City of Jacksonville Corrections Officers Retirement Plan

Actuarial Valuation and Review as of October 1, 2023

Segal

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April 19, 2024

Board of Trustees
City of Jacksonville Corrections Officers Retirement Plan
117 West Duval Street, Suite 330
Jacksonville, FL 32202

Dear Board of Trustees Members:

We are pleased to submit this Actuarial Valuation and Review as of October 1, 2023. The census information on which our calculations were based was prepared by the Plan and the financial information was provided by the City's Finance Department. That assistance is gratefully acknowledged .

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, 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.

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

The measurements shown in this actuarial valuation may not be applicable for other purposes. 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; changes in plan provisions or applicable law.

The actuarial calculations were directed under the supervision of Jeffrey S. Williams. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal

Jeffrey S. Williams, FCA, ASA, MAAA, EA
Vice President and Consulting Actuary
Enrolled Actuary No. 23-07009

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present a valuation of the City of Jacksonville Corrections Officers Retirement Plan as of October 1, 2023. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to provide information for required disclosures under Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Plan, as administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of September 30, 2023, provided by the Retirement System Administrative Office;
- The assets of the Plan as of September 30, 2023, provided by the City's Finance Department;
- Economic assumptions regarding future salary increases and investment earnings;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. and
- The funding policy adopted by the Board, subject to the requirements of Part VII, Chapter 112, Florida Statutes.

Valuation highlights

1. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance.
2. The City's minimum required contribution calculated in the October 1, 2023 actuarial valuation is for the plan year beginning October 1, 2024.
3. The City's minimum required contribution for fiscal 2025 is $21,981,270, an increase of $2,595,626 from the City's minimum required contribution for fiscal 2024.
4. Actual contributions made during the year ending September 30, 2023 were $17,196,000 were 100.06% of the City's minimum required contribution for fiscal 2023. In the prior fiscal year, actual contributions were $17,610,000, 100.10% of the prior year's minimum required contribution.
5. Actuarial Standard of Practice No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, states that an actuary preparing calculations of actuarially determined contributions should assess the material implications of the funding policy. This report includes two distinct contribution amounts, each with different implications.
   a. The **Florida Chapter 112 Determined Employer Contribution** is an amount consistent with a funding policy which seeks to stabilize the unfunded actuarial accrued liability (UAAL) as a percentage of total Corrections Officers Retirement Plan (CORP) payroll, including Defined Contribution participants, where UAAL is measured relative to assets currently available to make benefit payments. Under this policy, assuming that all assumptions are met in aggregate, the UAAL is expected to be reduced to zero over a period of 23 years after reflecting an amortization period reset as of October 1, 2016. Over the short term, this contribution policy would be expected to keep the UAAL roughly level over the next few years, primarily making payments on interest, and begin paying down the UAAL after that point.
   b. The **City's required minimum contribution**, which is the Chapter 112 contribution adjusted to comply with state law, reduced by amortization of discounted allocated surtax revenue, is an amount consistent with a funding policy which seeks to stabilize the contribution requirement as a percentage of total CORP payroll, including Corrections Officers Defined Contribution Plan participants, relative to an anticipated increase in contribution income set to begin January 1, 2031. Under this policy, assuming that all assumptions are met in aggregate, the UAAL is expected to be reduced to zero by December 31, 2060, after all of the surtax revenue allocated to the plan is collected and contributed. Over the short term, this contribution policy is expected to lead to an increase in the UAAL, prior to the revenue stream commencing and paying it down.

   Use of this contribution policy has been authorized by the Florida State Legislature and Jacksonville City Council.

6. The actuarial loss from investment and other experience is $24,110,512, or 4.23% of actuarial accrued liability.
   - The actuarial loss from investment experience was $5,683,627, or 1.00% of actuarial accrued liability.
   - The loss due to contributions less than the Florida Chapter 112 determined employer contribution was $7,966,331, or 1.40% of actuarial accrued liability.
   - The net experience loss from all other sources was $10,460,554, or 1.84% of the actuarial accrued liability. The primary cause of this loss was salary experience among the active population.
7. The rate of return on the market value of assets was 13.68% for the October 1, 2022 to September 30, 2023 plan year. The return on the actuarial value of assets was 4.34% for the same period due to the recognition of prior years' investment gains and losses. This resulted in an actuarial loss when measured against the assumed rate of return of 6.50%.
8. The actuarial value of assets is 103.06% of the market value of assets. The investment experience in the past years has only been partially recognized in the actuarial value of assets. As the deferred net loss is recognized in future years, the cost of the Plan is likely to increase unless the net loss is offset by future experience. The recognition of the market net losses of $8,118,317 will also have an impact on the future funded ratio. If the net deferred losses were recognized immediately in the actuarial value of assets, the City's minimum contribution would increase from 88.52% to 90.92% of projected payroll.
9. The following actuarial assumptions were approved by the Board and changed with this valuation, following the completion of an experience study:
   a. Withdrawal rates were lowered for active participants with between six and ten years of service.
   b. Active retirement rates were increased for participants with 20 years of service and decreased for participants with between 21 and 27 years of service
   c. Salary scale rates were changed to reflect higher merit and promotional increases.

   As a result of these assumption changes, the total normal cost increased by $884,379 (11.26%) and the actuarial accrued liability increased by $1,084,396 (0.19%). The net impact was an increase in the City's minimum required contribution of $975,295 (4.63% of pay).
10. The surtax allocation percentage is unchanged from the prior valuation (at 6.10%). This allocation percentage is directed by the City based on its calculation of the Corrections Officers Retirement Plan's share of the City's unfunded liabilities.
11. The City is solely responsible for the assumption as to what percentage the surtax revenue will grow and Segal relies on the City for this assumption. This rate was set at 4.25% by the City for the projection period January 1, 2023 through December 31, 2060, and will be recalculated by the City every year and adopted by the City Council. Segal will ask the City each year to provide actual surtax revenue for the preceding fiscal year and an assumption as to future growth. The difference in actual and projected surtax revenue each year will be amortized over the period by which each year's gain or loss is being amortized. If

surtax revenue grows more slowly or more quickly than expected, contribution requirements will increase or decrease accordingly.

12. The present value of the projected surtax revenue was determined and used in determination of the City's required contribution as follows:
    a. Smoothed 2023 surtax revenue was projected to increase by 4.25% each year thereafter through 2060.
    b. A share of 6.10% of the projected revenue for January 1, 2031 through December 31, 2060 was allocated to CORP.
    c. The revenue allocated to CORP was discounted at the valuation discount rate of 6.50% to October 1, 2023.
    d. The original allocated present value amount of $64,295,005 was amortized over a 30-year initial period (Section 3, Exhibit F), with subsequent charges amortized over new periods. The present value of projected surtax revenue as of October 1, 2023 allocated to CORP is $151,310,100 prior to smoothing.
    e. After the amortized value amount was adjusted for the timing of contributions and projected to October 1, 2024, this amount was used as an offset to the Florida Chapter 112 Determined Employer Contribution to determine the City's minimum required contribution for fiscal 2024.
13. The present value of projected surtax revenue does not decrease the UAAL. The amortized value of the projected surtax revenue is used as an offset to the Chapter 112 contribution.
14. This actuarial report as of October 1, 2023 is based on financial and demographic data as of that date. Changes subsequent to that date are not reflected and will affect future actuarial costs of the plan.
15. The financial information received states all results rounded to the nearest thousand. The results in this valuation are shown to the nearest dollar. Therefore, occasionally rounded numbers are combined with unrounded ones.

Changes from prior valuation

16. The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 47.85%, compared to the prior year funded ratio of 49.10%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 46.43%, compared to 43.78% as of the prior valuation date. These measurements are not necessarily appropriate for assessing the sufficiency of the Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.
17. The unfunded actuarial accrued liability is $297,633,130, which is an increase of $22,699,634 since the prior valuation.

Risk

18. It is important to note that this actuarial valuation is based on plan assets as of September 30, 2023. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the plan year. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after September 30, 2023 due to COVID-19. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.
19. Since the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition but have included a brief discussion of some risks that may affect the Plan in *Section 2*. A more detailed assessment would provide the Board with a better understanding of the inherent risks and could be important for the Plan because:
    a. Relatively small changes in investment performance can produce large swings in the unfunded liabilities
    b. retired participants account for most of the Plan's liabilities, leaving limited options for reducing costs in the event of adverse experience.
    c. The Board has not had a detailed risk assessment in several years.

GASB

20. This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution under the Plan's funding policy and measuring the progress of that funding policy. The Net Pension Liability (NPL) and Pension Expense under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, for inclusion in the Plan and employer's financial statements as of September 30, 2023, is included with this report.
21. The Net Pension Liability (NPL) is equal to the difference between the Total Pension Liability (TPL) and the Plan's fiduciary net position (equal to the market value of assets). The NPL as of September 30, 2023 is $305,751,447.
22. GASB accounting does not permit any recognition of the allocated surtax revenue in determining the Net Pension Liability or Pension Expense. It is Segal's understanding that the City has discussed this issue with their external auditors and does not include any recognition of allocated surtax revenue in its audited financial statements.

Summary of key valuation results

Valuation Result	2024	2023	2022
Contributions for fiscal year beginning October 1			
• Florida Chapter 112 determined employer contribution	$29,019,915	$26,128,351	$23,748,105
• Less amortized value of discounted value of projected surtax revenue	-7,038,645	-6,742,707	-6,562,132
• City's required minimum contribution*	$21,981,270	$19,385,644	$17,185,973
• Actual employer contributions	- -	- -	17,196,000
Actuarial accrued liability for plan year beginning October 1			
• Retired participants and beneficiaries		$412,154,218	$388,093,154
• Inactive vested participants		439,531	411,614
• Active participants		158,178,698	151,674,037
• Total		570,772,447	540,178,805
• Normal cost including administrative expenses		8,833,819	8,182,179
Assets for plan year beginning October 1			
• Market value of assets (MVA)		$265,021,000	$236,467,000
• Actuarial value of assets (AVA)		273,139,317	265,245,309
• Actuarial value of assets as a percentage of market value of assets		103.06%	112.17%
Funded status for plan year beginning October 1			
• Unfunded actuarial accrued liability on market value of assets		$305,751,447	$303,711,805
• Funded percentage on MVA basis		46.43%	43.78%
• Unfunded actuarial accrued liability on actuarial value of assets		$297,633,130	$274,933,496
• Funded percentage on AVA basis		47.85%	49.10%

*Pursuant to State Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E

Section 1: Actuarial Valuation Summary

Valuation Result	2024	2023	2022
Key assumptions			
• Net investment return		6.50%	6.50%
• Inflation rate		2.50%	2.50%
• Payroll growth rate for amortization purposes		1.25%	1.25%
Demographic data for plan year beginning October 1			
• Number of retired participants and beneficiaries		491	469
• Number of inactive vested participants		3	3
• Number of active participants		345	382
• Covered payroll		$24,526,732	$25,260,815
• Average payroll		$71,092	$66,128
• Projected payroll for next fiscal year		$24,833,316	$25,576,575

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Input Item	Description
Plan provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant information	An actuarial valuation for a plan is based on data provided to the actuary by the Retirement Administrative Office. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Financial information	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the City's Finance Department. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. The Jacksonville Retirement System uses an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Section 1: Actuarial Valuation Summary

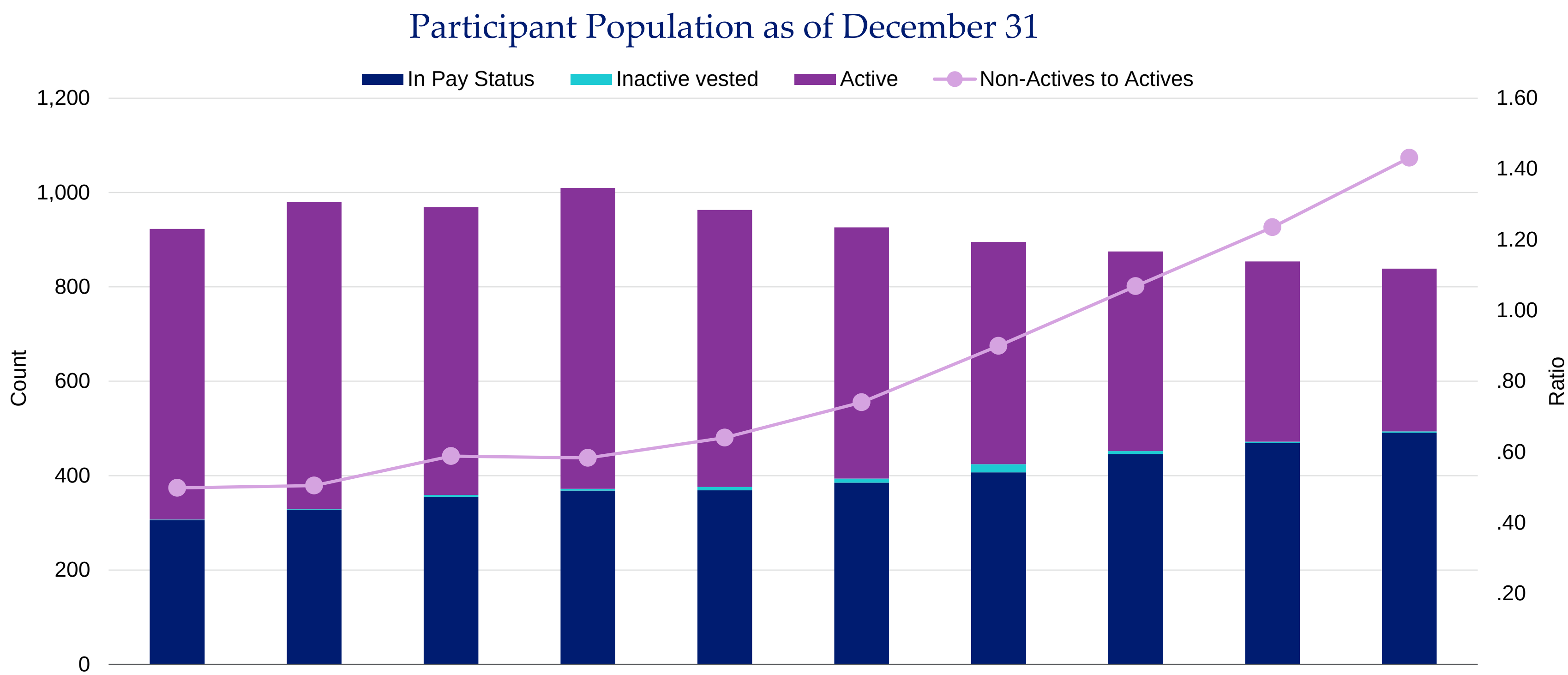
The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the Board of Trustees. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- If the Board is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan provisions, but they may be subject to alternative interpretations. The System should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the Board upon delivery and review. Trustees should notify Segal immediately of any questions or concerns about the final content.

As Segal has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

Section 2: Actuarial Valuation Results

Participant information



Legend	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
In Pay Status[1]	306	328	355	368	369	385	407	446	469	491
Inactive Vested[2]	1	1	4	4	7	9	17	6	3	3
Active	616	651	610	638	587	532	471	423	382	345
Ratio	0.50	0.51	0.59	0.58	0.64	0.74	0.90	1.07	1.24	1.43

[*] Includes DROP participants

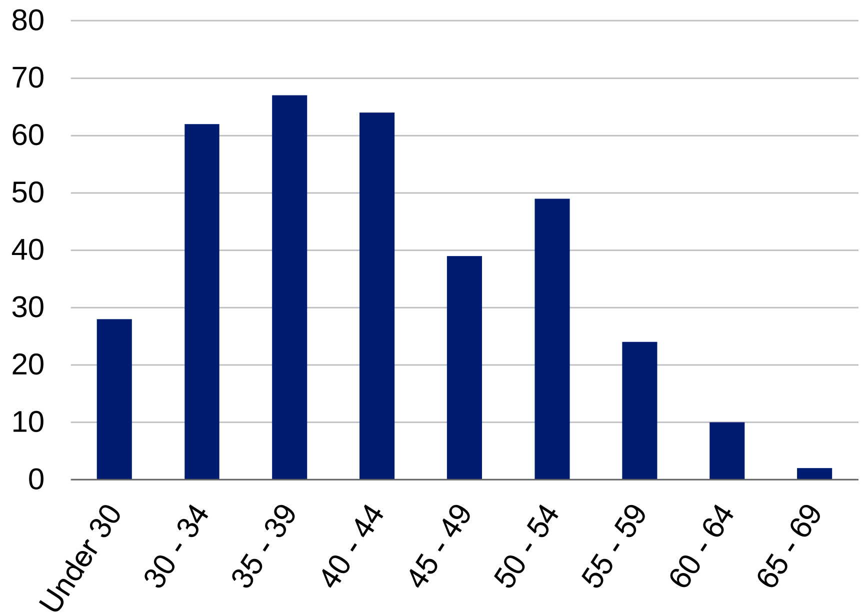
[2] Excludes Inactive participants due a refund of contributions

Active participants

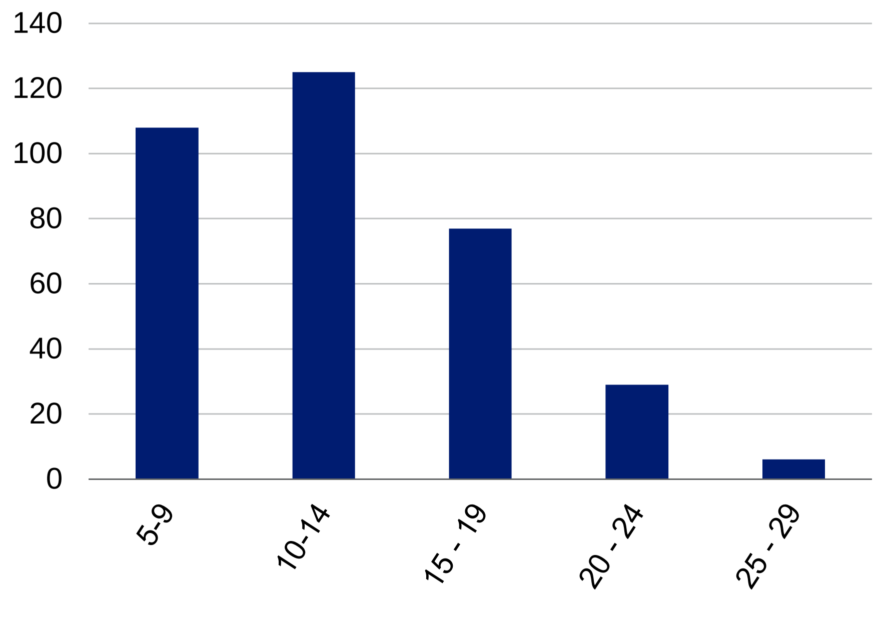
As of September 30,	2023	2022	Change
Active participants	345	382	-9.7%
Average age	42.3	41.8	0.5
Average years of service	13.3	12.5	0.8
Average compensation	$71,092	$66,128	7.5%

Distribution of Active Participants as of September 30, 2023

Actives by Age



Actives by Years of Service

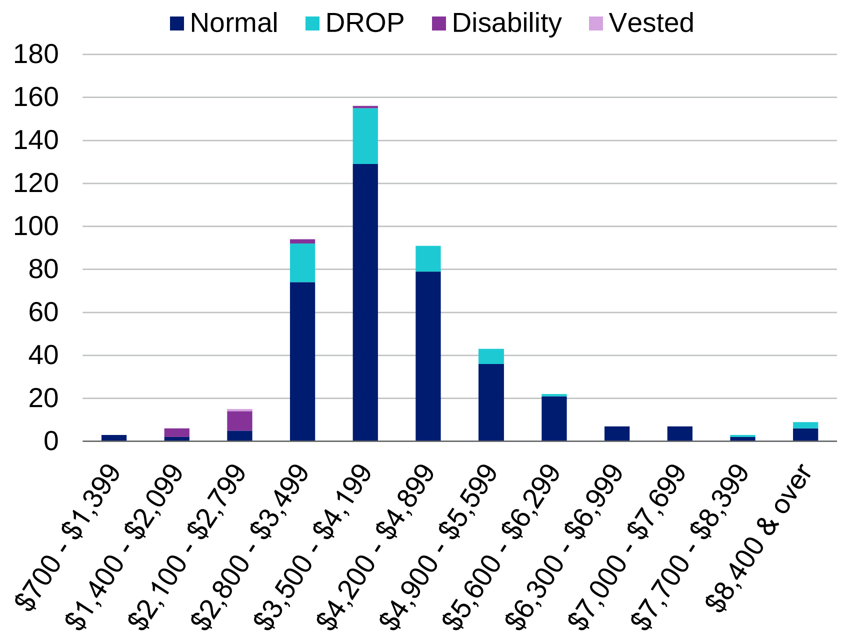


Retired participants and beneficiaries

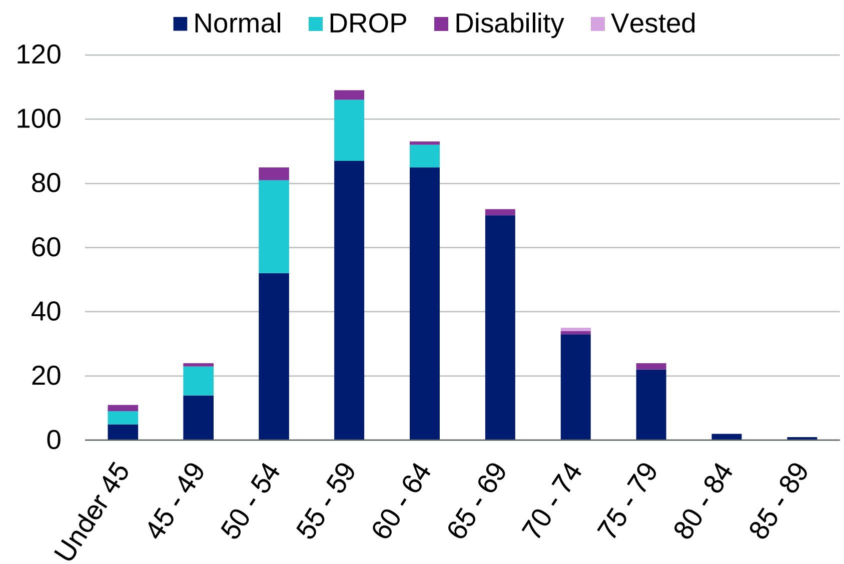
As of September 30,	2023	2022	Change
Retired participants	456	438	4.1%
Beneficiaries	35	31	12.9%
Average age	60.3	59.8	0.5
Average regular benefit amount	$4,195	$4,069	3.1%
Average supplement amount	117	117	0.0%
Total monthly amount	2,117,006	1,963,323	7.8%

Distribution of Retired Participants and Beneficiaries as of September 30, 2023

By Type and Monthly Amount



By Type and Age



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Determination of Actuarial Value of Assets for Year Ended September 30, 2023

Step	Original Amount*	Percent Deferred†	Unrecognized Amount‡	Amount
1. Market value of assets, September 30, 2023				$265,021,000
2. Calculation of unrecognized return				
a. Year ended September 30, 2023	$16,846,955	80%	$13,477,564	
b. Year ended September 30, 2022	-64,741,818	60%	-38,845,092	
c. Year ended September 30, 2021	45,760,012	40%	18,304,004	
d. Year ended September 30, 2020	-5,273,967	20%	-1,054,793	
e. Year ended September 30, 2019	-11,656,375	0%	0	
f. Total unrecognized return				-$8,118,317
3. Preliminary actuarial value: (1) - (2f)				273,139,317
4. Adjustment to be within 20% corridor				0
5. Final actuarial value of assets as of September 30, 2023: (3) + (4)				$273,139,317
6. Actuarial value as a percentage of market value: (5) ÷ (1)				103.1%
7. Amount deferred for future recognition: (1) - (5)				-$8,118,317

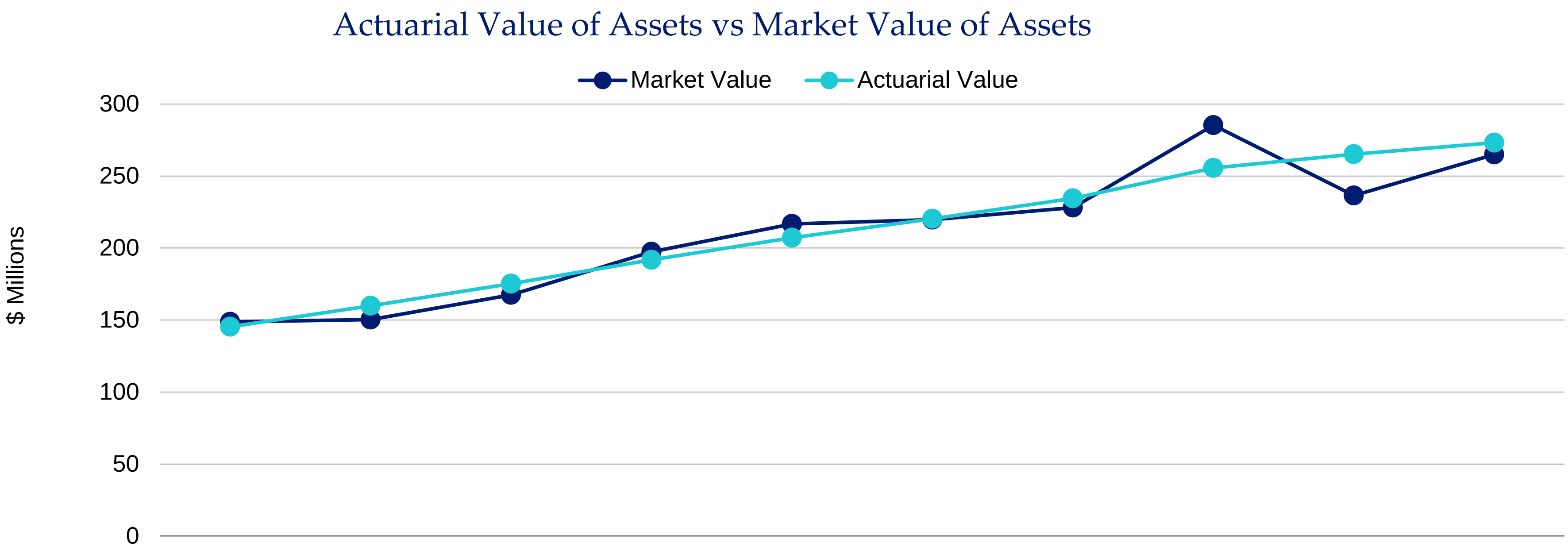
* Total return minus expected return on a market value basis.

† Percent deferred applies to the current valuation year.

‡ Recognition at 20% per year over five years. Deferred return as of September 30, 2023 recognized in each of the next four years:

a. Amount recognized on September 30, 2024	-$1,481,764
b. Amount recognized on September 30, 2025	-426,971
c. Amount recognized on September 30, 2026	-9,578,973
d. Amount recognized on September 30, 2027	3,369,391

Asset history for years ended September 30

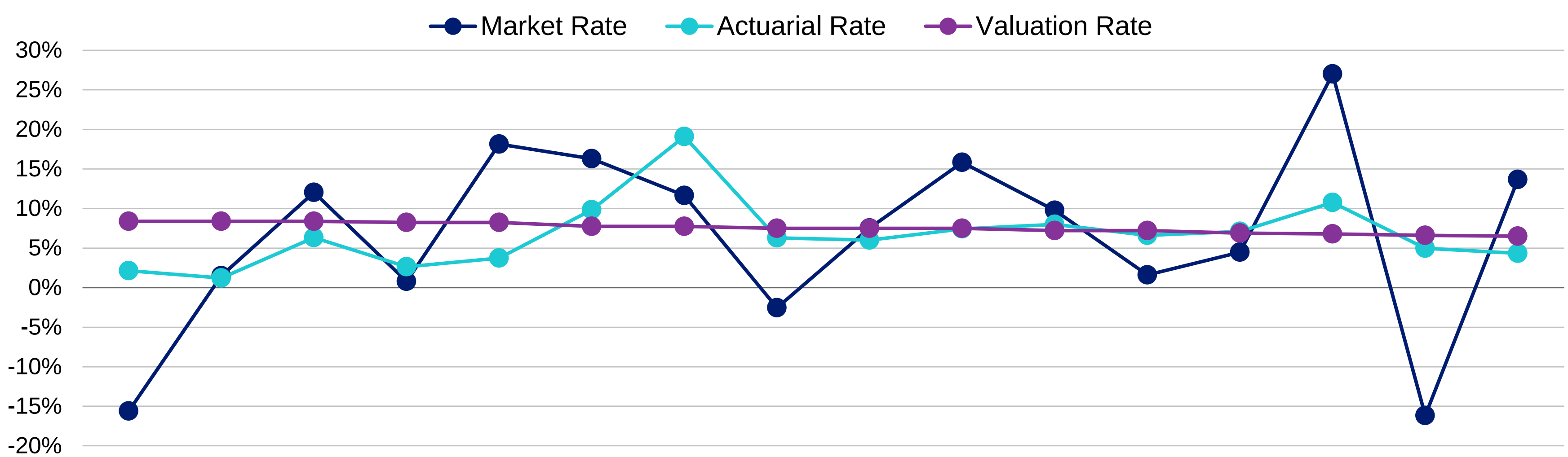


Legend	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Actuarial value*	$145.28	$159.91	$175.33	$191.74	$207.09	$220.33	$234.51	$255.56	$265.25	$273.14
Market value*	148.72	150.22	167.39	197.38	216.67	219.75	228.17	285.35	236.47	265.02
Ratio	0.98	1.06	1.05	0.97	0.96	1.00	1.03	0.90	1.12	1.03

* In $ millions

Historical investment returns

Market and Actuarial Rates of Return for Years Ended September 30



Legend	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Market rate	-15.61%	1.49%	12.03%	0.79%	18.14%	16.29%	11.66%	-2.54%	7.55%	15.83%	9.76%	1.62%	4.49%	27.03%	-16.18%	13.68%
Actuarial rate	2.14%	1.23%	6.33%	2.65%	3.73%	9.82%	19.12%	6.28%	6.02%	7.44%	8.00%	6.60%	7.10%	10.75%	4.97%	4.34%
Assumed rate	8.40%	8.40%	8.40%	8.25%	8.25%	7.75%	7.75%	7.50%	7.50%	7.50%	7.20%	7.20%	6.90%	6.80%	6.63%	6.50%

Average Rates of Return	Actuarial Value	Market Value
Most recent five-year average return:	6.66%	5.14%
Most recent ten-year average return:	7.54%	6.54%
Most recent 15-year average return:	7.03%	7.26%

Actuarial experience

- Assumptions should consider experience and should be based on reasonable expectations for the future.
- Each year actual experience is compared to that projected by the assumptions. Differences are reflected in the actuarial valuation.
- Assumptions are not changed if experience is believed to be a short-term development that will not continue over the long term. On the other hand, if experience is expected to continue, assumptions are changed.

Actuarial Experience for Year Ended September 30, 2023

	Assumption	Amount
1.	Loss from investments[1]	-$5,683,627
2.	Gain administrative expenses	69,478
3.	Loss from contributions	-7,966,331
4.	Net loss from other experience	-10,530,032
5.	**Net experience gain/(loss): 1 + 2 + 3**	-$24,110,512

[1] Details on next page

Investment experience

Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.

The assumed long-term rate of return of 6.50% considers past experience, the asset allocation policy of the Board and future expectations.

Investment Experience
Year Ended September 30, 2023

	Investment	Market Value	Actuarial Value
1.	Net investment income	$32,102,000	$11,442,008
2.	Average value of assets	234,693,000	263,471,309
3.	Rate of return: **1 ÷ 2**	13.68%	4.34%
4.	Assumed rate of return	6.50%	6.50%
5.	Expected investment income: **2 x 4**	15,255,045	17,125,635
6.	Investment gain/(loss): **1 – 5**	$16,846,955	-$5,683,627

Contributions

Contributions for the year ended September 30, 2023 totaled $20,529,000, compared to the projected amount of $27,323,916. This resulted in a loss of $7,966,331 for the year, when adjusted for timing.

Non-investment experience

Administrative expenses

Administrative expenses for the year ended September 30, 2023 totaled $97,000, as compared to the assumption of $159,000. This resulted in an experience gain of $69,478 for the year, after accounting for timing.

Other experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- Mortality experience (more or fewer than expected deaths)
- The extent of turnover among participants
- Retirement experience (earlier or later than projected)
- The number of disability retirements (more or fewer than projected)
- Salary increases (greater or smaller than projected)

The net loss from this other experience for the year ended September 30, 2023 amounted to $10,530,032, which is 1.8% of the actuarial accrued liability. The primary cause of this loss was salary experience among the active population.

Actuarial assumptions

- After the publication of the Review of Actuarial Experience for the Five-Year Period October 1, 2017 through September 30, 2022, the Board approved the following assumption changes first reflected in this valuation:
  - Withdrawal rates were lowered for active participants with between six and ten years of service.
  - Active retirement rates were increased for participants with 20 years of service and decreased for participants with between 21 and 27 years of service
  - Salary scale rates were changed to reflect higher expected merit and promotional increases.
  - As a result of these assumption changes, the total normal cost increased by $884,379 (11.26%) and the actuarial accrued liability increased by $1,084,396 (0.19%). The net impact was an increase in the City's minimum required contribution of $975,295 (3.93% of pay).

Plan provisions

- There were no changes in plan provisions since the prior valuation.

Unfunded actuarial accrued liability

Development of Unfunded Actuarial Accrued Liability for Year Ended September 30, 2023

Unfunded Actuarial Accrued Liability	Change	Amount
1. Unfunded actuarial accrued liability at beginning of year		$274,933,496
2. Employer normal cost at beginning of year		5,802,709
3. Actuarial determined contribution at beginning of year		-25,805,779
4. Interest on 1, 2 & 3		17,487,796
5. Expected unfunded actuarial accrued liability		**$272,418,222**
6. Changes due to:		
a. Net experience loss	$24,110,512	
b. Assumptions	1,104,396	
Total changes		**$25,214,908**
7. Unfunded actuarial accrued liability at end of year		$297,633,130

Florida Chapter 112 Determined Employer Contribution and City's Minimum Required Contribution

The chart below shows the calculations of the Florida Chapter 112 determined employer contribution and the City's minimum required contribution pursuant to State Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E.

The contribution requirements as of October 1, 2023 are based on the data previously described, the actuarial assumptions and Plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions. The contribution calculated as of October 1, 2023 is then projected to the following fiscal year and will be paid in the plan year beginning October 1, 2024.

Actuarially Determined Contribution

	Contribution	2023 Amount	2023 Percent of Projected Payroll	2022 Amount	2022 Percent of Projected Payroll
1.	Total normal cost	$8,736,819	35.18%	$8,023,179	31.37%
2.	Administrative expenses	97,000	0.40%	159,000	0.62%
3.	Expected employee contributions	-2,278,533	-9.18%	-2,379,470	-9.30%
4.	**Employer normal cost: (1) + (2) + (3)**	**$6,555,286**	**26.40%**	**$5,802,709**	**22.69%**
5.	Actuarial accrued liability	$570,772,447		$540,178,805	
6.	Actuarial value of assets	273,139,317		265,245,309	
7.	**Unfunded actuarial accrued liability: (5) - (6)**	**$297,633,130**		**$274,933,496**	
8.	Payment on projected unfunded actuarial accrued liability	21,149,704	85.17%	$19,141,737	74.84%
9.	Florida Chapter 112 determined employer contribution: (4) + (8)[1]	$29,019,915	116.86%	26,128,351	102.16%
10.	Amortized value of discounted value of projected surtax revenue[1, 2]	7,038,645	28.34%	6,742,707	26.36%
11.	**City's minimum required contribution: (9) - (10)[2]**	**$21,981,270**	**88.52%**	**$19,385,644**	**75.79%**
12.	Projected payroll	$24,833,316		$25,576,575	

[1]Adjusted for timing and projected to next fiscal year; contributions are assumed to be paid at the end of every month.

[2]Pursuant to State Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E

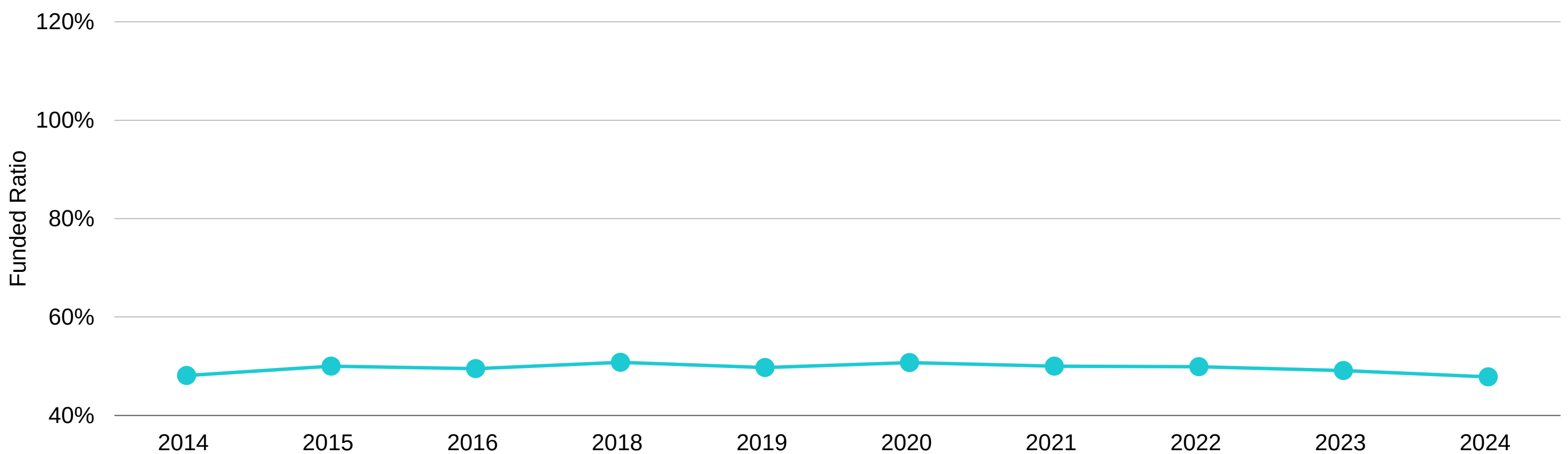
Reconciliation of City's Minimum Required Contribution

Reconciliation of City's Minimum Required Contribution
from October 1, 2023 to October 1, 2024

	Step	Amount
1.	City's minimum required contribution as of October 1, 2023	$19,385,644
2.	Effect of expected change in amortization payment due to payroll growth	166,344
3.	Effect of change in administrative expense assumption	-64,943
4.	Effect of change in other actuarial assumptions	975,295
5.	Effect of investment loss	417,599
6.	Effect of other gains and losses on accrued liability	1,142,240
7.	Net effect of other changes, including composition and number of participants	-40,909
8.	**Total change**	**$2,595,626**
9.	**City's minimum required contribution as of October 1, 2024**	**$21,981,270**

Schedule of funding progress through September 30, 2023

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Covered Compensation (c)	UAAL as a Percentage of Covered Compensation [(b) – (a)] / (c)
10/01/2014	$145,276,644	$302,122,370	$156,845,726	48.09%	$27,373,702	572.98%
10/01/2015	159,914,247	319,655,728	159,741,481	50.03%	28,091,083	568.66%
10/01/2016	175,333,405	354,234,673	178,901,268	49.50%	26,585,054	672.94%
10/01/2017	191,740,583	377,380,082	185,639,499	50.81%	27,548,015	673.88%
10/01/2018	207,089,881	416,673,228	209,583,347	49.70%	28,164,021	744.15%
10/01/2019	220,334,774	434,176,844	213,842,070	50.75%	28,726,006	744.42%
10/01/2020	234,514,215	468,831,017	234,316,802	50.02%	28,268,208	828.91%
10/01/2021	255,558,542	503,742,3353	248,183,793	50.73%	25,903,031	958.13%
10/01/2022	265,245,309	540,178,805	274,933,496	49.10%	25,260,815	1,088.38%
10/01/2023	273,139,317	570,772,447	297,633,130	47.85%	24,526,732	1,213.51%



History of employer contributions

History of Employer Contributions: 2016– 2025

Fiscal Year Ended September 30	City's Minimum Required	Actual Employer Contribution	Percent Contributed
2016	$18,863,935	$18,864,000	100.00%
2017	19,155,820	19,162,000	100.03%
2018	13,973,105	13,973,000	100.00%
2019	14,497,788	14,498,000	100.00%
2020	15,042,623	15,058,000	100.10%
2021	15,044,530	15,061,000	100.11%
2022	17,592,399	17,610,000	100.10%
2023	17,185,973	17,196,000	100.06%
2024	19,385,644	- -	- -
2025	21,981,270	- -	- -

Low-Default-Risk Obligation Measure (LDROM)

In December 2021, the Actuarial Standards Board issued a revision of Actuarial Standard of Practice No. 4 (ASOP 4) *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. One of the revisions to ASOP 4 requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the Actuarial Accrued Liability (AAL) used for funding, except for the discount rate. The LDROM is required to be calculated using "a discount rate…derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future."

The LDROM is a calculation assuming a plan's assets are invested in an all-bond portfolio, generally lowering expected long-term investment returns. The discount rate selected and used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate, published at the end of each week. The last published rate in December of the measurement period, by The Bond Buyer (www.bondbuyer.com), is 4.09% for use effective September 30, 2023. This is the rate used to determine the discount rate for valuing reported public pension plan liabilities in accordance with Governmental Accounting Standards when plan assets are projected to be insufficient to make projected benefit payments, and the 20-year period reasonably approximates the duration of plan liabilities. The LDROM is not used to determine a plan's funded status or Actuarially Determined Contribution (Florida Chapter 112 determined employer contribution). The plan's expected return on assets, currently 6.50%, is used for these calculations.

As of September 30, 2023, the LDROM for the system is $809,716,004. The difference between the plan's AAL of $570,772,447 and the LDROM can be thought of as the increase in the AAL if the entire portfolio were invested in low-default-risk securities. Alternatively, this difference could also be viewed as representing the expected savings from investing in the plan's diversified portfolio compared to investing only in low-default-risk securities.

ASOP 4 requires commentary to help the intended user understand the significance of the LDROM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the Actuarially Determined Contribution would be higher. While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of employer contributions, it also may be more likely to result in higher employer contributions or lower benefits.

Risk

The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions.

We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition but have included a brief discussion of some risks that may affect the Plan.

- Economic and Other Related Risks. Potential implications for the Plan due to the following economic effects (that were not reflected as of the valuation date) include:
  - Volatile financial markets and investment returns lower than assumed
  - High inflationary environment impacting salary increases and COLAs
  - Lingering direct and indirect effects of the COVID-19 pandemic
- Investment Risk (the risk that returns will be different than expected)

  If the actual return on market value for the prior plan year were 1% different (either higher or lower), the unfunded actuarial liability would change by 0.79%, or $2,346,930, disregarding the asset smoothing method.

  Since the Plan's assets are much larger than contributions, investment performance may create volatility in the actuarially determined contribution requirements. For example, for the prior plan year, if the actual return on market value were 1% different, the Actuarially Determined Contribution would increase or decrease by $164,625, disregarding the effects of the 5-year phase-in of investment gains and losses.

  The market value rate of return over the last 16 years has ranged from a low of -16.18% to a high of 27.03%.
- Longevity Risk (the risk that mortality experience will be different than expected)

  The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the Actuarially Determined Contribution.
- Contribution Risk (the risk that actual contributions will be different from actuarially determined contribution)

  The Plan's funding policy requires payment of the City's minimum required contribution, which is the Florida Chapter 112 determined contribution reduced for anticipated funding from allocated surtax income. This policy produces a risk that this reduction in immediate funding might be either too large or too small, depending on whether the surtax income gross as quickly as expected.

If the City paid the Florida Chapter 112 determined contribution, the effective amortization period would be 23 years, meaning that the current contribution level, with amortization payments growing 1.25%, would be adequate to be expected to reduce the unfunded liability to zero over 23 years. Under the City's current policy of paying the City's required contribution, over the immediate term, the unfunded liability has an expected growth rate of 1.6% and increases at this level can be expected to continue until the surtax income becomes payable to the Plan's trust. If plan experience is less favorable than anticipated, the unfunded liability will grow faster than 1.6% per year. By comparison, the surtax revenue is assumed to grow 4.25% per year.

- Demographic Risk (the risk that participant experience will be different than assumed)

  Examples of this risk include:
  - Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
  - More or less active participant turnover than assumed.

- There are external factors including legislative or financial reporting changes that could impact the Plan's funding and disclosure requirements. While we do not assume any changes in such external factors, it is important to understand that they could have significant consequences for the Plan.
- Actual Experience Over the Last Ten Years

  Past experience can help demonstrate the sensitivity of key results to the Plan's actual experience. Over the past ten years:

  The non-investment gain(loss) for a year has ranged from a loss of $10,056,085 to a gain of $1,978,720.

Plan Year Ended	Investment Gain/(Loss)	All Other Gains and (Losses)
2014	5,183,479	-7,402,084
2015	-15,203,738	-3,362,440
2016	-2,401,011	529,028
2017	14,071,137	1,978,720
2018	5,056,884	-1,546,971
2019	-12,089,300	-5,808,796
2020	-5,273,967	-10,056,085
2021	45,760,012	-5,207,826
2022	-64,741,818	-9,570,213
2023	16,846,955	-9,563,522

– The funded percentage on the actuarial value of assets has ranged from a low of 47.9% to a high of 50.8% since 2014.

Maturity Measures

As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities.

Currently the Plan has a non-active to active participant ratio of 1.43.

For the prior year, benefits and administrative expenses paid were $3,548,000 more than contributions received. Plans with high levels of negative cash flows may have a need for a larger allocation to income generating assets, which can create a drag on investment return.

GFOA funded liability by type

The Actuarial Accrued Liability represents the present value of benefits earned, calculated using the Plan's actuarial cost method. The Actuarial Value of Assets reflects the financial resources available to liquidate the liability. The portion of the liability covered by assets reflects the extent to which accumulated plan assets are sufficient to pay future benefits, and is shown for liabilities associated with employee contributions, pensioner liabilities, and other liabilities. The Government Finance Officers Association (GFOA) recommends that the funding policy aim to achieve a funded ratio of 100 percent.

GFOA Funded Liability by Type as of September 30

Type	2023	2022
Actuarial accrued liability (AAL)		
Active member contributions	$20,027,503	$19,822,533
Retirees and beneficiaries	412,154,218	388,093,154
Active and inactive members (employer-financed)	138,590,726	132,263,118
Total	**$570,772,447**	**$540,178,805**
Actuarial value of assets	273,139,317	265,245,309
Cumulative portion of AAL covered		
Active member contributions	100.00%	100.00%
Retirees and beneficiaries	61.41%	63.24%
Active and inactive members (employer-financed)	0.00%	0.00%

Actuarial balance sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the Plan for current participants is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the "liability" of the Plan.

Second, this liability is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Actuarial Balance Sheet

Description	Year Ended September 30, 2023	Year Ended September 30, 2022
Liabilities		
Present value of benefits for retired participants and beneficiaries	$412,154,218	$388,093,154
Present value of benefits for inactive vested participants	439,531	411,614
Present value of benefits for active participants	229,675,571	208,055,874
Total liabilities	**$642,269,320**	**$596,560,642**
Assets		
Total valuation value of assets	$273,139,317	$265,245,309
Present value of future contributions by members	18,355,208	16,695,020
Present value of future employer contributions for:		
• Entry age cost	53,141,665	39,686,817
• Unfunded actuarial accrued liability	297,633,130	274,933,496
Total of current and future assets	**$642,269,320**	**$596,560,642**

Section 3: Supplemental Information

Exhibit A: Table of plan demographics

Category	Year Ended September 30, 2023	Year Ended September 30, 2022	Change From Prior Year
Active participants in valuation:			
• Number	345	382	-9.7%
• Average age	42.3	41.8	0.5
• Average years of service	13.3	12.5	0.8
• Covered payroll	$24,526,732	$25,260,815	-2.9%
• Average payroll	71,092	66,128	7.5%
• Employee contribution balances	20,027,503	19,822,533	1.0%
• Total active vested participants	345	382	-9.7%
Inactive participants	3	3	0.0%
Retired participants:			
• Number in pay status	372	357	4.2%
• Average age	61.4	60.9	0.5
• Average monthly benefit1	$4,325	$4,217	2.6%
Disabled participants:			
• Number in pay status	16	17	-5.9%
• Average age	58.1	57.5	0.6
• Average monthly benefit1	$2,456	$2,424	1.3%
DROP participants not yet in pay status:			
• Number in pay status	68	64	6.3%
• Average age	52.9	52.3	0.6
• Average monthly benefit1	$4,294	$4,197	2.3%

[1] Does not include supplemental benefit amounts

Category	Year Ended September 30, 2023	Year Ended September 30, 2022	Change From Prior Year
Beneficiaries:			
• Number in pay status	35	31	12.9%
• Average age	63.4	64.0	-0.6
• Average monthly benefit	$3,218	$3,010	6.9%

Exhibit B: Participants in active service as of September 30, 2023 by age, years of service, and average compensation

Years of Service

Age	Total	5-9	10-14	15 - 19	20 - 24	25 - 29
Under 30	28	28	0	0	0	0
	$58,427	58,427	0	0	0	0
30 - 34	62	41	20	1	0	0
	64,501	59,818	73,876	68,988	0	0
35 - 39	67	16	35	16	0	0
	69,376	61,101	71,619	72,745	0	0
40 - 44	64	7	24	23	10	0
	76,301	65,186	73,502	80,636	80,830	0
45 - 49	39	5	12	8	12	2
	80,801	58,908	69,635	75,755	104,729	79,152
50 - 54	49	5	20	14	6	4
	74,385	58,332	70,046	74,404	80,704	106,603
55 - 59	24	4	8	11	1	0
	71,867	58,764	72,380	76,264	71,796	0
60 - 64	10	2	4	4	0	0
	70,712	58,044	69,519	78,240	0	0
65 - 69	2	0	2	0	0	0
	66,102	0	66,102	0	0	0
70 & over	0	0	0	0	0	0
	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
	0	0	0	0	0	0
Total	**345**	**108**	**125**	**77**	**29**	**6**
	$71,092	**$59,813**	**$71,793**	**$76,456**	**$90,382**	**$97,453**

Exhibit C: Reconciliation of participant data

	Active Participants	Inactive Vested Participants	DROP Participants	Disableds	Retired Participants	Beneficiaries	Total
Number as of October 1, 2022	**382**	**3**	**64**	**17**	**357**	**31**	**854**
New participants	0	N/A	0	N/A	N/A	N/A	0
Terminations — with vested rights	0	0	0	0	0	0	0
Terminations — without vested rights	0	N/A	0	N/A	N/A	N/A	0
Retirements	-9	0	-11	N/A	20	N/A	0
New DROP participants	-15	0	15	0	0	0	0
New disabilities	0	0	0	0	N/A	N/A	0
Return to work	0	0	0	0	0	N/A	0
Deceased	0	0	0	-1	-4	0	-5
New beneficiaries	0	0	0	0	0	2	2
Lump sum cash-outs	-11	0	0	0	0	0	-11
Rehire	0	0	0	N/A	0	N/A	0
Certain period expired	N/A	N/A	0	0	0	0	0
Data adjustments	-2	0	0	0	-1	2	-1
Active participants no longer accruing benefits	0	0	0	N/A	N/A	N/A	0
Net transfers (to)/from General	0	0	0	0	0	0	0
Number as of October 1, 2023	**345**	**3**	**68**	**16**	**372**	**35**	**839**

Exhibit D: Summary statement of income and expenses on a market value basis

Year Ended September 30, 2023 versus Year Ended September 30, 2022

Item	Income and Expenses	Assets as of YE 2023	Income and Expenses	Assets as of YE 2022
Net assets at market value at the beginning of the year		**$236,467,000**		**$285,351,000**
Contribution and other income:				
Employer contributions	$17,196,000		$17,610,000	
Employee contributions	3,333,000		3,153,000	
Total contribution income		$20,529,000		$20,763,000
Investment income:				
Interest, dividends and other income	$2,414,000		$4,578,000	
Realized appreciation	19,450,000		11,564,000	
Unrealized appreciation	12,205,000		-60,131,000	
Less investment fees	-1,967,000		-1,946,000	
Net investment income		$32,102,000		-$45,935,000
Total income available for benefits		$52,631,000		-$25,172,000
Less benefit payments and administrative expenses:				
Administrative expenses	-$97,000		-$159,000	
Benefit payments	-21,049,000		-19,727,000	
DROP credits	-3,351,000		-2,866,000	
Refunds	-2,605,000		-2,542,000	
DROP withdrawals	2,230,000		1,961,000	
DROP interest/adjustment	795,000		-379,000	
Net benefit payments and administrative expenses		-$24,077,000		-$23,712,000
Change in market value of assets		**$28,554,000**		**-$48,884,000**
Net assets at market value at the end of the year		**$265,021,000**		**$236,467,000**

Exhibit E: Summary statement of plan assets

Year Ended September 30, 2023 versus Year Ended September 30, 2022

Item	Investments	Assets as of YE 2023	Investments	Assets as of YE 2022
Cash and accounts receivable				
Cash equivalents		$4,271,000		$2,152,000
Total accounts receivable		63,000		0
Investments:				
Equities	$152,605,000		$132,667,000	
Fixed Income	51,800,000		47,799,000	
Real Estate	54,800,000		57,146,000	
Other Assets	15,000,000		9,865,000	
Total investments at market value		274,205,000		247,477,000
Total assets		**278,539,000**		**249,629,000**
Total accounts payable		-13,518,000		-13,162,000
Net assets at market value		**$265,021,000**		**$236,467,000**
Net assets at actuarial value		$273,139,317		$265,245,309

Exhibit F: Development of the fund through September 30, 2023

Year Ended September 30	Employer Contributions	Employee Contributions	Net Investment Return[1]	Admin. Expenses	Benefit Payments	Market Value of Assets at Year-End	Actuarial Value of Assets at Year-End	Actuarial Value as a Percent of Market Value
2014	$13,522,000	$2,253,000	$15,468,000	$65,000	$14,611,000	$148,721,000	$145,276,644	97.7%
2015	17,832,000	2,466,000	-3,849,000	73,000	14,874,000	150,223,000	159,914,247	106.5%
2016	18,864,000	2,410,000	11,548,000	75,000	15,583,000	167,387,000	175,333,405	104.7%
2017	19,162,000	2,500,000	26,747,000	75,000	18,338,000	197,383,000	191,740,583	97.1%
2018	13,973,000	3,151,000	19,269,000	128,000	16,981,000	216,667,000	207,089,881	95.6%
2019	14,498,000	3,225,000	3,496,000	158,000	17,974,000	219,754,000	220,334,774	100.3%
2020	15,058,000	3,401,000	9,840,000	153,000	19,728,000	228,172,000	234,514,215	102.8%
2021	15,061,000	3,341,000	61,141,000	160,000	22,204,000	285,351,000	255,558,542	89.6%
2022	17,610,000	3,153,000	-45,935,000	159,000	23,553,000	236,467,000	265,245,309	112.2%
2023	17,196,000	3,333,000	32,102,000	97,000	23,980,000	265,021,000	273,139,317	103.1%

[1] On a market basis, net of investment fees

Exhibit G: Table of amortization bases

Florida Chapter 112 Recommended Contribution Amortization Bases

Type	Date Established	Initial Period	Initial Amount	Annual Payment[1]	Years Remaining	Outstanding Balance
Fresh start	10/01/2016	30	$178,901,268	$12,416,260	23	$173,127,187
Experience loss	10/01/2017	30	-2,816,018	-192,592	24	-2,745,629
Change in assumptions	10/01/2017	30	-283,924	-19,418	24	-276,827
Plan amendment	10/01/2017	30	9,863,395	674,572	24	9,616,845
Experience loss	10/01/2018	29	5,111,441	349,784	24	4,986,606
Change in assumptions	10/01/2018	29	19,111,594	1,307,838	24	18,644,829
Experience loss	10/01/2019	28	12,171,775	834,614	24	11,898,446
Change in assumptions	10/01/2019	28	-7,304,312	-500,854	24	-7,140,286
Experience loss	10/01/2020	27	15,277,628	1,051,058	24	14,984,118
Change in assumptions	10/01/2020	27	6,108,635	420,257	24	5,991,276
Experience loss	10/01/2021	26	3,753,461	259,450	24	3,698,782
Change in assumptions	10/01/2021	26	11,440,746	790,818	24	11,274,081
Experience loss	10/01/2022	25	19,787,855	1,376,663	24	19,626,020
Change in assumptions	10/01/2022	25	8,804,784	612,559	24	8,732,774
Experience loss	10/01/2023	24	24,110,512	1,691,227	24	24,110,512
Change in assumptions	10/01/2023	24	1,104,396	77,468	24	1,104,396
Total				**$21,149,704**		**$297,633,130**

[1] Level percentage of payroll

City's Minimum Recommended Contribution Surtax Amortization Bases

Type	Date Established	Initial Period	Initial Amount	Annual Payment[1]	Years Remaining	Outstanding Balance
Discounted surtax revenue applied	10/01/2016	30	-$64,295,005	-$4,462,257	23	-$62,219,868
Surtax offset gain	10/01/2017	30	-1,534,336	-104,935	24	-1,495,981
Allocation change	10/01/2017	30	4,705,811	321,837	24	4,588,182
Discount rate change	10/01/2017	30	-3,286,369	-224,759	24	-3,204,220
Surtax offset gain	10/01/2018	29	-1,420,046	-97,176	24	-1,385,365
Allocation change	10/01/2018	29	-1,349,426	-92,344	24	-1,316,470
Discount rate change	10/01/2018	29	-3,713,867	-254,146	24	-3,623,164
Surtax offset gain	10/01/2019	28	-348,544	-23,900	24	-340,718
Allocation change	10/01/2019	28	-7,142,670	-489,770	24	-6,982,274
Discount rate change	10/01/2019	28	-2,159,598	-148,083	24	-2,111,103
Surtax offset loss	10/01/2020	27	6,298,215	433,299	24	6,177,215
Allocation change	10/01/2020	27	3,119,832	214,636	24	3,059,894
Discount rate change	10/01/2020	27	-2,063,845	-141,987	24	-2,024,194
Surtax offset gain	10/01/2021	26	-9,862,882	-681,751	24	-9,719,203
Allocation change	10/01/2021	26	-4,296,673	-296,999	24	-4,234,081
Discount rate change	10/01/2021	26	-4,356,487	-301,133	24	-4,293,022
Surtax offset gain	10/01/2022	25	-6,174,896	-429,594	24	-6,124,394
Allocation change	10/01/2022	25	2,166,398	150,719	24	2,148,680
Discount rate change	10/01/2022	25	-3,393,985	-236,123	24	-3,366,227
Surtax smoothing	10/01/2022	25	4,985,065	346,816	24	4,944,294
Surtax offset gain	10/01/2023	24	-2,880,697	-202,066	24	-2,880,697
Total				**-$6,719,716**		**-$94,402,716**

[1] Level percentage of payroll; per Part VII, Chapter 112.64(5)(b) of Florida Statutes, outstanding balances were amortized using a 1.25% payroll growth rate for October 1, 2022 valuation.

Exhibit H: Section 415

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the Plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $265,000 for 2023 and $275,000 for 2024. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as form of benefits chosen and after tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Exhibit I: Supplementary state of Florida information
Summary of Salary Changes

Year Ended September 30	Total Salary	Percent Change in Total Salary	Percent Change in Salary of Employees Remaining Active	Expected Percent Change in Salary of Employees Remaining Active
2010*	$27,869,052	0.75%	N/A	N/A
2010	32,329,400	16.88%	2.45%	5.28%
2011	31,832,037	-1.54%	3.09%	5.80%
2012	28,944,158	-9.07%	0.78%	6.15%
2013	27,871,010	-3.71%	3.03%	1.72%
2014	27,373,702	-1.78%	3.89%	1.70%
2015	28,091,083	2.62%	3.08%	1.66%
2016	26,585,054	-5.36%	2.63%	4.26%
2017	27,548,015	3.62%	4.03%	8.21%
2018	28,164,021	2.24%	10.21%	8.31%
2019	28,726,006	2.00%	12.46%	8.34%
2020	28,268,208	-1.59%	12.06%	3.98%
2021	25,903,031	-8.37%	3.06%	3.84%
2022	25,260,815	-2.48%	8.64%	3.69%
2023	24,526,732	-2.91%	8.86%	3.51%

Note: The Plan was closed to new entrants as of October 1, 2017.

The average total payroll growth for the most recent ten years was -1.27% per year. Additional analysis of bargained pay increases applicable for the next year and pay of DC plan participants was used to support a payroll increase assumption of 1.25%.

*Prior to the inclusion of new participants with greater than one year of employment.

Exhibit J: Supplementary state of Florida information
Recent History of Recommended and Actual Contributions

Fiscal Year Ended September 30	Valuation Date October 1	Contribution Rate as Percent of Valuation Payroll	Valuation Payroll	Florida Chapter 112 Recommended Contribution	City's Minimum Required Contribution	Actual Contribution
2013	2011	39.11%	$32,946,158	$12,884,770	- -	$10,742,000
2014	2012	49.93%	29,812,483	14,884,963	- -	13,522,000
2015	2013	62.81%	28,049,384	17,618,896	- -	17,832,000
2016	2014	68.64%	27,480,459	18,863,935	- -	18,864,000
2017	2015	67.73%	28,282,102	19,155,820	- -	19,162,000
2018	2016	69.26%	26,917,306	18,643,233	$13,973,105	13,973,000
2019	2017	68.63%	27,892,365	19,141,501	14,497,788	14,498,000
2020	2018	70.53%	28,516,071	20,111,161	15,042,623	15,058,000
2021	2019	71.56%	29,085,081	20,812,130	15,044,530	15,061,000
2022	2020	79.84%	28,621,561	22,851,586	17,592,399	17,610,000
2023	2021	90.55%	26,226,819	23,748,105	17,185,973	17,196,000
2024	2022	102.16%	25,576,575	26,128,351	19,385,644	- -
2025	2023	116.86%	24,833,316	29,019,915	21,981,270	- -

The Plan was closed to new entrants as of October 1, 2017; as a result, valuation payroll is expected to continue declining.

Exhibit K: Supplementary State of Florida Information
Comparative Summary of Principal Valuation Results

	Year Ended September 30, 2023		Year Ended
	New Assumptions	Old Assumptions	September 30, 2022
Participant data			
• Active members	345	345	382
• Total annual payroll	$24,526,732	$24,526,732	$25,260,815
• Retired members and beneficiaries	423	423	406
• Total annualized benefit	$21,130,232	$21,130,232	$19,679,844
• Terminated vested members	3	3	3
• Total annualized benefit	$44,563	$44,563	$44,568
• DROP participants	68	68	64
• Total annualized benefit	$3,503,954	$3,503,954	$3,223,296
Actuarial value of assets	$273,139,317	$273,139,317	$265,245,309
Present value of all future expected benefit payments:			
• Active members:			
• Retirement benefits	$202,560,907	$184,065,695	$181,225,097
• Vesting benefits	1,530,843	1,685,678	1,970,681
• Disability benefits	4,189,909	3,521,320	3,822,317
• Death benefits	1,366,409	1,121,432	1,215,246
• Return of contributions	20,027,503	20,027,503	19,822,533
• Total	$229,675,571	$210,421,628	$208,055,874
• Terminated vested members	439,531	439,531	411,614
• Retired members and beneficiaries	341,339,414	341,339,414	322,272,363
• DROP participants	70,814,803	70,814,803	65,820,790
Total	$642,269,319	$623,015,376	$596,560,641

Exhibit K: Supplementary State of Florida Information
Comparative Summary of Principal Valuation Results (Cont'd)

	Year Ended September 30, 2023		Year Ended
	New Assumptions	Old Assumptions	September 30, 2022
Unfunded actuarial accrued liability	$297,633,130	$296,528,734	$274,933,496
Actuarial present value of accrued benefits			
Vested accrued benefits			
Active members	$116,602,158	$122,521,249	$116,112,778
Inactive members	439,531	439,531	411,614
Retirees and beneficiaries	341,339,414	341,339,414	322,272,363
DROP participants	70,814,803	70,814,803	65,820,790
Nonvested active members	- -	- -	- -
Total	$529,195,907	$535,114,997	$504,617,545
Pension cost			
Normal cost, including administrative expenses	$8,833,819	$8,011,440	$8,182,179
Expected employee contributions	-2,278,533	-2,247,789	-2,379,470
Level % of payroll payment to amortize unfunded actuarial accrued liability	21,149,704	21,072,236	19,141,737
Discounted and amortized value of allocated surtax revenue	-6,719,716	-6,719,716	-6,437,187
Timing adjustment	724,622	694,612	639,056
Total minimum annual cost payable monthly at valuation date	$21,709,896	$20,810,783	$19,146,315
Total employer cost projected to budget year	**21,981,270**	**21,070,918**	**19,385,644**
Projected payroll	24,833,316	24,833,316	25,576,575
As % of projected payroll	88.52%	84.85%	75.79%
Present value of active members' future salaries at attained age	$183,552,079	$152,754,919	$166,950,196
Present value of expected future employee contributions	18,355,208	15,275,492	16,695,020

Exhibit L: Supplementary state of Florida Information Actuarial Present Value of Accumulated Plan Benefits

Factors	Change in Actuarial Present Value of Accumulated Plan Benefits
Actuarial present value of accumulated benefits as of October 1, 2022	$504,617,545
Benefits accumulated, net experience gain or loss, changes in data	22,456,663
Benefits paid	-23,980,000
Interest	32,020,790
Changes in assumptions	-5,919,091
Plan changes	0
Net increase	24,578,362
Actuarial present value of accumulated benefits as of October 1, 2023	$529,195,907

Exhibit M: Supplementary State of Florida information Reconciliation of DROP accounts

Nearest Age	Total Actives*	Eligible for Normal**	Number Retiring	Number Entering DROP
Under 40	167	0	0	0
40	5	2	1	1
41	15	2	0	0
42	10	3	0	1
43	19	6	0	0
44	12	0	0	0
45	11	3	0	1
46	10	5	0	3
47	10	3	0	0
48	7	4	1	1
49	8	6	0	1
50	10	5	1	0
51	9	3	0	1
52	13	4	0	0
53	13	5	1	2
54	12	4	0	0
55	5	0	0	0
56	6	1	0	0
57	6	2	1	1
58	9	1	0	0
59	5	0	0	0
60	3	2	0	2
61	4	1	0	1
62	4	0	0	0
63	2	0	1	0
64	2	1	1	0
65 & over	4	0	2	0
Total	382	63	9	15

*Number of active participants from prior valuation
**Number of active participants either eligible to retire as of October 1, 2022 or who became eligible during the plan year ended September 30, 2023

Exhibit N: Actuarial Projections through Fiscal 2062

City of Jacksonville General Employees Retirement Plan
Actuarial Projections through Fiscal Year Ending September 30, 2062

Plan Year Beginning	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio	Fiscal Year Ending	Surtax Contribution	% of Total Contribution	Required City Contribution	% of Total Contribution	Total Contribution
					2023	$0	0.0%	$19,385,644	100.0%	$19,385,644
2023	$570,772,447	$273,139,317	$297,633,130	47.85%	2024	0	0.0%	21,981,270	100.0%	21,981,270
2024	589,389,741	283,360,943	306,028,798	48.08%	2025	0	0.0%	22,307,402	100.0%	22,307,402
2025	608,031,719	296,906,783	311,124,936	48.83%	2026	0	0.0%	22,637,632	100.0%	22,637,632
2026	626,940,441	301,527,647	325,412,794	48.10%	2027	0	0.0%	23,364,889	100.0%	23,364,889
2027	645,074,521	318,621,471	326,453,050	49.39%	2028	0	0.0%	23,053,939	100.0%	23,053,939
2028	662,498,449	332,334,783	330,163,666	50.16%	2029	0	0.0%	23,096,365	100.0%	23,096,365
2029	679,385,906	345,119,249	334,266,657	50.80%	2030	7,663,837	25.0%	23,016,728	75.0%	30,680,565
2030	695,291,148	364,909,507	330,381,641	52.48%	2031	10,652,733	32.2%	22,407,128	67.8%	33,059,861
2031	708,382,964	385,987,998	322,394,966	54.49%	2032	11,105,475	33.3%	22,228,973	66.7%	33,334,448
2032	719,935,240	406,288,795	313,646,445	56.43%	2033	11,577,457	34.3%	22,156,153	65.7%	33,733,610
2033	730,276,623	426,549,912	303,726,711	58.41%	2034	12,069,499	35.5%	21,938,487	64.5%	34,007,986
2034	738,850,308	446,571,808	292,278,500	60.44%	2035	12,582,453	36.7%	21,687,136	63.3%	34,269,589
2035	745,483,715	466,190,750	279,292,965	62.54%	2036	13,117,207	38.1%	21,305,281	61.9%	34,422,488
2036	749,665,418	485,119,957	264,545,461	64.71%	2037	13,674,689	39.5%	20,979,858	60.5%	34,654,547
2037	751,431,464	503,343,644	248,087,820	66.98%	2038	14,255,863	41.2%	20,327,166	58.8%	34,583,029
2038	749,558,938	520,172,060	229,386,878	69.40%	2039	14,861,737	42.3%	20,275,113	57.7%	35,136,850
2039	745,916,100	536,692,593	209,223,507	71.95%	2040	15,493,361	43.3%	20,328,182	56.7%	35,821,543
2040	740,814,671	553,853,758	186,960,913	74.76%	2041	16,151,829	44.2%	20,394,752	55.8%	36,546,581
2041	734,259,066	571,921,854	162,337,212	77.89%	2042	16,838,281	45.1%	20,461,268	54.9%	37,299,549
2042	726,214,457	591,061,518	135,152,939	81.39%	2043	17,553,908	46.1%	20,511,844	53.9%	38,065,752
2043	716,591,055	611,398,978	105,192,077	85.32%	2044	18,299,949	47.0%	20,626,268	53.0%	38,926,217
2044	705,598,975	633,277,336	72,321,639	89.75%	2045	19,077,697	47.9%	20,743,291	52.1%	39,820,988
2045	693,248,733	656,995,432	36,253,301	94.77%	2046	19,888,499	48.7%	20,954,396	51.3%	40,842,895
2046	679,897,793	683,061,975	(3,164,182)	100.47%	2047	0	0.0%	10,131,626	100.0%	10,131,626
2047	665,774,224	690,596,656	(24,822,432)	103.73%	2048	0	0.0%	183,776	100.0%	183,776
2048	650,925,509	687,634,896	(36,709,387)	105.64%	2049	0	0.0%	188,370	100.0%	188,370
2049	635,404,539	674,497,693	(39,093,154)	106.15%	2050	0	0.0%	193,080	100.0%	193,080
2050	619,267,753	660,899,562	(41,631,809)	106.72%	2051	0	0.0%	197,906	100.0%	197,906
2051	602,575,729	646,911,143	(44,335,414)	107.36%	2052	0	0.0%	202,854	100.0%	202,854
2052	585,390,646	632,605,341	(47,214,695)	108.07%	2053	0	0.0%	207,925	100.0%	207,925
2053	567,776,043	618,057,107	(50,281,064)	108.86%	2054	0	0.0%	213,124	100.0%	213,124
2054	549,795,449	603,342,131	(53,546,682)	109.74%	2055	0	0.0%	218,452	100.0%	218,452
2055	531,514,811	588,539,310	(57,024,499)	110.73%	2056	0	0.0%	223,914	100.0%	223,914
2056	512,998,451	573,726,759	(60,728,308)	111.84%	2057	0	0.0%	229,511	100.0%	229,511
2057	494,309,741	558,982,535	(64,672,794)	113.08%	2058	0	0.0%	235,249	100.0%	235,249
2058	475,512,001	544,385,600	(68,873,599)	114.48%	2059	0	0.0%	241,131	100.0%	241,131
2059	456,667,098	530,014,482	(73,347,384)	116.06%	2060	0	0.0%	247,159	100.0%	247,159
2060	437,833,062	515,944,953	(78,111,891)	117.84%	2061	0	0.0%	253,338	100.0%	253,338
2061	419,064,764	502,250,778	(83,186,014)	119.85%	2062	0	0.0%	259,671	100.0%	259,671
Total:						$244,864,474	31.6%	$529,596,251	68.4%	$774,460,725
Total Present Value at 6.50%:						$84,712,259	24.9%	$255,118,608	75.1%	$339,830,867

Assumptions

Investment Return Assumption	6.50% per year
Actuarial Value of Assets	5-year smoothed market value
Payroll Growth Assumption	1.25% per year
Pension Liability Surtax Proceeds	6.10%, projected to increase 4.25% annually
Administrative Expenses	Projected to increase 2.5% annually

Projections are not a guarantee of future results. They are intended to serve as estimates of future financial outcomes that are based on assumptions about future experience and the information available at the time the modeling is undertaken and completed. Projected results will change if demographic or economic assumptions, or plan provisions, change in the future, or if the contributing employers make contributions other than expected.

Section 4: Actuarial Valuation Basis

Exhibit 1: Actuarial assumptions, methods and models

Rationale for assumptions

The information and analysis used in selecting each demographic assumption that has a significant effect on this actuarial valuation is shown in the Experience Study Report for the five-year period ended September 30, 2022.

Net investment return

6.50%. The net investment return assumption was chosen by the Retirement System's Board of Trustees with input from the actuary. The assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes as provided by Segal Marco Advisors, as well as the Plan's target asset allocation.

Salary increases

Salary increases include an assumed inflation rate of 2.50%

Service	Rate (%)
0	10.00
1 – 2	8.00
3 – 10	7.00
11 - 15	6.00
16+	3.50

Payroll growth

1.25% used for amortization of unfunded liability amounts, based on the requirement in the Florida Statutes that the assumption for this purpose may not exceed the average annual growth for the preceding ten years. Negotiated pay level increases and pay of DC

Plan participants were taken into consideration in setting a payroll growth that is expected to be achieved and maintained on a ten-year average basis. The Fund's long-term payroll growth assumption is equal to the inflation assumption of 2.50%.

Mortality rates

Healthy pre-retirement: FRS pre-retirement mortality tables for special risk personnel, set forward 2 years, projected generationally from 2010 with Scale MP2018

Healthy post-retirement: FRS healthy post-retirement mortality tables for special risk personnel, set forward 2 years, projected generationally from 2010 with Scale MP2018

Disabled: FRS disabled mortality tables for personnel other than special risk, with no set forward, projected generationally from 2010 with Scale MP2018

The FRS tables for special risk personnel, set forward 2 years, reasonably reflect the healthy annuitant mortality experience of the General Employees Retirement Plan as of the measurement date. The FRS disabled mortality tables for special risk personnel reasonably reflect the disabled annuitant mortality experience as of the measurement date.

Annuitant mortality rates

Rate (%)*

	Healthy		Disabled	
Age	**Male**	**Female**	**Male**	**Female**
55	1.04	0.55	2.53	1.91
60	1.16	0.61	3.08	2.27
65	1.45	0.88	3.93	2.83
70	2.34	1.51	5.08	3.79
75	3.90	2.62	6.98	5.46
80	6.63	4.65	10.12	8.31
85	11.21	8.64	14.68	12.60
90	18.13	15.47	21.29	17.72

* Mortality rates shown for base table.

Termination rates before retirement

Rate (%)

	Rate (%)			
	Mortality[1]		Disability[2]	
Age	Male	Female	Male	Female
20	0.05	0.04	0.03	0.03
25	0.06	0.05	0.04	0.04
30	0.07	0.05	0.05	0.05
35	0.08	0.06	0.08	0.08
40	0.10	0.08	0.12	0.12
45	0.14	0.11	0.18	0.18
50	0.21	0.17	0.30	0.30
55	0.32	0.25	0.47	0.47
60	0.50	0.40	0.75	0.75
65	0.87	0.69	0.00	0.00

Retirement rates

Age/Service	Retirement Probability (%)
Under 20	0
20	65
21	35
22	20
23 - 25	15
26 – 27	20
28+	100

100% retirement assumed at age 65 with 5 years of service; for ages less than 65, retirement rate assumptions are based on service

Refund of Contributions

95% of participants that are vested and terminate are assumed to take a refund of their employee contributions in lieu of their accrued benefit deferred to age 65

Retirement rates for inactive vested participants

65

Unknown data for participants

Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

Value of Applicable Tax Revenue

Smoothed revenue of $120,073,357 for fiscal 2023 is used as the basis of the City's revenue projection. This amount is prior to the application of the allocation percentage. Smoothed revenue is calculated as actual revenue less unrecognized revenue growth. Unrecognized revenue growth is equal to the difference between actual and expected revenue growth, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the actual revenue. This method is applied prospectively to revenue growth occurring during fiscal 2022 and later.

Actual revenue for fiscal 2023 was $128,012,366.

Tax Revenue Growth Rate

4.25%. This assumption is determined by the City. Segal has not reviewed the information used to set this assumption, but Segal previously reviewed the sensitivity of this assumption when it was initially set.

Projected Tax Revenue Allocation

6.10%. This percentage is determined by the City; last year’s percentage was 6.10%.

Administrative Expenses

Previous year’s actual expenses; $97,000 for October 1, 2023.

Family Composition

60% of participants are assumed to be married. None are assumed to have dependent children. Females are assumed to be three years younger than their spouses.

Actuarial value of assets

Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected market return, and is recognized over a five - year period, further adjusted, if necessary, to be within 20% of the market value

Actuarial cost method

Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis based on each member's benefit accrual rate and are allocated by compensation.

Normal Cost is not included for participants who are assumed to retire with 100% certainty in the upcoming plan year based on the retirement assumptions.

Justification for change in actuarial assumptions

Following the completion of the Review of Actuarial Experience for the Five-Year Period October 1, 2017 to September 30, 2022, the Board approved the following changes in actuarial assumptions:

- Withdrawal rates were lowered for active participants with between six and ten years of service.
- Active retirement rates were increased for participants with 20 years of service and decreased for participants with between 21 and 27 years of service
- Salary scale was changed to reflect higher expected merit and promotional increases.

Exhibit 2: Summary of plan provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan year

October 1 through September 30

Plan status

Closed to new entrants

Normal retirement

Age Requirement	Age 65 with five years of Credited Service or any age with 20 years of Credited Service.
Regular Benefit Amount	3.0% of Final Monthly Compensation times years of Credited Service for the first 20 years plus 2.0% of Final Monthly Compensation times years of Credited Service for years in excess of 20. However, the benefit may not exceed 80% of Final Monthly Compensation.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	$74.96 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.

Early retirement

None

Service-Incurred Disability

Age Requirement	None
Service Requirement	None
Regular Benefit Amount	50% of the average salary earned in the last three years immediately preceding disability retirement.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	$74.96 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.

Non-Service Incurred Disability

Age Requirement	None
Service Requirement	5 years of Credited Service
Regular Benefit Amount	25% percent of the average salary earned in the last three years immediately preceding disability retirement. For each year of service in excess of 5 years, the benefit shall be increased 2.5%, to a maximum of 50%.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	$74.96 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.

Vesting

Age Requirement	None
Service Requirement	5 years of Credited Service
Regular Benefit Amount	Accrued Normal Retirement Benefit payable at age 65.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month. Payable at Age 65.
Minimum Benefit Amount	$74.96 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.

Spouse's pre-retirement death benefit [(applicable only if elected by employee)]

Age Requirement	None
Service Requirement	None
Regular Benefit Amount	If the Member is eligible for retirement, the surviving spouse is entitled to 75% of the member's accrued retirement benefit. If the Member is not eligible for retirement, the surviving spouse is entitled to 75% of the pension the Member would have received if the Member had worked to eligibility for Normal Retirement at current salary, using a 2% annual accrual rate.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Member's Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	75% of $74.96 per whole year of Member's Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.

Spouse's post-retirement death benefit(s)

Regular Benefit Amount	Surviving spouse is entitled to 75% of the Member's regular benefit.
Supplemental Benefit Amount	Surviving spouse is entitled to 100% of the Member's supplemental benefit.
Minimum Benefit Amount	75% of the Member's Minimum Benefit Amount at retirement.

Member

All City Corrections Officers hired prior to October 1, 2017.

Member Contributions

10% of Earnable Compensation, additional 2% of Earnable Compensation during DROP participation.

Credited Service

The number of full years and months worked from date of participation to date of termination or retirement, plus any prior service purchased.

Final Monthly Compensation

Average monthly rate of Earnable Compensation during the highest 36 consecutive months (78 pay periods) out of the last ten years of employment

Earnable Compensation

Base pay for regular hours worked as an employee, plus service raises and excluding bonuses, adjusted compensation, overtime or any extra compensation over and above regularly budgeted salaries.

Cost of living adjustments (COLAs)

On the December 1st after the initial benefit commencement date, and on each December 1st thereafter, the regular benefit is increased by 3%.

DROP

Members with 20 or more years of service may elect to defer receipt of their retirement benefits while continuing employment with the City for up to 5 years. Upon the effective date of participating in the DROP, a member's years of service and Final Monthly Compensation become frozen for purposes of determining pension benefits. Additional service beyond the date of DROP participation no longer accrues any additional benefits under the Retirement System. Benefits that would have been payable are accumulated at interest to date of termination and paid or rolled over in a single sum, and payments are made directly to the Member thereafter based on the accrued retirement benefit at the DROP start date. COLA increases start at termination of employment rather than at the start of the DROP

Changes in plan provisions

There have been no changes in plan provisions since the last valuation.

Section 5: GASB Information

General information about the pension plan

Plan description

Plan membership. At September 30, 2023, pension plan membership consisted of the following:

Membership	Amount
Retired participants or beneficiaries currently receiving benefits	491
Inactive participants with a vested right to a deferred or immediate benefit	3
Active members	345
Total	839

Exhibit 1: Net Pension Liability

Components of the Net Pension Liability	Current	Prior
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date and reporting date for the Plan under GASB 67	September 30, 2023	September 30, 2022
Total Pension Liability	$584,290,447	$553,371,805
Plan Fiduciary Net Position	278,539,000	249,660,000
Net Pension Liability	305,751,447	303,711,805
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	47.67%	45.12%

The Net Pension Liability (NPL) for the plan was measured as of September 30, 2023 and 2022. Plan Fiduciary Net Position (plan assets) was valued as of the measurement dates and the Total Pension Liability (TPL) was determined from actuarial valuations as of October 1, 2023 and 2022, respectively.

Actuarial assumptions.

The Total Pension Liability (TPL) as of September 30, 2023 and 2022, that were measured by actuarial valuations as of October 1, 2023 and 2022, respectively, used the following actuarial assumptions, applied to all periods included in the measurement:

Assumption Type	Assumption
Wage inflation	2.50%
Salary increases	3.50% - 10.00%, of which 2.50% is the Plan’s long-term payroll inflation assumption
Net investment rate of return	6.50%, net of pension plan investment expense, including inflation
Other assumptions	See the October 1, 2023 actuarial valuation for a complete description of all actuarial assumptions. These assumptions were developed in the analysis of actuarial experience study for the period October 1, 2017 through September 30, 2022.

Detailed information regarding all actuarial assumptions can be found in Section 4, Exhibit I.

Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Domestic equity	30.0%	6.60%
International equity	20.0%	6.70%
Fixed income	20.0%	1.80%
Real estate	15.0%	3.40%
Private equity	7.5%	9.90%
Alternatives	7.5%	3.00%
Total	100.00%	5.16%

Discount rate. The discount rate used to measure the Total Pension Liability (TPL) was 6.50% as of September 30, 2023 and September 30, 2022. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan Fiduciary Net Position (FNP) was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both September 30, 2023 and September 30, 2022.

* Geometric real rates of return are net of inflation.

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability of the CORP as of September 30, 2023, calculated using the discount rate of 6.50%, as well as what the CORP's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (5.50%) or 1-percentage-point higher (7.50%) than the current rate.

Item	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (7.50%)
Net Pension Liability	$389,179,600	$305,751,447	$238,393,355

Exhibit 2: Schedule of changes in Net Pension Liability

Components of the Net Pension Liability	Current	Prior
Reporting and Measurement Dates		
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date and reporting date for the Plan under GASB 67	September 30, 2023	September 30, 2022
Total Pension Liability		
Service cost	$8,023,179	$7,781,651
Interest	35,721,919	33,939,708
Change of benefit terms	0	0
Differences between expected and actual experience	9,723,148	9,464,327
Changes of assumptions	1,104,396	8,804,784
Benefit payments, including refunds of member contributions	-23,654,000	-22,269,000
Net change in Total Pension Liability	$30,918,642	$37,721,470
Total Pension Liability — beginning	553,371,805	515,650,335
Total Pension Liability — ending	$584,290,447	$553,371,805
Plan Fiduciary Net Position		
Contributions — employer	$17,196,000	$17,610,000
Contributions — employee	3,333,000	3,153,000
Net investment income	32,101,000	-45,934,000
Benefit payments, including refunds of member contributions	-23,654,000	-22,269,000
Administrative expense	-97,000	-159,000
Other	0	0
Net change in Plan Fiduciary Net Position	$28,879,000	-$47,599,000
Plan Fiduciary Net Position — beginning	249,660,000	297,259,000
Plan Fiduciary Net Position — ending	$278,539,000	$249,660,000

Components of the Net Pension Liability	Current	Prior
Net Pension Liability		
Net Pension Liability – ending	$305,751,447	$303,711,805
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	47.67%	45.12%
Covered payroll*	$24,526,732	$25,260,815
Plan Net Pension Liability as percentage of covered payroll	1,246.60%	1,202.30%

Notes to Schedule:

- **Benefit changes:** *No benefit changes have been reflected in the past two fiscal years.*
- **Change of Assumptions:** *As of September 30, 2023 the rates of withdrawal and retirement were updated, as well as the salary scale.*

  As of September 30, 2022 the assumed investment return was lowered from 6.625% to 6.50%.

* Covered payroll represents compensation earnable and pensionable compensation. Only compensation earnable and pensionable compensation that would possibly go into the determination of the retirement benefits are included.

Exhibit 3: Schedule of employer contributions

Year Ended September 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll[1]	Contributions as a Percentage of Covered Payroll[2]
2014	$14,884,963	$13,522,000	$1,362,963	$27,373,702	49.40%
2015	17,618,896	17,832,000	-213,104	28,091,083	63.48%
2016	18,863,935	18,864,000	-65	26,585,054	70.96%
2017	19,155,820	19,162,000	-6,180	27,548,015	69.56%
2018	18,643,233	13,973,000	4,670,233	28,164,021	49.61%
2019	19,141,501	14,498,000	4,643,501	28,726,006	50.47%
2020	20,111,161	15,058,000	5,053,161	28,268,208	53.27%
2021	20,812,130	15,061,000	5,751,130	25,903,031	58.14%
2022	22,851,586	17,610,000	5,241,586	25,260,815	69.71%
2023	23,748,105	17,196,000	6,552,105	24,526,732	70.11%

See accompanying notes to this schedule on next page.

[1] Pensionable payroll as of the measurement date.

[2] The City contributed the percentage of payroll represented by the actuarially determined contribution in the corresponding actuarial valuation for years ending on or before September 30, 2016. Actual dollar contributions may be more or less than the actuarially determined contributions due to actual payroll being different from projected payroll. Effective with the September 30, 2017 fiscal year, the City implemented a policy to ensure that the calculated dollar amount of the actuarially determined contribution was met.

Effective with the September 30, 2018 fiscal year, the City began contributing based on an adjusted state minimum required contribution that reflects an adjustment for an offset for amortization of the discounted value of projected surtax revenue allocated to the plan beginning in 2030.

Methods and assumptions used to establish "actuarially determined contribution" rates:

Valuation date

Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported

Actuarial cost method

Entry Age Actuarial Cost Method

Amortization method

Level percent of payroll, using 1.25% annual increases. The Fund's payroll inflation assumption was 2.50% as of October 1, 2021. Per Part VII, Chapter 112.64(5)(a) of Florida Statutes, the payroll growth assumption used for amortization of the unfunded liability is not allowed to exceed the average annual payroll growth for the proceeding ten years. However, pursuant to Chapter 112.64(5)(b), and after adjusting this analysis to account for bargained pay level increases and inclusion of DC plan participants in the total payroll, the assumption was set at 1.25%

Remaining amortization period.

As of October 1, 2021 the effective amortization period is 25 years.

Asset valuation method

The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a five-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 20% of the market value of assets.

Investment rate of return

6.625%, net of pension plan investment expense, including inflation.

Inflation rate

2.50%

Projected salary increases

2.80% - 7.50%, of which 2.50% is the Plan's long-term payroll inflation assumption.

Cost of living adjustments

Plan provisions contain a 3.00% COLA

Other information

Same as those used in the October 1, 2021 funding actuarial valuation.

Exhibit 4 – Pension expense

Components of pension expense	Current	Prior
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date	September 30, 2023	Septembere 30, 2022
Service cost	$8,023,179	$7,781,651
Interest	35,721,919	33,939,708
Current-period benefit changes	0	0
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	2,430,787	2,366,081
Expensed portion of current-period changes of assumptions	276,099	2,201,196
Member contributions	-3,333,000	-3,153,000
Projected earnings on pension plan investments	-16,433,246	-19,638,256
Expensed portion of current-period differences between actual and projected earnings on pension plan investments	-3,133,550	13,114,452
Administrative expense	97,000	159,000
Other	0	0
Recognition of beginning of year deferred outflows of resources as pension expense	33,406,138	18,055,898
Recognition of beginning of year deferred inflows of resources as pension expense	-10,742,277	-11,751,455
Pension expense	**$46,313,049**	**$43,075,275**

Deferred outflows of resources and deferred inflows of resources

Reporting Date for Employer under GASB 68	September 30, 2024	September 30, 2023
Measurement Date	**September 30, 2023**	**September 30, 2022**
Deferred Outflows of Resources		
Changes of assumptions or other inputs	$11,028,714	$17,452,796
Net difference between projected and actual earnings on pension plan investments	10,053,331	30,440,863
Difference between expected and actual experience in the Total Pension Liability	16,046,102	18,066,256
Total Deferred Outflows of Resources	$37,128,147	$65,959,915
Deferred Inflows of Resources		
Changes of assumptions or other inputs	$0	$1,460,862
Net difference between projected and actual earnings on pension plan investments	0	0
Difference between expected and actual experience in the Total Pension Liability	0	293,499
Total Deferred Inflows of Resources	$0	$1,754,361
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended September 30:		
2024	N/A	$22,663,861
2025	$16,004,350	16,431,015
2026	11,569,562	11,996,227
2027	12,687,786	13,114,451
2028	-3,133,551	0
2029	0	0
Thereafter	0	0

Schedule of recognition of change in total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience on Total Pension Liability

Reporting Date for Employer under GASB 68 Year Ended September 30	Differences between Expected and Actual Experience	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	Thereafter
2017	-$1,418,089	7.00	-$202,584	$0	$0	$0	$0	$0	$0	$0
2018	-2,054,491	7.00	-293,499	-293,499	0	0	0	0	0	0
2019	17,044,608	6.00	2,840,768	2,840,768	0	0	0	0	0	0
2020	5,491,767	5.00	1,098,353	1,098,353	0	0	0	0	0	0
2021	9,965,234	5.00	1,993,047	1,993,047	1,993,047	0	0	0	0	0
2022	5,071,327	5.00	1,014,265	1,014,265	1,014,265	1,014,265	0	0	0	0
2023	9,464,327	4.00	2,366,081	2,366,082	2,366,082	2,366,082	0	0	0	0
2024	9,723,148	4.00	N/A	2,430,787	2,430,787	2,430,787	2,430,787	0	0	0
Total*			**N/A**	**$11,449,803**	**$7,804,181**	**$5,811,134**	**$2,430,787**	**$0**	**$0**	**$0**

* Net increase (decrease) in pension expense

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Assumption Changes

Reporting Date for Employer under GASB 68 Year Ended September 30	Assumption Changes	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	Thereafter
2017	$16,320,426	7.00	$2,331,489	$0	$0	$0	$0	$0	$0	$0
2018	9,950,689	7.00	1,421,527	1,421,527	0	0	0	0	0	0
2019	718,682	6.00	119,780	119,780	0	0	0	0	0	0
2020	-7,304,312	5.00	-1,460,862	-1,460,862	0	0	0	0	0	0
2021	6,108,635	5.00	1,221,727	1,221,727	1,221,727	0	0	0	0	0
2022	11,440,746	5.00	2,288,149	2,288,149	2,288,149	2,288,149	0	0	0	0
2023	8,804,784	4.00	2,201,196	2,201,196	2,201,196	2,201,196	0	0	0	0
2024	1,104,396	4.00	N/A	276,099	276,099	276,099	276,099	0	0	0
Total*			**N/A**	**$6,067,616**	**$5,987,171**	**$4,765,444**	**$276,099**	**$0**	**$0**	**$0**

The average of the expected remaining service lives of all employees that are provided with pensions through the Plan (active and inactive employees) determined as of September 30, 2023 is four years.

* Net increase (decrease) in pension expense

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Projected and Actual Earnings on Pension Plan Investments

Reporting Date for Employer under GASB 68 Year Ended September 30	Differences between Projected and Actual Earnings	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	Thereafter
2019	-$4,032,972	5.00	-$806,594	$0	$0	$0	$0	$0	$0	$0
2020	12,533,895	5.00	2,506,779	2,506,779	0	0	0	0	0	0
2021	6,100,070	5.00	1,220,014	1,220,014	1,220,014	0	0	0	0	0
2022	-44,939,578	5.00	-8,987,916	-8,987,916	-8,987,916	-8,987,916	0	0	0	0
2023	65,572,256	5.00	13,114,452	13,114,451	13,114,451	13,114,451	13,114,451	0	0	0
2024	-15,667,754	5.00	N/A	-3,133,550	-3,133,551	-3,133,551	-3,133,551	-3,133,551	0	0
Total*			**N/A**	**$4,719,778**	**$2,212,998**	**$992,984**	**$9,980,900**	**-$3,133,551**	**$0**	**$0**

* Net increase (decrease) in pension expense

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer under GASB 68 Year Ended September 30	Total Increase (Decrease) in Pension Expense	2023	2024	2025	2026	2027	2028	2029	Thereafter
2017	$16,008,525	$2,128,905	$0	$0	$0	$0	$0	$0	$0
2018	-5,219,891	1,128,028	1,128,028	0	0	0	0	0	0
2019	13,730,318	2,153,954	2,960,548	0	0	0	0	0	0
2020	10,721,350	2,144,270	2,144,270	0	0	0	0	0	0
2021	22,173,939	4,434,788	4,434,788	4,434,788	0	0	0	0	0
2022	-28,427,505	-5,685,502	-5,685,502	-5,685,502	-5,685,502	0	0	0	0
2023	83,841,367	17,681,729	17,681,729	17,681,729	17,681,729	13,114,451	0	0	0
2024	-4,840,210	N/A	-426,664	-426,665	-426,665	-426,665	-3,133,551	0	0
Total*		**N/A**	**$22,237,197**	**$16,004,350**	**$11,569,562**	**$12,687,786**	**-$3,133,551**	**$0**	**$0**

* Net increase (decrease) in pension expense

Schedule of reconciliation of Net Pension Liability

Reporting Date for Employer under GASB 68	September 30, 2024	September 30, 2023
Measurement Date	September 30, 2023	September 30, 2022
Beginning Net Pension Liability	**$303,711,805**	**$218,391,335**
Pension expense	46,313,049	43,075,275
Employer contributions	-17,196,000	-17,610,000
New net deferred inflows/outflows	-4,413,546	66,159,638
Recognition of prior deferred inflows/outflows	-22,663,861	-6,304,443
Ending Net Pension Liability	**$305,751,447**	**$303,711,805**

Appendix A: Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Term	Definition
Actuarial accrued liability for actives	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial accrued liability for retirees and beneficiaries	Actuarial Present Value of lifetime benefits to existing retirees and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial cost method	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial gain or 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 Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial present value	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Appendix A: Definition of Pension Terms

Term	Definition
Actuarial present value of future benefits	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions 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, as well as Actuarially Determined Contributions.
Actuarial value of assets	The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution.
Actuarially determined	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan.
Actuarially determined contribution	The employer's contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
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 Unfunded Actuarial Accrued Liability. 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 Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization payment	The portion of the pension plan contribution, or ADC, that is intended to pay off the Unfunded Actuarial Accrued Liability.
Assumptions or actuarial assumptions	The estimates upon which the cost of the Plan is calculated, including: **Investment return** — the rate of investment yield that the Plan will earn over the long-term future; **Mortality rates** — the rate or probability of death at a given age for employees and retirees; **Retirement rates** — the rate or probability of retirement at a given age or service; **Disability rates** — the rate or probability of disability retirement at a given age; **Withdrawal rates** — the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; **Salary increase rates** — the rates of salary increase due to inflation, real wage growth and merit and promotion increases.

Appendix A: Definition of Pension Terms

Term	Definition
Closed amortization period	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined benefit plan	A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.
Defined contribution plan	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
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.
Experience study	A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded ratio	The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.
GASB 67 and GASB 68	Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
Investment return	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL)	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal cost	The portion of the Actuarial Present Value of Future Benefits and expenses, if applicable, allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.
Open amortization period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.

Appendix A: Definition of Pension Terms

Term	Definition
Plan Fiduciary Net Position	Market value of assets.
Service costs	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Total Pension Liability (TPL)	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded actuarial accrued liability	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation date or actuarial valuation date	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.