# Town of Boxford Other Postemployment Benefits Plan

## GASB 74 & GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2021

As of the Measurement Date: June 30, 2022

For the Reporting Date: June 30, 2022

Delivered October 19, 2022





West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

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October 19, 2022

Personal and Confidential

Ms. Kathleen Benevento Town Accountant / Finance Director Town of Boxford 7A Spofford Road Boxford, MA 01921

Dear Ms. Benevento:

We have performed an actuarial valuation of the Town of Boxford Other Postemployment Benefits Plan for the Reporting Date & Fiscal Year Ending June 30, 2022 with a Measurement Date of June 30, 2022 and a Valuation Date of July 1, 2021. The figures presented in this report reflect the adoption, by the Town of Boxford, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75").

The financial results of the actuarial valuation are summarized in the report. The Executive Summaries highlight the results of the valuation. Additional information summarizing census data, actuarial assumptions, claim rates and the methodology for developing them, as well as a glossary of selected terms used in this study, is also included in the report.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions used are reasonable, reflecting the experience of the plan and reasonable expectations and, in combination, represent our best estimate of the anticipated experience under the plan.

We will be pleased to answer any questions that you may have regarding this actuarial valuation report.

Very truly yours,

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Parker E. Elmore, ASA, EA, FCA, MAAA President, CEO & Actuary

Odyssey ADVISORS

East Coast 11 Hayward Ave, Building 4 Colchester, CT 06415 (860) 537-9080 West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

October 19, 2022

#### ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Boxford other postemployment benefit programs with a Valuation Date of July 1, 2021 with a Measurement Date of June 30, 2022 for the Reporting Date & Fiscal Year Ending June 30, 2022 in accordance with Government Account Standards Board Statement No. 74 & 75 and Actuarial Standards of Practice as issued by the American Academy of Actuaries. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Numbers 74 & 75 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the Town and on participant claims or premium data provided by the Town and/or vendors employed by the Town.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statements Number 74 and 75 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the Town are reasonably related to the experience and expectations of the postemployment benefits programs.

Parker E. Elmore, ASA, EA, FCA, MAAA President, CEO & Actuary

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Kurtis J. Thompson, ASA, MAAA Consulting Actuary



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#### **EXECUTIVE SUMMARY**

## How did plan liabilities change from FY 21 to FY 22?

Plan Experience

For the year ending on the Measurement Date of June 30, 2022, the Plan saw an experience gain of \$649,878 or 4.26% of the beginning Total OPEB Liability ("TOL"). This was mainly due to average premiums for Medicare Supplement plans increasing by 4% rather than the expected 9% increase over the two-year period.

## Assumption Changes

One or more key assumptions have changed since the prior valuation. The total impact of these assumption changes increased disclosed liabilities by approximately \$3.5 million, as detailed below.

- ✓ Due to the GASB 75 standards the discount rate has been changed from 6.75% to 6.40% increasing the disclosed liability by approximately \$740 thousand.
- ✓ Due to updated guidance related to the implementation of ASOP 6, we have updated our methodology for calculating expected claims increasing the disclosed liability by approximately \$1.5 million.
- ✓ Based on recent actuarial research we have adopted the Getzen model for future projected healthcare costs increasing the disclosed liability by approximately \$1.3 million.

It is important to remember that actuarial assumptions or changes in such do not impact the actual cost of the Plan. Rather, they impact the timing of the recognition of such costs.

#### **Investment Experience**

✓ During the period investments earned approximately \$480 thousand less than expected.

#### Changes in Benefit Terms

✓ To the best of our knowledge there have been no material changes in benefit terms that would impact the figures shown in this report.





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#### **EXECUTIVE SUMMARY**

#### **Recognition Period**

- ✓ Changes in assumptions & plan experience are amortized into the net OPEB expense over 5.00 years.
- ✓ Differences between projected & actual earnings on OPEB plan investments are amortized into the net OPEB expense over 5.00 years
- ✓ Changes in benefit terms are to be recognized in full immediately

#### Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

#### Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare supplement) plans represent 73.56% of the total plan liabilities
- ✓ Age at which plan participants retire
- ✓ Percentage of plan participants who elect coverage for themselves and/or a spouse
- ✓ Medical care cost inflation rate We currently assume medical costs increase according to the Getzen Model of Long–Run Medical Cost Trends for Active and Medicare supplement plans, which includes an assumed 9.00% increase in fiscal year 2022 and an ultimate trend rate of 3.63% in fiscal year 2060.
- ✓ Discount Rate (6.40%) Higher discount rates yield lower liabilities and vice versa
- ✓ Cost Sharing Under Massachusetts law you may charge retirees up to 50% of premiums for health insurance

#### **Discount Rate Determinants**

- ✓ Employer Current and Future Benefit Payments
- ✓ Municipal Bond Rate The S&P 20-year high grade municipal bond index was 4.09% as of June 30, 2022.
- ✓ Current Asset Level The Town had \$4,417,840 of OPEB assets as of June 30, 2022.
- ✓ Future Funding Policy The Town is expected to contribute \$300,000 annually beyond pay-as-you-go costs.
- ✓ Investment Policy The Town is expected to earn 6.41% per year on assets based on its investment policy.



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#### **EXECUTIVE SUMMARY**

#### Low Default Risk Obligation Measure (LDROM)

For purposes of this LDROM, we have used a discount rate of 4.09% which represents the 20-year municipal bond index while keeping all other assumptions unchanged from the GASB 74/75 disclosures. Based on this, the LDROM Total OPEB Liability is \$25 million vs. the \$19 million under the GASB 74/75 measure - the reflection of the Town's funding and OPEB Trust Investment policy reduced disclosed liabilities by approximately \$6 million. Please note that the ultimate cost of the plan is the actual benefits paid plus expenses and any changes in assumptions, including discount rate, do not impact the actual cost of the plan.

#### Medicare Buy-In

The Town currently has 3 retirees or covered spouses who are over the age of 65 and are enrolled in Active medical plans rather than Medicare Supplement (Senior) plans. Under Actuarial Standards of Practice for OPEB, we are required to reflect the projected higher healthcare costs that occur as retirees age.

Recently, some of our clients have seen substantial cost savings by "buying into" Medicare for retirees who would otherwise be ineligible. To buy into Medicare the Town would need to pay the Medicare Part A premium and the Medicare Part A and B penalties. While the cost to buy into Medicare is significant, it is likely still far less than the cost of the claims that the associated retirees are expected to incur. You may wish to review their Medicare eligibility to see if they are already eligible for Medicare or if a "buy-in" is appropriate as this could yield a reduction in your OPEB annual costs and disclosed liabilities. If you are in this situation, we encourage you to talk to your healthcare consultant to see if this might be viable.





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#### EXECUTIVE SUMMARY

#### Key Plan Metrics

While an actuarial valuation under GASB 74/75 can be very complex with many variables, we find it helpful to look at several key metrics (shown below) to better allow you to manage your plan.

| <b>Representative Plan Statistics</b>              |               |               |  |  |  |  |  |  |
|--|---------------|---------------|--|--|--|--|--|--|
| Valuation Date                                     | July 1, 2021  | July 1, 2019  |  |  |  |  |  |  |
| Measurement Date & Period Ending                   | June 30, 2022 | June 30, 2021 |  |  |  |  |  |  |
| Reporting Date/Fiscal Year End                     | June 30, 2022 | June 30, 2021 |  |  |  |  |  |  |
|  |               |               |  |  |  |  |  |  |
| Total OPEB Liability                               | 18,704,813    | 15,267,628    |  |  |  |  |  |  |
| Per Eligible Active Plan Participant               | 55,567        | 40,731        |  |  |  |  |  |  |
| Per Retiree/Spouse Plan Participant                | 57,266        | 54,077        |  |  |  |  |  |  |
| Total Annual Service Cost (Annual Benefit Accrual) | 332,587       | 299,406       |  |  |  |  |  |  |
| Per Eligible Active Plan Participant               | 1,837         | 1,654         |  |  |  |  |  |  |
| Expected Employer Share of Retiree Costs           | 821,153       | 776,946       |  |  |  |  |  |  |
| Per Retiree/Spouse Plan Participant                | 5,438         | 5,322         |  |  |  |  |  |  |
| Net OPEB Liability as a % of Covered Payroll       | 103.81%       | 90.47%        |  |  |  |  |  |  |





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#### **EXECUTIVE SUMMARY**

#### Liabilities & Benefit Payments in Today's Dollars

With the growth of medical care costs over time, the nominal accrued liabilities ("TOL") and benefit payments can appear daunting. However, it is important to remember that a dollar paid in the future is worth less than a dollar paid today.

|                          | Number of<br>Retirees, |                      |                        |                           | Present Value at 3.00% of |
|--------------------------|------------------------|----------------------|------------------------|---------------------------|---------------------------|
|                          | Spouses, &             |                      | Present Value at 3.00% | <b>Employer Share of</b>  | Employer Share of         |
| For the Period Ending on | Surviving              |                      | of Total OPEB          | Premiums/Claims           | Premiums / Claims         |
| the Measurement Date of: | Spouses                | Total OPEB Liability | Liability              | Including "Implicit Cost" | Including "Implicit Cost" |
| June 30, 2022            | 151                    | 18,704,813           | 18,704,813             | 821,153                   | 821,153                   |
| June 30, 2027            | 183                    | 22,652,014           | 19,539,826             | 1,060,867                 | 915,113                   |
| June 30, 2032            | 193                    | 26,068,622           | 19,397,503             | 1,531,549                 | 1,139,616                 |
| June 30, 2037            | 187                    | 29,763,885           | 19,104,305             | 1,660,351                 | 1,065,716                 |
| June 30, 2042            | 173                    | 34,395,557           | 19,043,986             | 1,885,809                 | 1,044,127                 |
| June 30, 2047            | 160                    | 39,286,305           | 18,763,358             | 2,287,457                 | 1,092,502                 |
| June 30, 2052            | 147                    | 45,580,423           | 18,778,531             | 2,356,449                 | 970,826                   |





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#### EXECUTIVE SUMMARY

#### Continuing OPEB Disclosures

In addition to pension benefits, municipal entities may provide retired employees with healthcare and life insurance benefits. The portion of the cost of such benefit paid by these entities is generally provided on a pay-as-you-go basis.

The pay-as-you-go costs to the Town for such benefits for the most recent years is as follows:

| <u>Fiscal Year Ending</u> |             | <u>Cost</u> |
|---------------------------|-------------|-------------|
| June 30, 2023             | (Projected) | 736,134     |
| June 30, 2023             | (110jected) | 821,153     |
| June 30, 2021             |             | 776,946     |
| June 30, 2020             |             | 727,697     |
| June 30, 2019             |             | 650,522     |
| June 30, 2018             |             | 639,372     |

The Town performs actuarial valuations of its non-pension post-employment benefits liability in accordance with GASB reporting requirements. As of the June 30, 2022 Measurement Date the Net OPEB Liability ("NOL") was determined to be \$14,286,973 assuming a discount rate of 6.40%. The Town has established an OPEB Trust and plans to fund this liability. The Town is expected to contribute \$300,000 annually beyond pay-as-you-go costs. The balance of this fund as of June 30, 2022 was \$4,417,840. See the Town's audit reports for additional information.





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#### PRINCIPAL RESULTS OF THE VALUATION

## Town of Boxford Assuming Funding - 6.40% discount rate Comparison of Plan Liabilities to Prior Valuation

| Valuation Date  | July 1, 2021  | July 1, 2019     |
|---|---------------|------------------|
| For the Measurement Period ending on the Measurement Date of: | June 30, 2022 | June 30, 2021    |
| For the Reporting Period & Fiscal Year ending on:             | June 30, 2022 | June 30, 2021    |
|   |               |                  |
| I. Total OPEB Liability                                       |               |                  |
| A. Actives  | 10,057,613    | 7,372,329        |
| B. Retirees/Disabled  | 8,647,200     | <u>7,895,299</u> |
| C. Total  | 18,704,813    | 15,267,628       |
| II. Fiduciary Net Position [Plan Assets]                      | 4,417,840     | 4,292,646        |
| III. Net OPEB Liability (Asset) [I II.]                       | 14,286,973    | 10,974,982       |
| IV. Funded Ratio [II. / I.]                                   | 23.62%        | 28.12%           |
| V. Number of Eligible Participants                            |               |                  |
| A. Actives  | 181           | 181              |
| B. Retirees/Disabled & Dependents                             | <u>151</u>    | <u>146</u>       |
| C. Total  | 332           | 327              |
| VI. Service Cost  | 332,587       | 299,406          |
| VII. Financial Statement Expense/(Income)                     | 2,145,708     | 465,912          |
| VIII. Employer OPEB Trust (Contribution)/Withdrawal           | (300,000)     | (300,000)        |
| IX. Deferred Inflow of Resources                              | (707,469)     | (789,804)        |
| X. Deferred Outflow of Resources                              | 3,483,171     | 1,278,070        |
| XI. Money Weighted Rate of Return                             | (3.85%)       | 29.70%           |
| XII. 20-year Municipal Bond Rate (SAPIHG)                     | 4.09%         | 2.18%            |
| XIII. Expected Long Term Rate of Return (Net of Expense)      | 6.41%         | 6.77%            |
| XIV. Crossover Year   | 2094          | N/A              |
| XV. Discount Rate   | 6.40%         | 6.75%            |





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#### PRINCIPAL RESULTS OF THE VALUATION

## Town of Boxford Plan Liabilities as of the June 30, 2022 Measurement Date

|       |  | Town Employees   | School Employees |             |
|-------|--|------------------|------------------|-------------|
|       |  | and Retirees     | and Retirees     | Total       |
| I.    | Total OPEB Liability                                   |                  |                  |             |
|       | A. Actives   | 2,828,217        | 7,229,396        | 10,057,613  |
|       | B. Retirees/Disabled                                   | <u>6,120,396</u> | <u>2,526,804</u> | 8,647,200   |
|       | C. Total   | 8,948,613        | 9,756,200        | 18,704,813  |
| II.   | Fiduciary Net Position [Plan Assets]                   | 2,113,549        | 2,304,291        | 4,417,840   |
| III.  | Net OPEB Liability (Asset) [I II.]                     | 6,835,064        | 7,451,909        | 14,286,973  |
| For t | he Reporting Date and Fiscal Year Ending June 30, 2022 |                  |                  |             |
| IV.   | Service Cost   | 65,135           | 267,452          | 332,587     |
| V.    | Financial Statement Expense/(Income)                   | 930,617          | 1,215,091        | 2,145,708   |
| VI.   | Employer Share of Costs                                | (194,980)        | (626,173)        | (821,153)   |
| VII.  | Employer OPEB Trust (Contribution)/Withdrawal          | (143,524)        | (156,476)        | (300,000)   |
| VIII. | Total Employer Contribution [VI. + VII.]               | (338,504)        | (782,649)        | (1,121,153) |





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#### PRINCIPAL RESULTS OF THE VALUATION

#### CURRENT FUNDING POLICY (OPEN GROUP)

|                           | Funding - 6.40% discount rate                   |   |   |   |                                   |                    |  |             |   |  |   |   |
|---------------------------|---|---|---|---|-----------------------------------|--------------------|--|-------------|---|--|---|---|
| For the<br>Fiscal<br>Year | Period Ending on<br>the Measurement<br>Date of: | I. Total OPEB<br>Liability ("TOL") as<br>of Measurement<br>Date | II. Fiduciary Net<br>Position as of<br>Measurement Date<br>with an expected<br>6.41% return | III. Net OPEB<br>Liability (Asset)<br>[I II.] | IV. Funded<br>Ratio<br>[II. / I.] | V. Service<br>Cost | VI. Employer<br>Share of Benefit<br>Payments (With<br>Implicit Cost) |             | VIII. Gross<br>Trust<br>Contributions<br>[VI. + VII.] | IX. Benefit<br>Payments<br>Reimbursed<br>from the<br>Trust | X. Administrative<br>& Investment<br>Expenses<br>Reimbursed from<br>the Trust | XI. Total Employer<br>Payments Less<br>Reimbursements<br>[VIII IX X.] |
| 2022                      | June 30, 2022                                   | 18,704,813  | 4,417,840   | 14,286,973                                    | 23.62%                            | 332,587            | 821,153  | 300,000     | 1,121,153   | 821,153  | 0   | 300,000   |
| 2023                      | June 30, 2023                                   | 19,603,134  | 5,010,489   | 14,592,645                                    | 25.56%                            | 432,836            | 736,134  | 300,000     | 1,036,134   | 736,134  | 0   | 300,000   |
| 2024                      | June 30, 2024                                   | 20,383,187  | 5,641,127   | 14,742,060                                    | 27.68%                            | 452,244            | 820,779  | 300,000     | 1,120,779   | 820,779  | 0   | 300,000   |
| 2025                      | June 30, 2025                                   | 21,126,908  | 6,312,189   | 14,814,719                                    | 29.88%                            | 470,296            | 942,135  | 300,000     | 1,242,135   | 942,135  | 0   | 300,000   |
| 2026                      | June 30, 2026                                   | 21,885,940  | 7,026,266   | 14,859,674                                    | 32.10%                            | 483,764            | 986,708  | 300,000     | 1,286,708   | 986,708  | 0   | 300,000   |
| 2027                      | June 30, 2027                                   | 22,652,014  | 7,786,115   | 14,865,899                                    | 34.37%                            | 504,088            | 1,060,867  | 300,000     | 1,360,867   | 1,060,867  | 0   | 300,000   |
| 2028                      | June 30, 2028                                   | 23,367,921  | 8,594,671   | 14,773,250                                    | 36.78%                            | 519,339            | 1,197,688  | 300,000     | 1,497,688   | 1,197,688  | 0   | 300,000   |
| 2029                      | June 30, 2029                                   | 24,070,050  | 9,455,055   | 14,614,995                                    | 39.28%                            | 533,565            | 1,270,413  | 300,000     | 1,570,413   | 1,270,413  | 0   | 300,000   |
| 2030                      | June 30, 2030                                   | 24,765,932  | 10,370,590  | 14,395,342                                    | 41.87%                            | 549,691            | 1,350,371  | 300,000     | 1,650,371   | 1,350,371  | 0   | 300,000   |
| 2031                      | June 30, 2031                                   | 25,428,547  | 11,344,810  | 14,083,737                                    | 44.61%                            | 567,898            | 1,462,171  | 300,000     | 1,762,171   | 1,462,171  | 0   | 300,000   |
| 2032                      | June 30, 2032                                   | 26,068,622  | 12,381,478  | 13,687,144                                    | 47.50%                            | 580,539            | 1,531,549  | 300,000     | 1,831,549   | 1,531,549  | 0   | 300,000   |
| 2033                      | June 30, 2033                                   | 26,744,378  | 13,484,596  | 13,259,782                                    | 50.42%                            | 598,086            | 1,564,455  | 300,000     | 1,864,455   | 1,564,455  | 0   | 300,000   |
| 2034                      | June 30, 2034                                   | 27,405,298  | 14,658,424  | 12,746,874                                    | 53.49%                            | 617,336            | 1,589,314  | 300,000     | 1,889,314   | 1,589,314  | 0   | 300,000   |
| 2035                      | June 30, 2035                                   | 28,127,874  | 15,907,495  | 12,220,379                                    | 56.55%                            | 635,678            | 1,619,827  | 300,000     | 1,919,827   | 1,619,827  | 0   | 300,000   |
| 2036                      | June 30, 2036                                   | 28,953,325  | 17,236,631  | 11,716,694                                    | 59.53%                            | 655,096            | 1,588,444  | 300,000     | 1,888,444   | 1,588,444  | 0   | 300,000   |
| 2037                      | June 30, 2037                                   | 29,763,885  | 18,650,965  | 11,112,920                                    | 62.66%                            | 674,368            | 1,660,351  | 300,000     | 1,960,351   | 1,660,351  | 0   | 300,000   |
| 2038                      | June 30, 2038                                   | 30,616,373  | 20,155,958  | 10,460,415                                    | 65.83%                            | 695,027            | 1,649,613  | 300,000     | 1,949,613   | 1,649,613  | 0   | 300,000   |
| 2039                      | June 30, 2039                                   | 31,527,646  | 21,757,421  | 9,770,225                                     | 69.01%                            | 716,093            | 1,693,580  | 300,000     | 1,993,580   | 1,693,580  | 0   | 300,000   |
| 2040                      | June 30, 2040                                   | 32,463,755  | 23,461,537  | 9,002,218                                     | 72.27%                            | 738,391            | 1,774,935  | 300,000     | 2,074,935   | 1,774,935  | 0   | 300,000   |
| 2041                      | June 30, 2041                                   | 33,399,049  | 25,274,887  | 8,124,162                                     | 75.68%                            | 761,576            | 1,819,905  | 300,000     | 2,119,905   | 1,819,905  | 0   | 300,000   |
| 2042                      | June 30, 2042                                   | 34,395,557  | 27,204,473  | 7,191,084                                     | 79.09%                            | 786,560            | 1,885,809  | 300,000     | 2,185,809   | 1,885,809  | 0   | 300,000   |
| 2043                      | June 30, 2043                                   | 35,311,928  | 29,257,745  | 6,054,183                                     | 82.86%                            | 811,429            | 1,981,173  | 300,000     | 2,281,173   | 1,981,173  | 0   | 300,000   |
| 2044                      | June 30, 2044                                   | 36,247,725  | 31,442,632  | 4,805,093                                     | 86.74%                            | 838,757            | 2,045,408  | 300,000     | 2,345,408   | 2,045,408  | 0   | 300,000   |
| 2045                      | June 30, 2045                                   | 37,234,550  | 33,767,570  | 3,466,980                                     | 90.69%                            | 867,946            | 2,122,355  | 300,000     | 2,422,355   | 2,122,355  | 0   | 300,000   |
| 2046                      | June 30, 2046                                   | 38,290,599  | 36,241,537  | 2,049,062                                     | 94.65%                            | 899,021            | 2,194,857  | 300,000     | 2,494,857   | 2,194,857  | 0   | 300,000   |
| 2047                      | June 30, 2047                                   | 39,286,305  | 38,874,085  | 412,220                                       | 98.95%                            | 930,935            | 2,287,457  | 300,000     | 2,587,457   | 2,287,457  | 0   | 300,000   |
| 2048                      | June 30, 2048                                   | 40,417,565  | 41,675,380  | (1,257,815)                                   | 103.11%                           | 964,410            | 2,274,242  | 300,000     | 2,574,242   | 2,274,242  | 0   | 300,000   |
| 2049                      | June 30, 2049                                   | 41,618,405  | 43,047,677  | (1,429,272)                                   | 103.43%                           | 999,887            | 2,259,246  | (1,259,359) | 999,887   | 2,259,246  | 0   | (1,259,359)   |
| 2050                      | June 30, 2050                                   | 42,881,944  | 44,518,468  | (1,636,524)                                   | 103.82%                           | 1,036,530          | 2,285,682  | (1,249,152) | 1,036,530   | 2,285,682  | 0   | (1,249,152)   |
| 2051                      | June 30, 2051                                   | 44,234,171  | 46,070,448  | (1,836,277)                                   | 104.15%                           | 1,075,487          | 2,337,327  | (1,261,840) | 1,075,487   | 2,337,327  | 0   | (1,261,840)   |
| 2052                      | June 30, 2052                                   | 45,580,423  | 47,743,801  | (2,163,378)                                   | 104.75%                           | 1,115,831          | 2,356,449  | (1,240,618) | 1,115,831   | 2,356,449  | 0   | (1,240,618)   |





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## EXHIBIT A

## <u>FINANCIAL STATEMENT DISCLOSURES</u> (As of the June 30, 2022 Measurement Date)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require the following disclosures in the financial statements:

## 1. <u>OPEB Expense Development</u>

|      | Components of the Town's OPEB Expenses for the Fiscal Year Ending June 3                     | 0, 2022   |  |  |  |  |  |
|------|--|-----------|--|--|--|--|--|
| Des  | Description  |           |  |  |  |  |  |
| I.   | Service Cost   | 332,587   |  |  |  |  |  |
| II.  | Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments                 | 1,025,753 |  |  |  |  |  |
| III. | Deferred (Inflows)/Outflows from Plan Experience*  | 154,349   |  |  |  |  |  |
| IV.  | Deferred (Inflows)/Outflows from Changes of Assumptions*                                     | 973,928   |  |  |  |  |  |
| V.   | Projected Earnings on OPEB Plan Investments  | (300,804) |  |  |  |  |  |
| VI.  | Deferred (Inflows)/Outflows from Earnings on Plan Investments**                              | (40,105)  |  |  |  |  |  |
| VII. | OPEB Plan Administrative Expense   | 0         |  |  |  |  |  |
| VIII | . Other Changes in Fiduciary Net Position  | 0         |  |  |  |  |  |
| IX.  | Financial Statement Expense/(Income) Prior to Plan Design Changes [I. + II.+ + VII. + VIII.] | 2,145,708 |  |  |  |  |  |
| X.   | Expense Related to Change in Benefit Terms***  | 0         |  |  |  |  |  |
| XI.  | Financial Statement Expense/(Income) [IX. + X.]  | 2,145,708 |  |  |  |  |  |
| * Ar | nortized over 5.00 years   |           |  |  |  |  |  |

\*\* Amortized over 5.00 years

\*\*\* Recognized Immediately





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#### EXHIBIT A

## FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

## 2. <u>Changes in Net OPEB Liability</u>

|       | Changes in Net OPEB Lia  | bility            |                     |            |
|-------|--|-------------------|---------------------|------------|
|       |  |                   | Increase (Decrease) |            |
|       |  | <b>Total OPEB</b> | Plan Fiduciary      | Net OPEB   |
|       |  | Liability         | Net Position        | Liability  |
| I.    | Balances for the June 30, 2021 Reporting Date                            | 15,267,628        | 4,292,646           | 10,974,982 |
| II.   | Prior Period Adjustment  | <u>0</u>          | <u>0</u>            | <u>(</u>   |
| III.  | Balances for the June 30, 2021 Reporting Date with Adjustment [I. + II.] | 15,267,628        | 4,292,646           | 10,974,982 |
|       | Changes for the year:  |                   |                     |            |
| IV.   | Service Cost   | 332,587           | 0                   | 332,587    |
| V.    | Interest on Total OPEB Liability, Service Cost, and Benefit Payments     | 1,025,753         | 0                   | 1,025,753  |
| VI.   | Changes in Benefit Terms *   | 0                 | 0                   | 0          |
| VII.  | Change in Assumptions **   | 3,549,876         | 0                   | 3,549,876  |
| VIII. | Differences Between Actual and Expected Experience **                    | (649,878)         | 0                   | (649,878   |
| IX.   | Net Investment Income  | 0                 | (174,806)           | 174,806    |
| X.    | Employer Contributions to Trust  | 0                 | 1,121,153           | (1,121,153 |
| XI.   | Benefit Payments Withdrawn from Trust                                    | 0                 | (821,153)           | 821,153    |
| XII.  | Benefit Payments Excluding Implicit Cost                                 | (658,812)         | 0                   | (658,812   |
| XIII. | Implicit Cost Amount   | (162,341)         | 0                   | (162,341   |
| XIV.  | Total Benefit Payments Including Implicit Cost [XII. + XIII.]            | (821,153)         | 0                   | (821,153   |
| XV.   | Administrative Expense   | 0                 | 0                   | 0          |
| XVI.  | Other Charges  | 0                 | 0                   | 0          |
| XVII. | Net Changes [IV.+V.+VI.+VII.+VIII.+IX.+X.+XI.+XIV.+XV.+XVI.]             | 3,437,185         | 125,194             | 3,311,991  |
| xvII  | . Balances for the June 30, 2022 Reporting Date [III.+XVII.]             | 18,704,813        | 4,417,840           | 14,286,973 |

\*\* Amortized over 5.00 years





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#### EXHIBIT A

## FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

#### 3. <u>Changes in Net OPEB Expense</u>

| Deferr         | ed (Inflows)/Outflow                                   | ws in OPEB Exp                | ense Arising | from the Rec | ognition of t | he Effects of | Differences | Between     |  |  |  |  |
|----------------|--|-------------------------------|--------------|--------------|---------------|---------------|-------------|-------------|--|--|--|--|
|                | Expected & Actual Experience                           |                               |              |              |               |               |             |             |  |  |  |  |
| Fiscal<br>Year | Differences<br>Between Actual &<br>Expected Experience | Recognition<br>Period (Years) | <u>2022</u>  | 2023         | <u>2024</u>   | 2025          | 2026        | <u>2027</u> |  |  |  |  |
| 2017           |  |                               |              |              |               |               |             |             |  |  |  |  |
| 2018           | 1,854,235  | 5.00                          | 370,847      |              |               |               |             |             |  |  |  |  |
| 2019           | 0  | 5.00                          | 0            | 0            |               |               |             |             |  |  |  |  |
| 2020           | (442,134)  | 5.11                          | (86,523)     | (86,523)     | (86,523)      | (9,519)       |             |             |  |  |  |  |
| 2021           | 0  | 5.11                          | 0            | 0            | 0             | 0             | 0           |             |  |  |  |  |
| 2022           | (649,878)  | 5.00                          | (129,975)    | (129,975)    | (129,975)     | (129,975)     | (129,978)   |             |  |  |  |  |
| 2023           |  |                               |              |              |               |               |             |             |  |  |  |  |
| 2024           |  |                               |              |              |               |               |             |             |  |  |  |  |
| 2025           |  |                               |              |              |               |               |             |             |  |  |  |  |
| 2026           |  |                               |              |              |               |               |             |             |  |  |  |  |
| Total Ren      | naining Balance  |                               |              |              |               |               |             |             |  |  |  |  |
| Net incre      | ase (decrease) in OPEB                                 | Expense                       | 154,349      | (216,498)    | (216,498)     | (139,494)     | (129,978)   | 0           |  |  |  |  |

| De             | Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Changes in<br>Assumptions |                               |             |  |  |             |             |             |  |  |  |
|----------------|--|-------------------------------|-------------|--|--|-------------|-------------|-------------|--|--|--|
| Fiscal<br>Year | Differences from<br>Changes in<br>Actuarial<br>Assumptions   | Recognition<br>Period (years) | <u>2022</u> | <u>2023                                   </u> | <u>2024                                   </u> | <u>2025</u> | <u>2026</u> | <u>2027</u> |  |  |  |
| 2017           |  | _                             |             |  |  |             |             |             |  |  |  |
| 2018           | 0  | 5.00                          | 0           |  |  |             |             |             |  |  |  |
| 2019           | 0  | 5.00                          | 0           | 0  |  |             |             |             |  |  |  |
| 2020           | 907,664  | 5.11                          | 177,625     | 177,625  | 177,625  | 19,539      |             |             |  |  |  |
| 2021           | 441,137  | 5.11                          | 86,328      | 86,328   | 86,328   | 86,328      | 9,497       |             |  |  |  |
| 2022           | 3,549,876  | 5.00                          | 709,975     | 709,975  | 709,975  | 709,975     | 709,976     |             |  |  |  |
| 2023           |  |                               |             |  |  |             |             |             |  |  |  |
| 2024           |  |                               |             |  |  |             |             |             |  |  |  |
| 2025           |  |                               |             |  |  |             |             |             |  |  |  |
| 2026           |  |                               |             |  |  |             |             |             |  |  |  |
| Fotal Rem      | aining Balance   |                               |             |  |  |             |             |             |  |  |  |
| Net increa     | se (decrease) in OPEB  | Expense                       | 973,928     | 973,928  | 973,928  | 815,842     | 719,473     | 0           |  |  |  |





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## EXHIBIT A

#### FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2022 Measurement Date)

## 3. Changes in Net OPEB Expense (Continued)

| Deferi         | red (Inflows)/Outflo                                 | ows in OPEB Exp               | ense Arising | from the Re                                    | cognition of                                   | Differences                                    | Between Pro | jected &    |  |  |  |  |
|----------------|--|-------------------------------|--------------|--|--|--|-------------|-------------|--|--|--|--|
|                | Actual Earnings on OPEB Plan Investments             |                               |              |  |  |  |             |             |  |  |  |  |
| Fiscal<br>Year | Differences<br>Between Actual &<br>Expected Earnings | Recognition<br>Period (years) | <u>2022</u>  | <u>2023                                   </u> | <u>2024                                   </u> | <u>2025                                   </u> | <u>2026</u> | <u>2027</u> |  |  |  |  |
| 2017           |  |                               |              |  |  |  |             |             |  |  |  |  |
| 2018           | (95,013)   | 5.00                          | (19,001)     |  |  |  |             |             |  |  |  |  |
| 2019           | 22,510   | 5.00                          | 4,502        | 4,502  |  |  |             |             |  |  |  |  |
| 2020           | 139,035  | 5.00                          | 27,807       | 27,807   | 27,807   |  |             |             |  |  |  |  |
| 2021           | (742,675)  | 5.00                          | (148,535)    | (148,535)                                      | (148,535)                                      | (148,535)                                      |             |             |  |  |  |  |
| 2022           | 475,610  | 5.00                          | 95,122       | 95,122   | 95,122   | 95,122   | 95,122      |             |  |  |  |  |
| 2023           |  |                               |              |  |  |  |             |             |  |  |  |  |
| 2024           |  |                               |              |  |  |  |             |             |  |  |  |  |
| 2025           |  |                               |              |  |  |  |             |             |  |  |  |  |
| 2026           |  |                               |              |  |  |  |             |             |  |  |  |  |
| otal Rem       | aining Balance                                       |                               |              |  |  |  |             |             |  |  |  |  |
| Vet increa     | se (decrease) in OPEB                                | Expense                       | (40,105)     | (21,104)                                       | (25,606)                                       | (53,413)                                       | 95,122      | 0           |  |  |  |  |





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## EXHIBIT A

## FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

#### 3. <u>Changes in Net OPEB Expense (Continued)</u>

| Statement of (Inflows) & Outflows Arising from Current & Prior Reporting<br>June 30, 2022 to be Reported for the Fiscal Year E |                                      | ement Period Endin                  | g on      |
|--|--------------------------------------|-------------------------------------|-----------|
|  | Deferred<br>Outflows of<br>Resources | Deferred<br>Inflows of<br>Resources | Total     |
| I. Contributions Made Subsequent to the Measurement Date   | 0                                    | 0                                   | 0         |
| II. Differences Between Actual & Expected Experience   | 0                                    | (702,468)                           | (702,468) |
| III. Changes of Assumptions  | 3,483,171                            | 0                                   | 3,483,171 |
| IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments  | 0                                    | (5,001)                             | (5,001)   |
| VI. Total [I. + II. + III. + IV.]  | 3,483,171                            | (707,469)                           | 2,775,702 |





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## EXHIBIT A

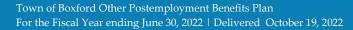
## FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

## 3. <u>Changes in Net OPEB Expense (Continued)</u>

| Annual Amortization of Deferred (Inflows) & Outflows  |                    |               |  |  |  |
|---|--------------------|---------------|--|--|--|
| The balance of deferred (inflows) & outflows as of the Reporting Date of June 30, 2022 will be reco<br>below. | gnized in future y | ears as shown |  |  |  |
| Year ending June 30:  |                    |               |  |  |  |
| 2023  | 736,326            |               |  |  |  |
| 2024  | 731,824            |               |  |  |  |
| 2025  | 622,935            |               |  |  |  |
| 2026  | 684,617            |               |  |  |  |
| 2027  | 0                  |               |  |  |  |
| Thereafter  | 0                  |               |  |  |  |

#### 4. <u>Discount Rate</u>

The discount rate used to measure the Total OPEB liability was 6.40% as of June 30, 2022 and 6.75% as of June 30, 2021. The projection of cash flows used to determine the discount rate assumed that contributions will be made in accordance with the Town's funding policy. Based on these assumptions, the OPEB Plan's Fiduciary Net Position is projected to be insufficient to make all projected benefit payments to current plan members. Therefore, the long-term expected rate of return on the OPEB Plan assets is applied to the projected benefits payments which the Fiduciary Net Position is expected to be sufficient to cover until Fiscal Year 2094 and the Municipal Bond Rate is applied thereafter. The Municipal Bond Rate is based on the S&P Municipal Bond 20 – Year High Grade Index ("SAPIHG"), which was 4.09% as of June 30, 2022. The S&P Municipal Bond 20 - Year High Grade Index rate for 20 – Year, tax exempt general obligation municipal bonds with an average rate of AA/Aa or higher.







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## EXHIBIT A

#### FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

## 5. Funding Policy

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. For the period ending on the June 30, 2022 Measurement Date, total Town premiums plus implicit costs for the retiree medical program were \$821,153. The Town also contributed \$300,000 to an OPEB Trust for a total contribution during the measurement period of \$1,121,153 to be reported on the financial statement for the fiscal year ending June 30, 2022.

#### 6. Investment Policy

The chart below shows how the long-term rate of return on assets is developed based on the Town's Investment Policy.

| Investment Target                       | Allocation & E       | xpected Long-Term Real Rate of Return   |   |
|---|----------------------|---|---|
| Asset Class                             | Target<br>Allocation | Asset Class                             | Long-Term<br>Expected Real<br>Rate of Return* |
|   | 14.50%               |   | 4.42%   |
| Domestic Equity - Large Cap             |                      | Domestic Equity - Large Cap             |   |
| Domestic Equity - Small/Mid Cap         | 3.50%                | Domestic Equity - Small/Mid Cap         | 4.81%   |
| International Equity - Developed Market | 16.00%               | International Equity - Developed Market | 4.91%   |
| International Equity - Emerging Market  | 6.00%                | International Equity - Emerging Market  | 5.58%   |
| Domestic Fixed Income                   | 20.00%               | Domestic Fixed Income                   | 1.00%   |
| International Fixed Income              | 3.00%                | International Fixed Income              | 1.04%   |
| Alternatives                            | 23.00%               | Alternatives                            | 5.98%   |
| Real Estate                             | 14.00%               | Real Estate                             | 6.25%   |
| Cash                                    | <u>0.00%</u>         | Cash                                    | <u>0.00%</u>                                  |
| Total                                   | 100.00%              |   |   |
|   |                      | I. Real Rate of Return                  | 4.41%   |
|   |                      | II. Inflation Assumption                | 2.50%   |
|   |                      | III. Total Nominal Return [I. + II.]    | 6.91%   |
|   |                      | IV. Investment Expense                  | 0.50%   |
|   |                      | V.Net Investment Return* [IIIIV.]       | 6.41%   |

\* Mean Geometric Returns based on 2021 Horizon Survey of Capital Market Assumptions





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## EXHIBIT A

## FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

## 7. Schedule of The Town's Contributions

| For the Fiscal Year<br>Ending | Actuarial<br>Determined<br>Contribution | Contributions in<br>Relation to the<br>Actuarially<br>Determined<br>Contribution | Contribution<br>Deficiency<br>(Excess) | Covered<br>Employee<br>Payroll | Contributions as a<br>Percentage of<br>Covered Employee<br>Payroll |
|-------------------------------|---|--|--|--------------------------------|--|
| June 30, 2022                 | 1,065,932                               | (1,121,153)  | (55,221)                               | 13,762,670                     | 8.15%  |
| June 30, 2021                 | 885,368                                 | (1,076,946)  | (191,578)                              | 12,130,527                     | 8.88%  |
| June 30, 2020                 | 1,135,524                               | (1,027,697)  | 107,827                                | 11,777,211                     | 8.73%  |
| June 30, 2019                 | 1,120,810                               | (1,000,522)  | 120,288                                | 10,980,482                     | 9.11%  |
| June 30, 2018                 | 989,774                                 | (989,372)  | 402                                    | 10,660,662                     | 9.28%  |
| June 30, 2017                 | 992,163                                 | (797,053)  | 195,110                                | 11,605,943                     | 6.87%  |





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## EXHIBIT A

#### FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

## 8. Effect of 1% Change in Healthcare Trend

| Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2022 Measurement Date |                    |                    |                    |  |
|---|--------------------|--------------------|--------------------|--|
|   | <u>1% Decrease</u> | Current Trend Rate | <u>1% Increase</u> |  |
| Net OPEB Liability (Asset)  | 12,008,515         | 14,286,973         | 17,071,839         |  |

#### 9. Effect of 1% Change in Discount Rates

| Impact of a 1% Change in the Discount Rate as of the June 30, 2022 Measurement Date |                    |                      |                    |  |
|---|--------------------|----------------------|--------------------|--|
|   | <u>Cu</u>          | urrent Discount Rate |                    |  |
|   | <u>1% Decrease</u> | <u>6.40%</u>         | <u>1% Increase</u> |  |
| Net OPEB Liability (Asset)  | 16,804,835         | 14,286,973           | 12,216,186         |  |





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## EXHIBIT A

## FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

#### 10. Money Weighted Rate of Return

|  | Plan<br>Investments /<br>Net External<br>Invested |    | Period<br>Weight |
|--|---|----|------------------|
|  | Cash Flows  |    |                  |
| I. Beginning value - June 30, 2021             | 4,292,646   | 12 | 1.0000           |
| Monthly net external cash flows:               |   |    |                  |
| July   | 0   | 11 | 0.9167           |
| August   | 300,000   | 10 | 0.8333           |
| September                                      | 0   | 9  | 0.7500           |
| October  | 0   | 8  | 0.6667           |
| November                                       | 0   | 7  | 0.5833           |
| December                                       | 0   | 6  | 0.5000           |
| January  | 0   | 5  | 0.4167           |
| February                                       | 0   | 4  | 0.3333           |
| March  | 0   | 3  | 0.2500           |
| April  | 0   | 2  | 0.1667           |
| May  | 0   | 1  | 0.0833           |
| June   | <u>0</u>  | 0  | 0.0000           |
| II. Total net external cash flow               | 300,000   |    |                  |
| III. Earnings and increase in fair value       | (174,806)   |    |                  |
| IV. Ending value - June 30, 2022 [I.+II.+III.] | 4,417,840   |    |                  |
| Money Weighted Rate of Return                  | (3.85%)   |    |                  |
| Asset Value - June 30, 2022                    | 4,417,840   |    |                  |





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#### EXHIBIT A

## FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2022 Measurement Date)

#### 11. OPEB Liability, OPEB Expense

|   | Fiscal Year Ending June 30, 2022 |               |             |
|---|----------------------------------|---------------|-------------|
|   | Town School                      |               |             |
|   | Employees and                    | Employees and |             |
|   | Retirees                         | Retirees      | Total       |
| I. Total OPEB Liability as of June 30, 2022                                     | 8,948,613                        | 9,756,200     | 18,704,813  |
| II. Fiduciary Net Position as of June 30, 2022                                  | 2,113,549                        | 2,304,291     | 4,417,840   |
| III. Net OPEB Liability (Asset) as of June 30, 2022 [I II.]                     | 6,835,064                        | 7,451,909     | 14,286,973  |
| IV. Service Cost  | 65,135                           | 267,452       | 332,587     |
| V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments | 488,821                          | 536,932       | 1,025,753   |
| VI. Projected Earnings on OPEB Plan Investments                                 | (143,934)                        | (156,870)     | (300,804)   |
| VII. Net Recognition of Deferred (Inflows)/Outflows                             | 520,595                          | 567,577       | 1,088,172   |
| VIII. OPEB Plan Administrative Expense  | 0                                | 0             | 0           |
| IX. Expense Related to Change in Benefit Terms                                  | 0                                | 0             | 0           |
| X. Financial Statement Expense/(Income) [IV. + V. + + VIII. + IX.]              | 930,617                          | 1,215,091     | 2,145,708   |
| XI. Employer Share of Costs   | (194,980)                        | (626,173)     | (821,153)   |
| XII. Employer (Payments) Withdrawals to/from OPEB Trust                         | (143,524)                        | (156,476)     | (300,000)   |
| XIII. Total Employer Contribution [XI. + XII.]                                  | (338,504)                        | (782,649)     | (1,121,153) |
| XIV. Net OPEB Expense/(Income) [X. + XIII.]                                     | 592,113                          | 432,442       | 1,024,555   |





> (1,121,153) 1,024,555

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#### EXHIBIT A

## <u>FINANCIAL STATEMENT DISCLOSURES</u> (As of the June 30, 2022 Measurement Date)

#### 12. <u>OPEB Liability, OPEB Expense and Deferred Inflow/Outflow</u>

| Valuation Date  | July 1, 2021  |
|---|---------------|
| For the Measurement Period ending on the Measurement Date of:   | June 30, 2022 |
| For the Reporting Period & Fiscal Year ending on:   | June 30, 2022 |
|   |               |
| Source of Deferred Inflow/Outflow   |               |
| I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience  | (702,468)     |
| II. Deferred (Inflow)/Outflow from Investment Experience  | (5,001)       |
| III. Deferred (Inflow)/Outflow from Changes in Assumptions  | 3,483,171     |
| Change in Deferred Inflow/Outflow   |               |
| 0   | 1,370,495     |
| I. Deferred Outflow at the beginning of the period  |               |
| II. Deferred Outflow created during the period  | 4,025,486     |
| III. Deferred Outflow recognized during the period  | 1,472,206     |
| IV. Change in Deferred Outflow (II III. )   | 2,553,280     |
| V. Deferred Outflow at end of the period (I. + IV.)   | 3,923,775     |
| VI. Deferred Inflow at the beginning of the period  | (882,229)     |
| VII. Deferred Inflow created during the period  | (649,878)     |
| VIII. Deferred Inflow recognized during the period  | (384,034)     |
| IX. Change in Deferred Inflow (VII VIII. )  | (265,844)     |
| X. Deferred Inflow at end of the period (VI. + IX.)   | (1,148,073)   |
| N.( OPED I 1.1.11)  |               |
| Net OPEB Liability  | 10.074.000    |
| I. Net OPEB Liability at beginning of period<br>II. Service Cost  | 10,974,982    |
|   | 332,587       |
| III. Interest on Total OPEB Liability, Service Cost, and Payments   | 1,025,753     |
| IV. Projected Investment Income   | (300,804)     |
| V. OPEB Plan Administrative Expense   | 0             |
| VI. Total Employer Contributions  | (1,121,153)   |
| VII. Expense Related to Change in Benefit Terms   | 0             |
| VIII. Net OPEB Expense/(Income) - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + + VI. + VII.) | (63,617)      |
| IX. Deferred Outflow created during the period  | 4,025,486     |
| X. Deferred Inflow created during the period  | (649,878)     |
| XI. Net OPEB Liability at end of period (I. + VIII. + IX. + X.)   | 14,286,973    |
| Net OPEB Expense  |               |
| I. Service Cost   | 332,587       |
| II. Interest on Total OPEB Liability, Service Cost, and Payments  | 1,025,753     |
| III. Projected Investment Income  | (300,804)     |
| IV. Recognition of Deferred (Inflow)/Outflow  | 1,088,172     |
| V. OPEB Plan Administrative Expense   | 0             |
| VI. Expense Related to Change in Benefit Terms  | 0             |
| VII. Financial Statement Expense/(Income) (I. + II. + III. + IV. + V. + VI.)                                  | 2,145,708     |
| VIII. Benefit Payments  | (821,153)     |
| IX. Contributions to Trust  | (300,000)     |
|   | (230)000)     |



Town of Boxford Other Postemployment Benefits Plan For the Fiscal Year ending June 30, 2022 | Delivered October 19, 2022

X. Total Employer Payments (VIII. + IX.)

XI. Total Net OPEB Expense/(Income) under GASB 75 (IX. + X.)



West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

## <u>EXHIBIT A</u> <u>REQUIRED SUPPLEMENTARY INFORMATION</u>

(As of the June 30, 2022 Measurement Date)

| Schedule of C   | hanges in the Town's <b>N</b> | Net OPEB Liability a | nd Related Ratios |               |               |               |
|---|-------------------------------|----------------------|-------------------|---------------|---------------|---------------|
| Valuation Date  | July 1, 2021                  | July 1, 2019         | July 1, 2019      | July 1, 2017  | July 1, 2017  | July 1, 2017  |
| Measurement Date  | June 30, 2022                 | June 30, 2021        | June 30, 2020     | June 30, 2019 | June 30, 2018 | June 30, 2017 |
| For the Reporting Period & Fiscal Year Ending on:                                     | June 30, 2022                 | June 30, 2021        | June 30, 2020     | June 30, 2019 | June 30, 2018 | June 30, 2017 |
| Total OPEB Liability  | 18,704,813                    | 15,267,628           | 14,308,230        | 13,354,141    | 12,792,821    | 10,851,613    |
| I. Service Cost   | 332,587                       | 299,406              | 286,453           | 316,568       | 297,469       | 314,494       |
| II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments              | 1,025,753                     | 995,801              | 929,803           | 895,274       | 758,436       | 655,663       |
| III. Changes in Benefit Terms   | 0                             | 0                    | 0                 | 0             | 0             | 0             |
| IV. Difference Between Expected & Actual Plan Experience                              | (649,878)                     | 0                    | (442,134)         | 0             | 1,894,235     | 0             |
| V. Changes of Assumptions   | 3,549,876                     | 441,137              | 907,664           | 0             | (369,560)     | 0             |
| VI. Benefit Payments Excluding Implicit Cost  | (658,812)                     | (595,892)            | (552,947)         | (600,537)     | (583,770)     | N/A           |
| VII. Implicit Cost Amount   | (162,341)                     | (181,054)            | (174,750)         | (49,985)      | (55,602)      | N/A           |
| VIII. Total Benefit Payments  | (821,153)                     | (776,946)            | (727,697)         | (650,522)     | (639,372)     | (497,053)     |
| IX. Other   | <u>0</u>                      | <u>0</u>             | <u>0</u>          | <u>0</u>      | <u>0</u>      | <u>0</u>      |
| X. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.+IX.]                        | 3,437,185                     | 959,398              | 954,089           | 561,320       | 1,941,208     | 473,104       |
| XI. Total OPEB Liability - Beginning of Period  | 15,267,628                    | 14,308,230           | 13,354,141        | 12,792,821    | 10,851,613    | 10,378,509    |
| XII. Change Due to Proportional Share   | 0                             | 0                    | 0                 | 0             | 0             | 0             |
| XIII. Total OPEB Liability - Beginning of Period with Adjustment [XI.+XII.]           | 15,267,628                    | 14,308,230           | 13,354,141        | 12,792,821    | 10,851,613    | 10,378,509    |
| XIV. Total OPEB Liability - End of Period [XII.+XIII.]                                | 18,704,813                    | 15,267,628           | 14,308,230        | 13,354,141    | 12,792,821    | 10,851,613    |
| Plan Fiduciary Net Position   | 4,417,840                     | 4,292,646            | 3,034,544         | 2,675,677     | 2,182,433     | 1,659,410     |
| XV. Earnings from Plan Investments  | (174,806)                     | 958,102              | 58,867            | 143,244       | 173,023       | 187,870       |
| XVI. Employer Contribution to Trust   | 1,121,153                     | 1,076,946            | 1,027,697         | 1,000,522     | 989,372       | 797,053       |
| XVII. Benefit Payments from Trust, Including Refunds of Member Contributions          | (821,153)                     | (776,946)            | (727,697)         | (650,522)     | (639,372)     | (497,053)     |
| XVIII. Administrative Expense   | 0                             | 0                    | 0                 | 0             | 0             | 0             |
| XIX. Other  | <u>0</u>                      | <u>0</u>             | <u>0</u>          | <u>0</u>      | <u>0</u>      | <u>0</u>      |
| XX. Net Change in Plan Fiduciary Net Position [XV.+XVI.+XVII.+XVIII.+XIX.]            | 125,194                       | 1,258,102            | 358,867           | 493,244       | 523,023       | 487,870       |
| XXI. Plan Fiduciary Net Position - Beginning of Period                                | 4,292,646                     | 3,034,544            | 2,675,677         | 2,182,433     | 1,659,410     | 1,171,540     |
| XXII. Prior Period Adjustment   | 0                             | 0                    | 0                 | 0             | 0             | 0             |
| XXIII. Plan Fiduciary Net Position - Beginning of Period with Adjustment [XXI.+XXII.] | 4,292,646                     | 3,034,544            | 2,675,677         | 2,182,433     | 1,659,410     | 1,171,540     |
| XXIV. Plan Fiduciary Net Position - End of Period [XXII.+XXIII.]                      | 4,417,840                     | 4,292,646            | 3,034,544         | 2,675,677     | 2,182,433     | 1,659,410     |
| XXV. Net OPEB Liability [XIVXXIV.]  | 14,286,973                    | 10,974,982           | 11,273,686        | 10,678,464    | 10,610,388    | 9,192,203     |
| XXVI. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIV./XIV.]           | 23.62%                        | 28.12%               | 21.21%            | 20.04%        | 17.06%        | 15.29%        |
| XXVII. Covered Employee Payroll   | 13,762,670                    | 12,130,527           | 11,777,211        | 10,980,482    | 10,660,662    | 11,605,943    |
| XXVIII. Plan NOL as % of Covered Employee Payroll [XXV./XXVII.]                       | 103.81%                       | 90.47%               | 95.72%            | 97.25%        | 99.53%        | 79.20%        |
| Single Discount Rate to Calculate Plan Liabilities                                    | 6.40%                         | 6.75%                | 7.00%             | 7.00%         | 7.00%         | 6.75%         |



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#### EXHIBIT B

## **REQUIRED SUPPLEMENTARY INFORMATION**

(As of the June 30, 2022 Measurement Date)

The Town's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which is composed of the service cost and an amortization of the unfunded liability. For FY 2022 and future years we have used a 30-year amortization increasing by 3.00% per year of the Town's unfunded liability for the purpose of calculating ADC. The following table shows the components of the Town's annual ADC and the amount actually contributed to the plan:

| Actuarially Determined Contribution - Deficiency / (Excess)              |                    |                      |                      |                      |                      |                      |
|--|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| For the Fiscal Year Ending:  | June 30, 2022      | <u>June 30, 2021</u> | <u>June 30, 2020</u> | <u>June 30, 2019</u> | <u>June 30, 2018</u> | <u>June 30, 2017</u> |
| I. Service Cost  | 332,587            | 299,406              | 286,453              | 316,568              | 297,469              | 314,494              |
| II. 30 Year Level Dollar Amortization of NOL                             | 733,345            | 585,962              | 849,071              | 804,242              | 692,305              | 677,669              |
| III. Actuarial Determined Contribution [I. + II.]                        | 1,065,932          | 885,368              | 1,135,524            | 1,120,810            | 989,774              | 992,163              |
| IV. Contributions in Relation to the Actuarially Determined Contribution | <u>(1,121,153)</u> | <u>(1,076,946)</u>   | <u>(1,027,697)</u>   | <u>(1,000,522)</u>   | <u>(989,372)</u>     | <u>(797,053)</u>     |
| V. Contribution Deficiency / (Excess) [III. + IV.]                       | (55,221)           | (191,578)            | 107,827              | 120,288              | 402                  | 195,110              |
| Covered Employee Payroll   | 13,762,670         | 12,130,527           | 11,777,211           | 10,980,482           | 10,660,662           | 11,605,943           |
| Contributions as a % of Covered Employee Payroll                         | 8.15%              | 8.88%                | 8.73%                | 9.11%                | 9.28%                | 6.87%                |
| Discount Rate  | 6.40%              | 6.75%                | 7.00%                | 7.00%                | 7.00%                | 6.75%                |
| Money Weighted Rate of Return  | (3.85%)            | 29.70%               | 2.03%                | 5.72%                | 9.02%                | 13.49%               |





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#### EXHIBIT B

## **REQUIRED SUPPLEMENTARY INFORMATION**

(As of the June 30, 2022 Measurement Date)

## Notes to Required Supplementary Information:

| Valuation Date:                  | Actuarially Determined Contribution was calculated as of July 1, 2021.                      |
|----------------------------------|---|
| Actuarial Cost Method:           | Individual Entry Age Normal   |
| Asset-Valuation Method:          | Market Value of Assets as of the Measurement Date, June 30, 2022.                           |
| Actuarial Assumptions:           |   |
| Investment Rate of Return:       | 6.41%, net of OPEB plan investment expense, including inflation.                            |
| Municipal Bond Rate              | 4.09% as of June 30, 2022 (source: S&P Municipal Bond 20-Year High Grade Index –<br>SAPIHG) |
| Single Equivalent Discount Rate: | 6.40%, net of OPEB plan investment expense, including inflation                             |
| Inflation:                       | 2.50% as of June 30, 2022 and for future periods  |
| Salary Increases:                | 3.00% annually as of June 30, 2022 and for future periods                                   |
| Cost of Living Adjustment:       | Not Applicable  |





West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

#### EXHIBIT B

|                            | <u>REQUIRED SUPPLEMENTARY INFORMATION</u><br>(As of the June 30, 2022 Measurement Date)  |
|----------------------------|--|
| Pre-Retirement Mortality:  | General: RP-2014 Mortality Table for Blue Collar Employees projected generationally<br>with scale MP-2016 for males and females, set forward 1 year for females<br>Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally<br>with scale MP-2016 for males and females                   |
| Post-Retirement Mortality: | General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females, set forward 1 year for females<br>Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females |
| Disabled Mortality:        | General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females, set forward 1 year<br>Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females             |





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## <u>EXHIBIT B</u>

## **REQUIRED SUPPLEMENTARY INFORMATION**

(As of the June 30, 2022 Measurement Date)

## Plan Membership

## At July 1, 2021, OPEB plan membership consisted of the following:

| Retirees & Beneficiaries: | 151        |
|---------------------------|------------|
| Actives:                  | <u>181</u> |
| Total:                    | 332        |

#### Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

Changes in Assumptions: From June 30, 2021 to June 30, 2022

- ✓ Due to the GASB 75 standards the discount rate has been changed from 6.75% to 6.40%.
- ✓ Due to updated guidance related to the implementation of ASOP 6, we have updated our methodology for calculating expected claims.
- ✓ Based on recent actuarial research we have adopted the Getzen model for future projected healthcare costs.

## Contributions/Withdrawals:

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town contributed \$300,000 beyond the pay-as-you-go cost for the period ending on the June 30, 2022 Measurement Date. For the year ending on the June 30, 2022 Measurement Date total Town premiums plus implicit costs for the retiree medical program were \$821,153. \$162,341 of the \$821,153 represents implicit cost.





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#### <u>EXHIBIT B</u>

## REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2022 Measurement Date)

## Census Data Manipulation:

In the absence of data, the following was assumed:

| Spouse Sex:             | Male participants had female spouses and vice versa.   |
|-------------------------|--|
| Spouse Age:             | Male spouses were three years older than female spouses and same sex spouses were the same age.  |
| Hire Age:               | Participants who were not on the previous valuation were hired halfway between last valuation and the current valuation. If we did not have census data related to the last valuation, the participants were assumed to have been hired at age forty.  |
| Retiree Age:            | Retirees had the same birth date as they had the prior valuation. If we did not have<br>census data related to the last valuation, retirees who were enrolled in Active plans<br>were assumed to be age sixty-two and retirees who were enrolled in Medicare<br>Supplement plans were assumed to be age seventy-two. Those not enrolled in a<br>medical plan were assumed to be sixty-seven. |
| School Demographics:    | Two thirds of school participants were teachers.   |
| Other Material Changes: | No other data changes were deemed to be material.  |





West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

#### APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

#### CONTRIBUTION PROJECTION DISCLOSURES

| Table 1: Projection of Contributions using a July 1, 2021 Valuation Date |                                     |                                     |                                |  |  |  |  |  |  |
|--|-------------------------------------|-------------------------------------|--------------------------------|--|--|--|--|--|--|
| For the Period Ending<br>on the Measurement<br>Date                      | I. Payroll for<br>current employees | II. Payroll for<br>future employees | III. Total Payroll<br>[I.+II.] | IV. Contributions<br>from current<br>employees | V. Employer<br>Payments for<br>current plan<br>members | VI. Employer<br>Payments for<br>future employees | VII. Total<br>Payments<br>[IV.+V.+VI.] |  |  |
| June 30, 2022  | 13,762,670                          | 0                                   | 13,762,670                     | 0  | 821,153  | 0  | 821,153                                |  |  |
| June 30, 2023  | 12,644,860                          | 1,530,690                           | 14,175,550                     | 0  | 736,134  | 0  | 736,134                                |  |  |
| June 30, 2023  | 11,624,256                          | 2,976,561                           | 14,600,817                     | 0  | 820,779  | 0  | 820,779                                |  |  |
| June 30, 2024  | 10,728,785                          | 4,310,057                           | 15,038,842                     | 0  | 942,135  | 0  | 942,135                                |  |  |
| June 30, 2025  | 9,841,921                           | 5,648,086                           | 15,490,007                     | 0  | 986,708  | 0  | 986,708                                |  |  |
| June 30, 2020  | 9,217,256                           | 6,737,451                           | 15,954,707                     | 0  | 1,060,867  | 0  | 1,060,867                              |  |  |
| -  |                                     |                                     |                                | 0  |  | 0  |  |  |  |
| June 30, 2028  | 8,620,686                           | 7,812,662                           | 16,433,348                     | 0  | 1,197,688  | 0  | 1,197,688                              |  |  |
| June 30, 2029  | 8,034,669                           | 8,891,679                           | 16,926,348                     |  | 1,270,413  |  | 1,270,413                              |  |  |
| June 30, 2030  | 7,533,837                           | 9,900,301                           | 17,434,138                     | 0  | 1,350,371  | 0  | 1,350,371                              |  |  |
| June 30, 2031  | 7,133,230                           | 10,823,932                          | 17,957,162                     | 0  | 1,462,171  | 0  | 1,462,171                              |  |  |
| June 30, 2032  | 6,640,997                           | 11,854,880                          | 18,495,877                     | 0  | 1,531,549  | 0  | 1,531,549                              |  |  |
| June 30, 2033  | 6,132,265                           | 12,918,488                          | 19,050,753                     | 0  | 1,558,629  | 5,826  | 1,564,455                              |  |  |
| June 30, 2034  | 5,782,929                           | 13,839,347                          | 19,622,276                     | 0  | 1,573,379  | 15,935   | 1,589,314                              |  |  |
| June 30, 2035  | 5,432,810                           | 14,778,134                          | 20,210,944                     | 0  | 1,588,952  | 30,875   | 1,619,827                              |  |  |
| June 30, 2036  | 5,102,339                           | 15,714,933                          | 20,817,272                     | 0  | 1,536,535  | 51,909   | 1,588,444                              |  |  |
| June 30, 2037  | 4,786,215                           | 16,655,575                          | 21,441,790                     | 0  | 1,581,781  | 78,570   | 1,660,351                              |  |  |
| June 30, 2038  | 4,521,493                           | 17,563,551                          | 22,085,044                     | 0  | 1,553,229  | 96,384   | 1,649,613                              |  |  |
| June 30, 2039  | 4,217,513                           | 18,530,082                          | 22,747,595                     | 0  | 1,578,001  | 115,579  | 1,693,580                              |  |  |
| June 30, 2040  | 3,946,715                           | 19,483,308                          | 23,430,023                     | 0  | 1,638,184  | 136,751  | 1,774,935                              |  |  |
| June 30, 2041  | 3,717,502                           | 20,415,422                          | 24,132,924                     | 0  | 1,669,762  | 150,143  | 1,819,905                              |  |  |
| June 30, 2042  | 3,476,450                           | 21,380,462                          | 24,856,912                     | 0  | 1,723,042  | 162,767  | 1,885,809                              |  |  |
| June 30, 2043  | 3,279,720                           | 22,322,899                          | 25,602,619                     | 0  | 1,793,792  | 187,381  | 1,981,173                              |  |  |
| June 30, 2044  | 3,028,213                           | 23,342,485                          | 26,370,698                     | 0  | 1,823,088  | 222,320  | 2,045,408                              |  |  |
| June 30, 2045  | 2,789,092                           | 24,372,727                          | 27,161,819                     | 0  | 1,854,440  | 267,915  | 2,122,355                              |  |  |
| June 30, 2046  | 2,529,183                           | 25,447,491                          | 27,976,674                     | 0  | 1,865,880  | 328,977  | 2,194,857                              |  |  |
| June 30, 2047  | 2,340,224                           | 26,475,750                          | 28,815,974                     | 0  | 1,884,524  | 402,933  | 2,287,457                              |  |  |
| June 30, 2048  | 2,151,546                           | 27,528,907                          | 29,680,453                     | 0  | 1,816,763  | 457,479  | 2,274,242                              |  |  |
| June 30, 2049  | 1,956,314                           | 28,614,553                          | 30,570,867                     | 0  | 1,742,654  | 516,592  | 2,259,246                              |  |  |
| June 30, 2050  | 1,800,887                           | 29,687,106                          | 31,487,993                     | 0  | 1,704,391  | 581,291  | 2,285,682                              |  |  |
| June 30, 2051  | 1,624,847                           | 30,807,786                          | 32,432,633                     | 0  | 1,709,599  | 627,728  | 2,337,327                              |  |  |
| June 30, 2052  | 1,493,447                           | 31,912,165                          | 33,405,612                     | 0  | 1,682,658  | 673,791  | 2,356,449                              |  |  |
| June 30, 2053  | 1,332,455                           | 33,075,325                          | 34,407,780                     | 0  | 1,688,402  | 735,439  | 2,423,841                              |  |  |
| June 30, 2054  | 1,207,161                           | 34,232,852                          | 35,440,013                     | 0  | 1,663,008  | 806,187  | 2,469,195                              |  |  |
| June 30, 2055  | 1,084,757                           | 35,418,456                          | 36,503,213                     | 0  | 1,638,105  | 886,558  | 2,524,663                              |  |  |
| June 30, 2055  | 933,656                             | 36,664,653                          | 37,598,309                     | 0  | 1,635,442  | 982,841  | 2,618,283                              |  |  |
| June 30, 2056  | 788,023                             | 37,938,235                          | 38,726,258                     | 0  | 1,591,397  | 1,090,042  | 2,618,283                              |  |  |
| June 30, 2057  | 684,354                             | 37,938,233                          | 39,888,046                     | 0  | 1,591,397  | 1,184,539  | 2,681,439                              |  |  |
|  |                                     |                                     |                                | 0  |  |  |  |  |  |
| June 30, 2059  | 545,625                             | 40,539,062                          | 41,084,687                     |  | 1,433,170  | 1,283,664  | 2,716,834                              |  |  |
| June 30, 2060  | 402,296                             | 41,914,932                          | 42,317,228                     | 0  | 1,392,272  | 1,388,206  | 2,780,478                              |  |  |
| June 30, 2061  | 291,297                             | 43,295,448                          | 43,586,745                     | 0  | 1,335,564  | 1,483,193  | 2,818,757                              |  |  |

Odyssey

Town of Boxford Other Postemployment Benefits Plan For the Fiscal Year ending June 30, 2022 | Delivered October 19, 2022



West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

#### APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

#### CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

#### Table 1: Projection of Contributions using a July 1, 2021 Valuation Date

| For the Period Ending<br>on the Measurement<br>Date | I. Payroll for<br>current employees | II. Payroll for<br>future employees | III. Total Payroll<br>[I.+II.] | IV. Contributions<br>from current<br>employees | V. Employer<br>Payments for<br>current plan<br>members | VI. Employer<br>Payments for<br>future employees | VII. Total<br>Payments<br>[IV.+V.+VI.] |
|---|-------------------------------------|-------------------------------------|--------------------------------|--|--|--|--|
| June 30, 2062                                       | 219,686                             | 44,674,661                          | 44,894,347                     | 0  | 1,288,766  | 1,578,617  | 2,867,383                              |
| June 30, 2063                                       | 152,864                             | 46,088,313                          | 46,241,177                     | 0  | 1,213,314  | 1,689,750  | 2,903,064                              |
| June 30, 2064                                       | 84,173                              | 47,544,239                          | 47,628,412                     | 0  | 1,181,396  | 1,807,114  | 2,988,510                              |
| June 30, 2065                                       | 46,801                              | 49,010,463                          | 49,057,264                     | 0  | 1,127,774  | 1,937,232  | 3,065,006                              |
| June 30, 2066                                       | 32,376                              | 50,496,606                          | 50,528,982                     | 0  | 1,092,565  | 2,083,168  | 3,175,733                              |
| June 30, 2067                                       | 20,211                              | 52,024,640                          | 52,044,851                     | 0  | 1,052,946  | 2,240,094  | 3,293,040                              |
| June 30, 2068                                       | 4,593                               | 53,601,604                          | 53,606,197                     | 0  | 1,025,991  | 2,396,188  | 3,422,179                              |
| June 30, 2069                                       | 0                                   | 55,214,383                          | 55,214,383                     | 0  | 995,452  | 2,557,770  | 3,553,222                              |
| June 30, 2070                                       | 0                                   | 56,870,814                          | 56,870,814                     | 0  | 963,467  | 2,726,584  | 3,690,051                              |
| June 30, 2071                                       | 0                                   | 58,576,938                          | 58,576,938                     | 0  | 922,065  | 2,885,039  | 3,807,104                              |
| June 30, 2072                                       | 0                                   | 60,334,246                          | 60,334,246                     | 0  | 879,703  | 3,043,949  | 3,923,652                              |
| June 30, 2073                                       | 0                                   | 62,144,273                          | 62,144,273                     | 0  | 840,645  | 3,211,858  | 4,052,503                              |
| June 30, 2074                                       | 0                                   | 64,008,601                          | 64,008,601                     | 0  | 802,925  | 3,380,377  | 4,183,302                              |
| June 30, 2075                                       | 0                                   | 65,928,859                          | 65,928,859                     | 0  | 766,282  | 3,556,334  | 4,322,616                              |
| June 30, 2076                                       | 0                                   | 67,906,725                          | 67,906,725                     | 0  | 725,485  | 3,741,496  | 4,466,981                              |
| June 30, 2077                                       | 0                                   | 69,943,927                          | 69,943,927                     | 0  | 683,263  | 3,932,963  | 4,616,226                              |
| June 30, 2078                                       | 0                                   | 72,042,245                          | 72,042,245                     | 0  | 646,687  | 4,136,341  | 4,783,028                              |
| June 30, 2079                                       | 0                                   | 74,203,512                          | 74,203,512                     | 0  | 609,042  | 4,346,121  | 4,955,163                              |
| June 30, 2080                                       | 0                                   | 76,429,617                          | 76,429,617                     | 0  | 571,743  | 4,564,385  | 5,136,128                              |
| June 30, 2081                                       | 0                                   | 78,722,506                          | 78,722,506                     | 0  | 530,896  | 4,786,662  | 5,317,558                              |
| June 30, 2082                                       | 0                                   | 81,084,181                          | 81,084,181                     | 0  | 490,811  | 5,014,035  | 5,504,846                              |
| June 30, 2083                                       | 0                                   | 83,516,706                          | 83,516,706                     | 0  | 454,316  | 5,248,899  | 5,703,215                              |
| June 30, 2084                                       | 0                                   | 86,022,207                          | 86,022,207                     | 0  | 415,251  | 5,486,672  | 5,901,923                              |
| June 30, 2085                                       | 0                                   | 88,602,873                          | 88,602,873                     | 0  | 378,132  | 5,731,822  | 6,109,954                              |
| June 30, 2086                                       | 0                                   | 91,260,959                          | 91,260,959                     | 0  | 341,134  | 5,987,290  | 6,328,424                              |
| June 30, 2087                                       | 0                                   | 93,998,788                          | 93,998,788                     | 0  | 305,902  | 6,250,992  | 6,556,894                              |
| June 30, 2088                                       | 0                                   | 96,818,752                          | 96,818,752                     | 0  | 272,564  | 6,528,863  | 6,801,427                              |
| June 30, 2089                                       | 0                                   | 99,723,315                          | 99,723,315                     | 0  | 241,245  | 6,816,527  | 7,057,772                              |
| June 30, 2090                                       | 0                                   | 102,715,014                         | 102,715,014                    | 0  | 212,015  | 7,115,264  | 7,327,279                              |
| June 30, 2091                                       | 0                                   | 105,796,464                         | 105,796,464                    | 0  | 184,936  | 7,426,210  | 7,611,146                              |
| June 30, 2092                                       | 0                                   | 108,970,358                         | 108,970,358                    | 0  | 159,989  | 7,745,218  | 7,905,207                              |
| June 30, 2093                                       | 0                                   | 112,239,469                         | 112,239,469                    | 0  | 137,206  | 8,073,530  | 8,210,736                              |
| June 30, 2094                                       | 0                                   | 115,606,653                         | 115,606,653                    | 0  | 116,528  | 8,410,983  | 8,527,511                              |
| June 30, 2095                                       | 0                                   | 119,074,853                         | 119,074,853                    | 0  | 97,926   | 8,759,051  | 8,856,977                              |
| June 30, 2096                                       | 0                                   | 122,647,099                         | 122,647,099                    | 0  | 81,331   | 9,119,489  | 9,200,820                              |



Town of Boxford Other Postemployment Benefits Plan For the Fiscal Year ending June 30, 2022 | Delivered October 19, 2022



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#### APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

#### FIDUCIARY NET POSITION PROJECTION DISCLOSURES

| Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1 2021 Valuation Date |  |              |         |  |  |   |  |                              |  |
|--|--|--------------|---------|--|--|---|--|------------------------------|--|
| For the Period Ending<br>on the Measurement<br>Date  | I. Beginning Fiduciary<br>Net Position for<br>Current Plan Members | Current Plan |         | IV. Gross<br>Contributions to<br>Trust for Current<br>Plan Members<br>[II. + III.] | V. Administrative<br>Expenses Withdrawn<br>from the Trust for<br>Current Plan<br>Members | VI. Benefit Payments<br>Withdrawn from the<br>Trust | VII. Trust<br>Withdrawals<br>[V. +VI.] | VIII. Investment<br>Earnings | IX. Ending<br>Fiduciary Net<br>Position for<br>Current Plan<br>Members |
| June 30, 2022  | 4,292,646  | 821,153      | 300,000 | 1,121,153  | 0  | 821,153   | 821,153                                | (174,806)                    | 4,417,840  |
| June 30, 2023  | 4,417,840  | 736,134      | 267,606 | 1,003,740  | 0  | 736,134   | 736,134                                | 261,048                      | 4,946,494  |
| June 30, 2024  | 4,946,494  | 820,779      | 238,841 | 1,059,620  | 0  | 820,779   | 820,779                                | 324,606                      | 5,509,941  |
| June 30, 2025  | 5,509,941  | 942,135      | 214,021 | 1,156,156  | 0  | 942,135   | 942,135                                | 359,940                      | 6,083,902  |
| June 30, 2026  | 6,083,902  | 986,708      | 190,612 | 1,177,320  | 0  | 986,708   | 986,708                                | 395,992                      | 6,670,506  |
| June 30, 2027  | 6,670,506  | 1,060,867    | 173,314 | 1,234,181  | 0  | 1,060,867   | 1,060,867                              | 433,048                      | 7,276,868  |
| June 30, 2028  | 7,276,868  | 1,197,688    | 157,375 | 1,355,063  | 0  | 1,197,688   | 1,197,688                              | 471,413                      | 7,905,656  |
| June 30, 2029  | 7,905,656  | 1,270,413    | 142,405 | 1,412,818  | 0  | 1,270,413   | 1,270,413                              | 511,246                      | 8,559,307  |
| June 30, 2030  | 8,559,307  | 1,350,371    | 129,639 | 1,480,010  | 0  | 1,350,371   | 1,350,371                              | 552,742                      | 9,241,688  |
| June 30, 2031  | 9,241,688  | 1,462,171    | 119,171 | 1,581,342  | 0  | 1,462,171   | 1,462,171                              | 596,152                      | 9,957,011  |
| June 30, 2032  | 9,957,011  | 1,531,549    | 107,716 | 1,639,265  | 0  | 1,531,549   | 1,531,549                              | 641,643                      | 10,706,370   |
| June 30, 2033  | 10,706,370   | 1,558,629    | 96,567  | 1,655,196  | 0  | 1,564,455   | 1,564,455                              | 689,325                      | 11,486,436   |
| June 30, 2034  | 11,486,436   | 1,573,379    | 88,414  | 1,661,793  | 0  | 1,589,314   | 1,589,314                              | 739,070                      | 12,297,985   |
| June 30, 2035  | 12,297,985   | 1,588,952    | 80,642  | 1,669,594  | 0  | 1,619,827   | 1,619,827                              | 790,845                      | 13,138,597   |
| June 30, 2036  | 13,138,597   | 1,536,535    | 73,530  | 1,610,065  | 0  | 1,588,444   | 1,588,444                              | 844,504                      | 14,004,722   |
| June 30, 2037  | 14,004,722   | 1,581,781    | 66,966  | 1,648,747  | 0  | 1,660,351   | 1,660,351                              | 899,816                      | 14,892,934   |
| June 30, 2038  | 14,892,934   |              | 61,419  | 1,614,648  | 0  | 1,649,613   | 1,649,613                              | 956,575                      | 15,814,544   |
| June 30, 2039  | 15,814,544   | 1,578,001    | 55,621  | 1,633,622  | 0  | 1,693,580   | 1,693,580                              | 1,015,467                    | 16,770,053   |
| June 30, 2040  | 16,770,053   | 1,638,184    | 50,534  | 1,688,718  | 0  | 1,774,935   | 1,774,935                              | 1,076,555                    | 17,760,391   |
| June 30, 2041  | 17,760,391   | 1,669,762    | 46,213  | 1,715,975  | 0  | 1,819,905   | 1,819,905                              | 1,139,899                    | 18,796,360   |
| June 30, 2042  | 18,796,360   | 1,723,042    | 41,958  | 1,765,000  | 0  | 1,885,809   | 1,885,809                              | 1,206,171                    | 19,881,722   |
| June 30, 2043  | 19,881,722   |              | 38,430  | 1,832,222  | 0  | 1,981,173   | 1,981,173                              | 1,275,631                    | 21,008,402   |
| June 30, 2044  | 21,008,402   | 1,823,088    | 34,450  | 1,857,538  | 0  | 2,045,408   | 2,045,408                              | 1,347,726                    | 22,168,258   |
| June 30, 2045  | 22,168,258   | 1,854,440    | 30,805  | 1,885,245  | 0  | 2,122,355   | 2,122,355                              | 1,421,957                    | 23,353,105   |
| June 30, 2046  | 23,353,105   |              | 27,121  | 1,893,001  | 0  | 2,194,857   | 2,194,857                              | 1,497,790                    | 24,549,039   |
| June 30, 2047  | 24,549,039   |              | 24,364  | 1,908,888  | 0  | 2,287,457   | 2,287,457                              | 1,574,362                    | 25,744,832   |
| June 30, 2048  | 25,744,832   |              | 21,747  | 1,838,510  | 0  | 2,274,242   | 2,274,242                              | 1,650,930                    | 26,960,030   |
| June 30, 2049  | 26,960,030   |              | 19,198  | 1,761,852  | 0  | 2,259,246   | 2,259,246                              | 1,728,744                    | 28,191,380   |
| June 30, 2050  | 28,191,380   | 1,704,391    | 17,158  | 1,721,549  | 0  | 2,285,682   | 2,285,682                              | 1,807,609                    | 29,434,856   |
| June 30, 2051  | 29,434,856   |              | 15,030  | 1,724,629  | 0  | 2,337,327   | 2,337,327                              | 1,887,248                    | 30,709,406   |
| June 30, 2052  | 30,709,406   |              | 13,412  | 1,696,070  | 0  | 2,356,449   | 2,356,449                              | 1,968,896                    | 32,017,923   |
| June 30, 2053  | 32,017,923   |              | 11,618  | 1,700,020  | 0  | 2,423,841   | 2,423,841                              | 2,052,715                    | 33,346,817   |
| June 30, 2054  | 33,346,817   |              | 10,219  | 1,673,227  | 0  | 2,469,195   | 2,469,195                              | 2,137,853                    | 34,688,702   |
| June 30, 2055  | 34,688,702   |              | 8,915   | 1,647,020  | 0  | 2,524,663   | 2,524,663                              | 2,223,827                    | 36,034,886   |
| June 30, 2056  | 36,034,886   |              | 7,450   | 1,642,892  | 0  | 2,618,283   | 2,618,283                              | 2,310,071                    | 37,369,566   |
| June 30, 2057  | 37,369,566   |              | 6,105   | 1,597,502  | 0  | 2,681,439   | 2,681,439                              | 2,395,582                    | 38,681,211   |
| June 30, 2058  | 38,681,211   |              | 5,147   | 1,519,971  | 0  | 2,699,363   | 2,699,363                              | 2,479,628                    | 39,981,447   |
| June 30, 2059  | 39,981,447   |              | 3,984   | 1,437,154  | 0  | 2,716,834   | 2,716,834                              | 2,562,936                    | 41,264,703   |
| June 30, 2060  | 41,264,703   |              | 2,852   | 1,395,124  | 0  | 2,780,478   | 2,780,478                              | 2,645,157                    | 42,524,506   |
| June 30, 2061  | 42,524,506   |              | 2,005   | 1,337,569  | 0  | 2,818,757   | 2,818,757                              | 2,725,884                    | 43,769,202   |





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#### APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

#### FIDUCIARY POSITION PROJECTION DISCLOSURES (CONTINUED)

#### Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1 2021 Valuation Date

| For the Period Ending<br>on the Measurement<br>Date | I. Beginning Fiduciary<br>Net Position for<br>Current Plan Members | Current Plan |       | IV. Gross<br>Contributions to<br>Trust for Current<br>Plan Members<br>[II. + III.] | V. Administrative<br>Expenses Withdrawn<br>from the Trust for<br>Current Plan<br>Members | VI. Benefit Payments<br>Withdrawn from the<br>Trust | VII. Trust<br>Withdrawals<br>[V. +VI.] | VIII. Investment<br>Earnings | IX. Ending<br>Fiduciary Net<br>Position for<br>Current Plan<br>Members |
|---|--|--------------|-------|--|--|---|--|------------------------------|--|
| June 30, 2062                                       | 43,769,202   | 1,288,766    | 1,468 | 1,290,234  | 0  | 2,867,383   | 2,867,383                              | 2,805,652                    | 44,997,705   |
| June 30, 2063                                       | 44,997,705   | 1,213,314    | 992   | 1,214,306  | 0  | 2,903,064   | 2,903,064                              | 2,884,384                    | 46,193,331   |
| June 30, 2064                                       | 46,193,331   | 1,181,396    | 530   | 1,181,926  | 0  | 2,988,510   | 2,988,510                              | 2,961,009                    | 47,347,756   |
| June 30, 2065                                       | 47,347,756   | 1,127,774    | 286   | 1,128,060  | 0  | 3,065,006   | 3,065,006                              | 3,035,000                    | 48,445,810   |
| June 30, 2066                                       | 48,445,810   | 1,092,565    | 192   | 1,092,757  | 0  | 3,175,733   | 3,175,733                              | 3,105,382                    | 49,468,216   |
| June 30, 2067                                       | 49,468,216   | 1,052,946    | 117   | 1,053,063  | 0  | 3,293,040   | 3,293,040                              | 3,170,916                    | 50,399,155   |
| June 30, 2068                                       | 50,399,155   | 1,025,991    | 26    | 1,026,017  | 0  | 3,422,179   | 3,422,179                              | 3,230,587                    | 51,233,580   |
| June 30, 2069                                       | 51,233,580   | 995,452      | 0     | 995,452  | 0  | 3,553,222   | 3,553,222                              | 3,284,072                    | 51,959,882   |
| June 30, 2070                                       | 51,959,882   | 963,467      | 0     | 963,467  | 0  | 3,690,051   | 3,690,051                              | 3,330,628                    | 52,563,926   |
| June 30, 2071                                       | 52,563,926   | 922,065      | 0     | 922,065  | 0  | 3,807,104   | 3,807,104                              | 3,369,348                    | 53,048,235   |
| June 30, 2072                                       | 53,048,235   | 879,703      | 0     | 879,703  | 0  | 3,923,652   | 3,923,652                              | 3,400,392                    | 53,404,678   |
| June 30, 2073                                       | 53,404,678   | 840,645      | 0     | 840,645  | 0  | 4,052,503   | 4,052,503                              | 3,423,240                    | 53,616,060   |
| June 30, 2074                                       | 53,616,060   | 802,925      | 0     | 802,925  | 0  | 4,183,302   | 4,183,302                              | 3,436,789                    | 53,672,472   |
| June 30, 2075                                       | 53,672,472   | 766,282      | 0     | 766,282  | 0  | 4,322,616   | 4,322,616                              | 3,440,405                    | 53,556,543   |
| June 30, 2076                                       | 53,556,543   | 725,485      | 0     | 725,485  | 0  | 4,466,981   | 4,466,981                              | 3,432,974                    | 53,248,021   |
| June 30, 2077                                       | 53,248,021   | 683,263      | 0     | 683,263  | 0  | 4,616,226   | 4,616,226                              | 3,413,198                    | 52,728,256   |
| June 30, 2078                                       | 52,728,256   | 646,687      | 0     | 646,687  | 0  | 4,783,028   | 4,783,028                              | 3,379,881                    | 51,971,796   |
| June 30, 2079                                       | 51,971,796   | 609,042      | 0     | 609,042  | 0  | 4,955,163   | 4,955,163                              | 3,331,392                    | 50,957,067   |
| June 30, 2080                                       | 50,957,067   | 571,743      | 0     | 571,743  | 0  | 5,136,128   | 5,136,128                              | 3,266,348                    | 49,659,030   |
| June 30, 2081                                       | 49,659,030   | 530,896      | 0     | 530,896  | 0  | 5,317,558   | 5,317,558                              | 3,183,144                    | 48,055,512   |
| June 30, 2082                                       | 48,055,512   | 490,811      | 0     | 490,811  | 0  | 5,504,846   | 5,504,846                              | 3,080,358                    | 46,121,835   |
| June 30, 2083                                       | 46,121,835   | 454,316      | 0     | 454,316  | 0  | 5,703,215   | 5,703,215                              | 2,956,410                    | 43,829,346   |
| June 30, 2084                                       | 43,829,346   | 415,251      | 0     | 415,251  | 0  | 5,901,923   | 5,901,923                              | 2,809,461                    | 41,152,135   |
| June 30, 2085                                       | 41,152,135   | 378,132      | 0     | 378,132  | 0  | 6,109,954   | 6,109,954                              | 2,637,852                    | 38,058,165   |
| June 30, 2086                                       | 38,058,165   | 341,134      | 0     | 341,134  | 0  | 6,328,424   | 6,328,424                              | 2,439,528                    | 34,510,403   |
| June 30, 2087                                       | 34,510,403   | 305,902      | 0     | 305,902  | 0  | 6,556,894   | 6,556,894                              | 2,212,117                    | 30,471,528   |
| June 30, 2088                                       | 30,471,528   | 272,564      | 0     | 272,564  | 0  | 6,801,427   | 6,801,427                              | 1,953,225                    | 25,895,890   |
| June 30, 2089                                       | 25,895,890   | 241,245      | 0     | 241,245  | 0  | 7,057,772   | 7,057,772                              | 1,659,927                    | 20,739,290   |
| June 30, 2090                                       | 20,739,290   | 212,015      | 0     | 212,015  | 0  | 7,327,279   | 7,327,279                              | 1,329,388                    | 14,953,414   |
| June 30, 2091                                       | 14,953,414   | 184,936      | 0     | 184,936  | 0  | 7,611,146   | 7,611,146                              | 958,514                      | 8,485,718  |
| June 30, 2092                                       | 8,485,718  | 159,989      | 0     | 159,989  | 0  | 7,905,207   | 7,905,207                              | 543,935                      | 1,284,435  |
| June 30, 2093                                       | 1,284,435  | 137,206      | 0     | 137,206  | 0  | 8,210,736   | 8,210,736                              | 82,332                       | 0  |
| June 30, 2094                                       | 0  | 116,528      | 0     | 116,528  | 0  | 8,527,511   | 8,527,511                              | 0                            | 0  |
| June 30, 2095                                       | 0  | 97,926       | 0     | 97,926   | 0  | 8,856,977   | 8,856,977                              | 0                            | 0  |
| June 30, 2096                                       | 0  | 81,331       | 0     | 81,331   | 0  | 9,200,820   | 9,200,820                              | 0                            | 0  |





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#### APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

#### BENEFIT PAYMENT PROJECTION DISCLOSURES

| Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2021 Valuation Date |  |  |   |   |  |  |   |                    |
|---|--|--|---|---|--|--|---|--------------------|
| For the Period Ending<br>on the Measurement<br>Date   | I. Beginning Fiduciary<br>Net Position for Current<br>Plan Members | II. Benefit<br>Payments for<br>Current Plan<br>Members | III. Funded Portion<br>of Benefit<br>Payments | IV. Unfunded<br>Portion of Benefit<br>Payments<br>[II III.] | V. Present Value of<br>Funded Benefit<br>Payments using the<br>Long-Term Rate of<br>Return [6.41%] | VI. Present Value of<br>Unfunded Benefit<br>Payments using the<br>Municipal Bond Rate<br>[4.09%] | VII. Present Value of<br>Benefit Payments using<br>the Single Equivalent<br>Discount Rate [6.40%] |                    |
| June 30, 2022   | 4,292,646  | 821,153  | 821,153                                       | 0   | 821,153  | 0  | 821,153   | Sum of Column V.   |
| June 30, 2023   | 4,417,840  | 736,134  | 736,134                                       | 0   | 691,790  | 0  | 691,834   | 21,259,588         |
| June 30, 2024   | 4,946,494  | 820,779  | 820,779                                       | 0   | 724,872  | 0  | 724,964   |                    |
| June 30, 2025   | 5,509,941  | 942,135  | 942,135                                       | 0   | 781,926  | 0  | 782,074   | Sum of Column VI.  |
| June 30, 2026   | 6,083,902  | 986,708  | 986,708                                       | 0   | 769,589  | 0  | 769,783   | 26,320             |
| June 30, 2027   | 6,670,506  | 1,060,867  | 1,060,867                                     | 0   | 777,587  | 0  | 777,832   |                    |
| June 30, 2028   | 7,276,868  | 1,197,688  | 1,197,688                                     | 0   | 824,991  | 0  | 825,303   | Sum of Column VII. |
| June 30, 2029   | 7,905,656  | 1,270,413  | 1,270,413                                     | 0   | 822,371  | 0  | 822,735   | [V. + VI.]         |
| June 30, 2030   | 8,559,307  | 1,350,371  | 1,350,371                                     | 0   | 821,473  | 0  | 821,889   | 21,285,908         |
| June 30, 2031   | 9,241,688  | 1,462,171  | 1,462,171                                     | 0   | 835,904  | 0  | 836,379   |                    |
| June 30, 2032   | 9,957,011  | 1,531,549  | 1,531,549                                     | 0   | 822,823  | 0  | 823,343   |                    |
| June 30, 2033   | 10,706,370   | 1,558,629  | 1,558,629                                     | 0   | 786,930  | 0  | 787,476   |                    |
| June 30, 2034   | 11,486,436   | 1,573,379  | 1,573,379                                     | 0   | 746,524  | 0  | 747,090   |                    |
| June 30, 2035   | 12,297,985   | 1,588,952  | 1,588,952                                     | 0   | 708,499  | 0  | 709,081   |                    |
| June 30, 2036   | 13,138,597   | 1,536,535  | 1,536,535                                     | 0   | 643,855  | 0  | 644,425   |                    |
| June 30, 2037   | 14,004,722   | 1,581,781  | 1,581,781                                     | 0   | 622,888  | 0  | 623,478   |                    |
| June 30, 2038   | 14,892,934   | 1,553,229  | 1,553,229                                     | 0   | 574,800  | 0  | 575,381   |                    |
| June 30, 2039   | 15,814,544   | 1,578,001  | 1,578,001                                     | 0   | 548,789  | 0  | 549,379   |                    |
| June 30, 2040   | 16,770,053   | 1,638,184  | 1,638,184                                     | 0   | 535,400  | 0  | 536,009   |                    |
| June 30, 2041   | 17,760,391   | 1,669,762  | 1,669,762                                     | 0   | 512,847  | 0  | 513,463   |                    |
| June 30, 2042   | 18,796,360   | 1,723,042  | 1,723,042                                     | 0   | 497,333  | 0  | 497,961   |                    |
| June 30, 2043   | 19,881,722   | 1,793,792  | 1,793,792                                     | 0   | 486,565  | 0  | 487,211   |                    |
| June 30, 2044   | 21,008,402   | 1,823,088  | 1,823,088                                     | 0   | 464,723  | 0  | 465,369   |                    |
| June 30, 2045   | 22,168,258   | 1,854,440  | 1,854,440                                     | 0   | 444,239  | 0  | 444,885   |                    |
| June 30, 2046   | 23,353,105   | 1,865,880  | 1,865,880                                     | 0   | 420,054  | 0  | 420,691   |                    |
| June 30, 2047   | 24,549,039   | 1,884,524  | 1,884,524                                     | 0   | 398,695  | 0  | 399,325   |                    |
| June 30, 2048   | 25,744,832   | 1,816,763  | 1,816,763                                     | 0   | 361,206  | 0  | 361,799   |                    |
| June 30, 2049   | 26,960,030   | 1,742,654  | 1,742,654                                     | 0   | 325,601  | 0  | 326,156   |                    |
| June 30, 2050   | 28,191,380   | 1,704,391  | 1,704,391                                     | 0   | 299,268  | 0  | 299,798   |                    |
| June 30, 2051   | 29,434,856   | 1,709,599  | 1,709,599                                     | 0   | 282,100  | 0  | 282,617   |                    |
| June 30, 2052   | 30,709,406   | 1,682,658  | 1,682,658                                     | 0   | 260,929  | 0  | 261,424   |                    |
| June 30, 2053   | 32,017,923   | 1,688,402  | 1,688,402                                     | 0   | 246,048  | 0  | 246,530   |                    |
| June 30, 2054   | 33,346,817   | 1,663,008  | 1,663,008                                     | 0   | 227,749  | 0  | 228,210   |                    |
| June 30, 2055   | 34,688,702   | 1,638,105  | 1,638,105                                     | 0   | 210,825  | 0  | 211,264   |                    |
| June 30, 2056   | 36,034,886   | 1,635,442  | 1,635,442                                     | 0   | 197,803  | 0  | 198,228   |                    |
| June 30, 2057   | 37,369,566   | 1,591,397  | 1,591,397                                     | 0   | 180,881  | 0  | 190,220   |                    |
| June 30, 2058   | 38,681,211   | 1,591,597  | 1,514,824                                     | 0   | 161,806  | 0  | 162,174   |                    |
| June 30, 2059   | 39,981,447   | 1,433,170  | 1,433,170                                     | 0   | 143,862  | 0  | 144,199   |                    |
| June 30, 2009   | 41,264,703   | 1,392,272  | 1,392,272                                     | 0   | 143,882  | 0  | 131,654   |                    |
| June 30, 2060   | 41,264,703   | 1,392,272  | 1,392,272                                     | 0   | 118,399  | 0  | 131,634   |                    |
| June 50, 2001   | 42,524,506   | 1,333,364  | 1,333,364                                     | 0   | 118,399  | 0  | 118,691   |                    |





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#### APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

#### BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

#### Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2021 Valuation Date

| For the Period Ending<br>on the Measurement<br>Date | I. Beginning Fiduciary<br>Net Position for Current<br>Plan Members | II. Benefit<br>Payments for<br>Current Plan<br>Members | III. Funded Portion<br>of Benefit<br>Payments | IV. Unfunded<br>Portion of Benefit<br>Payments<br>[II III.] | V. Present Value of<br>Funded Benefit<br>Payments using the<br>Long-Term Rate of<br>Return [6.41%] | VI. Present Value of<br>Unfunded Benefit<br>Payments using the<br>Municipal Bond Rate<br>[4.09%] | VII. Present Value of<br>Benefit Payments using<br>the Single Equivalent<br>Discount Rate [6.40%] |
|---|--|--|---|---|--|--|---|
| June 30, 2062                                       | 43,769,202   | 1,288,766  | 1,288,766                                     | 0   | 107,368  | 0  | 107,640   |
| June 30, 2063                                       | 44,997,705   | 1,213,314  | 1,213,314                                     | 0   | 94,993   | 0  | 95,240  |
| June 30, 2064                                       | 46,193,331   | 1,181,396  | 1,181,396                                     | 0   | 86,923   | 0  | 87,154  |
| June 30, 2065                                       | 47,347,756   | 1,127,774  | 1,127,774                                     | 0   | 77,979   | 0  | 78,191  |
| June 30, 2066                                       | 48,445,810   | 1,092,565  | 1,092,565                                     | 0   | 70,994   | 0  | 71,191  |
| June 30, 2067                                       | 49,468,216   | 1,052,946  | 1,052,946                                     | 0   | 64,298   | 0  | 64,481  |
| June 30, 2068                                       | 50,399,155   | 1,025,991  | 1,025,991                                     | 0   | 58,878   | 0  | 59,049  |
| June 30, 2069                                       | 51,233,580   | 995,452  | 995,452                                       | 0   | 53,684   | 0  | 53,844  |
| June 30, 2070                                       | 51,959,882   | 963,467  | 963,467                                       | 0   | 48,829   | 0  | 48,977  |
| June 30, 2071                                       | 52,563,926   | 922,065  | 922,065                                       | 0   | 43,916   | 0  | 44,052  |
| June 30, 2072                                       | 53,048,235   | 879,703  | 879,703                                       | 0   | 39,374   | 0  | 39,499  |
| June 30, 2073                                       | 53,404,678   | 840,645  | 840,645                                       | 0   | 35,360   | 0  | 35,474  |
| June 30, 2074                                       | 53,616,060   | 802,925  | 802,925                                       | 0   | 31,739   | 0  | 31,843  |
| June 30, 2075                                       | 53,672,472   | 766,282  | 766,282                                       | 0   | 28,466   | 0  | 28,561  |
| June 30, 2076                                       | 53,556,543   | 725,485  | 725,485                                       | 0   | 25,327   | 0  | 25,413  |
| June 30, 2077                                       | 53,248,021   | 683,263  | 683,263                                       | 0   | 22,416   | 0  | 22,494  |
| June 30, 2078                                       | 52,728,256   | 646,687  | 646,687                                       | 0   | 19,938   | 0  | 20,008  |
| June 30, 2079                                       | 51,971,796   | 609,042  | 609,042                                       | 0   | 17,646   | 0  | 17,710  |
| June 30, 2080                                       | 50,957,067   | 571,743  | 571,743                                       | 0   | 15,568   | 0  | 15,625  |
| June 30, 2081                                       | 49,659,030   | 530,896  | 530,896                                       | 0   | 13,585   | 0  | 13,635  |
| June 30, 2082                                       | 48,055,512   | 490,811  | 490,811                                       | 0   | 11,802   | 0  | 11,847  |
| June 30, 2083                                       | 46,121,835   | 454,316  | 454,316                                       | 0   | 10,267   | 0  | 10,306  |
| June 30, 2084                                       | 43,829,346   | 415,251  | 415,251                                       | 0   | 8,819  | 0  | 8,853   |
| June 30, 2085                                       | 41,152,135   | 378,132  | 378,132                                       | 0   | 7,547  | 0  | 7,577   |
| June 30, 2086                                       | 38,058,165   | 341,134  | 341,134                                       | 0   | 6,398  | 0  | 6,424   |
| June 30, 2087                                       | 34,510,403   | 305,902  | 305,902                                       | 0   | 5,392  | 0  | 5,414   |
| June 30, 2088                                       | 30,471,528   | 272,564  | 272,564                                       | 0   | 4,515  | 0  | 4,534   |
| June 30, 2089                                       | 25,895,890   | 241,245  | 241,245                                       | 0   | 3,755  | 0  | 3,771   |
| June 30, 2090                                       | 20,739,290   | 212,015  | 212,015                                       | 0   | 3,102  | 0  | 3,115   |
| June 30, 2091                                       | 14,953,414   | 184,936  | 184,936                                       | 0   | 2,542  | 0  | 2,553   |
| June 30, 2092                                       | 8,485,718  | 159,989  | 159,989                                       | 0   | 2,067  | 0  | 2,076   |
| June 30, 2093                                       | 1,284,435  | 137,206  | 137,206                                       | 0   | 1,666  | 0  | 1,673   |
| June 30, 2094                                       | 0  | 116,528  | 0   | 116,528   | 0  | 6,503  | 1,336   |
| June 30, 2095                                       | 0  | 97,926   | 0   | 97,926  | 0  | 5,250  | 1,055   |
| June 30, 2096                                       | 0  | 81,331   | 0   | 81,331  | 0  | 4,189  | 823   |





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# July 1 through June 30. Plan Year Premium Effective Date Medicare Supplement Plans: effective January 1, 2022 Active Plans: effective July 1, 2022 **Dental Plans:** N/A **Creditable Service** Elapsed time from date of hire to termination of service date. **Benefits Offered** Comprehensive Medical Insurance offered. Medicare Part A To the best of our knowledge the Town does not pay any Medicare Part A premiums or penalties. Medicare Part B Medicare Part B Premium reimbursements by the Town were not reflected in this valuation. Medicare Part B Penalty reimbursements by the Town were not reflected in this valuation. Surviving Spouse Coverage Surviving spouses pay 100% of premiums.

APPENDIX II - PLAN PROVISIONS





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## APPENDIX II – PLAN PROVISIONS

**Eligibility** 

| Hire Date                 | Eligibility                                  |
|---------------------------|--|
| Before April 2, 2012      | • Age 55 with 10 years of creditable service |
| before April 2, 2012      | •20 years of service regardless of age       |
| On or after April 2, 2012 | •Age 60 with 10 years of creditable service  |

### Participant Contributions

| Group            | Individual                          | Two-Person / Family       |  |
|------------------|-------------------------------------|---------------------------|--|
| •50% for Medex 2 |                                     |                           |  |
| Medical          | •34% for Managed Blue for Seniors   | •34% for all family plans |  |
|                  | •21% for all other individual plans |                           |  |
| Dental           | N/A                                 | N/A                       |  |
| Life             | N/A                                 | N/A                       |  |





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### APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

| <u>Pre-Retirement Mortality</u>  | General: RP-2014 Mortality Table for Blue Collar Employees projected generationally<br>with scale MP-2016 for males and females, set forward 1 year for females<br>Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally<br>with scale MP-2016 for males and females                   |
|----------------------------------|--|
| <u>Post-Retirement Mortality</u> | General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females, set forward 1 year for females<br>Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females |
| <u>Disabled Mortality</u>        | General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females, set forward 1 year<br>Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected<br>generationally with scale MP-2016 for males and females             |
| Assumption Experience Study      | The actuarial assumptions used to calculate the actuarial accrued liability and the service cost primarily reflect the latest experience studies of the Massachusetts PERAC issued in 2014 and their most recent analysis of retiree mortality during 2015 and 2016.   |
| Discount Rate                    | 6.40% per annum (previously 6.75%)   |
| Net Long Term Rate of Return     | 6.41% (based on investment policy)   |
| Municipal Bond Rate              | 4.09% as of June 30, 2022 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)   |
| Actuarial Cost Method            | Individual Entry Age Normal  |
| Asset-Valuation Method           | Market Value of Assets as of the Measurement Date, June 30, 2022   |





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### APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

**Employee** Termination

It was assumed that employees would terminate employment in accordance with the sample rates shown in the following table:

| Service | Male   | Female |
|---------|--------|--------|
| 0       | 15.00% | 15.00% |
| 5       | 7.60%  | 7.60%  |
| 10      | 5.40%  | 5.40%  |
| 15      | 3.30%  | 3.30%  |
| 20      | 2.00%  | 2.00%  |





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#### APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

#### Retirement Rates for Eligible Employees

|         | Standard | Standard | Male     | Female   | Public  |
|---------|----------|----------|----------|----------|---------|
| Age     | Male     | Female   | Teachers | Teachers | Safety  |
| 45 - 49 | 0.00%    | 0.00%    | 0.00%    | 0.00%    | 6.00%   |
| 50 - 51 | 3.00%    | 3.00%    | 2.00%    | 1.50%    | 6.00%   |
| 52      | 3.00%    | 3.00%    | 2.00%    | 1.50%    | 6.00%   |
| 53      | 3.00%    | 3.00%    | 2.00%    | 1.50%    | 7.50%   |
| 54      | 3.00%    | 3.50%    | 2.00%    | 2.00%    | 15.00%  |
| 55      | 3.50%    | 5.00%    | 6.00%    | 5.00%    | 25.00%  |
| 56      | 3.50%    | 5.00%    | 20.00%   | 15.00%   | 15.00%  |
| 57      | 4.00%    | 5.50%    | 40.00%   | 35.00%   | 15.00%  |
| 58      | 5.00%    | 6.00%    | 50.00%   | 35.00%   | 15.00%  |
| 59      | 6.00%    | 6.50%    | 50.00%   | 35.00%   | 15.00%  |
| 60      | 9.00%    | 7.50%    | 40.00%   | 35.00%   | 20.00%  |
| 61      | 11.00%   | 10.00%   | 40.00%   | 35.00%   | 20.00%  |
| 62      | 15.00%   | 15.00%   | 35.00%   | 35.00%   | 20.00%  |
| 63      | 15.00%   | 15.00%   | 35.00%   | 35.00%   | 20.00%  |
| 64      | 16.00%   | 15.00%   | 35.00%   | 35.00%   | 30.00%  |
| 65      | 20.00%   | 20.00%   | 35.00%   | 35.00%   | 50.00%  |
| 66      | 20.00%   | 20.00%   | 40.00%   | 35.00%   | 25.00%  |
| 67      | 20.00%   | 20.00%   | 40.00%   | 30.00%   | 25.00%  |
| 68      | 20.00%   | 20.00%   | 40.00%   | 30.00%   | 25.00%  |
| 69      | 20.00%   | 20.00%   | 40.00%   | 30.00%   | 25.00%  |
| 70      | 100.00%  | 100.00%  | 100.00%  | 100.00%  | 100.00% |
| 71      | 100.00%  | 100.00%  | 100.00%  | 100.00%  | 100.00% |
| 72      | 100.00%  | 100.00%  | 100.00%  | 100.00%  | 100.00% |

#### Permanent Disability Rates

|     |          |          | Public |
|-----|----------|----------|--------|
| Age | Standard | Teachers | Safety |
| 20  | 0.01%    | 0.05%    | 0.20%  |
| 30  | 0.01%    | 0.07%    | 0.21%  |
| 40  | 0.07%    | 0.21%    | 0.71%  |
| 50  | 0.13%    | 0.42%    | 1.10%  |
| 60  | 0.12%    | 0.50%    | 0.80%  |



Town of Boxford Other Postemployment Benefits Plan For the Fiscal Year ending June 30, 2022 | Delivered October 19, 2022



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### APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

### Trend Rate

# Medicare Part A & B Premiums & Penalties: N/A

**Medical Plans:** Rates were developed using the SOA Getzen Model of Long-Run Medical Cost Trends with the following model input variables:

| Inflation (CPI):                             | 2.50% |
|--|-------|
| Real GDP (per capita):                       | 1.10% |
| Excess Medical Cost Growth:                  | 1.10% |
| Expected Health Share of GDP in 2030:        | 21%   |
| Health Share of GDP Resistance Point:        | 22.5% |
| Year for Limiting Cost Growth to GDP Growth: | 2060  |
|  |       |

See below for a table of trend rates for select years:

| Year        | Rate  |
|-------------|-------|
| 2021        | 9.00% |
| 2022        | 8.00% |
| 2023        | 6.50% |
| 2024        | 5.00% |
| 2025        | 4.96% |
| 2026        | 4.92% |
| 2027        | 4.88% |
| 2028        | 4.84% |
| 2029        | 4.81% |
| 2030 - 2037 | 4.77% |
| 2050        | 4.38% |
| 2060+       | 3.63% |





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### APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

| Participation Rate          | It was assumed that 80% of employees eligible to receive retirement benefits would enroll in the retiree medical plans upon retirement  |
|-----------------------------|---|
| Spouse Participation Rate   | It was assumed that 80% of male employees and 70% of female employees who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement.  |
| <u>Medicare Eligibility</u> | It was assumed that retirees who were over age 66 on the valuation date and were enrolled in an Active plan were ineligible for Medicare and all other participants would be eligible for Medicare at age 65, absent any information to the contrary.   |
| Compensation Increases      | 3.00% per year.   |
| Inflation Rate              | 2.50% per year.   |
| <u>COVID–19</u>             | We recognize that COVID–19 may impact plan experience. We have reviewed the assumptions used in this report. Based on the data that is currently available, we have not made any adjustments to these assumptions to reflect the impact of COVID–19. We will continue to monitor the impact of COVID–19 to determine if adjustments to valuation assumptions are warranted. |





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#### APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

#### Implicit Subsidy

The implicit subsidy arises because retirees who are not eligible for Medicare are charged the same premium as active employees, even though their actual medical costs are higher on average. Consequently, a portion of the premiums being paid for active employees are being used to "subsidize" the premiums of retirees. Actuarial Standards of Practice and GASB standards require the liability associated with this implicit subsidy to be valued. The chart below shows a breakdown of how implicit cost impacts reported cash flows and liabilities. Actuarial Standard of Practice No. 6 ("ASOP 6") requires us to recognize this implicit subsidy while the plan sponsor may only pay the premiums billed by an insurance provider.

| Impact of Implicit Subsidy                            |                   |                      |  |  |
|---|-------------------|----------------------|--|--|
| As of the Measurement Date                            |                   |                      |  |  |
| Impact on Liability                                   | June 30, 2022     | <u>June 30, 2021</u> |  |  |
| I. Total OPEB Liability                               | 18,704,813        | 15,267,628           |  |  |
| II. Total OPEB Liability (Excluding Implicit Subsidy) | <u>14,349,199</u> | <u>13,175,720</u>    |  |  |
| III. Liability from Implicit Subsidy [I II.]          | 4,355,614         | 2,091,908            |  |  |

|  | For the Measurement Period Ending |                      |  |
|--|-----------------------------------|----------------------|--|
| Impact on Payments                                 | <u>June 30, 2022</u>              | <u>June 30, 2021</u> |  |
| IV. Employer Payments (Including Implicit Subsidy) | 821,153                           | 776,946              |  |
| V. Actual Employer Payments                        | <u>658,812</u>                    | <u>595,892</u>       |  |
| VI. Implicit Subsidy [IV V.]                       | 162,341                           | 181,054              |  |





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### APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

Pre-65 and post-65 per capita costs were developed using fully insured premium rates.

| ACTIVE EMPLOYEES |        |        |    |            | NOT MED<br>LIGIBLE | ICARE          |
|------------------|--------|--------|----|------------|--------------------|----------------|
| Age Bracket      | Female | Male   | Ag | ge Bracket | Female             | Male           |
| 24 & Under       | 4,659  | 2,937  | 44 | & Under    | 9,158              | 6,001          |
| 25 to 29         | 6,873  | 3,056  |    | 45 to 49   | 10,059             | 7,576          |
| 30 to 34         | 8,685  | 3,836  | ,  | 50 to 54   | 11,833             | 9 <i>,</i> 978 |
| 35 to 39         | 8,947  | 4,817  |    | 55 to 59   | 13,679             | 12,972         |
| 40 to 44         | 9,158  | 6,001  |    | 60 to 64   | 16,278             | 16,647         |
| 45 to 49         | 10,059 | 7,576  |    | 65 to 69   | 19,513             | 20,764         |
| 50 to 54         | 11,833 | 9,978  |    | 70 to 74   | 23,010             | 24,883         |
| 55 to 59         | 13,679 | 12,972 |    | 75 to 79   | 26,723             | 29,389         |
| 60 to 64         | 16,278 | 16,647 |    | 80 to 84   | 30,639             | 33,781         |
| 65 to 69         | 19,513 | 20,764 |    | 85 to 89   | 34,974             | 38,667         |
| 70 & Over        | 23,010 | 24,883 | 9  | 0 & Over   | 34,974             | 38,667         |

#### ANNUAL PER CAPITA CLAIMS\*

| RETIREE - MEDICARE<br>ELIGIBLE |       |       |  |  |  |  |  |  |
|--------------------------------|-------|-------|--|--|--|--|--|--|
| Age Bracket Female Male        |       |       |  |  |  |  |  |  |
| 65 to 69                       | 2,989 | 3,070 |  |  |  |  |  |  |
| 70 to 74                       | 3,527 | 3,679 |  |  |  |  |  |  |
| 75 to 79                       | 4,092 | 4,344 |  |  |  |  |  |  |
| 80 to 84                       | 4,692 | 4,993 |  |  |  |  |  |  |
| 85 to 89                       | 5,246 | 5,562 |  |  |  |  |  |  |
| 90 & Over                      | 5,246 | 5,562 |  |  |  |  |  |  |

\*Based on SOA 'Health Care Costs--From Birth to Death' study published in 2013





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#### APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

### **Open Group Forecast**

For the projection of plan liabilities in future years, it was assumed that the number of active employees will remain constant and those who terminate employment or retire will be replaced with new employees with the demographics below:

| <b>Open Group Forecast Population</b> |             |             |  |  |  |  |  |  |
|---------------------------------------|-------------|-------------|--|--|--|--|--|--|
| Demographics                          |             |             |  |  |  |  |  |  |
| Age Male Female                       |             |             |  |  |  |  |  |  |
| 20                                    | 8.0%        | 5.0%        |  |  |  |  |  |  |
| 30                                    | 7.0%        | 14.0%       |  |  |  |  |  |  |
| 40                                    | 20.0%       | 19.0%       |  |  |  |  |  |  |
| 50                                    | 10.0%       | 10.0%       |  |  |  |  |  |  |
| 60                                    | <u>3.0%</u> | <u>4.0%</u> |  |  |  |  |  |  |
| Total                                 | 48.0%       | 52.0%       |  |  |  |  |  |  |

#### Additional Comments

The liabilities being reported as of the Measurement Date of June 30, 2022 reflect a closed group and do not reflect any new entrants after the valuation date.

To the best of our knowledge all employees who are eligible on the valuation date are included in the actuarial valuation.





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### APPENDIX IV – PLAN DEMOGRAPHICS

#### Active Employees

| Valuation Date         | July 1, 2021 | July 1, 2019 |
|------------------------|--------------|--------------|
| A. Average Age at Hire | 37.40        | 36.75        |
| B. Average Service     | <u>10.45</u> | <u>11.47</u> |
| C. Average Current Age | 47.85        | 48.22        |

## Retired Employees & Spouses

| Valuation Date   | July 1, 2021 | July 1, 2019 |
|------------------|--------------|--------------|
| A. Under Age 65  | 20           | 24           |
| B. Age 65 & Over | <u>131</u>   | <u>122</u>   |
| C. Total         | 151          | 146          |

#### Average Service Age

|       |     | Years of Service |       |       |       |       |       |       |     |       |
|-------|-----|------------------|-------|-------|-------|-------|-------|-------|-----|-------|
| Age   | 0-4 | 5-9              | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-24  | 5   |                  |       |       |       |       |       |       |     | 5     |
| 25-29 | 10  | 2                |       |       |       |       |       |       |     | 12    |
| 30-34 | 9   | 3                | 1     |       |       |       |       |       |     | 13    |
| 35-39 | 12  | 2                | 3     | 5     |       |       |       |       |     | 22    |
| 40-44 | 12  | 3                | 2     |       | 1     |       |       |       |     | 18    |
| 45-49 | 9   | 6                | 3     | 5     | 4     |       |       |       |     | 27    |
| 50-54 | 4   | 5                | 6     | 6     | 4     | 4     | 1     |       |     | 30    |
| 55-59 | 6   | 1                | 4     | 4     | 2     | 4     | 1     |       | 1   | 23    |
| 60-64 | 3   | 4                | 7     | 3     | 3     |       |       |       |     | 20    |
| 65-69 |     | 2                | 1     | 4     | 1     | 2     | 1     |       |     | 11    |
| 70+   |     |                  |       |       |       |       |       |       |     |       |
| Total | 70  | 28               | 27    | 27    | 15    | 10    | 3     |       | 1   | 181   |





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### APPENDIX IV - PLAN DEMOGRAPHICS

| <u>Plan Offerings</u>    | Number of Contracts          |                   |               |              |  |
|--------------------------|------------------------------|-------------------|---------------|--------------|--|
|                          | <u>Single</u>                | Two-Person        | <u>Family</u> | <u>Total</u> |  |
| HMO Blue                 | 56                           |                   | 72            | 128          |  |
| Blue Care Elect          | 5                            |                   | 12            | 17           |  |
| Managed Blue for Seniors | 89                           |                   |               | 89           |  |
| Medex 2                  | <u>40</u>                    |                   |               | <u>40</u>    |  |
| Total                    | 190                          | 0                 | 84            | 274          |  |
|                          |                              |                   |               |              |  |
|                          | Per Contract Costs (monthly) |                   |               |              |  |
|                          | <u>Single</u>                | <u>Two-Person</u> | <u>Family</u> |              |  |
| HMO Blue                 | 895.33                       |                   | 2,391.94      |              |  |
| Blue Care Elect          | 1,058.36                     |                   | 2,831.89      |              |  |
| Managed Blue for Seniors | 337.58                       | 675.16            |               |              |  |
| Medex 2                  | 382.48                       | 764.96            |               |              |  |
| Dental Plan              | N/A                          |                   | N/A           |              |  |





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### APPENDIX IV - PLAN DEMOGRAPHICS

|                 | Active Plan Average Premium Calculation |                                       |        |              |                     |              |  |
|-----------------|---|---------------------------------------|--------|--------------|---------------------|--------------|--|
|                 |   | Number of Total Premiums Claims Witho |        |              |                     |              |  |
|                 | Single                                  | Two-Person                            | Family | Participants | Paid                | Children     |  |
| HMO Blue        | 56                                      |                                       | 72     | 200          | 2,668,297.92        | 2,148,792.00 |  |
| Blue Care Elect | 5                                       |                                       | 12     | 29           | 471,293.76          | 368,309.28   |  |
| Total           | 61                                      | 0                                     | 84     | 229          | 3,139,591.68        | 2,517,101.28 |  |
|                 |   |                                       |        | Blended Ave  | erage Monthly Rate: | \$ 915.98    |  |

|                          | Medicare Supplement Plan Average Premium Calculation |            |                                     |              |            |            |
|--------------------------|--|------------|-------------------------------------|--------------|------------|------------|
|                          | Number of Total Premiums Claims Without              |            |                                     |              |            |            |
|                          | Single   | Two-Person | Family                              | Participants | Paid       | Children   |
| Managed Blue for Seniors | 89   |            |                                     | 89           | 360,535.44 | 360,535.44 |
| Medex 2                  | 40   |            |                                     | 40           | 183,590.40 | 183,590.40 |
| Total                    | 129  | 0          | 0                                   | 129          | 544,125.84 | 544,125.84 |
|                          |  |            | Blended Average Monthly Rate: \$ 35 |              |            | \$ 351.50  |



Odyssey ADVISORS

East Coast 11 Hayward Ave, Building 4 Colchester, CT 06415 (860) 537-9080 West Coast 1350 E. Flamigo Road, Suite 254 Las Vegas, NV 89119 (702) 979-2880

#### APPENDIX V - OVERVIEW OF GASB 74 & 75

Before Statements 74 and 75, GASB statement 45 established the reporting standards for Other Postemployment Benefit ("OPEB") plans. It was designed to recognize the Other Postemployment Benefits earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. "pay-as-you-go" accounting. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a "Service Cost". These amounts are reflected in your financial statement each year so that OPEB benefits for an eligible employee shall be fully charged to the financial statement when that eligible employee terminates employment.

In 2012 GASB issued GASB Statements 67 and 68 to update and standardize the financial reporting of pension liabilities. This increased the transparency of pension liabilities by moving them to the balance sheet and made financial statement disclosures of pension liabilities more comparable between municipal entities. GASB Statements 74 and 75 are designed to have the same effect on OPEB plans.

GASB 74 and 75 require retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 74 only applies in situations where a separate trust is established to prefund these benefits. GASB 75 requires employers to perform periodic actuarial valuations to determine annual accounting costs and to keep a running tally of the extent to which these amounts are over or under funded.

GASB 74 and 75 apply to those benefits provided after retirement, except for pension benefits, such as medical, dental and life insurance. The philosophy behind the accounting standard is that these postemployment benefits are part of the compensation earned by employees in return for their services, and the cost of these benefits should be recognized while employees are providing those services, rather than after they have retired. This philosophy has already been applied for years to defined benefit pensions; GASB 74 and 75 extend this practice to all other postemployment benefits.





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#### APPENDIX V - OVERVIEW OF GASB 74 & 75

The process of determining the liability for OPEB benefits is based on many assumptions about future events. The key actuarial assumptions are:

<u>Turnover and retirement rates</u> – How likely is it that an employee will qualify for postemployment benefits and when will they start?

<u>Medical inflation and claims cost assumptions</u> – When an employee starts receiving postemployment benefits many years from now, how much will be paid each year for the benefits and how rapidly will the costs grow?

Mortality assumption – How long is a retiree likely to receive benefits?

Discount rate assumption – What is the present value of those future benefit payments in terms of today's dollars?

Since the liability is being recognized over the employee's whole career with the Town, the present value is divided into three pieces: the part that is attributed to past years (the "Total OPEB Liability" or "Past Service Liability"), the part that is being earned this year (the "Service Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Service Cost have been calculated, the next step is to determine an actuarially determined contribution. This is an amount that if paid annually would fully prefund the benefits for current active and retired employees. This consists of two pieces:

- ✓ Service Cost because the benefits earned by active employees each year should be paid for each year
- ✓ Past Service Cost a catch-up payment to fund the Accrued Liability over a period of time determined by an actuary

The final step is to keep track going forward of how much of the contribution is actually paid. There is no requirement to actually fund these benefits, but the cumulative deficiency must be disclosed on the Town's financial statements as the Net OPEB Liability (NOL). If you decide to fully fund the NOL this will appear in the financial statement as a Net OPEB Asset. In addition, the Discount Rate used to calculate the liabilities must reflect the expected investment income of whatever funds are set aside to prefund the benefits; if there is no prefunding then the Discount Rate will be much lower and the liabilities significantly higher than if the benefits are prefunded.



Odyssey

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#### APPENDIX VI – ASOP 41 DISCLOSURES

The Actuarial Standards Board (the "ASB"), vested by the U.S.-based actuarial organizations<sup>1</sup>, promulgates actuarial standards of practice ("ASOPs") for use by actuaries when providing professional services in the United States. Each of these organizations requires its members, through its Code of Professional Conduct<sup>2</sup>, to observe the ASOPs of the ASB when practicing in the United States.

The ASOPs are not narrowly prescriptive and neither dictate a single approach nor mandate a particular outcome. ASOPs are intended to provide actuaries with a framework for performing professional assignments and to offer guidance on relevant issues, recommended practices, documentation, and disclosure. Each ASOP articulates a process of analysis, documentation, and disclosure that, in the ASB's judgment, constitutes appropriate practice within the scope and purpose of the ASOP.

ASOP 41 provides guidance to actuaries with respect to actuarial communications and requires certain disclosures which are contained in this Appendix.

### Identification of the Responsible Actuary

The responsible actuary is Parker Elmore, ASA, EA, FCA, MAAA of Odyssey Advisors. This actuary is available to provide supplementary information and explanation.

## Identification of Actuarial Documents

The date of this document is October 19, 2022 and its subject is the Town of Boxford's GASB 75 OPEB liabilities.



<sup>&</sup>lt;sup>1</sup>The American Academy of Actuaries (the "Academy"), the American Society of Pension Professionals and Actuaries, the Casualty Actuarial Society, the Conference of Consulting Actuaries, and the Society of Actuaries.

<sup>&</sup>lt;sup>2</sup> These organizations adopted identical Codes of Professional Conduct effective January 1, 2001



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#### APPENDIX VI – ASOP 41 DISCLOSURES

Disclosures in Actuarial Reports

- ✓ The contents of this report are intended for the use of the officers, employees, and elected officials of the Town and the Town's appointed auditor. The Town may distribute this report to those parties that have a legal right to require the Town to provide it, in which case it will be provided in its entirety including all assumptions, caveats, and limitations. In addition, we request that the Town notify Odyssey Advisors to whom it was distributed.
- ✓ The purpose of this engagement was to provide the Town with analysis of the GASB 75 OPEB liabilities.
- ✓ The responsible actuary identified above is qualified as specified in the *Qualification Standards* of the American Academy of Actuaries.
- Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.
- Actuarial computations under GASB 75 are for purposes of fulfilling financial accounting requirements of the Town.
   Determinations for purposes other than meeting these financial accounting requirements may be significantly different from the results contained in this report. These communications should not be relied upon for any other purpose.
- The Town of Boxford has agreed to pay Odyssey Advisors a fee for preparing this report. Other than with regard to that contract, we are financially and organizationally independent from the Town and any entity or individual related to the Town. There is nothing in our relationship with the Town that would impair or seem to impair the objectivity of our work.
- The Town provided the employee/retiree data, premium rates and other information used to prepare our report. We have
  reviewed the data for reasonableness but have not audited it. To the extent that there are material inaccuracies in the data, our
  results may be accordingly affected.
- ✓ The date through which data or other information has been considered in developing the findings included in this report is June 30, 2022.
- ✓ The various documents comprising the actuarial report are contained within the document to which these disclosures are attached.





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#### APPENDIX VI – ASOP 41 DISCLOSURES

#### Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

#### Actuarial Findings

The actuarial findings of the report can be found in the report to which these disclosures are attached.

#### Methods, Procedures, Assumptions, and Data

The methods, procedures, assumptions and data used by the actuary can be found in the report to which these disclosures are attached.

#### Assumptions or Methods Prescribed by Law

While not legally binding, our determinations were made in accordance with our understanding of Statement No. 75 of the Governmental Accounting Standards Board. Actuarial computations under GASB 75 are for purposes of fulfilling employer accounting requirements. Determinations for purposes other than meeting such requirements may be significantly different from these results. Accordingly, additional determinations may be needed for other purposes.

### Responsibility for Assumptions and Methods

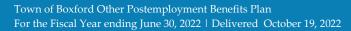
The actuary does not disclaim responsibility for any material assumption(s) or method(s).

### Deviation from the Guidance of an ASOP

The actuary has not deviated materially from the guidance set forth in an applicable ASOP.

### Rounding

Results in this report are shown to the nearest dollar. Due to the predictive nature of these results, no implication is made as to the degree of precision in these unrounded figures. Clients should work with their auditors to decide if it would be prudent to round these results when applying them to the financial statements.







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## GLOSSARY

<u>Accrual Accounting</u> – A system of accounting in which revenues are recorded when earned and outlays are recorded when goods are received or services performed, even though the actual receipt of revenues and payment for goods or services may occur, in whole or in part, at a different time.

<u>Actuarially Determined Contribution</u> – Amount of funding required annually to fully fund plan benefits. Determined by the actuary using a consistent methodology.

<u>Amortization</u> – Allows the recognition of liability over a fixed period of time.

<u>Cash Basis Accounting</u> – A system of accounting in which revenues are recorded when received and outlays are recorded when payment is made.

<u>Deferred Inflows/Outflows of Resources</u> – Amounts arising from experience gains and losses that have not been recognized into the OPEB Expense but will be recognized in the future.

<u>Discount Rate</u> – The interest rate used to calculate the present value of future cash flows. Under GASB 75, the rate should be the expected long-term rate of return on investments for a plan that is being fully funded, the 20-year municipal bond index for a pay-as-you-go plan, and a blend of the two rates for a plan that is being partially funded.

<u>Entry Age Normal</u> – Under this method, the annual service cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement. The annual service cost for each active member is a level percent of payroll. The total OPEB liability is the actuarial present value of the projected benefit times the ratio of past service to expected total service at retirement/termination.

<u>Fiduciary Net Position</u> – The value of cash, investments, other assets and property belonging to an OPEB trust.





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## <u>GLOSSARY</u>

<u>Government Accounting Standards Board (GASB)</u> – "The Governmental Accounting Standards Board (GASB) was organized in 1984 by the Financial Accounting Foundation (FAF) to establish standards of financial accounting and reporting for state and local governmental entities. Its standards guide the preparation of external financial reports of those entities."

<u>Implicit Subsidy</u> – The liability that arises because retirees who are not eligible for Medicare are charged the same premium as active employees even though their actual medical costs are higher on average.

<u>Irrevocable Contribution</u> – The transfer of assets to a qualified trust in which assets may only be withdrawn for the purpose of providing retiree other postemployment benefits.

<u>Net OPEB Liability (NOL)</u> – Total OPEB Liability less the Fiduciary Net Position.

<u>Other Postemployment Benefits (OPEB)</u> – Benefits that an employee will begin to receive at the start of retirement. This does not include pension benefits paid to the retired employee.

<u>OPEB Trust</u> – An entity which holds assets for the sole purpose of funding OPEB. All contributions and earning within this entity must be irrevocable and protected from creditors.

<u>Pay-as-you-go funding</u> – Paying benefits (such as pensions or OPEB) on a cash basis, with no money set aside for future liabilities which are already incurred.

<u>Service Cost</u> – The actuarially determined present value contribution needed to fund benefits which are earned for employee service rendered during the current year. Service cost depends on many factors, including the interest rate used to discount future cashflows, and expected inflation.

<u>Total OPEB Liability (TOL)</u> – That portion, as determined by the Individual Entry Age Normal Actuarial Cost Method, of the Actuarial Present Value of benefits and expenses which are not provided for by future Service Costs.

