

CITY OF FORT MEADE
FIREFIGHTERS' RETIREMENT PLAN
ACTUARIAL VALUATION
AS OF OCTOBER 1, 2023
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2024



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

March 4, 2024

Board of Trustees
City of Fort Meade
Firefighters' Pension Board

Re: City of Fort Meade Firefighters' Retirement Plan

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Fort Meade Firefighters' Retirement Plan. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Chapters 112 and 175, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the City of Fort Meade, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

Additionally, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models that apply the funding rules to generate the results. All internally developed models are reviewed as part of the valuation process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

In our opinion, the Minimum Required Contribution set forth in this report constitutes a reasonable actuarially determined contribution under Actuarial Standard of Practice No. 4.

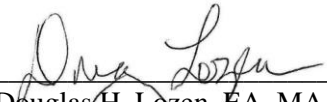
The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Fort Meade, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the FireFighters' Retirement Plan. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.


If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By: 

Douglas H. Lozen, EA, MAAA
Enrolled Actuary #23-7778

By: 

Kevin H. Peng, ASA, EA, MAAA
Enrolled Actuary #23-7783

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Fort Meade Firefighters' Retirement Plan, performed as of October 1, 2023, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2024.

The contribution requirements, compared with those set forth in the October 1, 2022 actuarial valuation report, are as follows:

Valuation Date	10/1/2023	10/1/2022
Applicable to Fiscal Year Ending	<u>9/30/2024</u>	<u>9/30/2023</u>
Minimum Required Contribution ¹	\$30,326	\$25,684

² Please note that the City has access to a prepaid contribution of \$7,143.72 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2024.

As you can see, the Minimum Required Contribution shows an increase when compared to the results set forth in the October 1, 2022 actuarial valuation report. The increase is primarily attributable to a net increase of 5 active members and overall 90% increase in Projected Annual Payroll. This increase was partially offset by a change in actuarial assumptions and cost method as the result of a special Actuarial Experience Study.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. The primary source of actuarial loss was an investment return of 3.85% (Actuarial Asset Basis) which fell short of the 6.75% assumption. This loss was offset in part by gains associated with inactive mortality experience, an average salary decrease of 26.65%, falling below the 3.00% assumption, and favorable turnover experience.

CHANGES SINCE PRIOR VALUATION

Plan Changes

There have been no changes in benefits since the prior valuation.

Actuarial Assumption/Method Changes

As approved by the Board at their December 12, 2023 meeting, the following changes were made to the assumptions and methods as a results of the experience study dated November 27, 2023.

- Assumed investment return reduced from 6.75% to 6.50%, net of investment-related expenses.
- Assumed individual salary increase rates decreased from 3.00% to 2.75% for all years of Credited Service.
- Assumed withdrawal rates were changed to be based on unisex service rather than sex distinct age table. The overall rates are assumed to be greater in comparison to the prior assumption.
- All components of the UAAL established on or after October 1, 2023 are amortized over 15 years.
- A change in the cost method from the Frozen Entry Age Actuarial Cost Method to the Entry Age Normal Actuarial Cost Method.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Asmp/Mthd <u>10/1/2023</u>	Old Asmp/Mthd <u>10/1/2023</u>	<u>10/1/2022</u>
A. Participant Data			
Actives	19	19	14
Service Retirees	7	7	7
Beneficiaries	2	2	3
Disability Retirees	0	0	0
Terminated Vested	<u>8</u>	<u>8</u>	<u>8</u>
Total	36	36	32
Projected Annual Payroll	152,228	152,598	80,325
Annual Rate of Payments to:			
Service Retirees	18,425	18,425	18,425
Beneficiaries	1,894	1,894	7,697
Disability Retirees	0	0	0
Terminated Vested	14,273	14,273	14,273
B. Assets			
Actuarial Value (AVA)	404,612	404,612	409,604
Market Value (MVA)	375,598	375,598	365,371
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	130,632	304,825	158,666
Disability Benefits	10,413	26,448	9,751
Death Benefits	1,202	3,312	1,507
Vested Benefits	20,473	3,536	4,323
Refund of Contributions	0	0	0
Service Retirees	144,037	141,752	146,171
Beneficiaries	12,428	12,282	51,341
Disability Retirees	0	0	0
Terminated Vested	<u>128,942</u>	<u>125,186</u>	<u>117,259</u>
Total	448,127	617,341	489,018

C. Liabilities - (Continued)	New Asmp/Mthd <u>10/1/2023</u>	Old Asmp/Mthd <u>10/1/2023</u>	<u>10/1/2022</u>
Present Value of Future Salaries	1,021,777	1,981,903	1,058,605
Present Value of Future Member Contributions	0	0	0
Normal Cost (Retirement)	6,099	n/a	n/a
Normal Cost (Disability)	1,067	n/a	n/a
Normal Cost (Death)	87	n/a	n/a
Normal Cost (Vesting)	1,321	n/a	n/a
Normal Cost (Refunds)	0	n/a	n/a
Total Normal Cost	<u>8,574</u>	<u>13,499</u>	<u>3,063</u>
Present Value of Future Normal Costs (EAN)	57,067	222,695	97,757
Accrued Liability (Retirement)	90,260	109,291	73,503
Accrued Liability (Disability)	3,467	4,627	1,825
Accrued Liability (Death)	622	826	410
Accrued Liability (Vesting)	11,304	683	752
Accrued Liability (Refunds)	0	0	0
Accrued Liability (Inactives)	<u>285,407</u>	<u>279,220</u>	<u>314,771</u>
Total Actuarial Accrued Liability (EAN AL)	391,060	394,647	391,261
Total Actuarial Accrued Liability (FIL)	n/a	442,015	448,648
Unfunded Actuarial Accrued Liability (UAAL)	(13,552)	37,403	39,044
Funded Ratio (AVA / EAN AL)	103.5%	102.5%	104.7%
Funded Ratio (AVA / FIL AL)	n/a	91.5%	91.3%

D. Actuarial Present Value of Accrued Benefits	New Asmp/Mthd <u>10/1/2023</u>	Old Asmp/Mthd <u>10/1/2023</u>	<u>10/1/2022</u>
Vested Accrued Benefits			
Inactives	285,407	279,220	314,771
Actives	62,277	70,899	59,539
Member Contributions	<u>0</u>	<u>0</u>	<u>0</u>
Total	347,684	350,119	374,310
Non-vested Accrued Benefits	<u>9,311</u>	<u>17,625</u>	<u>249</u>
Total Present Value			
Accrued Benefits (PVAB)	356,995	367,744	374,559
Funded Ratio (MVA / PVAB)	105.2%	102.1%	97.5%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(10,749)	0	
Plan Experience	0	(5,593)	
Benefits Paid	0	(25,639)	
Interest	0	24,417	
Other	<u>0</u>	<u>0</u>	
Total	(10,749)	(6,815)	

	New Asmp/Mthd	Old Asmp/Mthd	
Valuation Date	10/1/2023	10/1/2023	10/1/2022
Applicable to Fiscal Year Ending	<u>9/30/2024</u>	<u>9/30/2024</u>	<u>9/30/2023</u>

E. Pension Cost

Normal Cost ¹	\$8,853	\$13,955	\$3,166
Administrative Expenses ¹	21,473	21,499	19,061
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 15 years (as of 10/1/2023) ¹	(1,397)	3,393	3,457
Minimum Required Contribution ³	30,326	38,847	25,684
Expected Member Contributions ¹	0	0	0
Expected City and State Contribution	30,326	38,847	25,684

F. Past Contributions

Plan Years Ending:	<u>9/30/2023</u>
City and State Requirement	25,684
Actual Contributions Made:	
City	25,684
State	<u>0</u>

G. Net Actuarial (Gain)/Loss N/A

¹ Contributions developed as of 10/1/2023 displayed above an interest adjustment to account for the timing of sponsor contributions.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2023	(13,552) ¹

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2023	-26.65%	3.00%
Year Ended 9/30/2022	33.52%	3.00%
Year Ended 9/30/2021	-18.36%	3.00%
Year Ended 9/30/2020	13.93%	3.00%
Year Ended 9/30/2019	6.03%	3.00%

(ii) 5 Year Comparison of Investment Return on Market Value and Actuarial Value

	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2023	8.60%	3.85%	6.75%
Year Ended 9/30/2022	-13.17%	4.82%	6.75%
Year Ended 9/30/2021	19.31%	9.86%	7.00%
Year Ended 9/30/2020	6.24%	7.61%	7.00%
Year Ended 9/30/2019	5.12%	6.48%	7.00%

¹ Based on current State law and the existing UAAL bases, the UAAL is projected to never be positive.

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation 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.



Douglas H. Lozen, EA, MAAA
Enrolled Actuary #23-7778

Please let us know when the report is approved by the Board and unless otherwise directed we will provide copies of the report to the following offices to comply with Chapter 112, Florida Statutes:

Mr. Keith Brinkman
Bureau of Local
Retirement Systems
Post Office Box 9000
Tallahassee, FL 32315-9000

Mr. Steve Bardin
Municipal Police and Fire
Pension Trust Funds
Division of Retirement
Post Office Box 3010
Tallahassee, FL 32315-3010

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(Before Method Change)

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2022	\$39,044
(2)	Sponsor Normal Cost developed as of October 1, 2022	3,063
(3)	Expected administrative expenses for the year ended September 30, 2023	18,439
(4)	Expected interest on (1), (2) and (3)	3,465
(5)	Sponsor contributions to the System during the year ended September 30, 2023	25,684
(6)	Expected interest on (5)	924
(7)	Unfunded Actuarial Accrued Liability as of September 30, 2023 (1)+(2)+(3)+(4)-(5)-(6)	37,403
(8)	Change to UAAL due to Assumption Change	(3,587)
(9)	Unfunded Actuarial Accrued Liability as of October 1, 2023	33,816

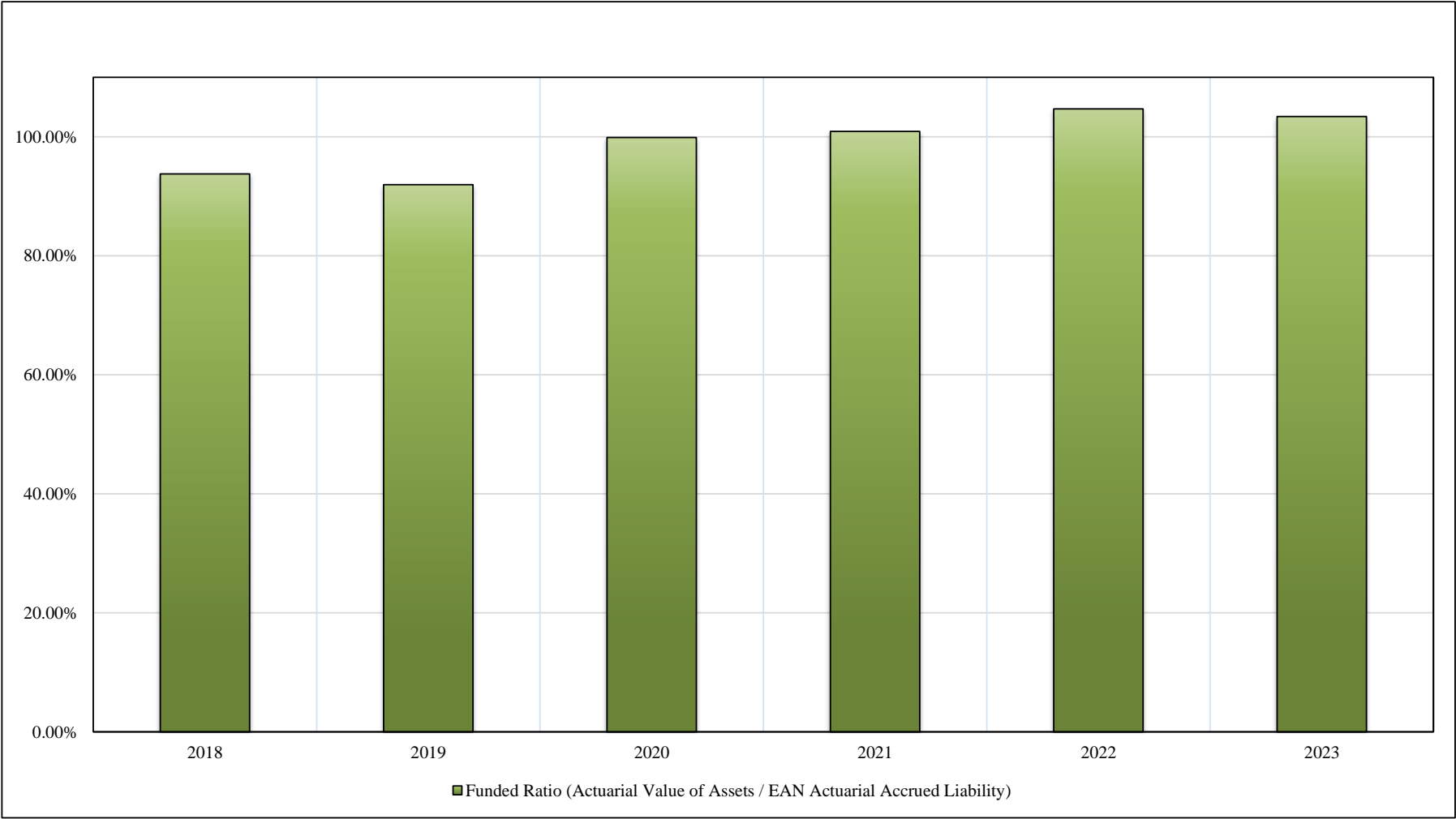
<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2023 Amount</u>	<u>Amortization Amount</u>
Prior Base #1		5	1,320	298
Prior Base #2		17	6,677	620
Assump Change	10/1/2016	23	13,934	1,112
Benefits Change	10/1/2017	24	1,940	152
Assump Change	10/1/2018	25	17,824	1,372
Assump Change	10/1/2020	27	(13,404)	(1,001)
Assump Change	10/1/2021	28	9,112	671
Assump Change	10/1/2023	30	<u>(3,587)</u>	<u>(258)</u>
			33,816	2,966

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(After Method Change)

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2022	\$39,044
(2)	Sponsor Normal Cost developed as of October 1, 2022	3,063
(3)	Expected administrative expenses for the year ended September 30, 2023	18,439
(4)	Expected interest on (1), (2) and (3)	3,465
(5)	Sponsor contributions to the System during the year ended September 30, 2023	25,684
(6)	Expected interest on (5)	924
(7)	Unfunded Actuarial Accrued Liability as of September 30, 2023 (1)+(2)+(3)+(4)-(5)-(6)	37,403
(8)	Change to UAAL due to Assumption Change	(3,587)
(9)	Change to UAAL due to Method Change	(47,368)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2023 (7)+(8)+(9)	(13,552)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2023 <u>Amount</u>	Amortization <u>Amount</u>
EAN Cost Method	10/1/2023	15	(13,552)	(1,353)

HISTORY OF FUNDING PROGRESS



ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: PubS.H-2010 for Employees, set forward one year.

Male: PubS.H-2010 (Below Median) for Employees, set forward one year.

Healthy Retiree Lives:

Female: PubS.H-2010 for Healthy Retirees, set forward one year.

Male: PubS.H-2010 (Below Median) for Healthy Retirees, set forward one year.

Beneficiary Lives:

Female: PubG.H-2010 (Below Median) for Healthy Retirees.

Male: PubG.H-2010 (Below Median) for Healthy Retirees, set back one year.

Disabled Lives:

80% PubG.H-2010 for Disabled Retirees / 20% PubS.H-2010 for Disabled Retirees.

All rates for healthy lives are projected generationally with Mortality Improvement Scale MP-2018. We feel this assumption sufficiently accommodates future mortality improvements.

The previously described mortality assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2021 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

Interest Rate

6.50% (prior year 6.75%) per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Salary Increases

2.75% (previously, 3.00%) per year. This assumption was adopted based on the November 27, 2023 actuarial experience study.

<u>Payroll Growth</u>	None.
<u>Administrative Expenses</u>	\$20,797 annually, based on the average of actual expenses incurred in the prior two fiscal years.
<u>Amortization Method</u>	<p>New UAAL amortization bases are amortized over 15 (previously 30) years; bases established prior to the valuation date are adjusted proportionally to match the Expected Unfunded Actuarial Accrued Liability as of the valuation date, in order to align prior year bases with the portion of the current year UAAL associated with prior year sources.</p> <p>The amortization payment is subject to a minimum based on a 30-year amortization of the UAAL, if the UAAL is positive, in order to comply with Actuarial Standard of Practice No. 4.</p>
<u>Funding Method</u>	<p>Entry Age Normal Actuarial Cost Method (previously Frozen Entry Age Normal). The following loads are applied for determining the minimum required contribution:</p> <p style="padding-left: 40px;">Interest - A half year, based on current 6.50% assumption.</p> <p style="padding-left: 40px;">Salary - None.</p>
<u>Retirement Age</u>	<p>100% retirement is assumed at the earliest of:</p> <ul style="list-style-type: none"> (a) any age with 40 years of service; (b) age 55 with 30 years of service; (c) age 60 with 10 years of service; or (d) age 65. <p>This assumption was adopted based on the November 27, 2023 actuarial experience study.</p>
<u>Disability Rate</u>	See sample rates later in this section. It is assumed that 100% of disablements are service related. This assumption was carried over from the prior actuary and adopted based on the November 27, 2023 actuarial experience study.
<u>Termination Rate</u>	See sample rates later in this section, unisex and service-based table (previously, age and gender-based). This assumption was adopted based on the November 27, 2023 actuarial experience study.
<u>Marriage assumption</u>	100% assumed married with spouse's same age as Member.

Actuarial Asset Method

All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period

Low-Default-Risk Obligation Measure

Based on the Entry Age Normal Actuarial Cost Method and an interest rate of 4.87% per year compounded annually, net of investment related expenses. This rate is consistent with the Yield to Maturity of the S&P Municipal Bond 20-Year High Grade Rate Index as of September 30, 2023. All other assumptions for the Low-Default-Risk Obligation Measure are consistent with the assumptions shown in this section unless otherwise noted.

Service	% Terminating During the Year	
	Current Rate	Prior Rate
0	15.5%	5.5%
5	13.0%	3.7%
10	10.5%	2.8%
15	8.0%	2.0%
20	5.5%	0.5%
25+	3.0%	0.0%

Age	% Becoming Disabled During the Year	
	Male	Female
20	0.03%	0.03%
25	0.04%	0.05%
30	0.05%	0.08%
35	0.07%	0.14%
40	0.12%	0.21%
45	0.20%	0.32%
50	0.36%	0.53%
55	0.72%	0.95%
60	1.26%	1.16%
65	1.75%	1.36%

GLOSSARY

Actuarial Value of Assets is the asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets (see below), with adjustments according to the plan's Actuarial Asset Method. These adjustments produce a "smoothed" value that is likely to be less volatile from year to year than the Market Value of Assets.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

(a) The normal cost accrual rate equals:

(i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by

(ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

(b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

(c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

(d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

Market Value of Assets is the fair market value of plan assets as of the valuation date. This amount may be adjusted to produce an Actuarial Value of Assets for plan funding purposes.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded. Under the Entry Age Normal cost method, it is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

Payroll Under Assumed Ret. Age is the projected annual rate of pay for the fiscal year beginning on the valuation date of all covered Members, excluding any Members who are assumed to retire with 100% probability on the valuation date.

Projected Annual Payroll is the projected annual rate of pay for the fiscal year following the fiscal year beginning on the valuation date of all covered Members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current plan participants.

Total Annual Payroll is the projected annual rate of pay for the fiscal year beginning on the valuation date of all covered Members.

Total Required Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over no more than 30 years. The required amount is adjusted for interest according to the timing of contributions during the year.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the Actuarial Value of Assets. Under the Entry Age Normal Actuarial Cost Method, an actuarial gain or loss, based on actual versus expected UAAL, is determined in conjunction with each valuation of the plan.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has increased from 70.6% on October 1, 2020 to 111.8% on October 1, 2023, indicating that the plan has experienced a significant growth in active population.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 72.9%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 99.9% on October 1, 2020 to 103.4% on October 1, 2023.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, increased from -6.3% on October 1, 2020 to -5.5% on October 1, 2023. The current Net Cash Flow Ratio of -5.5% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

Low Default-Risk Obligation Measure

ASOP No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, was revised as of December 2021 to include a “low-default-risk obligation measure” (LDROM). This liability measure is consistent with the determination of the actuarial accrued liability shown on page 9 in terms of member data, plan provisions, and assumptions/methods, under the Entry Age Normal Cost Method, except that the interest rate is tied to low-default-risk fixed income securities. The S&P Municipal Bond 20 Year High Grade Rate Index (daily rate closest to, but not later than, the measurement date) was selected to represent a current market rate of low risk but longer-term investments that could be included in a low-risk asset portfolio. The interest rate used in this valuation was 4.87%, resulting in an LDROM of \$474,126. The LDROM should not be considered the “correct” liability measurement; it simply shows a possible outcome if the Board elected to hold a very low risk asset portfolio. The Board actually invests the pension plan’s contributions in a diversified portfolio of stocks and bonds and other investments with the objective of maximizing investment returns at a reasonable level of risk. Consequently, the difference between the plan’s Actuarial Accrued Liability disclosed earlier in this section and the LDROM can be thought of as representing the expected taxpayer savings from investing in the plan’s diversified portfolio compared to investing only in high quality bonds.

The actuarial valuation reports the funded status and develops contributions based on the expected return of the plan’s investment portfolio. If instead, the plan switched to investing exclusively in high quality bonds, the LDROM illustrates that reported funded status would be lower (which also implies that the Actuarially Determined Contributions would be higher), perhaps significantly. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2023</u>	<u>10/1/2022</u>	<u>10/1/2021</u>	<u>10/1/2020</u>
<u>Support Ratio</u>				
Total Actives	19	14	14	12
Total Inactives	17	18	17	17
Actives / Inactives	111.8%	77.8%	82.4%	70.6%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	375,598	365,371	450,491	396,092
Total Annual Payroll	159,215	87,747	86,715	91,042
MVA / Total Annual Payroll	235.9%	416.4%	519.5%	435.1%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	285,407	314,771	265,505	261,462
Total Accrued Liability (EAN)	391,273	391,261	413,223	399,307
Inactive AL / Total AL	72.9%	80.5%	64.3%	65.5%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	404,612	409,604	416,975	398,850
Total Accrued Liability (EAN)	391,273	391,261	413,223	399,307
AVA / Total Accrued Liability (EAN)	103.4%	104.7%	100.9%	99.9%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ¹	(20,520)	(26,950)	(20,560)	(25,096)
Market Value of Assets (MVA)	375,598	365,371	450,491	396,092
Ratio	-5.5%	-7.4%	-4.6%	-6.3%

¹ Determined as total contributions minus benefit payments and administrative expenses.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2023

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Cash	5,363.98
Total Cash and Equivalents	5,363.98
Receivables:	
City Contributions in Transit	2,996.08
Total Receivable	2,996.08
Investments:	
Pooled/Common/Commingled Funds:	
Fixed Income	108,046.06
Equity	220,689.81
Real Estate	49,042.18
Total Investments	377,778.05
Total Assets	386,138.11
<u>LIABILITIES</u>	
Payables:	
Administrative Expenses	3,396.00
Prepaid City Contribution	7,143.72
Total Liabilities	10,539.72
NET POSITION RESTRICTED FOR PENSIONS	375,598.39

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
 FOR THE YEAR ENDED SEPTEMBER 30, 2023
 Market Value Basis

ADDITIONS

Contributions:		
City	25,684.00	
Total Contributions		25,684.00
Investment Income:		
Net Increase in Fair Value of Investments	31,510.48	
Less Investment Expense ¹	(764.16)	
Net Investment Income		30,746.32
Total Additions		56,430.32
<u>DEDUCTIONS</u>		
Distributions to Members:		
Benefit Payments	25,638.87	
Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	0.00	
Total Distributions		25,638.87
Administrative Expense		20,564.50
Total Deductions		46,203.37
Net Increase in Net Position		10,226.95
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		365,371.44
End of the Year		375,598.39

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
September 30, 2023

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/(Loss)	<u>Gains/Losses Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2023	2024	2025	2026	2027
09/30/2019	(7,286)	0	0	0	0	0
09/30/2020	(2,759)	(551)	0	0	0	0
09/30/2021	47,684	19,073	9,536	0	0	0
09/30/2022	(87,853)	(52,711)	(35,140)	(17,569)	0	0
09/30/2023	6,469	5,175	3,881	2,587	1,293	0
Total		(29,014)	(21,723)	(14,982)	1,293	0

Development of Investment Gain/Loss

Market Value of Assets, including Prepaid Contributions, 09/30/2022	367,075
Contributions Less Benefit Payments & Admin Expenses	(15,079)
Expected Investment Earnings*	24,277
Actual Net Investment Earnings	30,746
2023 Actuarial Investment Gain/(Loss)	6,469

*Expected Investment Earnings = $0.0675 * 367,075 - 15,079 * [(1 + 0.0675)^{0.5} - 1]$

Development of Actuarial Value of Assets

(1) Market Value of Assets, 09/30/2023	375,598
(2) Gains/(Losses) Not Yet Recognized	(29,014)
(3) Actuarial Value of Assets, 09/30/2023, (1) - (2)	404,612
(4) Limited Actuarial Value of Assets, 09/30/2023	404,612
(A) 09/30/2022 Actuarial Assets, including Prepaid Contributions:	411,308
(I) Net Investment Income:	
1. Net Increase in Fair Value of Investments	31,510
2. Change in Actuarial Value	(15,219)
3. Investment Expenses	(764)
Total	15,527
(B) 09/30/2023 Actuarial Assets, including Prepaid Contributions:	411,756
Actuarial Assets Rate of Return = $2I/(A+B-I)$:	3.85%
Market Value of Assets Rate of Return:	8.60%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(11,727)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2023
 Actuarial Asset Basis

REVENUES

Contributions:		
City	25,684.00	
Total Contributions		25,684.00
Earnings from Investments:		
Net Increase in Fair Value of Investments	31,510.48	
Change in Actuarial Value	(15,219.00)	
Total Earnings and Investment Gains		16,291.48

EXPENDITURES

Distributions to Members:		
Benefit Payments	25,638.87	
Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	0.00	
Total Distributions		25,638.87
Expenses:		
Investment related ¹	764.16	
Administrative	20,564.50	
Total Expenses		21,328.66
Change in Net Assets for the Year		(4,992.05)
Net Assets Beginning of the Year		409,604.44
Net Assets End of the Year ²		404,612.39

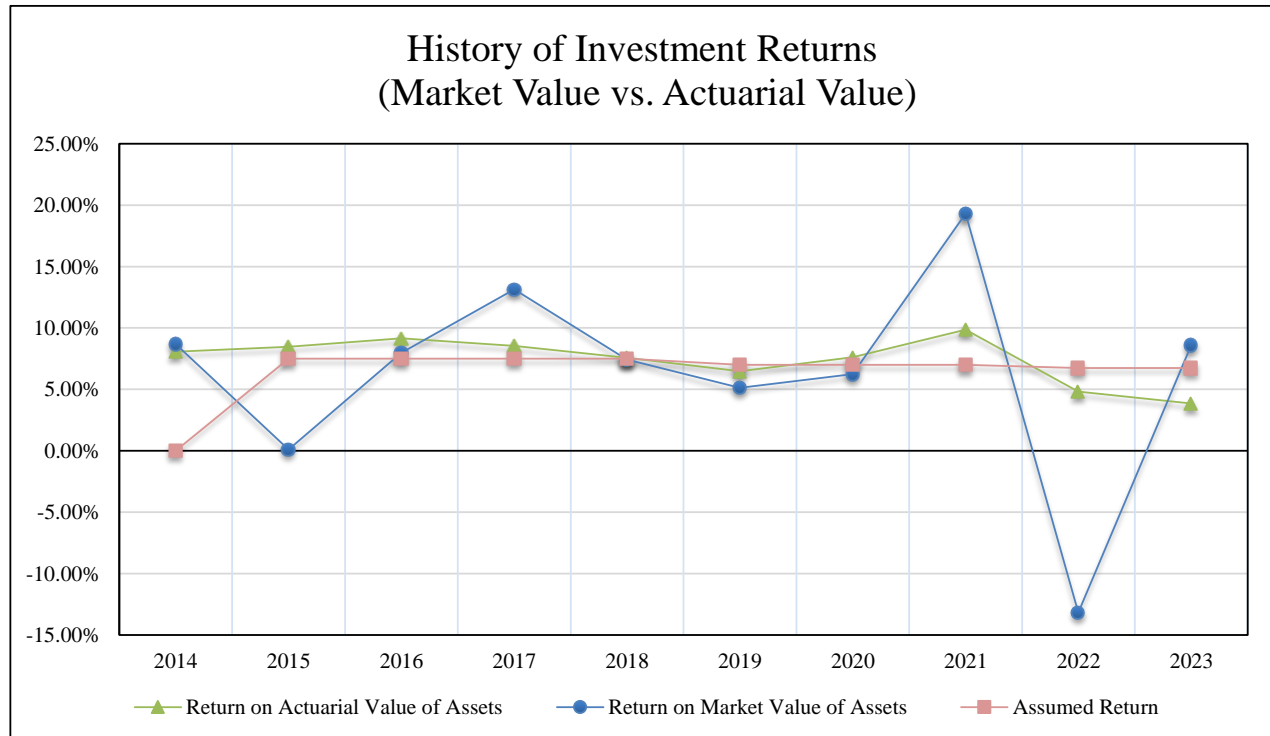
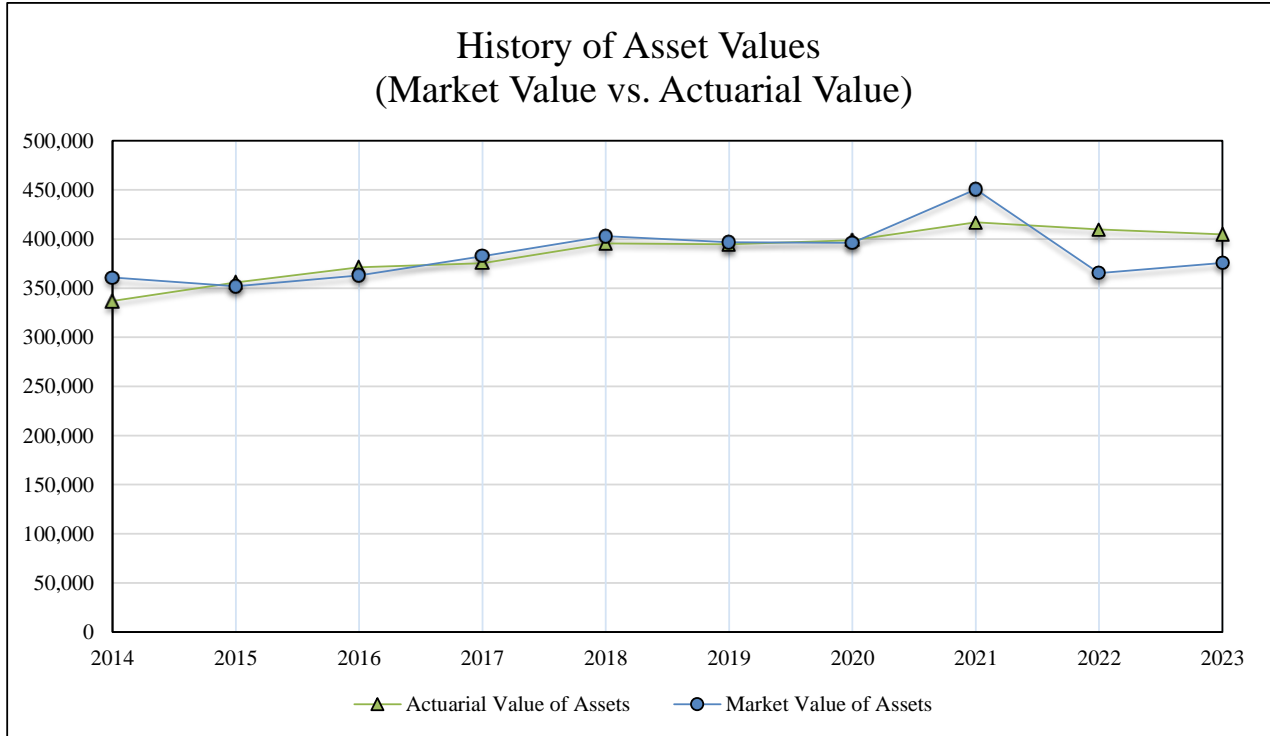
¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

²Net Assets may be limited for actuarial consideration.

RECONCILIATION OF CITY SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2023

(1) Required City and State Contributions	\$25,684.00
(2) Less Allowable State Contribution	<u>0.00</u>
(3) Required City Contribution for Fiscal 2023	25,684.00
(4) Less 2022 Prepaid Contribution	(1,703.08)
(5) Less Actual City Contributions	<u>(31,124.64)</u>
(6) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2023	(\$7,143.72)

HISTORY OF ASSET VALUES AND INVESTMENT RETURNS



STATISTICAL DATA

	<u>10/1/2023</u>	<u>10/1/2022</u>	<u>10/1/2021</u>	<u>10/1/2020</u>
<u>Actives</u>				
Number	19	14	14	12
Average Current Age	36.6	32.2	38.0	37.3
Average Age at Employment	32.2	26.9	29.6	28.5
Average Past Service	4.4	5.3	8.4	8.8
Average Annual Salary	\$8,380	\$6,268	\$6,194	\$7,587
<u>Service Retirees</u>				
Number	7	7	8	7
Average Current Age	72.1	71.1	71.4	73.4
Average Annual Benefit	\$2,632	\$2,632	\$2,497	\$2,643
<u>Beneficiaries</u>				
Number	2	3	2	2
Average Current Age	82.1	81.5	80.6	79.6
Average Annual Benefit	\$947	\$2,566	\$3,331	\$3,331
<u>Disability Retirees</u>				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
<u>Terminated Vested</u>				
Number	8	8	7	8
Average Current Age	54.3	53.3	51.8	50.8
Average Annual Benefit	\$1,784	\$1,784	\$1,118	\$1,347

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	2	1			1							4
25 - 29		1										1
30 - 34	1		1		2							4
35 - 39					1							1
40 - 44	2				1	1		1				5
45 - 49	3											3
50 - 54												0
55 - 59												0
60 - 64											1	1
65+												0
Total	8	2	1	0	5	1	0	1	0	0	1	19

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2022	14
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions or full lump sum distribution	(4)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. Continuing participants	10
g. New entrants / Rehires	9
h. Total active life participants in valuation	19

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	7	3	0	8	0	18
Retired						0
Vested (Deferred Annuity)						0
Vested (Due Refund)						0
Hired/Terminated in Same Year						0
Death, With Survivor						0
Death, No Survivor		(1)				(1)
Disabled						0
Refund of Contributions						0
Rehires						0
Expired Annuities						0
Data Corrections						0
b. Number current valuation	7	2	0	8	0	17

SUMMARY OF CURRENT PLAN

<u>Plan Effective Date</u>	January 1, 1969.
<u>Participation Requirement</u>	All full-time and volunteer firefighters of the City of Fort Meade, Florida participate in the plan as of the first day of the month.
<u>Credited Service</u>	The elapsed time from the participant's date of hire until his date of termination, retirement, or death, calculated to the nearest full month.
<u>Compensation</u>	Total cash remuneration, including overtime and payments for accrued vacation and longevity, but excluding bonuses; annual compensation in excess of \$200,000 (as indexed) is excluded in accordance with Internal Revenue Code (IRC) §401(a)(17).
<u>Average Final Compensation</u>	Average of the last 5 years of compensation paid preceding termination of employment.
<u>Normal Retirement</u>	
Eligibility	The earlier of: 1) Age 65, or 2) Age 60 and 10 years of Credited Service, or 3) Age 55 and 30 years of Credited Service, or 4) 40 years of Credited Service, regardless of age.
Benefit Amount	1.75% of Average Final Compensation times Credited Service.
Form of Benefit	Ten Year Certain and Life thereafter (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 10 years of Credited Service.
Benefit Amount	Accrued benefit, reduced 5% for each year prior to age 60.

Disability

Eligibility Total and permanent as determined by the commission. Coverage from date of employment for service incurred disabilities; 10 years of Credited Service required for non-service.

Benefit Amount

Service Incurred Accrued benefit (1.75% rate), but not less than 30% of Compensation in effect at the time of disability.

Non-service Incurred Accrued benefit (1.75% rate).

Duration Benefit commences on first day of the month following establishment of disability. Benefits are paid for life with 120 months guaranteed, or, if earlier, until recovery (as determined by the commission).

Pre-Retirement Death

Eligibility Coverage from date of employment.

Benefit Amount

Death prior to Normal Retirement Date Spouse will receive a single lump sum payment equal to the actuarially equivalent value of 75% of the participant's vested accrued benefit.

Death on or after Normal Retirement Date Spouse will receive 66½% of the participant's accrued 66½% joint and contingent annuity payable for life. Alternatively, his spouse may choose to receive the 75% lump sum benefit that is payable in the case of a pre- retirement death prior to reaching Normal Retirement Age.

Post-Retirement Death

According to option selected, if any.

Vesting (Termination)

Eligibility 10 years or more of Credited Service.

Benefit Amount Accrued benefit (1.75% rate) payable at the Member's election, on his otherwise Early or Normal Retirement Date.