

# Town of Belmont

**Actuarial Valuation and Review of Other  
Postemployment Benefits (OPEB) as of  
June 30, 2017 in accordance with  
GASB Statement No. 74**

The logo for Segal Consulting is a large, solid blue chevron pointing to the right. Inside the chevron, the company name "Segal Consulting" is written in white, preceded by a white stylized star icon.

✦ Segal Consulting

This report has been prepared at the request of the Town of Belmont to assist in administering the Plan. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Town of Belmont and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.  
Copyright © 2017 by The Segal Group, Inc. All rights reserved.



116 Huntington Avenue 8th Floor Boston, MA 02116-5744  
T 617.424.7300 www.segalco.com

*November 17, 2017*

*Ms. Chitra Subramanian  
Town Accountant  
Town of Belmont  
455 Concord Avenue  
Town Hall  
Belmont, MA 02478*

*Dear Ms. Subramanian:*

*We are pleased to submit this report on our actuarial valuation of postemployment welfare benefits as of June 30, 2017 under Governmental Accounting Standards Board (GASB) Statement Number 74. It establishes the liabilities of the postemployment welfare benefit plan in accordance with GASB Statement Number 74 for the fiscal year beginning July 1, 2017 and summarizes the actuarial data.*

*The actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions used in this valuation and described in Section 5, Exhibit I are reasonably related to the experience of and the expectations for the Plan. The actuarial projections are based on these assumptions and the plan of benefits as summarized in Section 5, Exhibit II.*

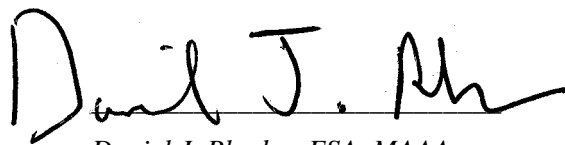
*We look forward to discussing this with you at your convenience.*

*Sincerely,*

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

By: 

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



*Daniel J. Rhodes, FSA, MAAA  
Vice President and Consulting Actuary*

SECTION 1	SECTION 2	SECTION 3	SECTION 4	SECTION 5
<b>VALUATION SUMMARY</b>	<b>VALUATION RESULTS</b>	<b>GASB NO. 74 INFORMATION - TOWN</b>	<b>GASB NO. 74 INFORMATION - LIGHT</b>	<b>SUPPORTING INFORMATION</b>
Important Information About Actuarial Valuations ..... 1	Summary of Valuation Results - Comparison of Prior Year and Current Year ..... 7	EXHIBIT 1 Plan Membership - TOWN..... 13	EXHIBIT 1 Plan Membership - LIGHT..... 21	EXHIBIT I Actuarial Assumptions and Actuarial Cost Method ..... 29
Purpose ..... 3	Summary of Valuation Results by Department – 6.50% Discount Rate ..... 8	EXHIBIT 2 Net OPEB Liability - TOWN..... 14	EXHIBIT 2 Net OPEB Liability - LIGHT..... 22	EXHIBIT II Summary of Plan ..... 41
Highlights of the Valuation ..... 3	Summary of Valuation Results by Department – 5.90% Discount Rate ..... 9	EXHIBIT 3 Determination of Discount Rate and Investment Rates of Return – TOWN ..... 16	EXHIBIT 3 Determination of Discount Rate and Investment Rates of Return – LIGHT ..... 24	EXHIBIT III Definitions of Terms..... 44
Accounting and Financial Reporting ..... 4	Funding Schedule..... 10	EXHIBIT 4 Sensitivity - TOWN ..... 17	EXHIBIT 4 Sensitivity - LIGHT ..... 25	EXHIBIT IV Accounting Requirements..... 46
Funding..... 5	Summary of Participant Data ..... 11	EXHIBIT 5 Schedule of Changes in Net OPEB Liability – Last Ten Fiscal Years - TOWN..... 18	EXHIBIT 5 Schedule of Changes in Net OPEB Liability – Last Ten Fiscal Years - LIGHT..... 26	
	Actuarial Certification..... 12	EXHIBIT 6 Schedule of Contributions – Last Ten Fiscal Years - TOWN.... 19	EXHIBIT 6 Schedule of Contributions – Last Ten Fiscal Years - LIGHT.... 27	

**IMPORTANT INFORMATION ABOUT ACTUARIAL VALUATIONS**

An actuarial valuation is an estimate of future uncertain obligations of a postretirement health plan. As such, it will never forecast the precise future stream of benefit payments. It is an estimated forecast – the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare a valuation, Segal Consulting (“Segal”) relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. For example, a plan may provide health benefits to post-65 retirees that coordinate with Medicare. If so, changes in the Medicare law or administration may change the plan’s costs without any change in the terms of the plan itself. It is important for the Town of Belmont to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the plan. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is not necessary to have perfect data for an actuarial valuation: the valuation is an estimated forecast, not a prediction. The uncertainties in other factors are such that even perfect data does not produce a “perfect” result. Notwithstanding the above, it is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** Part of the cost of a plan will be paid from existing assets – the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, provided by the Town of Belmont. Some plans include assets, such as private equity holdings, real estate, or hedge funds, that are not subject to valuation by reference to transactions in the marketplace. A snapshot as of a single date may not be an appropriate value for determining a single year’s contribution requirement, especially in volatile markets.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. To determine the future costs of benefits, Segal collects claims, premiums, and enrollment data in order to establish a baseline cost for the valuation measurement, and then develops short- and long-term health care cost rates to project increases in costs in future years. This forecast also requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year, as well as forecasts of the plan’s benefits for each of those events. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved the plan’s assets, or if there are no assets, a rate of return on the assets of the employer. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model necessarily uses approximations and estimates that may lead to significant changes in our results but will have no impact on the actual cost of the plan. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

## SECTION 1: Executive Summary for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

Given the above, the user of Segal's actuarial valuation (or other actuarial calculations) needs to keep the following in mind:

- The actuarial valuation is prepared for use by the Town of Belmont. It includes information for compliance with accounting standards. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- Sections of this report may include actuarial results that are not rounded, but that does not imply precision.
- Critical events for a plan include, but are not limited to, decisions about changes in benefits and contributions. The basis for such decisions needs to consider many factors such as the risk of changes in plan enrollment, emerging claims experience and health care cost trend, not just the current valuation results.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Town of Belmont should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the Town of Belmont upon delivery and review. The Town of Belmont should notify Segal immediately of any questions or concerns about the final content.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

## SECTION 1: Executive Summary for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

### PURPOSE

This report presents the results of our actuarial valuation of the Town of Belmont (the “Employer”) postemployment welfare benefit plan as of June 30, 2017. The results are in accordance with the Governmental Accounting Standards, which prescribe an accrual methodology for accumulating the value of other postemployment benefits (OPEB) over participants’ active working lifetimes. The accounting standard supplements cash accounting, under which the expense for postemployment benefits is equal to benefit and administrative costs paid on behalf of retirees and their dependents (*i.e.*, a pay-as-you-go basis).

### HIGHLIGHTS OF THE VALUATION

This is the first valuation of the Town of Belmont postemployment welfare benefit plan completed by Segal Consulting. The prior valuation as of June 30, 2016 was completed by KMS Actuaries, LLC. The following changes are reflected with this valuation:

- The data received for the current valuation included information on active employees and retirees with health coverage whereas data provided for the prior valuation included all active employees, regardless of health coverage, and retirees with health coverage. To account for the different data source and the decrease in covered lives, the assumption for participation in the retiree health plan was changed from 90% of active lives to 125% of covered active lives.
- Per capita health costs for the self-insured plans were based on claims data received from the carriers rather than working rates. This change reduced the over-65 liabilities.
- Effective January 1, 2018, prescription drug coverage for retirees enrolled in the Medicare Enhance plan is now provided through Aetna as a stand alone PDP on a fully-insured basis. This change lowered liabilities.
- The per capita health cost trend assumptions were updated and separate trend assumptions were applied to prescription drugs. The net effect of this change was lower liabilities.
- The salary increase assumption for all employees and the mortality assumption for Teachers were changed to match the assumptions used in the most recent actuarial valuations of the Belmont Contributory Retirement System and the Massachusetts Teachers’ Retirement System. The change in the salary increase assumption resulted in a reallocation of liability from past service to future service (a reduction in actuarial accrued liabilities and an increase in current and future normal costs) and the change in the mortality assumption for Teachers increased liabilities.
- The Medicare enrollment assumption for retirees under age 65 and active employees hired prior to 1986 was changed from 95% to 90%. This change increased liabilities.
- The discount rate used in the valuation was changed from 4.25% to a blended discount rate calculated in accordance with GASB Statement No. 74 (5.90% as of June 30, 2017 and 5.73% as of June 30, 2016) and the expected return on assets was lowered from 7.5% to 6.5%.

## SECTION 1: Executive Summary for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

For this report we have determined the liabilities and an Actuarially Determined Contribution using two discount rates - a blended discount rate of 5.90% as of June 30, 2017 and a funding discount rate of 6.50%. The funding discount rate is equal to the expected return on assets of 6.50%. The blended discount rate is the rate determined in accordance GASB Statement No. 74 based on the assets in the OPEB Trust and the Town's funding policy and the June 30, 2017 Bond Buyer's 20 bond index of 3.58%. The blending is based on the sufficiency of projected assets to make projected benefit payments and reflects the Town's funding policy to contribute approximately \$250,000 per year to the OPEB Trust through fiscal 2029 and to redirect the amount paid to the Retirement System toward the unfunded liability (\$12,000,000) beginning in fiscal 2030 when the Retirement System is projected to be fully funded.

As of June 30, 2017, the Town of Belmont has \$3,105,259 in an OPEB Trust. A reconciliation of the assets from June 30, 2016 to June 30, 2017 is shown below:

Reconciliation of OPEB Trust Fund	
	Total
Balance as of June 30, 2016	\$2,574,117
Fiscal year 2017 OPEB contributions	343,682
Net investment income	<u>187,460</u>
Balance as of June 30, 2017	\$3,105,259

### ACCOUNTING AND FINANCIAL REPORTING

- The **Net OPEB liability** (NOL) as of June 30, 2017 for the Town is \$92,800,012 and \$3,897,572 for the Light Department.
  - The Net OPEB Liability (NOL) for the Town is equal to the difference between the Total OPEB Liability (TOL) and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets. The TOL as of June 30, 2017 is \$95,663,919 and the Plan Fiduciary Net Position as of June 30, 2017 is \$2,863,907, resulting in an NOL of \$92,800,012.
  - The Net OPEB Liability (NOL) for the Light Department is equal to the difference between the Total OPEB Liability (TOL) and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets. The TOL as of June 30, 2017 is \$4,138,924 and the Plan Fiduciary Net Position as of June 30, 2017 is \$241,352, resulting in an NOL of \$3,897,572.
  - As of June 30, 2017, the ratio of the Plan's Fiduciary Net Position to the Total OPEB Liability (the funded ratio) is 2.99% for the Town and 5.83% for the Light Department.
  - Sections 3 and 4 include the disclosure information separately for the Town of Belmont and the Town of Belmont Light Department.
- Detailed information regarding all actuarial assumptions can be found in Section 5, Exhibit I.

## SECTION 1: Executive Summary for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

### FUNDING

- The Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2017 of \$19,120,887 is equal to the Annual Required Contribution (ARC) determined in accordance with GASB 45 as shown in the report prepared by KMS Actuaries, LLC. The Normal Cost and Actuarial Accrued Liability were determined using the Entry Age Normal cost method and a funding rate of return equal to 4.25%. The Unfunded Actuarial Accrued Liability was amortized using an open 30-year amortization period calculated as a level dollar amount.
- The determination of the Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2018 of \$8,029,300 is shown in Section 2. The Normal Cost and Actuarial Accrued Liability were determined using the Entry Age Normal cost method and a funding rate of return equal to 6.50%. The Unfunded Actuarial Accrued Liability was amortized using a closed 30-year amortization period with payments calculated to increase 3.0% per year.
- The unfunded actuarial accrued liability of \$89,852,077 as of June 30, 2017 represents a decrease of \$96,480,521 from \$186,332,598 as shown in the June 30, 2016 valuation report. The reconciliation of the unfunded actuarial accrued liability from June 30, 2016 to June 30, 2017 is shown below:

<b>Unfunded actuarial accrued liability as of June 30, 2016</b>	<b>\$186,333,000</b>
<b>Change in UAAL attributable to:</b>	
Benefits earned net of benefits paid and retiree contributions	\$11,458,000
Actuarial experience gain	-6,113,000
Changes in per capita costs, trends and demographic assumption changes	-78,005,000
Plan amendments	<u>-16,975,000</u>
<b>Total change in unfunded actuarial accrued liability</b>	<b>-89,635,000</b>
<b>Unfunded actuarial accrued liability as of June 30, 2017</b>	<b>\$96,698,000</b>

- Projected employer contributions for fiscal 2018 are equal to projected benefit payments of \$4,242,206 plus a contribution of \$250,000 to the OPEB Trust, totaling \$4,492,206.
- We have included a funding schedule in Section 2 that reflects the Town's policy to contribute approximately \$250,000 per year to the OPEB Trust through fiscal 2029 and to redirect the amount paid to the Retirement System toward the unfunded liability (\$12,000,000) beginning in fiscal 2030 when the Retirement System is projected to be fully funded. The total funding requirement shown in the funding schedule is calculated on the same closed 30-year basis as the Actuarially Determined Contribution. As shown on the schedule, projected benefit payments plus the funding policy contribution of \$250,000 are less than the Actuarially Determined Contribution through fiscal 2029. However, when the pension contribution is redirected to the OPEB Trust beginning in fiscal 2030, projected benefit payments plus the \$12,000,000 contribution to the Trust exceed the Actuarially Determined Contribution and the liabilities are projected to be fully funded in fiscal 2041, if all assumptions are met, and there are no changes in the actuarial assumptions, the plan of benefits or the funding policy.



## **SECTION 1: Executive Summary for the Town of Belmont June 30, 2017 Measurement Under GASB 74**

---

This valuation does not include the potential impact of any future changes due to the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 other than the excise tax on high cost health plans beginning in 2020 (reflected in this valuation) and those previously adopted as of the valuation date.

Employer decisions regarding plan design, cost sharing between the Employer and its retirees, actuarial cost method, amortization techniques, and integration with Medicare are just some of the decisions that affect the magnitude of OPEB obligations. We are available to assist you with any investigation of such options you may wish to undertake.

## SECTION 2: Valuation Results for the Town of Belmont June 30, 2017 Measurement Under GASB 74

### SUMMARY OF VALUATION RESULTS - COMPARISON OF PRIOR YEAR AND CURRENT YEAR

	June 30, 2016 Discount Rate 4.25%	June 30, 2017 Discount Rate 6.50%	June 30, 2017 Discount Rate 5.90%
1. Current retirees, beneficiaries and dependents	\$87,310,859	\$45,917,916	\$48,558,698
2. Current active employees	<u>101,595,856</u>	<u>47,039,420</u>	<u>51,244,145</u>
3. Total: (1) + (2)	\$188,906,715	\$92,957,336	\$99,802,843
4. Actuarial value of assets	<u>2,574,117</u>	<u>3,105,259</u>	<u>3,105,258</u>
5. Unfunded actuarial accrued liability (UAAL): (4) – (5)	\$186,332,598	\$89,852,077	\$96,697,585
<b>Actuarially Determined Contribution for Fiscal Year Ending June 30, 2017 and 2018</b>			
6. Normal Cost	\$7,687,713	\$3,115,745	\$3,572,447
7. Adjustment for timing	<u>326,728</u>	<u>99,667</u>	<u>103,879</u>
8. Normal Cost adjusted for timing: (6) + (7)	\$8,014,441	\$3,215,412	\$3,676,326
9. 30-year amortization of the UAAL	\$10,653,665	\$4,664,672	\$4,684,636
10. Adjustment for timing	<u>452,781</u>	<u>149,216</u>	<u>136,216</u>
11. Amortization payment adjusted for timing: (9) + (10)	\$11,106,446	\$4,813,888	\$4,820,852
12. Total Actuarially Determined Contribution (ADC): (8) + (11)	19,120,887	8,029,300	8,497,178
13. Projected Benefit Payments	4,046,494	4,242,206	4,242,206

Notes: Assumes payment in the middle of the fiscal year for fiscal 2018 and end of the year for fiscal 2017.

Amortization payments increase at 3.0% per year for fiscal 2018 and is level for fiscal 2017.

## SECTION 2: Valuation Results for the Town of Belmont June 30, 2017 Measurement Under GASB 74

### SUMMARY OF VALUATION RESULTS BY DEPARTMENT – 6.50% DISCOUNT RATE

	Town	Public Safety	School (MTRB)	School (BRS)	Light	Water	Sewer	Total
1. Current retirees, beneficiaries and dependents	\$8,396,855	\$8,950,043	\$18,127,919	\$7,557,593	\$1,578,336	\$896,012	\$411,158	\$45,917,916
2. Current active employees	<u>5,943,792</u>	<u>13,607,407</u>	<u>15,241,487</u>	<u>8,256,720</u>	<u>2,293,785</u>	<u>962,330</u>	<u>733,899</u>	<u>47,039,420</u>
3. Total as of June 30, 2017: (1) + (2)	\$14,340,647	\$22,557,450	\$33,369,406	\$15,814,313	\$3,872,121	\$1,858,343	\$1,145,057	\$92,957,336
4. Actuarial value of assets as of June 30, 2017	<u>382,123</u>	<u>601,069</u>	<u>889,166</u>	<u>421,391</u>	<u>241,352</u>	<u>285,079</u>	<u>285,079</u>	<u>3,105,259</u>
5. Unfunded actuarial accrued liability (UAAL) as of June 30, 2017: (4) – (5)	\$13,958,524	\$21,956,381	\$32,480,240	\$15,392,922	\$3,630,769	\$1,573,263	\$859,978	\$89,852,077
<b>Actuarially Determined Contribution for Fiscal Year Ending June 30, 2018</b>								
6. Normal Cost as of June 30, 2017	\$414,094	\$870,265	\$1,030,138	\$577,188	\$154,791	\$43,633	\$25,635	\$3,115,745
7. Adjustment for timing	<u>13,246</u>	<u>27,838</u>	<u>32,952</u>	<u>18,463</u>	<u>4,952</u>	<u>1,396</u>	<u>820</u>	<u>99,667</u>
8. Normal Cost adjusted for timing: (6) + (7)	\$427,340	\$898,103	\$1,063,090	\$595,651	\$159,743	\$45,029	\$26,455	\$3,215,412
9. 30-year amortization of the UAAL as of June 30, 2017	\$724,657	\$1,139,866	\$1,686,212	\$799,124	\$188,491	\$81,676	\$44,646	\$4,664,672
10. Adjustment for timing	<u>23,181</u>	<u>36,462</u>	<u>53,939</u>	<u>25,563</u>	<u>6,030</u>	<u>2,613</u>	<u>1,428</u>	<u>149,216</u>
11. Amortization payment adjusted for timing: (9) + (10)	\$747,838	\$1,176,328	\$1,740,151	\$824,687	\$194,521	\$84,289	\$46,074	\$4,813,888
12. Total Actuarially Determined Contribution (ADC): (8) + (11)	1,175,178	2,074,431	2,803,241	1,420,338	354,264	129,318	72,529	8,029,300
13. Projected Benefit Payments	808,509	827,393	1,586,470	755,106	140,506	92,733	31,489	4,242,206

Notes: Assumes payment in the middle of the fiscal year.

Actuarial value of assets are allocated based on accrued liability for Town, Public Safety, School (MTRB) and School (BRS). Actuarial value of assets for Water and Sewer are divided equally.

Amortization payments increase at 3.0% per year.

## SECTION 2: Valuation Results for the Town of Belmont June 30, 2017 Measurement Under GASB 74

### SUMMARY OF VALUATION RESULTS BY DEPARTMENT – 5.90% DISCOUNT RATE

	Town	Public Safety	School (MTRB)	School (BRS)	Light	Water	Sewer	Total
1. Current retirees, beneficiaries and dependents	\$8,863,483	\$9,480,672	\$19,170,604	\$7,995,068	\$1,669,566	\$945,615	\$433,689	\$48,558,698
2. Current active employees	<u>6,478,806</u>	<u>14,701,291</u>	<u>16,823,559</u>	<u>8,933,012</u>	<u>2,469,358</u>	<u>1,035,403</u>	<u>802,716</u>	<u>51,244,145</u>
3. Total as of June 30, 2017: (1) + (2)	\$15,342,289	\$24,181,963	\$35,994,163	\$16,928,080	\$4,138,924	\$1,981,018	\$1,236,405	\$99,802,843
4. Actuarial value of assets as of June 30, 2017	<u>380,667</u>	<u>599,994</u>	<u>893,074</u>	<u>420,013</u>	<u>241,352</u>	<u>285,079</u>	<u>285,079</u>	<u>3,105,258</u>
5. Unfunded actuarial accrued liability (UAAL) as of June 30, 2017: (4) – (5)	\$14,961,622	\$23,581,969	\$35,101,089	\$16,508,067	\$3,897,572	\$1,695,939	\$951,326	\$96,697,585
<b>Actuarially Determined Contribution for Fiscal Year Ending June 30, 2018</b>								
6. Normal Cost as of June 30, 2017	\$473,860	\$994,526	\$1,196,673	\$652,831	\$175,827	\$48,992	\$29,738	\$3,572,447
7. Adjustment for timing	<u>13,779</u>	<u>28,918</u>	<u>34,796</u>	<u>18,983</u>	<u>5,113</u>	<u>1,425</u>	<u>865</u>	<u>103,879</u>
8. Normal Cost adjusted for timing: (6) + (7)	\$487,639	\$1,023,444	\$1,231,469	\$671,814	\$180,940	\$50,417	\$30,603	\$3,676,326
9. 30-year amortization of the UAAL as of June 30, 2017	\$724,835	\$1,142,458	\$1,700,516	\$799,754	\$188,823	\$82,162	\$46,088	\$4,684,636
10. Adjustment for timing	<u>21,076</u>	<u>33,220</u>	<u>49,446</u>	<u>23,255</u>	<u>5,490</u>	<u>2,389</u>	<u>1,340</u>	<u>136,216</u>
11. Amortization payment adjusted for timing: (9) + (10)	\$745,911	\$1,175,678	\$1,749,962	\$823,009	\$194,313	\$84,551	\$47,428	\$4,820,852
12. Total Actuarially Determined Contribution (ADC): (8) + (11)	1,233,550	2,199,122	2,981,431	1,494,823	375,253	134,968	78,031	8,497,178
13. Projected Benefit Payments	808,509	827,393	1,586,470	755,106	140,506	92,733	31,489	4,242,206

Notes: Assumes payment in the middle of the fiscal year.

Actuarial value of assets are allocated based on accrued liability for Town, Public Safety, School (MTRB) and School (BRS). Actuarial value of assets for Water and Sewer are divided equally.

Amortization payments increase at 3.0% per year.

## SECTION 2: Valuation Results for the Town of Belmont June 30, 2017 Measurement Under GASB 74

### FUNDING SCHEDULE

#### 30-Year Closed, 6.5% discount rate

Fiscal Year Ending June 30	(1) Projected Benefit Payments	(2) Normal Cost	(3) Amortization of UAAL	(4) Total Funding Requirement (2) + (3)	(5) Funding Policy Funding	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) – (6)
2018	\$4,242,206	\$3,215,412	\$4,813,888	\$8,029,300	\$250,000	\$3,565,098	\$97,939,923	\$94,374,825
2019	4,585,329	3,311,874	5,157,797	8,469,671	250,000	4,054,826	102,991,827	98,937,001
2020	4,942,841	3,411,230	5,521,859	8,933,089	250,000	4,576,387	108,105,691	103,529,304
2021	5,315,612	3,513,567	5,907,775	9,421,342	250,000	5,131,849	113,272,871	108,141,022
2022	6,253,575	3,618,974	6,317,460	9,936,434	250,000	5,723,416	117,916,730	112,193,314
2023	6,542,986	3,727,543	6,719,151	10,446,694	250,000	6,353,435	122,675,813	116,322,378
2024	6,877,746	3,839,369	7,152,576	10,991,945	250,000	7,024,405	127,514,171	120,489,766
2025	7,108,291	3,954,550	7,619,328	11,573,878	250,000	7,738,988	132,547,968	124,808,980
2026	7,429,835	4,073,187	8,131,340	12,204,527	250,000	8,500,019	137,699,564	129,199,545
2027	7,547,376	4,195,383	8,689,323	12,884,706	250,000	9,310,517	143,190,818	133,880,301
2028	7,864,708	4,321,244	9,315,299	13,636,543	250,000	10,173,698	148,841,408	138,667,710
2029	8,218,620	4,450,881	10,005,946	14,456,827	250,000	11,092,985	154,627,837	143,534,852
2030	8,588,458	4,584,407	10,769,809	15,354,216	12,000,000	24,197,889	160,546,512	136,348,623
2031	8,974,938	4,721,939	10,670,186	15,392,125	12,000,000	38,154,612	166,592,990	128,438,378
2032	9,378,811	4,863,597	10,518,462	15,382,059	12,000,000	53,018,522	172,761,886	119,743,364
2033	9,800,857	5,009,505	10,301,608	15,311,113	12,000,000	68,848,586	179,046,789	110,198,203
2034	10,241,896	5,159,790	10,002,735	15,162,525	12,000,000	85,707,605	185,440,156	99,732,551
2035	10,702,781	5,314,584	9,599,606	14,914,190	12,000,000	103,662,460	191,933,209	88,270,749
2036	11,184,406	5,474,022	9,062,393	14,536,415	12,000,000	122,784,380	198,515,818	75,731,438
2037	11,687,704	5,638,243	8,350,226	13,988,469	12,000,000	143,149,225	205,176,373	62,027,148
2038	12,213,651	5,807,390	7,405,661	13,213,051	12,000,000	164,837,785	211,901,650	47,063,865
2039	12,763,265	5,981,612	6,145,457	12,127,069	12,000,000	187,936,101	218,676,670	30,740,569
2040	13,337,612	6,161,060	4,444,448	10,605,508	12,000,000	212,535,808	225,484,535	12,948,727
2041	13,937,805	6,345,892	2,105,579	8,451,471	5,771,023	232,306,264	232,306,264	-

Notes: Assumes payment in the middle of the fiscal year.

Normal cost is projected to increase 3.0% per year for inflation.

Assets are assumed to return 6.5% per year.

Amortization payments calculated to increase 3.0% per year.

## SECTION 2: Valuation Results for the Town of Belmont June 30, 2017 Measurement Under GASB 74

### SUMMARY OF PARTICIPANT DATA

<b>July 1, 2016</b>	<b>Town</b>	<b>Public Safety</b>	<b>School (MTRB)</b>	<b>School (BRS)</b>	<b>Light</b>	<b>Water</b>	<b>Sewer</b>	<b>Total</b>
<b>Total Active Employees</b>								
Number of Employees	122	121	312	204	31	12	12	814
Average Age	51.3	45.1	41.1	48.3	47.4	53.1	48.2	45.6
Average Service	12	15.3	10.3	10	13.7	17.5	13.3	11.5
<b>Retired Employees, Spouses and Beneficiaries Covered for Medical Benefits</b>								
Number of Individuals	90	123	199	56	22	12	8	510
Average Age	75.5	72.5	74.1	78.7	73.7	78.3	71.6	74.5
<b>July 1, 2017</b>	<b>Town</b>	<b>Public Safety</b>	<b>School (MTRB)</b>	<b>School (BRS)</b>	<b>Light</b>	<b>Water</b>	<b>Sewer</b>	<b>Total</b>
<b>Active Employees Covered for Medical Benefits</b>								
Number of Employees	99	93	230	130	24	7	6	589
Average Age	46.1	45.1	40.4	50.2	48.6	54.6	47.1	44.8
Average Service	10.5	16.4	9.6	10.7	14	15.6	15.4	11.4
<b>Retired Employees, Spouses and Beneficiaries Covered for Medical Benefits</b>								
Number of Individuals*	135	138	236	110	23	17	7	666
Average Age	74.4	72.8	74.1	74.9	74.1	77.1	74.5	74.1

\* In addition, there are 30 spouses of retirees covered under a family policy.

November 17, 2017

**ACTUARIAL CERTIFICATION**


This is to certify that Segal Consulting, a Member of The Segal Group, Inc. has conducted an actuarial valuation of certain benefit obligations of the Town of Belmont other postemployment benefit programs as of June 30, 2017, in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statement Number 74 for the determination of the liability for postemployment benefits other than pensions.

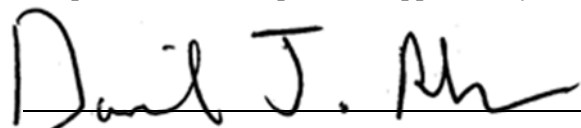
The actuarial valuation is based on the plan of benefits verified by the Town of Belmont and on asset, participant, premium data and claims experience provided by the Town of Belmont or from vendors employed by the Town of Belmont. Segal Consulting does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. Segal, however, does review the data for reasonableness and consistency.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported here. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination, or determining short-term cash flow requirements.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. The scope of the assignment did not include performing an analysis of the potential range of such future measurements.

The actuarial calculations were directed under our supervision. We are members of the American Academy of Actuaries and collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Town are reasonably related to the experience of and the expectations for the Plan.

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

  
Daniel J. Rhodes, FSA, MAAA  
Vice President and Consulting Actuary

### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

---

---

#### EXHIBIT 1

#### Plan Membership - TOWN

---

Plan membership: At June 30, 2017, the Town of Belmont plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	643
Active members	<u>565</u>
Total	1,208

*Note: We have assumed other general information about the Plan will be provided by the Town's auditors.*



### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

---

#### EXHIBIT 2 Net OPEB Liability - TOWN

---

The components of the Net OPEB Liability of the Town of Belmont are as follows:

	June 30, 2017
Total OPEB liability	\$95,663,919
Plan fiduciary net position	<u>2,863,906</u>
Net OPEB Liability	\$92,800,013
Plan fiduciary net position as a percentage of the total OPEB liability*	2.99%

\* These funded percentages are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.

*Actuarial assumptions.* The total OPEB liability was measured by an actuarial valuation as of June 30, 2017 using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

<b>Inflation</b>	3.0%
<b>Salary increases</b>	Service related increases for Group 1 and 2 members (excluding Teachers): 6.00% decreasing over 9 years to an ultimate level of 3.75% Service related increases for Group 4 members: 7.00% decreasing over 8 years to an ultimate level of 4.25% Service-related increases for Teachers: 7.50% decreasing over 20 years to an ultimate level of 4.00%
<b>Discount rate</b>	5.90% as of June 30, 2017 and 5.73% as of June 30, 2016
<b>Investment rate of return</b>	6.5%
<b>Health care trend rates</b>	
<i>Non-Medicare (Medical)</i>	7.0% decreasing by 0.5% each year to an ultimate level of 4.5% per year
<i>Medicare (Medical Only)</i>	4.5%
<i>Prescription Drug</i>	9.0% decreasing by 0.5% each year to an ultimate level of 4.5% per year
<i>Medicare Advantage</i>	7.5% decreasing by 0.5% each year to an ultimate level of 4.5% per year
<i>Administration</i>	3.0%
<i>Contributions</i>	7.5% decreasing by 0.5% each year to an ultimate level of 4.5% per year

### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

---

#### **Mortality tables**

<i>Pre-Retirement (Non-Teachers)</i>	RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D
<i>Healthy (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table projected generationally from 2009 with Scale BB2D
<i>Disabled (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D
<i>Pre-Retirement (Teachers)</i>	RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP-2016
<i>Healthy (Teachers)</i>	RP-2014 White Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2016
<i>Disabled (Teachers)</i>	RP-2014 Healthy Annuitant Mortality Table set forward 4 years projected generationally with Scale BB2D from 2014

Detailed information regarding all actuarial assumptions can be found in Section 5, Exhibit I.

### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

---

---

#### EXHIBIT 3

#### Determination of Discount Rate and Investment Rates of Return – TOWN

---

##### *DEVELOPMENT OF LONG-TERM RATE*

The long-term expected rate of return on OPEB plan investments was determined using a building block method in which best estimate ranges of expected future rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized below:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	60.00%	6.44%
Core fixed income	<u>40.00%</u>	2.02%
Total	100.00%	

*Note: Some asset classes in the target allocation have been combined.*

**Nature of Assets:** The assets are in an irrevocable OPEB Trust invested with Morgan Stanley.

### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

---

---

#### EXHIBIT 4 Sensitivity - TOWN

---

*Sensitivity of the net OPEB liability to changes in the discount rate.* The following presents the NOL of the Town of Belmont as well as what the Town of Belmont's NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (4.90%) or 1-percentage-point higher (6.90%) than the current rate:

	<b>1% Decrease in Discount Rate (4.90%)</b>	<b>Current Discount Rate (5.90%)</b>	<b>1% Increase in Discount Rate (6.90%)</b>
Town of Belmont's net OPEB liability as of June 30, 2017	\$105,626,327	\$92,800,013	\$82,228,130

*Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates.* The following presents the net OPEB liability of the Town of Belmont, as well as what the Town of Belmont's net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	<b>1% Decrease</b>	<b>Current Trend Rate</b>	<b>1% Increase</b>
Town of Belmont's net OPEB liability as of June 30, 2017	\$80,722,844	\$92,800,013	\$107,888,705

### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

#### EXHIBIT 5 Schedule of Changes in Net OPEB Liability – Last Ten Fiscal Years - TOWN

	2017	2016	2015	2014	Year End June 30,		2011	2010	2009	2008
					2013	2012				
<b>Total OPEB liability</b>										
Service cost	\$3,783,584									
Interest	8,496,483									
Differences between expected and actual experience	0									
Changes of assumptions	-40,435,528									
Plan amendments	-18,722,360									
Benefit payments, including refunds of member contributions	-3,856,996				(Historical information prior to implementation of GASB 74/75 is not required)					
<b>Net change in Total OPEB Liability</b>	<b>-\$50,734,816</b>									
<b>Total OPEB Liability - beginning</b>	<b><u>146,398,735</u></b>									
<b>Total OPEB Liability - ending (a)</b>	<b>\$95,663,919</b>									
<b>Plan Fiduciary Net Position</b>										
Contributions - employer	\$4,186,243									
Contributions - employee	0									
Net investment income	172,890									
Benefit payments, including refunds of member contributions	-3,856,996				(Historical information prior to implementation of GASB 74/75 is not required)					
Administrative expenses	0									
<b>Net change in Fiduciary Net Position</b>	<b>\$502,137</b>									
<b>Plan Fiduciary Net Position - beginning</b>	<b><u>2,361,770</u></b>									
<b>Plan Fiduciary Net Position - ending (b)</b>	<b>2,863,906</b>									
<b>Net OPEB liability – ending: (a)-(b)</b>	<b>\$92,800,013</b>									
<b>Plan's fiduciary net position as a percentage of the total OPEB liability</b>	<b>2.99%</b>				(Historical information prior to implementation of GASB 74/75 is not required)					
<b>Covered-employee payroll</b>	<b>N/A</b>									
<b>Net OPEB liability as a percentage of covered-employee payroll</b>	<b>N/A</b>									

Notes: Please enter covered payroll for fiscal 2017.

2017 employer contributions include projected benefit payments of \$3,856,996 and \$329,247 in employer contributions to the trust.

#### Notes to Schedule:

Changes in Assumptions: The discount rate was increased from 5.73% as of June 30, 2016 to 5.90% as of June 30, 2017.

Changes in Plan Provisions: Effective January 1, 2018, prescription drug coverage for retirees enrolled in the Medicare Enhance plan is now provided through Aetna as a stand alone PDP on a fully-insured basis.

### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

#### EXHIBIT 6

#### Schedule of Contributions – Last Ten Fiscal Years - TOWN

		Year End June 30,								
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined contribution	\$18,361,449									
Contributions in relation to the actuarially determined contribution	<u>4,186,243</u>									
Contribution deficiency (excess)	\$14,175,206									
Covered-employee payroll	N/A									
Contributions as a percentage of covered-employee payroll	N/A									

(Historical information prior to implementation of GASB 74/75 is not required)

Note: Please enter covered payroll for fiscal 2017.

#### Notes to Schedule:

Methods and assumptions used to establish actuarially determined contribution rates for fiscal 2017:

<b>Valuation date</b>	Actuarially determined contribution for fiscal year ending June 30, 2017 was determined with the June 30, 2016 actuarial valuation completed by KMS Actuaries, LLC dated March 30, 2017.
<b>Actuarial cost method</b>	Entry Age Normal – Level Percentage of Payroll
<b>Amortization method</b>	Level dollar
<b>Remaining amortization period</b>	30 years from July 1, 2016
<b>Asset valuation method</b>	Market value
<b>Investment rate of return</b>	4.25%
<b>Salary increases</b>	3.25%
<b>Health care cost trend rates</b>	
<i>Medical/Prescription Drug</i>	8.0% decreasing by 0.5% each year to an ultimate level of 5.0% per year

### SECTION 3: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Town

---

#### **Mortality tables**

*Pre-Retirement*

RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D

*Healthy (Non-Teachers)*

RP-2000 Healthy Annuitant Mortality Table projected generationally from 2009 with Scale BB2D

*Disabled (Non-Teachers)*

RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D

*Pre-Retirement (Teachers)*

RP-2014 Employee Mortality Table projected generationally from 2014 with Scale BB

*Healthy (Teachers)*

RP-2014 Annuitant Mortality Table projected generationally from 2014 with Scale BB

*Disabled (Teachers)*

RP-2014 Annuitant Mortality Table projected generationally from 2014 with Scale BB

#### SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

---

---

##### **EXHIBIT 1** **Plan Membership - LIGHT**

---

Plan membership: At June 30, 2017, the Town of Belmont Light Department plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	23
Active members	<u>24</u>
Total	47

*Note: We have assumed other general information about the Plan will be provided by the Town's auditors.*



## SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

### EXHIBIT 2 Net OPEB Liability - LIGHT

The components of the Net OPEB Liability of the Town of Belmont Light Department are as follows:

	June 30, 2017
Total OPEB liability	\$4,138,924
Plan fiduciary net position	<u>241,352</u>
Net OPEB Liability	\$3,897,572
Plan fiduciary net position as a percentage of the total OPEB liability*	5.83%

\* *These funded percentages are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.*

*Actuarial assumptions.* The total OPEB liability was measured by an actuarial valuation as of June 30, 2017 using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

<b>Inflation</b>	3.0%
<b>Salary increases</b>	Service related increases for Group 1 and 2 members (excluding Teachers): 6.00% decreasing over 9 years to an ultimate level of 3.75% Service related increases for Group 4 members: 7.00% decreasing over 8 years to an ultimate level of 4.25% Service-related increases for Teachers: 7.50% decreasing over 20 years to an ultimate level of 4.00%
<b>Discount rate</b>	5.90% as of June 30, 2017 and 5.73% as of June 30, 2016
<b>Investment rate of return</b>	6.5%
<b>Health care trend rates</b>	
<i>Non-Medicare (Medical)</i>	7.0% decreasing by 0.5% each year to an ultimate level of 4.5% per year
<i>Medicare (Medical only)</i>	4.5%
<i>Prescription Drug</i>	9.0% decreasing by 0.5% each year to an ultimate level of 4.5% per year
<i>Medicare Advantage</i>	7.5% decreasing by 0.5% each year to an ultimate level of 4.5% per year
<i>Administration</i>	3.0%
<i>Contributions</i>	7.5% decreasing by 0.5% each year to an ultimate level of 4.5% per year

## SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

---

### **Mortality tables**

<i>Pre-Retirement (Non-Teachers)</i>	RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D
<i>Healthy (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table projected generationally from 2009 with Scale BB2D
<i>Disabled (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D
<i>Pre-Retirement (Teachers)</i>	RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP-2016
<i>Healthy (Teachers)</i>	RP-2014 White Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2016
<i>Disabled (Teachers)</i>	RP-2014 Healthy Annuitant Mortality Table set forward 4 years projected generationally with Scale BB2D from 2014

Detailed information regarding all actuarial assumptions can be found in Section 5, Exhibit I.

## SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

---

---

### EXHIBIT 3

#### Determination of Discount Rate and Investment Rates of Return – LIGHT

---

##### *DEVELOPMENT OF LONG-TERM RATE*

The long-term expected rate of return on OPEB plan investments was determined using a building block method in which best estimate ranges of expected future rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized below:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	60.00%	6.44%
Core fixed income	<u>40.00%</u>	2.02%
Total	100.00%	

*Note: Some asset classes in the target allocation have been combined.*

**Nature of Assets:** The assets are in an irrevocable OPEB Trust and are invested with Morgan Stanley.

#### SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

---

---

##### EXHIBIT 4 Sensitivity - LIGHT

---

*Sensitivity of the net OPEB liability to changes in the discount rate.* The following presents the NOL of the Town of Belmont Light Departments as well as what the Town of Belmont Light Department's NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (4.90%) or 1-percentage-point higher (6.90%) than the current rate:

	<b>1% Decrease in Discount Rate (4.90%)</b>	<b>Current Discount Rate (5.90%)</b>	<b>1% Increase in Discount Rate (6.90%)</b>
Town of Belmont Light Department's net OPEB liability as of June 30, 2017	\$4,414,372	\$3,897,572	\$3,468,247

*Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates.* The following presents the net OPEB liability of the Town of Belmont Light Department, as well as what the Town of Belmont Light Department's net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate:

	<b>1% Decrease</b>	<b>Current Trend Rate</b>	<b>1% Increase</b>
Town of Belmont Light Department's net OPEB liability as of June 30, 2017	\$3,416,353	\$3,897,572	\$4,488,662

## SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

### EXHIBIT 5

#### Schedule of Changes in Net OPEB Liability – Last Ten Fiscal Years - LIGHT

	2017	2016	2015	2014	Year End June 30,		2011	2010	2009	2008
<b>Total OPEB liability</b>										
Service cost	\$154,575									
Interest	367,791									
Differences between expected and actual experience	0									
Changes of assumptions	-1,742,425									
Plan amendments	-809,061									
Benefit payments, including refunds of member contributions	-189,498									
<b>Net change in Total OPEB Liability</b>	-\$2,218,619									
<b>Total OPEB Liability - beginning</b>	<u>6,357,542</u>									
<b>Total OPEB Liability - ending (a)</b>	<u>\$4,138,924</u>									
<b>Plan Fiduciary Net Position</b>										
Contributions - employer	\$203,933									
Contributions - employee	0									
Net investment income	14,570									
Benefit payments, including refunds of member contributions	-189,498									
Administrative expenses	0									
<b>Net change in Fiduciary Net Position</b>	\$29,005									
<b>Plan Fiduciary Net Position - beginning</b>	<u>212,347</u>									
<b>Plan Fiduciary Net Position - ending (b)</b>	<u>\$241,352</u>									
<b>Net OPEB liability – ending: (a)-(b)</b>	<u>\$3,897,572</u>									
<b>Plan's fiduciary net position as a percentage of the total OPEB liability</b>	5.83%									
<b>Covered-employee payroll</b>	N/A									
<b>Net OPEB liability as a percentage of covered-employee payroll</b>	N/A									

Notes: Please enter covered payroll for fiscal 2017.

2017 employer contributions include projected benefit payments of \$189,498 and \$14,435 in employer contributions to the trust.

#### Notes to Schedule:

Changes in Assumptions: The discount rate was increased from 5.73% as of June 30, 2016 to 5.90% as of June 30, 2017.  
 Changes in Plan Provisions: Effective January 1, 2018, prescription drug coverage for retirees enrolled in the Medicare Enhance plan is now provided through Aetna as a stand alone PDP on a fully-insured basis.

## SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

### EXHIBIT 6

#### Schedule of Contributions – Last Ten Fiscal Years - LIGHT

	2017	2016	2015	2014	Year End June 30,		2011	2010	2009	2008
Actuarially determined contribution	\$759,438				2013	2012				
Contributions in relation to the actuarially determined contribution	<u>203,933</u>									
Contribution deficiency (excess)	\$555,505									
Covered-employee payroll	N/A									
Contributions as a percentage of covered-employee payroll	N/A									

(Historical information prior to implementation of GASB 74/75 is not required)

Note: Please enter covered payroll for fiscal 2017.

#### Notes to Schedule:

Methods and assumptions used to establish actuarially determined contribution rates for fiscal 2017:

<b>Valuation date</b>	Actuarially determined contribution for fiscal year ending June 30, 2017 was determined with the June 30, 2016 actuarial valuation completed by KMS Actuaries, LLC dated March 30, 2017.
<b>Actuarial cost method</b>	Entry Age Normal – Level Percentage of Payroll
<b>Amortization method</b>	Level dollar
<b>Remaining amortization period</b>	30 years from July 1, 2016
<b>Asset valuation method</b>	Market value
<b>Investment rate of return</b>	4.25%
<b>Salary increases</b>	3.25%
<b>Health care cost trend rates</b>	
<i>Medical/Prescription Drug</i>	8.0% decreasing by 0.5% each year to an ultimate level of 5.0% per year

## SECTION 4: GASB No. 74 Information for the Town of Belmont June 30, 2017 – Light

---

### **Mortality tables**

*Pre-Retirement*

RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D

*Healthy (Non-Teachers)*

RP-2000 Healthy Annuitant Mortality Table projected generationally from 2009 with Scale BB2D

*Disabled (Non-Teachers)*

RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D

*Pre-Retirement (Teachers)*

RP-2014 Employee Mortality Table projected generationally from 2014 with Scale BB

*Healthy (Teachers)*

RP-2014 Annuitant Mortality Table projected generationally from 2014 with Scale BB

*Disabled (Teachers)*

RP-2014 Annuitant Mortality Table projected generationally from 2014 with Scale BB

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

---

### EXHIBIT I

#### Actuarial Assumptions and Actuarial Cost Method

---

**Data:** Detailed census data, claims experience, premium rates, and summary plan descriptions for postemployment welfare benefits were provided by the Town of Belmont.

**Actuarial Cost Method:** Entry Age Normal – Level Percentage of Payroll

---

#### Per Capita Cost Development:

*Fully Insured Plans  
(Aetna Medicare Rx Plan and  
Tufts Medicare Preferred)*

Per capita costs were based on the fully insured premium rates effective January 1, 2017 for Tufts Medicare Preferred and January 1, 2018 for Aetna Medicare Rx Plan. Premiums were trended to the midpoint of the valuation year at assumed trend rates. Actuarial factors were then applied to the weighted average cost to estimate individual retiree and spouse costs by age and by gender.

*Self-Funded Plans  
(Non-Medicare Plans and  
Harvard Pilgrim Medicare  
Enhance)*

Per capita claims costs were based on the monthly paid claims experience by participant group and by coverage (medical and prescription drug) for the period July 1, 2015 through June 30, 2017. Claims were separated by plan year and by coverage and then adjusted as follows:

- paid claims were multiplied by a factor to yield an estimate of incurred claims,
- total claims were divided by the number of adult members to yield a per capita claim cost, and
- the per capita claim cost was trended to the midpoint of the valuation year at assumed trend rates.

Taking a weighted average, the per capita medical and prescription drug claims were combined with a manual rate based on national data. The weights used in this average account for a number of factors including each plan year's volatility of claims experience and distance to the valuation year. Actuarial factors were then applied to the weighted average cost to estimate individual retiree and spouse costs by age and by gender.

---

**Valuation Date:** June 30, 2017

The results of the June 30, 2016 actuarial valuation completed by KMS Actuaries, LLC, dated March 30, 2017, were used to determine the Actuarially Determined Contribution for the fiscal year ending June 30, 2017.



## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

**Discount Rate:** 5.90% as of June 30, 2017 and 5.73% as of June 30, 2016 (previously, 4.25%, determined by prior actuary)

The discount rate is a blend of the long-term expected rate of return on OPEB Trust assets and a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (3.58% as of June 30, 2017 and 2.85% as of June 30, 2016). The blending is based on the sufficiency of projected assets to make projected benefit payment.

**Expected Rate of Return:** 6.50%

The expected return was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce a long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

**Salary Increase:**

Years of Service	Groups 1 and 2	Group 4	Teachers
0	6.00%	7.00%	7.50%
1	5.50%	6.50%	7.10%
2	5.50%	6.00%	7.00%
3	5.00%	5.50%	6.90%
4	5.00%	5.00%	6.80%
5	4.50%	5.00%	6.70%
6	4.50%	4.50%	6.60%
7	4.00%	4.50%	6.50%
8	4.00%	4.25%	6.30%
9	3.75%	4.25%	6.10%
10	3.75%	4.25%	5.90%
11	3.75%	4.25%	5.70%
12	3.75%	4.25%	5.20%
13	3.75%	4.25%	4.70%
14	3.75%	4.25%	4.35%
15-16	3.75%	4.25%	4.20%
17-19	3.75%	4.25%	4.10%
+ 20	3.75%	4.25%	4.00%

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

**Asset Valuation Method:** Market value

---

### **Mortality Rates:**

<i>Pre-Retirement (Non-Teachers)</i>	RP-2000 Employee Mortality Table projected generationally from 2009 with Scale BB2D
<i>Healthy (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table projected generationally from 2009 with Scale BB2D
<i>Disabled (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table projected generationally from 2015 with Scale BB2D
<i>Pre-Retirement (Teachers)</i>	RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP-2016
<i>Healthy (Teachers)</i>	RP-2014 White Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2016
<i>Disabled (Teachers)</i>	RP-2014 Healthy Annuitant Mortality Table set forward 4 years projected generationally with Scale BB2D from 2014
<p>The underlying tables with generational projection to the ages of participants as of the measurement date reasonably reflect the mortality experience of the plan as of the measurement date. The mortality tables were then adjusted to future years using generational projection to reflect future mortality improvement between the measurement date and those years.</p>	

---

### **Non-Teacher Annuitant Mortality Rates:**

<b>Age</b>	<b>Rate per year (%)</b>	
	<b>Male</b>	<b>Female</b>
60	0.82	0.62
70	2.22	1.67
80	6.44	4.59
90	18.34	13.17

*Note: Rates shown are before generational projection.*

### **Teacher Annuitant Mortality Rates:**

<b>Age</b>	<b>Rate per year (%)</b>	
	<b>Male</b>	<b>Female</b>
60	0.52	0.39
70	1.24	1.06
80	3.73	3.04
90	12.62	10.02

*Note: Rates shown are before generational projection.*

**SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74**

---

**Termination Rates before Retirement:**

Groups 1 and 2 Rate (%)			
Mortality			
Age	Male	Female	Disability
20	0.03	0.02	0.01
25	0.04	0.02	0.02
30	0.04	0.03	0.03
35	0.08	0.05	0.06
40	0.11	0.07	0.10
45	0.15	0.11	0.15
50	0.21	0.17	0.19
55	0.30	0.25	0.24
60	0.49	0.39	0.28

*Notes: Mortality rates shown do not reflect generational projection.  
90% of the disability rates shown represent accidental disability.  
55% of the death rates shown represent accidental death.*

Group 4 Rate (%)			
Mortality			
Age	Male	Female	Disability
20	0.03	0.02	0.10
25	0.04	0.02	0.20
30	0.04	0.03	0.30
35	0.08	0.05	0.30
40	0.11	0.07	0.30
45	0.15	0.11	1.00
50	0.21	0.17	1.25
55	0.30	0.25	1.20
60	0.49	0.39	0.85

*Notes: Mortality rates shown do not reflect generational projection.  
90% of the disability rates shown represent accidental disability and death.*

**SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74**

---

Teachers - Rate per year (%)				
Mortality				
Age	Male		Female	Disability
20	0.02		0.01	0.00
25	0.03		0.01	0.01
30	0.02		0.01	0.01
35	0.03		0.02	0.01
40	0.03		0.07	0.01
45	0.05		0.04	0.03
50	0.09		0.07	0.05
55	0.15		0.11	0.07
60	0.25		0.15	0.07

*Notes: Mortality rates shown are before generational projection.  
35% of the rates shown represent accidental disability.  
55% of the death rates shown represent accidental death.*

**SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74**

---

**Withdrawal Rates:**

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

Teachers - Rate per year (%)						
Age	0 Years of Service		5 Years of Service		10+ Years of Service	
	Male	Female	Male	Female	Male	Female
20	13.0	10.0	5.5	7.0	1.5	5.0
30	15.0	15.0	5.4	8.8	1.5	4.5
40	13.3	10.5	5.2	5.0	1.7	2.2
50	16.2	9.8	7.0	5.0	2.3	2.0

**SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74**

---

**Retirement Rates:**

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

**SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74**

---

Teachers - Rate per year (%)						
Age	Years of Service					
	Less than 20		20 – 29		30 or more	
	Male	Female	Male	Female	Male	Female
50 - 52	--	--	1.0	1.0	2.0	1.5
53	--	--	1.5	1.0	2.0	1.5
54	--	--	2.5	1.0	2.0	2.0
55	5.0	3.0	3.0	3.0	6.0	5.0
56	5.0	3.0	6.0	5.0	20.0	15.0
57	5.0	4.0	10.0	8.0	40.0	35.0
58	5.0	8.0	15.0	10.0	50.0	35.0
59	10.0	8.0	20.0	15.0	50.0	35.0
60	10.0	10.0	25.0	20.0	40.0	35.0
61	20.0	12.0	30.0	25.0	40.0	35.0
62	20.0	12.0	35.0	30.0	35.0	35.0
63	25.0	15.0	40.0	30.0	35.0	35.0
64	25.0	20.0	40.0	30.0	35.0	35.0
65	25.0	25.0	40.0	40.0	35.0	35.0
66	30.0	25.0	30.0	30.0	40.0	35.0
67	30.0	30.0	30.0	30.0	40.0	30.0
68	30.0	30.0	30.0	30.0	40.0	30.0
69	30.0	30.0	30.0	30.0	40.0	30.0
70	100.0	100.0	100.0	100.0	100.0	100.0

**Dependents:**

Demographic data was available for spouses of current retirees. For future retirees, husbands were assumed to be three years older than their wives. For future retirees who elect to continue their health coverage at retirement, 50% were assumed to have an eligible spouse who also opts for health coverage at that time.

**SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74**

**Per Capita Health Costs:**

Fiscal year ending 2018 medical and prescription drug claims costs are shown in the table below for retirees and for spouses at selected ages. These costs are net of deductibles and other benefit plan cost sharing provisions.

Age	Non-Medicare (Medical)				Non-Medicare Prescription Drugs			
	Retiree		Spouse		Retiree		Spouse	
	Male	Female	Male	Female	Male	Female	Male	Female
45	\$8,049	\$10,097	\$4,992	\$7,536	\$1,798	\$2,255	\$1,115	\$1,683
50	9,553	10,881	6,672	8,737	2,134	2,430	1,490	1,951
55	11,345	11,713	8,929	10,113	2,534	2,616	1,994	2,259
60	13,473	12,625	11,953	11,729	3,009	2,820	2,670	2,620
65	16,001	13,601	16,001	13,601	3,574	3,038	3,574	3,038
70	18,545	14,657	18,545	14,657	4,142	3,274	4,142	3,274
75	19,985	15,777	19,985	15,777	4,464	3,524	4,464	3,524
80	21,521	17,009	21,521	17,009	4,807	3,799	4,807	3,799

Age	Medicare Supplement (Medical)				Medicare Prescription Drug				Medicare Advantage			
	Retiree		Spouse		Retiree		Spouse		Retiree		Spouse	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
65	\$1,788	\$1,520	\$1,788	\$1,520	\$2,077	\$1,765	\$2,077	\$1,765	\$3,492	\$2,968	\$3,492	\$2,968
70	2,072	1,638	2,072	1,638	2,407	1,903	2,407	1,903	4,047	3,199	4,047	3,199
75	2,233	1,763	2,233	1,763	2,594	2,048	2,594	2,048	4,362	3,443	4,362	3,443
80	2,405	1,901	2,405	1,901	2,794	2,208	2,794	2,208	4,697	3,712	4,697	3,712



## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

### Weighted Average Annual Retiree Contribution Amount:

	Retirees enrolled in Medicare before January 1, 2016	Retirees enrolled in Medicare after January 1, 2016
Non-Medicare Plans:	\$2,272	\$2,272
Medicare Supplement Plans:	1,798*	1,648*
Medicare Advantage Plans:	1,215*	1,065*

\* Reflects Town's subsidy of 50% of Medicare Part B base rate.

### Health Care Cost Trend Rates:

Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are "net" and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is applied to that year's cost to yield the next year's projected cost.

Year Ending June 30	Non-Medicare Medical	Medicare (Medical Only)	Medicare Advantage	Prescription Drug
2018	7.0%	4.5%	7.5	9.0%
2019	6.5%	4.5%	7.0	8.5%
2020	6.0%	4.5%	6.5	8.0%
2021	5.5%	4.5%	6.0	7.5%
2022	5.0%	4.5%	5.5	7.0%
2023	4.5%	4.5%	5.0	6.5%
2024	4.5%	4.5%	4.5	6.0%
2025	4.5%	4.5%	4.5	5.5%
2026	4.5%	4.5%	4.5	5.0%
2027 & later	4.5%	4.5%	4.5	4.5%

The trend rate assumptions were developed using Segal's internal guidelines, which are established each year using data sources such as the 2017 Segal Health Trend Survey, internal client results, trends from other published surveys prepared by the S&P Dow Jones Indices, consulting firms and brokers, and CPI statistics published by the Bureau of Labor Statistics.

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

**Retiree Contribution Increase Rate:** Retiree contributions for medical and prescription drug coverage are expected to increase as shown below:

<b>Year Ending June 30</b>	<b>Rate</b>
2018	7.5%
2019	7.0%
2020	6.5%
2021	6.0%
2022	5.5%
2023	5.0%
2024 and later	4.5%

**Participation and Coverage Election:** 125% of active employees with coverage are assumed to elect retiree coverage.

100% of retirees over age 65 are assumed to remain with their current medical plan for life.

For future retirees hired before 1986 and current retirees under age 65, 90% are assumed to be eligible for Medicare and are assumed to enroll in a Medicare Supplement plan upon reaching age 65 and 10% are assumed to be ineligible for Medicare and to remain enrolled in a non-Medicare plan.

For future retirees hired after 1986, 100% are assumed to be eligible for Medicare and are assumed to enroll in a Medicare Supplement Plan upon reaching age 65.

100% of future retirees with medical coverage are assumed to have life insurance coverage. Current retirees with life insurance coverage are identified in the data received.

**Plan Design:**

Development of plan liabilities was based on the substantive plan of benefits in effect as described in Exhibit II.

**Administrative Expenses:**

Administrative expenses for self-insured plans were based on current vendor contractual rates and fees. An administrative expense load of \$531 per participant for non-Medicare and \$383 for Medicare plans, increasing at 3.0% per year, was added for projected incurred self-funded claim costs in developing the benefit obligations.

Administrative expenses for fully-insured plans were assumed to be included in the fully-insured premium rates and are included in the per capita health costs.

**Missing Participant Data:**

A missing census item for a given participant was assumed to equal the average value of that item over all other participants of the same status for whom the item is known.

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

**Health Care Reform Assumption:** This valuation does not include the potential impact of any future changes due to the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 other than the excise tax on high cost health plans beginning in 2020 (reflected with this valuation) and those previously adopted as of the valuation date.

**Demographic and Salary Scale Assumptions:** Many of the demographic assumptions (including mortality, disability, turnover, retirement, and relative ages of spouses) and the salary increase assumptions used in this valuation are the same as used in the Belmont Contributory Retirement System Actuarial Valuation and Review as of January 1, 2016, dated January 6, 2017, completed by Segal Consulting and the Massachusetts Teachers' Retirement System Actuarial Valuation Report as of January 1, 2017, dated September 25, 2017, completed by PERAC. A review of these demographic assumptions is beyond the scope of this assignment; however, we have no reason to doubt the reasonableness of these assumptions.

The remaining demographic assumptions, such as percent married and enrollment elections, were based on the experience of the Plan and the experience of similar plans.

---

**Justification for Assumption Changes since Prior Valuation:**

Based on past experience and future expectations, the following actuarial assumptions were changed:

- The discount rate was changed from 4.25% to a blended discount rate calculated in accordance with GASB Statement No. 74 (5.90% as of June 30, 2017 and 5.73% as of June 30, 2016).
- The per capita health costs were updated to reflect current experience.
- The per capita health cost trend assumptions were revised to reflect current experience and future expectations.
- The salary increase assumption for all employees and the mortality assumption for Teachers was changed to match the assumption used in the Belmont Contributory Retirement System Actuarial Valuation and Review as of January 1, 2016, dated January 6, 2017, completed by Segal Consulting and the Massachusetts Teachers' Retirement System Actuarial Valuation Report as of January 1, 2017, dated September 25, 2017, completed by PERAC.
- The excise tax on high cost health plans beginning in 2020 was updated with this valuation.
- The Medicare enrollment assumption for retirees under age 65 and actives hired prior to 1986 was changed from 95% to 90% based on recent experience.
- The enrollment assumption was changed from 90% of active employees to 125% of covered active employees.

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

---

### EXHIBIT II Summary of Plan

---

This exhibit summarizes the major benefit provisions as included in the valuation. To the best of our knowledge, the summary represents the substantive plans as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

---

#### **Eligibility:**

Retired and receiving a pension from the Belmont Contributory Retirement System or the Massachusetts Teachers' Retirement System.

*Members hired before  
April 2, 2012*

#### **Group 1 and Group 2 (including Teachers):**

- Retirees with at least 10 years of creditable service are eligible at age 55;
- Retirees with at least 20 years of creditable service are eligible at any age.

#### **Group 4**

- Retirees are eligible at age 55;
- Retirees with at least 20 years of creditable service are eligible at any age.

*Members hired on or  
after April 2, 2012*

#### **Group 1 (including Teachers):**

- Retirees with at least 10 years of creditable service are eligible at age 60.

#### **Group 2**

- Retirees with at least 10 years of creditable service are eligible at age 55.

#### **Group 4**

- Retirees are eligible at age 55;
- Retirees with at least 10 years of creditable service are eligible at age 50.

**Disability:** Accidental (job-related) Disability has no age or service requirement. Ordinary (non-job related) Disability has no age requirement but requires 10 years of creditable service.

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

**Pre-Retirement Death:** Surviving spouses of members who die in active service on Accidental (job-related) Death are eligible at any age. Surviving spouses of members who die in active service on Ordinary (non-job related) Death are eligible after two years of service.

**Post-Retirement Death:** Surviving spouse is eligible.

---

<b>Benefit Types:</b>	Medical and prescription drug benefits are provided to all eligible retirees through plans offered by Harvard Pilgrim Health Care and Tufts Health Plan. The Town of Belmont pays 50% of the retiree life insurance premium and reimburses 50% of the Medicare Part B premium for retirees if applicable. (Dental coverage is offered but it is 100% retiree paid and therefore has no impact on this valuation.)
<b>Duration of Coverage:</b>	Lifetime.
<b>Dependent Benefits:</b>	Medical and prescription drugs.
<b>Dependent Coverage:</b>	Benefits are payable to a spouse for their lifetime, regardless of when the retirees dies.
<b>MGL Chapter 32B, Section 18A:</b>	Adopted
<b>Retiree Life:</b>	\$2,000
<b>Retiree Contributions:</b>	Premium rates and retiree contributions as of June 30, 2017 are summarized on the following page:

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

	Subscribers			Retirees 65 and over*	Monthly Premium (eff. 7/1/2017)	Town cost	Retiree cost	Retiree Cost %	
	Active	Retiree	Total						
<u>Non-Medicare Actives and Retirees</u>									
Harvard Pilgrim PPO									
Individual		1	7	8	5	\$1,116.88	\$558.44	\$558.44	50.0%
Family		2	2	4	1	\$3,037.92	\$1,518.96	\$1,518.96	50.0%
Harvard Pilgrim HMO**									
Individual		230	75	305	32	\$699.41	\$559.53	\$139.88	20.0%
Family		356	28	384	4	\$1,894.91	\$1,515.93	\$378.98	20.0%
<u>Non-Medicare Total</u>		589	112	701	42				

	Subscribers			Monthly Premium (eff. 7/1/2017)	Town cost	Retiree cost***	Retiree Cost %
	Active	Retiree	Total				
<u>Medicare Supplement Plans</u>							
Medicare Enhance	N/A	478	478				
Enrolled Prior to January 1, 2016				\$483.20	\$296.10	\$187.10	38.7%
Enrolled After January 1, 2016				\$483.20	\$308.60	\$174.60	36.1%
Tufts Medicare Preferred****		76	76				
Enrolled Prior to January 1, 2016				\$311.50	\$210.25	\$101.25	32.5%
Enrolled After January 1, 2016				\$311.50	\$222.75	\$88.75	28.5%
<u>Medicare Total</u>		554	554				
<u>Retiree Total*****</u>		666					

- \* 42 of 596 over-65 retirees are in a non-Medicare plan.
- \*\* Certain members based on date of hire may have a retiree cost share of 25%.
- \*\*\* Adjusted for 50% of Part B subsidy coshare of the Part B base rate.
- \*\*\*\* Rates are as of January 1, 2017.
- \*\*\*\*\* In addition, there are 30 spouses of retirees covered under a family policy.

### Plan Changes Since the Prior Valuation:

Effective January 1, 2018, prescription drug coverage for retirees enrolled in the Medicare Enhance plan is now provided through Aetna as a stand alone PDP on a fully-insured basis.

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

---

### EXHIBIT III Definitions of Terms

---

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

<b>Assumptions or Actuarial Assumptions:</b>	<p>The estimates on which the cost of the Plan is calculated including:</p> <ul style="list-style-type: none"><li>(a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;</li><li>(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;</li><li>(c) Retirement rates — the rate or probability of retirement at a given age;</li><li>(d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.</li></ul>
<b>Total OPEB Liability:</b>	<p>Present value of all future benefit payments for current retirees and active employees taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions.</p>
<b>Service Cost:</b>	<p>The amount of contributions required to fund the benefit allocated to the current year of service.</p>
<b>Actuarially Determined Contribution:</b>	<p>A target or recommended contribution to an OPEB plan for the reporting period based on the most recent measurement available.</p>
<b>Valuation Date:</b>	<p>The date at which the actuarial valuation is performed</p>
<b>Covered Employee Payroll:</b>	<p>The payroll of the employees that are provided OPEB benefits</p>
<b>Discount Rate:</b>	<p>The single rate of return, that when applied to all projected benefit payments results in an actuarial present value that is the sum of the following:</p> <ul style="list-style-type: none"><li>(1) the actuarial present value of projected benefit payments projected to be funded by plan assets using a long term rate of return, and</li><li>(2) the actuarial present value of projected benefit payments that are non included in (1) using a yield or index rate for 20 year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher</li></ul>

## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

<b>Entry Age Actuarial Cost Method:</b>	An actuarial cost method where the present value of the projected benefits for an individual is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age
<b>Healthcare Cost Trend Rates:</b>	The rate of change in per capita health costs over time
<b>Net OPEB Liability:</b>	The Total OPEB Liability less the Plan Net Fiduciary Position
<b>Plan Net Fiduciary Position:</b>	Market Value of Assets
<b>Real Rate of Return:</b>	The rate of return on an investment after removing inflation



## SECTION 5: Supporting Information for the Town of Belmont June 30, 2017 Measurement Under GASB 74

---

### EXHIBIT IV

#### Accounting Requirements

---

The Governmental Accounting Standards Board (GASB) issued Statement Number 74 – Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, and Statement Number 75 – Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions. Under these statements, all state and local government entities that provide other post-employment benefits (OPEB) are required to report the cost of these benefits on their financial statements. The accounting standards supplement cash accounting, under which the expense for postemployment benefits is equal to benefit and administrative costs paid on behalf of retirees and their dependents (*i.e.*, a pay-as-you-go basis).

The statements cover postemployment benefits of health, prescription drug, dental, vision and life insurance coverage for retirees; long-term care coverage, life insurance and death benefits that are not offered as part of a pension plan; and long-term disability insurance for employees. The benefits valued in this report are limited to those described in Exhibit II, which are based on those provided under the terms of the substantive plan in effect at the time of the valuation and on the pattern of sharing costs between the employer and plan members. The projection of benefits is not limited by legal or contractual limits on funding the plan unless those limits clearly translate into benefit limits on the substantive plan being valued.

The new standards introduce an accrual-basis accounting requirement, thereby recognizing the employer cost of postemployment benefits over an employee's career. The standards also introduce a consistent accounting requirement for both pension and non-pension benefits.

The total cost of providing postemployment benefits is projected, taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions. These assumptions are summarized in Exhibit I. This amount is then discounted to determine the Total OPEB Liability. The Net OPEB Liability (NOL) is the difference between the Total OPEB Liability and market value of assets in the Plan, called the Net Plan Fiduciary Position.

Once the NOL is determined, the Annual OPEB Expense is determined as the change in NOL from the prior year with deferred recognition of certain elements. In addition, Required Supplementary Information (RSI) must be reported, including historical information about the Net OPEB liability and the Contributions made to the Plan. Exhibit III contains a definition of terms as well as more information about GASB 74/75 concepts.

The calculation of an accounting obligation does not, in and of itself, imply that there is any legal liability to provide the benefits valued, nor is there any implication that the Employer is required to implement a funding policy to satisfy the projected expense.

Actuarial calculations reflect a long-term perspective, and the methods and assumptions use techniques designed to reduce short-term volatility in accrued liabilities and the actuarial value of assets, if any.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.