



Freiman Little Actuaries, LLC
4105 Savannahs Trail
Merritt Island, FL 32953

Phone 321 453 6542
Fax 321 453 6998

City of Rockledge

Fire Employees Retirement Plan

Actuarial Valuation as of October 1, 2021



January 28, 2022

REPORT TO DETERMINE MINIMUM FUNDING REQUIREMENTS
FOR THE PLAN AND FISCAL YEAR
BEGINNING OCTOBER 1, 2022



January 28, 2022

Board of Trustees
City of Rockledge Fire Employees Retirement Plan
Rockledge, Florida

RE: Actuarial Valuation as of October 1, 2021

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2021 for the City of Rockledge Fire Employees Retirement Plan (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal year ending September 30, 2023, and provides an analysis of experience since the last valuation. In addition to providing the summary and derivation of actuarial findings, this report describes the data, assumptions, and methods used to create these results.

In producing our work product, we rely on various models, internal and external, which were used for their intended purposes. Underlying data, assumptions, methodologies, model inputs and resulting outputs have been reviewed. The 7.65% net assumed return is a prescribed assumption as defined by Actuarial Standard of Practice No. 27 (ASOP 27), as it is set by the Board. While we find all other inputs and outputs to be reasonable, this prescribed assumption significantly conflicts with our judgment regarding what would constitute a reasonable assumption for the purpose of the measurement as discussed in ASOP 27. We continue to recommend lowering the net assumed return.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; 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 plan's funded status); and changes in plan provisions or applicable law.

Statement by Enrolled Actuary:

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

RE: Actuarial Valuation as of October 1, 2021
January 28, 2022
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We look forward to the presentation of these results to you in person and we are always available to answer any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Chad M. Little".

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 20-6619

A handwritten signature in black ink, appearing to read "Paula C. Freiman".

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 20-5796

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Section

1

Board Summary

A summary of the key valuation findings are compared with the results of the prior valuation below.

Summary of Principal Valuation Results

Fiscal Year Ending September 30,	2022	2023
Minimum Funding Requirements		
<u>As a Dollar Amount</u>		
Estimated Minimum Required City Contribution	\$444,860	\$326,385
Estimated State Contribution	<u>140,547</u>	<u>185,590</u>
Total Minimum Funding Requirement (City plus State)	\$585,407	\$511,975
<u>As a Percent of Valuation Payroll</u>		
Estimated Minimum Required City Contribution	24.51%	16.89%
Estimated State Contribution	<u>7.74%</u>	<u>9.61%</u>
Total Minimum Funding Requirement (City plus State)	32.25%	26.50%

Note: \$511,975 is the minimum funding requirement for fiscal 2023 including both contributions from the City and those from the State of Florida. We have estimated the City portion as \$326,385 which must be deposited on December 15, 2022.

The annual contribution paid by the City should take into account the actual amount of premium tax revenues received from the State of Florida that may be applied toward the actuarially determined contribution so that the total deposit for fiscal 2023 is \$511,975.

Funded Status

Valuation as of October 1,	2020	2021
Accrued Liability (AL)	\$15,582,540	\$16,014,866
Actuarial Value of Assets	<u>(13,077,499)</u>	<u>(14,182,066)</u>
Unfunded Accrued Liability (UAL)	\$2,505,041	\$1,832,800
Funded Percentage	83.92%	88.56%

Key Assumptions

Valuation as of October 1,	2020	2021
Assumed Investment Return, Net of Expenses	7.75%	7.65%
Salary Increase Assumption	6.00%	
Year 0-10		6.00%
Year 11+		4.50%

Please see the paragraph entitled Plan Changes in this Section 1 for an explanation of the difference between the actuarial valuation report as of October 1, 2020 and the results shown above for the actuarial valuation as of October 1, 2020.

Summary of Significant Events

Determination of the funded status of the Plan and minimum funding requirements are based on funding policy, participant data, asset information, Plan provisions, actuarial methods and assumptions, as well as contributions made to the Plan by the State of Florida. Any significant events associated with these items are discussed in the following.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the Plan Administrator and the City. This information includes, but is not limited to, statutory provisions, employee census, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

Participant Data

During the year active membership increased from 36 to 37 members due to one DROP entrant, 5 non-vested terminations and 7 new hires. The number of terminated members due future monthly benefits stayed the same at 5 and the number of members receiving payments increased from 24 to 25 due to one DROP entrant.

The following provides a summary comparing the actual and expected pay increases for the 12-month periods ending on the date specified.

Year Ended September 30,	Individual		Total Payroll Increase
	Actual	Expected	
2021	7.4%	6.0%	6.4%
2020	4.5%	6.0%	(1.3%)
2019	7.5%	6.0%	16.9%
2018	3.9%	6.0%	(1.2%)
2017	5.2%	6.0%	4.1%
2016	5.8%	6.0%	7.1%
2015	6.4%	6.0%	0.8%
2014	4.7%	6.0%	8.9%
2013	3.4%	6.0%	(8.4%)
2012	(3.0%)	6.0%	(2.6%)
Average:	4.5%	6.0%	2.9%

Pay increases were more than expected with the actual average pay increase amongst continuing actives at 7.4% in comparison to the 6.0% salary increase assumption. In addition, total payroll increased 2.9% on average over the last 10 years. Florida Statutes 112.64(5)(a) requires that the payroll growth assumption not exceed the average payroll growth for the prior ten years. This requirement is met in that the Unfunded Accrued Liability is amortized on a level dollar basis.

Overall, there was a small demographic gain primarily due to termination experience offset by salary increases more than expected. Should a pattern of consistent gains or losses develop, assumptions will be adjusted as needed. An experience review was performed for the 10-year period preceding October 1, 2020. See changes in assumptions made effective October 1, 2021 below.

Assets

The investment return on the Market Value of Assets was 20.26% and the return on the Actuarial Value of Assets was 11.07%, each in comparison to the 7.75% net investment return assumption expected for the year ending September 30, 2021. Because the return on the Actuarial Value of Assets was more than the net assumed investment return, there was an actuarial investment gain.

Note only a portion of actual investment gains or losses are recognized in the current year Actuarial Value of Assets with the remainder recognized over the next four years. Even if all assumptions are realized in the next several years, the Plan will experience changes in the required contribution rate until prior gains and losses are fully recognized.

The table below provides a comparison of the investment return on the Market Value of Assets and the Actuarial Value of Assets in comparison to the investment return assumed in the valuation of the Plan.

12-Month Period Ended September 30,	% Market Return	% Actuarial Return	% Assumed Return
2021	20.26 %	11.07 %	7.75 %
2020	10.66 %	8.71 %	7.80 %
2019	3.49 %	7.14 %	7.80 %
2018	9.59 %	8.16 %	7.90 %
2017	12.17 %	7.44 %	7.90 %
2016	9.14 %	6.98 %	8.00 %
2015	0.23 %	4.67 %	8.00 %
2014	8.75 %	7.19 %	8.00 %
2013	8.07 %	5.85 %	8.00 %
2012	11.41 %	1.26 %	8.00 %
Average	9.26%	6.82%	7.91%

Investment returns less than the assumed rate of return result in increased annual minimum required contributions in the future.

Plan Provisions

The October 1, 2020 actuarial valuation report dated February 10, 2021 did not include Ordinance No. 1818-2021 adopted upon second reading May 19, 2021. The State of Florida requires that funding for plan changes begin no later than the first day of the fiscal year following the change. As such, the valuation results that were adopted by the Board of Trustees (the Board) on February 10, 2021 were revised as shown in our letter dated May 21, 2021. The results in this report shown for the October 1, 2020 actuarial valuation are as adopted by the Board of Trustees and described in that May 21, 2021 letter.

Ordinance No. 1793-2020 was adopted effective November 4, 2020 regarding required minimum distributions at age 72. This ordinance had no significant impact on liability.

Assumptions and Methods

Our August 18, 2021 letter provides the results of an experience review for the 10-year period preceding October 1, 2020. Based on this review, we recommended revision to the individual salary increase assumption and the assumed net investment return assumption. The Board of Trustees adopted the individual salary increase assumption recommended. The net assumed rate of investment return was revised from 7.75% used in the October 1, 2020 actuarial valuation to 7.65% for this October 1, 2021 actuarial valuation of the Plan as directed by the Board of Trustees. The 7.65% net assumed return is a



prescribed assumption as defined by Actuarial Standard of Practice No. 27 (ASOP 27), as it is set by the Board. The prescribed assumption significantly conflicts with our judgment regarding what would constitute a reasonable assumption for the purpose of the measurement as discussed in ASOP 27. As discussed with the Board we recommend lowering the net assumed return.

The impact of the change in assumptions may be found in the reconciliation of the funded status and minimum funding requirements found at the end of Section 2 of this report. See "Reconciliations" in the table of contents.

State Contributions

The Estimated Minimum Required City Contribution shown on page 1 assumes that the premium tax money received from the State will be in the same amount received in the prior year. Should the amount received be less than expected, or should a portion of the State contribution be used towards the DC component of the Plan, the City will need to contribute any potential shortfall to the Plan.

Assessment and Disclosure of Risk

As described in Actuarial Standard of Practice No. 51 (ASOP 51), this section is meant to address the assessment and disclosure of risk in a pension funding valuation. This is not meant to be a comprehensive summary but should provide information regarding risks related to this plan. Additional historical information provided in this report also contain relevant information regarding asset size, asset mix, pay increases, benefits and contributions. This information can be used to understand the changes over time to identify trends.

Note that ASOP 51 defines risk as “The potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience....” The following provides examples of potential risk.

Investment Risk: As noted previously, investment returns less than the assumed rate of return result in increased annual minimum required contributions payable in a subsequent year.

Interest Rate Risk: Interest rates are used to discount the value of benefits. If the long-term expectation of returns is higher or lower than the assumed net investment return, the assumed net investment return should be adjusted. When the assumed net investment return is increased the estimated liability is decreased. When the assumed net investment return is decreased the estimated liability is increased. The chart below shows what the funded status of the plan is on a market value of assets basis after changing the net assumed return by 1% or 2%.

Funded Status on Market Value of Assets Basis						
As of 10/1	Valuation Net Assumed Return			Valuation Net Assumed Return Assumption		
	2% Decrease	1% Decrease	1% Increase	2% Increase		
2021	77.97%	87.27%	96.89%	106.80%	116.93%	7.65%
2020	68.16%	76.30%	84.71%	93.39%	102.27%	7.75%
2019	63.86%	71.81%	80.06%	88.57%	97.29%	7.80%
2018	64.39%	72.31%	80.51%	88.95%	97.57%	7.80%
2017	62.21%	69.69%	77.40%	85.30%	93.34%	7.90%
2016		65.10%	72.44%	79.98%		7.90%
2015		64.56%	71.60%	78.86%		8.00%
2014		67.86%	75.37%	83.12%		8.00%

Longevity and Other Demographic Risks: The estimated liability of the Plan is based on assumptions related to mortality, retirement, disability and termination. To the extent that Plan experience is different than these assumptions the gains and losses affect future required contributions and estimated liability.

Contribution Risk: The possibility that the plan sponsor does not make contributions to the plan according to the funding policy.

Intergenerational equity risk: Intergenerational equity is the concept that resources do not belong to a specific generation and they must be preserved for future generations. One way to alleviate this risk is to pay for benefits over the average future service of the group receiving benefits. Members may feel there are inequities when one is paying more than others, receiving less than others, or paying more than others in relation to what they are receiving.

Plan maturity measures may help understand the risks associated with the plan. As the Plan matures, the ratio of the Market Value of Assets to the Covered Payroll increases. As this ratio gets larger, the impact of asset volatility has a larger effect on the volatility of the Minimum Required Contribution as a percentage of pay.

Year Ending <u>9/30</u>	Market Value of <u>Assets</u>	<u>Payroll</u>	Asset Volatility <u>Ratio</u>
2021	\$15,517,529	\$1,977,033	7.8
2020	13,200,675	1,857,899	7.1
2019	12,122,748	1,867,373	6.5
2018	12,099,256	1,668,674	7.3
2017	11,652,598	1,513,002	7.7
2016	10,449,992	1,554,319	6.7
2015	9,790,114	1,366,711	7.2
2014	10,087,057	1,424,542	7.1
2013	9,600,740	1,512,764	6.3
2012	8,568,635	1,541,232	5.6
2011	7,408,817	1,592,229	4.7
2010	7,354,559	1,704,570	4.3
2009	6,551,286	1,875,511	3.5
2008	6,117,865	1,847,639	3.3
2007	6,856,342	1,817,193	3.8
2006	5,949,223	1,696,370	3.5
2005	5,159,717	1,637,147	3.2

Another measure of a pension plan's maturity is the Ratio of Benefit Payments to Contributions. Over the life of a pension plan, it is expected that the majority of the benefits will be paid for by returns rather than contributions. For this to happen, as a plan matures, the plan will eventually pay out more in benefits than it receives in contributions. It is important to understand the magnitude of this difference so that steps can be taken, if necessary, to manage cash flows going forward. The table below provides the Ratio of Benefit Payments to Contributions. Note that there are other cash flows to be considered such as interest and dividends earned or expenses paid by a pension plan.

Year Ending 9/30	Benefit Payments	Contributions	Ratio of Benefit Payments to Contributions
2021	\$1,037,051	\$783,399	1.32
2020	866,650	730,290	1.19
2019	1,107,999	784,632	1.41
2018	1,315,062	740,435	1.78
2017	675,538	679,288	0.99
2016	815,013	649,426	1.25
2015	806,383	636,621	1.27
2014	936,323	665,730	1.41
2013	214,827	609,213	0.35
2012	228,085	554,662	0.41
2011	231,470	537,354	0.43
2010	75,850	401,526	0.19
2009	148,046	521,807	0.28
2008	111,371	383,659	0.29
2007	74,217	436,587	0.17
2006	79,712	381,948	0.21
2005	28,687	357,772	0.08

When looking at Net Cash Flows, it is useful to understand the relative size of the cash flows in comparison to the Market Value of Assets. The following table provides the ratio of the Net Cash Flows divided by the Market Value of Assets. As mentioned previously, there are other cash flows to be considered such as interest and dividends earned or expenses paid by a pension plan.

Year Ending 9/30	<u>Contributions</u>	<u>Disbursements</u>	<u>Assets</u>	Net Cash Flow Divided by <u>Assets</u>
2021	\$783,399	\$1,108,673	\$15,517,529	(0.02)
2020	730,290	933,776	13,200,675	(0.02)
2019	784,632	1,176,081	12,122,748	(0.03)
2018	740,435	1,380,574	12,099,256	(0.05)
2017	679,288	744,105	11,652,598	(0.01)
2016	649,426	874,293	10,449,992	(0.02)
2015	636,621	877,661	9,790,114	(0.02)
2014	665,730	1,004,398	10,087,057	(0.03)
2013	609,213	281,807	9,600,740	0.03
2012	554,662	256,822	8,568,635	0.03
2011	537,354	283,717	7,408,817	0.03
2010	401,526	121,828	7,354,559	0.04
2009	521,807	179,244	6,551,286	0.05
2008	383,659	151,126	6,117,865	0.04
2007	436,587	116,838	6,856,342	0.05
2006	381,948	99,682	5,949,223	0.05
2005	357,772	45,149	5,159,717	0.06

Section 2 Results Derivation

In this section, the assets and liabilities of the Plan are shown in detail. Assets and liabilities are then compared to determine the funded status and minimum funding requirements.

While asset information is based on the fair market value of assets, along with any techniques used to smooth out market fluctuations, liabilities are determined through a combination of the benefit provisions, participant census data which contains information for the members who will receive those benefits, and the methods and assumptions used with regard to how benefits will be paid to members. A summary of participant data, an outline of the benefit provisions, and a description of the methods and assumptions used in this valuation are described in Section 4.

Financial Information

Over the life of the Plan, the majority of assets are typically generated from investment return. In this section, we describe how the assets of the Plan are invested, show how the actuarial value of assets is derived, and review the investment results since the prior valuation.

Investment Allocation

Valuation Date	October 1, 2020		October 1, 2021	
Stocks	\$9,333,664	71%	\$10,601,035	69%
Fixed Income Securities	2,438,078	18%	2,661,526	17%
Cash and Cash Equivalents	231,333	2%	347,102	2%
Real Estate	1,187,065	9%	1,310,087	8%
Infrastructure	0	0%	589,589	4%
Net Receivables	<u>10,535</u>	<u>0%</u>	<u>8,190</u>	<u>0%</u>
Fair Market Value of Assets	\$13,200,675	100%	\$15,517,529	100%

Reconciliation of Market Value of Assets

Year Ending September 30,	2020	2021
1. Market Value of Assets at Beginning of Year	\$12,122,748	\$13,200,675
2. Contributions		
a. Employer	\$459,690	\$459,417
b. State	140,547	185,590
c. Plan Members	<u>130,053</u>	<u>138,392</u>
d. Total Contributions	\$730,290	\$783,399
3. Investment Income		
a. Realized Appreciation (Depreciation)	\$67,271	\$1,286,978
b. Unrealized Appreciation (Depreciation)	1,021,400	1,158,428
c. Interest plus Dividends	240,497	247,691
d. Investment Expense	<u>(47,755)</u>	<u>(50,969)</u>
e. Net Investment Income	\$1,281,413	\$2,642,128
4. Deductions		
a. Benefits	(\$769,981)	(\$806,690)
b. Refund of Contributions	(30,508)	(27,269)
c. DROP Balance Disbursement	(66,161)	(203,092)
d. Administrative Expense	<u>(67,126)</u>	<u>(71,622)</u>
e. Total Deductions	(\$933,776)	(\$1,108,673)
5. Net Increase	<u>\$1,077,927</u>	<u>\$2,316,854</u>
6. Market Value of Assets at End of Year	\$13,200,675	\$15,517,529
7. Return on Market Value of Assets = 2I / (A + B - I)	10.66%	20.26%

Development of Actuarial Value of Assets

The Market Value of Assets is adjusted to recognize investment earnings greater than (or less than) the assumed net investment return over a five-year period. The Actuarial Value of Assets is no more than 120% and no less than 80% of the Market Value of Assets.

1.	Market Value of Assets as of October 1, 2021			\$15,517,529
2.	Phase-In Gains (Losses) Over Five Year Period			
	<u>Year Ending</u>	<u>Original Gain (Loss)</u>	<u>Percent Unrecognized</u>	<u>Unrecognized Gain (Loss)</u>
a.	September 30, 2021	\$1,628,368	80%	\$1,302,694
b.	September 30, 2020	338,675	60%	203,205
c.	September 30, 2019	(519,348)	40%	(207,739)
d.	September 30, 2018	186,515	20%	<u>37,303</u>
e.	Total			\$1,335,463
3.	Preliminary Actuarial Value of Assets			\$14,182,066
4.	Corridor Around Market Value			
a.	Minimum = 80% of Market Value of Assets			\$12,414,023
b.	Maximum = 120% of Market Value of Assets			\$18,621,035
c.	Corridor Adjustment to Preliminary Actuarial Value			\$0
5.	Actuarial Value of Assets as of October 1, 2021			\$14,182,066

Development of Historical Gain or Loss on Market Value of Assets

Fiscal Year End	2021	2020
1. Market Value of Assets - Beginning of Year	\$13,200,675	\$12,122,748
2. Expected Interest on Assets	1,023,052	945,574
3. Contributions	783,399	730,290
4. Benefit Payments + Administrative Expenses	(1,108,673)	(933,776)
5. Interest on items (3) and (4)	<u>(9,292)</u>	<u>(2,836)</u>
6. Expected Value of Assets at End of Year	\$13,889,161	\$12,862,000
7. Market Value of Assets - End of Year	\$15,517,529	\$13,200,675
8. Gain (Loss) for Plan Year = (7) - (6)	\$1,628,368	\$338,675

Fiscal Year End	2019	2018
1. Market Value of Assets - Beginning of Year	\$12,099,256	\$11,652,598
2. Expected Interest on Assets	943,742	920,555
3. Contributions	784,632	740,435
4. Benefit Payments + Administrative Expenses	(1,176,081)	(1,380,574)
5. Interest on items (3) and (4)	<u>(9,453)</u>	<u>(20,273)</u>
6. Expected Value of Assets at End of Year	\$12,642,096	\$11,912,741
7. Market Value of Assets - End of Year	\$12,122,748	\$12,099,256
8. Gain (Loss) for Plan Year = (7) - (6)	\$(519,348)	\$186,515

Historical Asset Values

<u>Year Ending September 30,</u>	<u>Actuarial Value of Assets</u>	<u>Market Value of Assets</u>	<u>% Market Return</u>	<u>% Actuarial Return</u>	<u>% Assumed Return</u>
2021	\$14,182,066	\$15,517,529	20.26 %	11.07 %	7.75 %
2020	13,077,499	13,200,675	10.66 %	8.71 %	7.80 %
2019	12,224,500	12,122,748	3.49 %	7.14 %	7.80 %
2018	11,787,843	12,099,256	9.59 %	8.16 %	7.90 %
2017	11,514,438	11,652,598	12.17 %	7.44 %	7.90 %
2016	10,779,413	10,449,992	9.14 %	6.98 %	8.00 %
2015	10,293,985	9,790,114	0.23 %	4.67 %	8.00 %
2014	10,070,624	10,087,057	8.75 %	7.19 %	8.00 %
2013	9,298,953	9,600,740	8.07 %	5.85 %	8.00 %
2012	8,466,891	8,568,635	11.41 %	1.26 %	8.00 %

Historical Contribution Amounts

<u>Year Ending September 30,</u>	<u>Employer</u>	<u>State</u>	<u>Members</u>	<u>Total</u>
2021	\$459,417	\$185,590	\$138,392	\$783,399
2020	459,690	140,547	130,053	730,290
2019	498,650	155,266	130,716	784,632
2018	479,284	144,344	116,807	740,435
2017	434,969	138,409	105,910	679,288
2016	390,264	154,239	104,923	649,426
2015	362,979	173,333	100,309	636,621
2014	381,796	185,014	98,920	665,730
2013	325,124	178,961	105,128	609,213
2012	269,266	175,451	109,945	554,662

Historical Deductions from Fund

<u>Year Ending September 30,</u>	<u>Benefits</u>	<u>Refunds</u>	<u>Administrative Expense</u>	<u>Total</u>
2021	\$1,009,782	\$27,269	\$71,622	\$1,108,673
2020	836,142	30,508	67,126	933,776
2019	1,094,763	13,236	68,082	1,176,081
2018	1,291,828	23,234	65,512	1,380,574
2017	673,973	1,565	68,567	744,105
2016	805,753	9,260	59,280	874,293
2015	722,075	84,308	71,278	877,661
2014	936,323	0	68,075	1,004,398
2013	193,660	21,167	66,980	281,807
2012	184,815	43,270	28,737	256,822

Historical State Contributions

Year Ending September 30	State Contributions		
	Regular	Supplemental	Total
2021	\$185,590	\$0	\$185,590
2020	139,351	1,196	140,547
2019	155,266	0	155,266
2018	141,704	2,640	144,344
2017	134,986	3,423	138,409
2016	133,157	21,082	154,239
2015	135,220	38,113	173,333
2014	133,388	51,626	185,014
2013	134,063	44,898	178,961
2012	133,555	41,896	175,451
2011	138,034	31,405	169,439
2010	129,388	33,498	162,886
2009	125,721	133,266	258,987
2008	123,083	0	123,083
2007	114,831	66,820	181,651
2006	110,777	26,327	137,104
2005	107,444	14,272	121,716
2004	96,823	9,247	106,070
2003	89,380	2,684	92,064
2002	86,480	0	86,480
2001	75,807	0	75,807
2000	74,000	0	74,000
1999	69,146	0	69,146
1998	59,994	0	59,994

Present Value of Benefits

Valuation as of October 1,	2020	2021
1. Active Members		
a. Retirement Benefits	\$6,951,599	\$6,657,127
b. Deferred Benefits	337,802	364,293
c. Survivor Benefits	93,174	97,961
d. Disability Retirement	<u>184,894</u>	<u>187,047</u>
e. Total for Active Members	\$7,567,469	\$7,306,428
2. Inactive Members		
a. Retired Members	\$10,268,677	\$10,815,958
b. Terminated members	422,042	461,956
c. Beneficiaries	145,836	145,258
d. Disability Retirement	<u>76,742</u>	<u>76,064</u>
e. Total for Inactive Members	\$10,913,297	\$11,499,236
3. Present Value of Benefits	\$18,480,766	\$18,805,664

Accrued Liability

Valuation as of October 1,	2020	2021
1. Active Members		
a. Retirement Benefits	\$4,550,627	\$4,382,340
b. Deferred Benefits	8,933	20,504
c. Survivor Benefits	35,655	37,671
d. Disability Retirement	<u>74,028</u>	<u>75,115</u>
e. Total for Active Members	\$4,669,243	\$4,515,630
2. Inactive Members		
a. Retired Members	\$10,268,677	\$10,815,958
b. Terminated members	422,042	461,956
c. Beneficiaries	145,836	145,258
d. Disability Retirement	<u>76,742</u>	<u>76,064</u>
e. Total for Inactive Members	\$10,913,297	\$11,499,236
3. Accrued Liability	\$15,582,540	\$16,014,866

Normal Cost

Valuation as of October 1,		2020	2021
1.	Preliminary Normal Cost		
a.	Retirement Benefits	\$275,046	\$262,247
b.	Deferred Benefits	40,286	41,174
c.	Survivor Benefits	6,857	7,167
d.	Disability Retirement	<u>13,601</u>	<u>13,770</u>
e.	Total	\$335,790	\$324,358
2.	Total Normal Cost		
a.	Preliminary Normal Cost	\$335,790	\$324,358
b.	Estimated Administrative Expense	<u>67,126</u>	<u>71,622</u>
c.	Total Normal Cost	\$402,916	\$395,980
d.	Total Normal Cost as a Percent of Pay	22.20 %	20.50 %
3.	Employer Normal Cost		
a.	Preliminary Normal Cost	\$335,790	
b.	Actual Administrative Expense	71,622	
c.	Actual Employee Contributions	<u>(138,392)</u>	
d.	Employer Normal Cost	\$269,020	
4.	Valuation Payroll	\$1,815,053	\$1,931,890

Unfunded Accrued Liability

Unfunded Accrued Liability

1. Accrued Liability	\$16,014,866
2. Actuarial Value of Assets	<u>(14,182,066)</u>
3. Unfunded Accrued Liability	\$1,832,800

Determination of Expected Unfunded Accrued Liability

1. Unfunded Accrued Liability as of Prior Year	\$2,505,041
2. Interest for a full year on (1)	194,141
3. Employer Normal Cost (Including Administrative Expenses) Prior Yr.	269,020
4. Interest for a full year on (3)	20,849
5. City Plus State Contribution	(645,007)
6. Interest on Contribution for Time on Deposit	(28,306)
7. Change in Plan, Methods or Assumptions	<u>(44,778)</u>
8. Expected Unfunded Accrued Liability	\$2,270,960

Calculation of (Gain) or Loss

1. Actual Unfunded Accrued Liability	\$1,832,800
2. Expected Unfunded Accrued Liability	<u>2,270,960</u>
3. Total (Gain) or Loss	\$(438,160)

Reconciliation of Unfunded Accrued Liability

1. Unfunded Accrued Liability as of Prior Year	\$2,505,041
2. Total Change in Unfunded Accrued Liability	
a. Expected Change in Unfunded Accrued Liability	\$(189,303)
b. Change in Plan, Methods or Assumptions	(44,778)
c. Change Due to (Gain) or Loss	
i. Portion of (Gain) / Loss Due to Investments	\$(425,627)
ii. Portion of (Gain) / Loss Due to Demographic Experience	<u>(12,533)</u>
iii. Total (Gain) or Loss	\$(438,160)
d. Total Change in Unfunded Accrued Liability	\$(672,241)
3. Unfunded Accrued Liability	\$1,832,800

Determination of Investment Gain (Loss)

1. Actuarial Value of Assets - Beginning of Year	\$13,077,499
2. Expected Interest on Beginning Value	1,013,506
3. Contributions (Employer)	459,417
4. Contributions (State)	185,590
5. Contributions (Employee)	138,392
6. Benefit Payments	(1,037,051)
7. Administrative Expenses	(71,622)
8. Interest on Contributions and Disbursements	<u>(9,292)</u>
9. Expected Value of Assets at End of Year	\$13,756,439
10. Actuarial Value of Assets - End of Year	\$14,182,066
11. Gain (Loss) for Plan Year = (10) - (9)	\$425,627
12. Actuarial Investment Income	\$1,429,841
13. Return on Actuarial Value of Assets	11.07 %

Amortization of Unfunded Liability

The Unfunded Actuarial Accrued Liability is being amortized as a level dollar amount based on the net assumed return assumption. Changes in the Unfunded Actuarial Accrued Liability due to plan changes, assumption changes, method changes, or gains and losses are all amortized over a 25-year period.

Amortization Bases

	10/1	Source	Original Balance	Remaining Balance	Adjusted Remaining Balance	Years Remain	Level \$ Amort
1.	2005	Method Change	\$712,901	\$488,947	\$463,648	14	\$51,185
2.	2006	Actuarial Gain	(389,008)	(270,241)	(256,258)	15	(27,219)
3.	2007	Actuarial Loss	146,070	102,343	97,047	16	9,958
4.	2007	Assumption Change	109,095	76,441	72,486	16	7,438
5.	2008	Actuarial Loss	1,281,746	902,377	855,685	17	85,118
6.	2008	Method Change	(1,048)	(737)	(699)	17	(70)
7.	2008	Method Change	(1,111,615)	(782,601)	(742,106)	17	(73,820)
8.	2009	Actuarial Loss	332,686	234,576	222,438	18	21,515
9.	2010	Actuarial Loss	717,799	505,414	479,262	19	45,197
10.	2011	Actuarial Loss	668,509	475,604	450,995	20	41,565
11.	2011	Assumption Change	436,124	310,274	294,219	20	27,116
12.	2012	Actuarial Gain	(149,835)	(107,828)	(102,249)	21	(9,229)
13.	2012	Asmp/Method Chg	905,104	651,346	617,643	21	55,748
14.	2013	Actuarial Loss	173,126	126,238	119,706	22	10,601
15.	2013	Assumption Change	10,903	7,949	7,538	22	668
16.	2014	Actuarial Gain	(56,425)	(47,638)	(45,173)	23	(3,932)
17.	2014	Assumption Change	11,756	9,926	9,412	23	819
18.	2015	Actuarial Loss	100,723	83,115	78,814	19	7,433
19.	2015	Assumption Change	12,388	10,223	9,694	19	914
20.	2016	Actuarial Loss	31,933	27,141	25,737	20	2,372
21.	2016	Assumption Change	307,379	261,241	247,723	20	22,831
22.	2017	Actuarial Gain	(56,192)	(48,643)	(46,126)	21	(4,163)
23.	2017	Assumption Change	(59)	(51)	(48)	21	(4)
24.	2018	Actuarial Gain	(330,276)	(296,635)	(281,286)	22	(24,910)
25.	2018	Assumption Change	154,133	138,433	131,270	22	11,625
26.	2019	Actuarial Gain	(112,849)	(107,641)	(102,071)	23	(8,884)
27.	2019	Plan Change	(12,971)	(12,372)	(11,732)	23	(1,021)
28.	2020	Actuarial Gain	(114,145)	(112,525)	(106,703)	24	(9,141)
29.	2020	Assumption Change	(249,721)	(246,179)	(233,441)	24	(19,998)
30.	2020	Plan Change	64,519	63,604	60,313	24	5,167
31.	2021	Actuarial Gain	(438,160)	(438,160)	(438,160)	25	(36,996)
32.	2021	Assumption Change	(44,778)	<u>(44,778)</u>	<u>(44,778)</u>	25	<u>(3,781)</u>
Scheduled Amortization Payment							\$184,102
Outstanding Bases				\$1,959,163	\$1,832,800		
Unfunded Accrued Liability					1,832,800		

Projected Unfunded Accrued Liability and Amortization Payments

Plan Year Beginning October 1	Total Outstanding Bases	Total Amortization Payment
2021	\$1,832,800	\$184,102
2022	1,774,823	184,102
2023	1,712,412	184,102
2024	1,645,225	184,102
2025	1,572,899	184,102
2026	1,495,040	184,102
2027	1,411,225	184,102
2028	1,320,998	184,102
2029	1,223,868	184,102
2030	1,119,309	184,102
2031	1,006,750	184,102
2032	885,580	184,102
2033	755,141	184,102
2034	614,724	184,110
2035	463,556	132,905
2036	355,947	160,138
2037	210,788	142,758
2038	73,234	131,528
2039	(62,753)	109,989
2040	(185,957)	56,474
2041	(260,977)	(37,464)
2042	(240,611)	(79,818)
2043	(173,093)	(77,738)
2044	(102,650)	(64,784)
2045	(40,763)	(40,763)
2046	0	0

Actions Taken to Reduce Unfunded Actuarial Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded actuarial accrued liability. This payment is designed to reduce the unfunded actuarial accrued liability in an orderly fashion over the next 25 years.

Minimum Funding Requirements

Determination of Required Contribution

Valuation as of October 1, Funding for Year Ending September 30,	2020 2022	2021 2023
1. Minimum Required Contribution		
a. Total Normal Cost	\$402,916	\$395,980
b. Amortization of Unfunded Accrued Liability	<u>238,590</u>	<u>184,102</u>
c. Beginning of Year Contribution	\$641,506	\$580,082
d. Interest	<u>70,955</u>	<u>67,125</u>
e. Minimum Required Contribution	\$712,461	\$647,207
2. Contribution by Source - \$ Amount		
a. City Policy Contribution	\$444,860	\$326,385
b. Expected State Contribution	140,547	185,590
c. Expected Member Contributions	<u>127,054</u>	<u>135,232</u>
d. Total	\$712,461	\$647,207
3. Contribution by Source - % Pay		
a. City Policy Contribution	24.51 %	16.89 %
b. Expected State Contribution	7.74 %	9.61 %
c. Expected Member Contributions	<u>7.00 %</u>	<u>7.00 %</u>
d. Total	39.25 %	33.50 %
5. Valuation Payroll	\$1,815,053	\$1,931,890
6. Net Assumed Rate of Return		
a. Net Assumed Rate of Return	7.75 %	7.65 %
b. Assumed Valuation Payroll Increase	0.00 %	0.00 %

Note: The \$326,385 minimum funding requirement for fiscal 2023 must be deposited on December 15, 2022. The actual premium tax distribution for the fiscal years ending September 30, 2022 and 2023 are not yet known. If state contributions are less than expected the City contributions must be increased to make up the difference.

Reconciliations

Reconciliation of Funded Status

	Unfunded Accrued Liability	Funded Percentage	Change in Unfunded Accrued Liability	Change in Funded Percentage
As of Prior Valuation	\$2,505,041	83.92 %		
Changes in due to:				
Normal Operation of Plan	2,315,738	85.59 %	\$(189,303)	1.67 %
Investment Experience	1,890,111	88.24 %	(425,627)	2.65 %
Demographic Experience	1,877,578	88.31 %	(12,533)	0.07 %
Revise Salary Scale	1,672,540	89.45 %	(205,038)	1.14 %
Net Return 7.65%	1,832,800	88.56 %	<u>160,260</u>	<u>(0.89)%</u>
Total Changes			\$(672,241)	4.64 %
As of Current Valuation	\$1,832,800	88.56 %		

Reconciliation of City Minimum Funding Requirement

	Dollar Amount	% of Pay
City Required Contribution for Fiscal 2022	\$444,860	24.51 %
Changes in Contribution due to:		
Normal Operation of Plan	\$0	0.00 %
Change in Expenses	4,917	0.27 %
Change in State \$	(42,429)	(2.34)%
Investment Experience	(39,608)	(2.18)%
Demographic Experience	(3,707)	(1.42)%
Revise Salary Scale	(57,918)	(3.00)%
Net Return 7.65%	<u>20,270</u>	<u>1.05 %</u>
Total Changes	\$(118,475)	(7.62)%
City Required Contribution for Fiscal 2023	\$326,385	16.89 %

Note: The City required contributions shown above must be deposited on December 15.

Section
3

Accounting Information

Information Required by GASB 67/68

A supplemental report provides information under the Governmental Accounting Standards Board No. 67/68.

Statement of Accumulated Plan Benefits

The following table is based on prior accounting standards and is required by the State. The present value of accrued benefits is an estimate of the liability for all benefits accrued to date.

Valuation as of October 1,	2020	2021
1. Actuarial present value of accumulated benefits		
a. Participants currently receiving benefits	\$10,491,255	\$11,037,280
b. Other participants	<u>3,230,998</u>	<u>3,064,688</u>
c. Vested participants	\$13,722,253	\$14,101,968
d. Nonvested participants	<u>700,259</u>	<u>857,491</u>
e. Total	\$14,422,512	\$14,959,459
2. Change in actuarial present value of accumulated benefits		
a. Actuarial present value of accumulated benefits beginning of year		\$14,422,512
b. Increase (decrease) during year attributable to:		
i. Plan amendment		\$0
ii. Change in assumptions or methods		146,114
iii. Increase for interest and probability of payment due to decrease in discount period and benefits accrued		1,427,884
iv. Benefits paid		(1,037,051)
v. Other		<u>0</u>
vi. Net increase (decrease)		\$536,947
c. Actuarial present value of accumulated benefits end of year		\$14,959,459

Other Disclosures Required by the State of Florida

Valuation as of October 1,	2020	2021
Present value of active member:		
Future salaries (attained age)	\$15,871,394	\$16,843,211
Future contributions (attained age)	\$1,110,998	\$1,179,025
Balance of contributions with interest for actives	\$1,167,129	\$1,145,028

Required Disclosure Under F.S. 112.664(1)

As required under F.S. Section 112.664(1) we have produced the following information:

- (a) Total pension liability calculated based on mortality used in one of the last two Florida Retirement System (FRS) valuations. This actuarial valuation assumes mortality as used in the July 1, 2019 and 2020 actuarial valuations for special risk members of FRS.
- (b) Total pension liability calculated using an assumed interest rate that is 200 basis points lower than that assumed in the valuation of the Plan.
- (c) Determination of the number of months or years for which the current market value of assets is adequate to sustain the payment of expected retirement benefits.
- (d) Recommended contribution to the Plan using the most recent valuation and the contributions necessary prepared pursuant to (a) and (b) stated as a dollar amount and % of payroll.

	2% Decrease (5.65%)	Current Discount Rate (7.65%)	2% Increase (9.65%)
Total pension liability	\$19,902,836	\$16,014,866	\$13,270,562
Plan fiduciary net position	<u>(15,517,529)</u>	<u>(15,517,529)</u>	<u>(15,517,529)</u>
Net pension liability	<u>\$4,385,307</u>	<u>\$497,337</u>	<u>\$(2,246,967)</u>
Plan fiduciary net position as a percentage of the total pension liability	77.97%	96.89%	116.93%
Years of benefit payments:			
Expected for current members:	100	100	100
Paid for with current assets:	17.92	23.87	100.00
City Plus State Contribution Requirement, Plus Expected Employee Contributions			
Dollar Amount	\$1,098,672	\$647,207	\$339,553
Percent of Payroll	56.87%	33.50%	17.58%

Required Disclosure Under F.S. 112.664(2)(b)2.

F.S. Section 112.664(2)(b)2. - For the previous five years, beginning with 2013, a side-by-side comparison of the plan's assumed rate of return compared to the actual rate of return, as well as the percentages of cash, equity, bond and alternative investments in the plan portfolio.

Year Ending September 30,	2021	2020	2019	2018	2017
Assumed rate of return	7.75%	7.8%	7.8%	7.9%	7.9%
Actual rate of return	20.3%	10.7%	3.5%	9.6%	12.2%
Percentages of assets in:					
Cash	2%	2%	1%	3%	3%
Equity	69%	71%	70%	74%	72%
Bond	17%	18%	19%	18%	20%
Alternative	12%	9%	10%	5%	5%
Total	100%	100%	100%	100%	100%

Section 4 Supplementary Information

Summary of Participant Data

Member Statistics

Valuation as of October 1,	2020	2021
<u>Active Participants</u>		
Number	36	37
Average Age	36.7	35.9
Average Credited Service	7.5	7.3
Percent Male	97.2	97.3
Average Valuation Salary	\$52,562	\$54,482
Total Valuation Salary	\$1,892,240	\$2,015,837
Payroll Covered in Valuation	\$1,815,053	\$1,931,890
<u>Terminated with Rights to Deferred Benefits</u>		
Number	5	5
Average Age	42.6	43.6
Percent Male	100.0	100.0
Average Monthly Benefit	\$1,630	\$1,630
Total Benefits	\$97,824	\$97,824
<u>Retirements (DROP and Service Retirees)</u>		
Number	22	23
Average Age	61.0	61.6
Percent Male	100.0	100.0
Average Monthly Benefit	\$3,359	\$3,422
Total Benefits	\$886,889	\$944,571
Total of DROP Account Balances September 30	\$478,125	\$443,303
<u>Beneficiaries</u>		
Number	1	1
Average Age	60.4	61.4
Percent Male	0.0	0.0
Average Monthly Benefit	\$1,120	\$1,120
Total Benefits	\$13,440	\$13,440
<u>Disability Retirements</u>		
Number	1	1
Average Age	59.7	60.7
Percent Male	100.0	100.0
Average Monthly Benefit	\$722	\$722
Total Benefits	\$8,663	\$8,663

Number of Active Members by Age and Service as of October 1, 2021

Age	Service							Total	
	< 1	< 5	< 10	< 15	< 20	< 25	< 30		< 35
< 25	4	2							5
< 30	3	2	2						7
< 35		6	2						8
< 40			4	2					6
< 45			1		1				2
< 50			1		1	1			3
< 55						1	1		2
< 60			1		1				2
< 65		1							1
Total	7	11	11	2	3	2	1		37

Active Valuation Pay by Age and Service as of October 1, 2021

Age	Service							Total	
	<1	<5	<10	<15	<20	<25	<30		<35
< 25	41,456	43,337							42,083
< 30	41,525	45,453	46,220						43,989
< 35		45,046	56,881						48,005
< 40			54,577	68,671					59,275
< 45			53,645		70,482				62,063
< 50			62,983		61,836	69,235			64,685
< 55						73,492	90,304		81,898
< 60			53,645		83,947				68,796
< 65		96,160							96,160
Total	41,486	49,456	54,071	68,671	72,088	71,363	90,304		54,482

DROP Balance Reconciliation

Year Ending September 30,	2020	2021
1. Beginning Balance	\$377,182.04	\$478,125.39
2. Additions	\$139,010.52	\$106,458.02
3. Interest	\$28,094.06	\$61,811.72
4. Distributions	\$66,161.23	\$203,092.01
5. Ending Balance	\$478,125.39	\$443,303.12

Reconciliation of Plan Participants

	Active	Retired	DROP	Deferred Vested	Disabled	Survivor	Total
October 1, 2020	36	19	3	5	1	1	65
Retired		1	-1				0
DROP Entrant	-1		1				0
Terminated Vested							0
Nonvested Termination	-5						-5
Death							0
Additions	7						7
October 1, 2021	37	20	3	5	1	1	67

Outline of Plan Provisions

Plan Type: Single-employer Defined Benefit Pension Plan

Effective Date: November 1, 1969. Plan amendment and restatement adopted December 4, 2019 effective December 14, 2019 with Ordinance No. 1763-2019. Subsequently amended by Ordinance No. 1768-2019, 1770-2020, 1774-2020, 1778-2020, 1793-2020, and 1818-2021.

Plan Administrator: The Board of Trustees

Board Composition: Two members are elected from among the fire employees of the City, who are members of the plan, two city residents appointed by the Commission and one person is chosen by a majority of the previous four members.

Funding Requirements: Employer contributions are actuarially determined and subject to State statute. Employee contributions are as described below and may be amended by ordinance.

Plan Year: The 12-month period from October 1st to the next September 30th.

Member: Full-time firefighters participate in the Plan immediately upon hire.

Credited Service: Employee service computed in years and completed calendar months. See Ordinance 1778-2020 regarding the "cross-credit" of service.

Members may purchase a total of 5 years of combined Credited Service for eligible military service or fire service prior to employment with the City and receive credit for that time upon full payment and vesting in the Plan.

Vesting: Members become 100% vested after earning 10 years of Credited Service.

Basic Compensation: Total compensation actually paid in a Plan Year by the City including tax deferred compensation and excluding overtime, commissions, bonuses, expense allowances and payment for accrued annual leave, accrued sick leave, and accrued compensatory leave.

Employee Contributions: 7.0% of Basic Compensation. Members receive benefits under the Plan no less than the value of their accumulated Employee Contributions with interest.

Members who terminate non-vested are entitled to the return of Employee Contributions accumulated with interest to the first day of the month in which termination occurs. The interest rate for accumulation was 5% from October 1, 1984 until October 1, 2019 when it was revised to 1.5%. Prior to October 1, 1984 a different interest rate was credited to Employee Contributions.

Average Monthly Compensation: The sum of the highest five successive Plan Years of Basic Compensation in the last ten Plan Years of employment divided by 60.

Normal Retirement Date: The first day of the month coincident with or next following the earlier of attainment of age 52 and 25 years of Credited Service or age 55 and 10 years of Credited Service.

Accrued Benefit: The amount of monthly retirement income payable at the Normal Retirement Date is determined according to the following formulas, but no less than 2% x Average Monthly Compensation x Credited Service. For Members hired before October 1, 2012, the amount of monthly retirement income payable at the Normal Retirement Date is determined according to the following formula:

3% x Average Monthly Compensation x Credited Service up to 25 years

Plus

1.5% x Average Monthly Compensation x Credited Service between 25 and 30 years

Per Ordinance No. 1818-2021 adopted May 19, 2021, the accrued benefit for Members hired on or after October 1, 2012 is determined according to the following formula:

3.00% x Average Monthly Compensation x Credited Service up to 25 years (Maximum 75%)

Prior to Ordinance No. 1818-2021 the accrued benefit for Members hired on or after October 1, 2012 was as follows:

2.75% x Average Monthly Compensation x Credited Service up to 25 years

Plus

1.25% x Average Monthly Compensation x Credited Service between 25 and 30 years

The Accrued Benefit is payable in the form of a 10-year certain and continuous annuity. However, any member with a spouse shall receive an actuarially equivalent 50% joint and survivor annuity unless the member chooses another Optional Form of Retirement Income.

Members who terminate employment 100% vested prior the Normal Retirement Date are eligible to receive their Accrued Benefit once the age requirements for the Normal Retirement Date are met, provided Employee Contributions remain in the Plan.

Late Retirement Benefit: The amount of monthly retirement income payable to a Member who retires after the Normal Retirement Date is the greater of (i) the monthly retirement income which can be provided by the single-sum value of the Accrued Benefit payable if he had retired at the Normal Retirement Date, accumulated with interest from the Normal Retirement Date to the date the monthly retirement income payments are to commence, and (ii) the monthly retirement income computed as described for the Accrued Benefit using Credited Service and Average Monthly Compensation determined at the Member's actual retirement date.

Early Retirement Date: The first day of the month coincident with or next following the date an employee retires prior to the Normal Retirement Date after the earlier of attainment of age 45 and 25 years of Credited Service or age 50 and 10 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit is reduced for commencement earlier than the Normal Retirement Date at a rate of 0.25% per month. However, the minimum monthly retirement income for a Member who retires before the Normal Retirement Date with 25 years Credited Service is 50% x Average Monthly Compensation.

Members who terminate employment 100% vested prior to reaching the Early Retirement Date age requirements may elect to receive an Early Retirement Benefit once the age requirements are met, provided Employee Contributions remain in the Plan.

Members who terminate employment 100% vested prior the Normal Retirement Date but on or after their Early Retirement Date but do not commence receipt of an Early Retirement Benefit at that time will receive a monthly retirement income not less than the monthly retirement income which can be provided by the single-sum value of the monthly early retirement income which would have been payable if he had

retired immediately upon termination, accumulated with interest from termination to the date the monthly retirement income payments are to commence.

Members who recover from Disability Retirement and who were eligible for an Early Retirement Benefit at the date of disability may elect to receive this benefit upon recovery from disability.

Disability Retirement: This benefit is payable from the first day of the month coincident with or next following the date the Retirement Committee approves the Member's Disability Retirement. The benefit is payable in the form of a 10 year certain and continuous annuity. The last payment is that due next preceding the earlier of (1) the date of recovery prior to the Normal Retirement Date and (2) the later of the date of death or the 120th payment. The amount of monthly retirement income is determined as follows:

(a) Non-Line of Duty: Members with less than 10 years of Credited Service upon disability receive a monthly retirement income which can be provided by the greater of (i) the single-sum value of the Accrued Benefit and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding disability. The monthly retirement income which can be provided by (ii) is limited to 60% x Anticipated Monthly Retirement Income at the Normal Retirement Date. In no event shall the benefit payable be less than the benefit required under section 175.191 of the Florida Statutes.

(b) Non-Line of Duty: Members with 10 years of Credited Service or more upon disability receive a monthly retirement income which is the greater of (i) the monthly retirement income which can be provided by the single-sum value of the Accrued Benefit and (ii) 30% x Basic Compensation paid in the Plan Year immediately preceding disability where the single-sum value of this monthly amount does not exceed 100 x the Anticipated Monthly Retirement Income at the Normal Retirement Date. In no event shall the benefit payable be less than the benefit required under section 175.191 of the Florida Statutes.

(c) Line of Duty: Members receive a monthly retirement income which is 50% x Basic Compensation paid in the Plan Year immediately preceding disability where the single-sum value of this monthly amount does not exceed 100 x the Anticipated Monthly Retirement Income at the Normal Retirement Date. In no event shall the benefit payable be less than the benefit required under section 175.191 of the Florida Statutes.

Members who recover from disability and re-enter the service of the City within 30 days of recovery will be deemed to have continuous service except that the period beginning with the first month for which Disability Retirement income was received and ending with the date of service re-entry is not considered as Credited Service.

Anticipated Monthly Retirement Income at the Normal Retirement Date: Determined as described for the Accrued Benefit, but instead using Anticipated Credited Service and Anticipated Average Monthly Compensation. Anticipated Credited Service is employee service computed in years and completed calendar months as if the member remains employed to the Normal Retirement Date. Anticipated Average Monthly Compensation is computed assuming that the last complete Plan Year of Basic Compensation is paid in each Plan Year, without change, to the Normal Retirement Date.

Survivor Benefit at Death of Disabled Member Prior to Disability Retirement: The designated beneficiary of a disabled Member who dies prior to receipt of Disability Retirement benefits is eligible to receive a monthly retirement income payable in the form of a 10 year certain and continuous annuity payable commencing on the first of the month coincident with or next following the date of the disabled Member's death. The designated beneficiary will receive a monthly retirement income which can be provided by the greater of (i) the single-sum value of the Accrued Benefit and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding disability not more than 100 x Anticipated Monthly Retirement Income at the Normal Retirement Date.

Survivor Benefit at Death of Vested Terminated Members: The designated beneficiary of vested Member who dies prior to retirement is eligible to receive a monthly retirement income payable in the form of a 10 year certain and continuous annuity payable commencing on the first of the month coincident with or next following the Member's death, which can be provided by the single-sum value of the Member's Accrued Benefit or Early Retirement Benefit.

Survivor Benefit at Death of Active Employee Prior to Normal Retirement Date: The designated beneficiary of a Member who dies while in active service prior to the Normal Retirement Date is eligible to receive, commencing on the first of the month coincident with or next following the Member's death, a monthly retirement income (payable in the form of a 10 year certain and continuous annuity) which can be provided by the greater of (i) the single-sum value of the Accrued Benefit as of the date of death, not less than the single-sum value of the Early Retirement Benefit which would have been payable if the Member had retired early on the date of death, and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding death not more than 100 x Anticipated Monthly Retirement Income at the Normal Retirement Date.

Survivor Benefit at Death of Active Employee After Normal Retirement Date: The designated beneficiary of a Member who dies while in active service after the Normal Retirement Date is eligible to receive, commencing on the first of the month coincident with or next following the Member's death, a monthly retirement income (payable in the form of a 10 year certain and continuous annuity) which can be provided by the single-sum value of the Late Retirement Benefit.

Optional Forms of Retirement Income: In addition to the 10 year certain and continuous form of annuity, also available under the terms of the Plan are the life only annuity and the joint and 50%, 66 2/3%, 75%, or 100% survivor annuity. With the joint and survivor options, the member may also elect the pop-up feature. The Plan also allows for other amounts and forms of retirement income that will meet the circumstances of the Participant, in the opinion of the Retirement Committee, and will not substantially affect the actuarial soundness of the Plan.

Deferred Retirement Option Program (DROP): Members are eligible to enter the DROP at the Normal Retirement Date. The Accrued Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates with interest in the DROP account and is payable as a single-lump sum (or as an actuarially equivalent annuity) upon DROP exit. The DROP account earns interest at a rate equal to the funds net rate of investment return minus 1% in administration fees, unless the DROP participant, as a one-time irrevocable option, elects a self-directed DROP as approved by the board of trustees. The maximum DROP participation duration is 5 years and participation will end if the employee resigns, dies or is terminated with cause prior to completion of the 5 years.

Defined Contribution (DC) Component: Ordinance 1709-2017 was adopted effective June 7, 2017 creating a DC component which will be funded by a portion of the premium tax revenues if the City and the collective bargaining representative do not reach mutual consent to use the premium tax revenues for an alternative means.

Description of Assumptions and Methods

Assumed Rate of Investment Return: 7.65% per year, net of investment expenses (revised from 7.75% used in the prior actuarial valuation).

Inflation: 2.0% per year. Note this assumption is not used directly in the valuation.

Salary Increase – Individual: Whereas the salary increase assumption at October 1, 2020 was 6.0% per year at all service levels, the assumption has been revised for this October 1, 2021 actuarial valuation to be 6.0% per year for 0-10 years of service and 4.5% per year at service levels over 10 years.

Salary Increase – Total Payroll: Based on individual salary increase assumptions and other decrements assumed in the valuation of Plan liabilities.

Unfunded accrued liability is amortized as a level dollar amount.

Mortality: Mortality rates are those required by state statute. Mortality is as assumed for the Florida Retirement System (FRS) valuation as of July 1, 2019 and 2020 for special risk employees, as follows:

The following sex distinct tables are used with fully generational mortality improvements using sex distinct Scale MP-2018.

Active: Male: PubS.H-2010(B) male employee set forward 1 year
 Female: PubS.H-2010 female employee set forward 1 year
 Healthy Retiree: Male: PubS.H-2010(B) male healthy retiree set forward 1 year
 Female: PubS.H-2010 female healthy retiree set forward 1 year

The following sex distinct tables are used with no mortality improvement projection.

Disabled Retiree: Male: 80% PubG.H-2010 male disabled retiree
 + 20% PubS.H-2010 male disabled retiree
 Female: 80% PubG.H-2010 female disabled retiree
 + 20% PubS.H-2010 female disabled retiree

Juvenile rates are used for ages 15-17.

The active tables reference the healthy retiree rates, above, at ages 80+.

The healthy retiree tables reference the active mortality rates, above, before age 44.

Retirement: 100% at the earlier of age 55 with 10 years of service or age 52 with 25 years of service.

Termination: Unisex rates based on the experience of the Rockledge firefighters from 1999 through 2005, as follows:

Service	Rate	Service	Rate	Service	Rate	Service	Rate
0	0.2000	7	0.0500	14	0.0175	21	0.0100
1	0.2000	8	0.0250	15	0.0175	22	0.0100
2	0.2000	9	0.0250	16	0.0175	23	0.0100
3	0.2000	10	0.0250	17	0.0150	24	0.0100
4	0.1000	11	0.0200	18	0.0150	>=25	0.0000
5	0.0500	12	0.0200	19	0.0150		
6	0.0500	13	0.0200	20	0.0100		

Disability: Sex distinct rates as used for special risk employees in the Florida Retirement System actuarial valuation report as of July 1, 2005. Linear interpolation has been used between the rates shown in five year age increments, as follows:

Age	Line-of-Duty		Age	Not Line-of-Duty	
	Male	Female		Male	Female
20	0.012%	0.008%	20	0.037%	0.036%
25	0.012%	0.008%	25	0.037%	0.036%
30	0.017%	0.016%	30	0.043%	0.046%
35	0.029%	0.037%	35	0.055%	0.075%
40	0.051%	0.068%	40	0.087%	0.118%
45	0.087%	0.106%	45	0.140%	0.259%
50	0.138%	0.153%	50	0.292%	0.318%
55	0.215%	0.230%	55	0.446%	0.492%
60	0.301%	0.285%	60	0.628%	0.597%
65+	0.231%	0.143%	65+	0.698%	0.380%

Funding Method: Entry Age Normal (level percent of salary)

A description of the funding method is found on the next page entitled "Glossary of Actuarial Terms."

Glossary of Actuarial Terms

Present Value of Benefits (PVB): The present value, as of the valuation date, of all benefits that will become payable by the Plan for the current group of members in the census.

Normal Cost (NC): Under the Individual Entry Age Normal Cost Method, the annual normal cost for each individual active member is determined as the amount, from the date of employment to the date of retirement, sufficient to accumulate the value of the member's benefit at the time of retirement. The annual normal cost is a constant percentage of the member's projected covered pay.

Accrued Liability (AL): This is the portion of the PVB attributable to the past at the valuation date. For active members, AL is the annual NC accumulated from date of entry to the valuation date for each member. For retired and terminated members, the PVB and the AL are equal. The AL is the estimated liability owed by the pension fund at the valuation date.

Unfunded Accrued Liability (UAL): Any excess of the Accrued Liability over the fund assets. A negative UAL indicates fund assets are greater than the Accrued Liability, otherwise known as a surplus. Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Actuarial Value of Assets: The value of assets used in the actuarial valuation of the Plan which is compared to the AL to determine the UAL and minimum funding requirements. A method may be used to smooth out short term volatility in the fair market value of assets. In this valuation, the Actuarial Value of Assets has been calculated to smooth out unexpected fluctuations in the fair market value of assets over a 5-year period.