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# GASB 74/75 ACTUARIAL VALUATION

Fiscal Year Ending June 30, 2020

# TOWN OF NORTH PROVIDENCE

## CONTACT

**Matt Sherertz, ASA, MAAA**  
matt.sherertz@nyhart.com

## ADDRESS

**Nyhart**  
8415 Allison Pointe Blvd. Suite 300  
Indianapolis, IN 46250

## PHONE

General	(317) 845-3500
Toll-Free	(800) 428-7106
Fax	(317) 845-3654

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**January 15, 2021**

**Maria Vallee  
Town of North Providence  
2000 Smith Street  
North Providence, RI 02911**

This report summarizes the GASB actuarial valuation for the Town of North Providence 2019/20 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans) and GASB Statement No. 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.



Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.

A handwritten signature in black ink that reads 'Matt Sherertz'.

Matt Sherertz, ASA, MAAA  
Consulting Actuary

A handwritten signature in black ink that reads 'David Murciano'.

David Murciano, ASA, EA, MAAA  
Valuation Actuary

SECTION A

# VALUATION RESULTS FOR TOWN OF NORTH PROVIDENCE

# Executive Summary

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending June 30, 2020 compared to the prior fiscal years as shown in the Town's Notes to Financial Statement.

	As of June 30, 2019		As of June 30, 2020	
<b>Total OPEB Liability</b>	\$	48,454,978	\$	47,637,647
<b>Plan Fiduciary Net Position</b>	\$	(1,779,114)	\$	(2,096,654)
<b>Net OPEB Liability</b>	\$	46,675,864	\$	45,540,993
<b>Funded Ratio</b>		3.7%		4.4%

	FY 2018/19		FY 2019/20	
<b>OPEB Expense</b>	\$	2,574,581	\$	3,726,225
<b>Annual Employer Contribution</b>	\$	2,138,700	\$	2,604,200

	As of June 30, 2019		As of June 30, 2020	
<b>Discount Rate</b>		3.51%		2.66%
<b>Expected Return on Assets</b>		6.86%		6.36%

	As of June 30, 2020	
<b>Total Active Participants</b>		265
<b>Total Retiree Participants</b>		98

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

# Executive Summary

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Below is a breakdown of total GASB 75 liabilities allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability allocated to pre and post Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

Present Value of Future Benefits	As of June 30, 2019		As of June 30, 2020	
Active Employees	\$	66,805,707	\$	62,249,355
Retired Employees		21,497,571		21,515,008
<b>Total Present Value of Future Benefits</b>	<b>\$</b>	<b>88,303,278</b>	<b>\$</b>	<b>83,764,363</b>

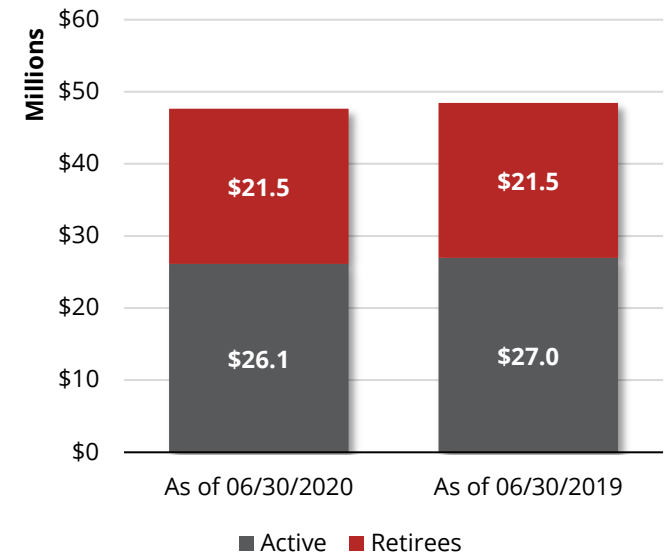
Total OPEB Liability	As of June 30, 2019		As of June 30, 2020	
Active Pre-Medicare	\$	26,044,091	\$	25,447,584
Active Post-Medicare		913,316		675,055
Active Liability	\$	26,957,407	\$	26,122,639

Retiree Pre-Medicare	\$	21,497,571	\$	21,515,008
Retiree Post-Medicare		0		0
Retiree Liability	\$	21,497,571	\$	21,515,008

<b>Total OPEB Liability</b>	<b>\$</b>	<b>48,454,978</b>	<b>\$</b>	<b>47,637,647</b>
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	As of June 30, 2019		As of June 30, 2020	
Discount Rate		3.51%		2.66%

### Changes in Total OPEB Liability



**Present Value of Future Benefits (PVFB)** is the amount needed as of June 30, 2019 and 2020, to fully fund the Town's retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

**Total OPEB Liability** is the portion of PVFB considered to be accrued or earned as of June 30, 2019 and 2020. This amount is a required disclosure in the Required Supplementary Information section.

# GASB Disclosures

Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2019/20	FY 2018/19	FY 2017/18	FY 2016/17	FY 2015/16
<b>Total OPEB Liability</b>					
Total OPEB liability – beginning of year	\$ 48,454,978	\$ 52,153,121	\$ 55,406,283	\$ 56,717,102	\$ 57,198,352
Service cost	2,437,393	2,541,914	2,623,333	2,959,480	2,725,113
Interest	1,745,362	2,080,498	2,014,755	1,618,729	2,233,318
Changes of benefit terms	2,140,105	0	0	0	(2,583)
Changes in assumptions	2,643,946	1,403,165	1,260,959	(2,689,096)	3,226,250
Differences between expected and actual experience	(7,429,937)	(7,835,020)	(6,256,150)	(618,971)	(5,905,518)
Benefit payments	(2,354,200)	(1,888,700) <sup>1</sup>	(2,896,059)	(2,580,961)	(2,757,830)
Net change in total OPEB liability	\$ (817,331)	\$ (3,698,143)	\$ (3,253,162)	\$ (1,310,819)	\$ (481,250)
Total OPEB liability – end of year	\$ 47,637,647	\$ 48,454,978	\$ 52,153,121	\$ 55,406,283	\$ 56,717,102
<b>Plan Fiduciary Net Position</b>					
Plan fiduciary net position – beginning of year	\$ 1,779,114	\$ 1,438,407	\$ 1,107,305	\$ 764,785	\$ 250,000
Contributions – employer	2,604,200	2,138,700	3,146,059 <sup>2</sup>	2,830,961	3,257,830
Contributions – active employees	0	0	0	0	0
Net investment income	70,280	93,513	82,858	92,520	15,465
Benefit payments	(2,354,200) <sup>1</sup>	(1,888,700) <sup>1</sup>	(2,896,059)	(2,580,961)	(2,757,830)
Trust administrative expenses	(2,740)	(2,806)	(1,756)	0	(680)
Net change in plan fiduciary net position	\$ 317,540	\$ 340,707	\$ 331,102	\$ 342,520	\$ 514,785
Plan fiduciary net position – end of year	\$ 2,096,654	\$ 1,779,114	\$ 1,438,407	\$ 1,107,305	\$ 764,785
<b>Net OPEB Liability – end of year</b>	<b>\$ 45,540,993</b>	<b>\$ 46,675,864</b>	<b>\$ 50,714,714</b>	<b>\$ 54,298,978</b>	<b>\$ 55,952,317</b>
Plan fiduciary net position as % of total OPEB liability	4.4%	3.7%	2.8%	2.0%	1.3%
Covered employee payroll	\$ 15,834,894	\$ 13,354,202	\$ 14,058,386	\$ 13,560,802	\$ 13,102,224
Net OPEB liability as % of covered payroll	287.4%	349.5%	360.7%	400.4%	427.0%

<sup>1</sup> Benefit payments for FY 2019/20 and FY 2018/19 are actual benefit payment amounts. Actuarial estimates were used for benefit payment amounts for prior years.

<sup>2</sup> Includes contribution receivable of \$250,000.



# GASB Disclosures

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below are based on the Annual Required Contribution (ARC) calculated in the prior GASB 45 actuarial valuations as shown in the Plan Sponsor financial statements.

	FY 2019/20	FY 2018/19	FY 2017/18	FY 2016/17	FY 2015/16
Actuarially Determined Contribution (ADC)	\$ 4,133,922	\$ 4,556,119	\$ 4,331,922	\$ 4,073,563	\$ 3,854,662
Contributions in relation to the ADC <sup>3</sup>	2,604,200	2,138,700	3,146,059	2,830,961	3,257,830
Contribution deficiency / (excess)	\$ 1,529,722	\$ 2,417,419	\$ 1,185,863	\$ 1,242,602	\$ 596,832
Covered employee payroll	\$ 15,844,894	\$ 13,354,202	\$ 14,058,386	\$ 13,560,802	\$ 13,102,224
Contribution as a % of covered employee payroll	16.4%	16.0%	22.4%	20.9%	24.9%
	FY 2014/15	FY 2013/14	FY 2012/13	FY 2011/12	FY 2010/11
Actuarially Determined Contribution (ADC)	\$ 5,651,000	\$ 5,332,000	\$ 4,955,000	\$ 4,686,000	\$ 4,549,000
Contributions in relation to the ADC	3,839,000	2,961,000	2,841,000	2,771,000	2,208,000
Contribution deficiency / (excess)	\$ 1,812,000	\$ 2,371,000	\$ 2,114,000	\$ 1,915,000	\$ 2,341,000
Covered employee payroll	\$ 37,460,000	\$ 37,460,000	\$ 41,332,000	\$ 41,332,000	\$ N/A
Contribution as a % of covered employee payroll	10.2%	7.9%	6.9%	6.7%	N/A

<sup>3</sup> Includes employer contribution for pay-go cost paid from General Fund and pre-funding contributions deposited into the OPEB Trust.

# GASB Disclosures

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### OPEB Expense

OPEB Expense	FY 2019/20	FY 2018/19
Discount rate as of beginning of fiscal year	3.51%	3.87%
Discount rate as of end of fiscal year	2.66%	3.51%
Service cost	\$ 2,437,393	\$ 2,541,914
Interest	1,745,362	2,080,498
Changes of benefit terms	2,140,105	0
Projected earnings on OPEB plan investments	(130,388)	(101,404)
Reduction for contributions from active employees	0	0
OPEB plan administrative expenses	2,740	2,806
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (3,149,657)	\$ (2,324,108)
Changes in assumptions	667,760	373,988
Net difference between projected and actual earnings on OPEB plan investments	12,910	887
Total current period recognition	\$ (2,468,987)	\$ (1,949,233)
Total OPEB expense	\$ 3,726,225	\$ 2,574,581

# GASB Disclosures

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average expected future service lives while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2020
June 30, 2016	\$ (5,905,518)	9	\$ (689,647)	\$ (2,758,585)
June 30, 2017	\$ (618,971)	9	\$ (68,775)	\$ (343,871)
June 30, 2018	\$ (6,256,150)	9	\$ (695,128)	\$ (4,170,766)
June 30, 2019	\$ (7,835,020)	9	\$ (870,558)	\$ (6,093,904)
June 30, 2020	\$ (7,429,937)	9	\$ (825,549)	\$ (6,604,388)

Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2020
June 30, 2016	\$ 3,226,250	9	\$ 376,762	\$ 1,507,046
June 30, 2017	\$ (2,689,096)	9	\$ (298,788)	\$ (1,493,944)
June 30, 2018	\$ 1,260,959	9	\$ 140,107	\$ 840,638
June 30, 2019	\$ 1,403,165	9	\$ 155,907	\$ 1,091,351
June 30, 2020	\$ 2,643,946	9	\$ 293,772	\$ 2,350,174

# GASB Disclosures

Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Deferred Outflows / (Inflows) of Resources – Continued

Net difference between projected and actual earnings in OPEB plan investments for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2020
June 30, 2016	\$ 22,376	5	\$ 4,476	\$ 0
June 30, 2017	\$ (25,956)	5	\$ (5,191)	\$ (5,192)
June 30, 2018	\$ 125	5	\$ 25	\$ 50
June 30, 2019	\$ 7,891	5	\$ 1,578	\$ 4,735
June 30, 2020	\$ 60,108	5	\$ 12,022	\$ 48,086

As of fiscal year ending June 30, 2020	Deferred Outflows	Deferred Inflows
Differences between expected and actual experience	\$ 0	\$ (19,971,514)
Changes in assumptions	5,789,209	(1,493,944)
Net difference between projected and actual earnings in OPEB plan investments	52,871	(5,192)
<b>Total</b>	<b>\$ 5,842,080</b>	<b>\$ (21,470,650)</b>

## Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2020 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

FYE	Balance
2021	\$ (2,473,464)
2022	\$ (2,468,272)
2023	\$ (2,468,296)
2024	\$ (2,469,876)
2025	\$ (2,169,012)
Thereafter	\$ (3,579,650)

# GASB Disclosures

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Sensitivity Results

The following presents the net OPEB liability as of June 30, 2020, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 2.66%.
- The 1% decrease in discount rate would be 1.66%.
- The 1% increase in discount rate would be 3.66%.

As of June 30, 2020	Net OPEB Liability
1% Decrease	\$ 49,688,970
Current Discount Rate	\$ 45,540,993
1% Increase	\$ 41,813,831

The following presents the net OPEB liability as of June 30, 2020, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5%.
- The 1% decrease in health care trend rates would assume an initial rate of 7.0% decreasing by 0.5% annually to an ultimate rate of 3.5%.
- The 1% increase in health care trend rates would assume an initial rate of 9.0% decreasing by 0.5% annually to an ultimate rate of 5.5%.

As of June 30, 2020	Net OPEB Liability
1% Decrease	\$ 40,934,816
Current Health Care Trend Rates	\$ 45,540,993
1% Increase	\$ 50,943,476

# Asset Information

Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Asset Breakdown

	June 30, 2020		June 30, 2019	
<b>Assets</b>				
Cash and cash equivalents	\$	0	\$	2,280
Securities lending cash collateral		0		0
Total cash	\$	0	\$	2,280
Receivables				
Contributions	\$	0	\$	0
Accrued interest		0		0
Total receivables	\$	0	\$	0
Investments				
Fixed income	\$	0	\$	0
Equities		0		0
Mutual Funds		2,096,654		1,776,834
Total investments	\$	2,096,654	\$	1,776,834
Total assets	\$	2,096,654	\$	1,779,114
<b>Liabilities</b>				
Payables				
Investment management fees	\$	0	\$	0
Securities lending expense		0		0
Total liabilities	\$	0	\$	0
<b>Net position restricted to OPEB</b>	<b>\$</b>	<b>2,096,654</b>	<b>\$</b>	<b>1,779,114</b>

# Asset Information

Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Reconciliation of Assets

	FY 2019/20	FY 2018/19
<b>Additions</b>		
Contributions received		
Employer	\$ 2,604,200	\$ 2,138,700
Employee	0	0
Total contributions	\$ 2,604,200	\$ 2,138,700
Investment income		
Net increase in fair value of investments	\$ 11,393	\$ 49,765
Interests and dividends	58,887	43,748
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 70,280	\$ 93,513
Total additions	\$ 2,674,480	\$ 2,232,213
<b>Deductions</b>		
Benefit payments <sup>4</sup>	\$ (2,354,200)	\$ (1,888,700)
Administrative expenses	(2,740)	(2,806)
Other	0	0
Total deductions	\$ (2,356,940)	\$ (1,891,506)
Net increase in net position	\$ 317,540	\$ 340,707
<b>Net position restricted to OPEB</b>		
Beginning of year	\$ 1,779,114	\$ 1,438,407
End of year	\$ 2,096,654	\$ 1,779,114

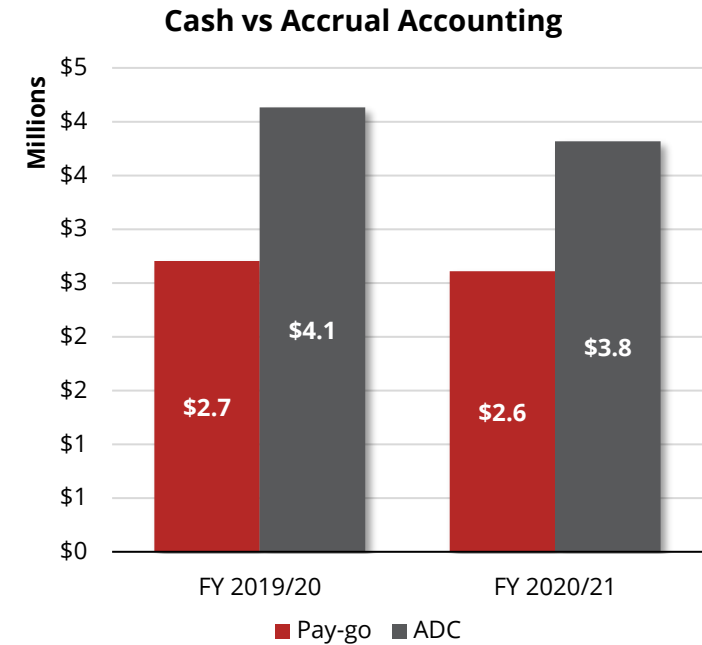
<sup>4</sup> Benefit payments for FY 2019/20 and FY 2018/19 are actual amounts.

# Actuarially Determined Contributions

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The Actuarially Determined Contributions calculated below are recommended target contributions and assumes that the Plan Sponsor has the ability to contribute these amounts on an annual basis. The Plan Sponsor has the responsibility to decide how much it should contribute after considering its other needs and the OPEB participants' needs.

	FY 2019/20	FY 2020/21
Discount rate	6.86%	6.36%
Payroll growth factor used for amortization	3.50%	3.50%
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level % of Salary	Level % of Salary
Amortization period	18 years	17 years
Actuarial accrued liability (AAL) – beginning of year	\$ 37,258,057	\$ 35,615,280
Actuarial value of assets – beginning of year	(1,779,114)	(2,096,654)
Unfunded AAL – beginning of year	\$ 35,478,943	\$ 33,518,626
Normal Cost	\$ 1,317,690	\$ 1,157,428
Amortization of UAAL	2,550,850	2,430,390
Total normal cost plus amortization	\$ 3,868,540	\$ 3,587,818
Interest to the end of year	265,382	228,185
Actuarially Determined Contribution – Preliminary	\$ 4,133,922	\$ 3,816,003
Expected benefit payments	2,705,223	2,610,235
<b>Actuarially Determined Contribution – Final<sup>5</sup></b>	<b>\$ 4,133,922</b>	<b>\$ 3,816,003</b>



**Actuarially Determined Contribution (ADC)** is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

<sup>5</sup> Set to be the greater of the preliminary ADC and expected benefit payments.



# Projection of GASB Disclosures

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

### Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

### Unexpected Events

- Increases in TOL when actual premium rates increase more than expected. A liability decrease occurs if the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

Projection of Total OPEB Liability (TOL)	FY 2019/20	FY 2020/21
TOL as of beginning of year	\$ 48,454,978	\$ 47,637,647
Normal cost as of beginning of year	2,437,393	2,392,618
Exp. benefit payments during the year	(2,354,200)	(2,610,235)
Interest adjustment to end of year	1,745,362	1,296,317
Exp. TOL as of end of year	\$ 50,283,533	\$ 48,716,347
Actuarial Loss/(Gain)	(2,645,886)	TBD
<b>Actual TOL as of end of year</b>	<b>\$ 47,637,647</b>	<b>\$ TBD</b>

Discount rate as of beginning of year	3.51%	2.66%
Discount rate as of end of year	2.66%	TBD

Projection of Actuarial Value of Assets (AVA)	FY 2019/20	FY 2020/21
AVA as of beginning of year	\$ 1,779,114	\$ 2,096,654
Exp. employer contributions during the year <sup>6</sup>	2,604,200	2,860,235
Exp. benefit payments during the year	(2,354,200)	(2,610,235)
Exp. investment income	130,388	141,074
Exp. Trust administrative expenses	(2,740)	(3,229)
Exp. AVA as of end of year	\$ 2,156,762	\$ 2,484,499
Differences between expected and actual experience	(60,108)	TBD
<b>AVA as of end of year</b>	<b>\$ 2,096,654</b>	<b>\$ TBD</b>
Expected asset return as of beginning of year	6.86%	6.36%
Expected asset return as of end of year	6.36%	TBD

<sup>6</sup> Expected employer contribution for 2020/21 is based on expected pay-go costs plus expected pre-funding contributions to the OPEB Trust of \$250,000.

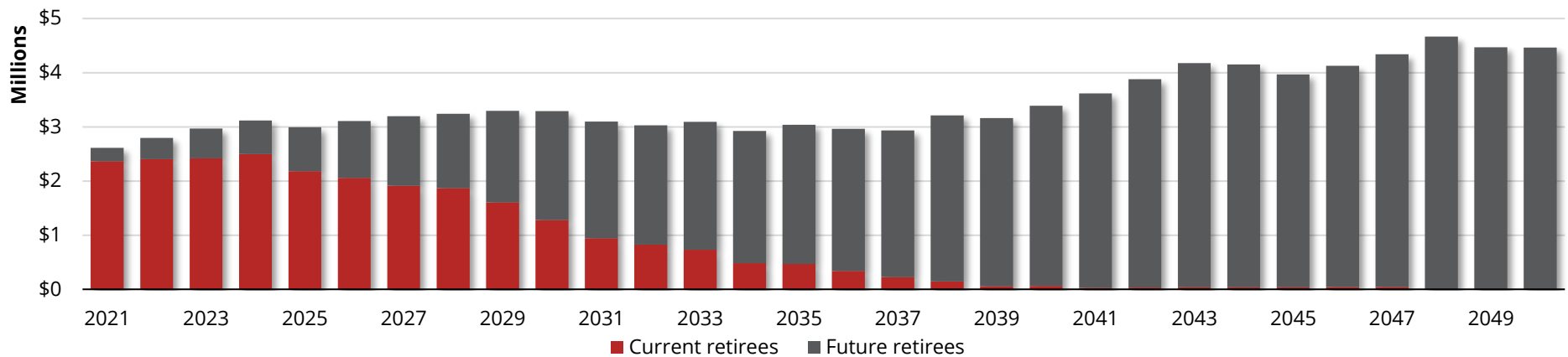
# Cash Flow Projections

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current / future retirees. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees <sup>7</sup>	Total	FYE	Current Retirees	Future Retirees <sup>9</sup>	Total	FYE	Current Retirees	Future Retirees <sup>9</sup>	Total
2021	\$ 2,362,555	\$ 247,680	\$ 2,610,235	2031	\$ 943,541	\$ 2,155,714	\$ 3,099,255	2041	\$ 29,800	\$ 3,589,873	\$ 3,619,673
2022	\$ 2,404,774	\$ 392,015	\$ 2,796,789	2032	\$ 826,573	\$ 2,203,252	\$ 3,029,825	2042	\$ 30,358	\$ 3,851,378	\$ 3,881,736
2023	\$ 2,417,390	\$ 549,566	\$ 2,966,956	2033	\$ 731,905	\$ 2,361,879	\$ 3,093,784	2043	\$ 37,812	\$ 4,139,862	\$ 4,177,674
2024	\$ 2,497,073	\$ 618,176	\$ 3,115,249	2034	\$ 481,006	\$ 2,443,644	\$ 2,924,650	2044	\$ 38,471	\$ 4,115,664	\$ 4,154,135
2025	\$ 2,179,130	\$ 812,693	\$ 2,991,823	2035	\$ 467,702	\$ 2,571,951	\$ 3,039,653	2045	\$ 39,124	\$ 3,931,215	\$ 3,970,339
2026	\$ 2,056,229	\$ 1,050,538	\$ 3,106,767	2036	\$ 337,083	\$ 2,628,128	\$ 2,965,211	2046	\$ 39,770	\$ 4,087,137	\$ 4,126,907
2027	\$ 1,911,910	\$ 1,283,919	\$ 3,195,829	2037	\$ 223,036	\$ 2,713,088	\$ 2,936,124	2047	\$ 40,399	\$ 4,300,239	\$ 4,340,638
2028	\$ 1,870,006	\$ 1,371,814	\$ 3,241,820	2038	\$ 146,580	\$ 3,066,860	\$ 3,213,440	2048	\$ 0	\$ 4,665,147	\$ 4,665,147
2029	\$ 1,605,363	\$ 1,689,267	\$ 3,294,630	2039	\$ 58,796	\$ 3,103,006	\$ 3,161,802	2049	\$ 0	\$ 4,469,920	\$ 4,469,920
2030	\$ 1,281,703	\$ 2,008,552	\$ 3,290,255	2040	\$ 59,764	\$ 3,328,201	\$ 3,387,965	2050	\$ 0	\$ 4,466,010	\$ 4,466,010

### Projected Employer Pay-go Cost



<sup>7</sup> Projections for future retirees do not take into account future new hires.

# Discussion of Discount Rates

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA /Aa or higher (or equivalent quality on another rating scale) must be used.

For the current valuation:

1. The long-term expected rate of return on OPEB plan investment is assumed to be 6.36%. This was determined using a building block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These expected future real rates of return are then combined to produce the long-term expected rate of return by weighting them based on the target asset allocation percentage. The best estimates of arithmetic nominal rates of return for each major asset class included in the OPEB Plan's target asset allocation as of June 30, 2020 are summarized in the following table.

Asset Class	Target Allocation <sup>8</sup>	L/T Expected Nominal ROR <sup>9</sup>
Mid Cap Stock	15.8%	7.00%
Large Cap Stock	23.6%	6.50%
Developed Market Stock	15.5%	7.30%
Emerging Market Stock	8.9%	11.00%
Investment Grade Bond	25.2%	3.40%
High Yield Bond	4.4%	5.70%
Cash	0.0%	2.00%
Real Estate	6.6%	7.70%
<b>Total</b>	<b>100.0%</b>	<b>6.36%</b>

2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

Yield as of	June 30, 2019	June 30, 2020
Bond Buyer Go 20-Bond Municipal Bond Index	3.51%	2.21%
S&P Municipal Bond 20-Year High Grade Rate Index	2.79%	2.66%
Fidelity 20-Year Go Municipal Bond Index	3.13%	2.45%
Nyhart Recommendation	2.79% - 3.51%	2.21% - 2.66%
Actual Discount Rate Used	3.51%	2.66%

3. The final equivalent single discount rate used for accounting disclosures is 3.51% as of July 1, 2019 and 2.66% as of June 30, 2020. This is based on the following expectations:
  - a. The Town will contribute \$250,000 annually.
  - b. Pay-go costs will continue to be paid from the General Fund as the Trust does not accumulate enough assets at the end of 50 years to cover future benefit payments.
 If any of the above expectations have changed, Nyhart will need to re-evaluate the discount rate used for accounting disclosure purposes.

<sup>8</sup> Based on the Town's actual holdings in the June 30, 2020 Trust statement.

<sup>9</sup> Provided by the Trust's asset advisor.

# Summary of Plan Participants

Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Active Employees

Actives with coverage	Single	Non-Single	Total	Avg. Age	Avg. Svc	Salary
DPW Healthmate	10	10	20	43.3	14.9	\$ 966,008
Firefighters Healthmate	23	58	81	40.5	13.4	\$ 4,784,688
Non-Union / Admin Classic	1	1	2	59.9	33.6	\$ 103,055
Non-Union / Admin Healthmate	10	19	29	56.0	12.3	\$ 1,423,182
Police Healthmate	15	39	54	38.9	11.4	\$ 4,167,590
Local 1033 Healthmate	21	34	55	48.3	13.4	\$ 2,912,903
<b>Total actives with coverage</b>	<b>80</b>	<b>161</b>	<b>241</b>	<b>44.2</b>	<b>13.1</b>	<b>\$ 14,357,426</b>

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary
DPW	2	51.2	11.9	\$ 100,593
Firefighters	8	39.5	13.4	\$ 463,489
Non-Union / Admin	5	59.4	15.7	\$ 391,723
Police	5	34.8	4.5	\$ 338,327
Local 1033	4	40.9	8.1	\$ 183,336
<b>Total actives without coverage</b>	<b>24</b>	<b>43.9</b>	<b>11.0</b>	<b>\$ 1,477,468</b>

Active employees who currently have no coverage are assumed to elect coverage at retirement according to the health care coverage election rate. They have been included in the GASB valuation.

# Summary of Plan Participants

Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Active Age-Service Distribution

Age	Years of Service										Total	
	< 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Under 25	6	4										<b>10</b>
25 to 29	4	16	6									<b>26</b>
30 to 34	2	17	19	5								<b>43</b>
35 to 39	1	5	8	10	6							<b>30</b>
40 to 44	1		1	15	10	2						<b>29</b>
45 to 49	1	3	3	5	9	11	2					<b>34</b>
50 to 54	1	2	3	6	2	10		13	1			<b>38</b>
55 to 59	1	6	3	5	3	6	1	5				<b>30</b>
60 to 64	1	2		1	4	2	2		2	2		<b>16</b>
65 to 69		1		3								<b>4</b>
70 & up			1	1		1		1	1			<b>5</b>
<b>Total</b>	<b>18</b>	<b>56</b>	<b>44</b>	<b>51</b>	<b>34</b>	<b>32</b>	<b>5</b>	<b>19</b>	<b>4</b>	<b>2</b>		<b>265</b>

# Summary of Plan Participants

Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Retirees

Retirees with coverage	Single	Non-Single	Total	Avg. Age
Firefighters Healthmate	5	54	59	58.7
Firefighters Classic		6	6	61.4
Police Healthmate	3	23	26	55.8
Police Classic	2	3	5	66.8
Local 1033 Healthmate	2	0	2	64.0
<b>Total retirees with coverage</b>	<b>12</b>	<b>86</b>	<b>98</b>	<b>58.6</b>

Additionally, information was provided for 3 retirees without health coverage. They have been excluded from this valuation.

## Retiree Age Distribution

Age	Retirees
< 45	2
45 to 49	5
50 to 54	15
55 to 59	39
60 to 64	28
65 to 69	7
70 to 74	
75 to 79	
80 to 84	
85 to 89	
90 & up	2
<b>Total</b>	<b>98</b>

# GASB Results by Group

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Below is the summary of the OPEB expense for fiscal year ending June 30, 2020 based on the Entry Age Normal Level % of Pay cost method with a discount rate of 3.51% as of the beginning of the year and 2.66% as of the end of the year.

OPEB Expense	Total	Fire	Police	Public Works	General
Discount rate as of beginning of fiscal year	3.51%	3.51%	3.51%	3.51%	3.51%
Discount rate as of end of fiscal year	2.66%	2.66%	2.66%	2.66%	2.66%
Service cost	\$ 2,437,393	\$ 808,331	1,408,128	44,773	176,161
Interest	1,745,362	786,643	814,915	33,372	110,432
Changes of benefit terms	2,140,105	0	0	662,308	1,477,797
Projected earnings on OPEB plan investments	(130,388)	(62,188)	(59,705)	(2,523)	(5,972)
Reduction for contributions from active employees	0	0	0	0	0
OPEB plan administrative expenses	2,740	1,263	1,250	52	175
Current period recognition of deferred outflows / (inflows) of resources					
Differences between expected and actual experience	\$ (3,149,657)	\$ (1,502,227)	\$ (1,442,240)	\$ (60,935)	\$ (144,255)
Changes in assumptions	667,760	318,488	305,770	12,919	30,583
Net difference between projected and actual earnings on OPEB plan investments	12,910	6,157	5,912	250	591
Total current period recognition	\$ (2,468,987)	\$ (1,177,582)	\$ (1,130,558)	\$ (47,766)	\$ (113,081)
Total OPEB expense	\$ 3,726,225	\$ 356,467	\$ 1,034,030	\$ 690,216	\$ 1,645,512

# GASB Results by Group

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Below is the breakdown of the Total OPEB Liability as of June 30, 2020 based on the Entry Age Normal Level % of Pay cost method with a discount rate of 2.66%.

	Total	Fire	Police	Public Works	General
<b>Current Active Members</b>					
Employees pre-Medicare	\$ 14,256,521	\$ 5,470,972	\$ 7,282,475	\$ 461,234	\$ 1,041,840
Dependents pre-Medicare	11,191,064	4,175,136	6,087,272	340,656	588,000
Employees post-Medicare	463,420	0	0	84,679	378,741
Dependents post-Medicare	211,634	0	0	34,345	177,289
<b>Total current active members</b>	<b>\$ 26,122,639</b>	<b>\$ 9,646,108</b>	<b>\$ 13,369,747</b>	<b>\$ 920,914</b>	<b>\$ 2,185,870</b>
<b>Current Retired Members</b>					
Employees pre-Medicare	\$ 11,246,870	\$ 6,719,356	\$ 4,494,468	\$ 0	\$ 33,046
Dependents pre-Medicare	10,268,138	6,322,094	3,946,044	0	0
Employees post-Medicare	0	0	0	0	0
Dependents post-Medicare	0	0	0	0	0
<b>Total current retired members</b>	<b>\$ 21,515,008</b>	<b>\$ 13,041,450</b>	<b>\$ 8,440,512</b>	<b>\$ 0</b>	<b>\$ 33,046</b>
<b>Total OPEB Liability as of June 30, 2020</b>	<b>\$ 47,637,647</b>	<b>\$ 22,687,558</b>	<b>\$ 21,810,259</b>	<b>\$ 920,914</b>	<b>\$ 2,218,916</b>



# GASB Results by Group

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Below is the breakdown of the Actuarially Determined Contribution for fiscal year 2019/20 by employee groups.

FY 2019/20	Total	Fire	Police	Public Works	General
Discount rate	6.86%	6.86%	6.86%	6.86%	6.86%
Payroll growth factor used for amortization	3.50%	3.50%	3.50%	3.50%	3.50%
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level % of Salary	Level % of Salary	Level % of Salary	Level % of Salary	Level % of Salary
Amortization period	18 years	18 years	18 years	18 years	18 years
Actuarial accrued liability (AAL) – beginning of year	\$ 37,258,057	\$ 18,009,445	\$ 16,012,805	\$ 696,545	\$ 2,539,262
Actuarial value of assets – beginning of year	(1,779,114)	(820,381)	(811,944)	(33,816)	(112,973)
Unfunded AAL – beginning of year	\$ 35,478,943	\$ 17,189,064	\$ 15,200,861	\$ 662,729	\$ 2,426,289
Normal Cost	\$ 1,317,690	\$ 429,332	\$ 762,136	\$ 23,674	\$ 102,547
Amortization of UAAL	2,550,849	1,235,852	1,092,904	47,649	174,444
Total normal cost plus amortization	\$ 3,868,539	\$ 1,665,184	\$ 1,855,040	\$ 71,323	\$ 276,991
Interest to the end of year	265,384	114,232	127,257	4,893	19,002
<b>Actuarially Determined Contribution</b>	<b>\$ 4,133,923</b>	<b>\$ 1,779,416</b>	<b>\$ 1,982,297</b>	<b>\$ 76,216</b>	<b>\$ 295,993</b>

# GASB Results by Group

## Town of North Providence GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Below is the breakdown of the Actuarially Determined Contribution for fiscal year 2020/21 by employee groups.

FY 2020/21	Total	Fire	Police	Public Works	General
Discount rate	6.36%	6.36%	6.36%	6.36%	6.36%
Payroll growth factor used for amortization	3.50%	3.50%	3.50%	3.50%	3.50%
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level % of Salary	Level % of Salary	Level % of Salary	Level % of Salary	Level % of Salary
Amortization period	17 years	17 years	17 years	17 years	17 years
Actuarial accrued liability (AAL) – beginning of year	\$ 35,615,280	\$ 17,892,321	\$ 15,258,458	\$ 698,163	\$ 1,766,338
Actuarial value of assets – beginning of year	(2,096,654)	(966,804)	(956,861)	(39,852)	(133,137)
Unfunded AAL – beginning of year	\$ 33,518,626	\$ 16,925,517	\$ 14,301,597	\$ 658,311	\$ 1,633,201
Normal Cost	\$ 1,157,428	\$ 441,315	\$ 612,307	\$ 27,089	\$ 76,717
Amortization of UAAL	2,430,390	1,227,248	1,036,988	47,733	118,421
Total normal cost plus amortization	\$ 3,587,818	\$ 1,668,563	\$ 1,649,295	\$ 74,822	\$ 195,138
Interest to the end of year	228,185	106,119	104,896	4,759	12,411
<b>Actuarially Determined Contribution</b>	<b>\$ 3,816,003</b>	<b>\$ 1,774,682</b>	<b>\$ 1,754,191</b>	<b>\$ 79,581</b>	<b>\$ 207,549</b>

SECTION B

# VALUATION RESULTS FOR NORTH PROVIDENCE SCHOOL

# Executive Summary

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending June 30, 2020 compared to the prior fiscal years as shown in the School's Notes to Financial Statement.

	As of June 30, 2019		As of June 30, 2020	
<b>Total OPEB Liability</b>	\$	6,131,693	\$	5,786,139
<b>Plan Fiduciary Net Position</b>	\$	0	\$	0
<b>Net OPEB Liability</b>	\$	6,131,693	\$	5,786,139
<b>Funded Ratio</b>		0.0%		0.0%

	FY 2018/19		FY 2019/20	
<b>OPEB Expense</b>	\$	296,671	\$	(377,104)
<b>Annual Employer Contribution</b>	\$	541,344	\$	572,585

	As of June 30, 2019		As of June 30, 2020	
<b>Discount Rate</b>		3.51%		2.66%
<b>Expected Return on Assets</b>		N/A		N/A

	As of June 30, 2020	
<b>Total Active Participants</b>		439
<b>Total Retiree Participants</b>		38

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

# Executive Summary

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Below is a breakdown of total GASB 75 liabilities allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability allocated to pre and post Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor's GASB subsidies.

Present Value of Future Benefits	As of June 30, 2019		As of June 30, 2020	
Active Employees	\$	8,412,006	\$	7,563,901
Retired Employees		876,154		1,052,467
<b>Total Present Value of Future Benefits</b>	<b>\$</b>	<b>9,288,160</b>	<b>\$</b>	<b>8,616,368</b>

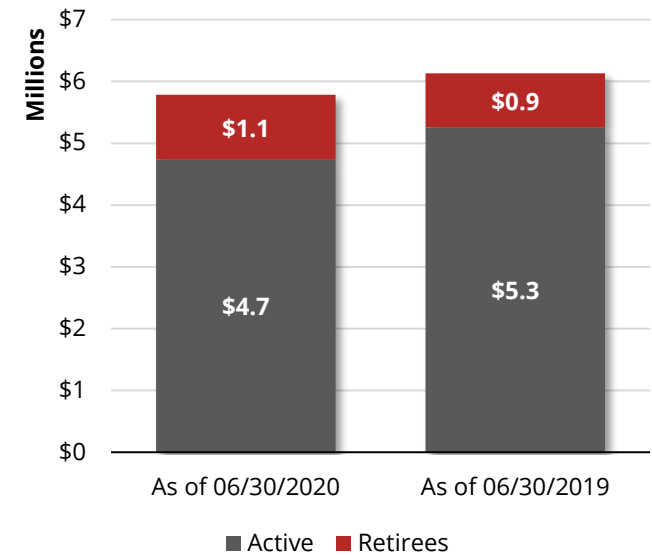
Total OPEB Liability	As of June 30, 2019		As of June 30, 2020	
Active Pre-Medicare	\$	3,881,975	\$	3,557,187
Active Post-Medicare		1,373,564		1,176,485
Active Liability	\$	5,255,539	\$	4,733,672

Retiree Pre-Medicare	\$	854,529	\$	969,081
Retiree Post-Medicare		21,625		83,386
Retiree Liability	\$	876,154	\$	1,052,467

<b>Total OPEB Liability</b>	<b>\$</b>	<b>6,131,693</b>	<b>\$</b>	<b>5,786,139</b>
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	As of June 30, 2019	As of June 30, 2020
Discount Rate	3.51%	2.66%

### Changes in Total OPEB Liability



**Present Value of Future Benefits (PVFB)** is the amount needed as of June 30, 2019 and 2020, to fully fund the Schools' retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

**Total OPEB Liability** is the portion of PVFB considered to be accrued or earned as of June 30, 2019 and 2020. This amount is a required disclosure in the Required Supplementary Information section.

# GASB Disclosures

North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2019/20	FY 2018/19	FY 2017/18	FY 2016/17	FY 2015/16
<b>Total OPEB Liability</b>					
Total OPEB liability – beginning of year	\$ 6,131,693	\$ 6,522,124	\$ 6,236,569	\$ 6,947,102	\$ 8,188,540
Service cost	298,641	290,339	304,845	360,836	294,094
Interest	215,743	253,267	224,321	195,594	315,409
Changes of benefit terms	(715,993)	0	0	0	(367,084)
Changes in assumptions	127,043	101,714	(442,723)	(198,693)	66,260
Differences between expected and actual experience	301,597	(494,407)	683,896	(567,301)	(937,473)
Benefit payments	(572,585)	(541,344)	(484,784)	(500,969)	(612,644)
Net change in total OPEB liability	\$ (345,554)	\$ (390,431)	\$ 285,555	\$ (710,533)	\$ (1,241,438)
Total OPEB liability – end of year	\$ 5,786,139	\$ 6,131,693	\$ 6,522,124	\$ 6,236,569	\$ 6,947,102
<b>Plan Fiduciary Net Position</b>					
Plan fiduciary net position – beginning of year	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Contributions – employer	572,585	541,344	484,784	500,969	612,644
Contributions – active employees	0	0	0	0	0
Net investment income	0	0	0	0	0
Benefit payments	(572,585)	(541,344)	(484,784)	(500,969)	(612,644)
Trust administrative expenses	0	0	0	0	0
Net change in plan fiduciary net position	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Plan fiduciary net position – end of year	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
<b>Net OPEB Liability – end of year</b>	<b>\$ 5,786,139</b>	<b>\$ 6,131,693</b>	<b>\$ 6,522,124</b>	<b>\$ 6,236,569</b>	<b>\$ 6,947,102</b>
Plan fiduciary net position as % of total OPEB liability	0.0%	0.0%	0.0%	0.0%	0.0%
Covered employee payroll	N/A	\$ 31,691,990	\$ 29,323,296	N/A	N/A
Net OPEB liability as % of covered payroll	N/A	19.3%	22.2%	N/A	N/A

# GASB Disclosures

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### OPEB Expense

OPEB Expense	FY 2019/20	FY 2018/19
Discount rate as of beginning of fiscal year	3.51%	3.87%
Discount rate as of end of fiscal year	2.66%	3.51%
Service cost	\$ 298,641	\$ 290,339
Interest	215,743	253,267
Changes of benefit terms	(715,993)	0
Projected earnings on OPEB plan investments	0	0
Reduction for contributions from active employees	0	0
OPEB plan administrative expenses	0	0
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (142,257)	\$ (192,523)
Changes in assumptions	(33,238)	(54,412)
Net difference between projected and actual earnings on OPEB plan investments	0	0
Total current period recognition	\$ (175,495)	\$ (246,935)
Total OPEB expense	\$ (377,104)	\$ 296,671

# GASB Disclosures

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2020
June 30, 2016	\$ (937,473)	8	\$ (124,696)	\$ (374,088)
June 30, 2017	\$ (567,301)	8	\$ (70,913)	\$ (283,649)
June 30, 2018	\$ 683,896	8	\$ 85,487	\$ 427,435
June 30, 2019	\$ (494,407)	6	\$ (82,401)	\$ (329,605)
June 30, 2020	\$ 301,597	6	\$ 50,266	\$ 251,331

Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2020
June 30, 2016	\$ 66,260	8	\$ 8,813	\$ 26,441
June 30, 2017	\$ (198,693)	8	\$ (24,837)	\$ (99,345)
June 30, 2018	\$ (442,723)	8	\$ (55,340)	\$ (276,703)
June 30, 2019	\$ 101,714	6	\$ 16,952	\$ 67,810
June 30, 2020	\$ 127,043	6	\$ 21,174	\$ 105,869



# GASB Disclosures

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Deferred Outflows / (Inflows) of Resources – Continued

Net difference between projected and actual earnings in OPEB plan investments for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2020
June 30, 2016	\$ 0	N/A	\$ 0	\$ 0
June 30, 2017	\$ 0	N/A	\$ 0	\$ 0
June 30, 2018	\$ 0	N/A	\$ 0	\$ 0
June 30, 2019	\$ 0	N/A	\$ 0	\$ 0
June 30, 2020	\$ 0	N/A	\$ 0	\$ 0

As of fiscal year ending June 30, 2020	Deferred Outflows	Deferred Inflows
Differences between expected and actual experience	\$ 678,766	\$ (987,342)
Changes in assumptions	200,120	(376,048)
Net difference between projected and actual earnings in OPEB plan investments	N/A	N/A
<b>Total</b>	<b>\$ 878,886</b>	<b>\$ (1,363,390)</b>

### Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2020 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

FYE	Balance
2021	\$ (175,495)
2022	\$ (175,495)
2023	\$ (175,493)
2024	\$ (59,605)
2025	\$ 101,584
Thereafter	\$ 0

# GASB Disclosures

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Sensitivity Results

The following presents the net OPEB liability as of June 30, 2020, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 2.66%.
- The 1% decrease in discount rate would be 1.66%.
- The 1% increase in discount rate would be 3.66%.

As of June 30, 2020	Net OPEB Liability
1% Decrease	\$ 6,026,290
Current Discount Rate	\$ 5,786,139
1% Increase	\$ 5,547,236

The following presents the net OPEB liability as of June 30, 2020, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5%.
- The 1% decrease in health care trend rates would assume an initial rate of 7.0% decreasing by 0.5% annually to an ultimate rate of 3.5%.
- The 1% increase in health care trend rates would assume an initial rate of 9.0% decreasing by 0.5% annually to an ultimate rate of 5.5%.

As of June 30, 2020	Net OPEB Liability
1% Decrease	\$ 5,410,433
Current Health Care Trend Rates	\$ 5,786,139
1% Increase	\$ 6,206,010

# Projection of GASB Disclosures

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

### Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

### Unexpected Events

- Increases in TOL when actual premium rates increase more than expected. A liability decrease occurs if the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

Projection of Total OPEB Liability (TOL)	FY 2019/20	FY 2020/21
TOL as of beginning of year	\$ 6,131,693	\$ 5,786,139
Normal cost as of beginning of year	298,641	270,210
Exp. benefit payments during the year	(572,585)	(576,372)
Interest adjustment to end of year	215,743	153,483
Exp. TOL as of end of year	\$ 6,073,492	\$ 5,633,460
Actuarial Loss/(Gain)	(287,353)	TBD
<b>Actual TOL as of end of year</b>	<b>\$ 5,786,139</b>	<b>\$ TBD</b>

Discount rate as of beginning of year	3.51%	2.66%
Discount rate as of end of year	2.66%	TBD

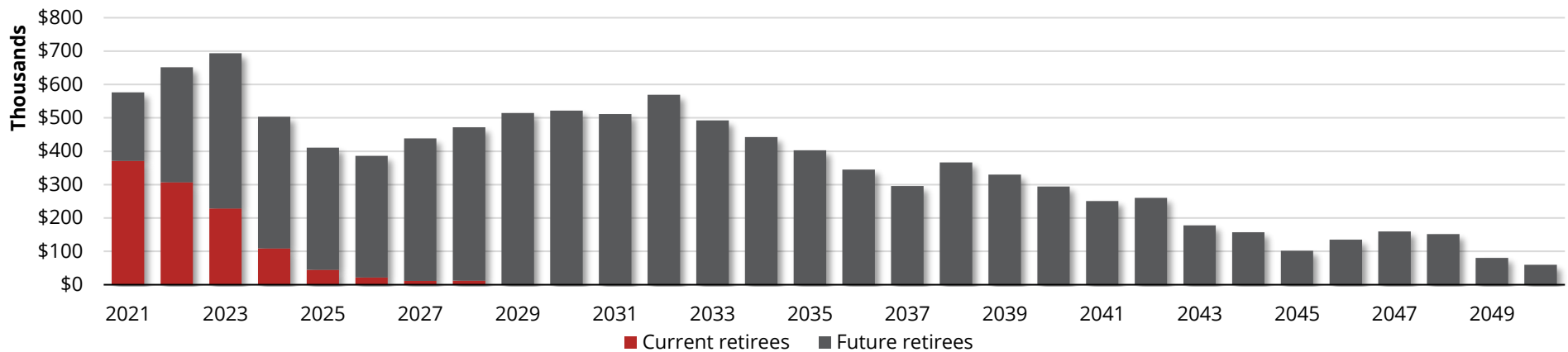
# Cash Flow Projections

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current / future retirees. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees <sup>10</sup>	Total	FYE	Current Retirees	Future Retirees <sup>10</sup>	Total	FYE	Current Retirees	Future Retirees <sup>10</sup>	Total
2021	\$ 371,274	\$ 205,098	\$ 576,372	2031	\$ 0	\$ 511,159	\$ 511,159	2041	\$ 0	\$ 250,842	\$ 250,842
2022	\$ 306,712	\$ 344,566	\$ 651,278	2032	\$ 0	\$ 568,980	\$ 568,980	2042	\$ 0	\$ 259,883	\$ 259,883
2023	\$ 228,180	\$ 465,431	\$ 693,611	2033	\$ 0	\$ 492,332	\$ 492,332	2043	\$ 0	\$ 177,683	\$ 177,683
2024	\$ 109,117	\$ 394,295	\$ 503,412	2034	\$ 0	\$ 442,445	\$ 442,445	2044	\$ 0	\$ 157,610	\$ 157,610
2025	\$ 44,709	\$ 366,335	\$ 411,044	2035	\$ 0	\$ 402,975	\$ 402,975	2045	\$ 0	\$ 101,579	\$ 101,579
2026	\$ 21,730	\$ 364,838	\$ 386,568	2036	\$ 0	\$ 344,982	\$ 344,982	2046	\$ 0	\$ 135,391	\$ 135,391
2027	\$ 11,413	\$ 427,161	\$ 438,574	2037	\$ 0	\$ 295,734	\$ 295,734	2047	\$ 0	\$ 159,675	\$ 159,675
2028	\$ 11,916	\$ 459,848	\$ 471,764	2038	\$ 0	\$ 366,172	\$ 366,172	2048	\$ 0	\$ 151,758	\$ 151,758
2029	\$ 0	\$ 514,809	\$ 514,809	2039	\$ 0	\$ 329,572	\$ 329,572	2049	\$ 0	\$ 80,126	\$ 80,126
2030	\$ 0	\$ 521,909	\$ 521,909	2040	\$ 0	\$ 294,430	\$ 294,430	2050	\$ 0	\$ 60,002	\$ 60,002

### Projected Employer Pay-go Cost



<sup>10</sup> Projections for future retirees do not take into account future new hires.

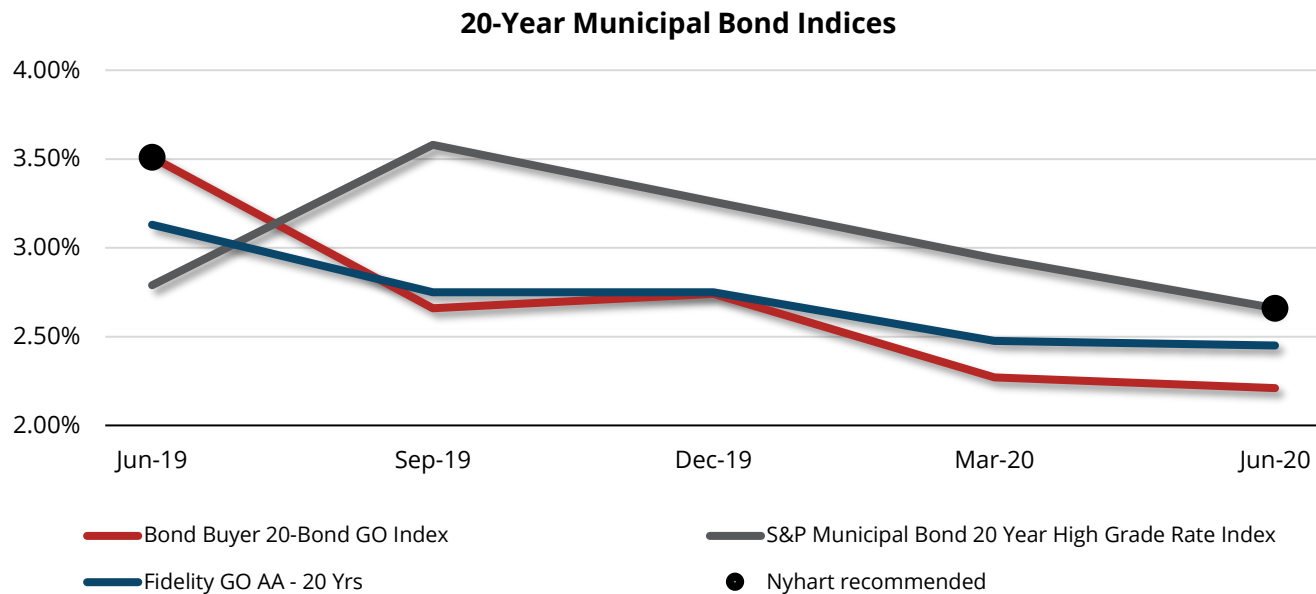
# Discussion of Discount Rates

## North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

Under GASB 75, the discount rate used in valuing OPEB liabilities for unfunded plans as of the Measurement Date must be based on a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale).

For the current valuation, the discount rate was selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

	Bond Buyer Go 20-Bond Municipal Bond Index	S&P Municipal Bond 20-Year High Grade Rate Index	Fidelity 20-Year Go Municipal Bond Index	Bond Index Range	Actual Discount Rate Used
Yield as of July 1, 2019	3.51%	2.79%	3.13%	2.79% - 3.51%	<b>3.51%</b>
Yield as of June 30, 2020	2.21%	2.66%	2.45%	2.21% - 2.66%	<b>2.66%</b>



# Summary of Plan Participants

North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Active Employees

Actives with coverage	Single	Non-Single	Total	Avg. Age	Avg. Svc	Salary
Admin Healthmate	2	9	11	51.2	14.0	\$ N/A
Custodian Healthmate	9	10	19	54.2	14.8	\$ N/A
Teacher Classic		2	2	59.0	30.0	\$ N/A
Teacher Healthmate	95	173	268	45.9	16.1	\$ N/A
Local 1033 Healthmate	27	45	72	54.9	13.6	\$ N/A
<b>Total actives with coverage</b>	<b>133</b>	<b>239</b>	<b>372</b>	<b>48.3</b>	<b>15.6</b>	<b>\$ N/A</b>

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary
Admin	7	47.6	8.0	\$ N/A
Custodian	6	55.1	8.5	\$ N/A
Teacher	41	46.0	16.2	\$ N/A
Local 1033	13	52.8	11.5	\$ N/A
<b>Total actives with coverage</b>	<b>67</b>	<b>48.3</b>	<b>13.7</b>	<b>\$ N/A</b>

Active employees who currently have no coverage are assumed to elect coverage at retirement according to the health care coverage election rate assumption. They have been included in the GASB valuation.

# Summary of Plan Participants

North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Active Age-Service Distribution

Age	Years of Service										Total	
	< 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
Under 25	1	2										<b>3</b>
25 to 29	5	14	6									<b>25</b>
30 to 34	1	12	9	10								<b>32</b>
35 to 39	2	8	5	33	3							<b>51</b>
40 to 44	2	9	5	11	11	12						<b>50</b>
45 to 49	4	11	10	7	18	18	4					<b>72</b>
50 to 54	3	5	5	13	8	10	22	6				<b>72</b>
55 to 59	2	10	1	8	7	17	1	15	1			<b>62</b>
60 to 64		4	3	6	7	19	6	4	2	1		<b>52</b>
65 to 69		1	1		1	4	2	2		2		<b>13</b>
70 & up			1		1	3		1		1		<b>7</b>
<b>Total</b>	<b>20</b>	<b>76</b>	<b>46</b>	<b>88</b>	<b>56</b>	<b>83</b>	<b>35</b>	<b>28</b>	<b>3</b>	<b>4</b>		<b>439</b>

# Summary of Plan Participants

North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

## Retirees

Retirees with coverage	Single	Non-Single	Total	Avg. Age
Teacher Classic	3		3	62.3
Teacher Healthmate	23	7	30	62.3
Local 1033 Healthmate	2	3	5	64.4
<b>Total retirees with coverage</b>	<b>28</b>	<b>10</b>	<b>38</b>	<b>62.6</b>

Additionally, information was provided for one retiree without health coverage. They have been excluded from this valuation.

## Retiree Age Distribution

Age	Retirees
< 45	
45 to 49	
50 to 54	
55 to 59	2
60 to 64	35
65 to 69	1
70 to 74	
75 to 79	
80 to 84	
85 to 89	
90 & up	
<b>Total</b>	<b>38</b>



SECTION C

**SUBSTANTIVE PLAN PROVISIONS  
AND  
ACTUARIAL METHODS AND  
ASSUMPTIONS**

# Substantive Plan Provisions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Eligibility

Town

Police officers are eligible for retiree health benefits (medical and dental) until Medicare eligibility once they attain 20 years of service.

Firefighters are eligible for retiree health benefits (medical and dental) until Medicare eligibility once they attain 20 years of service and if they are eligible to retire under Rhode Island Municipal Employees Retirement System (RI MERS).

Town general employees are eligible for retiree health benefits (medical and dental) for up to 36 months if they are eligible to retire under RI MERS and have the following years of service with the Town of North Providence:

1. Council 94 – 20 years of service
2. Local 1033 and Non-Union – 20 years of service

School

Teachers / Administrators are eligible for retiree health benefits until Medicare eligibility once they are eligible to retire under Rhode Island Employees Retirement System (RI ERS) and have the following years of service with the North Providence School System:

1. RI ERS Schedule A members – 15 years of service
2. RI ERS Schedule B members – 20 years of service

School general employees, except for Custodians, are eligible for retiree health benefits (medical and dental) for up to 36 months if they are eligible to retire under RI MERS and have 20 years of service with the North Providence School System.

Custodians hired prior to July 1, 1989 are eligible for retiree health benefits (medical and dental) for up to 36 months if they are eligible to retire under RI MERS and have 10 years of service with North Providence School System. For those hired on/after July 1, 1989, duration of retiree health benefits is until Medicare eligibility and they must have 20 years of service with North Providence School System.

# Substantive Plan Provisions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Spouse Benefit

Surviving spouse may continue coverage upon death of the retiree or active employees eligible to retire. Upon death of active employees who are not eligible to retire, surviving spouses are eligible for COBRA.

For the following employee groups that offer retiree health benefits until Medicare eligibility (Police, Fire, Teachers, School Administrators, and Custodians hired on/after July 1, 1989), the duration of spouse benefits while the retiree is alive is as follows:

1. Police / Fire – when the retiree turns 65, spouse is eligible for COBRA coverage for 36 months.
2. Teachers / School Administrators / Custodians – spouse coverage is terminated at the earlier of the spouse turning 65 (if the retiree is under 65) or retiree turning 65.

### RI ERS Eligibility Requirements

RI ERS eligibility requirements is the earlier of each employee’s (a) Article 7 or (b) RIRSA eligibility dates which vary by Schedules summarized below:

Schedules	Vested with 10 years of contributing service credit as of 7/1/2005	Eligible to retire as of 9/30/2009
A	Y	Y*
B	N	Y**
AB	Y	N
B1	N	N
B2	Employees that became a member of RI ERS after 9/30/2009	

\* Schedule A members were eligible to retire as of 9/30/2009 if they had (i) 28 years of service as of 9/30/2009 or (ii) had 10 years of contributing service and were age 60 as of 9/30/2009.

\*\* Schedule B members were eligible to retire as of 9/30/2009 if they had 10 years of contributing service and were age 65 as of 9/30/2009.

# Substantive Plan Provisions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### RI ERS Eligibility Requirements (Continued) Article 7 Eligibility Date

There are no changes to Schedule A and Schedule B members retirement eligibility dates. These employees may retire at any time once they met the prior RI ERS eligibility rules. The prior RI ERS eligibility rules are:

- Schedule A – earlier of (i) 28 years of service or (ii) age 60 with 10 years of contributing service.
- Schedule B – earlier of (i) age 65 with 10 years of contributing service or (ii) age 59 with 29 years of contributing service.

Minimum retirement age under Article 7 for Schedule AB and B1 members is 62 with “proportional downward adjustment” toward an earlier retirement age based on years of service as of 9/30/2009 (referred to as “frozen service credit”).

Schedule B2 members minimum retirement age under Article 7 is age 62 without “proportional downward adjustment” toward an earlier retirement age.

### RIRSA Eligibility Date

Employees with less than five years of contributing service credit on 6/30/2012 may retire at the Social Security normal retirement age (not higher than 67).

For employees with at least five years of contributing service credit on 6/30/2012, minimum retirement age is 62 with “proportional downward adjustment” toward an earlier retirement date based on years of service prior to 7/1/2012, but not earlier than 59.

Employees with at least 10 years of contributing service credit on 6/30/2012 may retire at their Article 7 eligibility date if they continue to work and contribute until that date. If they are within five years of reaching RIRSA retirement eligibility date and have at least 20 years of service, they may retire at any time.

Public school teachers may retire with a reduced pension if they have 20 years of service credit and are within five years of their RIRSA retirement date.

Effective on July 1, 2015, employees are now eligible to retire upon attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with at least 33 years of service. These are additional eligibility requirements, which means that if employees are eligible to retire under the current eligibility requirements, they may do so.

# Substantive Plan Provisions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### MERS Eligibility Requirements

#### General Employees

Employees eligible to retire as of 7/1/2012 are not impacted by the new eligibility requirements described below. Prior to 7/1/2012, employees were eligible to retire at the earlier of: (i) age 58 with 10 years of service credit or (ii) 30 years of service (no age requirement).

For employees who are not eligible to retire as of 7/1/2012:

- a) Members with less than five years of contributing service credit on 6/30/2012 may retire at their Social Security normal retirement age.
- b) Members with at least five years of contributing service credit on 6/30/2012 may retire at an individually determined age, which is the result of interpolating the member's prior Retirement Date (described in previous paragraph) and the retirement age applicable to members hired after 6/30/2012 (described in item (a) above).
- c) Members with at least ten years of contributing service credit on 6/30/2012 may retire at their prior Retirement Date (described in previous paragraph) if they continue to work and contribute until that date.

All members who are within five years of reaching their retirement eligibility date (described in the paragraphs above) may retire at any time if they have at least 20 years of service.

# Substantive Plan Provisions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### **MERS Eligibility Requirements (Continued)** Firefighters

Employees eligible to retire as of 7/1/2012 are not impacted by the new eligibility requirements described below. Prior to 7/1/2012, employees were eligible to retire at any age with 20 or more years of service.

For employees who are not eligible to retire as of 7/1/2012:

- a) Members who are at least age 45 with 10 years of service as of 7/1/2012 and are eligible to retire prior to age 52 under the old eligibility requirements may retire at age 52.
- b) All other members are eligible to retire at age 50 with 25 years of service or at any age if they have 27 years of contributing service. For members with at least five years of service but less than 25, they are eligible to retire at their Social Security normal retirement age.

All members who are within five years of reaching their retirement eligibility date (described in the paragraphs above) may retire at any time if they have at least 20 years of service.

Effective on July 1, 2015, firefighters are eligible to retire with full benefit upon attainment of age 50 with 25 years of service or any age with 27 years of service. These are additional eligibility requirements, which means that if employees are eligible to retire under the current eligibility requirements, they may do so.

### **Explicit Subsidy**

The Town / School pays for the full cost of medical and dental coverage for the following group of employees at retirement:

1. Police officers hired prior to January 1, 2015
2. Firefighters

Town pays 95% of the medical and dental cost at retirement for Police officers hired on/after January 1, 2015.

Town pays 85% of the medical and dental cost at retirement for Town Local 1033 retiring after July 1, 2019 and DPW (Council 94) retiring after July 1, 2016.

School pays 50% of the medical and dental cost at retirement for Teachers and Administrators.

School pays 80% of the medical and dental cost at retirement for School Local 1033 and School Custodians.

### **Retiree Cost Sharing**

Retirees are responsible for the portion of premium rates not covered by the Town / School.

# Substantive Plan Provisions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Medical Benefits

Same benefit options are available to retirees as active employees. All health plans are self-insured. For participants eligible for Medicare, benefits are administered as secondary to Medicare.

The monthly premiums by plan effective on July 1, 2020 are as shown below.

<b>Employee Groups</b>	<b>Plans</b>	<b>Single</b>	<b>Family</b>
School Admin / Teachers	Classic	\$ 802.51	\$ 2,164.40
School Admin / Teachers	Healthmate	\$ 657.01	\$ 1,771.97
School Custodians	Healthmate	\$ 680.52	\$ 1,835.40
School Local 1033	Healthmate	\$ 534.72	\$ 1,442.13
Town DPW	Healthmate	\$ 850.37	\$ 2,263.65
Town Fire	Classic	\$ 1,034.33	\$ 2,491.67
Town Fire	Healthmate	\$ 801.04	\$ 2,132.40
Town Non-Union / Admin	Classic	\$ 920.16	\$ 2,449.46
Town Non-Union / Admin	Healthmate	\$ 850.37	\$ 2,263.65
Town Police	Classic	\$ 1,020.37	\$ 2,716.21
Town Police	Healthmate	\$ 607.80	\$ 1,617.96
Town Local 1033	Healthmate	\$ 879.14	\$ 2,340.25

### Dental

The monthly premiums effective on July 1, 2020 are as shown below.

<b>Employee Groups</b>	<b>Single</b>	<b>Family</b>
School Admin / Teachers	\$ 30.76	\$ 100.18
School Custodians	\$ 29.19	\$ 95.45
School Local 1033	\$ 29.33	\$ 92.34
Town Police and Fire	\$ 30.22	\$ 90.54
Town Local 1033	\$ 30.22	\$ 99.77
Town DPW	\$ 28.77	\$ 88.42

# Actuarial Methods and Assumptions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and Town experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

There are changes to the actuarial assumptions since the last full GASB valuation, which was for the fiscal year ending June 30, 2018. Refer to Actuary's Notes section for complete information on these changes. For the current year GASB valuation, we have also updated the per capita costs. We expect to update discount rate, health care trend rates, mortality table, and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending June 30, 2022.

<b>Measurement Date</b>	For fiscal year ending June 30, 2020, a June 30, 2020 measurement date was used.
<b>Actuarial Valuation Date</b>	June 30, 2020 with no adjustments to get to the June 30, 2020 measurement date. Liabilities as of July 1, 2019 are based on an actuarial valuation date of July 1, 2018 projected to July 1, 2019 on a "no loss / no gain" basis.
<b>Discount Rate</b>	3.51% as of July 1, 2019 and 2.66% as of June 30, 2020 for accounting disclosure purposes for the Town and School 6.86% as of July 1, 2019 and 6.36% as of June 30, 2020 for Town funding disclosure purposes Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.
<b>Cost Method</b>	Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where: <ul style="list-style-type: none"><li>• Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and</li><li>• Annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.</li></ul>
<b>Inflation Rate</b>	3.0% per year
<b>Asset Method</b>	Market value of assets
<b>Employer Funding Policy</b>	Town of North Providence is expected to contribute the pay-as-you-go costs and make additional pre-funding contributions of \$250,000 per year. North Providence School Department funds on a pay-as-you-go basis.



# Actuarial Methods and Assumptions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Payroll Growth

For amortization purposes: 3.50%

For valuation purposes (to determine Actuarial Accrued Liability): 4.00% wage inflation for Fire, 3.00% inflation for Teachers and Administrators, and 3.25% wage inflation for all other employees except Police, plus merit and longevity increases shown below. These assumptions are based on the RI ERS and MERS actuarial valuation as of June 30, 2019. Police officers are assumed to have a flat annual payroll growth of 3.00%, which is based on the North Providence Police pension actuarial valuation as of June 30, 2020.

YOS	Fire	School Teachers / Admin	All others
1	10.00%	10.00%	4.00%
2	9.00%	9.00%	3.00%
3	7.00%	6.25%	2.75%
4	4.00%	5.50%	2.50%
5	2.50%	5.00%	2.25%
6	3.00%	5.00%	2.00%
7	0.50%	4.50%	1.25%
8	0.50%	4.25%	0.75%
9 – 10	0.00%	4.00%	0.50%
11 – 15	0.00%	0.00%	0.25%
16+	0.00%	0.00%	0.00%

### Census Data

Census information was provided by the Town and School in August and September 2020, respectively. We have reviewed it for reasonableness and no material modifications were made to the census data.

### Health Care Coverage Election Rate

Active employees are assumed to elect health coverage at retirement according to the following assumptions:

1. School Teachers / Admin: 95%
2. School All Others: 100%
3. Town Police: 90%
4. Town Fire and All Others: 100%

For existing retirees, we have assumed that all of them will continue coverage in the future (but not past the benefit duration specified in the substantive plan provision section).

# Actuarial Methods and Assumptions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Mortality

Police and Fire	RPH-2014 Blue Collar Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report
Teachers and Admin	RPH-2014 White Collar Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report
All Others	RPH-2014 Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report
Disabled Retirees	RPH-2014 Disabled Retiree Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report

### Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months. The termination rates are based on the RI ERS and MERS June 30, 2019 actuarial valuation assumptions for all groups except for Police. Police turnover rates are based on the same assumption used in the North Providence Police pension actuarial valuation as of June 30, 2020. Sample annual turnover rates are shown below:

YOS	School Teachers / Admin	Fire	All Others (except Police)	Age	Police
1	15.00%	10.00%	17.50%	20	2.90%
5	3.83%	2.31%	6.15%	25	2.90%
10	1.87%	1.28%	2.71%	30	2.90%
15	1.23%	0.67%	1.75%	35	1.90%
20	0.91%	0.00%	1.49%	40	1.70%

# Actuarial Methods and Assumptions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Retirement Rate

Annual rates of retirement for all groups except for Police are based on the RI ERS and MERS June 30, 2019 actuarial valuation assumptions. Police retirement rates are based on the same assumption used in the North Providence Police pension actuarial valuation as of June 30, 2020.

#### School Teachers / Admin

A flat 25% per year retirement probability for members under the age of 67 eligible for unreduced retirement, a flat 35% per year retirement probability for members at age 67 or older eligible for unreduced retirement. A 40% retirement probability at first eligibility will be applied if the member has reached age 65 or with at least 25 years of service. Reduced retirement rates are assumed for Schedule B members based on the years from normal retirement age as shown below:

Years from NRA	Rate
5	2.0%
4	2.0%
3	2.0%
2	3.0%
1	4.0%

#### Town Police and Fire

According to the table below. For Firefighters, all members are assumed to retire upon reaching age 65 with at least ten years of service.

YOS	Police	Fire
20	40%	12%
21 - 22	30%	10%
23	40%	10%
24	40%	12%
25	40%	14%
26	5%	16%
27	5%	18%
28 - 29	100%	20%
30 - 34	100%	35%
35+	100%	100%

#### All Others

A flat 20% per year retirement probability for members eligible for unreduced retirement. A 35% retirement probability at first eligibility will be applied if the member has reached age 65 or with at least 25 years of service.

# Actuarial Methods and Assumptions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Disability

Police: 50% of the 1985 Pension Disability Table (DP-85) Class 4. 50% of disabilities are assumed to be duty related.

### Spousal Coverage

Spousal coverage and ages for current retirees is based on actual data.

Spousal coverage election rate for future retirees are based on the table below. Husbands are assumed to be three years older than wives.

	Male	Female
School Teachers / Admin	50%	40%
School All Others	90%	90%
Town Police and Fire	90%	90%
Town All Others	80%	50%

### Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2021	8.0%	2025	6.0%
2022	7.5%	2026	5.5%
2023	7.0%	2027	5.0%
2024	6.5%	2028+	4.5%

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Annual dental trend is assumed to be 3.0% in the future.

### Retiree Contributions

Retiree contributions are assumed to increase according to health care trend rates.

# Actuarial Methods and Assumptions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Per Capita Costs

Annual per capita costs were calculated based on the weighted average July 1, 2020 premiums separately for the Town and School, actuarially increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates. Annual per capita costs by employee group are as shown below:

Age	Town Future Retirees		Town Current Retirees	
	Male	Female	Male	Female
<55	\$ 10,800	\$ 12,200	\$ 10,900	\$ 12,400
55 - 59	\$ 14,600	\$ 14,100	\$ 14,700	\$ 14,300
60 - 64	\$ 19,800	\$ 17,400	\$ 20,000	\$ 17,600
65 - 69	\$ 8,800	\$ 8,800	\$ 8,900	\$ 8,900
70 - 74	\$ 10,900	\$ 10,900	\$ 11,100	\$ 11,100
75 - 79	\$ 12,800	\$ 12,800	\$ 13,000	\$ 13,000
80 - 84	\$ 14,200	\$ 14,200	\$ 14,300	\$ 14,300
85 - 89	\$ 15,300	\$ 15,300	\$ 15,400	\$ 15,400
90+	\$ 16,100	\$ 16,100	\$ 16,200	\$ 16,200

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Age	School Future Retirees		School Current Retirees	
	Male	Female	Male	Female
<55	\$ 7,000	\$ 7,900	\$ 7,200	\$ 8,200
55 - 59	\$ 9,500	\$ 9,200	\$ 9,700	\$ 9,400
60 - 64	\$ 12,800	\$ 11,300	\$ 13,200	\$ 11,600
65 - 69	\$ 6,200	\$ 6,200	\$ 6,300	\$ 6,300
70 - 74	\$ 7,700	\$ 7,700	\$ 7,900	\$ 7,900
75 - 79	\$ 9,000	\$ 9,000	\$ 9,200	\$ 9,200
80 - 84	\$ 9,900	\$ 9,900	\$ 10,200	\$ 10,200
85 - 89	\$ 10,700	\$ 10,700	\$ 11,000	\$ 11,000
90+	\$ 11,300	\$ 11,300	\$ 11,600	\$ 11,600

Annual dental per capita costs are assumed to be \$345 for Town DPW, \$363 for all other Town participants, \$369 for Teachers and Admin, \$352 for School Local 1033, and \$350 for Custodians. These costs are assumed to increase with dental trend rates.

# Actuarial Methods and Assumptions

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Explicit Subsidy

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a future Police retiree hired prior to January 1, 2015 on the Healthmate plan.

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B	C = A - B
Retiree	\$ 607.80	\$ 0.00	\$ 607.80
Spouse	\$ 1,010.16	\$ 0.00	\$ 1,010.16

### Implicit Subsidy

The difference between (a) the per capita cost and (b) the premium rate. Below is an example of the monthly implicit subsidies for a male future Police retiree age 64 with female spouse of the same age on the Healthmate plan.

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A - B
Retiree	\$ 1,650.00	\$ 607.80	\$ 1,042.20
Spouse	\$ 1,450.00	\$ 1,010.16	\$ 439.84

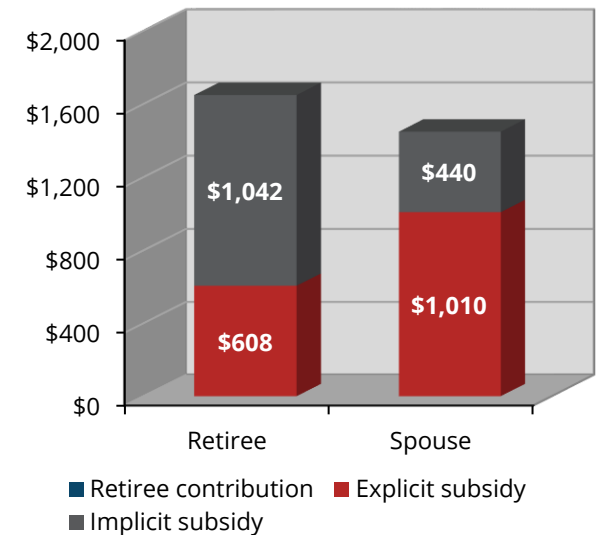
All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

### GASB Subsidy Breakdown

Below is a breakdown of the GASB 75 monthly total cost for a male future Police retiree age 64 with female spouse of the same age on the Healthmate plan.

	Retiree	Spouse
Retiree contribution	\$ 0.00	\$ 0.00
Explicit subsidy	\$ 607.80	\$ 1,010.16
Implicit subsidy	\$ 1,042.20	\$ 439.84
Total monthly cost	\$ 1,650.00	\$ 1,450.00

### GASB Subsidy Breakdown



SECTION D

# APPENDIX

# Appendix

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

	As of June 30, 2018		As of June 30, 2020	
	Town	School	Town	School
Active Participants	265	443	265	439
Retired Participants	113	39	98	38
Averages for Active				
Age	43.8	47.7	44.1	48.3
Service	12.6	13.9	12.9	15.3
Averages for Inactive				
Age	58.3	62.6	58.6	62.6



# Appendix

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Detailed Actuary's Notes

There have been some substantive plan provision changes since the last full valuation, which was for the fiscal year ending June 30, 2018.

1. Town Local 1033 employees retiring on/after July 1, 2019 with 20 years of service pay 15% of the medical and dental premium rates, while the Town pays the remaining 85%. Previously Local 1033 retirees paid the full cost of coverage. The impact of this change is an increase in liabilities.
2. Town DPW employees retiring on/after July 1, 2016 with 20 years of service pay 15% of the medical and dental premium rates, while the Town pays the remaining 85%. Previously DPW retirees paid the full cost of coverage. The impact of this change is an increase in liabilities.
3. School Local 1033 retirees pay 20% of the medical and dental premium rates, while the Town pays the remaining 80%. Previously Local 1033 retirees received free coverage. The impact of this change is a decrease in liabilities.
4. School Local 2435 (Custodians) retirees pay 20% of the medical and dental premium rates, while the Town pays the remaining 80%. Previously Custodian retirees received free coverage. The impact of this change is a decrease in liabilities.

The following actuarial assumptions have been updated since the last valuation:

1. Discount rate as of the Measurement Date has been updated as follows:
  - a) Town:
    - The current valuation uses a discount rate of 3.51% as of July 1, 2019 and 2.66% as of June 30, 2020 for accounting disclosure purposes, which was calculated using a discounted cash flow method assuming the following:
      - The Town will make annual pre-funding contributions of \$250,000.
      - Pay-go cost will continue to be paid from the General Fund, as the Trust does not accumulate enough asset at the end of 50 years to cover future benefit payments.
    - For funding purposes, we have used a 6.36% discount rate in calculating the Actuarially Determined Contribution, which is based on the expected rate of return of the Trust.

The impact of this change is an increase in the Town's liabilities.
  - b) School: the current valuation uses a discount rate of 3.51% as of July 1, 2019 and 2.66% as of June 30, 2020 based on a yield for 20-year tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). The impact of this change is an increase in the School's liabilities.

The discount rate will be updated annually to reflect market conditions as of the Measurement Date and any changes in the funding strategy.

# Appendix

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

### Detailed Actuary's Notes – Continued

2. Mortality tables have been updated as follows:
  - a. Police and Fire: RPH-2014 Blue Collar Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report
  - b. Teachers and Admin: RPH-2014 White Collar Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report
  - c. All Others: RPH-2014 Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report
  - d. Disabled Retirees: RPH-2014 Disabled Retiree Mortality Table with generational improvements from 2006 based on assumption from the 2019 SSA Trustees' Report

The combined impact of these changes is a slight decrease in the Town's and School's liabilities.

3. The salary scale for Police officers has been updated to a flat annual payroll growth of 3.00%, which is based on the North Providence Police pension actuarial valuation as of June 30, 2020. The net impact of these changes is a slight increase in the Town's liabilities and no impact on the School's liabilities.
4. Health care trend rates have been set to an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5%. The impact of this change is a slight decrease in the Town's and School's liabilities.

SECTION E

# GLOSSARY

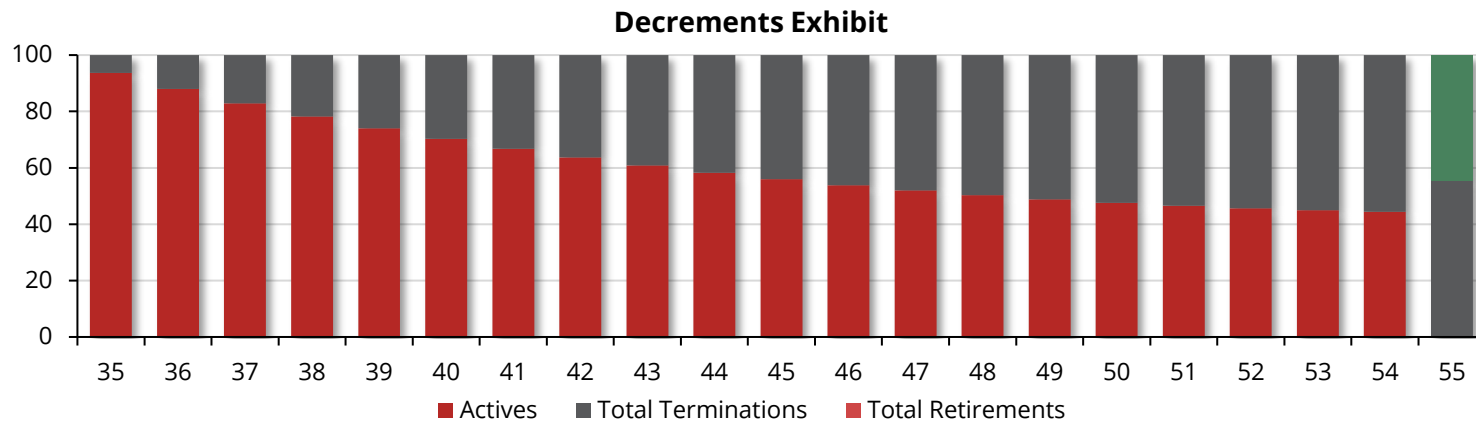
# Glossary – Decrements Exhibit

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.43 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year <sup>11</sup>	# of Retirements per Year	Total Decrements
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year	# of Retirements per Year	Total Decrements
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430



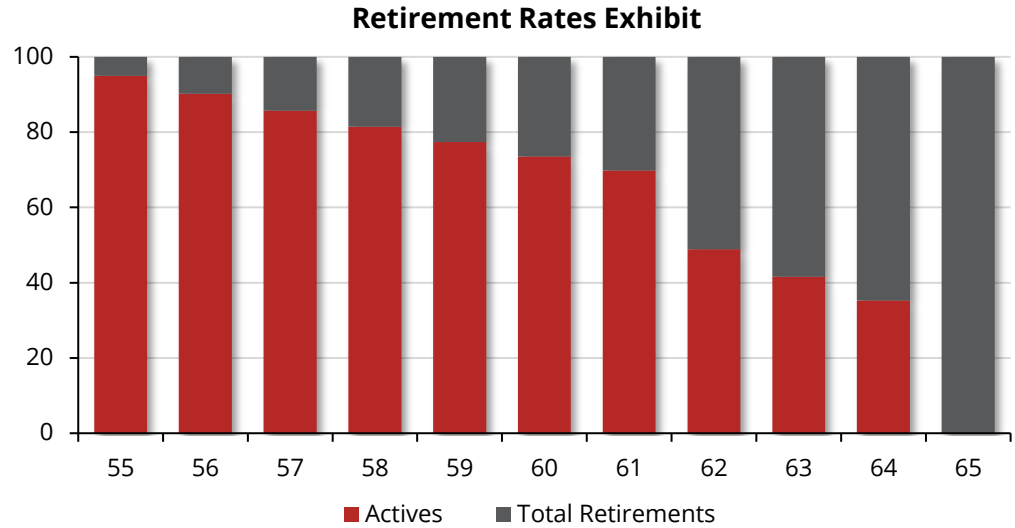
<sup>11</sup> The above rates are illustrative rates and are not used in our GASB calculations.

# Glossary – Retirement Rates Exhibit

## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



\* The above rates are illustrative rates and are not used in our GASB calculations.

# Glossary – Definitions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
2. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
3. **Actuarially Determined Contribution** - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
  - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
  - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
  - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
  - a. Differences between expected and actual experience of the OPEB plan
  - b. Changes in assumptions
  - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
6. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.

# Glossary – Definitions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

8. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
9. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
10. **OPEB** – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
12. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
13. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
14. **Present Value of Future Benefits** – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
15. **Real Rate of Return** – the rate of return on an investment after adjustment to eliminate inflation.

# Glossary – Definitions

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## Town of North Providence and North Providence School GASB 74/75 Valuation for Fiscal Year Ending June 30, 2020

16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% select rates, and 7% is the ultimate rate.
17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
18. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.
19. **Total OPEB Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).