subsidy - Shrinking Medicare Prescription Drug “Donut Hole”- Starting 1/1/2011: RDS payments are not reflected as an ongoing offsetting item in GASB 45 valuations, and so no impact is reflected.

Excise Tax on High-Cost Employer Health Plans (aka Cadillac Tax) - Effective 1/1/2018: There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. We have estimated the impact and included it in the liabilities. The liability and normal cost attributable to the Cadillac tax are \$369,629 and \$21,228, respectively for the 4% disclosures.

Other: We have not identified any other specific provision of health care reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

SCHEDULE D - GLOSSARY OF TERMS

Actuarial accrued liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of OPEB benefits and expenses which is not provided for by future Normal Costs and therefore is the value of benefits already earned.

Actuarial assumptions

Assumptions as to the occurrence of future events affecting OPEB costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided OPEB benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

Actuarial cost method

A procedure for determining the Actuarial Present Value of OPEB benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

Actuarial experience gain or loss

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Amortization (of unfunded actuarial accrued liability)

That portion of the OPEB plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability or the Unfunded Frozen Actuarial Accrued Liability.

Annual OPEB cost

An accrual-basis measure of the periodic cost of an employer's participation in a defined benefit OPEB plan.

Annual required contributions of the employer (ARC)

The employer's periodic expense to a defined benefit OPEB plan, calculated in accordance with the parameters. It is the value of the cash contributions for a funded plan and the value of the expense entry in the profit and loss section of the financial statements.

Closed amortization period (closed basis)

A specific number of years that is counted from one date and, therefore, declines to zero with the passage of time. For example, if the amortization period initially is thirty years on a closed basis, twenty-nine years remain after the first year, twenty-eight years after the second year, and so forth. In contrast, an open amortization period (open basis) is one that begins again or is recalculated at each actuarial valuation date. Within a maximum number of years specified by law or policy (for example, thirty years), the period may increase, decrease, or remain stable.

Covered payroll

Annual compensation paid to active employees covered by an OPEB plan. If employees also are covered by a pension plan, the covered payroll should include all elements included in compensation on which contributions to the pension plan are based. For example, if pension contributions are calculated on base pay including overtime, covered payroll includes overtime compensation.

Defined benefit OPEB plan

An OPEB plan having terms that specify the benefits to be provided at or after separation from employment. The benefits may be specified in dollars (for example, a flat dollar payment or an amount based on one or more factors such as age, years of service, and compensation), or as a type or level of coverage (for example, prescription drugs or a percentage of healthcare insurance premiums).

Funded ratio

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Funding policy

The program for the amounts and timing of contributions to be made by plan members, employer(s), and other contributing entities (for example, state government contributions to a local government plan) to provide the benefits specified by an OPEB plan.

Healthcare cost trend rate

The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Investment return assumption (discount rate)

The rate used to adjust a series of future payments to reflect the time value of money.

Level dollar amortization method

The amount to be amortized is divided into equal dollar amounts to be paid over a given number of years; part of each payment is interest and part is principal (similar to a mortgage payment on a building). Because payroll can be expected to increase as a result of inflation, level dollar payments generally represent a decreasing percentage of payroll; in dollars adjusted for inflation, the payments can be expected to decrease over time.

Level percentage of projected payroll amortization method

Amortization payments are calculated so that they are a constant percentage of the projected payroll of active plan members over a given number of years. The dollar amount of the payments generally will increase over time as payroll increases due to inflation; in dollars adjusted for inflation, the payments can be expected to remain level.

Net OPEB obligation

The cumulative difference since the effective date of this Statement between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt. It will be included as a balance sheet entry on the financial statements.

Normal cost

That portion of the Actuarial Present Value of OPEB benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. It is the value of benefits to be accrued in the valuation year by active employees.

OPEB-related debt

All long-term liabilities of an employer to an OPEB plan, the payment of which is not included in the annual required contributions of a sole or agent employer (ARC) or the actuarially determined required contributions of a cost-sharing employer. Payments generally are made in accordance with installment contracts that usually include interest. Examples include contractually deferred contributions and amounts assessed to an employer upon joining a multiple-employer plan.

Other postemployment benefits

Postemployment benefits other than pension benefits. Other postemployment benefits (OPEB) include postemployment healthcare benefits, regardless of the type of plan that provides them, and all postemployment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits.

Pay-as-you-go

A method of financing a OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Required supplementary information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.