

City of Orlando

# General Employees' Pension Fund

Actuarial Valuation Report

September 30, 2023





March 4, 2024

City of Orlando and  
Pension Advisory Committee  
City of Orlando General Employees' Pension Fund  
Orlando, Florida

Dear Committee Members:

The results of the September 30, 2023 Annual Actuarial Valuation of the City of Orlando General Employees' Pension Fund are presented in this report.

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

The purposes of the valuation are to measure the Fund's funding progress and to determine the employer contribution rate for the fiscal year beginning October 1, 2024. Information required by Statement Nos. 67 and 68 of the Governmental Accounting Standards Board (GASB) are provided in separate reports. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution amount in this report is determined using the actuarial assumptions and methods disclosed in Section D of this report. This report includes risk metrics on page A-11 and A-12 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor 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.

The findings in this report are based on data and other information through September 30, 2023. The valuation was based upon information furnished by the City, concerning Pension Fund benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City.

This report was prepared using assumptions and methods adopted by the Committee. All actuarial assumptions and methods used in this report are reasonable for the purposes of this valuation. Additional information about the actuarial assumptions and methods is included in Section D of this report. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e., not significantly optimistic or pessimistic).

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 City of Orlando General Employees' Pension Fund as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Brad Lee Armstrong, Jeffrey T. Tebeau and Kevin T. Noelke are Members of the American Academy of Actuaries (MAAA). These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. Our statement by the Enrolled Actuary is contained in Section A.

The signing actuaries are independent of the plan sponsor. Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Pension Advisory Committee and to answer any questions pertaining to the valuation.

Respectfully submitted,  
Gabriel, Roeder, Smith & Company



Brad Lee Armstrong, ASA, EA, MAAA, FCA



Jeffrey T. Tebeau, FSA, EA, MAAA, FCA



Kevin T. Noelke, ASA, MAAA, FCA

BLA/JTT/KTN:dj

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## **SECTION A**

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### **VALUATION HIGHLIGHTS AND STATEMENT BY ENROLLED ACTUARY**

# Actuarial Valuation Highlights

## September 30, 2023

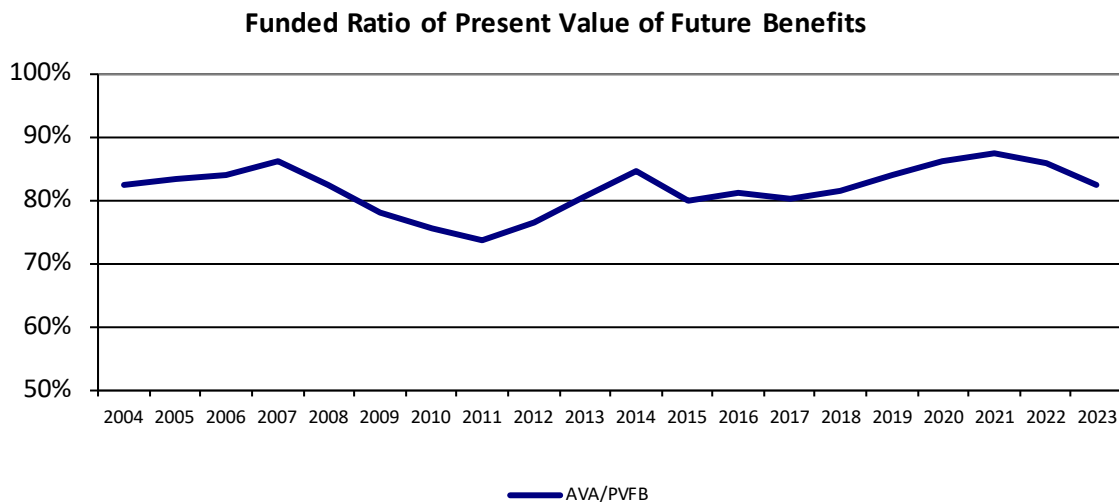
### Funding Objective

The funding objective of the Pension Fund is to establish and receive contributions which, expressed as dollar amounts, will remain approximately level from generation to generation of Orlando citizens, during the lifetime of the Fund.

The annual actuarial valuation measures the relationship between Pension Fund obligations and assets and determines the contribution amount for the ensuing year.

### Valuation Results – Funding Progress Indicators

With the Fund closed to new hires, costs have been computed using the aggregate cost method. The design of the aggregate cost method is to target that all benefits are fully funded over a period not to exceed 8 years. This is being accomplished through 8-year layered level-dollar amortization adopted during the most recent experience study. Under the aggregate cost method, the Present Value of Future Benefits (PVFB) is reduced by the actuarial value of assets and the present value of future member contributions, if any. The remainder is financed by City contributions as level dollar amounts. The method does not generate an actuarial accrued liability. The percentage of PVFB funded by the actuarial value of assets is shown below.



The funded ratio decreased from 85.7% in 2022 to 82.5% in 2023. Funded ratios are located on pages B-5 and E-3.

Since investment return is the most significant remaining risk for the lifetime of the Pension Fund, we point out that a one standard deviation return would create a gain or loss of approximately \$23 million. This will create a first-year decrease or increase in the City's contribution requirement of about \$1.2 million (growing to \$3.6 million by the 3<sup>rd</sup> year) each time this happens under the current asset valuation method and amortization policy. Investment decisions to reduce overall portfolio risk can lessen this effect.

## Valuation Results - Funding Progress Indicators

The overall activities of the members during the year increased the unfunded obligations of the Fund approximately \$15.26 million more than expected because certain individual assumptions deviated from expected:

*1.90% actuarial value rate of return versus 6.50% expected.*

*7 retirements versus 13 expected.*

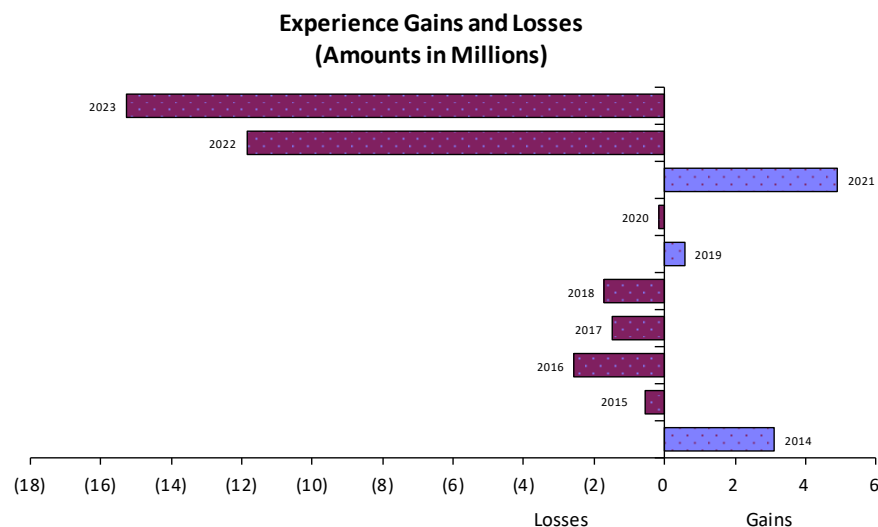
*23 retiree removals versus 25 expected and fewer benefits removed in aggregate versus expected.*

*15.99% increase in salary versus 3.93% expected.*

The estimated market value rate of return, net of investment expenses, on assets was 9.3% versus a 6.50% long-term assumption. The asset valuation method recognizes a portion of this year's gain and combines it with portions of gains and losses that occurred from 2020 – 2022. The result is a \$10.7 million recognized investment loss for the year which results in the 1.90% actuarial value rate of return shown above.

Note that for funding purposes, deviations from assumed market value investment experience are smoothed over a 3-year period and the ratio of market value to actuarial value is restricted to an 85% to 115% corridor. The remaining unrecognized gains from the investment return this year will be phased in over the next two valuation cycles. Please refer to page C-6 for further details.

The net result of the participant and fiscal activities was unfavorable, generating a \$15.26 million net experience loss, which represents 5.6% of the Present Value of Future Benefits at the beginning of the year.



Derivation of the current and prior years' experience gain(loss) is located on page B-6.

# Valuation Results - Contribution Requirement

The contribution requirements for the 2023-2024 and 2024-2025 fiscal years are:

**4.88% of pay by active members;  
\$10,308,070 by the City for 2023-2024; and  
\$12,957,991 by the City for 2024-2025.**

If the City's contribution is paid as a lump sum on the first day of the fiscal year (October 1), the contribution requirements for the 2023-2024 and 2024-2025 fiscal years are:

**\$9,988,552 by the City for 2023-2024; and  
\$12,556,334 by the City for 2024-2025.**

The 2024-2025 fiscal year contribution requirement reflects an increase in the City's dollar contribution requirement from the prior year.

## Employer Contributions for FY Beginning

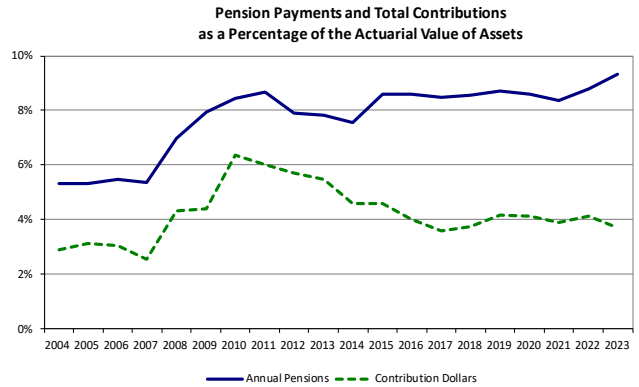
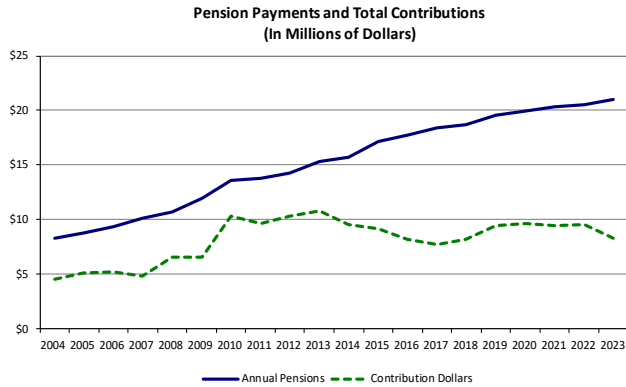


Comparative contribution information is located on page B-7. Composition of the current City contribution amount is located on page B-1.



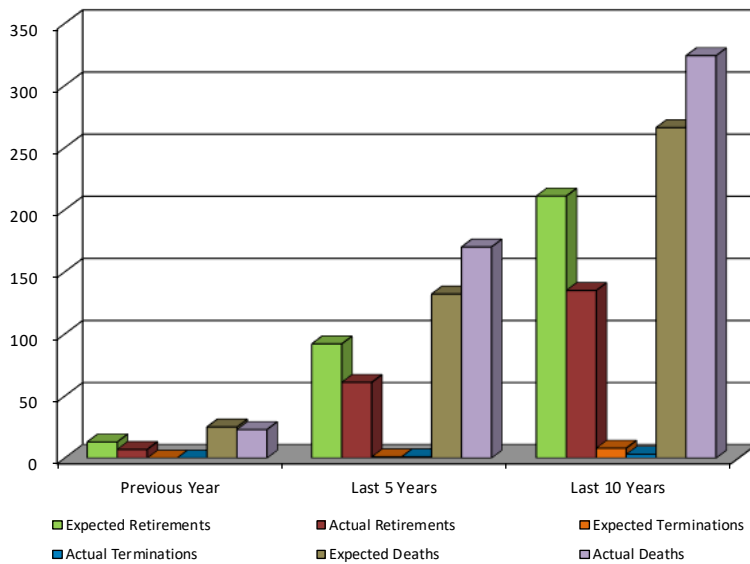
# Retiree Reconciliation

	Retiree Count	Beneficiary Count	Total Count	Total Pension
Start of Year	663	83	746	\$ 20,499,409
Added	13	7	20	821,193
Removed	(19)	(4)	(23)	(325,277)
<b>End of Year</b>	<b>657</b>	<b>86</b>	<b>743</b>	<b>\$ 20,995,325</b>



# Historical Comparisons

## Retirements, Deaths, and Terminations



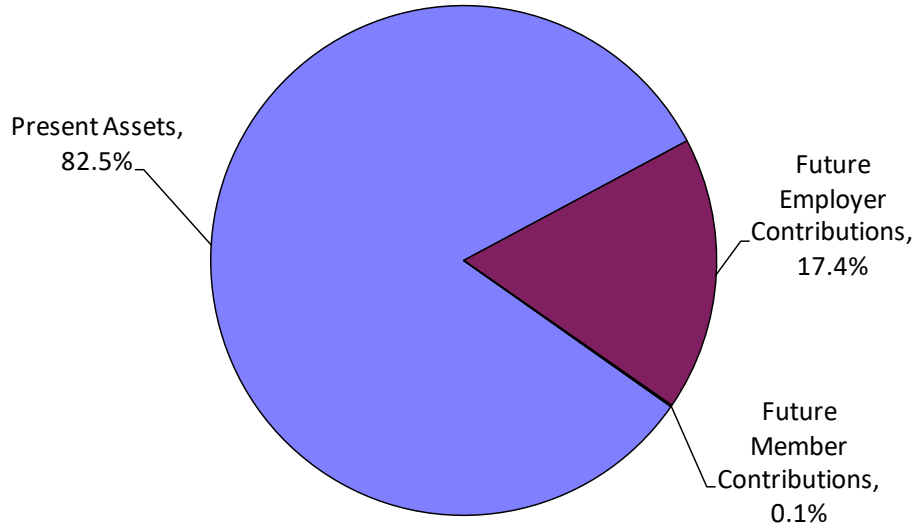
DC transfers are included in the chart above as Retirements or Terminations as appropriate.



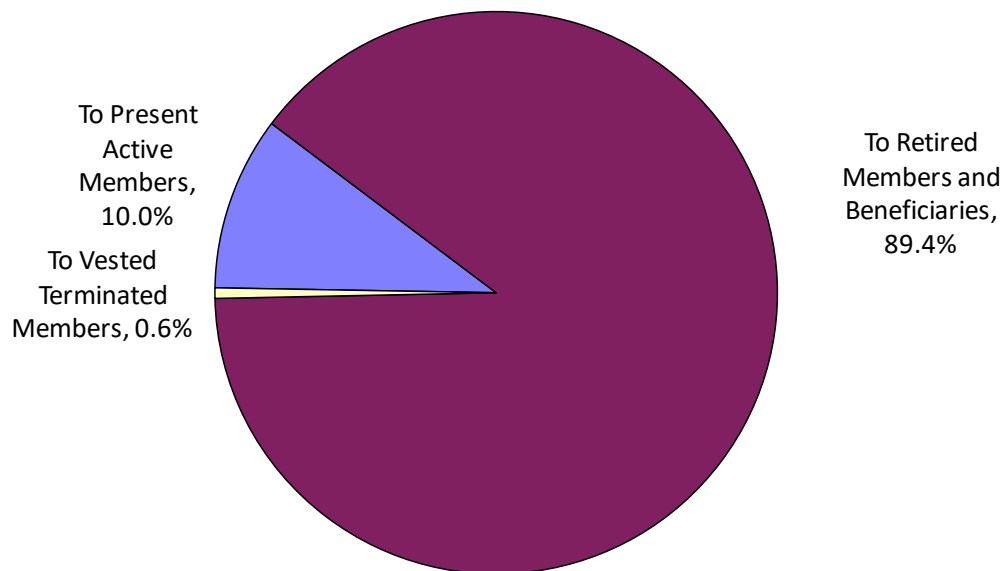
# Fund Obligations and Sources of Funding

## September 30, 2023

**Present Resources and Expected Future Resources  
(\$273 Million)**



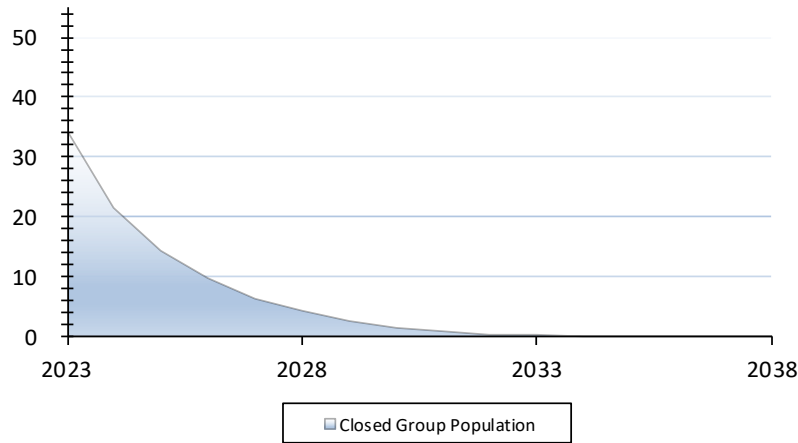
**Actuarial Present Value of Expected  
Future Benefit Payments and Reserves  
(\$273 Million)**



The actuarial balance sheet is located on page B-8.

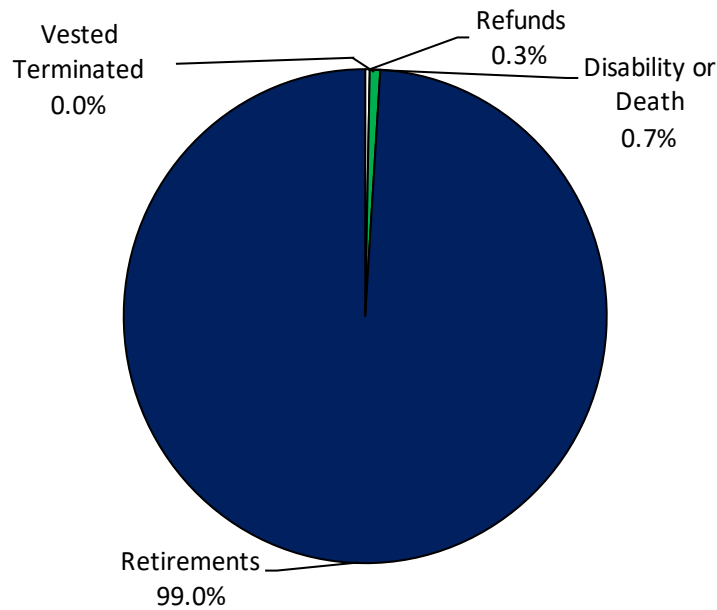
# Expected Development of Present Active Population September 30, 2023

## Closed Active Group Population Projection



The charts show the expected future development of the present population in simplified terms. The pension fund presently covers 34 active members. About 99% of the present population is expected to receive monthly retirement benefits by retiring directly from active service. The remaining 1% of the present population is expected to become eligible for vested terminated, refunds, disability, or death-in-service benefits. **All remaining active members are expected to retire or terminate within the next five-to-ten years.**

## Expected Terminations from Active Employment for Current Active Members



# Comments, Conclusion, and Statement by Enrolled Actuary

## Plan Experience

The activities of the Pension Fund and its members generated an experience loss of \$15.26 million on an aggregate basis during the plan year ended September 30, 2023. Losses were due to lower than expected recognized investment return, lower than expected retiree mortality and higher than expected salary increases. On average, salaries increased 16.0% versus 3.9% expected for the remaining actives.

The market value rate of return on plan assets this year was 9.3%. The actuarial value rate of return on assets used to determine the contribution requirements and funded ratio for this valuation was 1.90% versus 6.50% expected. The aggregate experience loss resulted in a higher dollar contribution than last year. Please refer to pages C-5, C-6, C-7, C-13, D-3, D-4, and D-5 for additional experience information.

## Plan Amendments

None.

## Amortization Policy

Experience gains/losses and one-time events (e.g., assumption changes) are valued using the Entry Age Normal cost method and amortized with level-dollar payments over separate 8-year closed bases for most years beginning with the 2015 valuation (for fiscal year 2017). See page B-2 for additional information. We recommend that the Board review the funding policy and consider adopting a written funding policy.

## Changes in Assumptions and Methods

There were no changes in actuarial assumptions or methods for this valuation.

## Future Employer Contribution Requirements

Currently the Actuarial Value of Assets, which is used to determine the funded ratio and contribution requirements for the Fund, is more than the Market Value of Assets by 7.9%, or \$16.4 million (see page C-6). A portion of this difference will be recognized in the 2024 report, which is expected to increase the City's contribution requirement in the absence of aggregate gains due to the Fund's experience during the fiscal year ending September 30, 2024 or other changes in provisions, methods or assumptions.

## Conclusion

Pension Fund contribution requirements are expected to fluctuate from year-to-year as experience emerges and economic conditions change. The expectation inherent in the funding of a pension fund is that year to year fluctuations will tend to cancel over periods of 5 to 10 years and this speaks to why the PAC's amortization policy remains at 8 years. The contribution requirements set forth in this report are sufficient to meet the Funding Objective stated on page A-1.

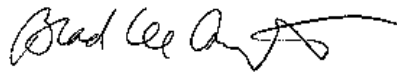


## Comments, Conclusion, and Statement by Enrolled Actuary

Over time, the funded ratio of a pension fund is expected to converge to 100%, but the basic trend may be interrupted by events such as changes in benefit provisions, or changes in actuarial cost methods and assumptions, or severe market downturns. Since the implementation of the aggregate actuarial cost method in 1998, the funded status has increased from 65.3% to 82.5%. This indicates the funding policies have been effective.

### Statement by Enrolled Actuary

This actuarial valuation and/or cost determination was prepared and completed 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 Part VII, Chapter 112, of the 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 increase in plan costs or required contribution rates have been taken into account in the valuation.



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Brad Lee Armstrong, ASA, EA, FCA, MAAA [23-5614]

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March 4, 2024

Date

# Low-Default-Risk Obligation Measure

## Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the “Low-Default-Risk Obligation Measure” (LDRM). The rationale that the ASB cited for the calculation and disclosure of the LDRM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

“The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the “right” liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan’s funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**”

## Comparing the Accrued Liabilities and the LDRM

One of the fundamental financial objectives of the Pension Fund is to finance each member’s retirement benefits over the period from the member’s date of hire until the member’s projected date of retirement. To fulfill this objective, the discount rate that is used to value the accrued liabilities of the Pension Fund is set equal to the **expected return** on the Fund’s diversified portfolio of assets (referred to sometimes as the investment return assumption). For the General Employees’ Pension Fund, the investment return assumption is 6.50%.

The LDRM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDRM is very dependent upon market interest rates at the time of the LDRM measurement. The lower the market interest rates, the higher the LDRM, and vice versa. The LDRM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the September 2023 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 5.46%, 4.53%, 4.28% and 4.42%. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligation.

**The difference between the two measures (Valuation and LDRM) is one illustration of the savings the sponsor anticipates by taking on risk in a diversified portfolio. The calculations below are based on the entry-age actuarial cost method:**

Valuation Accrued Liabilities	LDRM
\$270,867,746	\$328,163,376

## Other Observations

### Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the Present Value of Future Benefits (PVFB) and the Actuarial Value of Assets (AVA). Unless otherwise indicated, with regard to any funded status measurements presented in this report:

- 1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations; in other words, of transferring the obligations to an unrelated third party in an arm's length market value type transaction.
- 2) The measurement is dependent upon the actuarial cost method which, in combination with the plan's amortization policy, affects the timing and amounts of future contributions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. Future gains and losses would result in the funded ratio changing from 100%.

The computed contribution shown on page B-1 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 plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

### Limitations of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsors or other contributing entities to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

### Risks to Future Employer Contribution Requirements

There are ongoing risks to future employer contribution requirements to which the Pension Fund is exposed, such as:

- Actual and Assumed Investment Rate of Return
- Actual and Assumed Mortality Rates
- Amortization Policy/Actuarial Cost Method

## Risk Measures – Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the actuarial 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 actuarial 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: plan 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 plan 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 plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the actuarial liability and assets and consequently altering the funded status and 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 plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base. The continuing ability of the plan sponsor to make the contributions necessary to fund the plan is outside our scope of expertise and was not performed by GRS;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future actuarial liability and 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; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future actuarial liability and 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 cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.



## Risk Measures

(\$ in Thousands)

Actuarial Valuation Date (9/30)	(1) Actuarial Value of Assets	(2) Present Value of Future Benefits (PVFB)	(3) Unfunded PVFB (UPVFB) (2) - (1)	(4) Payroll	(5) Funded Ratio (1) / (2)	(6) Retiree Liabilities (RetLiab)	(7) RetLiab / PVFB (6)/(2)	(8) PVFB / Payroll (2) / (4)	(9) Assets / Payroll (1) / (4)	(10) UPVFB / Payroll (3) / (4)	(11) Non-Invest. Cash Flow (NICF)	(12) NICF / Assets (11)/(1)	(13) Market Rate of Return	(14) 5-year Trailing Average
2019	\$ 225,057	\$ 268,278	\$ 43,222	\$ 4,989	83.9%	\$ 224,658	83.7%	5,377.8%	4,511.4%	866.4%	\$ (9,902)	(4.4)%	5.5%	6.1%
2020 *	231,810	268,835	37,025	4,578	86.2%	228,252	84.9%	5,872.4%	5,063.6%	808.8%	(10,247)	(4.4)%	8.5%	8.0%
2021 *	242,780	277,683	34,903	3,864	87.4%	241,644	87.0%	7,185.7%	6,282.5%	903.2%	(10,831)	(4.5)%	15.5%	9.3%
2022	233,259	272,080	38,821	3,211	85.7%	241,485	88.8%	8,474.4%	7,265.3%	1,209.2%	(10,937)	(4.7)%	(16.7)%	3.3%
2023	224,795	272,577	47,782	3,100	82.5%	243,818	89.4%	8,794.1%	7,252.5%	1,541.6%	(12,817)	(5.7)%	9.3%	3.8%

\* Revised actuarial assumptions.

(5). The funded ratio is the most widely known measure of a plan's financial strength, but the trend in the funded ratio is much more important than the absolute ratio. The funded ratio should trend to 100%. As it approaches 100%, it is important to re-evaluate the level of investment risk in the portfolio and potentially to re-evaluate the assumed rate of return.

(6) and (7). The ratio of retiree liabilities to total PVFB gives an indication of the maturity of the system. As the ratio increases, cash flow needs increase, and the liquidity needs of the portfolio change. A ratio on the order of 50% indicates a maturing system.

(8) and (9). The ratio of liabilities and assets to payroll gives an indication of both maturity and volatility. Many systems have ratios between 500% and 700%. Ratios significantly above that range may indicate difficulty in supporting the benefit level as a level % of payroll.

(10). The ratio of unfunded PVFB to payroll gives an indication of the plan sponsor's ability to actually pay off the unfunded PVFB. A ratio above approximately 300% or 400% may indicate difficulty in discharging the unfunded PVFB within a reasonable time frame.

(11) and (12). A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means benefits and expenses exceed contributions, and existing funds may be 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 plan or a need for additional contributions.

(13) and (14). Investment return is probably the largest single risk that most systems face. The year-by-year return and the five-year geometric average both give an indication of the reasonableness of the system's assumed return. Of course, past performance is not a guarantee of future results. Market rate shown is based on an actuarial estimation method and will differ modestly from figures reported by the investment consultant.



## **SECTION B**

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### **DETAILED VALUATION RESULTS**

# Contributions to Finance Benefits of the Pension Fund for the Plan Year Beginning October 1 to be Contributed During the Fiscal Year

	Contribution Development for Fiscal Year Ending September 30	
	2025	2024
Development of Normal Cost		
a) Present value of future benefit payments	\$ 272,577,017	\$ 272,079,624
b) Present value of future member contributions	(337,420)	(395,392)
c) Actuarial value of assets	<u>(224,794,746)</u>	<u>(233,258,660)</u>
d) Unfunded present value of future benefit payments	47,444,851	38,425,572
e) Interest on item d) for one year	3,083,915	2,497,662
f) City contribution expected from prior valuation	(9,988,552)	(8,125,622)
g) Interest on item f) for 12 months	<u>(649,256)</u>	<u>(528,165)</u>
h) Total City present value of future normal cost	39,890,959	32,269,447
i) Implicit Closed level dollar amortization factor*	<u>3.13782006</u>	<u>3.19088704</u>
j) Item h) divided by item i)	12,712,953	10,113,002
Administrative Expenses	<u>245,038</u>	<u>195,068</u>
Total City Normal Cost and Administrative Expenses		
Dollar Amount*	<b>\$ 12,957,991</b>	<b>\$ 10,308,070</b>
Percent-of-Payroll	<b>720.61%</b>	<b>494.07%</b>

\* See page B-2 for details and D-1 for a description of the amortization method.

FS 112.64 requires City contributions to be deposited not less frequently than quarterly. Member contributions, which are in addition to the City contributions, must be deposited not less frequently than monthly.

Procedures for determining dollar contribution amounts are shown on page B-3.

Comparative contribution amounts for prior fiscal years are shown on page B-7.



## Sources and Financing of Present Value of Future Employer Normal Cost

	Initial		Current Amount*	Remaining Financing Period 9/30/2023	Amort. Factor	Contribution	
	Amount	Fin. Per.				Dollar	
Present Value of Future Employer Normal Cost (PVFerNC)							
9/30/2015	\$ 50,775,446	9 yrs.	\$ 5,244,147	1 yr.	0.96916329	\$	5,411,004
Changes from experience deviations (based on Entry Age Normal cost method)							
9/30/2016	\$ 2,404,434	8 yrs.	\$ 401,922	1 yr.	0.96916329	\$	414,710
9/30/2017	1,625,712	8 yrs.	524,725	2 yrs.	1.87917578		279,231
9/30/2018	1,398,187	8 yrs.	652,915	3 yrs.	2.73364759		238,844
9/30/2019	(427,228)	8 yrs.	(257,270)	4 yrs.	3.53596855		(72,758)
9/30/2020	(3,007)	8 yrs.	(2,191)	5 yrs.	4.28932156		(511)
9/30/2021	(5,137,920)	8 yrs.	(4,350,559)	6 yrs.	4.99669527		(870,687)
9/30/2022	11,802,182	8 yrs.	11,321,978	7 yrs.	5.66089594		2,000,033
9/30/2023	14,923,401	8 yrs.	15,893,422	8 yrs.	6.28455855		2,528,964
Changes from actuarial assumption and actuarial cost method revisions (based on Entry Age Normal cost method)							
9/30/2016	\$ 27,374	8 yrs.	\$ 4,576	1 yr.	0.96916329	\$	4,722
9/30/2017	6,249,688	8 yrs.	2,017,190	2 yrs.	1.87917578		1,073,444
9/30/2020	699,723	8 yrs.	509,614	5 yrs.	4.28932156		118,810
9/30/2021	9,365,744	8 yrs.	7,930,490	6 yrs.	4.99669527		1,587,147
<b>Totals</b>			<b>\$39,890,959</b>				<b>\$12,712,953</b>

\* This unfunded amount is projected to the applicable fiscal year with interest less the intervening City contribution expected from the prior valuation.

## Determining Dollar Contributions

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollar amounts. We recommend one of the following procedures.

**Procedure 1.** Contribute the annual amounts of \$12,957,991 for City normal cost and administrative expenses during the fiscal year beginning October 1, 2024 on at least a quarterly schedule to comply with FS112.64. The above dollar amount is based on base salary for the next year and is assumed to be contributed, on average, halfway through the fiscal year. Alternatively, if a monthly schedule is followed, the average City contribution would be \$1,079,833 for fiscal year 2024-2025. If contributions are made on a later schedule, interest should be added at the rate of 0.526% (0.00526) for each month of delay.

**Procedure 2.** The City contributes an amount of \$12,556,334 for City normal cost and administrative expenses, paid as a lump sum on October 1, 2024. This amount represents 698.3% of payroll.

The covered payroll is anticipated to decline sharply in the next few years since the active group is closed to new entrants. This has been addressed in part with the level dollar amortization in determining the employer rate. We recommend reviewing the percent-of-payroll funding policy and exploring requiring the City to contribute the full dollar amounts.

## Funding Progress Indicators

There is no single all-encompassing indicator that measures a pension fund's funding progress and current funded status.

**Three reliable indicators** of funding progress and funded status are described below and shown on page B-5.

**Indicator (1) The actuarial present value of gains or losses realized in the operation of the Pension Fund**

- an experience indicator. Gains and losses are expected to cancel each other over a period of years (in the absence of double-digit inflation) and sizable year to year fluctuations are common. Further details on the derivation of the gain (loss) are shown on page B-6.

**Indicator (2) The ratio of the actuarial value of assets to the present value of future benefits**

- a funding level indicator. The ratio is expected to converge to 100% as the active membership in the plan is eliminated, but the basic trend may be interrupted by certain events such as benefit improvements, changes in actuarial cost methods or changes in actuarial assumptions. Information concerning the funded ratio both before and after this change in method are provided to allow the reader to draw more appropriate conclusions concerning the funded status trend of the plan.

**Indicator (3) The ratio of the unfunded present value of future benefits to active member payroll**

- an inflation adjusted indicator. In a soundly financed pension fund, the amount of the unfunded present value of future benefits will be controlled and prevented from increasing in the absence of benefit improvements. However, in an inflationary environment it is seldom practical to impose this control on dollar amounts which are depreciating in value. The ratio is a relative index of condition where inflation is present in both items. The ratio is expected to decrease over time but the basic trend may be interrupted by certain events such as benefit improvements, changes in actuarial cost methods or changes in actuarial assumptions.

## Funding Progress Indicators – Historical Comparison (\$ Amounts in Millions)

Valuation Date September 30	Indicator <sup>(1)</sup>		Indicator <sup>(2)</sup>			Indicator <sup>(3)</sup>	
	Gain (Loss)	Actuarial Value of Assets	Present Value of Future Benefits (PVFB)*	Funded Ratio*	Unfunded PVFB*	Active Member Payroll	Percent-of- Payroll
2005 (a)	\$ 0.15	\$ 163.82	\$ 196.84	83.2 %	\$ 33.02	\$20.83	158.5 %
2006	(2.12)	168.45	200.89	83.9	32.44	19.63	165.3
2007	0.81	179.93	208.69	86.2	28.76	19.14	150.3
2008	(11.81)	176.36	214.26	82.3	37.90	18.36	206.4
2009	(14.76)	172.35	221.17	77.9	48.82	16.60	294.1
2010 (a)	(8.43)	173.70	229.78	75.6	56.08	13.61	412.2
2011	(10.09)	168.61	229.27	73.5	60.66	12.72	476.7
2012	0.63	175.35	229.54	76.4	54.19	11.83	457.9
2013	1.62	186.76	232.48	80.3	45.72	10.49	436.0
2014	3.12	199.60	235.91	84.6	36.31	9.80	370.4
2015	(0.56)	208.68	260.97	80.0	52.29	8.15	641.5
2016 (a)	(2.57)	212.87	262.90	81.0	50.03	7.54	663.7
2017 (a)	(1.49)	216.19	269.63	80.2	53.44	6.55	815.7
2018	(1.70)	218.72	268.95	81.3	50.23	6.19	811.1
2019	0.57	225.06	268.28	83.9	43.22	4.99	866.4
2020 (a)	(0.16)	231.81	268.84	86.2	37.03	4.58	808.9
2021 (a)	4.91	242.78	277.68	87.4	34.90	3.86	903.1
2022	(11.86)	233.26	272.08	85.7	38.82	3.21	1,209.1
2023	(15.26)	224.79	272.58	82.5	47.79	3.10	1,541.8

(a) After changes in benefit provisions and/or actuarial assumptions and/or actuarial cost methods.

\* Prior to the September 30, 1998 valuation, the entry-age normal cost method was used. The amounts shown were based on the actuarial accrued liability under that method. Beginning with the September 30, 1998 valuation, the aggregate method was used, which does not produce an unfunded accrued liability.

As of September 30, 2023, the unfunded PVFB with respect to the Market Value of Assets (MVA) is \$64.2 million and the ratio of MVA to PVFB is 76.4%.



# Derivation of Experience Gain (Loss)

## Based on Unfunded Present Value of Future Benefits (UPVFB)

	Year Ended September 30	
	2023	2022
<b>Derivation of Experience Gain (Loss)</b>		
(1) UPVFB at start of year	\$ 38,820,964	\$ 34,903,265
(2) Employer and Employee contributions	8,291,400	9,593,146
(3) Interest accrual	1,989,809	1,650,981
(4) Expected UPVFB before changes:		
(1) - (2) + (3)	32,519,373	26,961,100
(5) Change from Voluntary Separation Plan	0	0
(6) Change from revised actuarial assumptions	0	0
(7) Expected UPVFB after changes:		
(4) + (5) + (6)	32,519,373	26,961,100
(8) Actual UPVFB at end of year	47,782,271	38,820,964
(9) Gain (loss): (7) - (8)	<u>(15,262,898)</u>	<u>(11,859,864)</u>
(10) Gain (loss) as percent of present value of future benefits at start of year	(5.61)%	(4.27)%

## Based on Unfunded Entry Age Actuarial Accrued Liability (UAAL)

	Year Ended September 30	
	2023	2022
<b>Derivation of Experience Gain (Loss)</b>		
(1) UAAL at start of year	\$ 36,773,938	\$ 32,257,494
(2) Total Normal Cost	784,802	802,327
(3) Employer and Employee contributions	8,291,400	9,593,146
(4) Interest accrual	1,882,259	1,505,081
Expected UAAL before changes:		
(5) (1) + (2) - (3) + (4)	31,149,599	24,971,756
(6) Change from Voluntary Separation Plan	0	0
(7) Change from revised actuarial assumptions	0	0
Expected UAAL after changes:		
(8) (4) + (5) + (6)	31,149,599	24,971,756
(9) Actual UAAL at end of year	46,073,000	36,773,938
(10) Gain (loss): (7) - (8)	<u>(14,923,401)</u>	<u>(11,802,182)</u>
(11) Gain (loss) as percent of Actuarial Accrued Liability at start of year	(5.53)%	(4.29)%
Gain (loss) due to investments	(3.95)%	(4.91)%
Gain (loss) due to liabilities	(1.58)%	0.62%



## City Contributions: Historical Comparison (\$ Amounts in Millions)

Valuation Date September 30	Applicable Fiscal Year	Computed % of Active Member Covered Payroll	Dollar Contribution	
			Projected	Actual
2000	00-01	7.71 %	\$ 2.73	\$ 2.73
2001	01-02	8.63	2.22	2.22
2002	02-03	11.09	2.88	2.88
2003	03-04	13.06	3.12	3.12
2004 (a)	04-05	15.42	3.42	3.42
2005 (a)	05-06	19.72	4.12	4.12
2006	06-07	21.74	4.27	4.27
2007	07-08	20.31	3.85	3.85
2008	08-09	31.12	5.61	5.61
2008	09-10	53.44	6.63	9.29
2009	10-11	59.15	9.31	8.95 &
2010 (a)	11-12	79.13*	10.05	9.67 &
2011	12-13	92.58	10.59	10.19 &
2012	13-14	90.39	9.41	9.06 &
2013	14-15	100.18	9.06	8.72 &
2014	15-16	100.58	8.17	7.86 &
2015	16-17	117.47	7.68	7.41 &
2016 (a)	17-18	138.59	8.17	7.88 &
2017 (a)	18-19	192.26	9.47	9.14 &
2018	19-20	219.41	9.69	9.35 &
2019	20-21	278.37	9.59	9.26 &
2020 (a)	21-22	333.10	9.74	9.41 &
2021 (a)	22-23	315.23	8.39	8.13 &
2022	23-24	494.07	10.31	
2023	24-25	720.61	12.96	

(a) After changes in benefit provisions and/or actuarial assumptions and/or actuarial cost methods.

\* Contributions for the fiscal year ended 9/30/10 include \$2,905,589 for the Voluntary Separation Program.

& The City's contributions are made in a lump sum on October 1 in accordance with Procedure 2 on page B-3 of the corresponding valuation report. The actual dollar contribution under this procedure was equivalent to the projected dollar contribution.

# Actuarial Balance Sheet

## Present Resources and Expected Future Resources at September 30

	2023	2022
A. Actuarial value of assets		
1. Net assets from plan financial statements (market value)	\$208,355,939	\$202,833,617
2. Actuarial value adjustment	16,438,807	30,425,043
3. Actuarial value of assets	224,794,746	233,258,660
B. Actuarial present value of expected future employer contributions	47,444,851	38,425,572
C. Actuarial present value of expected future member contributions	337,420	395,392
D. Total present and expected future resources	\$272,577,017	\$272,079,624

## Actuarial Present Value of Expected Future Benefit Payments and Reserves

A. To retired members and beneficiaries	\$243,817,612	\$241,485,255
B. To vested terminated members	1,516,347	1,733,736
C. To present active members	27,243,058	28,860,633
D. Total actuarial present value of expected future benefit payments	\$272,577,017	\$272,079,624

## Actuarial Present Value of Future Benefit Payments and Compensation

Actuarial Present Value of Future Benefit Payments	September 30	
	2023	2022
For present active members		
Service pensions	\$ 27,043,457	\$ 28,637,275
Pre-retirement survivor pensions	190,272	212,303
Termination benefits		
Deferred service pensions	0	0
Refunds of member contributions	9,329	11,055
<b>Total</b>	<b>27,243,058</b>	<b>28,860,633</b>
For vested terminated members		
Regular	1,324,843	1,459,615
LTD	191,504	274,121
<b>Total</b>	<b>1,516,347</b>	<b>1,733,736</b>
For pension recipients		
Service retirees	232,174,140	230,391,082
Disabled retirees	1,501,245	1,198,282
Beneficiaries	10,142,227	9,895,891
<b>Total</b>	<b>243,817,612</b>	<b>241,485,255</b>
<b>Total actuarial present value of future benefit payments</b>	<b>\$272,577,017</b>	<b>\$272,079,624</b>
Actuarial present value of future compensation	\$ 6,914,340	\$ 8,102,292

## Projection of City Contributions as of September 30, 2023 6.50% Investment Return Assumption

Valuation Date	Unfunded Present Value of Benefits (UPVB)	Contribution for Fiscal Year Beginning	Employer Contribution*
9/30/2021	\$34,387,910	10/1/2022	\$ 8,385,547
9/30/2022	38,425,572	10/1/2023	10,308,070
9/30/2023	47,444,851	10/1/2024	12,957,991
9/30/2024	57,970,692	10/1/2025	10,378,977
9/30/2025	47,456,250	10/1/2026	8,524,625
9/30/2026	40,031,083	10/1/2027	8,286,764
9/30/2027	34,037,906	10/1/2028	8,360,227
9/30/2028	27,900,772	10/1/2029	8,242,025
9/30/2029	21,288,879	10/1/2030	7,525,540
9/30/2030	14,369,260	10/1/2031	5,525,557
9/30/2031	7,739,639	10/1/2032	3,030,449
9/30/2032	2,744,076	10/1/2033	200,000
9/30/2033	0	10/1/2034	200,000
9/30/2034	0	10/1/2035	200,000

\* Based upon the Fund's current actuarial assumptions being met each year in the future and includes administrative expenses of \$200,000 per year for projected years after the current valuation date. The amounts shown after the first few years are cash flows as if the City were making contributions throughout the year. For the purpose of this projection, the UPVB is projected to be \$0 beginning in 2033 due to recognition of scheduled investment gains/(losses) known as of the valuation date. We note that administrative expenses were \$245,038 during the fiscal year ending September 30, 2023. If this is likely to persist, employer contributions after the current valuation date should be adjusted to account for this.

With a relatively short amortization period, there can be a great deal of volatility in annual contribution requirements as actual experience unfolds.



## **SECTION C**

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### **SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA SUBMITTED BY PENSION FUND**

# Summary of Benefit Provisions Considered for Actuarial Valuation (September 30, 2023)

## Participation

All persons regularly employed by the City, for more than 20 hours a week and more than 5 months a year except:

- i) Police Officers
- ii) Firefighters
- iii) Employees of the Orlando Utilities Commission
- iv) Employees of the Greater Orlando Aviation Authority
- v) Prior members who have elected to transfer to the Defined Contribution Plan

This plan closed to new hires effective October 1, 1998.

## Final Average Earnings

One-third (1/3) of the member's basic salary or wages for the 3 highest years during the last 10 years of credited service. Lump sum payments for unused accumulated leave time paid at termination/retirement are excluded for pension purposes.

## Service (Normal) Retirement

**Eligibility.** Members are eligible to retire with 25 or more years of service or at age 65 or older with 5 or more years of credited service.

**Pension Amount.** Two and one-half percent (2.5%) of final average earnings multiplied by credited service, to a maximum pension of 75% of final average earnings. The normal form of pension is payable for life. Optional forms are available on an actuarial equivalent basis.

## Service (Early) Retirement

**Eligibility.** Age 55 or older with 10 or more years of credited service.

**Pension Amount.** Two and one-half percent (2.5%) of final average earnings multiplied by credited service, to a maximum pension of 75% of final average earnings, reduced by 1/6 of 1% of the preceding amount for each month retirement precedes age 65.



# Summary of Benefit Provisions Considered for Actuarial Valuation (September 30, 2023)

## Vested Termination of Employment

**Eligibility.** Termination of employment with 5 or more years of credited service (2 or more years if an elected or appointed official prior to December 12, 1988).

**Pension Amount.** Computed in same manner as a normal or early service retirement pension, based on pension fund benefit provisions, final average earnings and credited service at time of termination.

**Forfeiture.** Terminated member may request refund of employee contributions with interest and forfeit entitlement to the deferred pension.

## Disability Retirement

Benefits are funded and provided through a self-insured long-term disability plan. Vested termination of employment benefits are available to qualifying individuals.

## Post-Retirement Survivor Benefits

Any excess of member contributions, with interest to date of retirement, over aggregate amount of pension paid is paid to beneficiary in a lump sum.

Other optional forms of payment are available on an actuarial equivalent basis.

## Pre-Retirement Survivor Benefits

**Eligibility Condition 1.** Death after attaining age 40 with 10 or more years of credited service prior to termination of employment.

**Eligibility Condition 2.** Death after attaining 25 or more years of credited service prior to termination of employment.

**Pension Amount under Condition 1.** Fifty percent (50%) of the deceased member's actuarially reduced accrued normal service retirement pension will be paid to the surviving spouse if the marriage was of at least 1 year's duration at time of death.



## **Summary of Benefit Provisions Considered for Actuarial Valuation (September 30, 2023)**

***Pension Amount under Condition 2.*** One hundred percent (100%) of the deceased member's actuarially reduced accrued normal service retirement pension will be paid to the surviving spouse.

***Conversion to the DC Retirement Plan.*** In the event of the death of a member with 10 or more years of service, as of October 1, 1998, or of a member who was hired before October 1, 1998 and died prior to October 1, 2001, the present value of his accrued benefit in the DB Plan may be transferred to the DC Plan by the member's designated beneficiary, or executor or administrator of the member's estate, provided such election is made within 6 months of the date of death.

### **Cost-of-Living Adjustment (COLA)**

The monthly amount of pension shall be increased annually by 2% of the monthly amount paid during the prior year. Increases occur on the anniversary of the member's pension commencement date. Increases begin at the later of:

- (a) one full year of retirement; or
- (b) the earlier of:
  - (1) the attainment of age 64; or
  - (2) the completion of 4 full years of retirement.

Such cost-of-living adjustments shall apply in like manner to benefits payable to surviving spouses and to surviving pension beneficiaries.

Cost-of-living adjustments are payable to employees that retired on or after October 1, 1998. Terminated vested members are not eligible for the COLA.



# Summary of Benefit Provisions Considered for Actuarial Valuation (September 30, 2023)

## Transfers to Defined Contribution Plan

Effective October 1, 1998, members may elect to transfer to the DC Retirement Plan with the present value of their accrued benefit as of the date of transfer. Transferred participants revoke their rights to benefits under this plan. The window for transferring is unlimited except for members with less than 10 years of service as of October 1, 1998, who may only elect to transfer prior to October 1, 2001. In all cases, the amount of the transfer is calculated using actuarial equivalence factors which are cost neutral to the Fund.

## Member Contributions

Member contributions: 4.88%.

## City Contributions

Amounts determined actuarially in accordance with Chapter 112, Florida Statutes.

## Changes Since Prior Valuation

None.

# Accounting Information Submitted for Valuation

## Statements of Change in Plan Net Assets

	Year Ended September 30	
	2023	2022
<b>Additions</b>		
City Contributions	\$ 8,125,622	\$ 9,413,981
Member Contributions:		
Basic	165,664	178,488
Buybacks	114	677
Total Contributions	<u>\$ 8,291,400</u>	<u>\$ 9,593,146</u>
<b>Investment Income</b>		
Interest and Dividends	\$ 2,066,058	\$ 2,206,363
Realized Appreciation in Fair Value of Assets	-	-
Net Increase (Decrease) in Fair Value of Investments	16,661,544	(43,486,815)
Securities Lending Income	207	9,590
Management & Custodian Fees	(388,858)	(558,502)
Other	-	-
<b>Net Investment Income</b>	<u>\$ 18,338,951</u>	<u>\$ (41,829,364)</u>
<b>Total Additions</b>	<u>\$ 26,630,351</u>	<u>\$ (32,236,218)</u>
<b>Deductions</b>		
Benefits	\$ 20,789,616	\$ 20,335,333
Refunds of Contributions	73,375	-
Administrative Expenses	245,038	193,083
Other Expenses	-	1,985
<b>Total Deductions</b>	<u>\$ 21,108,029</u>	<u>\$ 20,530,401</u>
<b>Net Increase (Decrease) before Transfers</b>	5,522,322	(52,766,619)
Transfers to Defined Contribution Plan	-	-
<b>Net Increase (Decrease)</b>	<u>\$ 5,522,322</u>	<u>\$ (52,766,619)</u>
<b>Net Position - Restricted for Pension Benefits:</b>		
<b>Beginning of Year (From Preliminary Statements)</b>	202,833,617	255,600,236
Adjustments After Preliminary Statements Submitted	1	-
<b>Beginning of Year (Audited Balance)</b>	<u>\$ 202,833,618</u>	<u>\$ 255,600,236</u>
<b>End of Year</b>	<u>\$ 208,355,940</u>	<u>\$ 202,833,617</u>

## Summary of Assets – Market Value

	2023	2022
<b>Assets</b>		
Cash & Cash Equivalents	\$ 4,398,005	\$ 5,310,529
Prepaid Items	1,514,755	1,470,489
Investments, at Fair Value		
Fixed Income	71,630,833	66,874,242
Equity (Domestic & International)	96,036,689	91,627,132
Real Estate	14,923,334	17,067,637
Global Commingled Investments	19,729,250	17,367,949
Hedge Fund of Funds	23,465	313,937
Short-term Investments	96,507	2,838,467
Securities Lending Collateral	-	-
Construction in Progress	-	-
Software	66,504	69,499
<b>Total Assets</b>	<u>208,419,342</u>	<u>\$ 202,939,881</u>
<b>Liabilities</b>		
Obligations Under Securities Lending	\$ -	\$ -
Accounts Payable	63,403	106,264
Due to Other Funds	-	-
<b>Total Liabilities</b>	<u>\$ 63,403</u>	<u>\$ 106,264</u>
Adjustments After Preliminary Statements Submitted	-	-
<b>Net Assets</b>	<u>\$ 208,355,939</u>	<u>\$ 202,833,617</u>



## Derivation of Actuarial Value of Assets

	2022	2023	2024	2025
A. Actuarial Value Beginning of Year	\$242,780,151	\$233,258,660		
B. Market Value End of Year	202,833,617	208,355,939		
C. Market Value Beginning of Year	255,600,236	202,833,617		
D. Non-Investment Net Cash Flow#				
D1. Employer Contributions	9,413,981	8,125,622		
D2. All other cash flows (incl. EE cont., ben pmts. and admin. Exp.)	(20,351,236)	(20,942,251)		
E. Investment Income#				
E1. Market Total: (B) - (C) - (D1) - (D2)	(41,829,364)	18,338,951		
E2. Amount for Immediate Recognition: 6.50% x [ (A) + (D1) + (D2) x 0.5 ]	15,731,203	15,009,355		
E3. Amount for Phased-In Recognition: (E1)-(E2)	(57,560,567)	3,329,596		
F. Phased-In Recognition Investment Income				
F1. Current Year: (E3) ÷ 3	(19,186,856)	1,109,865		
F2. First Prior Year	6,308,604	(18,658,538)	\$ 1,109,865	
F3. Second Prior Year	583,431	6,308,603	(18,658,538)	\$ 1,109,866
F4. Third Prior Year	(963,983)	583,430	-	-
F5. Total Recognized Investment Gain	(13,258,804)	(10,656,640)	(17,548,673)	1,109,866
G. Corridor Adjustment	15%	15%		
G1. Upper Bound	233,258,660	239,609,330		
G2. Lower Bound	172,408,574	177,102,548		
G3. Adjustment to Actuarial Value to Keep within Corridor	(1,056,635)	-		
H. Actuarial Value End of Year:				
= (A) + (D) + (E2) + (F5) + (G3)	233,258,660	224,794,746		
I. Difference between Market & Actuarial Value	(30,425,043)	(16,438,807)		
J. Actuarial Value Rate of Return#	0.6%	1.9%		
K. Market Value Rate of Return#	(16.7)%	9.3%		
L. Ratio of Actuarial Value to Market Value	115.0%	107.9%		

# Net of investment expenses.

The Actuarial Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased-in over a closed 3-year period. During periods when investment performance exceeds the assumed rate, the Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, the Actuarial Value of Assets will tend to be greater than Market Value. If assumed rates are exactly realized for 2 consecutive years, it will become equal to Market Value. The Actuarial Value of Assets is limited to a corridor of 85% to 115% of the Market Value of Assets.



## Retired Member and Beneficiary Data Historical Schedule

Year Ended September 30	Added		Removed		Net Increase		End of Year		Expected Removals	
	No.	Annual Pensions#	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions
1999	56	\$ 817,332	29	\$ 186,939	27	\$ 630,393	667	\$ 6,520,483	18	\$ 124,157
2000	49	741,278	22	200,172	27	541,106	694	7,061,589	19	135,322
2001	30	444,366	37	303,929	(7)	140,437	687	7,202,026	20	154,928
2002	35	422,596	43	359,586	(8)	63,010	679	7,265,036	22	157,532
2003	37	613,424	22	183,284	15	430,140	694	7,695,176	22	166,102
2004	33	700,639	20	145,788	13	554,851	707	8,250,027	23	179,495
2005	34	694,063	30	177,622	4	516,441	711	8,766,468	24	195,270
2006	37	782,529	28	193,285	9	589,244	720	9,355,712	23	186,073
2007	40	931,788	24	199,077	16	732,712	736	10,088,424	23	201,845
2008	32	848,106	31	230,877	1	617,229	737	10,705,653	24	218,624
2009	61	1,411,570	30	208,663	31	1,202,907	768	11,908,560	26	255,238
2010	62	1,998,620	37	296,313	25	1,702,307	793	13,610,868	25	253,964
2011	23	616,376	35	396,432	(12)	219,944	781	13,830,812	26	277,153
2012	30	760,460	33	334,976	(3)	425,484	778	14,256,296	26	285,102
2013	46	1,423,948	22	368,676	24	1,055,272	802	15,311,568	26	299,524
2014	24	657,053	20	235,537	4	421,516	806	15,733,084	27	330,001
2015	49	1,698,889	32	302,785	17	1,396,104	823	17,129,188	28	357,035
2016	27	1,020,171	37	456,102	(10)	564,069	813	17,693,257	26	350,498
2017	24	1,002,040	31	276,467	(7)	725,573	806	18,418,830	26	368,092
2018	25	884,010	34	618,790	(9)	265,220	797	18,684,050	27	402,260
2019	30	1,272,920	29	354,631	1	918,289	798	19,602,339	27	417,898
2020	20	783,527	36	452,670	(16)	330,857	782	19,933,196	27	440,329
2021	28	1,172,300	46	799,149	(18)	373,151	764	20,306,347	27	482,389
2022	18	904,737	36	711,675	(18)	193,062	746	20,499,409	26	498,153
2023	20	821,193	23	325,277	(3)	495,916	743	20,995,325	25	506,706

# Includes cost-of-living adjustments for existing retirees.



## Age and Service Retired Members

Valuation Date September 30		All Retired Members			New Retired Members During Prior Year			
		Average			Average			
		Attained Age	Retirement Age	Annual Pension	Number	Retirement Age	Service	Annual Pension
2009	686	70.1 yrs.	58.8 yrs.	\$16,624	61	60.2 yrs.	15.6 yrs.	\$21,503
2010	715	69.7	58.6	18,324	59	58.9	22.1	31,524
2011	702	70.0	58.5	18,934	16	57.1	17.8	22,576
2012	700	70.1	58.4	19,534	24	57.5	16.8	22,385
2013	720	70.3	58.4	20,393	38	60.0	17.6	26,462
2014	722	70.7	58.5	20,899	20	60.8	17.8	24,420
2015	739	70.8	58.4	22,190	31	57.7	21.7	20,813
2016	728	71.0	59.0	23,236	21	60.6	29.2	33,048
2017	721	71.4	58.3	24,405	21	59.9	22.4	28,842
2018	717	71.8	58.3	24,856	13	60.3	22.6	24,965
2019	716	71.9	58.4	26,091	19	60.9	29.4	36,745
2020	700	72.2	58.3	27,118	10	59.4	27.8	38,989
2021	685	72.5	58.3	28,115	14	62.5	29.0	46,276
2022	663	72.7	58.2	29,260	14	62.7	24.7	39,340
2023	657	73.3	58.1	30,172	13	59.7	26.4	29,634

## Retired Members and Beneficiaries

### Historical Comparison

Valuation Date September 30	% Incr. in Annual Pensions	No. of Active Per Retired	Annual Pensions as % of Active Member Payroll	Average Annual Pensions
2009	11.2 %	0.4	71.7 %	\$ 15,506
2010	14.3	0.3	100.0	17,164
2011	1.6	0.3	108.7	17,709
2012	3.1	0.3	120.5	18,324
2013	7.4	0.2	146.0	19,092
2014	2.8	0.2	160.5	19,520
2015	8.9	0.2	210.1	20,813
2016	3.3	0.2	234.7	21,763
2017	4.1	0.1	281.1	22,852
2018	1.4	0.1	301.7	23,443
2019	4.9	0.1	392.9	24,564
2020	1.7	0.1	435.4	25,490
2021	1.9	0.1	525.5	26,579
2022	1.0	0.1	638.5	27,479
2023	2.4	0.0	677.4	28,258



## Retired Member and Beneficiary Data as of September 30, 2023 by Type of Benefits Being Paid

Type of Benefits Being Paid	No.	Annual Benefits	Average	Actuarial Present Value of Pensions
Straight Life	438	\$12,589,198	\$28,742	\$139,459,672
10-Year Certain and Life Thereafter	9	241,647	26,850	2,793,861
100% Contingent Annuitant	81	2,779,648	34,317	39,728,926
66-2/3% Contingent Annuitant	65	2,190,984	33,707	29,229,596
50% Contingent Annuitant	60	1,962,883	32,715	21,759,795
LTD Contingent Annuitant	4	58,629	14,657	703,535
Survivor Beneficiaries	79	1,135,733	14,376	9,857,293
Death-in-Service Survivors	7	36,603	5,229	284,934
<b>Total Benefits Being Paid</b>	<b>743</b>	<b>\$20,995,325</b>	<b>\$28,258</b>	<b>\$243,817,612</b>

## Retired Member and Beneficiary Data as of September 30, 2023 by Attained Aged

Attained Age	No.	Annual Benefits	Average
25 - 29	1	\$ 27,680	\$ 27,680
45 - 49	1	40,823	40,823
50 - 54	11	417,560	37,960
55 - 59	33	1,360,475	41,227
60 - 64	79	3,239,855	41,011
65 - 69	137	4,532,939	33,087
70 - 74	153	4,791,758	31,319
75 - 79	138	3,482,233	25,234
80 - 84	109	1,928,292	17,691
85 - 89	52	913,674	17,571
Over 90	29	260,036	8,967
<b>Totals</b>	<b>743</b>	<b>\$20,995,325</b>	<b>\$ 28,258</b>

## Vested Terminated Member Data\* as of September 30, 2023 by Attained Age

Attained Age	No.	Estimated Annual Benefits
45 - 49	1	\$ 10,520
50 - 54	2	11,445
55 - 59	8	77,358
60 - 64	12	64,331
65 - 69	4	20,196
70 - 74	1	2,276
<b>Totals</b>	<b>28</b>	<b>\$186,126</b>

*\* Includes Regular and LTD Vested Terminated members.*



## Active and Vested Terminated Members Included in Valuation

Valuation Date	Active Members	Vested Term. Members	Active Member Payroll	Average in Years		
				Age	Service	Pay
9/30/99 #	1,449	207	\$46,853,029	44.6	11.0	\$32,335
9/30/00	998	175	35,343,262	45.9	12.0	35,414
9/30/01	665	159	25,777,150	47.4	13.9	38,763
9/30/02	619	172	26,065,429	48.1	14.8	42,109
9/30/03	543	178	24,015,995	48.9	15.9	44,228
9/30/04	499	174	22,264,155	49.5	16.6	44,618
9/30/05 &	455	168	21,459,676	50.0	17.4	47,164
9/30/06	421	159	19,626,410	50.8	18.2	46,619
9/30/07	389	148	19,140,901	51.5	18.8	49,205
9/30/08	359	142	18,358,988	52.1	19.5	51,139
9/30/09	312	131	16,600,574	52.2	20.1	53,207
9/30/10	256	124	13,606,449	52.0	20.7	53,150
9/30/11	234	119	12,723,853	52.9	21.6	54,375
9/30/12	217	111	11,833,293	53.8	22.3	54,531
9/30/13	189	96	10,486,831	54.2	23.1	55,486
9/30/14	174	93	9,803,716	54.9	24.0	56,343
9/30/15	142	78	8,151,240	55.5	24.4	57,403
9/30/16	126	72	7,538,477	56.1	25.0	59,829
9/30/17	109	69	6,551,773	56.8	25.9	60,108
9/30/18	96	56	6,193,073	57.4	26.8	64,511
9/30/19	76	51	4,988,621	57.9	27.6	65,640
9/30/20	66	45	4,577,943	58.8	28.6	69,363
9/30/21	53	37	3,864,363	58.8	29.5	72,913
9/30/22	42	34	3,210,591	59.1	30.3	76,443
9/30/23	34	28	3,099,534	60.7	31.6	91,163

# On October 1, 1998 the plan was closed to new hires and members were allowed to transfer to a new DC plan.  
 & The pay reported in conjunction with the valuation included 27 pay periods.

## Numbers Added to and Removed from Active Participation

Year Ended	Number Added During Year		Terminations During Year								Active Members End of Year
			Retirement		Death-in-Service		Other Withdrawals				
	A	E					A	E	Vested	Other	
9/30/99	5	0	111	38	1	2	349	163	512	127	1,449
9/30/00	3	0	72	27	1	2	310	71	381	72	998
9/30/01	4	0	58	25	0	2	218	61	279	43	665
9/30/02	4	0	18	25	0	2	22	10	32	43	619
9/30/03	0	0	30	19	0	1	32	14	46	20	543
9/30/04	5	0	28	19	0	1	16	5	21	16	499
9/30/05	1	0	30	18	1	1	11	3	14	15	455
9/30/06	0	0	23	21	1	1	7	3	10	14	421
9/30/07	0	0	27	22	0	0	4	1	5	11	389
9/30/08	0	0	26	21	1	1	0	3	3	10	359
9/30/09	1	0	43	22	0	1	4	1	5	9	312
9/30/10	3	0	53	18	1	1	5	0	5	7	256
9/30/11	0	0	13	18	0	1	9	0	9	4	234
9/30/12	1	0	14	22	0	1	4	0	4	3	217
9/30/13	0	0	24	23	0	1	4	0	4	3	189
9/30/14	0	0	14	23	0	1	1	0	1	2	174
9/30/15	0	0	31	26	1	1	0	0	0	2	142
9/30/16	0	0	0	24	0	1	0	0	0	1	126
9/30/17	0	0	16	23	0	0	1	0	1	1	109
9/30/18	0	0	13	23	0	0	0	0	0	1	96
9/30/19	0	0	19	23	0	0	1	0	1	1	76
9/30/20	0	0	10	21	0	0	0	0	0	0	66
9/30/21	1	0	14	21	0	0	0	0	0	0	53
9/30/22	0	0	11	14	0	0	0	0	0	0	42
9/30/23	0	0	7	13	1	0	0	0	0	0	34
Subtotals											
2019-2023	1	0	61	92	1	0	1	0	1	1	
2014-2023	1	0	135	211	2	3	3	0	3	8	
Expected for 9/30/24											
		0		12		0				0	

A Represents actual number.

E Represents expected number.

Transfers to the DC plan are included as Retirements, Vested Withdrawals, or Other Withdrawals, based upon eligibility for retirement at time of transfer.



## Active Members as of September 30, 2023 by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Active Member Payroll
50 - 54						4	1	5	\$ 443,954
55 - 59					1	2	6	9	737,476
60 - 64						1	12	13	1,245,822
65 - 69						2	3	5	501,407
70 & up							2	2	170,875
<b>Totals</b>					<b>1</b>	<b>9</b>	<b>24</b>	<b>34</b>	<b>\$ 3,099,534</b>

### Group Averages:

Age: 60.7 years  
Service: 31.6 years  
Annual Pay: \$91,163

## Reconciliation of Membership [Participants] for the Plan Year Ended September 30, 2023

	Active Members	Vested Terminated Members		Pension Recipients	
		Regular	LTD	All Retirees	All Beneficiaries
No. at Start of Year	42	26	8	663	83
Increase (Decrease) From					
Service Retirement					
- electing monthly lifetime payments	(7)	(3)		10	
- electing DC transfer					
Long-term Disability			(3)	3	
Deaths					
- with beneficiary				(6)	6
- without beneficiary	(1)			(13)	(4)
Other Pension Terminations					
Vested Terminations					
- electing monthly lifetime payments					
- electing DC transfer					
Adjustments					1
Rehires/Reclassifications					
<b>No. at End of Year</b>	<b>34</b>	<b>23</b>	<b>5</b>	<b>657</b>	<b>86</b>

## **SECTION D**

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### **ACTUARIAL COST METHOD, ACTUARIAL ASSUMPTIONS AND DEFINITIONS OF TECHNICAL TERMS**

## Actuarial Cost Method

The actuarial cost method is a procedure for allocating the actuarial present value of pension benefits to time periods. The method used for your valuation is known as the aggregate actuarial cost method, and has the following characteristics:

- The present value of future benefits is reduced by the actuarial value of assets and the present value of future member contributions. This unfunded amount is projected to the applicable fiscal year with interest less the intervening City contribution expected from the prior valuation. Experience gains/losses and one-time events (e.g., assumption changes) are valued using the Entry Age Normal cost method and amortized with level-dollar payments over separate 8-year closed bases. The remaining net unfunded present value of future normal costs are amortized using level dollar payments over a closed 8-year period beginning with the 2015 valuation.
- The actuarial value of assets used for funding purposes is derived as follows: prior year actuarial value of assets are increased by actual member and City contributions and expected investment income and decreased by actual refunds, benefit payments and administrative expenses. Added to this amount is one-third of the difference between expected and actual investment income for the current year and each of the previous two years. The Actuarial Value of Assets is limited to no less than 85% and no more than 115% of the market value of assets.

## Actuarial Assumptions Used for the Valuation

In accordance with Chapter 112, Florida Statutes, 112.661(9), the Board of Trustees adopts the assumed rate of return assumption used for actuarial valuation purposes. The actuarial assumptions are set by the Board. The rationale for the actuarial assumptions is described in the October 1, 2014 through September 30, 2020 experience study report. All actuarial assumptions are estimates of future experience, not market measures.

Funding objective contribution requirements and actuarial present values are calculated by applying estimates of future Fund activities (actuarial assumptions) to the benefit provisions and member data of the Fund, using the actuarial cost method described on page D-1.

The principal areas of risk which require estimates of future Fund activities are:

- (i) Rates of inflation impacting assets of the Fund
- (ii) Long-term rates of real investment return to be generated by the assets of the Fund
- (iii) Rates of salary increase to members
- (iv) Rates of mortality among active members, retired members and beneficiaries, and vested terminated members
- (v) Rates of withdrawal of active members
- (vi) Rates of disability among active members
- (vii) Rates of retirement due to age and service

In making a valuation, the monetary effect of each activity is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

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Actual activities of the Fund will not coincide exactly with estimated activities due to the nature of the activities. Each valuation provides a complete recalculation of estimated future activities and takes into account the effect of differences between estimated and actual activities to date. The result is a continual series of adjustments (usually small) to the computed contribution amount. From time-to-time one or more of the estimates are modified to reflect experience trends (but not random or temporary year-to-year fluctuations).

The actuarial assumptions regarding the INFLATION rate, REAL INVESTMENT RETURN rate, and SALARY INCREASE rates were adopted effective September 30, 2021. Other actuarial assumptions were adopted effective as indicated in this section. These estimates are used, in combination with the other estimates, to (i) determine the present value of amounts expected to be paid in the future and (ii) establish contribution amounts which are expected to remain relatively level during the amortization period.

## Actuarial Assumptions Used for the Valuation

**Rates of Investment Return.** 6.50% per annum, compounded annually, net of investment expenses.

**Rates of Price Inflation.** This is the rate at which growth in the supply of money and credit is estimated to exceed growth in the supply of goods and services. It may be thought of as the rate of depreciation of the purchasing power of the dollar. There are a number of indices for measuring the inflation rate. Recent rates of inflation, as measured by the Consumers Price Index, have been:

	Year Ended September 30					Average	
	2023	2022	2021	2020	2019	3-Year	5-Year
Actual	3.7%	8.2%	5.4%	1.4%	1.7%	5.8%	4.0%

Although not explicitly used in the valuation, the economic assumptions are consistent with a price inflation assumption of 2.50% per year.

**Rates of Real Investment Return over Prices.** This is the rate of return produced by investing a pool of assets in an inflation-free environment. The assumed real rate of return is approximately 3.00% over wages, which would correspond to an assumed real rate of return of 4.00%. Recent rates of real investment return on the Actuarial Value of Assets have been:

	Year Ended September 30					Average	
	2023	2022	2021	2020	2019	3-Year	5-Year
Gross Rate of Return	2.1 %	0.8 %	9.9 %	8.0 %	7.9 %	4.2 %	5.7 %
Less Invest. Expenses	<u>0.2</u>	<u>0.2</u>	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>	<u>0.2</u>	<u>0.3</u>
Net Rate of Return	1.9	0.6	9.6	7.7	7.6	4.0	5.4
Less Inflation Rate	<u>3.7</u>	<u>8.2</u>	<u>5.4</u>	<u>1.4</u>	<u>1.7</u>	<u>5.8</u>	<u>4.0</u>
Net Real Rate of Return	(1.8)	(7.6)	4.2	6.3	5.9	(1.8)	1.4

The total investment return rate was computed using the approximate formula  $i = I$  divided by  $1/2(A + B - I)$ , where  $I$  is actual realized investment income plus market value adjustments,  $A$  is the beginning of year asset value, and  $B$  is the end of year asset value.

The preceding investment return rates reflect the particular characteristics of this Fund and the method of determining the actuarial value of assets. They should not be used to measure an investment advisor's performance or for comparison with other pension funds.



## Actuarial Assumptions Used for the Valuation

**Rates of Salary Increase.** 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. A schedule of long-term rates of increase in individual salaries used for the valuation follows for sample ages:

Attributable to:	Annual Rates of Salary Increase for Sample Ages			
	30	40	50	60
Merit & Seniority	2.85 %	1.70 %	0.80 %	0.30 %
Other Sources	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>	<u>3.50</u>
Total	6.35 %	5.20 %	4.30 %	3.80 %

Lump sum payments for unused leave time are not included in the calculation of final average earnings.

Recent rates of salary change experience, as measured by average reported pay, have been:

	Year Ended September 30					Average		
	2023	2022	2021	2020	2019	3-Year	5-Year	10-Year
Rate of Average Salary Increase:								
Actual <sup>(1)</sup>	16.0 %	5.0 %	4.6 %	6.7 %	2.7 %	8.4 %	6.9 %	5.7 %
Assumed	3.9	4.0	4.1	4.1	4.1	4.0	4.0	4.7

<sup>(1)</sup> Excluding terminations and new entrants.

Recent comparisons of the net rate of investment return to the rate of actual increase in salaries have been:

	Year Ended September 30					Average	
	2023	2022	2021	2020	2019	3-Year	5-Year
Net Rate of Investment Return*	1.90 %	0.60 %	9.60 %	7.70 %	7.60 %	4.00 %	5.40 %
Rate of Average Salary Increase	<u>15.99</u>	<u>5.01</u>	<u>4.57</u>	<u>6.72</u>	<u>2.72</u>	<u>8.40</u>	<u>6.90</u>
Difference:							
Actual	(14.09)	(4.41)	5.03	0.98	4.88	(4.80)	(1.80)
Target	3.00 %	3.00 %	3.25 %	3.25 %	3.50 %	3.10 %	3.20 %

\* Net of investment expenses.

## Actuarial Assumptions Used for the Valuation

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

For healthy participants post-employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Female Mortality Table and General Below Median Healthy Retiree Male Mortality Table set back 1 year, both with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. Sample values for healthy retirees follow:

Sample Ages in 2023	PUB-2010 Fully Generational Mortality Tables			
	Value of \$1 Monthly for Life		Mandated Future Life Expectancy (Years)	
	Men	Women	Men	Women
50	\$ 155.75	\$ 163.25	33.30	37.09
55	148.07	157.64	28.93	32.64
60	139.54	149.61	24.82	28.08
65	128.51	138.53	20.74	23.49
70	114.21	124.24	16.71	19.00
75	97.71	107.28	12.99	14.81
80	79.88	88.26	9.69	11.04

For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Tables set forward 3 years, with separate rates for males and females.

The margin for future mortality improvements is included in projection scales.

## Actuarial Assumptions Used for the Valuation

**Rates of Withdrawal from Active Membership.** These rates represent the probabilities of members leaving employment for reasons other than death or disability and prior to their becoming eligible to retire. No withdrawals from active membership are assumed to occur. This assumption was first used for the September 30, 2021 valuation.

**Rates of Disability.** These rates represent the probabilities of active members becoming disabled. No disabilities are assumed to occur. This assumption was first used for the September 30, 2021 valuation.

**Rates of Retirement.** These rates represent the probabilities of eligible members retiring.

Rates of Retirement Within Next Year				
Years of Service	Service Based Rates	Retirement Ages	Age Based Rates	
			Early	Normal
25	25%	55	18%	
26	15%	56	7%	
27	20%	57	7%	
28	15%	58	7%	
29	20%	59	7%	
30	30%	60	7%	
31	30%	61	7%	
32	30%	62	10%	
33	30%	63	10%	
34	30%	64	10%	
35	30%	65		25%
36	30%	66		25%
37	100%	67		20%
		68		10%
		69		25%
		70		25%
		71		50%
		72		50%
		73+		100%

These rates were first used for the September 30, 2021 valuation.

**Expenses.** Administrative expenses are included as an additional employer contribution to provide for reimbursement of these expenses. Investment expenses are offset against gross investment income. This is unchanged from previous valuations.

**Active Member Group Size.** The valuation was based on a closed active member group size.

**Transfers to the DC Plan.** Rates of Retirement and Rates of Withdrawal include members transferring to the DC Plan.

**Marital Status.** Sixty-seven percent of active members who meet the age and service requirements for pre-retirement surviving benefits are estimated to be married. Female spouses are assumed to be 4 years younger than the male participant. Male spouses are assumed to be 4 years older than the female participant. This assumption was first used for the September 30, 2021 valuation.



# Miscellaneous and Technical Assumptions

## September 30, 2023

<b>Pay Increase Timing:</b>	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.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the anniversary of the valuation date.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability does not operate during retirement eligibility.
<b>Service Credit Accruals:</b>	It is assumed that members accrue one year of service credit per year.
<b>Normal Form of Benefit:</b>	A straight life benefit is the normal form of benefit.
<b>Benefit Service:</b>	Exact Fractional service is used to determine the amount of benefit payable.
<b>Deferred Members:</b>	All deferred members are assumed to retire at age 65.
<b>City Contributions:</b>	Beginning with the 2010 valuation, dollar contributions are developed using closed level dollar amortization.
<b>Data Adjustments:</b>	None.

## Definitions of Technical Terms

**Accrued Service** - Service credited under the system which was rendered before the date of the actuarial valuation.

**Actuarial Accrued Liability** - The difference between the actuarial present value of future benefits payments and the actuarial present value of future normal costs. Also referred to as “accrued liability” or “past service liability.”

**Actuarial Assumptions** - Estimates of expected future experience with respect to rates of mortality, disability, withdrawal, retirement, rate or rates of investment income, inflation and salary increases. Decrement estimates (rates of mortality, disability, withdrawal and retirement) are generally based on past experience, often modified for projected changes in conditions. Fiscal estimates (investment income and salary increases) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**Actuarial Cost Method** - A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future benefit payments” between future normal cost and actuarial accrued liabilities. Sometimes referred to as the “actuarial valuation cost method.”

**Actuarial Equivalent** - A single amount or series of amounts which is of equal actuarial present value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

**Actuarial Present Value** - The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment. Also referred to as “present value.”

**Actuarial Value of Assets** - The value of assets derived by spreading capital value changes (unrealized and realized gains and losses) in equal dollar installments over four years. This treatment removes the timing of investment activities from the valuation process.

**Amortization** - Paying off an interest-discounted amount with periodic payments of interest and principal -- as opposed to paying it off with a lump sum payment.

**Experience Gain (Loss)** - The difference between actual experience costs and anticipated actuarial costs -- during the period between two actuarial valuation dates.

**Normal Cost** - The actuarial cost allocated to the current year by the actuarial cost method. Sometimes referred to as “current service cost.”

## SECTION E

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### ADDITIONAL DISCLOSURES

**GASB Statements No. 67 and No. 68 are the accounting standards which replaced GASB Statements No. 25 and No. 27. GASB Statement No. 67 is first effective for fiscal year 2014 and GASB Statement No. 68 is first effective for fiscal year 2015. A separate GASB Statements No. 67 and No. 68 report has been issued outside of this report. This section contains historical GASB Statements No. 25 and No. 27 reporting information for prior fiscal years and illustrative information for fiscal year 2015 and after.**

## Present Value of Future Benefit Payments

The present value of future benefit payments is the discounted value of benefits likely to be paid to participants based on the assumptions found in Section D of this report. Allocation of the unfunded actuarial present value of projected benefits over future service was based on the aggregate actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the Fund's dollar annual required contribution between the valuation date and assumed exit age.

The preceding methods comply with the financial reporting standards established by the Governmental Accounting Standards Board (GASB).

The aggregate actuarial accrued liability was determined as part of an actuarial valuation of the plan as of September 30, 2023. Significant actuarial assumptions used in determining the aggregate actuarial accrued liability include (a) a rate of return on the investment of present and future assets of 6.50% per year compounded annually, (b) projected salary increases of 3.50% per year compounded annually, attributable to inflation and other sources, (c) additional projected salary increases of 0.30% to 3.00% per year attributable to seniority/merit, and (d) the assumption that benefits will increase after retirement according to the COLA provisions.

As of September 30, 2023, the unfunded present value of future benefit payments was determined as follows:

Present Value of Future Benefit Payments	
Active members (34 vested, 0 non-vested)	\$ 27,243,058
Retired members and beneficiaries receiving benefits (743 recipients)	243,817,612
Vested terminated members not yet receiving benefits (28 deferred)	<u>1,516,347</u>
Total Present Value of Future Benefit Payments	272,577,017
Actuarial Value of Assets (market value was \$208,355,939)	<u>224,794,746</u>
Unfunded Present Value of Future Benefit Payments	<u><u>\$ 47,782,271</u></u>

During the year ended September 30, 2023, the Plan experienced a net change of the present value of future benefit payments of \$497,393. There were no changes in benefit provisions or actuarial assumptions.



## Determination of Actuarial Value of Assets <sup>(1)</sup>

Original Period						Remaining Amount to be Allocated	
FY	Amount to be Allocated <sup>(2)</sup>	2019-2020	2020-2021	2021-2022	2022-2023	Per Year	Total
16/17	\$ 5,580,209	\$ 1,395,053					
17/18	(1,195,730)	(298,933)	\$ (298,931)				
18/19	(3,855,935)	(963,984)	(963,984)	\$ (963,983)			
19/20	2,333,723	583,431	583,431	583,431	\$ 583,430		
20/21	18,925,811		6,308,604	6,308,604	6,308,603		
21/22	(57,560,567)			(20,243,491)	(18,658,538)	\$ (18,658,538)	\$ (18,658,538)
22/23	3,329,596				1,109,865	1,109,865	2,219,731
TOTAL		\$ 715,567	\$ 5,629,120	\$ (14,315,439)	\$ (10,656,640)		<u>\$ (16,438,807)</u>
Net contribution per year <sup>(3)</sup>		\$ 6,037,707	\$ 5,341,119	\$ 4,793,948	\$ 2,192,726		
Beginning actuarial value		225,056,638	231,809,912	242,780,151	233,258,660		
Ending actuarial value		<u>\$ 231,809,912</u>	<u>\$ 242,780,151</u>	<u>\$ 233,258,660</u>	<u>\$ 224,794,746</u>		

<sup>(1)</sup> General Employees' Pension Fund includes Component Units' employees.

<sup>(2)</sup> Represents the difference between assumed and actual investment income to be smoothed over the present and two future periods, (1/3) each year, with additional adjustment for periods during which the corridor applied.

<sup>(3)</sup> Represents net change in actuarial value from non-investment cash flow and assumed investment income.





# Required Supplementary Information Schedule of Funding Progress

(Dollar Amounts Are in Millions)

## Based on Aggregate Cost Method

Actuarial Valuation Date September 30	Actuarial Value of Assets (a)	Present Value of Future Benefits (PVFB) (b)	Unfunded PVFB (b)-(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	UPVFB as a Percentage of Active Member Covered Payroll ((b-a)/c)
2013	\$186.76	\$232.48	\$45.72	80.3 %	\$10.49	436.0 %
2014	199.60	235.91	36.31	84.6	9.80	370.4
2015 *	208.68	260.97	52.29	80.0	8.15	641.5
2016 *	212.87	262.90	50.03	81.0	7.54	663.7
2017 *	216.19	269.63	53.44	80.2	6.55	815.7
2018	218.72	268.95	50.23	81.3	6.19	811.1
2019	225.06	268.28	43.22	83.9	4.99	866.4
2020 *	231.81	268.84	37.03	86.2	4.58	808.9
2021 *	242.78	277.68	34.90	87.4	3.86	903.1
2022	233.26	272.08	38.82	85.7	3.21	1,209.1
2023	224.79	272.58	47.79	82.5	3.10	1,541.8

## Based on Entry Age Normal Cost Method

Actuarial Valuation Date September 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b)-(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	Unfunded AAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
2013	\$186.76	\$226.27	\$39.51	82.5 %	\$10.49	376.6 %
2014	199.60	230.45	30.85	86.6	9.80	314.8
2015 *	208.68	256.07	47.39	81.5	8.15	581.5
2016 *	212.87	258.59	45.72	82.3	7.54	606.4
2017 *	216.19	265.91	49.72	81.3	6.55	759.1
2018	218.72	265.77	47.05	82.3	6.19	760.1
2019	225.06	265.88	40.82	84.6	4.99	818.0
2020 *	231.81	266.81	35.00	86.9	4.58	764.2
2021 *	242.78	275.04	32.26	88.3	3.86	835.8
2022	233.26	270.03	36.77	86.4	3.21	1,145.5
2023	224.79	270.87	46.08	83.0	3.10	1,486.5

\* After changes in benefits and/or actuarial assumptions and/or actuarial cost methods.



## Contributions Required and Contributions Made

The City's funding policy provides for periodic employer contributions at actuarially determined dollar amounts that are designed to accumulate sufficient assets to pay benefits when due. Effective October 1, 1998, the contributions are determined using the aggregate actuarial cost method. Prior to this, the normal cost and actuarial liability were determined using the entry age actuarial cost method.

During the year ended September 30, 2023, contributions totaling \$8,291,400 -- \$8,125,622 employer and \$165,778 employee -- were made in accordance with contribution requirements determined by an actuarial valuation of the Fund as of September 30, 2021. Employer contributions represented 306% of September 30, 2023 covered payroll.

### Schedule of Employer Contributions

Fiscal Year 10/1 - 9/30	Valuation Date 9/30	% of Payroll	Annual Required Contribution	Percentage Contributed
2013-14	2012	90.39 %	\$ 9,412,100	100.0 % #
2014-15	2013	100.18	9,062,366	100.0 #
2015-16	2014	100.60	8,166,704	100.0 #
2016-17	2015	117.47	7,684,072	100.0 #
2017-18	2016	138.59	8,170,586	100.0 #
2018-19	2017	192.26	9,467,665	100.0 #
2019-20	2018	219.41	9,686,417	100.0 #
2020-21	2019	278.37	9,593,377	100.0 #
2021-22	2020	333.10	9,737,898	100.0 #
2022-23	2021	315.23	8,385,547	100.0 #
2023-24	2022	494.07	10,308,070	
2024-25	2023	720.61	12,957,991	

*# The City's contributions were made in a lump sum on October 1 in accordance with Procedure 2 on page B-3 of the applicable valuation reports.*

This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the City's financial statements.

## General Employees' Defined Benefit Pension Fund Solvency Test

Valuation Date	Present Value of Future Benefits for			Actuarial Value of Assets	Portion of Present Values Covered by Reported Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Active Member Contributions	Retirees and Beneficiaries	Active and Inactive Members (Employer Financed Portion)				
9/30/2011	\$ 7,774,127	\$ 147,179,038	\$ 74,320,507	\$ 168,612,802	100 %	100 %	18.38 %
9/30/2012	7,756,847	151,310,608	70,476,474	175,349,449	100	100	23.10
9/30/2013	7,169,512	161,965,094	63,344,283	186,759,639	100	100	27.82
9/30/2014	7,476,438	166,764,127	61,668,396	199,598,187	100	100	41.12
9/30/2015 (a)	6,400,380	197,053,626	57,516,413	208,676,563	100	100	9.08
9/30/2016 (a)	5,899,150	202,859,707	54,139,740	212,873,029	100	100	7.60
9/30/2017 (a)	5,404,208	213,676,179	50,548,863	216,185,536	100	98.65	0.00
9/30/2018	5,076,666	216,225,412	47,652,894	218,722,643	100	98.81	0.00
9/30/2019	4,176,802	224,657,758	39,443,706	225,056,638	100	98.32	0.00
9/30/2020 (a)	3,825,339	228,251,529	36,758,454	231,809,912	100	99.88	0.00
9/30/2021 (a)	3,275,266	241,643,977	32,764,174	242,780,151	100	99.11	0.00
9/30/2022	2,647,328	241,485,255	27,947,041	233,258,660	100	95.50	0.00
9/30/2023	2,363,191	243,817,612	26,396,214	224,794,746	100	91.23	0.00

(a) After changes in benefits and/or actuarial assumptions and/or actuarial cost methods.

**SECTION F**

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**PRESENT VALUE OF ACCRUED BENEFITS IN STATE FORMAT**

## Present Value of Accrued Benefits in State Format

	September 30, 2023	September 30, 2022
Actuarial Present Value of Accrued Benefits (calculated in accordance with FASB Statement No. 35)		
(i) Vested accrued benefits		
Retired members and beneficiaries	\$ 243,817,612	\$ 241,485,255
Terminated members	\$1,516,347	\$1,733,736
Active members (includes non-forfeitable accum. member contributions)	23,621,742	25,569,315
Total	\$ 268,955,701	\$ 268,788,306
(ii) Non-vested accrued benefits	0	0
(iii) Total actuarial p.v. of accrued benefits	\$ 268,955,701	\$ 268,788,306
(iv) Actuarial p.v. of accrued benefits at begin. of year	\$ 268,788,306	\$ 273,104,249
(v) Changes attributable to:		
Amendments	\$ 0	\$ 0
Assumption change	0	0
Operation of decrements	20,957,011	16,019,390
Benefit payments	(20,789,616)	(20,335,333)
Other	0	0
(vi) Net change	167,395	(4,315,943)
(vii) Actuarial p.v. of accr. benefits at end of year	\$ 268,955,701	\$ 268,788,306