



March 7, 2023

Ms. Grisell Aedo, BBA, MPS
Retirement Director
City of Hialeah
501 Palm Avenue 3rd floor
Hialeah, Florida 33010-4719

**Re: City of Hialeah Elected Officers Retirement System
October 1, 2022 Actuarial Valuation**

Dear Grisell:

As requested, we are pleased to enclose five (5) copies of the October 1, 2022 Actuarial Valuation Report for the City of Hialeah Elected Officers Retirement System.

We appreciate the opportunity to work with you on this important project and look forward to presenting the key financial results of our Actuarial Valuation at an upcoming meeting with the interested parties. Please provide the date and time for the meeting in order for us to attend and present the key financial results of our Report.

Upon Board approval of the Actuarial Valuation Report, we will upload an electronic copy of the Actuarial Valuation Report along with the required disclosure information to the State portal as required by the State.

If you should have any question concerning the above, please do not hesitate to contact us.

Sincerest regards,
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Michelle Jones". The signature is written in a cursive, flowing style.

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

Enclosures

cc: Ms. Ruth Rubi (w/ enclosures)
Ms. Lorena Bravo (w/ enclosure)
Mr. Enrique Llerena (w/ enclosure)

CITY OF HIALEAH ELECTED OFFICERS RETIREMENT SYSTEM

ACTUARIAL VALUATION AS OF OCTOBER 1, 2022

This Valuation Determines the Annual Contribution for the System Year October 1, 2022 through September 30, 2023
with City contribution to be Paid in Fiscal Year October 1, 2023 through September 30, 2024

March 7, 2023



**City of Hialeah Elected Officers
Retirement System**

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March 7, 2023

City Council
c/o Ms. Grisell Aedo, BBA, MPS
Retirement Director
City of Hialeah
501 Palm Avenue 3rd floor
Hialeah, Florida 33010-4719

Dear City Council Members:

We are pleased to present our October 1, 2022 Actuarial Valuation for the City of Hialeah Elected Officers Retirement System (System). The purpose of this report is to indicate appropriate contribution levels, monitor minimum funding requirements and comment on the actuarial stability of the System. Gabriel, Roeder, Smith & Company (GRS), as System actuary, is authorized to prepare an annual Actuarial Valuation. This report is prepared for and at the request of the City Council.

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

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

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

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

The actuarial assumptions used in this Actuarial Valuation are as adopted by the City Council based on historical and expected future experience. The mortality assumptions are prescribed by statute. Each assumption represents an estimate of future System experience.

If all actuarial assumptions are met and if all future minimum required contributions are paid, System assets will be sufficient to pay all System benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to improve. System minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act with normal cost determined as a level percent of covered payroll and a level dollar amortization payment using an initial amortization period of 15 years.

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

The Unfunded Actuarial Present Value of Vested Accrued Benefits and the corresponding Vested Benefit Security Ratio may not be appropriate for assessing the sufficiency of System assets to meet the estimated cost of settling benefit obligations and also may not be appropriate for assessing the need for or the amount of future contributions.

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

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

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

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



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

The signing actuaries are independent of the System sponsor.

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

Sincerely,

Gabriel, Roeder, Smith & Company



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



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

EXECUTIVE SUMMARY

Retirement System Costs

Our Actuarial Valuation develops the required minimum System contribution under the Florida Protection of Public Employee Retirement Benefits Act. The minimum contribution consists of payment of annual normal costs including expenses and amortization of the components of the unfunded actuarial accrued liability over various periods as prescribed by law and includes an interest adjustment to reflect the assumed payment date (not less than normal cost).

The minimum required contribution for System year ending September 30, 2023 to be paid in fiscal year ending September 30, 2024 is **\$84,785 (60.9%)**. The figure in parentheses is the minimum required System contribution expressed as a percentage of covered annual payroll as of October 1, 2022 (\$139,133).

This total cost is to be met by Member and City contributions. We anticipate Members will contribute **\$9,739 (7.0%)**. The resulting minimum required City contribution to be paid in fiscal year ending September 30, 2024 is **\$75,046 (53.9%)**. The minimum required City contribution may be reduced by up to the total credit balance, if any, as of September 30, 2023 (\$1,218,334 as of September 30, 2022).

Changes in Actuarial Assumptions, Methods and System Benefits

System provisions remain unchanged from the October 1, 2021 Actuarial Valuation. System provisions are summarized on Table XI.

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

As in prior years, the minimum required contribution amounts reflect F.S., 112.66 (13) requiring the City contribute not less than the City normal cost. This City funding requirement was added by F.S., Chapter 2011-216.

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

Table II of our report provides information of a comparative nature. The left columns of the Table indicate the costs as calculated for October 1, 2021. The right columns indicate the costs as calculated for October 1, 2022.

Comparing the left and right columns of Table II shows the effect of System experience during the year. The number of active participants and annual payroll both decreased. Total normal cost and net City minimum funding requirement both decreased as a dollar amount but increased as a percentage of covered payroll. The unfunded actuarial accrued liability decreased both as a dollar amount and as a percentage of covered payroll.



System assets exceed the value of vested accrued benefits resulting in a Vested Benefit Security Ratio (VBSR) of 114.7%, a decrease from 144.2% as of October 1, 2021. The VBSR is measured on a market value of assets basis.

Actuarial Gains (Losses)

Table VIII indicates the System experienced an actuarial loss of \$33,975. This suggests actual System experience was less favorable than expected under the actuarial assumptions.

Table XVIII provides figures on recent System experience (salary, turnover and investment yield). System salary experience indicates that actual salary increases averaged approximately 4.06% this year. Salary experience was an offsetting source of actuarial gain when compared to the 7.25% pay increase assumption. The latest three, five and ten-year average salary increases are 3.5%, 2.7% and 2.1%, respectively.

Employee turnover this year was approximately 670% of the assumed turnover and was generally an offsetting source of actuarial gain. The latest three, five and ten-year average turnover is 210%, 130% and 80% of expected turnover, respectively.

Smoothed actuarial value investment return this year was 5.4% which was below the 6.0% investment return assumption. Smoothed actuarial value investment return was generally a source of actuarial loss during the previous year. The latest three, five and ten-year average annual smoothed actuarial value investment returns are 8.1%, 7.8% and 8.2%, respectively. One, three, five and ten-year average annual market value investment returns are -14.1%, 3.5%, 4.7% and 6.4%, respectively.

Conclusion and Recommendations

The Market Value of Assets is less than the Actuarial Value of Assets by \$1,311,337 as of the valuation date. This difference will be gradually recognized in the absence of future offsetting gains. In turn, the actuarially determined contribution rate will increase.

We note there is one remaining active member. We recommend the City Council consider lowering the assumed investment return assumption and reviewing the actuarial cost method again when the last member terminates service and only inactive members remain in the System.

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

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITIES AND ACTUARIALLY DETERMINED CONTRIBUTION

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: system experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the System's funded status); and changes in system provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

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

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

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

The computed contribution rate shown on page four may be considered as a minimum contribution rate that complies with the Council’s funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Plan Maturity Measures

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

	<u>2021</u>	<u>2022</u>
Ratio of the market value of assets to total payroll	34.62	81.89
Ratio of actuarial accrued liability to payroll	25.32	73.79
Ratio of actives to retirees and beneficiaries	0.33	0.06
Ratio of net cash flow to market value of assets	-3.6%	-4.7%
Duration of the actuarial accrued liability	11.03	10.70

Ratio of Market Value of Assets to Payroll

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

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time. The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

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

Duration of Actuarial Accrued Liability

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

Additional Risk Assessment

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

Table I

Summary of Retirement System Costs as of October 1, 2022

	<u>Cost Data</u>	<u>% of Payroll</u>
A. Participant Data Summary (Table III)		
1. Active employees	1	N/A
2. Terminated vested	5	N/A
3. Receiving benefits	17	N/A
4. Annual payroll of active employees	\$ 139,133	100.0%
B. Total Normal Costs		
1. Age retirement benefits	\$ 17,386	12.5%
2. Termination benefits	10,875	7.8%
3. Survivor benefits	49	0.0%
4. Disability benefits	0	0.0%
5. Estimated expenses	56,475	40.6%
6. Total annual normal costs	<u>\$ 84,785</u>	<u>60.9%</u>
C. Total Actuarial Accrued Liability		
1. Age retirement benefits active employees	\$ 427,480	307.2%
2. Termination benefits active employees	197,513	142.0%
3. Survivor benefits active employees	816	0.6%
4. Disability benefits active employees	0	0.0%
5. Retired or terminated vested participants receiving benefits	8,857,138	6366.0%
6. Terminated vested participants entitled to future benefits	762,461	548.0%
7. Deceased participants whose beneficiaries are receiving benefits	21,526	15.5%
8. Disabled participants receiving benefits	0	0.0%
9. Miscellaneous liability	0	0.0%
10. Total actuarial accrued liability	<u>\$ 10,266,934</u>	<u>7379.2%</u>
D. Net Smoothed Actuarial Value of Assets (Table VI)	\$ 12,705,620	9132.0%
E. Unfunded Actuarial Accrued Liability (C. - D.)	\$ (2,438,686)	(1752.8%)

**Table I
(Cont'd)**

Summary of Retirement System Costs as of October 1, 2022

	<u>Cost Data</u>	<u>% of Payroll</u>
F. Preliminary Minimum Required Contribution		
1. Total normal cost	\$ 84,785	60.9%
2. Amortization of unfunded liability	(339,506)	(244.0%)
3. Interest adjustment	(23,509)	(16.9%)
4. Total preliminary required contribution	<u>\$ (278,230)</u>	<u>(200.0%)</u>
G. Minimum Required Contribution (F.S., 112.66 (13)) (Greater of F.1. and F.4.)	\$ 84,785	60.9%
H. Contribution Sources		
1. Expected City	\$ 75,046	53.9%
2. Expected Member	\$ 9,739	7.0%
I. Actuarial Gain / (Loss) (Table VIII)	\$ (33,975)	(24.4%)
J. Actuarial Present Value of Vested Accumulated Benefits		
1. Retired, terminated vested, beneficiaries and disabled receiving benefits including DROP participants	\$ 8,878,664	6381.4%
2. Terminated vested participants entitled to future benefits and miscellaneous	762,461	548.0%
3. Active participants entitled to future benefits	<u>295,047</u>	<u>212.1%</u>
4. Total actuarial present value of vested accumulated benefits	\$ 9,936,172	7141.5%
K. Net Market Value of Assets (Table V)	\$ 11,394,283	8189.5%
L. Unfunded Actuarial Present Value of Vested Accrued Benefits (J. - K., not less than zero)	\$ 0	0.0%
M. Vested Benefit Security Ratio (K. ÷ J.)	114.7%	N/A

Table II

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

	October 1, 2021		October 1, 2022	
	Cost Data	% of Annual Compensation	Cost Data	% of Annual Compensation
A. Participants				
1. Active employees	4	N/A	1	N/A
2. Terminated vested	7	N/A	5	N/A
3. Receiving benefits	12	N/A	17	N/A
4. Annual payroll of active employees	\$ 411,699	100.0%	\$ 139,133	100.0%
B. Total Normal Costs	\$ 90,806	22.1%	\$ 84,785	60.9%
C. Total Actuarial Accrued Liability	\$ 10,422,479	2531.6%	\$ 10,266,934	7379.2%
D. Net Smoothed Actuarial Value of Assets	\$ 12,704,627	3085.9%	\$ 12,705,620	9132.0%
E. Unfunded Actuarial Accrued Liability	\$ (2,282,148)	(554.3%)	\$ (2,438,686)	(1752.8%)
F. Minimum Required City Contribution	\$ 75,287	18.3%	\$ 75,046	53.9%
G. Actuarial Gain / (Loss)	\$ 136,764	33.2%	\$ (33,975)	(24.4%)
H. Unfunded Actuarial Present Value of Vested Accrued Benefits	\$ 0	0.0%	\$ 0	0.0%
I. Vested Benefit Security Ratio	144.2%	N/A	114.7%	N/A

Table III

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

A. Active System Participants Summary

1. Active participants fully vested	1	
2. Active participants partially vested	0	
3. Active participants non-vested	0	
4. Total active participants	1	
5. Annual rate of pay of active participants	\$ 139,133	

B. Retired and Terminated Vested Participant Summary

1. Retired or terminated vested participants receiving benefits	16	
2. Terminated vested participants entitled to future benefits	5	
3. Deceased participants whose beneficiaries are receiving benefits	1	
4. Disabled participants receiving benefits	0	

C. Projected Annual Retirement Benefits

1. Retired or terminated vested receiving benefits	\$ 851,160	
2. Terminated vested entitled to future benefits	86,058	
3. Beneficiaries of deceased participants	10,578	
4. Disabled participants	0	

Table IV

Statement of System Assets as of October 1, 2022

	<u>Market Value *</u>
A. <u>Cash and Cash Equivalents</u>	\$ 0
B. <u>General Investments</u>	
1. U.S. Government / Agency Bonds	\$ 0
2. Corporate Bonds	0
3. Mutual Funds	11,674,166
4. Real Estate	946,512
C. <u>Other Receivable</u>	\$ 685
D. <u>Accounts Payable</u>	\$ 8,746
E. <u>Total System Assets</u> (A. + B. + C. - D.)	\$ 12,612,617
F. <u>Funding Standard Account Credit Balance</u>	\$ 1,218,334
G. <u>Net System Assets</u> (E. - F.)	\$ 11,394,283

* As reported by City

Table V

Reconciliation of System Assets *

A. <u>Market Value of Assets as of October 1, 2021</u>		\$	15,470,074
B. <u>Receipts During Period</u>			
1. Contributions			
a. Employee	\$	10,635	
b. City		129,503	
c. Total	\$	<u>140,138</u>	
2. Investment Income			
a. Dividends and other income	\$	358,778	
b. Realized gains / (losses)		(2,525,244)	
c. Unrealized gains / (losses)		42,309	
d. Investment expenses		<u>(7,682)</u>	
e. Net investment income	\$	<u>(2,131,839)</u>	
3. Total receipts during period		\$	(1,991,701)
C. <u>Disbursements During Period</u>			
1. Pension payments	\$	809,281	
2. Contribution refunds		0	
3. Administrative expenses		<u>56,475</u>	
4. Total disbursements during period		\$	865,756
D. <u>Total Market Value of Assets as of September 30, 2022</u>		\$	12,612,617
E. <u>Funding Standard Account Credit Balance</u>		\$	1,218,334
F. <u>Net Market Value of Assets as of September 30, 2022 (D. - E.)</u>		\$	11,394,283

* As reported by City

Development of Smoothed Actuarial Value of Assets as of September 30

	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
A. Preliminary smoothed actuarial value from prior year	\$ 13,083,577	\$ 13,922,961	\$ 13,923,954			
B. Market value beginning of year	13,623,389	15,470,074	12,612,617			
C. Market value end of year	15,470,074	12,612,617				
D. Non-investment net cash flow	(485,927)	(725,618)				
E. Investment return						
1. Total market value return: C. - B. - D.	2,332,612	(2,131,839)				
2. Amount for immediate recognition (6.0%)	802,826	906,436				
3. Amount for phased-in recognition: E.1. - E.2.	1,529,786	(3,038,275)				
F. Phased-in recognition of investment return						
1. Current year: 20% of E.3.	305,957	(607,655)				
2. First prior year	98,683	305,957	(607,655)			
3. Second prior year	4,045	98,683	305,957	(607,655)		
4. Third prior year	19,145	4,045	98,683	305,957	(607,655)	
5. Fourth prior year	94,655	19,145	4,044	98,684	305,958	(607,655)
6. Total phased-in recognition of investment return	<u>522,485</u>	<u>(179,825)</u>	<u>(198,971)</u>	<u>(203,014)</u>	<u>(301,697)</u>	<u>(607,655)</u>
G. Smoothed actuarial value end of year						
1. Preliminary total smoothed actuarial value end of year:						
A. + D. + E.2. + F.6.	13,922,961	13,923,954				
2. Upper corridor limit: 120% of C.	18,564,089	15,135,140				
3. Lower corridor limit: 80% of C.	12,376,059	10,090,094				
4. Smoothed actuarial value end of year:						
G.1., not more than G.2., nor less than G.3.	13,922,961	13,923,954				
H. Difference between market value and smoothed actuarial value	1,547,113	(1,311,337)				
I. Total smoothed actuarial value rate of return	10.3%	5.4%				
J. Market value rate of return	17.4%	(14.1%)				
K. Funding standard account credit balance	1,218,334	1,218,334				
L. Net smoothed actuarial value of assets G.4. - K.	12,704,627	12,705,620				

Funding Standard Account

I. Funding Standard Account for System Year Ended September 30, 2022

A. Charges to the Funding Standard Account

1. Prior year funding deficiency	\$	0
2. City normal cost for the System Year		129,503
3. Net amortization charges		(238,108)
4. Interest charge		<u>(9,326)</u>
5. Total employer charges (A.1. + A.2. + A.3. + A.4., but not less than A.2.)	\$	129,503

B. Credits to the Funding Standard Account

1. Prior year credit balance	\$	1,218,334
2. City contributions		<u>129,503</u>
3. Total credits	\$	1,347,837

C. Credit Balance / (Funding Deficiency)

(B.3. - A.5.)	\$	1,218,334
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**Actuarial Gain / (Loss) for
System Year Ended September 30, 2022**

A. Derivation of Actuarial Gain / (Loss)

1. City normal cost previous valuation	\$	75,287
2. Unfunded actuarial accrued liability previous valuation		(2,282,148)
3. City contributions previous year		129,503
4. Interest on:		
(a) Normal cost	\$	4,517
(b) Unfunded actuarial accrued liability		(136,929)
(c) City contributions		3,885
(d) Net total: (a) + (b) - (c)	\$	(136,297)
5. Expected unfunded actuarial accrued liability current year: (1. + 2. - 3. + 4.)	\$	(2,472,661)
6. Actual unfunded actuarial accrued liability current year		(2,438,686)
7. Actuarial gain / (loss): (5. - 6.)	\$	(33,975)

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

1. Smoothed actuarial value of net assets previous year	\$	12,704,627
2. Contributions during period		140,138
3. Benefits and administrative expenses during period		865,756
4. Expected net appreciation for period		740,509
5. Expected smoothed actuarial value of net assets current year: (1. + 2. - 3. + 4.)	\$	12,719,518
6. Actual smoothed actuarial value of net assets current year	\$	12,705,620
7. Approximate investment gain / (loss): (6. - 5.)	\$	(13,898)

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

	\$	(20,077)
--	----	----------

Amortization of Unfunded Actuarial Accrued Liability

A. Unfunded Actuarial Accrued Liability

<u>Date</u>	<u>Unfunded Liability</u>	<u>Amortization Payment</u>
October 1, 2022	\$ (2,438,686)	\$ (339,506)
October 1, 2023	\$ (2,225,131)	\$ (339,506)
October 1, 2024	\$ (1,998,763)	\$ (339,506)
October 1, 2025	\$ (1,758,812)	\$ (339,506)
October 1, 2026	\$ (1,504,464)	\$ (401,064)
...		
...		
October 1, 2037	\$ 0	\$ 0

Accounting Disclosure Exhibit

	<u>10/01/2021</u>	<u>10/01/2022</u>
I. <u>Number of System Members</u>		
a. Receiving benefits	12	17
b. Terminated due deferred benefits	7	5
c. Active System members	4	1
d. Total	<u>23</u>	<u>23</u>
II. <u>Financial Accounting Standards Board Allocation</u> <u>As of October 1, 2022</u>		
A. <u>Statement of Accumulated System Benefits</u>		
1. Actuarial present value of accumulated vested System benefits		
a. Participants currently receiving benefits including DROP participants	\$ 6,756,455	\$ 8,878,664
b. Other participants	3,124,197	1,057,508
c. Total	<u>\$ 9,880,652</u>	<u>\$ 9,936,172</u>
2. Actuarial present value of accumulated non-vested System benefits	<u>\$ 0</u>	<u>\$ 0</u>
3. Total actuarial present value of accumulated System benefits	\$ 9,880,652	\$ 9,936,172
B. <u>Statement of Change in Accumulated System Benefits</u>		
1. Actuarial present value of accumulated System benefits as of October 1, 2021		\$ 9,880,652
2. Increase / (decrease) during year attributable to:		
a. System amendment		\$ 0
b. Change in actuarial assumptions		0
c. Benefits paid including refunds		(809,281)
d. Other, including benefits accumulated, increase for interest due to decrease in the discount period		864,801
e. Net increase		<u>\$ 55,520</u>
3. Actuarial present value of accumulated System benefits as of October 1, 2022		\$ 9,936,172
C. <u>Significant Matters Affecting Calculations</u>		
1. Assumed rate of return used in determining actuarial present values		6.0%
2. Change in System provisions		None.
3. Change in actuarial assumptions		None.

Accounting Disclosure Exhibit

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

Measurement date	9/30/2014	9/30/2015	9/30/2016	9/30/2017	9/30/2018	9/30/2019	9/30/2020	9/30/2021	9/30/2022	Projected 9/30/2023 *
A. Total Pension Liability (TPL)										
Service Cost	\$ 278,300	\$ 214,225	\$ 169,969	\$ 160,470	\$ 163,244	\$ 156,228	\$ 153,299	\$ 105,265	\$ 73,200	\$ 28,310
Interest	490,346	502,980	504,307	527,684	549,563	569,807	573,480	580,910	605,462	592,051
Benefit Changes	0	0	0	0	0	0	0	0	0	0
Difference Between Actual and Expected Experience	(76,666)	(237,890)	(332,714)	10,202	53,554	28,448	18,209	6,687	514,843	(24,926)
Assumption Changes	0	0	0	80,686	0	0	(228,363)	0	(39,630)	0
Benefit Payments, including Refunds of Member Contributions	(230,929)	(281,298)	(354,923)	(377,185)	(382,474)	(411,218)	(492,255)	(630,943)	(809,281)	(855,447)
Net Change in Total Pension Liability	461,051	198,017	(13,361)	401,857	383,887	343,265	24,370	61,919	344,594	(260,012)
Total Pension Liability (TPL) - (beginning of year)	8,086,261	8,547,312	8,745,329	8,731,968	9,133,825	9,517,712	9,860,977	9,885,347	9,947,266	10,291,860
Total Pension Liability (TPL) - (end of year)	<u>\$ 8,547,312</u>	<u>\$ 8,745,329</u>	<u>\$ 8,731,968</u>	<u>\$ 9,133,825</u>	<u>\$ 9,517,712</u>	<u>\$ 9,860,977</u>	<u>\$ 9,885,347</u>	<u>\$ 9,947,266</u>	<u>\$ 10,291,860</u>	<u>\$ 10,031,848</u>
B. System Fiduciary Net Position										
Contributions - City	\$ 305,000	\$ 304,126	\$ 203,796	\$ 155,257	\$ 164,417	\$ 171,793	\$ 152,234	\$ 147,015	\$ 129,503	\$ 75,287
Contributions - Member	15,655	21,453	21,718	22,297	23,118	23,598	16,262	15,607	10,635	9,739
Net Investment Income	918,376	(11,419)	1,030,248	1,112,500	788,367	746,766	1,246,894	2,332,612	(2,131,839)	731,950
Benefit Payments, including Refunds of Member Contributions	(230,929)	(281,298)	(354,923)	(377,185)	(382,474)	(411,218)	(492,255)	(630,943)	(809,281)	(855,447)
Administrative Expenses	(9,718)	(5,925)	(25,428)	(30,780)	(19,085)	(16,867)	(39,200)	(17,606)	(56,475)	(56,475)
Other	0	0	0	0	0	0	0	0	0	0
Net Change in System Fiduciary Net Position	998,384	26,937	875,411	882,089	574,343	514,072	883,935	1,846,685	(2,857,457)	(94,946)
System Fiduciary Net Position - (beginning of year)	8,868,218	9,866,602	9,893,539	10,768,950	11,651,039	12,225,382	12,739,454	13,623,389	15,470,074	12,612,617
System Fiduciary Net Position - (end of year)	<u>\$ 9,866,602</u>	<u>\$ 9,893,539</u>	<u>\$ 10,768,950</u>	<u>\$ 11,651,039</u>	<u>\$ 12,225,382</u>	<u>\$ 12,739,454</u>	<u>\$ 13,623,389</u>	<u>\$ 15,470,074</u>	<u>\$ 12,612,617</u>	<u>\$ 12,517,671</u>
C. Net Pension Liability (NPL) - (end of year): (A) - (B)	\$ (1,319,290)	\$ (1,148,210)	\$ (2,036,982)	\$ (2,517,214)	\$ (2,707,670)	\$ (2,878,477)	\$ (3,738,042)	\$ (5,522,808)	\$ (2,320,757)	\$ (2,485,823)
D. System Fiduciary Net Position as Percentage of TPL: (B) / (A)	115.44 %	113.13 %	123.33 %	127.56 %	128.45 %	129.19 %	137.81 %	155.52 %	122.55 %	124.78 %
E. Covered Employee Payroll **	\$ 1,001,519	\$ 872,761	\$ 688,294	\$ 695,295	\$ 684,581	\$ 679,872	\$ 558,182	\$ 499,025	\$ 154,364	\$ 139,133
F. NPL as a Percentage of Covered Employee Payroll: (C) / (E)	(131.73%)	(131.56%)	(295.95%)	(362.04%)	(395.52%)	(423.39%)	(669.68%)	(1106.72%)	(1503.43%)	(1786.65%)
G. Notes to Schedule:										
Valuation Date	10/1/2013	10/1/2014	10/1/2015	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	10/1/2022
GASB No. 68 Reporting Date	9/30/2015	9/30/2016	9/30/2017	9/30/2018	9/30/2019	9/30/2020	9/30/2021	9/30/2022	9/30/2023	9/30/2024

Update procedures used to roll forward TPL to the measurement dates

See Notes to Schedule of Contributions for a history of assumption changes and benefit changes. For measurement date September 30, 2023: No benefit or assumption change.

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

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

Accounting Disclosure Exhibit

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

<u>Fiscal Year Ended 9/30</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll^{1,2}</u>	<u>Actual Contribution as a % of Covered Payroll</u>
2013	\$ 312,403	\$ 312,403	\$ 0	\$ 1,085,310	28.78%
2014	288,521	305,000	(16,479)	1,001,519	30.45%
2015	304,126	304,126	0	872,761	34.85%
2016	203,796	203,796	0	688,294	29.61%
2017	155,257	155,257	0	695,295	22.33%
2018	164,417	164,417	0	684,581	24.02%
2019	171,793	171,793	0	679,872	25.27%
2020	152,234	152,234	0	558,182	27.27%
2021	147,015	147,015	0	499,025	29.46%
2022	129,503	129,503	0	154,364	83.89%
2023 ³	75,287	75,287	0	139,133	54.11%

¹ Projected prior to fiscal year ended September 30, 2014

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

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

Accounting Disclosure Exhibit

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

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

Methods and Assumptions Used to Determine Contribution Rates for Fiscal Year Ending September 30, 2023:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level dollar amount, closed
Amortization Period	15 years
Asset Valuation Method	Smoothed market value
Inflation	2.75%
Salary Increases	7.25%
Investment Rate of Return	6.00%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

Other Information:

Benefit Changes

2013 - System closed to new entrants effective January 1, 2014; added member contributions of 7% of compensation for members not vested as of January 1, 2014.

Assumption Changes

2021 - salary increase factors were updated. 2019 - mortality assumptions updated. 2016 - mortality assumptions updated. 2013 - payroll growth assumption eliminated.

Accounting Disclosure Exhibit

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

A discount rate of 6% was used to measure the TPL. This discount rate was based on the expected rate of return on System investments of 6%. The projection of cash flows used to determine this discount rate assumed member contributions will be made at the current member contribution rate and employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member contribution rate. Based on these assumptions, the pension System's fiduciary net position was projected to be available to make all projected future benefit payments of current System members. Therefore, the long-term expected rate of return on System investments was applied to all periods of projected benefit payments to determine the TPL.

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

Measurement date: September 30, 2022

	1% Decrease	Current Discount Rate	1% Increase
Discount Rate	5%	6%	7%
NPL	\$ (1,193,672)	\$ (2,320,757)	\$ (3,258,891)

Measurement date: September 30, 2023 *

	1% Decrease	Current Discount Rate	1% Increase
Discount Rate	5%	6%	7%
NPL	\$ (1,421,447)	\$ (2,485,823)	\$ (3,373,838)

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

Accounting Disclosure Exhibit

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

Pension Expense for Fiscal Year Ending September 30, 2023 \$ 473,104

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

	Deferred Outflows of Resources	Deferred Inflows of Resources
	<hr/>	<hr/>
Differences between actual and expected experience on liabilities	\$ 0	\$ 0
Changes of assumptions or other inputs	0	0
Net difference between projected and actual earnings on System investments	1,311,337	0
Total	<u>\$ 1,311,337</u>	<u>\$ 0</u>

Projected Deferred Outflows for City Contributions to Be Recognized after the Measurement Date \$ 75,287

Summary of Deferred Outflows and Inflows of Resources to Be Recognized in Pension Expense in Future Years.

Year Ending 30-Sep	Amount
<hr/>	<hr/>
2024	\$ 198,971
2025	203,014
2026	301,697
2027	607,655
2028	0
Thereafter	0

Accounting Disclosure Exhibit

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

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

Measurement Date	9/30/2014	9/30/2015	9/30/2016	9/30/2017	9/30/2018	9/30/2019	9/30/2020	9/30/2021	9/30/2022	Projected 9/30/2023 *
Service Cost	\$ 278,300	\$ 214,225	\$ 169,969	\$ 160,470	\$ 163,244	\$ 156,228	\$ 153,299	\$ 105,265	\$ 73,200	\$ 28,310
Interest on Total Pension Liability	490,346	502,980	504,307	527,684	549,563	569,807	573,480	580,910	605,462	592,051
Current-Period Benefit Changes	0	0	0	0	0	0	0	0	0	0
Contributions - Member	(15,655)	(21,453)	(21,718)	(22,297)	(23,118)	(23,598)	(16,262)	(15,607)	(10,635)	(9,739)
Projected Earnings on System Investments	(534,493)	(593,147)	(588,967)	(639,225)	(692,642)	(726,542)	(753,478)	(802,826)	(906,436)	(731,950)
Administrative Expenses	9,718	5,925	25,428	30,780	19,085	16,867	39,200	17,606	56,475	56,475
Other Changes in System Fiduciary Net Position	0	0	0	0	0	0	0	0	0	0
Recognition of Beginning Deferred Outflows / (Inflows) due to Liabilities	(29,487)	(142,768)	(315,814)	(105,738)	70,896	41,966	(168,564)	(28,338)	475,213	(24,926)
Recognition of Beginning Deferred Outflows / (Inflows) due to Assets	(76,777)	44,136	(44,120)	(138,775)	(157,918)	(85,187)	(304,785)	(522,485)	179,825	198,971
Total Pension Expense	<u>\$ 121,952</u>	<u>\$ 9,898</u>	<u>\$ (270,915)</u>	<u>\$ (187,101)</u>	<u>\$ (70,890)</u>	<u>\$ (50,459)</u>	<u>\$ (477,110)</u>	<u>\$ (665,475)</u>	<u>\$ 473,104</u>	<u>\$ 109,192</u>

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

Accounting Disclosure Exhibit

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

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

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

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2021 / 2022	\$ 514,843	0.8	0.0	\$ 514,843	\$ 0
TOTAL				\$ 514,843	\$ 0

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

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2021 / 2022	\$ 0	0.8	0.0	\$ 0	\$ 0
TOTAL				\$ 0	\$ 0

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

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2021 / 2022	\$ 0	0.8	0.0	\$ 0	\$ 0
TOTAL				\$ 0	\$ 0

Accounting Disclosure Exhibit

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

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

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

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2021 / 2022	\$ (39,630)	0.8	0.0	\$ (39,630)	\$ 0
			TOTAL	\$ (39,630)	\$ 0

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

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

Established	Initial Balance	Initial Recognition Period	Remaining Recognition Period as of 9/30/2022	Recognition Amount for 2021 / 2022	Balance as of 9/30/2022
2017 / 2018	\$ (95,725)	5	0	\$ (19,145)	\$ 0
2018 / 2019	\$ (20,224)	5	1	\$ (4,045)	\$ (4,044)
2019 / 2020	\$ (493,416)	5	2	\$ (98,683)	\$ (197,367)
2020 / 2021	\$ (1,529,786)	5	3	\$ (305,957)	\$ (917,872)
2021 / 2022	\$ 3,038,275	5	4	\$ 607,655	\$ 2,430,620
			TOTAL	\$ 179,825	\$ 1,311,337

Outline of Principal Provisions of the Retirement System

A. Eligibility:

All elected officials, city attorneys and assistant city attorneys are eligible to participate. Effective January 1, 2014, the System is closed to new entrants.

B. Normal Retirement:

1. Eligibility:

Earlier of:

- (a) Attainment of age 55 with completion of 8 years of credited service.
- (b) Completion of 20 years of credited service.

2. Mandatory Retirement Age:

None.

3. Amount of Pension:

Total service not to exceed 25 years, times 3.0% of final average monthly compensation at time of retirement.

4. Normal Form:

Normal form of benefit is payable for life with 60 months guaranteed.

5. Type of Final Average Salary:

Highest annual W-2 pay prior to termination or retirement divided by 12.

C. Deferred Retirement:

1. Eligibility:

100% vesting upon the completion of 8 years of credited service - pension begins at age 55. Employees who have not completed 8 years of credited service at date of termination of employment shall be entitled to the return of their member contributions with 3% compound interest.

2. Benefit:

Computed as a regular retirement but based upon service and compensation at time of termination.

Outline of Principal Provisions of the Retirement System

D. Duty Disability Retirement:

None.

E. Non-Duty Disability Retirement:

None.

F. Pre-Retirement Death:

1. Eligibility:

Immediate.

2. Benefit:

Computed as for normal retirement and payable immediately, but terminates after 60 payments of monthly amount or 120 payments of one-half monthly amount.

G. City Contributions:

Actuarially determined amounts sufficient to cover the funding requirements.

H. Member Contributions:

7% of compensation for members who are not vested as of January 1, 2014. None for members who are vested as of January 1, 2014.

I. Changes Since Previous Actuarial Valuation:

None.

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

A. Mortality:

For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

Sample Ages (2022)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	32.75	35.17	28.83
60	27.89	30.14	24.73	28.00
62	25.99	28.16	23.10	26.17

Sample Ages (2042)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	34.38	36.65	30.85
60	29.45	31.58	26.59	29.67
62	27.52	29.57	24.90	27.79

B. Interest to be Earned by Fund:

6.0%, compounded annually, net of investment expenses - includes inflation of 2.75%.

C. Allowances for Expenses or Contingencies:

Estimated expenses are based on actual expenses paid in previous year.

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

D. Employee Withdrawal Rates:

The rates do not apply to members eligible to retire and do not include separation on account of death or disability. This estimate measures the probabilities of members remaining in employment. These rates were first used for the September 30, 1995 valuation for Elected Officers and September 30, 2004 for Attorneys.

<u>Sample Ages</u>	<u>Years of Service</u>	<u>Withdrawal Rates Per 100 Employees</u>	
		<u>Elected Officers</u>	<u>Attorneys</u>
ALL	Less than 5	10	20
25	5 & Over	10	10
30		10	10
35		10	10
40		10	10
45		10	10
50		10	10
55		10	10
55		10	10

E. Disability Rates:

None.

F. Salary Increase Factors:

Employee salaries are estimated to increase between the date of hire and date of retirement. The following assumed rates of increase in individual salaries were first used for the September 30, 2021 valuation.

<u>Sample Ages</u>	<u>Salary Increase</u>
20	7.25%
30	7.25%
40	7.25%
50	7.25%
60	7.25%

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

G. Payroll Growth Assumption:

None.

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

H. Retirement Rates:

A member is assumed to retire upon becoming eligible for retirement after 20 or more years of service regardless of age or after attaining age 55 with 8 or more years of service. This rate was first used for the September 30, 1998 valuation.

I. Technical Assumptions:

1. Pay Increase Timing:

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

2. Decrement Timing:

Decrements of all types are assumed to occur mid-year.

3. Eligibility Testing:

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

4. Benefit Service:

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

5. Decrement Relativity:

Decrement rates are used directly from tabular rates, without adjustment for multiple decrement table effects.

6. Decrement Operation:

Mortality decrement does not operate during the first 5 years of service. Withdrawal does not operate during retirement eligibility.

7. Incidence of Contributions:

Contributions are assumed to be received midway through the fiscal year.

8. Marriage Assumption:

100% of members are assumed to be married for purposes of death-in-service benefits.

J. Asset Valuation Method:

The method used for determining the smoothed actuarial value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. The smoothed actuarial value of assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of System assets and whose upper limit is 120% of the fair market value of System assets.

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

K. Cost Method:

Entry-Age-Normal Cost Method

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

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

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

L. Disclosure of Assumptions

The salary increase (wage inflation) assumption was updated based on the most recent assumption study performed as of September 30, 2020. The mortality rates are based upon the July 1, 2022 FRS Actuarial Valuation, as required under F.S., Chapter 2015 -157.

M. Changes Since Previous Actuarial Valuation:

None.

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

<u>Attained</u> <u>Age Group</u>	-----COMPLETED YEARS OF SERVICE-----							<u>Total</u>
	<u>0 - 4</u>	<u>5 - 9</u>	<u>10 - 14</u>	<u>15 - 19</u>	<u>20 - 24</u>	<u>25 - 29</u>	<u>30 & Over</u>	
Under 25	-	-	-	-	-	-	-	0
25 - 29	-	-	-	-	-	-	-	0
30 - 34	-	-	-	-	-	-	-	0
35 - 39	-	-	1	-	-	-	-	1
40 - 44	-	-	-	-	-	-	-	0
45 - 49	-	-	-	-	-	-	-	0
50 - 54	-	-	-	-	-	-	-	0
55 - 59	-	-	-	-	-	-	-	0
60 - 64	-	-	-	-	-	-	-	0
65 - 69	-	-	-	-	-	-	-	0
70 - 74	-	-	-	-	-	-	-	0
75 & Over	-	-	-	-	-	-	-	0
TOTAL	0	0	1	0	0	0	0	1
				<u>10/01/2021</u>		<u>10/01/2022</u>		
Average Attained Age				41.5 years		38.6 years		
Average Hire Age				29.3 years		27.8 years		
Average Service				12.2 years		10.8 years		
Average Pay				\$ 102,925		\$139,133		
Percent Female				50.0%		100.0%		

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

A. Entitled to Deferred Benefits

Current Age Group	Count	Total Annual Benefit	Average Annual Benefit
Less than 40	2	30,892	15,446
40 - 44	-	-	-
45 - 49	-	-	-
50 - 54	3	55,166	18,389
55 - 59	-	-	-
60 - 64	-	-	-
65 & Over	-	-	-
TOTAL	5	\$ 86,058	\$ 17,212

B. Receiving Benefits

Current Age Group	Count	Total Annual Benefit	Average Annual Benefit
Less than 50	-	-	-
50 - 54	1	78,386	78,386
55 - 59	7	240,483	34,355
60 - 64	2	103,883	51,942
65 - 69	-	-	-
70 - 74	3	276,461	92,154
75 - 79	2	122,876	61,438
80 - 84	-	-	-
85 - 89	1	21,202	21,202
90 & Over	1	18,447	18,447
TOTAL	17	\$ 861,738	\$ 50,690

Reconciliation of Employee Data

A. <u>Active Participants</u>	
1. Active participants previous year	4
2. Retired during year	(1)
3. Died during year	0
4. Disabled during year	0
5. Terminated during year	(2)
6. New active participants	0
7. Re-instated during year	0
8. Active participants current year	<u>1</u>
B. <u>Participants Receiving Benefits</u>	
1. Participants receiving benefits previous year	12
2. New retired participants	1
3. New terminated vested receiving benefits	4
4. New disabled receiving benefits	0
5. New beneficiaries receiving benefits	0
6. Died or ceased payment during year	0
7. Retired or terminated vested receiving benefits current year	<u>17</u>
C. <u>Terminated Vested Participants Entitled to Future Benefits</u>	
1. Terminated vested entitled previous year	7
2. Died during year	0
3. Commenced receiving benefits during year	(4)
4. New terminated vested	2
5. Terminated vested paid lump sum	0
6. Terminated vested entitled current year	<u>5</u>

Projected Retirement Benefits

<u>Fiscal Year</u>	<u>Projected Total Annual Payout</u>
2023	\$ 855,447
2024	\$ 841,148
2025	\$ 836,629
2026	\$ 840,502
2027	\$ 813,055
2028	\$ 789,377
2029	\$ 766,648
2030	\$ 742,509
2031	\$ 717,588
2032	\$ 725,056

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

Table XVII

Summary of Transaction Information

Valuation Date	Benefits Paid ¹	Administrative Expenses	Employee Contributions	City Contributions	Smoothed Actuarial Value ^{2,3}
10/01/2022	\$ 809,281	\$ 56,475	\$ 10,635	\$ 129,503	\$ 12,705,620
10/01/2021	630,943	17,606	15,607	147,015	12,704,627
10/01/2020	492,255	39,200	16,262	152,234	11,865,243
10/01/2019	411,218	16,867	23,598	171,793	11,169,939
10/01/2018	382,474	19,085	23,118	164,417	10,590,904
10/01/2017	377,185	30,780	22,297	155,257	9,954,368
10/01/2016	354,923	25,428	21,718	203,796	9,343,634
10/01/2015	281,298	5,925	21,453	304,126	8,654,447
10/01/2014	230,929	9,718	15,655	305,000	9,146,093
10/01/2013	179,542	17,338	0	312,403	8,284,179
10/01/2012	180,809	8,660	0	280,405	7,484,518
10/01/2011	166,290	3,190	0	313,841	6,833,524
10/01/2010	161,821	4,057	0	500,000	6,293,694
10/01/2009	161,742	6,400	0	500,000	5,530,202
10/01/2008	169,428	6,400	0	500,000	4,839,784
10/01/2007	158,082	5,800	0	500,000	4,507,879
10/01/2006	154,695	0	0	500,000	3,920,986
10/01/2005	53,796	0	0	400,000	3,455,014
10/01/2004	55,076	0	0	311,137	3,049,827
10/01/2003	56,630	0	0	250,000	2,664,848
10/01/2002	50,532	4,900	0	250,000	2,062,206
10/01/2001	50,532	4,400	0	250,000	1,842,622
10/01/2000	52,188	4,175	0	342,700	1,717,505
10/01/1999	54,146	3,975	0	439,873	1,307,638

¹ Includes contribution refunds

² Market Value prior to October 1, 2009

³ Net of funding standard account credit balance effective October 1, 2015

Recent Compensation, Termination and Investment Return Experience

Valuation Date	Compensation		Termination	Investment Return ¹		
	% Increase / (Decrease)	Assumed Increase	Ratio of Actual to Expected	Market Value	Smoothed Actuarial Value ²	Assumed
10/01/2022	4.06%	7.25%	6.7	(14.1%)	5.4%	6.0%
10/01/2021	1.6%	8.0%	0.0	17.4%	10.3%	6.0%
10/01/2020	4.8%	8.0%	2.9	9.9%	8.7%	6.0%
10/01/2019	0.2%	8.0%	0.0	6.2%	6.9%	6.0%
10/01/2018	3.0%	8.0%	1.3	6.8%	7.7%	6.0%
10/01/2017	1.4%	8.0%	0.0	10.4%	8.1%	6.0%
10/01/2016	2.1%	8.0%	0.0	10.5%	8.6%	6.0%
10/01/2015	1.4%	8.0%	0.9	(0.1%)	7.5%	6.0%
10/01/2014	2.5%	8.0%	1.2	10.3%	9.4%	6.0%
10/01/2013	0.1%	8.0%	0.0	9.9%	9.4%	6.0%
Last 3 Years	3.5%	7.7%	2.1	3.5%	8.1%	6.0%
Last 5 Years	2.7%	7.8%	1.3	4.7%	7.8%	6.0%
Last 10 Years	2.1%	7.9%	0.8	6.4%	8.2%	6.0%

¹ Computed as $2I/(A+B-I)$, where A is beginning value, B is ending value and I is investment return.

² Market value prior to October 1, 2009

Employer Contribution Information

Valuation Date	Contribution Fiscal Year End	Minimum Required Employer Contributions	Actual Employer Contributions Paid
10/01/2022	09/30/2024	\$ 75,046	N/A
10/01/2021	09/30/2023	\$ 75,287	N/A
10/01/2020	09/30/2022	\$ 129,503	\$ 129,503
10/01/2019	09/30/2021	\$ 147,015	\$ 147,015
10/01/2018	09/30/2020	\$ 152,234	\$ 152,234
10/01/2017	09/30/2019	\$ 171,793	\$ 171,793
10/01/2016	09/30/2018	\$ 164,417	\$ 164,417
10/01/2015	09/30/2017	\$ 155,257	\$ 155,257
10/01/2014	09/30/2016	\$ 203,796	\$ 203,796
10/01/2013	09/30/2015	\$ 304,126	\$ 304,126
10/01/2012	09/30/2014	\$ 288,521	\$ 305,000
10/01/2011	09/30/2013	\$ 312,403	\$ 312,403
10/01/2010	09/30/2012	\$ 280,405	\$ 280,405
10/01/2009	09/30/2011	\$ 313,841	\$ 313,841
10/01/2008	09/30/2010	\$ 356,028	\$ 500,000
10/01/2007	09/30/2009	\$ 299,852	\$ 500,000
10/01/2006	09/30/2008	\$ 288,006	\$ 500,000
10/01/2005	09/30/2007	\$ 263,369	\$ 500,000
10/01/2004	09/30/2006	\$ 240,475	\$ 500,000
10/01/2003	09/30/2005	\$ 250,415	\$ 400,000
10/01/2002	09/30/2004	\$ 130,205	\$ 311,137
10/01/2001	09/30/2003	\$ 136,116	\$ 250,000

Actuarial Valuation as of October 1, 2022

State Required Exhibit

	<u>10/01/2021</u>	<u>10/01/2022</u>
A. <u>Participant Data</u>		
1. Active participants	4	1
2. Retired participants and beneficiaries receiving benefits	12	17
3. Disabled participants receiving benefits	0	0
4. Terminated vested participants	7	5
5. Annual payroll of active participants	\$ 411,699	\$ 139,133
6. Annual benefits payable to those currently receiving benefits	\$ 676,837	\$ 861,738
B. <u>Value of Assets</u>		
1. Net Smoothed Actuarial Value of Assets	\$ 12,704,627	\$ 12,705,620
2. Net Market Value of Assets	\$ 14,251,740	\$ 11,394,283
C. <u>Liabilities</u>		
1. Actuarial present value of future expected benefit payments for active members		
a. Retirement benefits	\$ 1,988,237	\$ 541,953
b. Vesting benefits	372,547	269,119
c. Death benefits	1,886	1,136
d. Disability benefits	0	0
e. Total	<u>\$ 2,362,670</u>	<u>\$ 812,208</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 1,634,607	\$ 762,461
3. Actuarial present value of future expected benefit payments for members currently receiving benefits		
a. Service retired	\$ 6,725,936	\$ 8,857,138
b. Disability retired	0	0
c. Beneficiaries	30,519	21,526
d. Miscellaneous	0	0
e. Total	<u>\$ 6,756,455</u>	<u>\$ 8,878,664</u>

Actuarial Valuation as of October 1, 2022

State Required Exhibit

	<u>10/01/2021</u>	<u>10/01/2022</u>
4. Total actuarial present value of future expected benefit payments	\$ 10,753,732	\$ 10,453,333
5. Actuarial accrued liabilities	\$ 10,422,479	\$ 10,266,934
6. Unfunded actuarial accrued liabilities	\$ (2,282,148)	\$ (2,438,686)
D. <u>Statement of Accumulated System Benefits</u>		
1. Actuarial present value of accumulated vested benefits		
a. Participants currently receiving benefits	\$ 6,756,455	\$ 8,878,664
b. Other participants	3,124,197	1,057,508
c. Total	<u>\$ 9,880,652</u>	<u>\$ 9,936,172</u>
2. Actuarial present value of accumulated non-vested System benefits	<u>0</u>	<u>0</u>
3. Total actuarial present value of accumulated System benefits	\$ 9,880,652	\$ 9,936,172
E. <u>Statement of Change in Accumulated System Benefits</u>		
1. Actuarial present value of accumulated System benefits as of October 1, 2021		\$ 9,880,652
2. Increase (decrease) during year attributable to:		
a. System amendment		\$ 0
b. Change in actuarial assumptions		0
c. Benefits paid including refunds		(809,281)
d. Other, including benefits accumulated and increase for interest due to decrease in the discount period		864,801
e. Net increase		<u>\$ 55,520</u>
3. Actuarial present value of accumulated System benefits as of October 1, 2022		\$ 9,936,172

Actuarial Valuation as of October 1, 2022

State Required Exhibit

	<u>10/01/2021</u>	<u>10/01/2022</u>
F. <u>Pension Cost</u>		
1. Total normal cost	\$ 90,806	\$ 84,785
2. Payment required to amortize unfunded liability	(290,888)	(339,506)
3. Interest adjustment	(18,938)	(23,509)
4. Total preliminary required contribution	<u>\$ (219,020)</u>	<u>\$ (278,230)</u>
5. Total required contribution (Greater of F.1. and F.4.)	\$ 90,806	\$ 84,785
6. Item 5 as a percentage of payroll	22.1%	60.9%
7. Estimated employee contributions	\$ 15,519	\$ 9,739
8. Item 7 as a percentage of payroll	3.8%	7.0%
9. Net amount payable by City	\$ 75,287	\$ 75,046
10. Item 9 as a percentage of payroll	18.3%	53.9%
G. <u>Past Contributions</u>		
1. Total City contribution required (Prior Year Valuation)	\$ 129,503	\$ 75,287
2. Actual City contributions paid	\$ 129,503	N/A
H. <u>Net Actuarial Gain / (Loss)</u>	\$ 136,764	\$ (33,975)
I. <u>Disclosure of Following Items</u>		
1. Actuarial present value of future salaries - attained age	\$ 1,558,398	\$ 907,018
2. Actuarial present value of future employee contributions - attained age	\$ 102,059	\$ 63,491
3. Actuarial present value of future contributions from other sources	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 117,112	\$ 74,098
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A
6. Actuarial present value of future employee contributions at entry age	N/A	N/A

State Required Exhibit

	<u>Unfunded Actuarial Accrued Liabilities</u>	<u>Current Unfunded Liabilities</u>	<u>Amortization Payment</u>	<u>Remaining Funding Period</u>
10/01/2010	Combined Bases *	\$ 87,216	\$ 13,250	8 years
10/01/2011	Actuarial Loss / (Gain)	226,110	61,560	4 years
10/01/2012	Actuarial Loss / (Gain)	(268,115)	(60,047)	5 years
10/01/2013	Actuarial Loss / (Gain)	(630,314)	(120,927)	6 years
10/01/2014	Actuarial Loss / (Gain)	(1,133,718)	(191,593)	7 years
10/01/2015	Actuarial Loss / (Gain)	(823,575)	(125,118)	8 years
10/01/2015	Establish Credit Balance	2,107,651	320,196	8 years
10/01/2016	Actuarial Loss / (Gain)	(427,776)	(59,333)	9 years
10/01/2016	Assumptions Change	115,134	15,969	9 years
10/01/2017	Actuarial Loss / (Gain)	(315,057)	(40,383)	10 years
10/01/2018	Actuarial Loss / (Gain)	(320,450)	(38,331)	11 years
10/01/2019	Actuarial Loss / (Gain)	(204,747)	(23,039)	12 years
10/01/2019	Assumptions Change	(278,736)	(31,365)	12 years
10/01/2020	Actuarial Loss / (Gain)	(416,150)	(44,347)	13 years
10/01/2021	Actuarial Loss / (Gain)	(147,417)	(14,962)	14 years
10/01/2021	Assumptions Change	(42,717)	(4,336)	14 years
10/01/2022	Actuarial Loss / (Gain)	33,975	3,300	15 years
	TOTAL	\$ (2,438,686)	\$ (339,506)	

* Combined per Internal Revenue Code Regulation 1.412(b)-1

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

Michelle Jones

Shelly L. Jones, A.S.A.
Enrollment Number: 20-08646

Jennifer Borregard

Jennifer M. Borregard, E.A.
Enrollment Number: 20-07624

Date: March 7, 2023

Glossary

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

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

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

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

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

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

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

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

Glossary

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

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

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

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

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

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

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

GASB. Governmental Accounting Standards Board.

Glossary

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

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

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

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

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

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