# Estero Fire Rescue Firefighters' Retirement Plan

Actuarial Valuation As of October 1, 2022

Determines the Contribution For the 2023/24 Fiscal Year



		Page
Discussion		1
Table I-B Table I-C Table I-D Table I-E Table I-F	Minimum Required Contribution Sensitivity Analysis Gain and Loss Analysis Present Value of Future Benefits Present Value of Accrued Benefits Present Value of Vested Benefits Entry Age Normal Accrued Liability	I-1 I-3 I-4 I-5 I-6 I-7
Accounting Res GASB 67/68 Sup	sults oplement as of September 30, 2022	
Table II-B Table II-C Table II-D Table II-E Table II-F	Actuarial Value of Assets Market Value of Assets Investment Return Asset Reconciliation Historical Trust Fund Detail Other Reconciliations Historical Chapter 175/185 Contributions	-1   -2   -3   -4   -5   -6   -7
Table III-B Table III-C Table III-D Table III-E Table III-F	Summary of Participant Data Data Reconciliation Active Participant Data Active Age-Service Distribution Active Age-Service-Salary Table Inactive Participant Data Projected Benefit Payments	-1    -2    -3    -4    -5    -6
	umptions Summary of Actuarial Methods and Assumptions Changes in Actuarial Methods and Assumptions	IV-1 IV-4
	: Summary of Plan Provisions Summary of Plan Amendments	V-1 V-5



February 12, 2023

### Introduction

This report presents the results of the October 1, 2022 actuarial valuation of the Estero Fire Rescue Firefighters' Retirement Plan. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2022 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2023/24 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an <u>estimate</u> of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the minimum required contribution rate.

### Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2023/24 plan year. The minimum required contribution rate is 16.78% of covered payroll, which represents an increase of 2.12% of payroll from the prior valuation.

The normal cost rate is 16.78%, which is 2.08% greater than the normal cost rate that was developed in the prior valuation. Table I-C provides a breakdown of the sources of change in the normal cost rate. Significantly, the rate increased by 1.67% of payroll due to investment shortfalls and increased by another 0.41% of payroll due to demographic experience. Although the market value of assets lost 13.27% during the 2021/22 plan year, the actuarial value of assets is based on a five-year phase-in of the unexpected investment gains and losses. On this basis, the actuarial value of



assets earned 5.06% during the 2021/22 plan year, whereas a 6.80% annual investment return was required to maintain a stable contribution rate.

Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the District must contribute an amount equal to the annual normal cost of the plan plus an adjustment as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the District's 2023/24 minimum required contribution will be equal to 16.78% multiplied by the total pensionable earnings for the 2023/24 plan year for the active employees who are covered by the plan and reduced by the portion of the Chapter 175/185 contribution that is allowed to be recognized during the 2023/24 plan year. As of the date of this report, the allowable portion of the Chapter 175/185 contribution is \$267,811 per year.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$46,913,125. As illustrated in Table I-A, current assets are sufficient to cover \$39,232,070 of this amount, the employer's 2022/23 expected contribution will cover \$795,514 of this amount, the employer's 2023/24 expected contribution will cover \$915,702 of this amount, and future employee contributions are expected to cover \$1,165,253 of this amount, leaving \$4,768,586 to be covered by future employer funding beyond the 2023/24 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

### Advance Employer Contribution

The District has made contributions to the plan in excess of the minimum amount that was required to be contributed pursuant to Chapter 112. In this report, the excess contributions are referred to as an "advance employer contribution." As of October 1, 2022, the advance employer contribution is \$460,858, which reflects the advance employer contribution of \$472,930 as of October 1, 2021 minus \$12,072 to cover actual employer contributions which were less than the minimum required contribution for the 2021/22 plan year as shown in Table II-F.

The District may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2022/23 plan year or for any later plan year. The minimum required contribution for that plan year will be reduced dollar-for-dollar by the amount of the advance employer contribution that is applied in this manner.

Alternatively, at any time, the District may apply all or any portion of the advance employer contribution as an <u>extra</u> contribution in excess of the minimum required contribution. In this case, the immediate application of the entire balance of the advance employer contribution as of October 1, 2022 would reduce the normal cost rate to 15.59% of payroll and would reduce the minimum required contribution for the 2023/24 plan year to 15.53% of payroll.

#### Identification and Assessment of Risk

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an <u>estimate</u> of the



true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, there is always a risk that, should these assumptions not be realized, the liabilities of the plan, the contributions required to fund the plan, and the funded status of the plan may be significantly different than the amounts shown in this report.

Although a thorough analysis of the risk of not meeting the assumptions is beyond the scope of this report, this discussion is intended to identify the significant risks faced by the plan. In some cases, a more detailed review of the risks, including numerical analysis, may be appropriate to help the plan sponsor and other interested parties assess the specific impact of not realizing certain assumptions. For example, Table I-B illustrates the impact that alternative long-term investment returns would have on the contribution rate. Note that this report is not intended to provide advice on the management or reduction of the identified risks nor is this report intended to provide investment advice.

The most significant risk faced by most defined benefit pension plans is investment risk, i.e. the risk that long-term investment returns will be less than assumed. Other related risks include a risk that, if the investments of the plan decline dramatically over a short period of time (such as occurred with many pension plans in 2008), the plan's assets may not have sufficient time to recover before benefits become due. Even if the assets of the plan grow in accordance with the assumed investment return over time, if benefit payments are expected to be large in the short-term (for example, if the plan provides an actuarial equivalent lump sum payment option and a large number of participants are expected to become entitled to such a lump sum in the near future), the plan's assets may not be sufficient to support such a high level of benefit payments. We have provided a 10-year projection of the expected benefit payments in Table III-G to help the Trustees in formulating an investment policy that is expected to provide an investment return that meets both the short- and long-term cash flow needs of the pension plan.

Another source of risk is demographic experience. This is the risk that participants will receive salary increases that are different than the amount assumed, that participants will retire, become disabled, or terminate their employment at a rate that is different than assumed, and that participants will live longer than assumed, just to cite a few examples of the demographic risk faced by the plan. Although for most pension plans, the demographic risk is not as significant as the investment risk, particularly in light of the fact that the mortality assumption includes a component for future life expectancy increases, the demographic risk can nevertheless be a significant contributing factor to liabilities and contribution rates that become higher than anticipated.

A third source of risk is the risk that the plan sponsor (or other contributing entities) will not make, or will not have the ability to make, the contributions that are required to keep the plan funded at a sufficient level. Material changes in the number of covered employees, covered payroll, and, in some cases, hours worked by active participants can also significantly impact the plan's liabilities and the level of contributions received by the plan.

Finally, an actuarial funding method has been used to allocate the gap between projected liablities and assets to each year in the future. The contribution rate under some funding methods is higher during the early years of the plan and then is lower during the later years of the plan. Other funding methods provide for lower contribution rates initially, with increasing contribution rates over time.



The Trustees have adopted the aggregate funding method for this plan, which is expected to result in a contribution rate that is level as a percentage of payroll over the working life of the plan's active participants. A brief description of the actuarial funding method is provided in Table IV-A.

#### Contents of the Report

Tables I-D through I-G provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on the market value of assets, adjusted to reflect a five-year phase-in of the net investment gains and losses. Tables III-A through III-G provide statistical information concerning the plan's participant population. In particular, Table III-G gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of October 1, 2022, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

#### Certification

This actuarial valuation was prepared by me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate and, in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,

Charles J. Carryling

Charles T. Carr Consulting Actuary Southern Actuarial Services Company, Inc.

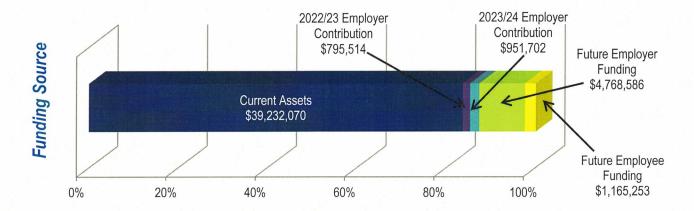
Enrolled Actuary No. 20-04927

The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



# Minimum Required Contribution

### Table I-A



### For the 2023/24 Plan Year

Present Value of Future Benefits	\$46,106,265
Present Value of Future Administrative Expenses	\$806,860
Actuarial Value of Assets	(\$39,232,070)
Present Value of Future Employee Contributions	(\$1,165,253)
Present Value of Future Normal Costs	\$6,515,802
Present Value of Future Payroll	÷ \$38,841,834
Normal Cost Rate	= 16.7752%
Expected Payroll_	x \$5,426,428
Normal Cost	\$910,295
Adjustment to Reflect Bi-Weekly Employer Contributions	\$31,462
Expected Employer Contribution for the 2022/23 Plan Year	(\$795,514)
Remaining Contribution Due/(Credit) for the 2022/23 Plan Year	\$146,243
	x 0.068
One Year's Interest Charge/(Credit) on the Remaining Contribution	\$9,945
Preliminary Employer Contribution for the 2023/24 Plan Year	\$951,702
Expected Payroll for the 2023/24 Plan Year	÷ \$5,670,617

(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)

Minimum Required Contribution Rate

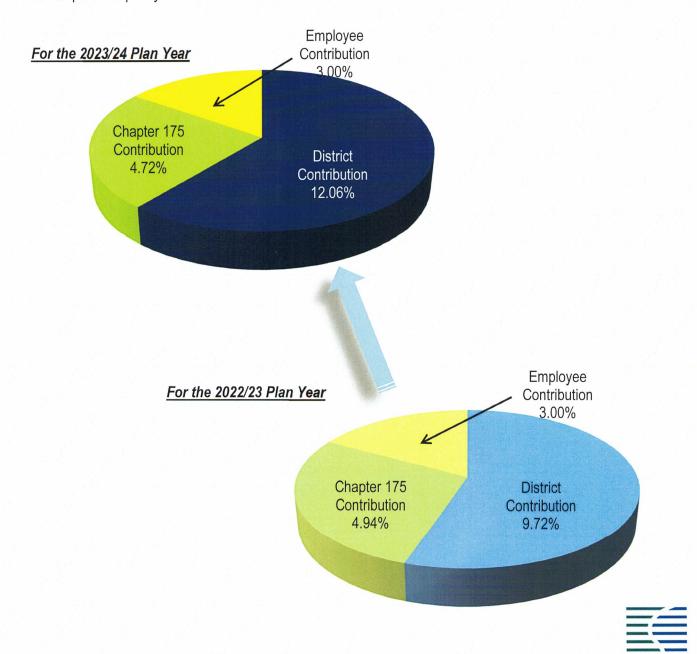


16.78%

### Minimum Required Contribution

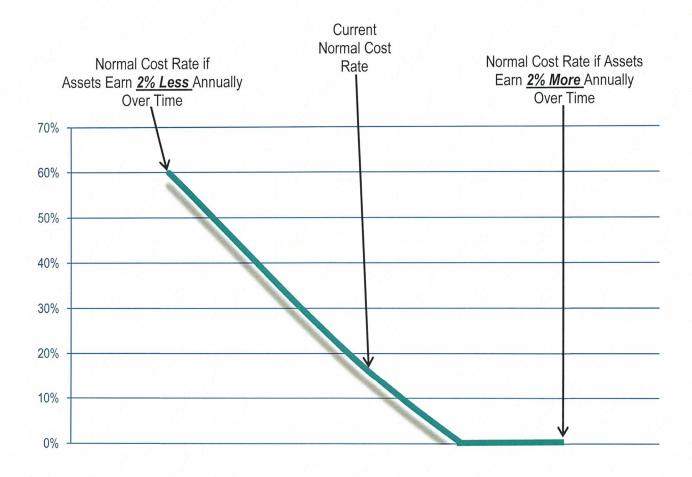
# Table I-A *(continued)*

The minimum required contribution rate of 16.78% includes both the District contribution and the allowable Chapter 175 contribution. In addition, employees are required to contribute 3.00% of pensionable earnings. The actual District contribution rate is expected to be approximately 12.06% based on the allowable Chapter 175 contribution for the previous year. The chart below shows the expected contribution rate by source for the 2023/24 plan year based on the expected payroll. A comparative chart shows the contribution rate by source for the previous plan year.



# Sensitivity Analysis

Table I-B



The line above illustrates the sensitivity of the normal cost rate to changes in the long-term investment return.



# Gain and Loss Analysis

# Table I-C

Previous normal cost rate	14.70%
Increase (decrease) due to investment gains and losses Increase (decrease) due to demographic experience	1.67% 0.41%
Increase (decrease) due to plan amendments Increase (decrease) due to actuarial assumption changes Increase (decrease) due to actuarial method changes	0.00% 0.00% 0.00%
Current normal cost rate	16.78%



# Present Value of Future Benefits

# Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$32,016,569	\$32,016,569	\$32,016,569
Termination benefits	\$2,152,672	\$2,152,672	\$2,152,672
Disability benefits	\$1,367,140	\$1,367,140	\$1,367,140
Death benefits	\$131,300	\$131,300	\$131,300
Refund of employee contributions	\$70,221	\$70,221	\$70,221
Sub-total	\$35,737,902	\$35,737,902	\$35,737,902
Deferred Vested Participants			
Retirement benefits	\$449,459	\$449,459	\$449,459
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$449,459	\$449,459	\$449,459
Due a Refund of Contributions	\$26,909	\$26,909	\$26,909
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
Retired Participants			
Service retirements	\$4,416,785	\$4,416,785	\$4,416,785
Disability retirements	\$1,315,596	\$1,315,596	\$1,315,596
Beneficiaries receiving	\$59,982	\$59,982	\$59,982
DROP participants	\$4,099,632	\$4,099,632	\$4,099,632
Sub-total	\$9,891,995	\$9,891,995	\$9,891,995
Grand Total	<u>\$46,106,265</u>	<u>\$46,106,265</u>	<u>\$46,106,265</u>
Present Value of Future Payroll	\$38,841,834	\$38,841,834	\$38,841,834
Present Value of Future Employee Contribs.	\$1,165,253	\$1,165,253	\$1,165,253
Present Value of Future Employer Contribs.	\$6,515,802	\$6,515,802	\$6,515,802



# Present Value of Accrued Benefits

# Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$18,184,107	\$18,184,107	\$18,184,107
Termination benefits	\$1,255,373	\$1,255,373	\$1,255,373
Disability benefits	\$900,241	\$900,241	\$900,241
Death benefits	\$77,759	\$77,759	\$77,759
Refund of employee contributions	\$38,445	\$38,445	\$38,445
Sub-total	\$20,455,925	\$20,455,925	\$20,455,925
Deferred Vested Participants			
Retirement benefits	\$449,459	\$449,459	\$449,459
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$449,459	\$449,459	\$449,459
Due a Refund of Contributions	\$26,909	\$26,909	\$26,909
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
Retired Participants			
Service retirements	\$4,416,785	\$4,416,785	\$4,416,785
Disability retirements	\$1,315,596	\$1,315,596	\$1,315,596
Beneficiaries receiving	\$59,982	\$59,982	\$59,982
DROP participants	\$4,099,632	\$4,099,632	\$4,099,632
Sub-total	\$9,891,995	\$9,891,995	\$9,891,995
Grand Total	<u>\$30,824,288</u>	<u>\$30,824,288</u>	\$30,824,288
<u>Funded Percentage</u>	115.05%	115.05%	115.05%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)



# Present Value of Vested Benefits

# Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$17,576,037	\$17,576,037	\$17,576,037
Termination benefits	\$1,116,843	\$1,116,843	\$1,116,843
Disability benefits	\$900,241	\$900,241	\$900,241
Death benefits	\$69,984	\$69,984	\$69,984
Refund of employee contributions	\$61,757	\$61,757	\$61,757
Sub-total	\$19,724,862	\$19,724,862	\$19,724,862
Deferred Vested Participants			
Retirement benefits	\$449,459	\$449,459	\$449,459
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$449,459	\$449,459	\$449,459
Due a Refund of Contributions	\$26,909	\$26,909	\$26,909
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
Retired Participants			
Service retirements	\$4,416,785	\$4,416,785	\$4,416,785
Disability retirements	\$1,315,596	\$1,315,596	\$1,315,596
Beneficiaries receiving	\$59,982	\$59,982	\$59,982
DROP participants	\$4,099,632	\$4,099,632	\$4,099,632
Sub-total	\$9,891,995	\$9,891,995	\$9,891,995
Grand Total	\$30,093,225	\$30,093,225	\$30,093,225



# Entry Age Normal Accrued Liability

# Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	\$24,844,222	\$24,844,222	\$24,844,222
Termination benefits	\$1,576,488	\$1,576,488	\$1,576,488
Disability benefits	\$1,028,063	\$1,028,063	\$1,028,063
Death benefits	\$100,308	\$100,308	\$100,308
Refund of employee contributions	\$39,943	\$39,943	\$39,943
Sub-total	\$27,589,024	\$27,589,024	\$27,589,024
Deferred Vested Participants			
Retirement benefits	\$449,459	\$449,459	\$449,459
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$449,459	\$449,459	\$449,459
Due a Refund of Contributions	\$26,909	\$26,909	\$26,909
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
Retired Participants			
Service retirements	\$4,416,785	\$4,416,785	\$4,416,785
Disability retirements	\$1,315,596	\$1,315,596	\$1,315,596
Beneficiaries receiving	\$59,982	\$59,982	\$59,982
DROP participants	\$4,099,632	\$4,099,632	\$4,099,632
Sub-total	\$9,891,995	\$9,891,995	\$9,891,995
Grand Total	<u>\$37,957,387</u>	<u>\$37,957,387</u>	<u>\$37,957,387</u>



### **Actuarial Value of Assets**

### Table II-A

<u>ized Gain (Loss)</u>	<u>Unreco</u>	tment Gain (Loss)	<u>Net Inves</u>
(\$79,706)	x 20%	(\$398,531)	For the 2018/19 plan year
(\$33,089)	x 40%	(\$82,723)	For the 2019/20 plan year
\$2,462,188	x 60%	\$4,103,646	For the 2020/21 plan year
(\$6,579,515)	x 80%	(\$8,224,394)	For the 2021/22 plan year
(\$4,230,122)			

Market Value of Assets as of October 1	, 2022	\$35,760,439
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Minus DROP account balances	(\$297,633)
Minus advance employer contributions	(\$460,858)
Minus excess Chapter 175/185 contributions	\$0

Adjustment for unrecognized gain or loss as shown above, but restricted to an amount that keeps the actuarial value of assets within an 80%-120% corridor of the market value \$4,230,122

Actuarial Value of Assets as of October 1, 2022 \$39,232,070

#### **Historical Actuarial Value of Assets** October 1, 2013 \$13,182,471 October 1, 2014 \$14,500,351 October 1, 2015 \$15,719,506 October 1, 2016 \$17,235,291 October 1, 2017 \$19,474,289 October 1, 2018 \$22,382,042 October 1, 2019 \$25,329,900 October 1, 2020 \$32,485,489 October 1, 2021 \$37,094,892 October 1, 2022 \$39,232,070

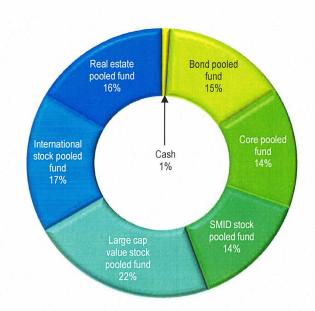


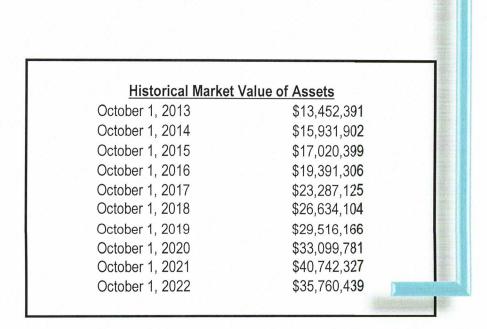
### Market Value of Assets

### Table II-B

### As of October 1, 2022

Market Value of Assets	\$35,760,439
Cash Bond pooled fund	\$357,570 \$5,327,794
Core pooled fund	\$5,184,766 \$5,005,981
SMID stock pooled fund Large cap value stock pooled fund	\$7,938,056 \$6,042,935
International stock pooled fund Real estate pooled fund Employee contribution receivable	\$5,899,906 \$3,431
Employee continuution receivable	\$5,451

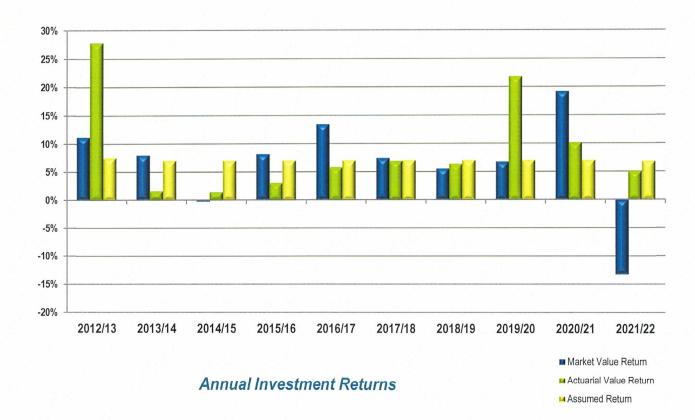






### **Investment Return**

Table II-C



	Market	Actuarial		
Plan	Value	Value	Assumed	
<u>Year</u>	Return	Return	Return	
2012/13	11.18%	27.83%	7.50%	
2013/14	7.97%	1.64%	7.00%	
2014/15	-0.25%	1.45%	7.00%	
2015/16	8.17%	3.10%	7.00%	
2016/17	13.40%	5.82%	7.00%	
2017/18	7.41%	6.90%	7.00%	
2018/19	5.54%	6.37%	7.00%	
2019/20	6.72%	21.81%	7.00%	
2020/21	19.18%	10.14%	7.00%	
2021/22	-13.27%	5.06%	6.80%	
10yr. Avg.	6.27%	8.71%	7.03%	



Asset Reconciliation		Table II-D
	Market Value	Actuarial Value
As of October 1, 2021	\$40,742,327	\$37,094,892
Increases Due To:		
Employer Contributions Chapter 175/185 Contributions Employee Contributions Share Plan Transfer Total Contributions	\$528,508 \$535,622 \$178,846 (\$267,811) \$975,165	\$528,508 \$535,622 \$178,846 (\$267,811) \$975,165
Interest and Dividends Realized Gains (Losses) Unrealized Gains (Losses) Total Investment Income	\$0 \$0 (\$5,438,642) (\$5,438,642)	\$1,885,084
Other Income	\$0	
Total Income	(\$4,463,477)	\$2,860,249
Decreases Due To:		
Monthly Benefit Payments Refund of Employee Contributions DROP Credits Total Benefit Payments	(\$446,324) \$0 (\$446,324)	(\$446,324) \$0 (\$216,732)
		(\$663,056)
Investment Expenses Administrative Expenses	\$0 (\$72,087)	(\$72,087)
Advance Employer Contribution Excess Chapter 175/185 Contribution		\$12,072 \$0
Total Expenses	(\$518,411)	(\$723,071)
As of October 1, 2022	\$35,760,439	\$39,232,070



# Historical Trust Fund Detail

# Table II-E

<u>Income</u>								
				Share		Realized	Unrealized	
Plan	Employe	er Chapter	Employee	Plan	Interest /	Gains /	Gains /	Other
Year	Contribe	Contribs.	Contribs.	<u>Transfer</u>	<u>Dividends</u>	Losses	Losses	Income
2012/13	\$2,083,34	9 \$0	\$205,447	\$0	\$0	\$0	\$1,244,635	\$0
2013/14	\$839,23	2 \$654,290	\$134,012	-\$118,668	\$0	\$0	\$1,125,520	\$0
2014/15	\$871,48	9 \$345,330	\$146,502	-\$77,519	\$0	\$0	-\$40,658	\$0
2015/16	\$754,44	7 \$325,479	\$148,229	-\$57,668	\$0	\$0	\$1,428,448	\$0
2016/17	\$1,032,00	0 \$304,597	\$156,888	-\$36,786	\$0	\$0	\$2,679,023	\$0
2017/18	\$1,380,64	8 \$300,072	\$158,408	-\$32,261	\$0	\$0	\$1,782,592	\$0
2018/19	\$1,313,29	7 \$306,612	\$157,741	-\$38,801	\$0	\$0	\$1,512,964	\$0
2019/20	\$1,437,65	3 \$347,246	\$172,685	-\$79,435	\$0	\$0	\$2,036,637	\$0
2020/21	\$1,297,19	8 \$352,673	\$178,501	-\$84,862	\$0	\$0	\$6,461,276	\$0
2021/22	\$528,50	8 \$535,622	\$178,846	-\$267,811	\$0	\$0	-\$5,438,642	\$0

Expenses					Other Ac	tuarial Adju	ustments
	Monthly					Advance	Excess
Plan	Benefit	Contrib.	Admin.	Invest.	DROP	Employer	Chapter
<u>Year</u>	<b>Payments</b>	Refunds	Expenses	Expenses	<b>Credits</b>	Contribs.	Contribs.
2012/13	\$93,875	\$0	\$42,736	\$0	\$0	-\$267,668	\$0
2013/14	\$93,875	\$8,546	\$52,454	\$0	\$0	\$261,215	\$0
2014/15	\$93,875	\$0	\$62,772	\$0	\$0	\$126,972	\$0
2015/16	\$148,046	\$15,010	\$64,972	\$0	\$0	-\$70,663	\$0
2016/17	\$159,236	\$28,277	\$52,390	\$0	\$16,534	-\$270	\$0
2017/18	\$165,996	\$0	\$76,484	\$0	\$51,622	-\$3	\$0
2018/19	\$307,120	\$0	\$62,631	\$0	-\$23,757	-\$82,529	\$0
2019/20	\$266,240	\$0	\$64,931	\$0	\$70,069	\$5,060	\$0
2020/21	\$495,759	\$0	\$66,481	\$0	-\$33,567	-\$36,772	\$0
2021/22	\$446,324	\$0	\$72,087	\$0	\$216,732	-\$12,072	\$0

Note: Information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source.



# Other Reconciliations

# Table II-F

### **DROP Account Reconciliation**

Excess Chapter 175/185 Contribution as of October 1, 2022

DROP Balance as of October 1, 2021	\$80,901
DROP Benefit Credits	\$206,467
DROP Investment Credits	\$10,265
DROP Benefits Paid Out	\$0
Net DROP Credit	\$216,732
Net Divor Great	Ψ210,702
DROP Balance as of October 1, 2022	\$297,633
Advance Employer Contribution	
Advance Employer Contribution as of October 1, 2021	\$472,930
Additional Employer Contribution	\$796,319
Minimum Required Contribution	(\$808,391)
Net Increase in Advance Employer Contribution	(\$12,072)
Advance Employer Contribution as of October 1, 2022	\$460,858
Excess Chapter 175/185 Contribution	
Excess Chapter 175/185 Contribution as of October 1, 2021	\$0
Additional Chapter 175/185 Contribution	\$535,622
Share Plan Transfer	(\$267,811)
Allowable Chapter 175/185 Contribution	(\$267,811)
Net Increase in Excess Chapter 175/185 Contribution	\$0



\$0

# Historical Chapter 175/185 Contributions

# Table II-G

	Total Accumulate	d Excess Chapter 175/	185 Contribution	\$0
	Chapter 175	Chapter 175		
	Regular	Supplemental	Chapter 185	Allowable
	Distribution	<u>Distribution</u>	<u>Distribution</u>	<u>Amount</u>
1998 Distribution	\$0	\$0	\$0	\$0
1999 Distribution	\$0	\$0	\$0	\$0
2000 Distribution	\$17,375	\$0	\$0	\$0
2001 Distribution	\$44,684	\$0	\$0	\$0
2002 Distribution	\$82,744	\$0	\$0	(\$113,193)
2003 Distribution	\$104,260	\$0	\$0	(\$53,243)
2004 Distribution	\$140,205	\$0	\$0	(\$51,134)
2005 Distribution	\$185,628	\$0	\$0	(\$51,134)
2006 Distribution	\$269,186	\$0	\$0	(\$51,134)
2007 Distribution	\$288,552	\$42,518	\$0	(\$51,134)
2008 Distribution	\$328,893	\$44,799	\$0	(\$51,134)
2009 Distribution	\$327,823	\$0	\$0	(\$51,134)
2010 Distribution	\$333,647	\$2,614	\$0	(\$267,811)
2011 Distribution	\$338,804	\$0	\$0	(\$267,811)
2013 Distribution	\$654,290	\$0	\$0	(\$535,622)
2014 Distribution	\$345,330	\$0	\$0	(\$267,811)
2015 Distribution	\$325,479	\$0	\$0	(\$267,811)
2016 Distribution	\$304,597	\$0	\$0	(\$267,811)
2017 Distribution	\$300,072	\$0	\$0	(\$267,811)
2018 Distribution	\$306,612	\$0	\$0	(\$267,811)
2019 Distribution	\$347,246	\$0	\$0	(\$267,811)
2020 Distribution	\$352,673	\$0	\$0	(\$267,811)
2021 Distribution	\$535,622	\$0	\$0	(\$267,811)
Interest Adjustment				\$2,371
Transfer to Share Plan				(\$1,149,931)
One-Time Use				(\$1,189,121)



87

# Summary of Participant Data

### Table III-A

As of October 1, 2022

Participant Distribution by Status

#### Actively Employed Participants **Active Participants** 65 **DROP** Participants 4 Inactive Participants Deferred Vested Participants 1 Due a Refund of Contributions 6 **Deferred Beneficiaries** 0 Participants Receiving a Benefit Service Retirements 7 Disability Retirements 3 Beneficiaries Receiving 1

**Total Participants** 

	of Participan					
	Active	DROP	Inactive	Retired	Total	
October 1, 2013	53	0	6	4	63	
October 1, 2014	51	0	7	4	62	
October 1, 2015	59	0	7	4	70	
October 1, 2016	60	0	5	6	71	
October 1, 2017	57	1	5	5	68	
October 1, 2018	59	1	5	6	71	
October 1, 2019	60	1	5	7	73	
October 1, 2020	63	1	6	8	78	
October 1, 2021	60	2	6	10	78	
October 1, 2022	65	4	7	11	87	F



# Data Reconciliation Table III-B

	Active	DROP	Deferred Vested	Due a Refund	Def. Benef.	Service Retiree	Disabled Retiree	Benef. Rec'v.	Total
	7101170								
October 1, 2021	60	2	1	5	0	7	3	0	78
Change in Status Re-employed Terminated Retired	(1) (1)			1		1			
Participation Ended Transferred Out Cashed Out Died	(2)	2				(1)			(1)
Participation Began Newly Hired Transferred In New Beneficiary	9							1	9
Other Adjustment	05					_			
<u>October 1, 2022</u>	65	4	1	6	0	7	3	1	87



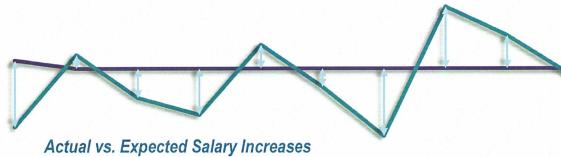
# Active Participant Data

### Table III-C

### As of October 1, 2022



Average Age	40.2 years
Average Service	11.4 years
Total Annualized Compensation for the Prior Year	\$6,003,133
Total Expected Compensation for the Current Year	\$5,426,428
Average Increase in Compensation for the Prior Year	4.12%
Expected Increase in Compensation for the Current Year	4.50%
Accumulated Contributions for Active Employees	\$1,878,081



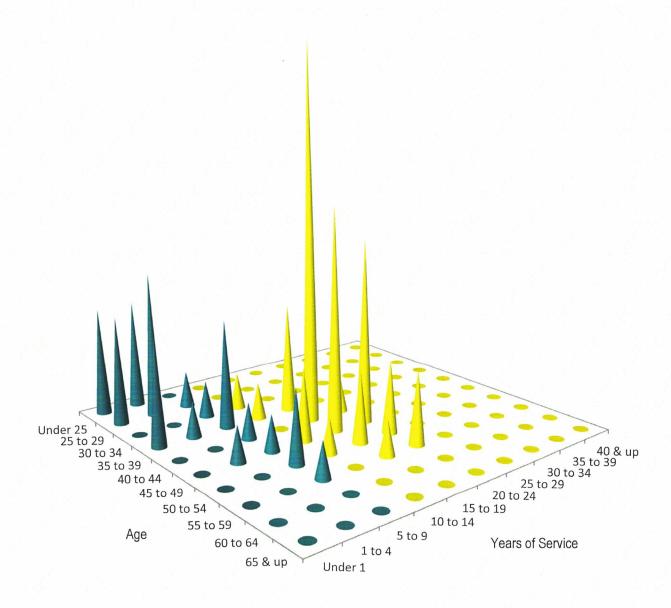
### **Active Participant Statistics From Prior Valuations**

				Average Expected	Average Actual	
	Average	Average	Average	Salary	Salary	
	Age	Service	Salary	Increase	Increase	
October 1, 2013	38.4	8.9	\$81,233	5.11%	0.25%	
October 1, 2014	39.1	9.5	\$85,793	4.50%	5.50%	
October 1, 2015	38.6	9.4	\$81,492	4.50%	2.37%	
October 1, 2016	40.0	10.1	\$82,872	4.50%	1.15%	
October 1, 2017	41.1	11.2	\$89,329	4.50%	6.22%	
October 1, 2018	41.6	11.5	\$89,582	4.50%	3.17%	
October 1, 2019	41.8	12.0	\$87,172	4.50%	-0.37%	
October 1, 2020	41.3	12.1	\$91,329	4.50%	8.95%	
October 1, 2021	41.7	12.6	\$96,973	4.50%	6.88%	
October 1, 2022	40.2	11.4	\$92,356	4.50%	4.12%	



# Active Age-Service Distribution

### Table III-D



Eligible to retire

May be eligible to retire

▲ Not eligible to retire



# Active Age-Service-Salary Table

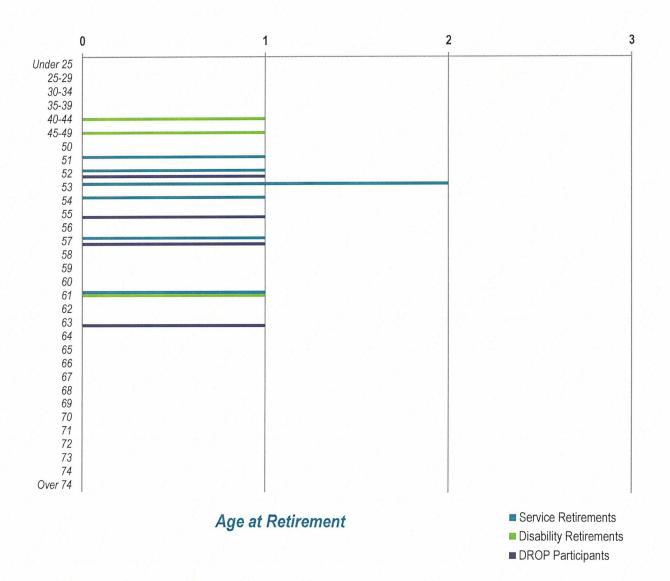
# Table III-E

Attained					Complet	ed Years o	f Service				
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total
U 25	2	2			0	0	0	0	0	0	6
<b>Under 25</b> Avg.Pay	<b>3</b> 46,610	<b>3</b> 74,759	<b>0</b> 0	<b>0</b> 0	0	0	0	0	0	0	60,685
Avy.ray	40,010	14,133	U	0	O	O					00,000
25 to 29	3	4	1	0	0	0	0	0	0	0	8
Avg.Pay	46,363	70,206	103,362	0	0	0	0	0	0	0	65,410
30 to 34	0	0	1	1	0	0	0	0	0	0	2
Avg.Pay	0	0	105,780	92,759	0	0	0	0	0	0	99,270
35 to 39	3	1	3	1	3	0	0	0	0	0	11
Avg.Pay	46,610	88,251	86,516	77,553	99,321	0	0	0	0	0	78,468
1045 11	0	0			40		0		0	0	12
40 to 44 Avg.Pay	<b>0</b> 0	<b>0</b> 0	<b>1</b> 74,939	<b>0</b>	<b>10</b> 104,337	1 103,603	<b>0</b> 0	<b>0</b> 0	<b>0</b> 0	<b>0</b> 0	101,826
Avy.Fay	0	U	74,333	0	104,557	100,000	0	0	U	U	101,020
45 to 49	0	1	1	2	6	5	0	0	0	0	15
Avg.Pay	0	77,466	92,848	87,338	107,042	117,441	0	0	0	0	104,963
50 to 54	0	0	2	1	2	2	0	0	0	0	7
Avg.Pay	0	0	93,338	92,759	104,649	102,602	0	0	0	0	99,134
55 to 59	0	0	1	0	1	2	0	0	0	0	4
Avg.Pay	0	0	95,394	0	146,106	161,137	0	0	0	0	140,943
60 to 64	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
9.17	3.41			1011	12						
65 & up	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
Total	9	9	10	5	22	10	0	0	0	0	65
Avg.Pay	46,528	74,535	91,855	87,549	106,318	121,829	0	0	0	0	92,356



# Inactive Participant Data

# Table III-F



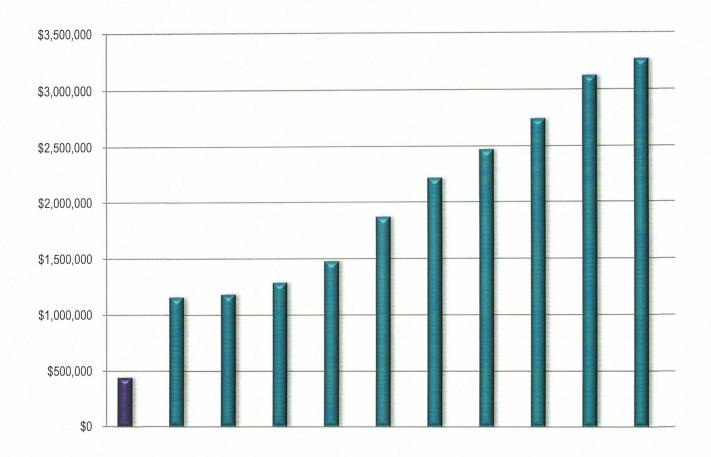
### Average Monthly Benefit

Service Retirements	\$4,060.91
Disability Retirements	\$2,902.15
Beneficiaries Receiving	\$409.61
DROP Participants	\$6,431.48
Deferred Vested Participants	\$3,646.34
Deferred Beneficiaries	Not applicable



# **Projected Benefit Payments**

# Table III-G



<u>Actual</u>	
For the period October 1, 2021 through September 30, 2022	\$446,324

### **Projected**

For the period October 1, 2022 through September 30, 2023		\$1,160,243
For the period October 1, 2023 through September 30, 2024		\$1,184,004
For the period October 1, 2024 through September 30, 2025		\$1,288,543
For the period October 1, 2025 through September 30, 2026		\$1,476,737
For the period October 1, 2026 through September 30, 2027	,	\$1,870,823
For the period October 1, 2027 through September 30, 2028		\$2,216,352
For the period October 1, 2028 through September 30, 2029		\$2,472,108
For the period October 1, 2029 through September 30, 2030		\$2,747,136
For the period October 1, 2030 through September 30, 2031		\$3,122,893
For the period October 1, 2031 through September 30, 2032		\$3,270,125



### Summary of Actuarial Methods and Assumptions

Table IV-A

NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.

### 1. Actuarial Cost Method

Aggregate cost method. Under this actuarial cost method, a funding cost is developed for the plan as a level percentage of payroll. The level funding percentage is calculated as the excess of the total future benefit liability over accumulated assets and future employee contributions, with this excess spread over the expected future payroll for current active participants. The normal cost is equal to the level funding percentage multiplied by the expected payroll for the year immediately following the valuation date. The actuarial accrued liability is equal to the accumulated assets. Therefore, under the aggregate cost method, no unfunded accrued liability is developed.

#### 2. Asset Method

The actuarial value of assets is equal to the market value of assets, adjusted to reflect a five-year phase-in of the unexpected investment gains and losses.

#### 3. Interest (or Discount) Rate

6.80% per annum

### 4. Salary Increases

Plan compensation is assumed to increase at the rate of 4.50% per annum, unless actual plan compensation is known for a prior plan year.

#### 5. Decrements

Pre-retirement mortality:

Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Employee Mortality Table for public safety employees (Below Median table for males), with full generational improvements in mortality using Scale MP-2018 and with ages set forward one year



### Summary of Actuarial Methods and Assumptions

### Table IV-A

(continued)

Post-retirement mortality:

For non-disabled retirees, sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Healthy Retiree Mortality Table for public safety employees (Below Median table for males), with full generational improvements in mortality using Scale MP-2018 and with ages set forward one year; for disabled retirees, sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Disabled Retiree Mortality Table (80% general employee rates plus 20% public safety employee rates), with full generational improvements in mortality using Scale MP-2018

• Disability:

Age- and gender-based rates of disability were assumed, ranging from 0.067% for males and 0.040% for females at age 25, 0.119% for males and 0.118% for females at age 35, 0.462% for males and 0.435% for females at age 45, and 1.000% for males and 0.840% for females at age 55; all disabilities are assumed to be service-related.

• Termination:

With respect to participants with less than 10 years of service, the termination rates are both gender- and service-based, ranging from 15.00% for males and 10.01% for females with less than two years of service to 4.30% for males and 4.75% for females with between eight and 10 years of service; with respect to participants with at least 10 years of service, the termination rates are both gender- and age-based, ranging from 4.28% for males and 5.41% for females at age 25 to 0.00% for both genders at age 55.

Retirement:

For those participants whose normal retirement age is age 53 or earlier, retirement is assumed to occur at the rate of 15% at age 50, 10% at each of ages 51 and 52, and 100% at the earlier of age 53 or normal retirement age. For those participants whose normal retirement age is age 54 or later, retirement is assumed to occur at the rate of 15% at each of ages 50 through 54 and 100% at age 55, except that 40% retirement is assumed to occur at a normal retirement age of 54.

### 6. Form of Payment

Future retirees have been assumed to select the 10-year certain and life annuity, except that participants who terminate their service with less than 10 years of service are assumed to receive a refund of their accumulated employee contributions.



# Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

### 7. Expenses

The total projected benefit liability has been loaded by 1.75% to account for anticipated administrative expenses. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.



### Changes in Actuarial Methods and Assumptions

Table IV-B

No assumptions or methods were changed since the completion of the previous valuation.

The following additional assumption and method changes were made during the past 10 years:

- (1) Effective October 1, 2022, the assumed interest (or discount) rate was decreased from 7.00% per annum to 6.80% per annum.
- (2) Effective October 1, 2020, the mortality basis was changed from the RP-2000 Blue Collar Mortality Table with generational improvements in mortality using Scale BB to selected PUB-2010 Mortality Tables with generational improvements in mortality using Scale MP-2018.
- (3) Effective October 1, 2020, the actuarial value of assets was changed from the market value of assets adjusted to reflect a five-year phase-in of the total investment gains and losses to the market value adjusted to reflect a five-year phase-in of the unexpected investment gains and losses.
- (4) Effective October 1, 2018, the mortality basis was changed from the RP-2000 Combined Mortality Table to the RP-2000 Blue Collar Mortality Table, both with full generational improvements in mortality using Scale BB.
- (5) Effective October 1, 2016, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table as required by State law.
- (6) Effective October 1, 2013, the method used to determine the actuarial value of assets was changed from the market value, adjusted to reflect a five-year phase-in of the net investment gains or losses, to the market value, adjusted to reflect a five-year phase-in of the net investment gains and losses that occur after September 30, 2013.
- (7) Effective October 1, 2013, the assumed interest rate was decreased from 7.50% per annum to 7.00% per annum.
- (8) Effective October 1, 2013, the assumed increase in future salaries was decreased from a range of rates (8.00% per year graded down to 5.00% per year, depending on service) to a flat 4.50% per year.
- (9) Effective October 1, 2013, the mortality basis was changed from the RP-2000 Mortality Table for annuitants, projected to 2007 by Scale AA, to the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, both as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.



Table V-A

### 1. Monthly Accrued Benefit

2.00% of Average Final Compensation multiplied by Credited Service earned prior to December 1, 2000 plus 3.70% of Average Final Compensation multiplied by Credited Service earned during the period December 1, 2000 through September 30, 2010 plus 3.00% of Average Final Compensation multiplied by Credited Service earned after September 30, 2010

### 2. Normal Retirement Age and Benefit

Age

Age 55 with at least 10 years of Credited Service; or Age 52 with at least 25 years of Credited Service

Amount

Monthly Accrued Benefit

Form of Payment

Actuarially increased single life annuity (optional);

10-year certain and life annuity (normal form of payment);

Actuarially reduced 50% joint and contingent annuity (optional);

Actuarially reduced 66<sup>2</sup>/<sub>3</sub>% joint and contingent annuity (optional);

Actuarially reduced 75% joint and contingent annuity (optional);

Actuarially reduced 100% joint and contingent annuity (optional);

Social security level income annuity (optional);

Any other actuarially equivalent form of payment approved by the Board; or

Actuarially equivalent lump sum distribution (automatic if the single sum value of the participant's benefit is less than or equal to \$1,000)

(Note: A participant may change his joint annuitant up to two times after retirement.)

### 3. Early Retirement Age and Benefit

Age

Any age with at least 10 years of Credited Service

Amount

Monthly Accrued Benefit (payable at Normal Retirement Age); or

Monthly Accrued Benefit reduced by 3% for each year by which the participant's Early Retirement Date precedes his Normal Retirement Date (payable at Early Retirement Age)

Form of Payment

Same as for Normal Retirement



Table V-A

(continued)

### 4. Service Incurred Disability Eligibility and Benefit

### Eligibility

The participant is eligible if his disability was incurred during the course of his employment with the District.

#### Condition

The Board must find that the participant has a physical or mental condition resulting from bodily injury, disease, or a mental disorder which renders him incapable of employment as a firefighter.

### Amount Payable

A monthly 10-year certain and life annuity equal to the larger of (a) or (b), as follows, but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other District-provided disability compensation from exceeding his Average Final Compensation:

- (a) Monthly Accrued Benefit; or
- (b) 42% of Average Final Compensation

### 5. Non-Service Incurred Disability Eligibility and Benefit

### Eligibility

The participant must have earned at least 10 years of Credited Service if his disability was incurred other than during the course of his employment with the District.

#### Condition

Same as for a Service Incurred Disability Benefit

### Amount Payable

A monthly 10-year certain and life annuity equal to the larger of (a) or (b), as follows, but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other District-provided disability compensation from exceeding his Average Final Compensation:

- (a) Monthly Accrued Benefit; or
- (b) 25% of Average Final Compensation

### 6. Delayed Retirement Age and Benefit

### Age

After Normal Retirement Age

#### Amount

Monthly Accrued Benefit

#### Form of Payment

Same as for Normal Retirement



Table V-A

(continued)

#### 7. Deferred Vested Benefit

Age

Any age with at least 10 years of Credited Service

Amount

Monthly Accrued Benefit (payable at Normal Retirement Age); or Monthly Accrued Benefit reduced by 3% for each year by which the participant's Early Retirement Date precedes his Normal Retirement Date (payable at Early Retirement Age)

Form of Payment

Same as for Normal Retirement

#### 8. Pre-Retirement Death Benefit

In the case of the death of a vested participant prior to retirement, his beneficiary will receive the participant's Monthly Accrued Benefit payable for 10 years beginning on the participant's early or normal retirement date. In the case of the death of a non-vested participant prior to retirement, his beneficiary will receive the participant's Accumulated Contributions in lieu of any other benefits payable from the plan.

### 9. Average Final Compensation

Average of the highest five years of Compensation out of the last 10 years of employment (or career average, if higher)

### 10. Compensation

Fixed monthly compensation; annual compensation in excess of \$200,000 (as indexed) is excluded in accordance with Internal Revenue Code (IRC) §401(a)(17).

#### 11. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death, provided that the participant made all required contributions, excluding leave conversions of unused accrued paid time off. Firefighters hired on or before December 1, 2000 who did not opt to participate in the plan until January 1, 2007 do not receive credit for service prior to 2007 unless they make a contribution equal to the full actuarial cost of their prior service. In addition, the participant may purchase up to five additional years of Credited Service for certain military service or other firefighter service by paying into the plan the full actuarial cost thereof, subject to the restrictions on such service purchases as set forth in the legal plan document.



Table V-A

(continued)

### 12. Participation Requirement

All full-time firefighters of the Estero Fire District who are hired after December 1, 2000 automatically become a participant in the plan on their date of hire. Firefighters hired on or before December 1, 2000 could elect to participate as of that date or were given an additional opportunity to participate effective January 1, 2007. The Fire Chief may irrevocably opt not to participate in the plan.

#### 13. Accumulated Contributions

The Employee Contributions accumulated with no interest; if the participant terminates his employment with less than 10 years of Credited Service, he receives his Accumulated Contributions in lieu of any other benefits payable from the plan.

### 14. Participant Contribution

3.00% of earnings

### 15. Definition of Actuarially Equivalent

#### Interest Rate

7.00% per annum

#### Mortality Table

RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430; male rates are used for the primary annuitant and female rates are used for the joint annuitant.

#### 16. Plan Effective Date

December 1, 2000

### 17. Deferred Retirement Option Plan (DROP)

A participant who reaches his Normal Retirement Age is eligible to participate in the DROP for a period of up to 60 months. The DROP accounts are credited with interest at the rate of 6.50% per annum or based on the actual investment return on plan assets as elected by the participant.



### Summary of Plan Amendments

Table V-B

Since the completion of the previous valuation, Resolution No. 2023-01 was adopted to be effective October 11, 2022. This resolution changed the definition of compensation, but had no actuarial impact on the plan.

The following additional plan amendments were adopted during the past 10 years and were reflected in prior valuation reports:

- (1) During the 2020/21 plan year, a provision was adopted whereby a disability due to cancer is presumed to have been incurred in the line of duty in accordance with State law. (Resolution 2020-01)
- (2) Effective during the 2015/16 plan year, the interest rate and mortality table used for actuarial equivalence was changed to the interest rate used to complete the most recently approved actuarial valuation of the plan and the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA. (Resolution 2016-02)
- (3) Effective during the 2015/16 plan year, credited service excludes leave conversions of unused accrued paid time off. (Resolution 2016-02)
- (4) Effective during the 2015/16 plan year, a DROP participant may choose between receiving interest at a flat rate of 6.50% per annum or based on the actual investment return on plan assets and may change his election one time. (Resolution 2016-02)

