

City of Starke Firefighters' Retirement System

ACTUARIAL VALUATION AS OF OCTOBER 1, 2022

This Valuation Determines the Annual Contribution for the System Year October 1, 2023
through September 30, 2024 to be paid in System Year October 1, 2023 to September 30, 2024

June 30, 2023



**City of Starke Firefighters’
Retirement System**

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June 30, 2023

Board of Trustees
City of Starke Firefighters' Retirement System
c/o Mr. Scott Baur
Resource Centers, LLC
4360 Northlake Blvd., Suite 206
Palm Beach Gardens, FL 33410

Dear Board Members:

We are pleased to present our October 1, 2022 Actuarial Valuation Report for the City of Starke Firefighters' Retirement System (System). The purpose of this report is to indicate appropriate contribution levels, monitor minimum funding requirements, comment on the actuarial stability of the System and to satisfy State and accounting requirements. Gabriel, Roeder, Smith & Company (GRS), as System actuary, is authorized to prepare an annual Actuarial Valuation under Section 78-203 of the System. This Report is prepared for and at the request of the Board of Trustees.

This Report consists of this cover letter, executive summary and risk assessment followed by detailed Tables I through XVIII, the State Required Exhibit on Table XIX and the Glossary on Table XX. The Tables contain basic System cost figures plus significant details on the benefits, liabilities and experience of the System. We suggest you thoroughly review the report at your convenience and contact us with any questions that may arise.

The findings in this report are based on data or other information through September 30, 2022. The valuation was based upon information furnished by Board concerning System benefits, plan provisions and active members, terminated members, retirees and beneficiaries. We received financial information as of September 30, 2022 concerning fund assets from the Board.

We do not audit the Member census data and asset information that is provided to us; however, we perform certain reasonableness checks. The System is responsible for the accuracy of the data.

In our opinion the benefits provided for under the current System will be sufficiently funded through the payment of the amount as indicated in this and future Actuarial Valuation reports. This valuation assumed the continuing ability of the plan sponsors to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed. We will continue to update you on the future payment requirements for the System through our actuarial valuation reports. These reports will also continue to monitor emerging experience of the System.

The actuarial assumptions used in this Actuarial Valuation are as adopted by the Board of Trustees. The economic and non-prescribed demographic actuarial assumptions are based on the results of an Actuarial Experience Study for the period October 1, 2014 – September 30, 2019. The mortality assumptions are prescribed by statute. Each assumption represents an estimate of future System experience.

If all actuarial assumptions are met and if all future minimum required contributions are paid, System assets will be sufficient to pay all System benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to improve. System minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act and Firefighters Retirement Chapter 175 with normal cost determined as a level percent of covered payroll and a level percent amortization payment using a maximum amortization period of 30 years.

The Unfunded Actuarial Accrued Liability (UAAL) may not be appropriate for assessing the sufficiency of System assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions. The UAAL would be different if it reflected the market value of assets rather than the actuarial value of assets.

The GASB Net Pension Liability and System Fiduciary Net Position as a Percentage of Total Pension Liability may not be appropriate for assessing the sufficiency of System assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

This report should not be relied upon for any purpose other than the purpose described in the primary communication. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This Report may be provided to parties other than the Board only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.



The signing actuaries are independent of the System sponsor.

The undersigned are Members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. We are available to respond to any questions with regards to matters covered in this report.

Sincerely,
Gabriel, Roeder, Smith & Company



Shelly L. Jones, A.S.A., E.A.
Consultant and Actuary



Jennifer M. Borregard, E.A.
Consultant and Actuary

EXECUTIVE SUMMARY

Retirement System Costs

Our Actuarial Valuation as of October 1, 2022 develops the required minimum Retirement System payment for fiscal year beginning **October 1, 2023** under the Florida Protection of Public Employee Retirement Benefits Act and Chapter 175. The minimum payment consists of payment of annual normal costs including expenses and amortization of the components of the unfunded actuarial accrued liability over various periods as prescribed by law. The minimum payment is **43.0% of covered payroll (\$315,836)**. The figure in parentheses is the System cost expressed as an estimated dollar amount based on projected covered annual payroll for fiscal year beginning October 1, 2023 (\$733,896).

This total cost is to be met by member, City and State contributions. We anticipate member contributions will be **5.0% of covered payroll** for fiscal year ending September 30, 2024 for full-time Firefighters **(\$35,478)**, **6.0% of covered payroll** for fiscal year ending September 30, 2024 for volunteer Firefighters **(\$1,460)**, and member pick-up contributions will be **5.0% of covered full-time payroll** for fiscal year ending September 30, 2024 **(\$35,478)**. Allowable State contributions will be **\$30,248 (4.1% of covered payroll)** for fiscal year ending September 30, 2024) based upon our understanding of *Mutual Consent*. This leaves a base City requirement of **29.0% of covered total payroll** for fiscal year ending September 30, 2024 **(\$213,172)**. The City contribution includes an interest adjustment and must be increased if allowable 2024 State contributions are less than \$30,248.

Changes in Actuarial Assumptions, Methods and System Benefits

A benefit increase of 5% was provided to current retired members, DROP participants and beneficiaries. The remaining System benefit provisions are unchanged from the October 1, 2021 Actuarial Valuation and are summarized on Table X.

The actuarial assumptions and methods remain unchanged from the October 1, 2021 Actuarial Valuation and are outlined on Table XI.

Comparison of October 1, 2021 and October 1, 2022 Valuation Results

Table II of our report provides information of a comparative nature. The left columns of the Table indicate the costs as calculated for the October 1, 2021 Actuarial Valuation. The center columns of the Table indicate the costs as calculated for the October 1, 2022, prior to the update in System provisions. The right columns indicate the costs as calculated for October 1, 2022, after the update in System provisions.

Comparing the left and center columns of Table II shows the effect of System experience during the year. The number of active participants increased by approximately 13% while covered payroll increased by approximately 12%. Total System membership increased by approximately 11%. Total normal cost, the Net Base City minimum funding requirement and the unfunded actuarial accrued liability all increased both as a percentage of covered payroll and as a dollar amount.

Comparing the center and right columns of Table II shows the effect of the update of the System provisions. Total normal cost remained level both as a percentage of covered payroll and as a dollar amount. The Net



Base City minimum funding requirement and the unfunded actuarial accrued liability increased both as a percentage of covered payroll and as a dollar amount.

The value of vested accrued benefit exceeds the System assets, resulting in a Vested Benefit Security Ratio (VBSR) of 86.3% (88.4% prior to System provision update) which is a decrease from 110.0% as of the October 1, 2021 Actuarial Valuation. The VBSR is measured on a market value of assets basis.

Table VIII provides figures on recent System payroll growth experience. Recent System covered payroll growth experience indicates actual payroll growth averaged approximately 6.5% annually for the ten (10) fiscal years ended September 30, 2022. The payroll growth assumption is 4.0%, not in excess of the ten (10) year average annual payroll growth assumption. The cap on payroll growth assumption is provided under Florida Statute.

System Experience

Table VII indicates net System experience resulted in an actuarial loss of \$327,977. This suggests actual overall experience was less favorable than expected.

Table XVII provides figures on recent System experience (salary, turnover and investment yield). Salary experience indicates actual salary increases were approximately 12.1% for full-time Firefighters. This was more than the assumption for salary increases of 4.2% and was generally a source of actuarial loss. Three, five and ten-year average annual salary increases are 12.8%, 11.6% and 8.3%, respectively.

There was no turnover this year amongst full-time Firefighters. Full-time Firefighter turnover was an additional source of actuarial loss. There has been no turnover of full-time Firefighters during the last ten years.

The smoothed actuarial value investment return of 4.76% was less than the 7.25% assumption for investment return. Smoothed actuarial value investment return was an additional source of actuarial loss during the year. The three, five and ten-year average annual smoothed actuarial value investment returns are 9.09%, 8.92% and 8.13%, respectively. The one, three, five and ten-year average annual returns based upon market value are -13.83%, 5.01%, 5.97% and 6.88%, respectively.

Conclusion and Recommendations

The Market Value of Assets is less than the Actuarial Value of Assets by \$502,614 as of the valuation date. This difference will be gradually recognized in the absence of future offsetting gains. In turn, the actuarially determined contribution rate will increase.

The required minimum City contribution is computed based on an assumption that the amount to be received from the State will be equal to the amount received in the prior year, subject to a maximum of \$30,248. If the actual payment from the State falls below this assumed amount, then the City must increase its contribution by the difference.

The remainder of this report includes detailed actuarial valuation results, information relating to the pension fund, financial accounting information, miscellaneous employee data and a summary of plan provisions and actuarial assumptions and methods.



RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITIES AND ACTUARIALLY DETERMINED CONTRIBUTION

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; 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 System's funded status); and changes in System provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the system's future financial condition include:

1. Investment risk – actual investment returns may differ from expected returns;
2. Asset / Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and the actuarially determined contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the System's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and the actuarially determined contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and the actuarially determined contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the actuarially determined contribution can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in the actuarially determined contribution can be anticipated.

The actuarially determined contribution rate shown on page four may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially

determined contributions is critical to support the financial health of the System. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

System Maturity Measures

Risks facing a pension system evolve over time. A young system with virtually no investments and paying few benefits may experience little investment risk. An older system with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted system maturity measures include the following:

	<u>2021</u>	<u>2022</u>
Ratio of the market value of assets to payroll	7.98	6.13
Ratio of actuarial accrued liability to payroll	8.69	8.70
Ratio of actives to retirees and beneficiaries	6.33	7.17
Ratio of net cash flow to market value of assets	0.9%	-0.2%
Duration of the actuarial accrued liability	13.17	13.12

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of the actuarially determined contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in the actuarially determined contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of the actuarially determined contributions for a fully funded system. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also the actuarially determined contributions) as a percentage of payroll.

Ratio of Actives to Retirees and Beneficiaries

A young system with many active members and few retirees will have a high ratio of active to retirees. A mature open system may have close to the same number of actives to retirees resulting in a ratio near 1.0. A

super-mature or closed system may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature system or a need for additional contributions.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, a duration of 10 indicates the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Summary of Retirement System Costs as of October 1, 2022

	Prior System		Current System	
	Cost Data	% of Payroll	Cost Data	% of Payroll
A. Participant Data Summary (Table III)				
1. Active employees	43	N/A	43	N/A
2. Terminated vested	0	N/A	0	N/A
3. Receiving benefits (including DROPs)	6	N/A	6	N/A
4. Annual payroll of active employees	\$ 705,669	100.0%	\$ 705,669	100.0%
B. Total Normal Costs				
1. Age retirement benefits	\$ 141,202	20.0%	\$ 141,202	20.0%
2. Termination benefits	4,122	0.6%	4,122	0.6%
3. Death benefits	3,383	0.5%	3,383	0.5%
4. Disability benefits	5,962	0.8%	5,962	0.8%
5. Estimated expenses	45,000	6.4%	45,000	6.4%
6. Total annual normal costs	\$ 199,669	28.3%	\$ 199,669	28.3%
C. Total Actuarial Accrued Liability				
1. Age retirement benefits active employees	\$ 3,366,384	477.0%	\$ 3,366,384	477.0%
2. Termination benefits active employees	9,879	1.4%	9,879	1.4%
3. Death benefits active employees	66,768	9.5%	66,768	9.5%
4. Disability benefits active employees	30,263	4.3%	30,263	4.3%
5. Retired or terminated vested participants receiving benefits including DROP participants	2,404,854	340.8%	2,524,741	357.8%
6. Terminated vested participants entitled to future benefits	0	0.0%	0	0.0%
7. Deceased participants whose beneficiaries are receiving benefits	0	0.0%	0	0.0%
8. Disabled participants receiving benefits	0	0.0%	0	0.0%
9. Miscellaneous liability	0	0.0%	0	0.0%
10. Share Plan liability	142,598	20.2%	142,598	20.2%
11. Total actuarial accrued liability	\$ 6,020,746	853.2%	\$ 6,140,633	870.2%
D. Smoothed Actuarial Value of Assets (Table VI)	\$ 4,828,399	684.2%	\$ 4,828,399	684.2%
E. Unfunded Actuarial Accrued Liability (C-D)	\$ 1,192,347	169.0%	\$ 1,312,234	186.0%

Summary of Retirement System Costs as of October 1, 2022

	Prior System		Current System	
	Cost Data	% of Payroll	Cost Data	% of Payroll
F. Minimum Required Contribution				
1. Total normal cost	\$ 199,669	28.3%	\$ 199,669	28.3%
2. Amortization of unfunded liability	87,216	12.4%	93,243	13.2%
3. Interest adjustment	10,565	1.5%	10,776	1.5%
4. Total required contribution	<u>\$ 297,450</u>	42.2%	<u>\$ 303,688</u>	43.0%
G. Expected payroll of active employees for 2023-2024 year (\$705,669 x 1.04)	\$ 733,896	104.0%	\$ 733,896	104.0%
H. Contribution Sources (percent of expected 2023-2024 payroll)				
1. Expected City				
a. Base	\$ 206,684		\$ 213,172	
b. Member <i>pick-up</i>	35,478 ¹		35,478 ¹	
c. Total expected City	<u>\$ 242,162</u>	33.0%	<u>\$ 248,650</u>	33.9%
2. Expected State	30,248	4.1%	30,248	4.1%
3. Expected Member				
a. Full-time member	\$ 35,478 ¹		\$ 35,478 ¹	
b. Volunteer member	1,460 ²		1,460 ²	
c. Total member	<u>36,938</u>	5.0%	<u>36,938</u>	5.0%
4. Total expected minimum required contribution	<u>\$ 309,348</u>	42.2%	<u>\$ 315,836</u>	43.0%
I. Actuarial Gain / (Loss) (Table VII)	\$ (327,977)	(46.5%)	\$ (327,977)	(46.5%)
J. Actuarial Present Value of Vested Accrued Benefits				
1. Retired, terminated vested, beneficiaries and disabled receiving benefits including DROP participants	\$ 2,404,854	340.8%	\$ 2,524,741	357.8%
2. Terminated vested participants entitled to future benefits and miscellaneous (including Share Plan)	142,598	20.2%	142,598	20.2%
3. Active participants entitled to future benefits	<u>2,344,744</u>	332.3%	<u>2,344,744</u>	332.3%
4. Total actuarial present value of vested accrued benefits	<u>\$ 4,892,196</u>	693.3%	<u>\$ 5,012,083</u>	710.3%
K. Market Value of Assets (Table V)	\$ 4,325,785	613.0%	\$ 4,325,785	613.0%
L. Unfunded Actuarial Present Value of Vested Accrued Benefits (J. - K., not less than zero)	\$ 566,411	80.3%	\$ 686,298	97.3%
M. Vested Benefit Security Ratio (K. ÷ J.)	88.4%	N/A	86.3%	N/A

¹ 5% of expected 2023-2024 full-time covered payroll (\$709,560)

² 6% of expected 2023-2024 volunteer covered payroll (\$24,336)

Comparison of Cost Data of October 1, 2021 and October 1, 2022 Valuations

	October 1, 2021		Prior System October 1, 2022		Current System October 1, 2022	
	Cost Data	% of Annual Compensation	Cost Data	% of Annual Compensation	Cost Data	% of Annual Compensation
A. Participants						
1. Active employees	38	N/A	43	N/A	43	N/A
2. Terminated vested	0	N/A	0	N/A	0	N/A
3. Receiving benefits (including DROPs)	6	N/A	6	N/A	6	N/A
4. Annual payroll of active employees	\$ 631,035	100.0%	\$ 705,669	100.0%	\$ 705,669	100.0%
5. Projected annual payroll of active employees	\$ 656,276	104.0%	\$ 733,896	104.0%	\$ 733,896	104.0%
B. Total Normal Costs	\$ 174,921	27.7%	\$ 199,669	28.3%	\$ 199,669	28.3%
C. Total Actuarial Accrued Liability	\$ 5,484,485	869.1%	\$ 6,020,746	853.2%	\$ 6,140,633	870.2%
D. Smoothed Actuarial Value of Assets	\$ 4,623,040	732.6%	\$ 4,828,399	684.2%	\$ 4,828,399	684.2%
E. Unfunded Actuarial Accrued Liability	\$ 861,445	136.5%	\$ 1,192,347	169.0%	\$ 1,312,234	186.0%
F. Net Base City Cost	\$ 167,264	25.5% ¹	\$ 206,684	28.2% ²	\$ 213,172	29.0% ²
G. Actuarial Gain / (Loss)	\$ 143,654	22.8%	\$ (327,977)	(46.5%)	\$ (327,977)	(46.5%)
H. Unfunded Actuarial Present Value of Vested Accrued Benefits	\$ 0	0.0%	\$ 566,411	80.3%	\$ 686,298	97.3%
I. Vested Benefit Security Ratio	110.0%	N/A	88.4%	N/A	86.3%	N/A

¹ Percent of expected 2022-2023 covered payroll (\$656,276)

² Percent of expected 2023-2024 covered payroll (\$733,896)

**Characteristics of Participants in
Actuarial Valuation as of October 1, 2022**

A. Active System Participants Summary

1. Active participants fully vested	24
2. Active participants partially vested	0
3. Active participants non-vested	19
4. Total active participants	43
5. Annual rate of pay of active participants	\$ 705,669

B. Retired and Terminated Vested Participant Summary

1. Retired or terminated vested participants receiving benefits including DROP participants	6
2. Terminated vested participants entitled to future benefits	0
3. Deceased participants whose beneficiaries are receiving benefits	0
4. Disabled participants receiving benefits	0

C. Projected Annual Retirement Benefits

1. Retired or terminated vested receiving benefits including DROP participants	\$ 215,164
2. Terminated vested entitled to future benefits	0
3. Beneficiaries of deceased participants	0
4. Disabled participants	0

Statement of System Assets as of October 1, 2022

	<u>Market Value</u>
A. <u>Cash</u>	\$ 194,452
B. <u>General Investments</u>	
1. Cash Equivalents	\$ 200,641
2. US Government Securities	\$ 0
3. Federal mortgage	\$ 0
4. Corporate bonds	\$ 892,114
5. Common stocks	\$ 3,061,519
6. Foreign stocks	\$ 0
C. <u>Receivables</u>	
1. City contribution receivable	\$ 0
2. State contribution receivable	\$ 0
3. Employee contribution receivable	\$ 0
4. Accrued interest	\$ 6,434
D. <u>Payable</u>	
1. Account Payable	\$ 23,875
2. Due to Other Funds	\$ 5,500
E. <u>Total System Assets</u> (A + B + C - D)	\$ 4,325,785

Reconciliation of System Assets *

A. <u>Total Market Value of Assets as of October 1, 2021</u>		\$	5,035,267
Adjustment to Total Market Value of Assets as of October 1, 2021			(3,069)
Adjusted Total Market Value of Assets as of October 1, 2021		\$	5,032,198
B. <u>Receipts During Period</u>			
1. Contributions			
a. Member	\$	35,517	
b. Member (picked up by City)		34,113	
c. City		189,025	
d. State		0	
e. Total	\$	258,655	
2. Investment Income			
a. Interest, dividends and other	\$	65,575	
b. Investment expenses		(37,262)	
c. Net investment income	\$	28,313	
3. Net realized gains / (losses)		(423,735)	
4. Net unrealized gains / (losses)		(299,849)	
5. Total receipts during period		\$	(436,616)
C. <u>Disbursements During Period</u>			
1. Pension payments	\$	215,680	
2. DROP distributions		0	
3. Share Plan distributions		0	
4. Contribution refunds		0	
5. Administrative expenses		54,117	
6. Total disbursements during period		\$	269,797
D. <u>Total Market Value of Assets as of September 30, 2022</u>		\$	4,325,785
E. <u>Share Plan</u>			
1. Balance as of October 1, 2021	\$	152,309	
2. Adjustment		(3,071)	
3. Increase from State funds received		13,552	
4. Investment gains / (losses) during year		(20,192)	
5. Administrative fees		0	
6. Distributions		0	
7. Balance as of September 30, 2022		\$	142,598
F. <u>Reconciliation of DROP Account Balances</u>			
1. DROP account balances as of October 1, 2021	\$	0	
2. Benefit payments into DROP accounts during year		0	
3. Investment gains / (losses) during year		0	
4. Distributions from DROP accounts during year		0	
5. DROP account balances as of September 30, 2022		\$	0

* Based on draft financial information provided by the Board in the Annual State Report

Development of Smoothed Actuarial Value of Assets as of September 30

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
A. Preliminary total smoothed actuarial value from prior year	\$ 4,105,852	\$ 4,623,040	\$ 4,828,399		
B. Market value beginning of year	4,329,103	5,035,267	4,325,785		
C. Market value end of year	5,035,267	4,325,785			
D. Non-investment net cash flow	38,233	(14,211)			
E. Investment return					
1. Total market value return: C. - B. - D.	667,931	(695,271)			
2. Amount for immediate recognition (7.25%)	299,060	334,655			
3. Amount for phased-in recognition: E.1. - E.2.	368,871	(1,029,926)			
F. Phased-in recognition of investment return					
1. Current year: 25% of E.3.	92,218	(257,482)			
2. First prior year	85,394	92,218	(257,482)		
3. Second prior year	(35,216)	85,394	92,218	(257,482)	
4. Third prior year	37,499	(35,215)	85,395	92,217	(257,480)
5. Total phased-in recognition of investment return	179,895	(115,085)	(79,869)	(165,265)	(257,480)
G. Total smoothed actuarial value end of year					
1. Preliminary total smoothed actuarial value end of year:					
A. + D. + E.2. + F.5.	4,623,040	4,828,399			
2. Upper corridor limit: 120% of C.	6,042,320	5,190,942			
3. Lower corridor limit: 80% of C.	4,028,214	3,460,628			
4. Total smoothed actuarial value end of year:					
G.1., not more than G.2., nor less than G.3.	4,623,040	4,828,399			
H. Difference between total market value and total smoothed actuarial value	412,227	(502,614)			
I. Smoothed actuarial value rate of return	11.61%	4.76%			
J. Market value rate of return	15.36%	(13.83%)			

**Actuarial Gain / (Loss) for
System Year Ended September 30, 2022 ***

A. Derivation of Actuarial Gain / (Loss)

1. City and State net normal cost previous Actuarial Valuation	\$ 114,036
2. Unfunded actuarial accrued liability previous Actuarial Valuation	861,445
3. City and State net contributions previous year	175,473
4. Interest on:	
(a) City and State net normal cost	\$ 8,268
(b) Unfunded actuarial accrued liability	62,455
(c) City and State net contributions	6,361
(d) Net total: (a) + (b) - (c)	<u>\$ 64,362</u>
5. Increase / (decrease) in unfunded actuarial accrued liability due to benefit changes	\$ 119,887
6. Expected unfunded actuarial accrued liability current year: (1. + 2. - 3. + 4. + 5.)	\$ 984,257
7. Actual unfunded actuarial accrued liability current year	<u>1,312,234</u>
8. Actuarial gain / (loss): (6. - 7.)	<u>\$ (327,977)</u>

**B. Approximate Portion of Gain / (Loss)
due to Investments**

1. Smoothed actuarial value of net assets previous year	\$ 4,470,731
2. Net contributions during period	245,103
3. Benefits and administrative expenses during period	269,797
4. Expected net appreciation for period	<u>323,233</u>
5. Expected smoothed actuarial value of net assets current year: (1. + 2. - 3. + 4.)	\$ 4,769,270
6. Actual smoothed actuarial value of net assets current year	\$ 4,685,801
7. Approximate gain / (loss) due to investments: (6. - 5.)	\$ (83,469)

**C. Approximate Portion of Gain / (Loss)
due to Liabilities: A. - B.**

\$ (244,508)

* Net of Share Plan

Amortization of Unfunded Actuarial Accrued Liability

A. Actuarial Accrued Liability Remaining Unfunded

Date	Unfunded Liability	Amortization Payment
October 1, 2022	\$ 1,312,234	\$ 93,243
October 1, 2023	\$ 1,307,368	\$ 97,210
October 1, 2024	\$ 1,297,894	\$ 99,944
October 1, 2025	\$ 1,284,801	\$ 103,115
October 1, 2026	\$ 1,267,358	\$ 107,178
...		
...		
October 1, 2052	\$ 0	\$ 0

B. Covered Payroll History

Date	Covered Payroll *	Annual Increase
October 1, 2022	\$ 705,669	11.8%
October 1, 2021	\$ 631,035	10.8%
October 1, 2020	\$ 569,388	7.8%
October 1, 2019	\$ 528,381	30.5%
October 1, 2018	\$ 404,909	8.3%
October 1, 2017	\$ 373,777	14.3%
October 1, 2016	\$ 327,068	8.6%
October 1, 2015	\$ 301,292	(21.2%)
October 1, 2014	\$ 382,189	0.5%
October 1, 2013	\$ 380,115	1.2%
October 1, 2012	\$ 375,673	N/A
Ten-Year Average Annual Increase		6.5%

* Excludes DROP payroll

Accounting Disclosure Exhibit

	10/01/2021	Prior System 10/01/2022	Current System 10/01/2022
I. <u>Number of System Members</u>			
a. Receiving benefits including DROPs	6	6	6
b. Terminated due deferred benefits	0	0	0
c. Active members	38	43	43
d. Total	44	49	49
II. <u>Financial Accounting Standards Board Allocation</u> <u>As of October 1, 2022</u>			
A. <u>Statement of Accumulated System Benefits</u>			
1. Actuarial present value of accumulated vested System benefits			
a. Participants currently receiving benefits including DROP participants	\$ 2,431,544	\$ 2,404,854	\$ 2,524,741
b. Other participants (including Share Plan)	2,146,179	2,487,342	2,487,342
c. Total	\$ 4,577,723	\$ 4,892,196	\$ 5,012,083
2. Actuarial present value of accumulated non-vested System benefits	46,182	47,977	47,977
3. Total actuarial present value of accumulated System benefits	\$ 4,623,905	\$ 4,940,173	\$ 5,060,060
B. <u>Statement of Change in Accumulated System Benefits</u>			
1. Actuarial present value of accumulated System benefits as of October 1, 2021			\$ 4,623,905
2. Increase (decrease) during year attributable to:			
a. System amendment			\$ 119,887
b. Change in actuarial assumptions			0
c. Benefits paid including refunds and DROP and Share Plan distributions			(215,680)
d. Other, including benefits accumulated, increase for interest due to decrease in the discount period			531,948
e. Net increase			\$ 436,155
3. Actuarial present value of accumulated System benefits as of October 1, 2022			\$ 5,060,060
C. <u>Significant Matters Affecting Calculations</u>			
1. Assumed rate of return used in determining actuarial present values			7.25%
2. Change in System provisions			See Table X, Item P.
3. Change in actuarial assumptions			None.

Accounting Disclosure Exhibit

III. Net Pension Liability and Related Ratios (GASB No. 67 & No. 68)

Measurement date	9/30/2014	9/30/2015	9/30/2016	9/30/2017	9/30/2018	9/30/2019	9/30/2020	9/30/2021	9/30/2022	Projected 9/30/2023 *
A. <u>Total Pension Liability (TPL)</u>										
Service Cost	\$ 83,807	\$ 83,956	\$ 63,717	\$ 69,461	\$ 79,325	\$ 84,734	\$ 113,924	\$ 123,551	\$ 136,921	\$ 154,669
Interest	269,498	262,020	289,172	305,434	335,636	337,300	365,099	384,958	365,428	448,113
Benefit Changes	0	0	0	0	0	0	190,499	0	0	119,887
Difference Between Actual and Expected Experience	(90,269)	(164,041)	183,386	74,382	187,675	(6,284)	14,578	140,799	42,247	236,040
Assumption Changes	0	0	18,331	(14,589)	0	0	(80,127)	107,244	0	0
Benefit Payments, including Refunds of Member Contributions	(86,580)	(83,962)	(378,840)	(134,757)	(155,053)	(355,281)	(421,546)	(205,560)	(215,680)	(228,864)
Net Change in Total Pension Liability	\$ 176,456	\$ 97,973	\$ 175,766	\$ 299,931	\$ 447,583	\$ 60,469	\$ 182,427	\$ 550,992	\$ 328,916	\$ 729,845
Total Pension Liability (TPL) - (beginning of year)	3,464,193	3,640,649	3,738,622	3,914,388	4,214,319	4,661,902	4,722,371	4,904,798	5,455,790	5,784,706
Total Pension Liability (TPL) - (end of year)	\$ 3,640,649	\$ 3,738,622	\$ 3,914,388	\$ 4,214,319	\$ 4,661,902	\$ 4,722,371	\$ 4,904,798	\$ 5,455,790	\$ 5,784,706	\$ 6,514,551
B. <u>System Fiduciary Net Position</u>										
Contributions - City and State	\$ 216,595	\$ 173,181	\$ 171,238	\$ 180,222	\$ 191,176	\$ 203,630	\$ 240,755	\$ 224,781	\$ 189,025	\$ 210,194
Contributions - Member	19,703	18,678	16,789	19,087	20,603	23,770	27,592	33,620	35,517	35,517
Contributions - Member (picked up by City)	16,376	15,447	14,170	16,838	18,457	21,548	25,636	30,112	34,113	34,113
Net Investment Income	306,638	(194,473)	334,500	416,423	403,164	127,498	624,392	667,931	(695,271)	313,835
Benefit Payments, including Refunds of Member Contributions	(86,580)	(83,962)	(378,840)	(134,757)	(155,053)	(355,281)	(421,546)	(205,560)	(215,680)	(228,864)
Administrative Expenses	(29,676)	(41,841)	(39,371)	(19,937)	(49,917)	(33,342)	(35,323)	(44,720)	(54,117)	(45,000)
Other	0	0	0	0	0	0	0	0	(3,069)	0
Net Change in System Fiduciary Net Position	\$ 443,056	\$ (112,970)	\$ 118,486	\$ 477,876	\$ 428,430	\$ (12,177)	\$ 461,506	\$ 706,164	\$ (709,482)	\$ 319,795
System Fiduciary Net Position - (beginning of year)	2,524,896	2,967,952	2,854,982	2,973,468	3,451,344	3,879,774	3,867,597	4,329,103	5,035,267	4,325,785
System Fiduciary Net Position - (end of year)	\$ 2,967,952	\$ 2,854,982	\$ 2,973,468	\$ 3,451,344	\$ 3,879,774	\$ 3,867,597	\$ 4,329,103	\$ 5,035,267	\$ 4,325,785	\$ 4,645,580
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 672,697	\$ 883,640	\$ 940,920	\$ 762,975	\$ 782,128	\$ 854,774	\$ 575,695	\$ 420,523	\$ 1,458,921	\$ 1,868,971
D. <u>System Fiduciary Net Position as a Percentage of TPL: (B) / (A)</u>	81.52 %	76.36 %	75.96 %	81.90 %	83.22 %	81.90 %	88.26 %	92.29 %	74.78 %	71.31 %
E. <u>Covered Employee Payroll **</u>	\$ 382,968	\$ 362,802	\$ 327,059	\$ 374,243	\$ 404,909	\$ 468,003	\$ 545,328	\$ 653,134	\$ 705,669	\$ 705,669
F. <u>NPL as a Percentage of Covered Employee Payroll: (C) / (E)</u>	175.65 %	243.56 %	287.69 %	203.87 %	193.16 %	182.64 %	105.57 %	64.39 %	206.74 %	264.85 %
G. <u>Notes to Schedule:</u>										
Valuation Date	10/1/2013	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	10/1/2022
Reporting Date (GASB No. 68)	9/30/2015	9/30/2016	9/30/2017	9/30/2018	9/30/2019	9/30/2020	9/30/2021	9/30/2022	9/30/2023	9/30/2024

Update procedures used to roll forward TPL excluding DROP account balances and Share Plan to the measurement dates - actual DROP account balances and Share Plan as of measurement dates included in TPL.

See Table IX, Item V. for a history of benefit and assumption changes through measurement date September 30, 2021. No System provision and assumption changes for measurement date September 30, 2022. A benefit increase of 5% for retirees and no assumption changes for measurement date September 30, 2023.

* Projected - actual amounts will be available after fiscal year end

** Reported payroll on which contributions to the System are based as provided under GASB No. 82

Accounting Disclosure Exhibit

IV. Schedule of Employer Contributions (GASB No. 67 & No. 68)

<u>Fiscal Year Ended 9/30</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll ^{1,2}</u>	<u>Actual Contribution as a % of Covered Payroll</u>
2013	\$ 202,879	\$ 202,879	\$ 0	\$ 375,673	54.00%
2014	173,612	216,595	(42,983)	382,968	56.56%
2015	163,445	173,181	(9,736)	362,802	47.73%
2016	134,684	171,238	(36,554)	327,059	52.36%
2017	180,222	180,222	0	374,243	48.16%
2018	191,176	191,176	0	404,909	47.21%
2019	203,606	203,630	(24)	468,003	43.51%
2020	240,952	240,755	197	545,328	44.15%
2021	223,804	224,781	(977)	653,134	34.42%
2022	253,385	189,025	64,360	705,669	26.79%
2023 ³	210,194	210,194	0	705,669	29.79%

¹ Projected prior to fiscal year ended September 30, 2014

² Reported payroll on which contributions to the System are based as provided under GASB No. 82

³ Projected - actual amounts will be available after fiscal year end

Accounting Disclosure Exhibit

V. Notes to Schedule of Contributions (GASB No. 67 & No. 68)

Valuation Date: Actuarially determined contributions are calculated as of October 1st - two year(s) prior the fiscal year end in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for fiscal year ended September 30, 2022:

Actuarial Cost Method	Entry Age
Amortization Method	Level Percentage of Pay, Closed
Amortization Period	30 years
Asset Valuation Method	4-year smoothed market
Inflation	2.5%
Salary Increases	3.5% - 5.0%
Investment Rate of Return	7.25%
Payroll Growth Assumption	4.0% per annum - not greater than historical 10-year average (2.5%).
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Other Information:

Benefit Changes

2019: Final average salary and duty disability retirement eligibility provisions updated.

Assumption Changes

2020: Interest return, employee withdrawal rates, retirement rates and payroll growth assumption were updated.
2019: Mortality and rates of disability incidence assumption were updated. 2016: Per statute, pre-retirement mortality assumption updated. 2015: Mortality rates, investment rate of return, salary increase factors, withdrawal rates and retirement rates were updated. 2012: Interest to be earned by Fund updated to 7.75% compounded annually, net of investment expenses, general increase in wage level due to inflation updated to 3.5%, administrative expenses updated to average of the preceding three fiscal years;

Accounting Disclosure Exhibit

VI. Discount Rate (GASB No. 67 & No. 68)

A discount rate of 7.25% was used to measure the TPL effective with the September 30, 2021 TPL. This discount rate was based on the expected rate of return on Fund investments of 7.25%. The projection of cash flows used to determine this discount rate assumed member contributions will be made at the current member contribution rate and employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member contribution rate. Based on these assumptions, the System's fiduciary net position was projected to be available to make all projected future expected benefit payments of current System members. Therefore, the long-term expected rate of return on System investments was applied to all periods of projected benefit payments to determine the TPL.

VII. Sensitivity of the NPL to the Discount Rate Assumption (GASB No. 67 & No. 68)

Measurement date: September 30, 2022

	1% Decrease	Current Discount Rate	1% Increase
Discount Rate	6.25%	7.25%	8.25%
NPL	\$ 2,191,771	\$ 1,458,921	\$ 844,351

Measurement date: September 30, 2023 *

	1% Decrease	Current Discount Rate	1% Increase
Discount Rate	6.25%	7.25%	8.25%
NPL	\$ 2,689,037	\$ 1,868,971	\$ 1,179,437

*Projected - actual amounts will be available after fiscal year end

Accounting Disclosure Exhibit

VIII. Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions - Reporting Date (GASB No. 68)

Pension Expense for Fiscal Year Ending September 30, 2023 \$ 234,221

Summary of Outstanding Deferred Inflows and Outflows of Resources as of September 30, 2023

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between actual and expected experience on liabilities	407,005	91,770
Changes of assumptions or other inputs	98,817	70,356
Net difference between projected and actual earnings on System investments	531,807	0
Total	\$ 1,037,629	\$ 162,126

Projected Deferred Outflows for City Contributions to Be Recognized after the Measurement Date \$ 179,946

Summary of Deferred Outflows and Inflows of Resources that will be Recognized in Pension Expense in Future Years

Year Ending 30-Sep	Amount
2024	\$ 137,645
2025	105,994
2026	174,080
2027	247,479
2028	42,363
Thereafter	167,942

Accounting Disclosure Exhibit

The following information is not required to be disclosed but is provided for informational purposes.

IX. Components of Pension Expense (GASB No. 68)

Measurement Date	9/30/2014	9/30/2015	9/30/2016	9/30/2017	9/30/2018	9/30/2019	9/30/2020	9/30/2021	9/30/2022	Projected 9/30/2023 *
Service Cost	\$ 83,807	\$ 83,956	\$ 63,717	\$ 69,461	\$ 79,325	\$ 84,734	\$ 113,924	\$ 123,551	\$ 136,921	\$ 154,669
Interest on Total Pension Liability	269,498	262,020	289,172	305,434	335,636	337,300	365,099	384,958	365,428	448,113
Current-Period Benefit Changes	0	0	0	0	0	0	190,499	0	0	119,887
Contributions - Member	(36,079)	(34,125)	(30,959)	(35,925)	(39,060)	(45,318)	(53,228)	(63,732)	(69,630)	(69,630)
Projected Earnings on System Investments	(200,966)	(233,175)	(206,023)	(225,315)	(259,798)	(285,745)	(283,962)	(315,246)	(364,653)	(313,835)
Administrative Expenses	29,676	41,841	39,371	19,937	49,917	33,342	35,323	44,720	54,117	45,000
Other Changes in System Fiduciary Net Position	0	0	0	0	0	0	0	0	3,069	0
Recognition of Beginning Deferred Outflows / (Inflows) due to Liabilities	(7,164)	(19,980)	(4,463)	101	14,996	14,541	9,721	29,252	32,632	51,667
Recognition of Beginning Deferred Outflows / (Inflows) due to Assets	(21,134)	64,396	38,701	479	(28,196)	24,587	(129,029)	(173,867)	76,337	105,013
Total Pension Expense	<u>\$ 117,638</u>	<u>\$ 164,933</u>	<u>\$ 189,516</u>	<u>\$ 134,172</u>	<u>\$ 152,820</u>	<u>\$ 163,441</u>	<u>\$ 248,347</u>	<u>\$ 29,636</u>	<u>\$ 234,221</u>	<u>\$ 540,884</u>

* Projected - actual amounts will be available after measurement date

Accounting Disclosure Exhibit

The following information is not required to be disclosed but is provided for informational purposes.

X. Recognition of Deferred Outflows and (Inflows) due to Liabilities - Measurement Date (GASB No. 68)

Recognition of Deferred Outflows due to Differences Between Actual and Expected Experience on Liabilities

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2013 / 2014	\$ 0	12.6	3.6	\$ 0	\$ 0
2014 / 2015	\$ 0	12.8	4.8	\$ 0	\$ 0
2015 / 2016	\$ 183,386	13.0	6.0	\$ 14,107	\$ 84,637
2016 / 2017	\$ 74,382	13.1	7.1	\$ 5,678	\$ 40,314
2017 / 2018	\$ 187,675	12.6	7.6	\$ 14,895	\$ 113,200
2018 / 2019	\$ 0	13.8	9.8	\$ 0	\$ 0
2019 / 2020	\$ 14,578	13.6	10.6	\$ 1,072	\$ 11,362
2020 / 2021	\$ 140,799	12.7	10.7	\$ 11,087	\$ 118,625
2021 / 2022	\$ 42,247	12.5	11.5	\$ 3,380	\$ 38,867
TOTAL				\$ 50,219	\$ 407,005

Recognition of Deferred (Inflows) due to Differences Between Actual and Expected Experience on Liabilities

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2013 / 2014	\$ (90,269)	12.6	3.6	\$ (7,164)	\$ (25,793)
2014 / 2015	\$ (164,041)	12.8	4.8	\$ (12,816)	\$ (61,513)
2015 / 2016	\$ 0	13.0	6.0	\$ 0	\$ 0
2016 / 2017	\$ 0	13.1	7.1	\$ 0	\$ 0
2017 / 2018	\$ 0	12.6	7.6	\$ 0	\$ 0
2018 / 2019	\$ (6,284)	13.8	9.8	\$ (455)	\$ (4,464)
2019 / 2020	\$ 0	13.6	10.6	\$ 0	\$ 0
2020 / 2021	\$ 0	12.7	10.7	\$ 0	\$ 0
2021 / 2022	\$ 0	12.5	11.5	\$ 0	\$ 0
TOTAL				\$ (20,435)	\$ (91,770)

Recognition of Deferred Outflows due to Changes of Assumptions or Other Inputs on Liabilities

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2013 / 2014	\$ 0	12.6	3.6	\$ 0	\$ 0
2014 / 2015	\$ 0	12.8	4.8	\$ 0	\$ 0
2015 / 2016	\$ 18,331	13.0	6.0	\$ 1,410	\$ 8,461
2016 / 2017	\$ 0	13.1	7.1	\$ 0	\$ 0
2017 / 2018	\$ 0	12.6	7.6	\$ 0	\$ 0
2018 / 2019	\$ 0	13.8	9.8	\$ 0	\$ 0
2019 / 2020	\$ 0	13.6	10.6	\$ 0	\$ 0
2020 / 2021	\$ 107,244	12.7	10.7	\$ 8,444	\$ 90,356
2021 / 2022	\$ 0	12.5	11.5	\$ 0	\$ 0
TOTAL				\$ 9,854	\$ 98,817

Accounting Disclosure Exhibit

The following information is not required to be disclosed but is provided for informational purposes.

X. Recognition of Deferred Outflows and (Inflows) due to Liabilities - Measurement Date (GASB No. 68) (cont'd)

Recognition of Deferred (Inflows) due to Changes of Assumptions or Other Inputs on Liabilities

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2013 / 2014	\$ 0	12.6	3.6	\$ 0	\$ 0
2014 / 2015	\$ 0	12.8	4.8	\$ 0	\$ 0
2015 / 2016	\$ 0	13.0	6.0	\$ 0	\$ 0
2016 / 2017	\$ (14,589)	13.1	7.1	\$ (1,114)	\$ (7,905)
2017 / 2018	\$ 0	12.6	7.6	\$ 0	\$ 0
2018 / 2019	\$ 0	13.8	9.8	\$ 0	\$ 0
2019 / 2020	\$ (80,127)	13.6	10.6	\$ (5,892)	\$ (62,451)
2020 / 2021	\$ 0	12.7	10.7	\$ 0	\$ 0
2021 / 2022	\$ 0	12.5	11.5	\$ 0	\$ 0
TOTAL				\$ (7,006)	\$ (70,356)

XI. Recognition of Deferred Outflows and (Inflows) due to Assets (GASB No. 68)

Recognition of Deferred Outflows / (Inflows) due to Difference Between Projected and Actual Earnings on Pension Plan Investments

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2017 / 2018	\$ (143,366)	5	0	\$ (28,674)	\$ 0
2018 / 2019	\$ 158,247	5	1	\$ 31,649	\$ 31,651
2019 / 2020	\$ (340,430)	5	2	\$ (68,086)	\$ (136,172)
2020 / 2021	\$ (352,685)	5	3	\$ (70,537)	\$ (211,611)
2021 / 2022	\$ 1,059,924	5	4	\$ 211,985	\$ 847,939
TOTAL				\$ 76,337	\$ 531,807

Outline of Principal Provisions of the Retirement System

A. Normal Retirement:

1. Eligibility

Earlier of:

- (a) Attainment of age 55 with completion of 10 years of Credited Service.
- (b) Completion of 25 years of Credited Service.

2. Mandatory Retirement Age

Age 60. Extensions granted with employer consent.

3. Amount of Pension

Total service times 3.50% of Final Average Salary. Maximum 100% of Final Average Salary.

4. Normal Form

The Normal Form of pension is a 10 year Certain and Life. Upon his or her death, 100% of the reduced benefit is continued for the remainder of the Certain period, if any. Optional forms are available on an actuarial equivalent basis.

5. Final Average Salary

Highest 3 consecutive years out of last 10. Salary includes base pay plus longevity pay and up to the first 250 hours of overtime per year. Lump sum payments paid at the time of retirement are not included in the determination of Final Average Salary.

B. Early Retirement:

1. Eligibility

Attainment of age 50 with completion of 10 years of Credited Service.

2. Amount of Pension

Computed as a Normal Retirement pension but reduced 3.0% for each year (0.25% for each month) that Early Retirement precedes the date the Member would have been eligible for Normal Retirement.

Outline of Principal Provisions of the Retirement System

C. Deferred Retirement:

1. Eligibility

10 or more years of Credited Service. Pension begins at age 55.

2. Benefit

Computed as a Normal Retirement pension but based upon service and Final Average Salary at time of termination.

D. Duty Disability Retirement:

1. Eligibility

No age or service requirement. Must be in receipt of worker's compensation.

Effective July 1, 2019, a Firefighter who becomes totally and permanently unable to perform useful and efficient service as a Firefighter due to a diagnosis of cancer or circumstances that arise out of the treatment of such cancer will be presumed to be duty disabled subject to the limitations in Chapter 112.1816, Florida Statutes.

2. Benefit

Computed as a Normal Retirement pension. Minimum benefit shall be 42% of Final Average Salary. Worker's compensation payments are offset, to the extent permitted by law.

E. Non-Duty Disability Retirement:

1. Eligibility

10 or more years of service.

2. Benefit

Computed as a Normal Retirement pension. Minimum benefit shall be 42% of Final Average Salary. Worker's compensation payments are offset, to the extent permitted by law.

F. Death Before Retirement:

1. Eligibility

10 or more years of service.

2. Benefit

Computed as a Normal Retirement pension but actuarially reduced in accordance with a 100% joint and survivor election.

Outline of Principal Provisions of the Retirement System

G. Deferred Retirement Option Plan (DROP):

Members may elect to freeze their retirement benefit at Normal Retirement eligibility, and continue working for a maximum of 5 years. The retirement benefit will be calculated as of the date the Member elects the DROP. This retirement benefit will be accumulated with interest at 4% during the DROP period in a DROP account. At actual termination, the Member can rollover the DROP account balance or receive the balance directly with appropriate tax consequences. The retirement benefit calculated as of the date of the DROP election becomes payable directly to the retiree or beneficiary thereafter. Member pick-up contributions will cease at the date of DROP election. Disability and death before retirement provisions will no longer apply to members who enter the DROP.

H. Post-Retirement Cost-of-Living Adjustments:

Effective October 1, 1994 all current retired Members and beneficiaries received an increase in their pension of \$75/month. Effective October 1, 2004, all current retired Members and beneficiaries received an increase in their pension of \$100/month. Effective October 1, 2022 all current retired members, DROP participants and beneficiaries received a pension increase of 5%.

I. Annual Holiday Bonus:

\$100

J. Member Contributions:

5.00% of annual salary for full-time Firefighters. 6.00% of annual salary for volunteer Firefighters. This amount is refunded upon termination. The City currently picks-up the former 5.00% Member contribution for full-time Firefighters. For all employees hired prior to December 31, 1999, this amount is refunded upon termination of membership with 3 or more years of Credited Service in the absence of a pension. For all employees hired after December 31, 1999, this amount is refunded upon termination of membership with 10 or more years of Credited Service in the absence of a pension. Should a Member die and no pension becomes or will become available, picked-up Member contributions will be refunded even if the required years of service have not been attained.

If you terminate employment and receive a refund of contributions, you forfeit any rights to future benefits from the Retirement System. The taxable portion of any refund you receive is subject to an automatic 20% withholding for Federal income tax purposes, and a possible 10% excise tax. These taxes can be avoided, however, if you roll the taxable portion over to an Individual Retirement Account (IRA) or another qualified employer plan. This rollover will result in no tax being due until you begin withdrawing funds from the IRA or other qualified employer plan. The rollover of the distribution, however, MUST be made directly by the System to your chosen IRA or other qualified employer plan.

Outline of Principal Provisions of the Retirement System

K. City Contributions:

Actuarially determined amounts which together with Member contributions and premium tax monies are sufficient to at least cover the requirements of the funding objective.

L. Premium Tax Monies:

A distribution of property insurance premium tax monies collected by the State pursuant to Chapter 175, Florida Statutes.

M. Forfeiture of Retirement Benefits:

Retirement benefits granted by the Retirement System are subject to forfeiture if an employee is convicted of an offense specified in Section 112.3173 and 175.195, Florida Statutes, pursuant to the procedures set forth in the cited statutes.

N. Claims Procedure:

Claims for benefits should be filed with the Board of Trustees at the City Clerk's office. If the claim is denied, you will be notified and informed of the procedure to request a hearing before the Board of Trustees. An applicant for benefits must appeal said denial within 60 days of being informed of the denial by filing an appeal with the Board at the City Clerk's office. If no appeal is filed within the time period then the denial shall be final.

O. Disclaimer:

The preceding summary briefly describes the principal benefits of the Retirement System. Detailed benefit conditions and limitations are contained in the Retirement Ordinance which establishes the System. The Internal Revenue Code, Florida Statutes, and the Ordinance all govern the operation of the System, and should be consulted before taking any action concerning your participation or benefits. In the case of any conflict between this summary and the provisions of the Ordinance or other applicable law, the Ordinance or other applicable law will prevail. Copies of the Ordinance are available at the City Clerk's office.

P. Change From Previous Valuation:

Post-Retirement Cost-of-Living Adjustments was:

Effective October 1, 1994 all current retired Members and beneficiaries received an increase in their pension of \$75/month. Effective October 1, 2004, all current retired Members and beneficiaries received an increase in their pension of \$100/month.

**Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation**

A. Mortality

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Sample Ages (2022)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
55	30.62	34.47	27.78	31.35
60	25.66	29.40	23.18	26.55
62	23.73	27.39	21.44	24.71

Sample Ages (2042)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
55	32.25	35.96	29.67	33.18
60	27.23	30.84	24.97	28.30
62	25.27	28.81	23.18	26.42

B. Interest to be Earned by Fund

7.25%, compounded annually, net of investment expenses - includes inflation at 2.5%.

C. Allowances for Expenses or Contingencies

Administrative expenses are projected to continue at the same dollar amount as the average of the preceding three fiscal years, rounded to the nearest thousand.

D. Employee Withdrawal Rates

The rates do not apply to Members eligible to retire and do not include separation on account of death or disability. This estimate measures the probabilities of Members leaving employment.

**Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation**

D. Employee Withdrawal Rates (Cont'd)

<u>Sample Ages</u>	<u>Years of Service</u>	<u>Withdrawal Rates Per 100 Employees</u>
ALL	0	9.0
	1	6.0
	2	4.0
	3	3.0
	4	2.5
Under 35	5 & Over	2.25
35 - 39		1.00
40 - 44		0.50
45 & Over		0.20

E. Disability Rates

These estimates represent the probabilities of active Members becoming disabled.

<u>Sample Ages</u>	<u>Percent Becoming Disabled Within Next Year</u>	
	<u>Male</u>	<u>Female</u>
20	0.07%	0.03%
25	0.09%	0.05%
30	0.10%	0.07%
35	0.14%	0.13%
40	0.21%	0.19%
45	0.32%	0.28%
50	0.52%	0.45%
55	0.92%	0.76%
60	1.53%	1.10%

75% of disabilities are assumed to be service incurred - 25% non-service incurred.

F. Salary Increase Factors

Employee salaries are estimated to increase between the date of hire and date of retirement. Salary increases occur in recognition of (i) individual merit and seniority, (ii) inflation-related depreciation of the purchasing power of salaries, and (iii) competition from other employers for personnel.

<u>Age</u>	<u>Salary Increase</u>
Under 35	5.0%
35 - 54	4.0%
55 & Over	3.5%

General increase in wage level due to inflation is 3%.

**Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation**

G. Payroll Growth Assumption

4.0% per annum - not greater than historical 10-year average (6.5%) but not less than 0.0%.

H. Retirement Rates

These rates are used to measure the probabilities of an eligible Member retiring during the next year.

Retirement Ages	Percent Retiring
< 56	17%
56 - 63	10%
64	20%
65	100%

A Firefighter is eligible for retirement after 25 years of service or after attaining age 55 with 10 or more years of Credited Service.

A Firefighter is eligible for Early Retirement at age 50 with 10 or more years of Credited Service.

Benefits accruing after age 65 are offset by actuarial gains from the deferred retirement.

I. Asset Valuation Method

The method used for determining the smoothed actuarial value of assets phases in the deviation between the expected and actual return on assets at the rate of 25% per year. The smoothed actuarial value of assets will be further adjusted to the extent necessary to remain within the corridor whose lower and upper limits are 80% and 120%, respectively, of the fair market value of System assets.

J. Cost Method

Normal Retirement, Termination, Disability, and Death Benefits: Entry-Age-Normal Cost Method.

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his entry age to his assumed retirement age to fund his estimated benefits, assuming the System had always been in effect. The normal cost for the System is the sum of such amounts for all employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the System is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the assets of the System.

Vested Normal Retirement, Termination, Disability, and Death Benefits: Unit Credit Cost Method

Under this method, the actuarial present value of vested accrued benefits is an amount calculated to be the sum of the present values of each individual's vested accrued or earned benefit under the Plan as of the valuation date. Each individual's calculation is based on pay and service as of the valuation date.

**Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation**

K. Disclosure of Assumptions

The investment return, salary increases, payroll growth assumption, withdrawal and retirement rates were updated based on the most recent experience study performed for the five years ending September 30, 2019. The mortality rates are based upon the July 1, 2022 FRS Actuarial Valuation, as required under F.S., Chapter 2015-157.

L. Changes From Previous Valuation

None.

M. Technical Assumptions

1. Pay Increase Timing:

Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

2. Decrement Timing:

Decrements are assumed to occur mid-year.

3. Eligibility Testing:

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

4. Benefit Service:

Exact fractional service is used to determine the amount of benefit payable.

5. Decrement Relativity:

Decrement rates are used directly from tabular rates - no adjustment for multiple decrement table effects.

6. Decrement Operation:

Disability and mortality decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during periods of retirement eligibility.

7. Incidence of Contributions:

Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

8. Marriage Assumption:

100% of Members are assumed to be married. Male spouses are assumed to be three years older than female spouses.

**Actuarial Assumptions and Actuarial Cost Methods
Used in the Valuation**

M. Technical Assumptions (cont'd)

9. Normal Form of Benefit:

The assumed Normal Form of benefit is a benefit payable for life with 10 years of guaranteed payments. Optional forms are available on an actuarial equivalent basis for Normal Retirement.

10. Actuarial Equivalence Basis for Optional Forms of Payment:

7.5% interest and the RP 2000 Combined Healthy Male Mortality Table with Blue Collar adjustment projected to the fiscal year that contains the benefit commencement date for participants and the RP 2000 Combined Healthy Female Mortality Table projected to the fiscal year that contains the benefit commencement date for beneficiaries. Disabled lives are set forward 5 years.

11. Duty and Non-Duty Related Assumption:

50% are assumed in-service and 50% are assumed non-service for pre-retirement death benefits.

12. Vested Members:

Vested Members who terminate with a benefit worth less than 100% of their accumulated employee contribution balance are assumed to withdraw the balance of their accumulated employee contributions and forfeit any vested benefit.

13. Salary:

Salary reported for the Actuarial Valuation includes all amounts included in the Final Average Compensation for benefit purposes.

**Distribution by Attained Age Groups
and Service Groups as of October 1, 2022**

<u>Attained</u> Age Group	-----COMPLETED YEARS OF SERVICE-----							<u>Total</u>
	<u>0 - 4</u>	<u>5 - 9</u>	<u>10 - 14</u>	<u>15 - 19</u>	<u>20 - 24</u>	<u>25 - 29</u>	<u>30 & Over</u>	
Under 25	2	-	-	-	-	-	-	2
25 - 29	5	1	-	-	-	-	-	6
30 - 34	3	4	3	-	-	-	-	10
35 - 39	1	-	4	3	-	-	-	8
40 - 44	1	-	3	3	-	-	-	7
45 - 49	-	-	-	1	1	1	-	3
50 - 54	1	-	1	-	2	1	-	5
55 - 59	1	-	-	-	-	-	-	1
60 - 64	-	-	-	1	-	-	-	1
65 & Over	-	-	-	-	-	-	-	0
TOTAL	14	5	11	8	3	2	0	43
				<u>10/01/2021</u>				<u>10/01/2022</u>
Average Attained Age				37.42 years				38.05 years
Average Hire Age				25.95 years				26.94 years
Average Pay				\$ 16,606				\$ 16,411
Percent Female				5.3%				4.7%

**Statistics for Participants Entitled to Deferred Benefits
and Participants Receiving Benefits**

A. Entitled to Deferred Benefits

Current Age Group	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 40	-	\$ -	\$ -
40 - 44	-	-	-
45 - 49	-	-	-
50 - 54	-	-	-
55 - 59	-	-	-
60 - 64	-	-	-
65 & Over	-	-	-
TOTAL	-	\$ -	\$ -

B. Receiving Benefits (including DROPs)

Current Age Group	<u>Count</u>	<u>Total Annual Benefit</u>	<u>Average Annual Benefit</u>
Less than 50	-	\$ 0	\$ 0
50 - 54	1	10,724	10,724
55 - 59	4	150,104	37,526
60 - 64	-	-	-
65 - 69	1	54,336	54,336
70 - 74	-	-	-
75 - 79	-	-	-
80 - 84	-	-	-
85 - 89	-	-	-
90 - 94	-	-	-
95 - 99	-	-	-
100 & Over	-	-	-
TOTAL	6	\$ 215,164	\$ 35,861

Reconciliation of Employee Data

A. <u>Active Participants</u>	
1. Active participants previous year	38
2. Retired during year	0
3. Entered DROP	0
4. Died during year	0
5. Disabled during year	0
6. Vested terminated refunded during year	0
7. Non-vested terminated during year	0
8. New active participants	5
9. Re-instated during year	0
10. Active participants current year	<u>43</u>
B. <u>Participants Receiving Benefits</u>	
1. Participants receiving benefits previous year	6
2. New retired participants	0
3. Former DROPs now receiving benefits	0
4. New terminated vested receiving benefits	0
5. New disabled receiving benefits	0
6. New beneficiaries receiving benefits	0
7. Died or ceased payment during year	0
8. Retired or terminated vested receiving benefits current year	<u>6</u>
C. <u>DROP Participants</u>	
1. DROP participants previous year	0
2. Died during year	0
3. Became disabled during year	0
4. Employment terminated and retired during year	0
5. Entered DROP during year	0
6. DROP participants current year	<u>0</u>
D. <u>Terminated Vested Participants Entitled to Future Benefits</u>	
1. Terminated vested entitled previous year	0
2. Died during year	0
3. Commenced receiving benefits during year	0
4. New terminated vested	0
5. Terminated vested paid lump sum	0
6. Terminated vested entitled current year	<u>0</u>

Projected Retirement Benefits

<u>Fiscal Year</u>	<u>Projected Total Annual Payout</u>
2023	\$ 228,864
2024	\$ 251,803
2025	\$ 274,410
2026	\$ 296,200
2027	\$ 315,647
2028	\$ 338,139
2029	\$ 371,560
2030	\$ 409,402
2031	\$ 446,690
2032	\$ 484,480

The above projected payout of System benefits during the next ten years is based on assumptions involving all decrements. The actual payouts may differ from the above estimates depending upon the death, salary and retirement experience of the System. However, since the projected payment is recomputed each valuation date, there is an automatic correction to the extent that actual experience varies from expected experience.

Table XVI

Summary of Transaction Information

Valuation Date	Benefits Paid ¹	Administrative Expenses	Employee Contributions	City Contributions	City Contributions (Member Pick-up)	State Contributions	Smoothed Actuarial Value ^{2,3}
10/01/2022	\$ 215,680	\$ 54,117	\$ 35,517	\$ 189,025	\$ 34,113	\$ 0	\$ 4,828,399
10/01/2021	205,560	44,720	33,620	183,201	30,112	41,580	4,623,040
10/01/2020	421,546	35,323	27,592	198,848	25,636	41,907	4,105,852
10/01/2019	355,281	33,342	23,770	166,165	21,548	37,465	3,852,315
10/01/2018	155,053	49,917	20,603	154,675	18,457	36,501	3,647,990
10/01/2017	134,757	19,937	19,087	143,335	16,838	36,887	3,362,895
10/01/2016	378,840	39,371	16,789	131,570	14,170	39,668	3,072,025
10/01/2015	83,962	41,841	18,678	128,963	15,447	44,218	3,105,208
10/01/2014	86,580	29,676	19,703	175,113	16,376	41,482	2,827,628
10/01/2013	89,073	35,105	19,575	161,708	16,156	41,171	2,466,636
10/01/2012	143,356	53,138	19,355	123,399	15,920	38,771	2,085,908
10/01/2011	96,354	19,379	22,012	149,434	19,320	37,581	1,977,744
10/01/2010	91,345	22,418	22,592	149,928	20,619	37,373	1,885,006
10/01/2009	92,398	19,074	19,864	131,351	17,664	39,238	1,754,894
10/01/2008	89,747	28,896	18,893	110,400	17,674	39,637	1,670,448
10/01/2007	111,911	17,188	15,987	76,417	14,188	37,382	1,580,073
10/01/2006	93,620	15,428	13,631	54,040	12,819	28,967	1,467,896
10/01/2005	51,357	21,044	15,475	74,600	14,554	34,448	1,366,942
10/01/2004	39,681	20,699	15,236	65,402	14,330	21,435	1,235,022
10/01/2003	35,013	34,418	4,063	54,773	14,071	23,636	1,137,647
10/01/2002	43,132	22,590	3,890	36,415	13,473	24,101	1,079,544
10/01/2001	34,527	17,937	3,692	28,775	12,787	20,565	1,060,211
10/01/2000	45,283	9,748	4,095	26,827	11,818	25,145	1,021,145
10/01/1999	33,569	3,461	2,349	27,775	11,742	15,385	950,656

¹ Effective for year ending September 30, 2013, includes DROP and Share Plan distributions (previously included DROP benefit payments)

² Effective for year ending September 30, 2013, includes DROP account balances

³ Prior to October 1, 2009 and effective for year ending September 30, 2013, Actuarial Value included the excess State contribution reserve

Recent Compensation, Termination and Investment Return Experience

Valuation Date	Compensation ¹		Termination ¹	Investment Return ²		
	% Increase (Decrease)	Assumed Increase	Ratio of Actual to Expected	Market Value	Smoothed Value	Assumed
10/01/2022	12.1%	4.2%	0.0	(13.83%)	4.76%	7.25%
10/01/2021	16.1%	4.3%	0.0	15.36%	11.61%	7.25%
10/01/2020	10.4%	4.2%	0.0	16.49%	11.04%	7.50%
10/01/2019	9.6%	4.2%	0.0	3.35%	9.61%	7.50%
10/01/2018	10.0%	4.2%	0.0	11.64%	7.70%	7.50%
10/01/2017	9.2%	4.1%	0.0	13.86%	7.39%	7.50%
10/01/2016	8.5%	4.1%	0.0	12.18%	6.10%	7.50%
10/01/2015	4.7%	5.8%	0.0	(6.46%)	6.84%	7.75%
10/01/2014	1.2%	5.7%	0.0	11.83%	8.86%	7.75%
10/01/2013	1.7%	5.8%	0.0	8.94%	7.56%	7.75%
Last 3 Periods	12.8%	4.2%	0.0	5.01%	9.09%	7.33%
Last 5 Periods	11.6%	4.2%	0.0	5.97%	8.92%	7.40%
Last 10 Periods	8.3%	4.7%	0.0	6.88%	8.13%	7.52%

¹ For full-time Firefighters only

² Computed as $2I/(A+B-I)$, where A is beginning value, B is ending value and I is investment return.

Employer Contribution Information

Valuation Date	Contribution Fiscal Year End	Minimum Required Employer Contributions	Actual City Contributions	Actual State Contributions	Actual Employer Contributions
10/01/2022	09/30/2024	\$ 243,420 ¹	N/A	N/A	N/A
10/01/2021	09/30/2023	\$ 210,194 ¹	N/A	N/A	N/A
10/01/2020	09/30/2022	\$ 253,385 ²	\$ 189,025	\$ 0	\$ 189,025
10/01/2019	09/30/2021	\$ 223,804 ²	\$ 183,201	\$ 41,580	\$ 224,781
10/01/2018	09/30/2020	\$ 240,952 ²	\$ 198,848	\$ 41,907	\$ 240,755
10/01/2017	09/30/2019	\$ 203,606 ²	\$ 166,165	\$ 37,465	\$ 203,630
10/01/2016	09/30/2018	\$ 191,176 ²	\$ 154,675	\$ 36,501	\$ 191,176
10/01/2015	09/30/2017	\$ 180,222 ²	\$ 143,335	\$ 36,887	\$ 180,222
10/01/2014	09/30/2016	\$ 134,684 ²	\$ 131,570	\$ 39,668	\$ 171,238
10/01/2013	09/30/2015	\$ 163,445 ²	\$ 128,963	\$ 44,218	\$ 173,181
10/01/2012	09/30/2014	\$ 173,612 ²	\$ 175,113	\$ 41,482	\$ 216,595
10/01/2011	09/30/2013	\$ 202,879 ²	\$ 161,708	\$ 41,171	\$ 202,879
10/01/2010	09/30/2012	\$ 162,170 ²	\$ 123,399	\$ 38,771	\$ 162,170
10/01/2009	09/30/2011	\$ 187,015 ²	\$ 149,434	\$ 37,581	\$ 187,015
10/01/2008	09/30/2010	\$ 167,418 ²	\$ 149,928	\$ 37,373	\$ 187,301
10/01/2007	09/30/2009	\$ 155,024 ²	\$ 131,351	\$ 39,238	\$ 170,589

¹ Projected² Based upon percentage of payroll

Actuarial Valuation as of October 1, 2022

State Required Exhibit

	<u>10/01/2021</u>	<u>Prior System 10/01/2022</u>	<u>Current System 10/01/2022</u>
A. <u>Participant Data</u>			
1. Active participants	38	43	43
2. Retired participants and beneficiaries receiving benefits (including DROPs)	6	6	6
3. Disabled participants receiving benefits	0	0	0
4. Terminated vested participants	0	0	0
5. Annual payroll of active participants	\$ 631,035	\$ 705,669	\$ 705,669
6. Projected payroll of active participants	\$ 656,276	\$ 733,896	\$ 733,896
7. Annual benefits payable to those currently receiving benefits including DROP participants	\$ 204,947	\$ 215,164	\$ 215,164
B. <u>Value of Assets</u>			
1. Smoothed Actuarial Value of Assets	\$ 4,623,040	\$ 4,828,399	\$ 4,828,399
2. Market Value of Assets	\$ 5,035,267	\$ 4,325,785	\$ 4,325,785
C. <u>Liabilities</u>			
1. Actuarial present value of future expected benefit payments for active members			
a. Retirement benefits	\$ 4,034,698	\$ 4,705,882	\$ 4,705,882
b. Vesting benefits	49,497	50,757	50,757
c. Death benefits	84,336	99,186	99,186
d. Disability benefits	76,076	87,857	87,857
e. Total	<u>\$ 4,244,607</u>	<u>\$ 4,943,682</u>	<u>\$ 4,943,682</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 0	\$ 0	\$ 0
3. Actuarial present value of future expected benefit payments for members currently receiving benefits			
a. Service retired including DROP participants	\$ 2,431,544	\$ 2,404,854	\$ 2,524,741
b. Disability retired	0	0	0
c. Beneficiaries	0	0	0
d. Miscellaneous	0	0	0
e. Total	<u>\$ 2,431,544</u>	<u>\$ 2,404,854</u>	<u>\$ 2,524,741</u>

Actuarial Valuation as of October 1, 2022

State Required Exhibit

	<u>10/01/2021</u>	<u>Prior System 10/01/2022</u>	<u>Current System 10/01/2022</u>
4. Share Plan liability	\$ 152,309	\$ 142,598	\$ 142,598
5. Total actuarial present value of future expected benefit payments	\$ 6,828,460	\$ 7,491,134	\$ 7,611,021
6. Actuarial accrued liabilities	\$ 5,484,485	\$ 6,020,746	\$ 6,140,633
7. Unfunded actuarial accrued liabilities	\$ 861,445	\$ 1,192,347	\$ 1,312,234
 D. <u>Statement of Accumulated System Benefits</u>			
1. Actuarial present value of accumulated vested benefits			
a. Participants currently receiving benefits including DROP participants	\$ 2,431,544	\$ 2,404,854	\$ 2,524,741
b. Other participants (including Share Plan)	2,146,179	2,487,342	2,487,342
c. Total	<u>\$ 4,577,723</u>	<u>\$ 4,892,196</u>	<u>\$ 5,012,083</u>
2. Actuarial present value of accumulated non-vested System benefits	<u>46,182</u>	<u>47,977</u>	<u>47,977</u>
3. Total actuarial present value of accumulated System benefits	<u>\$ 4,623,905</u>	<u>\$ 4,940,173</u>	<u>\$ 5,060,060</u>
 E. <u>Statement of Change in Accumulated System Benefits</u>			
1. Actuarial present value of accumulated System benefits as of October 1, 2021			\$ 4,623,905
2. Increase (decrease) during year attributable to:			
a. System amendment			\$ 119,887
b. Change in actuarial assumptions			0
c. Benefits paid including refunds and DROP and Share Plan distributions			(215,680)
d. Other, including benefits accumulated and increase for interest due to decrease in the discount period			531,948
e. Net increase			<u>\$ 436,155</u>
3. Actuarial present value of accumulated System benefits as of October 1, 2022			\$ 5,060,060

Actuarial Valuation as of October 1, 2022

State Required Exhibit

	<u>10/01/2021</u>	<u>Prior System 10/01/2022</u>	<u>Current System 10/01/2022</u>
F. <u>Pension Cost</u>			
1. Total normal cost	\$ 174,921	\$ 199,669	\$ 199,669
2. Payment required to amortize unfunded liability	66,892	87,216	93,243
3. Interest adjustment	8,987	10,565	10,776
4. Total required contribution	\$ 250,800	\$ 297,450	\$ 303,688
5. Item 4 as a percentage of payroll	39.7%	42.2%	43.0%
6. Estimated employee contributions	\$ 33,390	\$ 36,938	\$ 36,938
7. Item 6 as a percentage of projected payroll	5.1%	5.0%	5.0%
8. Estimated State contributions	\$ 30,248	\$ 30,248	\$ 30,248
9. Item 8 as a percentage of projected payroll	4.6%	4.1%	4.1%
10. Estimated pick-up employee contributions by City	\$ 29,930	\$ 35,478	\$ 35,478
11. Item 10 as a percentage of projected payroll	4.6%	4.8%	4.8%
12. Net amount payable by City	\$ 167,264	\$ 206,684	\$ 213,172
13. Item 12 as a percentage of projected payroll	25.5%	28.2%	29.0%
G. <u>Past Contributions (Prior Year Valuation)</u>			
1. Total contribution required (prior valuation % of pay)	\$ 309,463	\$ 278,643	\$ 278,643
2. Actual contributions made:			
a. Employees	\$ 35,517	N/A	N/A
b. State (net)	0	N/A	N/A
c. City (Member Pick-Up)	34,113	N/A	N/A
d. City (net of addition to Share Plan)	175,473	N/A	N/A
e. Total	\$ 245,103	N/A	N/A
H. <u>Net Actuarial Gain / (Loss)</u>	\$ 143,654	\$ (327,977)	\$ (327,977)
I. <u>Disclosure of Following Items:</u>			
1. Actuarial present value of future salaries - attained age	\$ 6,082,253	\$ 6,605,613	\$ 6,605,613
2. Actuarial present value of future employee contributions - attained age	\$ 581,767	\$ 648,857	\$ 648,857
3. Actuarial present value of future contributions from other sources	N/A	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 601,705	\$ 689,387	\$ 689,387
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A	N/A
6. Actuarial present value of future employee contributions at entry age	N/A	N/A	N/A

State Required Exhibit

	Unfunded Actuarial Accrued Liabilities	Current Unfunded Liabilities	Amortization Payment	Remaining Funding Period
10/01/1993	Actuarial Loss / (Gain)	\$ (228)	\$ (228)	1 year
10/01/1994	Actuarial Loss / (Gain)	1,132	575	2 years
10/01/1994	System Amendment	974	494	2 years
10/01/1995	Actuarial Loss / (Gain)	(904)	(311)	3 years
10/01/1995	Assumption and Method Change	3,038	1,044	3 years
10/01/1996	Actuarial Loss / (Gain)	195	51	4 years
10/01/1997	Actuarial Loss / (Gain)	(5,628)	(1,196)	5 years
10/01/1997	Assumption and Method Change	5,768	1,226	5 years
10/01/1998	Actuarial Loss / (Gain)	3,864	695	6 years
10/01/1999	Actuarial Loss / (Gain)	5,240	819	7 years
10/01/2000	Actuarial Loss / (Gain)	(764)	(106)	8 years
10/01/2001	Actuarial Loss / (Gain)	61,974	7,763	9 years
10/01/2001	System Amendment	10,476	1,312	9 years
10/01/2002	Actuarial Loss / (Gain)	47,833	5,472	10 years
10/01/2002	System Amendment	58,705	6,716	10 years
10/01/2003	Actuarial Loss / (Gain)	(46,964)	(4,956)	11 years
10/01/2003	System Amendment	3,632	383	11 years
10/01/2004	Actuarial Loss / (Gain)	5,458	536	12 years
10/01/2005	Actuarial Loss / (Gain)	71,817	6,601	13 years
10/01/2006	Actuarial Loss / (Gain)	(11,387)	(986)	14 years
10/01/2006	System Amendment	10,055	871	14 years
10/01/2007	Actuarial Loss / (Gain)	(23,456)	(1,923)	15 years
10/01/2008	Actuarial Loss / (Gain)	79,473	6,194	16 years
10/01/2009	Actuarial Loss / (Gain)	158,566	11,796	17 years
10/01/2009	Assumption Change	46,577	3,465	17 years
10/01/2010	Actuarial Loss / (Gain)	165,818	11,815	18 years
10/01/2011	Actuarial Loss / (Gain)	95,186	6,515	19 years
10/01/2012	Actuarial Loss / (Gain)	(36,480)	(2,405)	20 years
10/01/2012	Assumption Change	(8,289)	(547)	20 years
10/01/2013	Actuarial Loss / (Gain)	(68,735)	(4,376)	21 years
10/01/2014	Actuarial Loss / (Gain)	(183,590)	(11,311)	22 years
10/01/2015	Actuarial Loss / (Gain)	172,314	10,294	23 years
10/01/2015	Assumption Change	16,897	1,009	23 years
10/01/2016	Actuarial Loss / (Gain)	111,266	6,457	24 years
10/01/2016	Assumption Change	(13,813)	(802)	24 years
10/01/2017	Actuarial Loss / (Gain)	166,614	9,408	25 years
10/01/2018	Actuarial Loss / (Gain)	(6,951)	(382)	26 years
10/01/2018	System Amendment	167,055	9,192	26 years
10/01/2019	Actuarial Loss / (Gain)	(88,610)	(4,758)	27 years
10/01/2019	Assumption Change	(79,721)	(4,281)	27 years
10/01/2020	Actuarial Loss / (Gain)	7,959	418	28 years
10/01/2020	Assumption Change	109,645	5,753	28 years
10/01/2021	Actuarial Loss / (Gain)	(147,641)	(7,579)	29 years
10/01/2022	Actuarial Loss / (Gain)	327,977	16,489	30 years
10/01/2022	System Amendment	119,887	6,027	30 years
	TOTAL	\$ 1,312,234	\$ 93,243	

This Actuarial Valuation and / or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate, and in our opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the System and / or paid from the System's assets for which liabilities or current costs have not been established or other wise provided for in the valuation. All known events or trends which may require material increase in System costs or required contribution rates have been taken into account in the valuation.



Shelly L. Jones, A.S.A., E.A.
Enrollment Number: 23-08646
Dated: June 30, 2023



Jennifer M. Borregard, E.A.
Enrollment Number: 23-07624

Glossary

Actuarial Accrued Liability. The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.

Actuarial Assumptions. Assumptions about future System experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members and other items.

Actuarial Cost Method. A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.

Actuarial Equivalent. Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value of Future Benefits. The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

Actuarial Valuation. The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.

Actuarial Value of Assets. The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of System assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution.

Amortization Method. A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.

Glossary

Amortization Payment. That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Amortization Period. The period used in calculating the Amortization Payment.

Annual Required Contribution. The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.

Closed Amortization Period. A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.

Employer Normal Cost. The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.

Equivalent Single Amortization Period. For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.

Experience Gain/Loss. A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. Losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

GASB. Governmental Accounting Standards Board.

Glossary

GASB No. 67 and GASB No. 68. These are the governmental accounting standards that set the accounting rules for public retirement plans and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the plans themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement plans.

Normal Cost. The annual cost assigned, under the Actuarial Cost Method, to the current plan year.

Open Amortization Period. An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability. The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.

Valuation Date. The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

Vested Benefit Security Ratio. The ratio of the Market Value of Assets to the Actuarial Present Value of Vested Accrued Benefits.