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SUFFOLK PUBLIC SCHOOLS

OTHER POSTEMPLOYMENT BENEFITS PLAN

FINANCIAL ACCOUNTING REPORT

PREPARED AS OF DECEMBER 31, 2018

FOR PLAN REPORTING AS OF DECEMBER 31, 2018 AND

JUNE 30, 2019 EMPLOYER FINANCIAL REPORTING

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October 30, 2019

Ms. Wendy Forsman
Executive Director of Finance
Suffolk Public Schools
100 N. Main Street
Suffolk, Virginia 23434

Re: December 31, 2018 Financial Accounting Report for the Suffolk Public Schools Other Postemployment Benefits Plan

Ms. Forsman:

This financial accounting report provides the information that the Suffolk, Virginia Public Schools (the Schools or the Employer) should use to satisfy the requirements described in Governmental Accounting Standards Board (GASB) Statement Nos. 74 and 75 for the Suffolk Public Schools Other Postemployment Benefits Plan (the Plan). This report has been prepared by the Plan's actuary, Cavanaugh Macdonald Consulting (CMC), as of December 31, 2018 (Measurement Date) for Plan reporting as of December 31, 2018 and Employer financial reporting as of June 30, 2019.

GASB Statement No. 74 (GASB 74) establishes accounting and financial reporting requirements for other postemployment benefits (OPEB) plans. GASB Statement No. 75 (GASB 75) establishes accounting and financial reporting requirements for governmental employers who sponsor or participate in other postemployment benefits (OPEB) plans. In general, the GASB rules that apply to OPEB plans are designed to help plans and plan sponsors adequately and systematically account for plan costs, facilitate comparisons of plan financial information by standardizing certain aspects of OPEB plan asset and liability measurement, and improve the utility of financial statement information by requiring that plan sponsors provide certain information about their OPEB plans.

Additional Information and Disclosures

The information contained in this report is intended to be used by the Schools for Plan accounting purposes for the fiscal year ending on December 31, 2018 (FYE 2018) and Employer financial accounting purposes for the fiscal year ending on June 30, 2019 (FYE 2019), and its use for other purposes may not be appropriate. Calculations for purposes other than satisfying the requirements of GASB 74 and GASB 75 may produce significantly different results. This report supersedes all FYE 2018 Plan reporting and FYE 2019 Employer financial reporting results, including draft versions of this document, issued prior to the date of this report. The Schools should rely only on the FYE 2018 plan accounting and FYE 2019 financial accounting information provided herein.

The results contained in this report were prepared by qualified actuaries according to generally accepted actuarial principles and practices, and in compliance with Actuarial Standards of Practice issued by the Actuarial Standards Board. The financial accounting information provided in this report reflects our current understanding of GASB Statement Nos. 74 and 75 (GASB accounting rules), including any applicable guidance provided by the Schools or its audit partners as of the date of this report.

The actuarial valuation used as a basis for much of the information presented in this report was performed as of December 31, 2017 (Valuation Date). Financial accounting results are based on a projection of Plan membership, expected claim, and contribution data from the Valuation Date to the Measurement Date using generally accepted actuarial practices assuming no changes in the projected eligible member population during the measurement period. The census data for active and retired members as of the Valuation Date, changes in plan provisions since the Valuation Date, the net benefits and administrative expenses paid during the fiscal year beginning on January 1, 2018 and ending on December 31, 2018, and pertinent financial information was provided by the Schools for financial reporting purposes. We did not audit the supplied information, but it was reviewed for reasonableness and consistency. In certain situations, the supplied information was adjusted to account for normal differences in collection dates and/or methods. As a result, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it is reliable for the purposes stated herein. The results and conclusions contained in this report depend on the integrity of this information, and if any of the supplied information or analyses change, our results and conclusions may be different and this report may need to be revised. Likewise, this information may need to be revised to reflect any significant event that affects the Plan subsequent to the Valuation Date.

All assumptions used for GASB 74 and 75 purposes—including, but not limited to, discount rates, expected rates of return on assets, expected annual per capita claims, long-term health care cost trend rates, and expected retiree and spouse health care coverage election assumptions—have been selected by the Schools and should reflect best estimates of anticipated Plan experience. The discount rate selected by the Schools was determined based on the methods prescribed by GASB accounting rules. Other than the discount rate required under GASB accounting rules, we believe that those assumptions selected by the Schools for FYE 2018 Plan accounting and FYE 2019 financial reporting purposes are reasonable for the purposes of preparing the measurements described above.

The actuarial cost method, the asset valuation method, and the amortization methods are prescribed under GASB rules for financial accounting purposes as of the Measurement Date. Actuarial methods, such as the actuarial cost method, asset valuation method, and amortization methods, used in the cost allocation procedure (for financial accounting purposes) are designed to recognize changes in an orderly fashion over a period of years. In certain situations, the actuarial methods used in an allocation procedure may have the effect of deferring changes in amounts into later years. Likewise, the use of these methods could produce deferred gains or losses if any material underlying assumption is not met over an extended period of time.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. Since an assessment of the potential impact of variations in factors other than discount rates and health care cost trend rates is outside the scope of typical financial accounting requirements, we have not performed any analysis of the potential range of such future differences. **This report does not consider all possible scenarios.**

The funded status measurements included in this report are based on the assumptions and methods used to determine the Plan's obligations and asset values as of the Valuation and/or Measurement Date(s). Funded status measurements for financial accounting purposes may not be appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. Likewise, funded status measurements for financial accounting purposes may not be appropriate for assessing the need for or the amount of future actuarially determined contributions.

CMC does not provide legal, investment, or accounting advice. Thus, the information in this report is not intended to supersede or supplant the advice and interpretations of the Schools or its affiliated legal, investing, or accounting partners.

The undersigned is familiar with the near-term and long-term aspects of other postemployment benefit plan valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained in this report. All sections of this report, including any appendices and attachments, are considered an integral part of the actuarial opinions.

To the best of our knowledge, no executive or employee of CMC providing services to the Schools has any direct financial interest or indirect material interest in the Schools. As a result, we believe that there is no relationship existing that might affect our capacity to prepare and certify these results for the Schools' Plan as of December 31, 2018.

Please call us at 678-388-1700 if you have any questions.

Respectfully submitted,

Jeffrey Gann, FSA, MAAA, FCA, EA
Senior Actuary

JG:nh

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Section I — Executive Summary

GASB DISCLOSURE INFORMATION
FOR THE SCHOOLS' OPEB PLAN AS OF DECEMBER 31, 2018

Principal Results as of Measurement Date (MD)	December 31, 2018	December 31, 2017
Valuation Date (VD):	December 31, 2017	December 31, 2017
GASB 74 Reporting Date:	December 31, 2018	December 31, 2017
GASB 75 Reporting Date:	June 30, 2019	June 30, 2018
Discount Rate:		
Long-Term Expected Rate of Return at MD	7.50%	7.50%
Municipal Bond Index Rate at MD	4.10%	3.44%
Year in which Plan Fiduciary Net Position is Projected to be Depleted	N/A	N/A
Single Equivalent Interest Rate at MD	7.50%	7.50%
Net OPEB Liability / (Asset) (NOL) as of the MD:		
Total OPEB Liability (TOL)	$ 13,912,495	$ 13,625,931
Plan Fiduciary Net Position (PFNP)	14,750,514	15,465,239
Net OPEB Liability / (Asset) (TOL – PFNP)	$ (838,019)	$ (1,839,308)
PFNP as a Percentage of TOL	106.02%	113.50%
NOL as a Percentage of Covered Compensation	(0.99%)	(2.28%)
OPEB Expense / (Income) for the Measurement Period:	$ 327,317	$ (6,486)
Employer Contributions During the Measurement Period:	$ 588,348	$ 1,323,985
Deferred Outflows / (Inflows) of Resources as of the MD:		
Total Deferred Outflows of Resources*	$ 2,481,212	$ 1,133,470
Total Deferred (Inflows) of Resources	$ (2,732,350)	$ (2,646,928)

* The Deferred Outflows of Resources shown in the table above do not include any amounts for employer contributions made subsequent to the measurement date and before the end of the reporting period as required under GASB 75, paragraph 44.

Section II — Introduction

The Governmental Accounting Standards Board issued Statement No. 74 (GASB 74), "*Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*" and Statement No. 75 (GASB 75), "*Accounting and Financial Reporting for Postemployment Benefit Plans Other Than Pensions*" in June 2015 (GASB accounting rules). GASB 74 is effective for plan fiscal years beginning after June 15, 2016. GASB 75 is effective for employer fiscal years beginning after June 15, 2017. For the purposes of reporting under GASB 74 and 75, the Plan is assumed to be a single-employer defined benefit OPEB plan without a special funding situation where assets are accumulated in a trust that meets the criteria under GASB accounting rules. Additionally, the Schools chose not to restate results for any period prior to the adoption of GASB 74 or 75.

This report, prepared as of December 31, 2018 (Measurement Date or MD), presents information to assist the Schools in meeting the requirements of GASB 74 and 75. Much of the material provided in this report is based on the data, assumptions, plan provisions, and results of the actuarial valuation of the Plan as of December 31, 2017 (Valuation Date or VD).

GASB 74 and 75 establish accounting and financial reporting requirements for governmental employers who sponsor or participate in other postemployment benefits (OPEB) plans. In general, the GASB accounting rules that apply to OPEB plans are designed to help plan sponsors adequately and systematically account for plan costs, facilitate comparisons of plan sponsor financial information by standardizing certain aspects of OPEB plan asset and liability measurement, and improve the utility of financial statement information by requiring that plan sponsors provide certain information about their OPEB plans. GASB 74 and 75 replace GASB 43 and 45, respectively, and also represent a significant departure from the requirements of the prior statements. GASB 43 and 45 required employers providing benefits through OPEB plans to report items consistent with the results of the plan's actuarial valuations, as long as those valuations met certain parameters. GASB 74 and 75 create disclosures and reporting requirements that may or may not be consistent with the basis used for funding the Plan. In fact, GASB 75 paragraph B10 states:

> "The Board concluded that it is not within the scope of its activities to set standards that establish a specific method of financing OPEB (that being a policy decision for government officials or other responsible authorities to make) or to regulate a government's compliance with the financing policy or method it adopts. Accordingly, the Board established standards in this Statement within the context of accounting and financial reporting, not within the context of the funding of OPEB."

GASB accounting rules also require the use of the Entry Age Normal (EAN) (Level Percentage of Pay) actuarial cost method in the determination of the Total OPEB Liability (TOL) for the Plan. If the TOL was measured on a valuation date that does not exactly coincide with either the prior or current measurement date, the TOL can be projected—in other words, rolled backward or forward—to the relevant measurement date. The plan provisions recognized in the calculation of the TOL are summarized in Schedule D.

If a financial accounting asset exists, the employer will report a Net OPEB Liability / (Asset) (NOL), which is equal to the difference between the actual/projected TOL and the Plan's Fiduciary Net Position (PFNP)—the market value of the financial accounting asset—as of the measurement date.

The discount rate is an important assumption used in the measurement of the TOL, and the guidance concerning discount rate selection provided under GASB accounting rules varies based on whether or not the plan has a financial accounting asset. The environment for yields on 20-year tax-exempt municipal bonds (rating AA/Aa or higher) on the measurement date (Municipal Bond Index Rate) could affect discount rates in either case, so the plan sponsor must choose an appropriate basis for these Municipal Bond Index Rates. The Municipal Bond Index Rate selected by the Schools for this purpose is the 20-Bond average General Obligation 20-year Municipal Bond Rate published at the end of the last week during the month of December by The Bond Buyer (www.bondbuyer.com).

If the plan does not have a financial accounting asset, the plan sponsor must select a discount rate based solely on the Municipal Bond Index Rate. However, if the plan has assets that are accumulated in a Trust that meets the criteria under GASB accounting rules, the plan sponsor must select a discount rate based on the Single Equivalent Interest Rate (SEIR) for the plan.

To determine the SEIR, the PFNP must be projected into the future for as long as there are anticipated benefits payable to members and beneficiaries under the relevant plan provisions in effect on the measurement date. Future contributions must be projected in accordance with the plan's funding policy and/or the application of professional judgment in situations where the recent contribution history of the contributing entities warrants detailed consideration. If the PFNP is not projected to be depleted at any point in the future, the SEIR will be equal to the long term expected rate of return on plan investments selected by the plan sponsor on the measurement date (and the Municipal Bond Index Rate is not a factor).

Conversely, if the PFNP is projected to be depleted on any future measurement date, the SEIR will be equal to the single rate that generates a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion based on the long-term expected rate of return on plan investments, and the present value determined by discounting those benefits after the date of depletion by the Municipal Bond Index Rate selected by the plan sponsor on the measurement date.

The changes reflected in the TOL during the measurement period are shown in Section III. Under GASB 75, differences between expected and actual experience and changes of assumptions or other inputs are recorded as Deferred Outflows of Resources if the change increases the Plan's TOL, or Deferred Inflows of Resources if the change reduces the Plan's TOL.

Schedule A shows the development of the Plan's projected earnings on plan investments, and the determination of the difference between actual and projected earnings on plan investments during the measurement period that are required under GASB 75. Differences between actual and projected earnings on plan investments, if any, are recorded as Deferred Outflows of Resources if the change lowers the PFNP, or Deferred Inflows of Resources if the change increases the PFNP.

Deferred Outflows of Resources and Deferred Inflows of Resources are usually recognized on a level dollar basis without any adjustments for interest. The unrecognized portions of the Deferred Outflows of Resources and Deferred Inflows of Resources that must be included on the Statement of Net Position under GASB 75 are provided in Section IV.

GASB 75 requires the determination and disclosure of an OPEB Expense / (Income) (OE) in the notes to employer financial statements. Generally speaking, OE includes the following components:

COMPONENTS OF OPEB EXPENSE / (INCOME)	
+	**Service Cost (SC)** This is equal to the Normal Cost determined using the Entry Age Normal (Level Percentage of Pay) actuarial cost method.
–	**Active Member Contributions** The total amount of active employee payroll deductions for OPEB benefits, if applicable.
+	**Administrative Expenses** The amount, if any, paid during the measurement period for OPEB costs not directly related to the payment of benefits. This amount would include costs such as actuarial fees, audit fees, trust fees, salaries associated with staff time spent on OPEB related tasks, etc.
+ / –	**Changes of Benefit Terms** Benefit changes during the period are recognized immediately. Plan amendments increase OE if the change improves benefits for existing Plan members. Likewise, changes that reduce benefits for existing Plan members lower OE.
+	**Interest on the Total OPEB Liability (IOT)** IOT is determined based on the Discount Rate that was used to measure the Plan's TOL as of the Prior Measurement Date. Please note that the SC component may include interest to the end of the measurement period, or this interest adjustment may be included with IOT.
–	**Projected Earnings on Plan Investments (XR)** If the Plan has a financial accounting asset, XR is determined based on the long-term expected rate of return assumption at the end of the prior measurement period.
+ / –	**Other** Miscellaneous and non-standard expense items are included in this component.

COMPONENTS OF OPEB EXPENSE / (INCOME)	
+ / –	**Recognition of Current Period Deferred Outflows / (Inflows) of Resources for:** — **Differences Between Expected and Actual Experience** — **Changes of Assumptions or Other Inputs** — **Differences Between Actual and Projected Earnings on Plan Investments** Please note that the results provided in this report reflect the following conventions: Experience losses ("positive amounts") increase the balances of Deferred Outflows of Resources, and amounts recognized increase OPEB expense. Experience gains ("negative amounts") decrease the balances of Deferred (Inflows) of Resources, and amounts recognized decrease OPEB expense. For differences between expected and actual experience and changes of assumptions or other inputs, the amounts that must be recognized during the current period are determined by spreading the total changes over the average expected remaining service lives (AERSL) of the entire Plan membership at the beginning of the measurement period. The active member AERSL is the average number of years that the active members are expected to remain in covered employment. AERSL is equal to zero for inactive members. The AERSL of the entire Plan membership is the weighted average of these two values, but cannot be less than one year[1]. For differences between actual and projected earnings on plan investments, if any, the amount that must be recognized during the current period is determined by amortizing the total change over five (5) years.
+	**Recognition of Prior Period Deferred Outflows of Resources** The amounts that must be recognized during the current year for those Deferred Outflows of Resources established before the current measurement period.
–	**Recognition of Prior Period Deferred (Inflows) of Resources** The amounts that must be recognized during the current year for those Deferred (Inflows) of Resources established before the current measurement period.

The development of the OE is shown in Section V.

The remaining Sections and Schedules that follow provide the results for note disclosure and the Required Supplementary Information (RSI) that must be included in the reporting entity's financial report. Our understanding is that the note disclosures required under GASB 74 should be included within the employer's financial report if an OPEB plan does not issue a stand-alone financial report.

[1] Based on the guidance in GASB Implementation Guide 2017-3, paragraph 4.129.

Section III — Schedule of Changes in the Net OPEB Liability / (Asset)

The tables below provide the changes in the Total OPEB Liability (TOL), the Plan Fiduciary Net Position (PFNP), and the Net OPEB Liability / (Asset) (NOL) during the current measurement period that must be disclosed under GASB accounting rules, as well as the most recent five years of the 10-year schedule of changes in the TOL, PFNP, NOL, and related ratios that must be included in Required Supplementary Information (RSI). The Schools chose not to restate results for any period prior to the adoption of GASB 74 or 75, so only results for the years since adoption are shown. Additional periods within the five year window will be added in the future.

Reconciliation of Changes in the Plan's Total OPEB Liability (TOL)

Fiscal Years Ending on December 31	2018	2017	2016	2015	2014
Total OPEB Liability (TOL)					
Service Cost	$ 456,968	$ 518,107			
Interest on the TOL	1,034,554	1,168,697			
Changes of benefit terms	0	(391,210)			
Difference between expected and actual experience	(651,244)	(2,060,226)			
Changes of assumptions or other inputs	34,634	1,303,406			
Net benefit payments	(588,348)	(1,323,985)			
Net change in TOL	$ 286,564	$ (785,211)			
TOL—beginning of period	$ 13,625,931	$ 14,411,142			
TOL—end of period	$ 13,912,495	$ 13,625,931			

Reconciliation of Changes in the Plan's Fiduciary Net Position (PFNP) and Net OPEB Liability / (Asset) (NOL)

Fiscal Years Ending on December 31		2018	2017	2016	2015	2014
TOL—end of period	(a)	$ 13,912,495	$ 13,625,931			
Plan Fiduciary Net Position (PFNP)						
Contributions – Schools		$ 588,348	$ 1,323,985			
Contributions – active member		N/A	N/A			
Net investment income		(699,998)	2,073,264			
Net benefit payments		(588,348)	(1,323,985)			
Administrative expenses		(14,727)	(14,546)			
Other		0	0			
Net change in PFNP		$ (714,725)	$ 2,058,718			
PFNP—beginning of period		$ 15,465,239	$ 13,406,521			
PFNP—end of period	(b)	$ 14,750,514	$ 15,465,239			
PFNP as a percentage of the TOL	[(b) / (a)]	106.02%	113.50%			
Net OPEB Liability / (Asset) (NOL)						
NOL—end of period	[(a) – (b)]	$ (838,019)	$ (1,839,308)			
Covered Payroll[1]		$ 84,334,164	$ 80,618,413			
NOL as a percentage of Covered Payroll		(0.99%)	(2.28%)			

[1] Covered Payroll provided by the Schools for active employees who would be eligible for benefits at retirement.

Section IV — Balances of GASB 75 Deferred Outflows and (Inflows) of Resources

The following tables provide the balances of Deferred Outflows and (Inflows) of Resources that are reported for current and prior period differences between expected and actual experience, changes of assumptions or other inputs, and differences between actual and projected earnings on plan investments under GASB 75. The information in the tables reflects the assumptions and other conventions listed below. This presentation is designed to facilitate the development of OPEB Expense / (Income) (OE), and should not be used for financial reporting purposes without appropriate adjustments. Please note that the Employer may be required to report Deferred Outflows / (Inflows) of Resources for contributions made subsequent to the measurement date and prior to the end of the reporting period; however, CMC will not provide or incorporate these amounts in the tables included in this section of the report.

- No differences between expected and actual experience, changes of assumptions or other inputs, or differences between actual and projected earnings on plan investments during measurement periods ending prior to December 31, 2017 are being recognized.
- Experience losses are presented as positive amounts. Experience gains are presented as negative amounts.
- Deferred Outflows of Resources are presented as positive amounts. Deferred (Inflows) of Resources are presented as negative amounts.
- Experience losses ("positive amounts") increase the balances of Deferred Outflows of Resources, and amounts recognized increase OE. Experience gains ("negative amounts") decrease the balances of Deferred (Inflows) of Resources, and amounts recognized decrease OE.

The table below provides a summary of the unrecognized balances of Deferred Outflows of Resources and (Inflows) of Resources by source as of December 31, 2018:

	Deferred Outflows of Resources	Deferred (Inflows) of Resources
Differences between expected and actual experience	$ 0	$ (2,090,868)
Changes of assumptions or other inputs	993,733	0
Differences between projected and actual earnings on plan investments	1,487,479	(641,482)
Total unrecognized balance as of December 31, 2018	$ 2,481,212	$ (2,732,350)

Balances of Deferred Outflows / (Inflows) of Resources by Source and Year

Measurement Period Ending December 31	(a) Initial Experience (Gain) / Loss Amount	(b) Initial Recognition Period (Years)	(c) Initial Recognition Amount [(a) ÷ (b)]	(d) Amounts Recognized in OPEB Expense through December 31, 2018	Balances as of December 31, 2018: Deferred Outflows of Resources [(a) – (d), > 0]	Balances as of December 31, 2018: Deferred (Inflows) of Resources [(a) – (d), < 0]
Deferred Outflows / (Inflows) of Resources for Differences Between Expected and Actual Experience:						
2017	$ (2,060,226)	7.67	$ (268,608)	$ (537,216)	$ 0	$ (1,523,010)
2018	$ (651,244)	7.81	$ (83,386)	$ (83,386)	$ 0	$ (567,858)
			$ (351,994)		$ 0	$ (2,090,868)
Deferred Outflows / (Inflows) of Resources for Changes in Assumptions or Other Inputs:						
2017	$ 1,303,406	7.67	$ 169,936	$ 339,872	$ 963,534	$ 0
2018	$ 34,634	7.81	$ 4,435	$ 4,435	$ 30,199	$ 0
			$ 174,371		$ 993,733	$ 0
Deferred Outflows / (Inflows) of Resources for Differences Between Projected and Actual Earnings on Plan Investments:						
2017	$ (1,069,138)	5.00	$ (213,828)	$ (427,656)	$ 0	$ (641,482)
2018	$ 1,859,349	5.00	$ 371,870	$ 371,870	$ 1,487,479	$ 0
			$ 158,042		$ 1,487,479	$ (641,482)

Section V — GASB 75 OPEB Expense / (Income)

The development of the OPEB expense / (income) for the financial reporting period ending on June 30, 2019 is shown in the following table:

OPEB Expense / (Income) For the Fiscal Year Ending on June 30, 2019	
Service cost	$ 456,968
Active member contributions	N/A
Administrative costs*	14,727
Changes of benefit terms during the current period	0
Interest on the TOL	1,034,554
Projected earnings on plan investments	(1,159,351)
Other	0
Recognition of current period Deferred Outflows / (Inflows) of Resources:	
Difference between expected and actual experience	(83,386)
Changes of assumptions or other inputs	4,435
Difference between actual and projected earnings on plan investments	371,870
Recognition of prior period Deferred Outflows of Resources	169,936
Recognition of prior period Deferred (Inflows) of Resources	(482,436)
OPEB Expense / (Income)	$ 327,317

* Administrative costs are based on the administrative expenses paid from the Plan's trust during the fiscal year ending on December 31, 2018.

Section VI — Financial Statement Note Disclosures

This section contains accounting information that may be used to satisfy the reporting requirements for employers under Governmental Accounting Standards Board Statement No. 74 (GASB 74) for the fiscal year ending on December 31, 2018 and Governmental Accounting Standards Board Statement No. 75 (GASB 75) for the fiscal year ending on June 30, 2019, based on a December 31, 2017 valuation date.

As stated previously, we have assumed that the Plan is a single-employer, other than insured, defined benefit OPEB plan without a special funding situation where assets are accumulated in a trust that meets the criteria under GASB accounting rules. Additionally, the Schools chose not to restate results for any period prior to the adoption of GASB 74 or 75. This report does not include any non-actuarial items that may need to be reported or disclosed.

Summary of Key Actuarial Assumptions, Methods, and Other Inputs

The Total OPEB Liability (TOL) was determined by an actuarial valuation as of December 31, 2017, using the key actuarial assumptions, methods, and other inputs listed below as of December 31, 2018, and projected to that date assuming no changes in the projected eligible member population during the measurement period. Please note that the complete set of actuarial assumptions, methods, and other inputs that were used to develop the TOL are provided in Schedule B.

Expected Long-term Rate of Inflation	2.50%
Expected Long-term Real Wage Growth	1.00%
Expected Long-term Payroll Growth Rate	3.50%
Salary Increases, Including Wage Inflation	
General Employees	3.50% – 5.35%
Teachers	3.50% – 5.95%
Long-term Investment Rate of Return, Net of OPEB Plan Investment Expense, Including Price Inflation	7.50%
Municipal Bond Index Rate	4.10%
Year PFNP is Projected to be Depleted	N/A
Single Equivalent Interest Rate, Net of OPEB Plan Investment Expense, Including Price Inflation	7.50%
Health Care Cost Trend Rates	
Pre-Medicare Claims / Member Contributions	
HMO / POS Plan Designs	6.80% for FYE 2019, decreasing to an ultimate rate of 4.75% by 2028
PPO Plan Designs	7.30% for FYE 2019, decreasing to an ultimate rate of 4.75% by 2028
Medicare Eligible Claims / Member Contributions	N/A

Health care cost trend rates are set on an annual basis based on published annual health care inflation surveys in conjunction with actual plan experience (if credible), building block models, and heuristics developed by health plan actuaries and administrators. The health care cost trend rates shown above were selected for the measurement of the TOL as of December 31, 2018 (Measurement Date).

In late 2018, the Society of Actuaries' (SOA) Retirement Plans Experience Committee (RPEC) released an exposure draft of the Pub–2010 Public Retirement Plans Mortality Tables report, which represents a comprehensive review of the recent mortality experience of public postretirement plans in the United States. RPEC collected data from 35 different public pension systems that collectively submitted information for 78 plans for calendar years 2008 through 2013. The final Pub–2010 tables were released in January 2019 and are based on approximately 46 million life-years of exposure and 580 thousand deaths from public pension systems across the United States. According to the final report, “the Committee believes that for most pension-related actuarial applications, the Pub–2010 mortality rates (including those for Disabled Retirees) should be projected with an appropriate mortality improvement scale, and that generational projection should be considered as an approach to projecting future mortality rates.” As a result, the mortality rates selected as of the Measurement Date are based on the amount-weighted Pub–2010 mortality tables with generationally projected mortality improvements using Scale MP–2018. Generationally projected healthy and disabled mortality rates reflect differences for males and females, and for general and teacher/professional employment classifications.

The demographic actuarial assumptions for retirement, disability incidence, and withdrawal used in the December 31, 2018 measurement of the Plan’s TOL were based on the results of an experience study for the period July 1, 2012 through June 30, 2016, adopted by the Virginia Retirement System.

Expected per capita claims costs used in the December 31, 2017 valuation are based on a review of recent Plan experience that was performed concurrently with the December 31, 2017 valuation and are trended to the measurement date based on the applicable health care cost trend rates for the fiscal year ending on December 31, 2018. The remaining actuarial assumptions (e.g. rates of plan participation, rates of plan election, etc.) used in the December 31, 2018 measurement of the Plan’s TOL were selected on the Measurement Date based on actual and/or reasonable expectations of Plan experience.

The long-term expected return on plan assets is reviewed as part of the GASB 74 and 75 valuation process. Several factors are considered in evaluating the long-term rate of return assumption, including the Plan’s current asset allocations and ranges of expected future real rates of return (expected return, net of investment expense and inflation) for each major asset class provided by the Virginia Association of Counties (VACo) and the Virginia Municipal League (VML) who operate the “VACo/VML Pooled OPEB Trust”.

CMC reviewed the expected long-term rate of return assumption selected by the Schools as of the Measurement Date. Our review is based on a model that uses expected arithmetic returns for a given investment horizon to determine the underlying log-normally distributed (i.e. “geometric”) returns for each asset class and for the entire portfolio, and reflects the following inputs:

- The 2.50% expected long-term rate of inflation (CPI-U) selected by the Schools as of December 31, 2018;
- The OPEB Plan target asset allocation policy for Portfolio I adopted in November 2018 provided in the Virginia Pooled OPEB Trust Fund Summary of Investment Policy & Guidelines April 2008, as amended on November 30, 2018; and,

- Expected future nominal and real (expected return, net of investment expense and inflation) rates of return, standard deviations of returns, and correlation coefficients (relative to all other returns) for each major asset class published by Horizon Actuarial Services, LLC in its *"Survey of Capital Market Assumptions, 2019 Edition"*.

The resulting long-term expected rate of return is equal to the geometric combination of the allocation-weighted average expected future real rate of return of the portfolio and the expected long-term rate of inflation.

The development of the expected long-term rate of return based on the OPEB Plan's asset allocation and the estimates of arithmetic real rates of return for each major asset class is provided in the table below:

Asset Class[1]	Target Allocation	Expected 20-Year Arithmetic Real Rate of Return	Standard Deviation
US Equity—Large Cap	26.00%	6.05%	16.17%
US Equity—Small/Mid Cap	10.00%	7.23%	20.15%
Non-US Equity—Developed	13.00%	7.01%	18.23%
Non-US Equity—Emerging	5.00%	9.38%	24.73%
US Corporate Bonds—Core	21.00%	2.17%	5.47%
US Corporate Bonds—Long Duration		2.68%	10.50%
US Corporate Bonds—High Yield		4.09%	10.06%
Non-US Debt—Developed		1.52%	7.61%
Non-US Debt—Emerging		4.47%	11.31%
US Treasuries (Cash Equivalents)		0.78%	2.31%
TIPS (Inflation-Protected)		1.40%	6.11%
Real Estate	7.00%	5.65%	15.03%
Hedge Funds	10.00%	4.32%	8.38%
Commodities	3.00%	4.00%	17.66%
Infrastructure		6.17%	14.39%
Private Equity	5.00%	10.53%	22.05%
Private Debt		6.28%	11.62%
Total Portfolio	100.00%	5.61%	11.58%
Expected Long-term Real Return		4.88%	
Expected Long-term Rate of Inflation		2.50%	
Expected Long-term Rate of Return		1.0488 x 1.0250 – 1 = 7.50%	
Expected Long-term Rate of Return Selected		7.50%	

[1] The "Survey of Capital Market Assumptions, 2019 Edition" published by Horizon Actuarial Services, LLC, does not include results for all possible classes of investable assets. As a result, we mapped allocations of OPEB Plan investments to asset classes that were not explicitly represented in survey results to a reasonable alternative that was included.

DEVELOPMENT OF THE DISCOUNT RATE (SEIR)

The discount rate was determined based on a projection of cash flows performed in accordance with the procedures described in GASB accounting rules. The basis for this projection is the Plan's actuarial valuation performed as of December 31, 2017 (Valuation Date). In addition to the actuarial methods and assumptions used for financial accounting purposes as of December 31, 2018, the following actuarial methods and assumptions were used in the projection of cash flows for the purpose of determining the discount rate under GASB accounting rules as of the Measurement Date:

- The Schools selected the 4.10% Municipal Bond Index Rate as of the Measurement Date based on the 20-Bond average General Obligation 20-year Municipal Bond Rate published at the end of the last week during the month of December by The Bond Buyer (www.bondbuyer.com), and prescribed it for use in determining the Plan's discount rate under GASB accounting rules as of the Measurement Date.
- Total payroll for the initial projection year consists of the payroll of the active membership as of the Valuation Date who are expected to be actively employed on the Measurement Date. In subsequent projection years, total payroll was assumed to increase annually at a rate of 3.50%.
- In future years, the Schools are assumed to make projected contributions in the middle of each fiscal year equal to the average annual Schools' contribution during the most recent five year period ending on the Measurement Date. Projected Schools' contributions were allocated to current and future members based on the change in the percentage of total membership attributable to each group during each future period. Projected contributions allocated to future members were first applied to reduce applicable service costs for those members.
- Active employees do not explicitly contribute to the Plan.
- Administrative expenses paid by the Trust during the fiscal year ending on December 31, 2018 were projected to future periods using a 2.50% assumed annual rate of increase. Projected administrative expenses were allocated to current and future employees based on the change in the percentage of total membership attributable to each group during each future period, and are assumed to be paid in the middle of each fiscal year.
- Projected benefit payments for current members as of the Measurement Date reflect applicable service-related accruals, and are assumed to be paid in the middle of each fiscal year.

Based on these assumptions, the Plan's PFNP was not projected to be depleted. As a result, the Municipal Bond Index Rate was not used in the determination of the SEIR, and the 7.50% long-term expected rate of return selected by the Schools was used to measure the Plan's TOL as of the Measurement Date.

Please note that the PFNP projections are based upon the Plan's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements under GASB accounting rules. As such, the PFNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the Plan, or the Plan's ability to make benefit payments in future years.

Sensitivity of the Net OPEB Liability / (Asset) to Health Care Cost Trend Rates

GASB accounting rules require the plan sponsor to disclose the sensitivity of the NOL to changes in health care cost trend rates. The table below provides the NOL of the Plan determined using current health care cost trend rates, as well as what the Plan's NOL would be if health care cost trend rates were 1-percentage-point lower or 1-percentage-point higher than current health care cost trend rates.

Sensitivity of the Net OPEB Liability / (Asset) to Health Care Cost Trend Rates	1% Lower Trend Rates	Current Trend Rates	1% Higher Trend Rates
Initial Pre-65 Health Care Cost Trend Rates	5.80% / 6.30%	6.80% / 7.30%	7.80% / 8.30%
Initial Post-64 Health Care Cost Trend Rate	N/A	N/A	N/A
Ultimate Health Care Cost Trend Rate	3.75%	4.75%	5.75%
Net OPEB Liability / (Asset)	$ (2,202,100)	$ (838,019)	$ 742,229

Please keep in mind that the estimates provided in the table above were prepared using streamlined calculation techniques, and they are intended to provide an "order of magnitude" indication of the NOL's sensitivity to changes in these assumptions. Results based on more refined calculations may yield findings and conclusions different than those suggested by the methodology required under GASB accounting rules as shown above.

Sensitivity of the Net OPEB Liability / (Asset) to Discount Rates

The plan sponsor must also disclose the sensitivity of the NOL to changes in the discount rate. The table below provides the NOL of the Plan determined using the current discount rate of 7.50%, as well as what the Plan's NOL would be if the discount rate was 1-percentage-point lower or 1-percentage-point higher than the current rate:

Sensitivity of the Net OPEB Liability / (Asset) to Discount Rates	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net OPEB Liability / (Asset)	$ 371,331	$ (838,019)	$ (1,939,255)

Please keep in mind that the estimates provided in the table above were prepared using streamlined calculation techniques, and they are intended to provide an "order of magnitude" indication of the NOL's sensitivity to changes in these assumptions. Results based on more refined calculations may yield findings and conclusions different than those suggested by the methodology required under GASB accounting rules, as shown above. For example, one possible refinement would consider the impact of similar changes in bond yields on Plan assets, including (but not limited to) the valuations of certain fixed income investments held by the Plan. However, as required by GASB accounting rules, we have not made any attempt to adjust the Plan's PFNP to reflect a potentially related change in fixed income asset pricing.

Schedule of the Recognition of Deferred Outflows / (Inflows) of Resources in OPEB Expense

Amounts reported as Deferred Outflows of Resources and Deferred (Inflows) of Resources related to OPEB benefits as of the Measurement Date will be recognized in OPEB Expense as follows:

Reporting Period Ending:	Deferred Outflows of Resources Recognized	Deferred (Inflows) of Resources Recognized	Net Amount Recognized
June 30, 2020	$ 546,241	$ (565,822)	$ (19,581)
June 30, 2021	$ 546,241	$ (565,822)	$ (19,581)
June 30, 2022	$ 546,241	$ (565,820)	$ (19,579)
June 30, 2023	$ 546,240	$ (351,994)	$ 194,246
June 30, 2024	$ 174,371	$ (351,994)	$ (177,623)
Thereafter	$ 121,878	$ (330,898)	$ (209,020)

Section VII — Required Supplementary Information

Under GASB accounting rules, the reporting entity may need to incorporate one or more of the following items in the Required Supplementary Information (RSI) that must be included in its financial statements.

Details Concerning Plan Amendments and Assumption Changes

Information about changes to benefit terms and changes to assumptions or other inputs should be provided in RSI. The information should be listed by the date for which the indicated change was first reflected in reported amounts. We have only provided relevant details for the measurement period ending on December 31, 2018.

CHANGES TO BENEFIT TERMS

December 31, 2018 (Valuation Date: December 31, 2017)

- There were no changes in the Plan's benefit provisions during the measurement period ending on December 31, 2018.

CHANGES TO ASSUMPTIONS OR OTHER INPUTS

December 31, 2018 (Valuation Date: December 31, 2017)

- The Schools selected the 4.10% Municipal Bond Index Rate as of the Measurement Date based on the 20-Bond average General Obligation 20-year Municipal Bond Rate published at the end of the last week during the month of December by The Bond Buyer (www.bondbuyer.com), and prescribed it for use in determining the Plan's discount rate under GASB accounting rules as of the Measurement Date; and,
- In late 2018, the Society of Actuaries' (SOA) Retirement Plans Experience Committee (RPEC) released an exposure draft of the Pub–2010 Public Retirement Plans Mortality Tables report, which represents a comprehensive review of the recent mortality experience of public postretirement plans in the United States. RPEC collected data from 35 different public pension systems that collectively submitted information for 78 plans for calendar years 2008 through 2013. The final Pub–2010 tables were released in January 2019 and are based on approximately 46 million life-years of exposure and 580 thousand deaths from public pension systems across the United States. According to the final report, "the Committee believes that for most pension-related actuarial applications, the Pub–2010 mortality rates (including those for Disabled Retirees) should be projected with an appropriate mortality improvement scale, and that generational projection should be considered as an approach to projecting future mortality rates."

  As a result, the mortality rates selected as of the Measurement Date are based on the amount-weighted Pub–2010 mortality tables with generationally projected mortality improvements using Scale MP–2018. Generationally projected healthy and disabled mortality rates reflect differences for males and females, and for general and teacher/professional employment classifications. The assumed rates of mortality for healthy and disabled lives, rates of mortality improvement, and the mortality improvement projection method were updated to better reflect anticipated plan experience.

Schedule A — Additional Supporting Information

Membership Census Data

Active and Retired Member Census Data Summary Statistics

The following table provides summaries of relevant statistics that describe the key features of the active and retired member data provided by the Schools for both the current valuation as of December 31, 2017 and the prior valuation as of January 1, 2017:

Statistics as of:	December 31, 2017	January 1, 2017
Active Employees		
Number of Males	350	344
Number of Females	1,431	1,459
Total Count	1,781	1,803
Average Age	46.45	47.07
Average VRS Service	13.30	13.32
Average Schools Service	9.74	10.29
Average Pay	$ 45,266	$ 44,338
Retired Members[1]		
Count	68	103
Average Age	61.42	61.56
Number of Covered Spouses	7	9
Disabled Members		
Count	7	
Average Age	61.55	
Number of Covered Spouses	1	
Surviving Spouses		
Count	0	
Average Age		
Plan Membership		
Total Count	1,856	1,906
Total Count Including Covered Spouses	1,864	1,915

[1] Details by status are not available for members who were receiving benefits under the Plan as of January 1, 2017.

Distribution of Active Members By Age and Service

The distribution of active members by age and years of service with the Schools as of the December 31, 2017 valuation date is shown in the table below:

	Years of Service									
Age	**0–4**	**5–9**	**10–14**	**15–19**	**20–24**	**25–29**	**30–34**	**35–39**	**40+**	**Total**
Under 25	29									**29**
25 – 29	124	8								**132**
30 – 34	110	45	10							**165**
35 – 39	105	33	53	11						**202**
40 – 44	101	28	49	42	6					**226**
45 – 49	90	49	53	42	23	10				**267**
50 – 54	70	44	60	61	27	19	5	1		**287**
55 – 59	60	41	65	51	23	19	24	8		**291**
60 – 64	26	24	45	17	24	21	12	6		**175**
Over 64	2	2	1	1					1	**7**
Total	**717**	**274**	**336**	**225**	**103**	**69**	**41**	**15**	**1**	**1,781**

Distribution of Current Benefit Recipients by Age and Status

The distribution of members and dependents who are currently receiving Plan benefits by age and status as of the December 31, 2017 valuation date is shown in the table below:

	Current Benefit Recipients				
Age	**Retired Members**	**Disabled Members**	**Surviving Spouses**	**Spouses**	**Total**
Under 60	16	1		4	**21**
60	7	1			**8**
61	13			3	**16**
62	11	3		1	**15**
63	13	1			**14**
64	8	1			**9**
Over 64					**0**
Total	**68**	**7**	**0**	**8**	**83**

Plan Membership Information

The Plan's membership data was furnished by the Schools for valuation purposes as of December 31, 2017. The following table summarizes the *projected* membership of the Plan as of the December 31, 2018 measurement date.

Membership Group	Number
Inactive plan members currently receiving benefits	58
Inactive plan members entitled to, but not currently receiving benefits	0
Active participants	1,781
Total projected membership	1,839

Total OPEB Liability (TOL) Projections

The development of the projected Total OPEB Liability (TOL) as of December 31, 2018, as well as the differences associated with relevant changes, is shown in the table below:

TOL Projection ("Roll Forward")	(1) Expected Change	(2) Experience (Gain) / Loss	(3) Assumption Change
(a) Valuation Date	Dec. 31, 2017	Dec. 31, 2018	Dec. 31, 2018
(b) Projection Period	1 Year	None	None
(c) Discount Rate (SEIR)	7.50%	7.50%	7.50%
(d) TOL as of (a)	$ 13,625,931	$ 13,877,861	$ 13,912,495
(e) Entry Age Normal Cost during the Period from (a) to December 31, 2018	$ 456,968	N/A	N/A
(f) Actual / Expected Net Benefit Payments from (a) to December 31, 2018	$ 588,348	N/A	N/A
(g) TOL as of December 31, 2018 $[((d) + (e)) \times (1 + (c))^{(b)}] - [(f) \times (1 + (c))^{(b)/2}]$	$ 14,529,105	$ 13,877,861	$ 13,912,495
(h) Experience (Gain) / Loss [(2g) – (1g)]		$ (615,244)	
(i) Assumption Change [(3g) – (2g)]			$ 34,634

Development of the Projected Earnings on Plan Investments as of December 31, 2018

The development of the projected earnings on plan investments component of OPEB Expense / (Income) as of the December 31, 2018 measurement date is shown in the following table:

Projected Earnings on Plan Investments For the Measurement Period Ending on December 31, 2018	
(a) Expected rate of return on assets at December 31, 2017	7.50%
(b) Beginning of year market value of assets	$ 15,465,239
(c) Expected return on assets at the beginning of the year [(b) x (a)]	$ 1,159,893
(d) External cash flow (mid-year payments assumed):	
Contributions—Schools	$ 588,348
Contributions—active members	N/A
Refunds of contributions	0
Net benefit payments	(588,348)
Administrative expenses	(14,727)
Other	0
Total external cash flow	$ (14,727)
(e) Expected return on external cash flow [(d) x ((1 + (a))^{½} – 1)]	$ (542)
(f) **Projected earnings on plan investments** [(c) + (e)]	**$ 1,159,351**

Development of the Deferred Outflow / (Inflow) of Resources for the Difference Between Projected and Actual Earnings on Plan Investments at December 31, 2018

The determination of the Deferred Outflow / (Inflow) of Resources for the difference between projected and actual earnings on plan investments at December 31, 2018 is shown in the following table:

Difference Between Projected and Actual Earnings on Plan Investments at December 31, 2018	
(a) Projected earnings on plan investments at December 31, 2018	$ 1,159,351
(b) Net investment income[1]	$ (699,998)
(c) **Difference between projected and actual earnings on plan investments** [(a) – (b)]	**$ 1,859,349**

[1] See "Reconciliation of Changes in the Plan's Fiduciary Net Position (PFNP) and Net OPEB Liability / (Asset) (NOL)" on page 7.

Development of the Average Expected Remaining Service Lives at January 1, 2018

The determination of the average expected remaining service lives for the entire Plan membership at the beginning of the measurement period is provided in the following table:

Membership Category	(1) Number	(2) Average Remaining Service Lives (in Years)
(a) Active Members	1,781	8.14
(b) Inactive Members	75	0.00
(c) **Total Membership** [((1a) × (2a)) + ((1b) × (2b))] / (1c)	**1,856**	**7.81**

Schedule B — Summary of Actuarial Assumptions and Methods for GASB Accounting Purposes

ECONOMIC ASSUMPTIONS

Discount Rate

7.50% per year for all periods after December 31, 2018 (adopted December 31, 2018).

Municipal Bond Index Rate

4.10% per year for all periods after December 31, 2018 (adopted December 31, 2018).

Municipal Bond Index Rate Basis

The Schools selected the 20-Bond average General Obligation 20-year Municipal Bond Rate published at the end of the last week during the month of December by The Bond Buyer (www.bondbuyer.com) and prescribed it for use as the 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate required under GASB rules.

Expected Long-term Rate of Return on Assets

7.50% per year, net of investment expenses, for all periods after December 31, 2018 (adopted December 31, 2018).

Expected Administrative Expenses Included in Service Cost

None.

Expected Long-term Rates of Inflation

The expected long-term rate of inflation was 2.50% per year for all years (adopted December 31, 2018).

Expected Long-term Payroll Growth Rate

3.50% per year for all periods after December 31, 2018, based upon the 2.50% expected long-term rate of inflation and 1.00% productivity assumptions. This rate does not reflect any expected future increase in the number of active members.

Long-term Health Care Cost Trend Rates

Annual per capita health care claims costs are expected to increase in future years as a result of medical inflation, utilization, leverage in the plan design, and improvements in technology adjusted for any implicit and/or explicit cost containment features. Initial health care cost trend rates were selected based on an analysis of national average health trend surveys specific to similarly structured plans for Medicare ineligible participants.

The assumed annual rates of increases in retiree expected health care claims costs and retiree and Schools contributions[1] during each period subsequent to the measurement date are shown in the table below (adopted December 31, 2018):

	Annual Health Care Cost Trend Rates		
Fiscal Year Beginning on January 1,	Pre-Medicare HMO / POS Plan Designs	Pre-Medicare PPO Plan Designs	Medicare Eligible
2019	6.80%	7.30%	N/A
2020	6.60%	7.10%	N/A
2021	6.40%	6.90%	N/A
2022	6.20%	6.70%	N/A
2023	6.00%	6.50%	N/A
2024	5.75%	6.15%	N/A
2025	5.50%	5.80%	N/A
2026	5.25%	5.45%	N/A
2027	5.00%	5.10%	N/A
2028+	4.75%	4.75%	N/A

[1] A 7.00% (HMO / POS) and 7.50% (PPO) trend rate were used to project health care claim costs and contributions backward from December 31, 2018 to entry year in measurements of benefit obligations based on the Entry Age Normal (Level Percentage of Pay) actuarial cost method.

DEMOGRAPHIC ASSUMPTIONS

Expected Annual Per Capita Health Care Claims Costs

MEDICAL AND PRESCRIPTION DRUGS—BEFORE MEDICARE ELIGIBILITY

The assumed annual per capita health care claims costs were developed for the following plan designs as of January 1, 2018 based on the medical and prescription drug premium / premium equivalent rates provided by the Schools for each design.

- Anthem HealthKeepers HMO 90/10 Plan;
- Anthem KeyCare (PPO) Plan; and,
- Anthem HealthKeepers HMO POS Open Access 80/20 Plan.

Our understanding is that these premium / premium equivalent rates include all relevant medical, prescription drug, and/or third-party administrative costs, and represent the amounts paid by the Schools as "the full contribution amount" for each coverage provided.

Age-adjusted health care premium / premium equivalent rates for covered adults were trended forward to the midpoint of the measurement period. The expected annual age 65 per capita health care claims costs for the medical and prescription drug plans for the year following the measurement date are shown below:

Expected Annual Age 65 Per Capita Claims Cost for	HealthKeepers HMO 90/10 Plan	KeyCare (PPO) Plan	HealthKeepers HMO OA 80/20 Plan
Current and Future Retirees	$16,008	$16,913	$13,217
Current and Future Spouses	$14,918	$17,413	$13,457

Future experience may differ significantly from the cost estimates presented in this report due to unforeseen and random events. As such, these results should be viewed as having a likely range of variability.

AGE RELATED MORBIDITY

Expected annual age 65 per capita health care claims costs are adjusted to reflect anticipated age-related cost changes. The assumed annual percentage increases in expected annual per capita health care costs/net incurred claims that were used to adjust medical and prescription drug amounts from one age to the next are provided in the following table for both retirees and their dependents:

Attained Age	Annual Increase
Under 30	0.00%
30 – 34	1.00%
35 – 39	1.50%
40 – 44	2.00%
45 – 49	2.60%
50 – 54	3.30%
55 – 59	3.60%
60 – 64	4.20%
65 and over	*0.00%*

AFFORDABLE CARE ACT (ACA)

The impact of the Affordable Care Act (ACA) was addressed in this valuation. A review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results. While the impact of certain provisions—if applicable—such as the future implementation of the excise tax on high-value health insurance plans, mandated benefits, and participation changes due to the individual mandate should be recognized in the determination of liabilities, overall future plan costs and the resulting liabilities are driven by amounts employers and retirees can afford (i.e., trend). As stated previously, the trend assumption forecasts the anticipated increase to initial per capita costs, taking into account health care cost inflation, increases in benefit utilization, plan changes, government-mandated benefits, and technological advances. Given the uncertainty regarding the ACA's implementation, continued monitoring of the ACA's impact on the Plan's liability will be required.

DEMOGRAPHIC ASSUMPTIONS—GENERAL EMPLOYEES

The demographic assumptions for retirement, disability incidence, and withdrawal were developed based on an investigation of demographic and economic experience over the period from July 1, 2012 through June 30, 2016 adopted by the Virginia Retirement System[1].

Mortality and Mortality Improvement Rates

PRE-RETIREMENT	PubG–2010 total healthy general employee amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018). 15% of pre-retirement deaths are assumed to be service-related.
POST-RETIREMENT	PubG–2010 total healthy general annuitant amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018). For spouses of retired members, Pub–2010 contingent survivor amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018).
POST-DISABLEMENT	PubNS–2010 total disabled non-safety (teachers and general) annuitant amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018). For spouses of disabled members, Pub–2010 contingent survivor amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018).

Retirement Rates

CURRENT PLAN 1 MEMBERS WHO SURVIVE TO A RETIREMENT AGE:
See Tables 1 and 2 (adopted July 1, 2017), which contain age and service based annual rates of retirement for males and females, respectively.

CURRENT PLAN 2 AND HYBRID PLAN MEMBERS WHO SURVIVE TO A RETIREMENT AGE:
See Tables 3 and 4 (adopted July 1, 2017), which contain age and service based annual rates of retirement for males and females, respectively.

[1] Please note that the rates shown in this report for some ages may be different from those that appear in other published sources. Since the Plan does not provide benefits to members or dependents who are age 65 or older, these assumptions have been adjusted so that employment periods after age 64 are excluded from the attribution period used in the actuarial cost method as required under GASB Implementation Guide 2017–3, paragraph 4.108.

Termination Rates

The following tables contain age and service based annual rates of withdrawal (separation from service for causes other than death, disability, or retirement) for males and females at sample ages (adopted July 1, 2017):

	Male Members—Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20	0.27688	0.25244	0.22872	0.20056	0.16855	0.14057	0.12603	0.11320	0.10411	0.10411	0.10411
25	0.25057	0.23024	0.20925	0.18373	0.15688	0.13361	0.11957	0.10835	0.09992	0.09992	0.09992
30	0.22157	0.20258	0.18350	0.16156	0.14147	0.12425	0.11142	0.10236	0.09459	0.08978	0.08978
35	0.20650	0.18223	0.16214	0.14313	0.12751	0.11426	0.10347	0.09571	0.08813	0.07795	0.06549
40	0.19553	0.16457	0.14299	0.12680	0.11490	0.10504	0.09615	0.08848	0.08079	0.06770	0.04626
45	0.18397	0.14896	0.12718	0.11399	0.10572	0.09878	0.09085	0.08205	0.07363	0.06227	0.04626
50	0.17144	0.13660	0.12001	0.10648	0.10447	0.09747	0.08930	0.08111	0.06806	0.06227	0.04626
55	0.16068	0.12967	0.12001	0.10500	0.10447	0.09747	0.08930	0.08111	0.06486	0.06227	0.04626
60	0.15449	0.12875	0.12001	0.10500	0.10447	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

	Female Members—Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20	0.30069	0.27981	0.24957	0.21230	0.17722	0.15634	0.13998	0.12034	0.10656	0.10656	0.10656
25	0.27370	0.25711	0.23395	0.20379	0.17488	0.15451	0.13809	0.12034	0.10656	0.10642	0.10642
30	0.24251	0.22690	0.21116	0.19063	0.17074	0.15276	0.13578	0.12002	0.10656	0.09928	0.09928
35	0.22330	0.20208	0.18736	0.17235	0.15849	0.14347	0.12837	0.11557	0.10447	0.09116	0.07607
40	0.20843	0.18156	0.16471	0.15164	0.14138	0.13004	0.11766	0.10682	0.09812	0.08252	0.05323
45	0.19506	0.16555	0.14581	0.13206	0.12281	0.11551	0.10655	0.09714	0.08999	0.07643	0.05323
50	0.18178	0.15325	0.13203	0.11702	0.10714	0.10278	0.09905	0.09359	0.08483	0.07560	0.05323
55	0.16934	0.14490	0.12446	0.10933	0.10007	0.09284	0.09284	0.09284	0.08445	0.07560	0.05323
60	0.16029	0.14080	0.12292	0.10875	0.10007	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Disability Rates

The table below provides age and gender based annual rates of disability at sample ages (adopted July 1, 2017). 15% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.000048	0.000009
25	0.000086	0.000009
30	0.000215	0.000009
35	0.000524	0.000240
40	0.001297	0.000579
45	0.002713	0.001270
50	0.004292	0.002739
55	0.005846	0.004830
60	0.006564	0.006403

Salary Increase Rates

Rates of salary increases are constructed geometrically based on the expected long-term rate of inflation (currently, 2.50%), an expected productivity component (currently, 1.00%), and a variable expected merit component that is dependent on years of service. The following table provides service-based rates of salary increases that are used to project a member's total salary as of the valuation date to future years (adopted July 1, 2017).

Years of Service	Total Increase (Next Year)
1	5.35%
2	5.35%
3	4.75%
4	4.45%
5	4.45%
6	4.45%
7	4.35%
8	4.25%
9	4.00%
10	4.00%
11–19	3.65%
20 +	3.50%

DEMOGRAPHIC ASSUMPTIONS—TEACHER AND PROFESSIONAL EMPLOYEES

The demographic assumptions for retirement, disability incidence, and withdrawal were developed based on an investigation of demographic and economic experience over the period from July 1, 2012 through June 30, 2016 adopted by the Virginia Retirement System[1].

Mortality and Mortality Improvement Rates

PRE-RETIREMENT

PubT–2010 total healthy teacher employee amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018).

5% of pre-retirement deaths are assumed to be service-related.

POST-RETIREMENT

PubT–2010 total healthy teacher annuitant amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018).

For spouses of retired members, Pub–2010 contingent survivor amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018).

POST-DISABLEMENT

PubNS–2010 total disabled non-safety (teachers and general) annuitant amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018).

For spouses of disabled members, Pub–2010 contingent survivor amount-weighted mortality rates projected from the 2010 base year to all future years with fully generational mortality improvements using Scale MP–2018 (adopted December 31, 2018).

Retirement Rates

CURRENT PLAN 1 MEMBERS WHO SURVIVE TO A RETIREMENT AGE:
See Tables 5 and 6 (adopted July 1, 2017), which contain age and service based annual rates of retirement for males and females, respectively.

CURRENT PLAN 2 AND HYBRID PLAN MEMBERS WHO SURVIVE TO A RETIREMENT AGE:
See Tables 7 and 8 (adopted July 1, 2017), which contain age and service based annual rates of retirement for males and females, respectively.

[1] Please note that the rates shown in this report for some ages may be different from those that appear in other published sources. Since the Plan does not provide benefits to members or dependents who are age 65 or older, these assumptions have been adjusted so that employment periods after age 64 are excluded from the attribution period used in the actuarial cost method as required under GASB Implementation Guide 2017–3, paragraph 4.108.

Termination Rates

The following tables contain age and service based annual rates of withdrawal (separation from service for causes other than death, disability, or retirement) for males and females at sample ages (adopted July 1, 2017):

	Male Members—Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20	0.21079	0.14843	0.11901	0.11020	0.09349	0.08050	0.08046	0.07228	0.05097	0.04292	0.04292
25	0.18729	0.14293	0.12175	0.11084	0.09453	0.08071	0.07568	0.06716	0.05060	0.04286	0.04286
30	0.16964	0.13940	0.12584	0.11218	0.09637	0.08159	0.07055	0.06162	0.05134	0.04355	0.04355
35	0.16964	0.13888	0.12459	0.10907	0.09347	0.07931	0.06709	0.05881	0.05210	0.04361	0.03314
40	0.16964	0.13888	0.12078	0.10272	0.08688	0.07483	0.06444	0.05760	0.05255	0.04302	0.02407
45	0.16964	0.13888	0.11573	0.10116	0.07864	0.06940	0.06230	0.05733	0.05243	0.04239	0.02407
50	0.16964	0.13888	0.11233	0.10116	0.07206	0.06391	0.06033	0.05733	0.05234	0.04238	0.02407
55	0.16964	0.13888	0.11217	0.10116	0.07038	0.05844	0.05813	0.05733	0.05234	0.04238	0.02407
60	0.16964	0.13888	0.11217	0.10116	0.07038	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

	Female Members—Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20	0.18697	0.11393	0.09392	0.09392	0.08483	0.06269	0.04984	0.04984	0.04938	0.04663	0.04663
25	0.18037	0.12332	0.10860	0.10637	0.09381	0.07728	0.06567	0.06507	0.05448	0.04933	0.04933
30	0.17320	0.13889	0.12685	0.11780	0.10503	0.09536	0.08496	0.07332	0.06172	0.05303	0.04656
35	0.16500	0.14138	0.12602	0.11307	0.10178	0.09519	0.08653	0.07385	0.06386	0.05292	0.03931
40	0.15660	0.13208	0.11313	0.09891	0.08919	0.08395	0.07759	0.06810	0.06086	0.04911	0.02568
45	0.15055	0.12047	0.09933	0.08544	0.07686	0.07181	0.06623	0.05912	0.05390	0.04417	0.02287
50	0.14909	0.11617	0.09449	0.08038	0.07126	0.06481	0.05822	0.05346	0.04858	0.04357	0.02287
55	0.14909	0.11617	0.09449	0.08038	0.07093	0.06249	0.05450	0.05326	0.04771	0.04357	0.02287
60	0.14909	0.11617	0.09449	0.08038	0.07093	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Disability Rates

The table below provides age and gender based annual rates of disability at sample ages (adopted July 1, 2017). 5% of disability cases are assumed to be service-related.

Age	Male	Female
20	0.000005	0.000003
25	0.000005	0.000023
30	0.000064	0.000081
35	0.000135	0.000196
40	0.000325	0.000481
45	0.000725	0.000792
50	0.001444	0.001609
55	0.002443	0.002521
60	0.003395	0.003321

Salary Increase Rates

Rates of salary increases are constructed geometrically based on the expected long-term rate of inflation (currently, 2.50%), an expected productivity component (currently, 1.00%), and a variable expected merit component that is dependent on years of service. The following table provides service-based rates of salary increases that are used to project a member's total salary as of the valuation date to future years (adopted July 1, 2017).

Years of Service	Total Increase (Next Year)
1	5.95%
2–3	5.85%
4–6	5.45%
7–9	5.35%
10–12	4.85%
13–14	4.75%
15–16	4.65%
17	4.55%
18–19	4.45%
20 +	3.50%

DEMOGRAPHIC ASSUMPTIONS—ALL EMPLOYEES

Decrement Timing and Adjustment

Decrements—retirement, withdrawal, death, and disability—are assumed to occur at the middle of the year, except that 100% retirement (see above) is assumed to occur at the beginning of the year.

Absolute decrement rates are assumed to be uniformly distributed throughout the year. Absolute rates were adjusted to reflect multiple decrement effects (or "probabilities").

Health Care Participation Rates[1]

FUTURE RETIREES

80% of retirees and disabled members, are assumed to participate. Of those participating, the percentage of future retirees, disabled members, and surviving spouses assumed to enroll in the coverage options available on January 1, 2018 are as follows (adopted December 31, 2017):

	Assumed Annual Election Rates	
Pre-Medicare Health Plan Coverage Option	Grandfathered Employees[2]	Non-Grandfathered Employees
HealthKeepers HMO 90/10 Plan	50.00%	N/A
KeyCare (PPO) Plan	30.00%	N/A
HealthKeepers HMO OA 80/20 Plan	20.00%	100%

CURRENT RETIREES

All current retirees and surviving spouses are assumed to continue current coverage until they are no longer eligible to participate.

Spouse Health Care Coverage Elections[1]

FUTURE RETIREES

25% of future participating retirees are assumed to elect coverage for their spouses (adopted December 31, 2017).

CURRENT RETIREES

All current covered spouses are assumed to continue current coverage until they are no longer eligible to participate.

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[1] Long-term health care participation and spouse coverage election rates are uncertain and future experience may differ significantly from the assumptions that were used to measure Plan obligations as of December 31, 2018. As such, these assumptions will need to be reviewed as experience evolves, and the results provided in this report should be viewed as having a likely range of variability.

[2] Employees who were hired on or before November 15, 2017.

Marital and Spouse Assumptions

For Participants Who Are Not Receiving Benefits

100% of participants are assumed to be married to a spouse of the opposite gender. Husbands are assumed to be two years older than their wives.

For Participants Who Are Receiving Benefits

Actual spouse age is used where available. If relevant spouse information is not available, husbands are assumed to be two years older than their wives.

Valuation Date

December 31, 2017

Measurement Date

December 31, 2018

Measurement Period

January 1, 2018 to December 31, 2018

Benefits Not Valued

Former employees and dependents not eligible for benefits under the terms of the Plan may be eligible for coverage under COBRA. Likewise, some eligible former employees and their dependents may be able to elect to continue dental coverage under COBRA. We have assumed that liabilities for these benefits are accounted for under GASB Statement No. 10, "*Accounting and Financial Reporting for Risk Financing and Related Insurance Issues*". As a result, no pre-retirement death or withdrawal benefit liabilities, or dental benefit liabilities, are included in the Plan's financial accounting results as of December 31, 2018.

Other Assumptions and Methods

Unless otherwise stated above, all other actuarial assumptions and methods are the same as those used for the purpose of preparing the Schools' financial accounting results as of December 31, 2017.

Changes in Financial Accounting Assumptions and Methods Since the Prior Valuation

The December 31, 2017 measurements used in the development of December 31, 2018 financial accounting results for the Plan reflect the following changes in assumptions and methods:

PRESCRIBED CHANGES

- The Schools selected the 4.10% Municipal Bond Index Rate as of the Measurement Date based on the 20-Bond average General Obligation 20-year Municipal Bond Rate published at the end of the last week during the month of December by The Bond Buyer (www.bondbuyer.com), and prescribed it for use in determining the Plan's discount rate under GASB accounting rules as of the Measurement Date; and,
- In late 2018, the Society of Actuaries' (SOA) Retirement Plans Experience Committee (RPEC) released an exposure draft of the Pub–2010 Public Retirement Plans Mortality Tables report, which represents a comprehensive review of the recent mortality experience of public postretirement plans in the United States. RPEC collected data from 35 different public pension systems that collectively submitted information for 78 plans for calendar years 2008 through 2013. The final Pub–2010 tables were released in January 2019 and are based on approximately 46 million life-years of exposure and 580 thousand deaths from public pension systems across the United States. According to the final report, "the Committee believes that for most pension-related actuarial applications, the Pub–2010 mortality rates (including those for Disabled Retirees) should be projected with an appropriate mortality improvement scale, and that generational projection should be considered as an approach to projecting future mortality rates."

  As a result, the mortality rates selected as of the Measurement Date are based on the amount-weighted Pub–2010 mortality tables with generationally projected mortality improvements using Scale MP–2018. Generationally projected healthy and disabled mortality rates reflect differences for males and females, and for general and teacher/professional employment classifications. The assumed rates of mortality for healthy and disabled lives, rates of mortality improvement, and the mortality improvement projection method were updated to better reflect anticipated plan experience.

The aggregate effect of the changes described above was an increase in the Plan's Total OPEB Liability and Service Cost measured as of December 31, 2018.

TABLE 1

Retirement Rates—General Employee Plan 1 Members—Males (July 1, 2017)

	Years of Service						
Age	0–4	5	6–9	10	11–29	30	31+
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.050	0.050	0.100	0.100
51	0.000	0.000	0.000	0.055	0.040	0.100	0.080
52	0.000	0.000	0.000	0.055	0.040	0.100	0.080
53	0.000	0.000	0.000	0.055	0.040	0.100	0.080
54	0.000	0.000	0.000	0.055	0.040	0.100	0.100
55	0.000	0.055	0.055	0.055	0.050	0.140	0.100
56	0.000	0.055	0.050	0.050	0.050	0.140	0.100
57	0.000	0.090	0.055	0.055	0.055	0.110	0.100
58	0.000	0.090	0.055	0.055	0.055	0.110	0.100
59	0.000	0.100	0.055	0.055	0.055	0.120	0.100
60	0.000	0.100	0.060	0.060	0.060	0.120	0.100
61	0.000	0.150	0.100	0.100	0.100	0.250	0.220
62	0.000	0.130	0.170	0.170	0.170	0.350	0.300
63	0.000	0.130	0.150	0.150	0.150	0.200	0.250
64	0.000	0.200	0.150	0.150	0.150	0.270	0.250
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE 2

Retirement Rates—General Employee Plan 1 Members—Females (July 1, 2017)

	Years of Service						
Age	0–4	5	6–9	10	11–29	30	31+
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.055	0.055	0.060	0.060
51	0.000	0.000	0.000	0.055	0.040	0.060	0.100
52	0.000	0.000	0.000	0.055	0.045	0.060	0.100
53	0.000	0.000	0.000	0.055	0.045	0.120	0.100
54	0.000	0.000	0.000	0.055	0.045	0.120	0.100
55	0.000	0.070	0.070	0.070	0.055	0.120	0.100
56	0.000	0.060	0.055	0.055	0.055	0.120	0.100
57	0.000	0.060	0.055	0.055	0.055	0.100	0.100
58	0.000	0.060	0.055	0.055	0.055	0.100	0.100
59	0.000	0.060	0.055	0.055	0.055	0.150	0.100
60	0.000	0.085	0.075	0.075	0.075	0.150	0.100
61	0.000	0.085	0.075	0.075	0.075	0.200	0.175
62	0.000	0.190	0.170	0.170	0.170	0.200	0.250
63	0.000	0.110	0.150	0.150	0.150	0.200	0.250
64	0.000	0.110	0.150	0.150	0.150	0.250	0.150
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE 3

Retirement Rates—General Employee Plan 2 and Hybrid Plan Members—Males (July 1, 2017)

	Years of Service																	
Age	0–4	5	6–25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.100	0.100	0.100
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.140	0.100	0.100	0.100	0.100
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.140	0.100	0.100	0.100	0.100	0.100
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.110	0.100	0.100	0.100	0.100	0.100	0.100
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.110	0.100	0.100	0.100	0.100	0.100	0.100	0.100
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.120	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
60	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.120	0.120	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
61	0.000	0.150	0.100	0.100	0.100	0.100	0.250	0.250	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
62	0.000	0.130	0.170	0.170	0.170	0.350	0.350	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
63	0.000	0.130	0.150	0.150	0.200	0.200	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
64	0.000	0.200	0.150	0.270	0.270	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE 4

Retirement Rates—General Employee Plan 2 and Hybrid Plan Members—Females (July 1, 2017)

	Years of Service																	
Age	0–4	5	6–25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.060
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.060	0.100
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.120	0.100	0.100
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.120	0.100	0.100	0.100
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.120	0.100	0.100	0.100	0.100
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.120	0.100	0.100	0.100	0.100	0.100
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.150	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
60	0.000	0.085	0.085	0.085	0.085	0.085	0.085	0.150	0.150	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
61	0.000	0.085	0.075	0.075	0.075	0.075	0.200	0.200	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175
62	0.000	0.190	0.170	0.170	0.170	0.200	0.200	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
63	0.000	0.110	0.150	0.150	0.200	0.200	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
64	0.000	0.110	0.150	0.250	0.250	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE 5

Retirement Rates—Teacher and Professional Plan 1 Members—Males (July 1, 2017)

	Years of Service						
Age	0–4	5	6–9	10	11–29	30	31+
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.020	0.020	0.175	0.175
51	0.000	0.000	0.000	0.020	0.020	0.175	0.150
52	0.000	0.000	0.000	0.020	0.020	0.175	0.150
53	0.000	0.000	0.000	0.020	0.020	0.175	0.150
54	0.000	0.000	0.000	0.040	0.035	0.175	0.150
55	0.000	0.070	0.070	0.070	0.045	0.225	0.150
56	0.000	0.070	0.045	0.045	0.045	0.225	0.150
57	0.000	0.070	0.045	0.045	0.045	0.225	0.150
58	0.000	0.070	0.060	0.060	0.060	0.225	0.150
59	0.000	0.100	0.060	0.060	0.060	0.225	0.150
60	0.000	0.100	0.070	0.070	0.070	0.225	0.150
61	0.000	0.110	0.085	0.085	0.085	0.300	0.250
62	0.000	0.170	0.150	0.150	0.150	0.350	0.350
63	0.000	0.140	0.150	0.150	0.150	0.350	0.250
64	0.000	0.180	0.150	0.150	0.150	0.350	0.250
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE 6

Retirement Rates—Teacher and Professional Plan 1 Members—Females (July 1, 2017)

	Years of Service						
Age	0–4	5	6–9	10	11–29	30	31+
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.024	0.024	0.150	0.150
51	0.000	0.000	0.000	0.035	0.020	0.150	0.100
52	0.000	0.000	0.000	0.035	0.025	0.150	0.100
53	0.000	0.000	0.000	0.035	0.025	0.150	0.100
54	0.000	0.000	0.000	0.040	0.030	0.150	0.100
55	0.000	0.060	0.060	0.060	0.050	0.225	0.160
56	0.000	0.060	0.050	0.050	0.050	0.225	0.160
57	0.000	0.060	0.050	0.050	0.050	0.225	0.160
58	0.000	0.070	0.050	0.050	0.050	0.225	0.160
59	0.000	0.080	0.060	0.060	0.060	0.225	0.200
60	0.000	0.090	0.080	0.080	0.080	0.225	0.200
61	0.000	0.150	0.100	0.100	0.100	0.300	0.250
62	0.000	0.150	0.150	0.150	0.150	0.350	0.300
63	0.000	0.150	0.150	0.150	0.150	0.350	0.300
64	0.000	0.250	0.150	0.150	0.150	0.350	0.300
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE 7

Retirement Rates—Teacher and Professional Plan 2 and Hybrid Plan Members—Males (July 1, 2017)

	Years of Service																	
Age	**0–4**	**5**	**6–25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40+**
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175	0.175
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175	0.175	0.150
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175	0.175	0.150	0.150
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175	0.175	0.150	0.150	0.150
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.150	0.150	0.150	0.150
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.150	0.150	0.150	0.150	0.150
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.150	0.150	0.150	0.150	0.150	0.150
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.150	0.150	0.150	0.150	0.150	0.150	0.150
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
60	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.225	0.225	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
61	0.000	0.110	0.085	0.085	0.085	0.085	0.300	0.300	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
62	0.000	0.170	0.150	0.150	0.150	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350
63	0.000	0.140	0.150	0.150	0.350	0.350	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
64	0.000	0.180	0.150	0.350	0.350	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

TABLE 8

Retirement Rates—Teacher and Professional Plan 2 and Hybrid Plan Members—Females (July 1, 2017)

	Years of Service																	
Age	**0–4**	**5**	**6–25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40+**
Under 49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.150
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.150	0.100
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.150	0.100	0.100
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	0.150	0.100	0.100	0.100
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.160	0.160	0.160	0.160
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.160	0.160	0.160	0.160	0.160
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.160	0.160	0.160	0.160	0.160	0.160
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.160	0.160	0.160	0.160	0.160	0.160	0.160
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.225	0.225	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
60	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.225	0.225	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
61	0.000	0.150	0.100	0.100	0.100	0.100	0.300	0.300	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
62	0.000	0.150	0.150	0.150	0.150	0.350	0.350	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
63	0.000	0.150	0.150	0.150	0.350	0.350	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
64	0.000	0.250	0.150	0.350	0.350	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
65 +	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Schedule C — Actuarial Cost and Asset Valuation Methods

Actuarial Cost Method

The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.50%), of each member's expected benefits at retirement or disability is determined, based upon age, service, and gender. The calculations take into account the probability of a member's death or termination of employment prior to receiving benefits under the Plan. The present value of the expected benefits payable on account of active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable by the Plan.

The actuarial cost method is a procedure for allocating the actuarial present value of postemployment benefits and expenses to time periods. The method used for the valuation is known as the Entry Age Normal (Level Percentage of Pay) actuarial cost method, and has the following characteristics:

(i) The annual normal costs for each individual active participant are sufficient to accumulate the value of the participant's postemployment benefits at time of retirement.

(ii) Each annual normal cost is a constant percentage of the participant's year-by-year projected covered compensation.

The Entry Age Normal (Level Percentage of Pay) actuarial cost method allocates the actuarial present value of each participant's projected benefits on a level basis over the participant's assumed compensation rates between the entry age of the participant and the assumed ages at which the participant will leave active service.

The portion of the actuarial present value allocated to the valuation year is called the service cost (SC). The portion of the actuarial present value of expected benefits not provided for by the actuarial present value of future service costs is called the Total OPEB Liability (TOL). The difference between the TOL and the Plan Fiduciary Net Position (PFNP) is the Net OPEB Liability / (Asset) (NOL).

The actuarial cost method is prescribed by GASB 74 and 75 for financial accounting purposes.

Asset Valuation Method

The Actuarial Asset Value for financial accounting purposes is equal to the Plan Fiduciary Net Position (PFNP)—the market value of the financial accounting asset—on the measurement date.

The asset valuation method is prescribed by GASB 74 and 75 for financial accounting purposes.

Changes in Actuarial Cost and Asset Valuation Methods Since the Previous Valuation

There were no changes in actuarial cost or asset valuation methods since the previous valuation.

Schedule D — Summary of Main Plan Provisions for Valuation Purposes

This summary of main plan provisions is intended to describe only the principal features of the Suffolk Public Schools Other Postemployment Benefits Plan (the Plan), a single employer defined benefit OPEB plan sponsored by the Suffolk, Virginia Public Schools (the Schools). All actual eligibility requirements and benefit amounts will be determined in accordance with the plan document and any Schools practices, processes, and procedures.

Key Plan Terms

PREMIUM COST
The Schools determined monthly premiums for employee, employee plus spouse, employee plus a dependent child, and employee plus family coverage that are expected to insure all anticipated medical and prescription drug claims and administrative expenses for all enrolled active employees, pre-Medicare-eligible retirees, and dependents for each coverage option under the Plan.

VRS
Virginia Retirement System

VRS PLAN 1
The benefit structure available to VRS members whose participation started prior to July 1, 2010 and who were vested as of January 1, 2013.

VRS PLAN 2
The benefit structure available to VRS members whose participation started on or after July 1, 2010 but before January 1, 2014, or members whose participation started prior to July 1, 2010 but were not vested as of January 1, 2013. Members whose participation started after January 1, 2014 in Political Subdivisions with Enhanced Hazardous Duty Benefit Coverage are also in Plan 2.

VRS HYBRID PLAN
The benefit structure available to VRS members whose participation started on or after January 1, 2014 in Political Subdivisions with General Employee Pension Benefit Coverage. Members in Plan 1 or Plan 2 who elected to "opt-in" during the election window that opened on January 1, 2014 and closed on April 30, 2014, are also in the Hybrid Plan.

Eligibility for Postretirement Health Care Benefits

Participants in the Suffolk Public Schools OPEB Plan are eligible for Plan benefits if the member has met the eligibility criteria for full regular or disability retirement under VRS rules, the member has been continuously enrolled in the Schools' active group health plan during the 24 month period immediately preceding his or her retirement date, and the member has satisfied the following service-based requirement when he or she retires:

- Members must have at least 20 years of service with the Schools.

The applicable VRS eligibility criteria for service and disability retirement benefits are summarized below.

DISABILITY RETIREMENT

Plan 1 and Plan 2 Eligibility—On or after the first day of employment.

Hybrid Plan Eligibility—On or after the first day of employment for work-related disability benefits. Otherwise, the member must have at least one year of service credit to be eligible for non-work related disability benefits.

EARLY RETIREMENT

Plan 1 Eligibility—On or after age 50 with at least ten years of service credit, or on or after age 55 with at least five years of service credit.

Plan 2 and Hybrid Plan Eligibility—On or after age 60 with at least five years of service credit, or any retirement date after the date on which the sum of the member's age and service is greater than or equal to 90 years ("Rule of 90").

NORMAL RETIREMENT

Plan 1 Eligibility—On or after age 65 with at least five years of service credit.

Plan 2 and Hybrid Plan Eligibility—On or after attaining Social Security Normal Retirement Age with at least five years of service credit.

Postemployment Medical and Prescription Drug Benefits

BEFORE MEDICARE ELIGIBILITY

Medical and prescription drug coverage under the Schools' active group health insurance plan is provided to eligible retirees until they become eligible for Medicare (typically, when they reach age 65). After the initial enrollment at retirement, retirees may elect the same coverage and tier, or a lower cost coverage or tier, in subsequent years. Generally speaking, retirees cannot elect a higher cost coverage or tier after enrolling in a lower cost coverage option.

The Schools amended the Plan on November 15, 2017 to remove the Anthem HealthKeepers HMO 90/10 Plan and Anthem KeyCare (PPO) Plan enrollment options at retirement for all employees who are hired after that date (Non-Grandfathered Employees). Employees who were hired on or before November 15, 2017 (Grandfathered Employees) may choose from the available medical and prescription drug options under the Plan at retirement. However, if they choose (or later enroll in) a "non-grandfathered coverage option", they cannot enroll (or re-enroll) in the Anthem HealthKeepers HMO 90/10 Plan or the Anthem KeyCare (PPO) Plan coverage options in any subsequent year.

AFTER MEDICARE ELIGIBILITY

Coverage for retirees, spouses, and dependents ends at the earlier of each individual's attainment of age sixty-five, or eligibility for Medicare, whichever comes first.

Spouse and Dependent Coverage

Eligible retirees may continue dependent coverage (and pay the full premium for this coverage) if the dependent is not eligible for Medicare, and the member elects coverage for the dependent when he or she enrolls in the Plan at retirement.

Spouses and dependents of retirees are eligible to participate in the Plan as long as the retiree's coverage has never terminated or lapsed at any point in time following the date that the employee retired or became disabled, and the spouse has not reached age 65.

Retiree Contributions[1]

Eligible retirees who are not eligible for Medicare and elect to enroll in a health care coverage option under the Plan contribute a monthly amount based on the coverages that they selected. The Schools contributes an amount equal to 50% of the current Schools contribution for the Anthem HealthKeepers HMO 90/10 Plan. As of January 1, 2018, this amount is $325.50 per month. Retirees are responsible for the remaining retiree only premium cost and the full premium cost for the benefits applicable to their dependents.

The following tables provide the full monthly health care premium costs and contributions as of January 1, 2018 for retirees, spouses, and dependents who have not reached a Medicare-eligible age:

Monthly Contributions for the Anthem HealthKeepers HMO 90/10 Plan			
Coverage Tier	Retiree Contribution	Schools Contribution	Total Premium Cost
▪ Employee	$ 325.50	$ 325.50	$ 651.00
▪ Employee + One	$ 986.50	$ 325.50	$1,312.00
▪ Family	$1,519.50	$ 325.50	$1,845.00

Monthly Contributions for the Anthem KeyCare (PPO) Plan			
Coverage Tier	Retiree Contribution	Schools Contribution	Total Premium Cost
▪ Employee	$ 399.50	$ 325.50	$ 725.00
▪ Employee + One	$1,167.50	$ 325.50	$1,493.00
▪ Family	$1,774.50	$ 325.50	$2,100.00

Monthly Contributions for the Anthem HealthKeepers HMO POS OA 80/20 Plan			
Coverage Tier	Retiree Contribution	Schools Contribution	Total Premium Cost
▪ Employee	$ 254.50	$ 325.50	$ 580.00
▪ Employee + One	$ 846.50	$ 325.50	$1,172.00
▪ Family	$1,313.50	$ 325.50	$1,639.00

Changes in Plan Provisions Since the Previous Valuation

There were no changes in the Plan's benefit provisions during the measurement period ending on December 31, 2018.

1 Retiree contributions were trended to the December 31, 2018 measurement date using the applicable 7.00% (HMO / POS) or 7.50% (PPO) trend rate for the year beginning on January 1, 2018 and ending on December 31, 2018.