



**TOWN OF SHREWSBURY
POST RETIREMENT BENEFITS PLAN**

Actuarial Valuation Report
June 30, 2014

TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page</u>
SECTION I	OVERVIEW	1
SECTION II	REQUIRED INFORMATION	3
SECTION III	MEMBERSHIP DATA AND DEPARTMENT RESULTS.....	4
SECTION IV	REQUIRED SUPPLEMENTARY INFORMATION	6
SECTION V	NET OPEB OBLIGATION.....	8
SECTION VI	SCHEDULE OF EMPLOYER CONTRIBUTIONS.....	10
SCHEDULE A	ACTUARIAL ASSUMPTIONS AND METHODS.....	15
SCHEDULE B	SUMMARY OF PROGRAM PROVISIONS	20
SCHEDULE C	CONSIDERATION OF HEALTH CARE REFORM.....	21
SCHEDULE D	GLOSSARY OF TERMS	22

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, 2014. 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, 2014, the plan provisions and the health plans offered as of July 1, 2014.

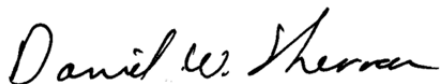
While the actuary believes that the assumptions are reasonable for financial reporting purposes, it should be understood that there is a range of assumptions that could be deemed reasonable that would yield different results. Moreover, while the actuary considers the assumption set to be reasonable based 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



January 9, 2015

Daniel Sherman, ASA, MAAA, EA
CEO

Date

SECTION II – REQUIRED INFORMATION

	Town Pay-as-you-go 4%	Town Full prefunding 8%	Light & Cable Full prefunding 8%
a) Actuarial valuation date	June 30, 2014	June 30, 2014	June 30, 2014
b) Actuarial Value of Assets	\$ 418,528	\$ 418,528	\$ 1,669,052
c) Actuarial Accrued Liability			
Active participants	\$ 41,512,677	\$ 18,841,645	\$ 1,535,884
Retired participants	27,468,264	18,842,982	1,516,367
Total AAL	\$ 68,980,941	\$ 37,684,627	\$ 3,052,251
d) Unfunded Actuarial Liability "UAL" [c - b]	\$ 68,562,413	\$ 37,266,099	\$ 1,383,199
e) Funded ratio [b / c]	0.6%	1.1%	54.7%
f) Annual covered payroll	\$ 52,875,483	\$ 52,875,483	\$ 4,777,924
g) UAL as percentage of covered payroll	129.7%	70.5%	28.9%
h) Normal Cost for fiscal year 2014	\$ 3,863,429	\$ 1,466,092	\$ 68,866
i) Amortization of UAL for fiscal year 2014 *	\$ 2,285,414	\$ 2,036,693	\$ 162,965
j) Interest to the middle of the fiscal year	\$ 0	\$ 0	\$ 0
k) Annual Required Contribution "ARC" for fiscal year 2014 [h + i + j]	\$ 6,148,843	\$ 3,502,785	\$ 231,831
l) Expected claims cost	\$ 2,151,036	\$ 2,151,036	\$ 187,413

* 30-year amortization, increasing 4% per year for the Town
10-year amortization, increasing 4% per year for Light and Cable

SECTION III - MEMBERSHIP DATA AND MEDICAL PREMIUM

Monthly Premiums effective June 30, 2014

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

Plan	Gross Premium	Cost Sharing
BCBS Options (individual)	\$628.00	60/40
BCBS Options (family)	\$1,685.00	60/40
Fallon Senior Plan (individual)	\$278.00	75/25
Fallon Directcare (individual)	\$505.00	78/22
Fallon Directcare (family)	\$1,357.00	78/22
Fallon Selectcare (individual)	\$542.00	73/27
Fallon Selectcare (family)	\$1,460.00	73/27
Harvard Pilgram EPO (individual)	\$610.00	60/40
Harvard Pilgram EPO (family)	\$1,590.00	60/40
Harvard Pilgram Medicare Enhanced (individual)	\$328.33	50/50
Harvard Pilgram PPO (individual)	\$1,750.00	50/50
Harvard Pilgram PPO (family)	\$3,886.00	50/50
BCBS Managed Blue for Seniors (individual)	\$267.18	60/40
Medicare HMO Blue (individual)		
Medex 2 (individual)	\$311.63	50/50
Tufts Medicare Plus (individual)	\$320.00	60/40
Tufts POS (individual)	\$1,750.00	50/50
Tufts POS (family)	\$3,886.00	50/50
Tufts Navigator (individual)	\$645.00	60/40
Tufts Navigator (family)	\$1,688.00	60/40
Tufts Medicare Preferred (individual)	\$252.00	75/25

Cost Sharing for surviving spouses is 50/50.

SECTION III - MEMBERSHIP DATA AND DEPARTMENT RESULTS

Number of Employees	Public Buildings	Sewer	Water	Electric	CATV	School	All Others	Total
Actives	19	4	12	34	27	791	160	1,047
Retired	4	2	12	29	6	362	91	506
Total	23	6	24	63	33	1,153	251	1,553
Accrued Liability	@ 4%							
Active	1,235,975	255,874	924,497	1,826,155	1,328,365	29,372,300	9,724,031	44,667,197
Retired	286,664	95,295	1,486,383	1,663,823	498,261	18,726,313	6,873,609	29,630,348
Total	1,522,639	351,169	2,410,880	3,489,978	1,826,626	48,098,613	16,597,640	74,297,545
Assets	9,238	2,131	14,628	1,098,438	570,613	291,829	100,703	2,087,580
Unfunded Accrued Liability	1,513,401	349,038	2,396,252	2,391,540	1,256,013	47,806,784	16,496,937	72,209,965
Annual Required Contribution								
Normal Cost with interest	37,016	11,713	8,974	80,674	96,850	3,125,143	680,583	4,040,953
Amortization of UAL with interest	50,447	11,635	79,875	239,154	125,601	1,593,559	549,898	2,650,169
Total - FYE14	87,463	23,348	88,849	319,828	222,451	4,718,702	1,230,481	6,691,122
Expected Claims Costs	33,733	6,298	73,935	114,949	45,723	1,471,416	592,395	2,338,449
Accrued Liability	@ 8%							
Active	702,936	136,492	499,365	915,742	620,142	12,986,081	4,516,771	20,377,529
Retired	198,712	68,391	864,751	1,159,795	356,572	12,931,724	4,779,404	20,359,349
Total	901,648	204,883	1,364,116	2,075,537	976,714	25,917,805	9,296,175	40,736,878
Assets	10,014	2,275	15,150	1,098,438	570,613	287,845	103,244	2,087,580
Unfunded Accrued Liability	891,634	202,608	1,348,966	977,099	406,101	25,629,960	9,192,931	38,649,298
Annual Required Contribution								
Normal Cost with interest	16,129	4,870	3,413	30,818	38,048	1,202,376	170,438	1,466,092
Amortization of UAL with interest	48,730	11,073	73,725	115,119	47,846	1,400,747	502,419	2,036,693
Total - FYE14	64,859	15,943	77,138	145,937	85,894	2,603,123	672,857	3,502,785
Expected Claims Costs	33,733	6,298	73,935	114,949	45,723	1,471,416	592,395	2,338,449

SECTION IV – REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF FUNDING PROGRESS - 8%

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	34,641,767	34,641,767	0.00%	52,977,722	65.4%
June 30, 2010	0	42,827,747	42,827,747	0.00%	58,901,418	72.7%
June 30, 2012	187,844	36,892,324	36,704,480	0.51%	54,804,649	67.0%
June 30, 2014	418,528	37,684,627	37,266,099	1.11%	52,875,483	70.5%

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%
June 30, 2014	418,528	68,980,941	68,562,413	0.61%	52,875,483	129.7%

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%
December 31, 2014	1,098,438	2,075,537	977,099	52.92%	2,736,400	35.7%

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%
December 31, 2014	570,613	976,714	406,101	58.42%	2,041,524	19.9%

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	1,786,301	4,901,552	25,057,246
2014	6,125,495	1,002,290	835,242	6,292,543	2,171,480	4,121,063	29,178,309
2015	6,389,773	1,167,132	972,610	6,584,295	2,285,135	4,299,161	33,477,469

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	2,517	22,551	100,002
2014	23,348	4,000	3,333	24,015	6,298	17,717	117,719
2015	24,340	4,709	3,924	25,125	8,682	16,444	134,163

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	182,724	0	0	182,724	71,874	110,850	110,850
2010	197,678	3,880	3,203	197,001	77,770	119,231	230,081
2011	194,643	8,053	6,648	193,238	852,074	(658,836)	(428,755)
2012	175,737	(15,006)	(12,389)	173,120	350,053	(176,933)	(605,688)
2013	182,947	(48,455)	(61,594)	196,086	339,811	(143,725)	(749,413)
2014	145,937	(59,953)	(88,294)	174,278	124,448	49,830	(699,583)
2015	151,929	(55,967)	(89,970)	185,932	142,181	43,751	(655,833)

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	369,793	0	0	369,793	4,938	364,855	364,855
2010	192,890	12,770	10,543	190,663	7,259	183,404	548,259
2011	194,008	19,189	15,842	190,661	259,445	(68,784)	479,475
2012	101,744	16,782	13,854	104,672	151,214	(46,542)	432,933
2013	106,023	34,635	44,026	96,632	216,614	(119,982)	312,951
2014	85,894	25,036	36,871	74,059	128,602	(54,543)	258,408
2015	89,520	20,673	33,233	76,960	138,371	(61,411)	196,997

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	7,273,866	0	0	7,273,866	1,585,141	5,688,725	5,688,725
2010	7,631,770	199,106	164,377	7,597,041	1,997,163	5,599,878	11,288,603
2011	7,690,969	395,101	326,185	7,622,053	2,868,170	4,753,883	16,042,486
2012	6,583,076	561,488	463,549	6,681,015	2,663,111	4,017,904	20,060,390
2013	6,867,002	795,506	656,870	7,005,638	2,345,243	4,660,395	24,720,785
2014	6,380,674	971,373	787,152	6,564,895	2,430,828	4,134,067	28,854,853
2015	6,655,563	1,136,547	919,797	6,872,313	2,574,368	4,297,944	33,152,797

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>
2014	3,863,429	2,285,414	6,148,843	2,171,480
2015	4,017,966	2,485,207	6,503,173	2,285,135
2016	4,178,685	2,647,446	6,826,131	2,236,706
2017	4,345,832	2,823,534	7,169,366	2,352,570
2018	4,519,665	3,008,559	7,528,224	2,503,297
2019	4,700,452	3,201,905	7,902,357	2,568,353
2020	4,888,470	3,407,121	8,295,591	2,751,105
2021	5,084,009	3,620,857	8,704,866	2,876,571
2022	5,287,369	3,845,706	9,133,075	3,114,055
2023	5,498,864	4,078,506	9,577,370	3,286,305
2024	5,718,819	4,322,124	10,040,943	3,437,910
2025	5,947,572	4,578,006	10,525,578	3,676,644
2026	6,185,475	4,843,935	11,029,410	3,848,262
2027	6,432,894	5,122,963	11,555,857	4,017,655
2028	6,690,210	5,416,026	12,106,236	4,194,464
2029	6,957,818	5,723,779	12,681,597	4,387,528
2030	7,236,131	6,046,610	13,282,741	4,589,471
2031	7,525,576	6,385,194	13,910,770	4,794,004
2032	7,826,599	6,740,462	14,567,061	5,014,906
2033	8,139,663	7,112,926	15,252,589	5,246,487
2034	8,465,250	7,503,328	15,968,578	5,482,440
2035	8,803,860	7,912,677	16,716,537	5,734,514
2036	9,156,014	8,341,632	17,497,646	5,992,906
2037	9,522,255	8,791,238	18,313,493	6,262,887
2038	9,903,145	9,262,416	19,165,561	6,545,197
2039	10,299,271	9,756,121	20,055,392	6,840,254
2040	10,711,242	10,273,349	20,984,591	7,148,697
2041	11,139,692	10,815,138	21,954,830	7,471,104
2042	11,585,280	11,382,569	22,967,849	7,808,102
2043	12,048,691	11,976,768	24,025,459	8,160,405
2044	12,530,639	12,598,904	25,129,543	8,528,652
2045	13,031,865	13,250,199	26,282,064	8,913,576

* 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>
2014	1,466,092	2,036,693	3,502,785	2,171,480
2015	1,532,066	2,118,161	3,650,227	2,285,135
2016	1,601,009	2,202,887	3,803,896	2,236,706
2017	1,673,054	2,291,002	3,964,056	2,352,570
2018	1,748,341	2,382,642	4,130,983	2,503,297
2019	1,827,016	2,477,948	4,304,964	2,568,353
2020	1,909,232	2,577,066	4,486,298	2,751,105
2021	1,995,147	2,680,149	4,675,296	2,876,571
2022	2,084,929	2,787,355	4,872,284	3,114,055
2023	2,178,751	2,898,849	5,077,600	3,286,305
2024	2,276,795	3,014,803	5,291,598	3,437,910
2025	2,379,251	3,135,395	5,514,646	3,676,644
2026	2,486,317	3,260,811	5,747,128	3,848,262
2027	2,598,201	3,391,243	5,989,444	4,017,655
2028	2,715,120	3,526,893	6,242,013	4,194,464
2029	2,837,300	3,667,969	6,505,269	4,387,528
2030	2,964,979	3,814,688	6,779,667	4,589,471
2031	3,098,403	3,967,276	7,065,679	4,794,004
2032	3,237,831	4,125,967	7,363,798	5,014,906
2033	3,383,533	4,291,006	7,674,539	5,246,487
2034	3,535,792	4,462,646	7,998,438	5,482,440
2035	3,694,903	4,641,152	8,336,055	5,734,514
2036	3,861,174	4,826,798	8,687,972	5,992,906
2037	4,034,927	5,019,870	9,054,797	6,262,887
2038	4,216,499	5,220,665	9,437,164	6,545,197
2039	4,406,241	5,429,492	9,835,733	6,840,254
2040	4,604,522	5,646,672	10,251,194	7,148,697
2041	4,811,725	5,872,539	10,684,264	7,471,104
2042	5,028,253	6,107,441	11,135,694	7,808,102
2043	5,254,524	6,351,739	11,606,263	8,160,405
2044	5,490,978	-	5,490,978	8,528,652
2045	5,738,072	-	5,738,072	8,913,576

* 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>
2014	30,818	115,119	145,937	114,948
2015	32,205	119,724	151,929	132,681
2016	33,654	124,513	158,167	141,529
2017	35,168	129,494	164,662	145,313
2018	36,751	134,674	171,425	163,961
2019	38,405	140,061	178,466	172,429
2020	40,133	145,663	185,796	179,454
2021	41,939	151,490	193,429	192,905
2022	43,826	157,550	201,376	188,290
2023	45,798	163,852	209,650	200,660
2024	47,859	-	47,859	216,270
2025	50,013	-	50,013	215,924
2026	52,264	-	52,264	225,641
2027	54,616	-	54,616	235,795
2028	57,074	-	57,074	246,406
2029	59,642	-	59,642	257,494
2030	62,326	-	62,326	269,081
2031	65,131	-	65,131	281,190
2032	68,062	-	68,062	293,843
2033	71,125	-	71,125	307,066
2034	74,326	-	74,326	320,884
2035	77,671	-	77,671	335,324
2036	81,166	-	81,166	350,414
2037	84,818	-	84,818	366,182
2038	88,635	-	88,635	382,660
2039	92,624	-	92,624	399,880
2040	96,792	-	96,792	417,875
2041	101,148	-	101,148	436,679
2042	105,700	-	105,700	456,330
2043	110,457	-	110,457	476,864
2044	115,428	-	115,428	498,323
2045	120,622	-	120,622	520,748

* 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	38,048	47,846	85,894	45,723
2013	39,760	49,760	89,520	55,492
2014	41,549	51,750	93,299	53,499
2015	43,419	53,820	97,239	60,863
2016	45,373	55,973	101,346	69,812
2017	47,415	58,212	105,627	63,464
2018	49,549	60,540	110,089	75,728
2019	51,779	62,962	114,741	76,396
2020	54,109	65,480	119,589	68,006
2021	56,544	68,099	124,643	82,977
2022	59,088	-	59,088	88,281
2023	61,747	-	61,747	96,923
2024	64,526	-	64,526	101,285
2025	67,430	-	67,430	105,843
2026	70,464	-	70,464	110,606
2027	73,635	-	73,635	115,583
2028	76,949	-	76,949	120,784
2029	80,412	-	80,412	126,220
2030	84,031	-	84,031	131,899
2031	87,812	-	87,812	137,835
2032	91,764	-	91,764	144,037
2033	95,893	-	95,893	150,519
2034	100,208	-	100,208	157,293
2035	104,717	-	104,717	164,371
2036	109,429	-	109,429	171,767
2037	114,353	-	114,353	179,497
2038	119,499	-	119,499	187,574
2039	124,876	-	124,876	196,015
2040	130,495	-	130,495	204,836
2041	136,367	-	136,367	214,053
2042	142,504	-	142,504	223,686
2043	148,917	-	148,917	233,752

* 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

Interest Funded: 8.00% per year, net of investment expenses
 Unfunded: 4.00% per year, net of investment expenses

Actuarial Cost Method: Projected Unit Credit and Assets at Market Value

Medical Care Inflation:

<u>Year</u>	<u>Inflation Rate</u>
2014	6.0%
2015	5.5%
2016	5.0%
2017 & after	4.5%

Amortization period: 30-year level percent of pay assuming 4.0% increasing, closed basis for full prefunding. The amortization period is a specific number of years that is counted from one date, declining to zero with the passage of time. Under the pay-as-you-go, a 30-year open basis was used for the amortization. The amortization period is 30 years for all future valuations.

Participation: 75% of future retirees are assumed to participate in the retiree medical plan. 75% of current actives over age 50 with at least 10 years of service are expected to elect medical coverage starting at age 65. 95% of future retirees are expected to elect life insurance.

Medical Plan Costs: It is assumed that future retirees are Medicare eligible. Per capita costs were developed from the Town developed monthly costs.

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 2014-15 at age 64 and 65 are \$13,440 and \$3,634, respectively. Medicare eligible employees' per capita claims costs at age 65 is \$3,019.

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.

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.