

CITY OF PENSACOLA
POLICE OFFICERS' RETIREMENT PLAN
ACTUARIAL VALUATION
AS OF OCTOBER 1, 2020
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2022
GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2020



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

February 23, 2021

Board of Trustees
City of Pensacola
Police Officers' Pension Board

Re: City of Pensacola Police Officers' Retirement Plan

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Pensacola Police Officers' Retirement Plan. Included are the related results for GASB Statements No. 67 and No. 68. The funding 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. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuations have 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 reflect laws and regulations issued to date pursuant to the provisions of Chapters 112 and 185, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuations, 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 valuations, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City of Pensacola, 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.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2019. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2020 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

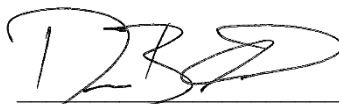
The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Pensacola, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police Officers' 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.


Drew D Ballard, EA, MAAA
Enrolled Actuary #20-8193


Sara E. Carlson, ASA, EA, MAAA
Enrolled Actuary #20-8546

Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Pensacola Police Officers' Retirement Plan, performed as of October 1, 2020, 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, 2022.

The contribution requirements, compared with those set forth in the October 1, 2019 actuarial valuation report, are as follows:

Valuation Date	10/1/2020	10/1/2019
Applicable to Fiscal Year Ending	<u>9/30/2022</u>	<u>9/30/2021</u>
Minimum Required Contribution	\$4,805,703	\$4,978,986
Member Contributions (Est.)	214,132	221,410
City And State Required Contribution	4,591,571	4,757,576
State Contribution (Est.) ¹	623,811	623,811
City Required Contribution ²	\$3,967,760	\$4,133,765

¹ Represents the amount received in calendar 2020.

² The City has access to the September 30, 2020 Contribution Surplus Account Balance of \$878,884.41 to help offset a portion of the above stated requirements for fiscal 2021. Please see page 17 of this report for detail of the account balance reconciliation.

As you can see, the Minimum Required Contribution shows a decrease when compared to the results determined in the October 1, 2019 actuarial valuation. The decrease is attributable to a change in the mortality assumption. The decrease was offset in part by unfavorable actuarial experience.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an average salary increase of 8.58% which exceeded the 4.00% assumption and more retirements than expected. These losses were offset in part by gains associated with an investment return of 7.44% (Actuarial Asset Basis) which exceeded the 7.125% assumption and an annual cost-of-living adjustment for the retirees that was lower than the assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

As mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the rates used in Milliman's July 1, 2019 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

There have been no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>10/1/2020</u>	Old Assump <u>10/1/2020</u>	<u>10/1/2019</u>
A. Participant Data			
Actives	62	62	67
Service Retirees	123	123	116
DROP Retirees	9	9	12
Beneficiaries	25	25	26
Disability Retirees	15	15	15
Terminated Vested	<u>15</u>	<u>15</u>	<u>14</u>
Total	249	249	250
Covered Non-DROP Payroll	3,959,536	3,959,536	4,094,123
Annual Rate of Payments to:			
Service Retirees	5,832,758	5,832,758	5,452,115
DROP Retirees	595,375	595,375	714,524
Beneficiaries	631,287	631,287	606,730
Disability Retirees	278,051	278,051	273,403
Terminated Vested	174,131	174,131	130,199
B. Assets			
Actuarial Value (AVA) ¹	110,431,718	110,431,718	105,137,476
Market Value (MVA) ¹	111,724,639	111,724,639	105,137,476
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	30,466,914	30,682,740	29,636,326
Disability Benefits	2,814,026	2,667,543	2,853,193
Death Benefits	366,441	487,423	526,662
Vested Benefits	564,686	561,635	631,575
Refund of Contributions	15,653	15,654	19,375
Service Retirees	86,636,417	88,236,492	83,395,235
DROP Retirees ¹	11,530,440	11,605,583	14,163,795
Beneficiaries	6,960,909	7,073,673	6,733,766
Disability Retirees	3,632,866	3,617,685	3,636,721
Terminated Vested	<u>1,399,194</u>	<u>1,397,013</u>	<u>1,066,597</u>
Total	144,387,546	146,345,441	142,663,245

C. Liabilities - (Continued)	New Assump <u>10/1/2020</u>	Old Assump <u>10/1/2020</u>	<u>10/1/2019</u>
Present Value of Future Salaries	25,730,469	25,699,257	27,697,322
Present Value of Future Member Contributions	1,337,984	1,336,361	1,440,261
Normal Cost (Retirement)	588,974	591,831	618,415
Normal Cost (Disability)	116,008	109,733	120,193
Normal Cost (Death)	14,329	18,455	20,273
Normal Cost (Vesting)	34,813	34,539	34,972
Normal Cost (Refunds)	<u>3,346</u>	<u>3,346</u>	<u>3,141</u>
Total Normal Cost	757,470	757,904	796,994
Present Value of Future Normal Costs	4,841,129	4,837,439	5,279,504
Accrued Liability (Retirement)	26,622,908	26,823,683	25,460,786
Accrued Liability (Disability)	2,056,845	1,954,245	2,053,042
Accrued Liability (Death)	272,714	367,501	391,394
Accrued Liability (Vesting)	426,905	424,908	473,444
Accrued Liability (Refunds)	7,219	7,219	8,961
Accrued Liability (Inactives) ¹	<u>110,159,826</u>	<u>111,930,446</u>	<u>108,996,114</u>
Total Actuarial Accrued Liability (EAN AL)	139,546,417	141,508,002	137,383,741
Funded Ratio (AVA / EAN AL)	79.1%	78.0%	76.5%
Unfunded Actuarial Accrued Liability (UAAL)	29,114,699	31,076,284	32,246,265
Contribution Surplus Account	878,884	878,884	769,559
Total Amortization Charge	29,993,583	31,955,168	33,015,824
Amortization Amount	3,793,398	3,996,035	3,920,492

D. Actuarial Present Value of Accrued Benefits	New Assump <u>10/1/2020</u>	Old Assump <u>10/1/2020</u>	<u>10/1/2019</u>
Vested Accrued Benefits			
Inactives ¹	110,159,826	111,930,446	108,996,114
Actives	14,921,273	15,035,904	14,361,007
Member Contributions	<u>1,636,382</u>	<u>1,636,382</u>	<u>1,578,390</u>
Total	126,717,481	128,602,732	124,935,511
Non-vested Accrued Benefits	<u>4,168,538</u>	<u>4,175,351</u>	<u>3,948,751</u>
Total Present Value Accrued Benefits (PVAB)	130,886,019	132,778,083	128,884,262
Funded Ratio (MVA / PVAB)	85.4%	84.1%	81.6%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(1,892,064)	0	
Plan Experience	0	2,523,778	
Benefits Paid	0	(7,544,199)	
Interest	0	8,914,242	
Other	<u>0</u>	<u>0</u>	
Total	(1,892,064)	3,893,821	

Valuation Date	New Assump 10/1/2020	Old Assump 10/1/2020	10/1/2019
Applicable to Fiscal Year Ending	<u>9/30/2022</u>	<u>9/30/2022</u>	<u>9/30/2021</u>

E. Pension Cost

Normal Cost ²	\$787,769	\$788,220	\$828,874
Administrative Expenses ²	72,800	72,800	72,800
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 15 years (as of 10/1/2020) ²	3,945,134	4,155,876	4,077,312
Minimum Required Contribution	4,805,703	5,016,896	4,978,986
Expected Member Contributions ²	214,132	214,132	221,410
Expected City and State Contribution	4,591,571	4,802,764	4,757,576

F. Past Contributions

Plan Years Ending:	<u>9/30/2020</u>
City and State Requirement	4,822,795
Actual Contributions Made:	
City	4,254,519
State	<u>623,811</u>
Total	4,878,330

G. Net Actuarial (Gain)/Loss

1,021,555

¹ The asset values and liabilities include accumulated DROP Plan Balances as of 9/30/2020 and 9/30/2019.

² Contributions developed as of 10/1/2020 displayed above have been adjusted to account for assumed salary increase components.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2020	29,993,583
2021	28,066,949
2022	26,003,041
2025	18,886,342
2029	6,796,109
2035	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2020	8.58%	4.00%
Year Ended 9/30/2019	7.80%	4.00%
Year Ended 9/30/2018	5.49%	4.00%
Year Ended 9/30/2017	4.39%	4.00%
Year Ended 9/30/2016	3.03%	4.00%

(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 9/30/2020	8.50%	7.44%	7.125%
Year Ended 9/30/2019	4.15%	7.96%	7.125%
Year Ended 9/30/2018	9.92%	9.46%	7.125%
Year Ended 9/30/2017	13.48%	9.18%	7.125%
Year Ended 9/30/2016	10.96%	7.25%	7.125%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2020	\$3,959,536
	10/1/2010	6,966,752
(b) Total Increase		-43.17%
(c) Number of Years		10.00
(d) Average Annual Rate		-5.49%

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.



Drew D. Ballard, EA, MAAA
Enrolled Actuary #20-8193

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

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2019	\$32,246,265
(2)	Sponsor Normal Cost developed as of October 1, 2019	584,100
(3)	Expected administrative expenses for the year ended September 30, 2020	70,000
(4)	Expected interest on (1), (2) and (3)	2,341,657
(5)	Sponsor contributions to the System during the year ended September 30, 2020	4,878,329
(6)	Expected interest on (5)	308,964
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2020 (1)+(2)+(3)+(4)-(5)-(6)	30,054,729
(8)	Change to UAAL due to Assumption Change	(1,961,585)
(9)	Change to UAAL due to Actuarial (Gain)/Loss	1,021,555
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2020	29,114,699
(11)	Contribution Surplus Account as of October 1, 2020	878,884
(12)	Total Amortization Charge as of October 1, 2020	29,993,583

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2020 <u>Amount</u>	Amortization <u>Amount</u>
		11	32,003,312	4,008,844
Actuarial Gain	10/1/2018	13	(667,858)	(75,124)
Actuarial Loss	10/1/2019	14	70,937	7,629
Method Change	10/1/2019	14	(472,778)	(50,843)
Actuarial Loss	10/1/2020	15	1,021,555	105,529
Assump Change	10/1/2020	15	(1,961,585)	(202,637)
			<u>29,993,583</u>	<u>3,793,398</u>

PROJECTED OUTSTANDING AMORTIZATION BASES

Plan Year	Fiscal Year	Expected Outstanding Amortization Bases	Expected Amortization Payment	Expected Outstanding Amortization Bases on 9/30
9/30/2020	9/30/2022	29,993,583	3,793,398	28,066,949
9/30/2021	9/30/2023	28,066,949	3,793,398	26,003,041
9/30/2022	9/30/2024	26,003,041	3,793,398	23,792,080
9/30/2023	9/30/2025	23,792,080	3,793,398	21,423,589
9/30/2024	9/30/2026	21,423,589	3,793,398	18,886,342
9/30/2025	9/30/2027	18,886,342	3,793,398	16,168,317
9/30/2026	9/30/2028	16,168,317	3,793,398	13,256,634
9/30/2027	9/30/2029	13,256,634	3,793,398	10,137,491
9/30/2028	9/30/2030	10,137,491	3,793,398	6,796,109
9/30/2029	9/30/2031	6,796,109	3,793,398	3,216,654
9/30/2030	9/30/2032	3,216,654	3,793,396	(617,835)
9/30/2031	9/30/2033	(617,835)	(215,446)	(431,058)
9/30/2032	9/30/2034	(431,058)	(215,452)	(230,968)
9/30/2033	9/30/2035	(230,968)	(140,327)	(97,099)
9/30/2034	9/30/2036	(97,099)	(97,099)	0
9/30/2035	9/30/2037	0	0	

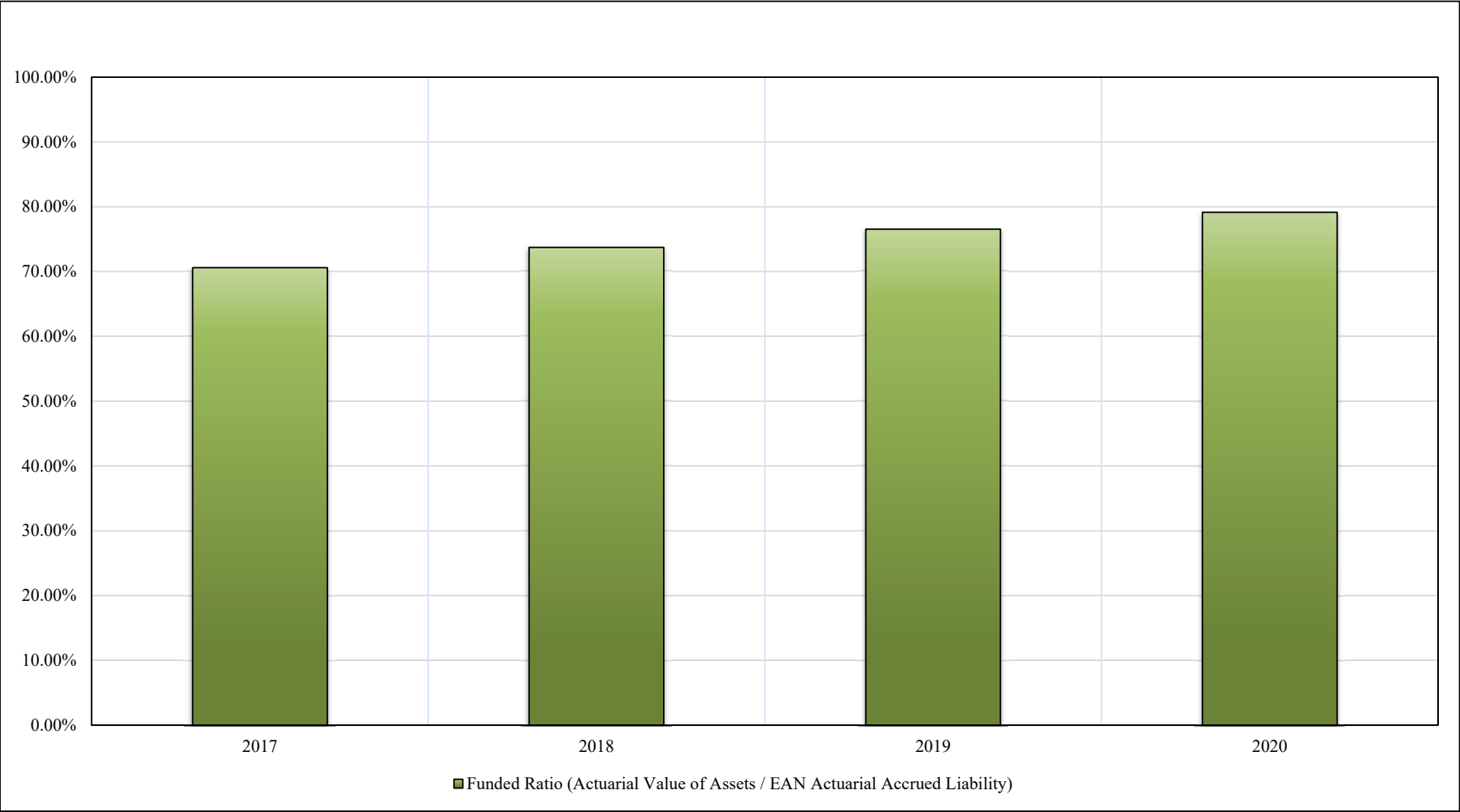
DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2019	\$32,246,265
(2) Expected UAAL as of October 1, 2020	30,054,729
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(323,229)
Salary Increases	1,139,736
Active Decrements	475,855
Inactive Mortality	41,318
Lower Than Expected Cost-of-Living Adjustment	(1,021,392)
Other	<u>709,267</u>
Increase in UAAL due to (Gain)/Loss	1,021,555
Assumption Changes	<u>(1,961,585)</u>
(4) Actual UAAL as of October 1, 2020	\$29,114,699

CONTRIBUTION SURPLUS ACCOUNT RECONCILIATION
October 1, 2019 through September 30, 2020

(1) 9/30/2019 Contribution Surplus Account Balance	769,559.08
(2) Minimum Required City and State Contribution for Plan Year Beginning 10/1/2019	4,822,795.00
(3) City Contributions Deposited on or around 10/1/2019	4,254,518.85
(4) State Contributions Deposited on 8/14/2020	623,810.51
(5) Shortfall/(Excess) Contribution for Plan Year Beginning 10/1/2019 (with interest) $\{[(2) - (3)] \times 1.07125\} - [(4) \times (1 + (0.07125 \times (48/365)))]$	(20,889.70)
(6) Actual Non-Investment Expenses for Plan Year Beginning 10/1/2019	38,630.53
(7) Expected Non-Investment Expenses for Plan Year Beginning 10/1/2019	70,000.00
(8) Interest at 7.125%	57,066.16
(9) 9/30/2020 Contribution Surplus Account Balance $(1) - (5) - [(6) - (7)] + (8)$	878,884.41

HISTORY OF FUNDING PROGRESS



ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: PubS.H-2010 (Below Median) for Employees, set forward one year. Prior year assumption: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: PubS.H-2010 (Below Median) for Employees, set forward one year. Prior year assumption: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Healthy Retiree Lives:

Female: PubS.H-2010 for Healthy Retirees, set forward one year. Prior year assumption: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: PubS.H-2010 for Healthy Retirees, set forward one year. Prior year assumption: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Beneficiary Lives:

Female: PubG.H-2010 for Healthy Retirees. Prior year assumption: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: PubG.H-2010 for Healthy Retirees, set back one year. Prior year assumption: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Disabled Lives:

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

Prior year assumption (Female): 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale

Prior year assumption (Male): 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

All rates 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, 2019 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

15% of active deaths are assumed to be service-incurred.

Interest Rate

7.125% 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

4.00% compounded annually. This assumption was utilized by the prior actuary.

Payroll Growth

0.00% for purposes of amortizing the Unfunded Actuarial Accrued Liability. This assumption cannot exceed the ten-year average payroll growth, in compliance with Part VII of Chapter 112, Florida Statutes.

Administrative Expenses

\$70,000 annually. This assumption was utilized by the prior actuary.

Retirement Rates

% Retiring During the Year		
Service	Age	Rate
< 25 Years	45 - 49	5%
	50 - 56	10%
	57	50%
	58	70%
	59	90%
	60	100%
25 Years	45 - 57	50%
	58	70%
	59	90%
	60	100%
26 - 29 Years	45 - 56	25%
	57	50%
	58	70%
	59	90%
	60	100%
30+ Years	All Ages	100%

The assumed rates of retirement were utilized by the prior actuary.

Termination Rates

% Terminating During the Year	
Age	Rate
25 - 39	6.0%
40 - 44	2.0%
45+	0.0%

The assumed rates of termination were utilized by the prior actuary.

Disability Rates

See sample rates in table that follows.

<u>Age</u>	<u>Probability of Disablement</u>
25	0.2387%
30	0.2800%
35	0.3867%
40	0.5733%
45	1.0600%
50	1.8467%
55	3.0600%
60	4.7867%
65	0.0000%

45% of disabilities are assumed to be in Line of Duty. The disability assumptions were utilized by the prior actuary.

Marriage

80% of active participants are assumed to be married with spouses three years younger. This assumption was utilized by the prior actuary.

Actuarial Asset Method

All assets are valued at market value with an adjustment 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.

Funding Method

Entry Age Normal Actuarial Cost Method.

The following loads are applied for determination of the Sponsor dollar funding requirement for the following year:

Interest – None; assuming an October 1 deposit.

Salary – A full year, based on the current 4.00% assumption.

Amortization Method

New UAAL amortization bases are amortized over 15 years.

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.

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 decreased from 40.3% on October 1, 2017 to 33.3% on October 1, 2020, indicating that the plan has been maturing during the period.
- 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 78.9%. 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 70.6% on October 1, 2017 to 79.1% on October 1, 2020.
- 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 -4.0% on October 1, 2017 to -2.2% on October 1, 2020. The current Net Cash Flow Ratio of -2.2% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks in this section 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>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>	<u>10/1/2020</u>
<u>Support Ratio</u>				
Total Actives	73	68	67	62
Total Inactives ¹	181	184	182	186
Actives / Inactives ¹	40.3%	37.0%	36.8%	33.3%

Asset Volatility Ratio

Market Value of Assets (MVA)	93,617,461	101,955,040	105,137,476	111,724,639
Covered Non-DROP Payroll	4,048,557	3,911,400	4,094,123	3,959,536
MVA / Covered Non-DROP Payroll	2,312.4%	2,606.6%	2,568.0%	2,821.7%

Accrued Liability (AL) Ratio

Inactive Accrued Liability	102,516,721	106,962,052	108,996,114	110,159,826
Total Accrued Liability (EAN)	128,266,462	132,865,529	137,383,741	139,546,417
Inactive AL / Total AL	79.9%	80.5%	79.3%	78.9%

Funded Ratio

Actuarial Value of Assets (AVA)	90,550,803	97,975,086	105,137,476	110,431,718
Total Accrued Liability (EAN)	128,266,462	132,865,529	137,383,741	139,546,417
AVA / Total Accrued Liability (EAN)	70.6%	73.7%	76.5%	79.1%

Net Cash Flow Ratio

Net Cash Flow ²	(3,737,152)	(1,092,121)	(1,107,366)	(2,433,345)
Market Value of Assets (MVA)	93,617,461	101,955,040	105,137,476	111,724,639
Ratio	-4.0%	-1.1%	-1.1%	-2.2%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	619,399.23	_____%
1999	584,429.37	-5.6%
2000	579,318.13	-0.9%
2001	581,500.95	0.4%
2002	657,853.43	13.1%
2003	717,421.06	9.1%
2004	706,380.19	-1.5%
2005	662,758.94	-6.2%
2006	662,758.94	0.0%
2007	662,758.94	0.0%
2008	662,758.94	0.0%
2009	527,249.04	-20.4%
2010	486,189.84	-7.8%
2011	474,151.54	-2.5%
2012	477,013.80	0.6%
2013	473,910.37	-0.7%
2014	473,282.65	-0.1%
2015	512,807.52	8.4%
2016	533,483.40	4.0%
2017	542,276.76	1.6%
2018	572,693.45	5.6%
2019	601,682.12	5.1%
2020	623,810.51	3.7%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2020

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Checking Account	59,931.78	59,931.78
Money Market	3,043,256.00	3,043,256.00
Cash	16,344.84	16,344.84
Total Cash and Equivalents	3,119,532.62	3,119,532.62
Receivables:		
Member Contributions in Transit	3,609.94	3,609.94
City Contributions in Transit	69.42	69.42
Investment Income	212,907.23	212,907.23
Total Receivable	216,586.59	216,586.59
Investments:		
U. S. Bonds and Bills	8,853,191.89	9,154,200.95
Federal Agency Guaranteed Securities	6,047,804.69	6,407,716.39
Corporate Bonds	13,069,317.43	13,294,355.62
Stocks	49,650,200.63	58,613,113.79
Mutual Funds:		
Fixed Income	3,034,481.64	3,034,481.64
Pooled/Common/Commingled Funds:		
Equity	7,887,240.45	7,887,240.45
Real Estate	9,062,627.91	10,394,523.35
Total Investments	97,604,864.64	108,785,632.19
Total Assets	100,940,983.85	112,121,751.40
<u>LIABILITIES</u>		
Payables:		
DROP Distributions	318,312.91	318,312.91
Investment Expenses	78,694.87	78,694.87
Administrative Expenses	105.00	105.00
Total Liabilities	397,112.78	397,112.78
NET POSITION RESTRICTED FOR PENSIONS	100,543,871.07	111,724,638.62

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2020
Market Value Basis

ADDITIONS

Contributions:

Member	219,429.34
Buy-Back	51,726.23
City	4,254,518.85
State	623,810.51

Total Contributions		5,149,484.93
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Investment Income:

Net Increase in Fair Value of Investments	7,241,747.24
Interest & Dividends	2,283,767.64
Less Investment Expense ¹	(505,007.20)

Net Investment Income		9,020,507.68
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Total Additions		14,169,992.61
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DEDUCTIONS

Distributions to Members:

Benefit Payments	6,485,029.01
Lump Sum DROP Distributions	1,059,170.42
Refunds of Member Contributions	0.00

Total Distributions		7,544,199.43
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Administrative Expense		38,630.53
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Total Deductions		7,582,829.96
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Net Increase in Net Position		6,587,162.65
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year		105,137,475.97
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End of the Year		111,724,638.62
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¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION
September 30, 2020

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				
		2020	2021	2022	2023	2024
09/30/2020	1,616,151	1,292,921	969,691	646,461	323,231	0
Total		1,292,921	969,691	646,461	323,231	0

<u>Development of Investment Gain/Loss</u>	
Market Value of Assets, 09/30/2019	105,137,476
Contributions Less Benefit Payments & Admin Expenses	(2,433,345)
Expected Investment Earnings*	7,404,357
Actual Net Investment Earnings	9,020,508
2020 Actuarial Investment Gain/(Loss)	<u>1,616,151</u>

*Expected Investment Earnings = $0.07125 * (105,137,476 - 0.5 * 2,433,345)$

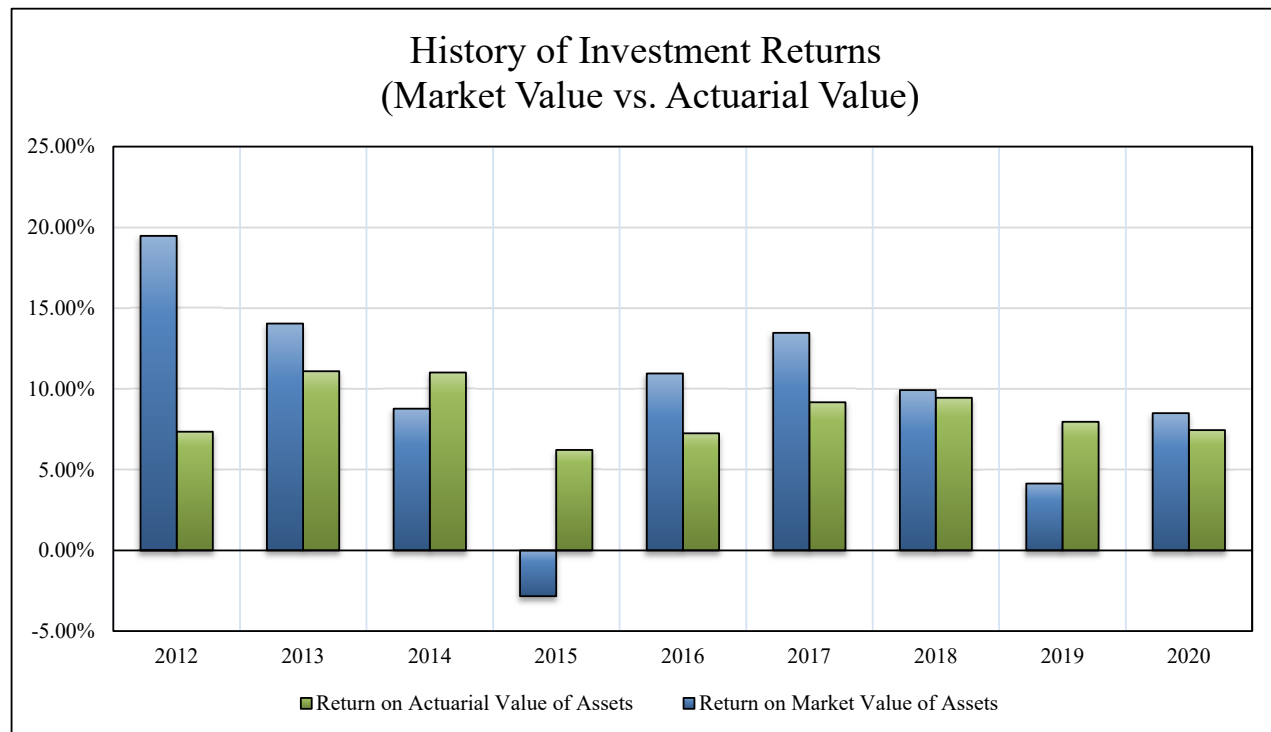
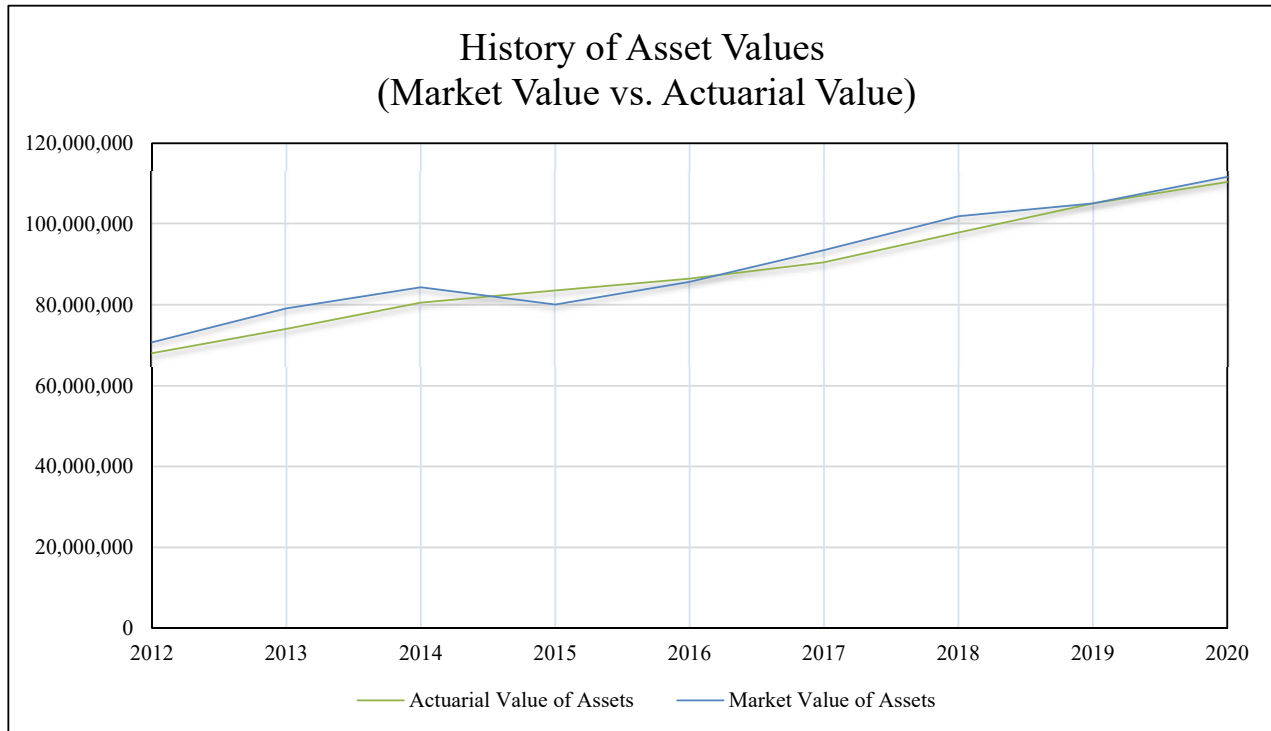
<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2020	111,724,639
(2) Gains/(Losses) Not Yet Recognized	<u>1,292,921</u>
(3) Actuarial Value of Assets, 09/30/2020, (1) - (2)	110,431,718
(A) 09/30/2019 Actuarial Assets:	105,137,476
(I) Net Investment Income:	
1. Interest and Dividends	2,283,768
2. Net Increase in Fair Value of Investments	7,241,747
3. Change in Actuarial Value	(1,292,921)
4. Investment Expenses	<u>(505,007)</u>
Total	7,727,587
(B) 09/30/2020 Actuarial Assets::	110,431,718
Actuarial Assets Rate of Return = $2I/(A+B-I)$:	7.44%
Market Value of Assets Rate of Return:	8.50%
10/01/2020 Limited Actuarial Assets:	110,431,718
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	323,229

REVENUES

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2019 to September 30, 2020

Beginning of the Year Balance	1,675,439.54
Plus Additions	705,982.51
Investment Return Earned	23,438.02
Less Distributions	(1,059,170.42)
End of the Year Balance	1,345,689.65

HISTORY OF ASSET VALUES AND INVESTMENT RETURNS



STATISTICAL DATA

	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>	<u>10/1/2020</u>
<u>Actives</u>				
Number	73	68	67	62
Average Current Age	42.2	42.8	43.7	44.3
Average Age at Employment	27.2	27.1	27.1	26.9
Average Past Service	15.0	15.7	16.6	17.4
Average Annual Salary	\$56,580	\$58,760	\$62,407	\$66,712
<u>Service Retirees</u>				
Number	116	118	116	123
Average Current Age	64.2	64.8	65.5	65.8
Average Annual Benefit	\$44,832	\$45,538	\$47,001	\$47,421
<u>DROP Retirees</u>				
Number	9	11	12	9
Average Current Age	53.1	53.4	54.1	53.7
Average Annual Benefit	\$53,328	\$56,147	\$59,544	\$66,153
<u>Beneficiaries</u>				
Number	28	27	26	25
Average Current Age	73.4	74.0	74.7	74.2
Average Annual Benefit	\$21,913	\$22,861	\$23,336	\$25,251
<u>Disability Retirees</u>				
Number	15	15	15	15
Average Current Age	69.6	70.6	71.6	72.6
Average Annual Benefit	\$17,434	\$17,817	\$18,227	\$18,537
<u>Terminated Vested</u>				
Number	14	14	14	15
Average Current Age ¹	40.7	42.0	43.0	43.8
Average Annual Benefit ²	\$10,015	\$10,015	\$10,015	\$12,438

¹ Effective 10/1/2018, the Average Current Age excludes participants awaiting a refund of contributions.

² The Average Annual Benefit excludes participants awaiting a refund of contributions.

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												0
25 - 29						1						1
30 - 34						1						1
35 - 39						1	10	3				14
40 - 44						1	1	12	5			19
45 - 49						1	2	2	7	2		14
50 - 54						1	2	3	3			9
55 - 59								1		1		2
60 - 64										1		1
65+										1		1
Total	0	0	0	0	0	6	15	21	15	5	0	62

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2019	67
b. Terminations	
i. Vested (partial or full) with deferred annuity	(1)
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions or full lump sum distribution received	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(2)
f. DROP	<u>(2)</u>
g. Continuing participants	62
h. New entrants	<u>0</u>
i. Total active life participants in valuation	62

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

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <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	116	12	26	15	13	1	183
Retired	6	(4)	0	0	0	0	2
DROP	0	2	0	0	0	0	2
Vested (Deferred Annuity)	0	0	0	0	1	0	1
Vested (Due Refund)	0	0	0	0	0	0	0
Hired/Terminated in Same Year	0	0	0	0	0	0	0
Death, With Survivor	0	(1)	1	0	0	0	0
Death, No Survivor	0	0	(2)	0	0	0	(2)
Disabled	0	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	0	0
Rehires	0	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0	0
Data Corrections	1	0	0	0	0	0	1
b. Number current valuation	123	9	25	15	14	1	187

SUMMARY OF CURRENT PLAN

<u>Eligibility</u>	Employees who are classified as full-time Police Officers hired prior to January 1, 2013 shall participate in the System as a condition of employment.
<u>Credited Service</u>	Aggregate number of years of service and fractional parts of years of service
<u>Compensation</u>	<p>Total cash compensation, educational incentive pay, court pay, automobile and/or meals and uniform expense, accumulated sick leave at retirement and vacation pay at retirement, special duty pay, shift differential pay, or special bonuses.</p> <p>Effective January 1, 2013, compensation shall be limited to an officer's base pay and senior officer pay exclusive of overtime for earnings on or after January 1, 2013, but shall include overtime which had been earned as of December 31, 2012.</p>
<u>Average Final Compensation</u>	<p>Average Compensation for the best 2 years out of the last 5 years of Credited Service for Members with 20 or more years of Credited Service as of January 1, 2013.</p> <p>Average Compensation for the last 5 years of Credited Service for Members with less than 20 years of Credited Service as of January 1, 2013.</p>
<u>Member Contributions</u>	5.20% of Salary.
<u>City and State Contributions</u>	Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII of Chapter 112, Florida Statutes.
<u>Normal Retirement</u>	
Date	Earlier of (1) Age 55 and 12 years of Credited Service, or (2) 25 years of Credited Service, regardless of Age.
Benefit	3.00% of Average Final Compensation for each full year of Credited Service.
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 12 Years of Credited Service.
Benefit	Accrued benefit, reduced 3% per year for each year preceding age 55.

Vesting

Less than 12 years of
Credited Service

Refund of Member Contributions.

12 or more years of
Credited Service

Accrued benefit payable at the Member's otherwise
Normal Retirement Date
or
Refund of Member Contributions

Disability

Eligibility

Line of Duty

Total and permanent disability.

Non Line of Duty

Total and permanent disability with at least 12 years of
Credited Service.

Benefit

Line of Duty

3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 42% of AFC.

Non Line of Duty

3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 25% of AFC.

Form of Benefit

Payable as a 10-year Certain and Life Annuity. Options
available.

Death Benefits

Pre-Retirement

Line of Duty

3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 42% of AFC.

Non Line of Duty

For members with 12 or more years of Credited Service:
3.00% of Average Final Compensation for each full year
of Credited Service. Minimum benefit is 25% of AFC.

For members with less than 12 years of Credited
Service: Refund of accumulated contributions without
interest.

Post-Retirement

Benefits payable to beneficiary in accordance with
option selected at retirement.

Board of Trustees

- a. Two City Council appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member chosen by a majority of the other four trustees

Deferred Retirement Option Plan

Eligibility

Satisfaction of Retirement requirements.

Participation

Not to exceed 60 months.

Rate of Return

Members who entered DROP
Prior to January 1, 2013

4.00% annual interest.

Members who entered DROP
On or after January 1, 2013

1.30% annual interest.

Form of Distribution

Cash lump sum (options available) at termination of employment.

Cost-of-Living Adjustment

Eligibility

All members in payment status.

Increase

Increased annually effective each January 1st based on Consumer Price Index as of the previous September 30th, limited to 3.00% per year for retirees and DROP participants. The limit is 2.00% per year after 10 years of benefit payments for retirees who retire on or after January 1, 2013. Additionally, Members who entered the DROP on or after January 1, 2013 shall not receive any cost-of-living adjustments while participating in the DROP.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2020

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	59,932
Money Market	3,043,256
Cash	16,345
Total Cash and Equivalents	3,119,533
Receivables:	
Member Contributions in Transit	3,610
City Contributions in Transit	70
Investment Income	212,907
Total Receivable	216,587
Investments:	
U. S. Bonds and Bills	9,154,201
Federal Agency Guaranteed Securities	6,407,716
Corporate Bonds	13,294,356
Stocks	58,613,114
Mutual Funds:	
Fixed Income	3,034,482
Pooled/Common/Commingled Funds:	
Equity	7,887,240
Real Estate	10,394,523
Total Investments	108,785,632
Total Assets	112,121,752
<u>LIABILITIES</u>	
Payables:	
DROP Distributions	318,313
Investment Expenses	78,695
Administrative Expenses	105
Total Liabilities	397,113
NET POSITION RESTRICTED FOR PENSIONS	111,724,639

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2020
Market Value Basis

ADDITIONS

Contributions:

Member	219,429	
Buy-Back	51,726	
City	4,254,519	
State	623,811	
Total Contributions		5,149,485
Investment Income:		
Net Increase in Fair Value of Investments	7,241,747	
Interest & Dividends	2,283,768	
Less Investment Expense ¹	(505,007)	
Net Investment Income		9,020,508
Total Additions		14,169,993

DEDUCTIONS

Distributions to Members:

Benefit Payments	6,485,029	
Lump Sum DROP Distributions	1,059,170	
Refunds of Member Contributions	0	
Total Distributions		7,544,199
Administrative Expense		38,631
Total Deductions		7,582,830
Net Increase in Net Position		6,587,163
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		105,137,476
End of the Year		111,724,639

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

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2020)

Plan Administration

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Two City Council appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member chosen by a majority of the other four.

Employees who are classified as full-time Police Officers hired prior to January 1, 2013 shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2019:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	169
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	14
Active Plan Members	67
	250

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

A summary of the benefit provisions can be found in the October 1, 2019 Actuarial Valuation Report for the City of Pensacola Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member: 5.20% of Salary.

City and State: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII of Chapter 112, Florida Statutes.

Investment Policy:

The following was the Board's adopted asset allocation policy as of September 30, 2020:

Asset Class	Target Allocation
All Cap Value Equity	22.5%
Broad Growth Equity	22.5%
International Equity	15.0%
Fixed Income (Core)	25.0%
Global Bond	5.0%
Real Estate	10.0%
Total	100.0%

Concentrations:

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

Rate of Return:

For the year ended September 30, 2020, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 8.50 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Deferred Retirement Option Program

Eligibility: Satisfaction of Normal Retirement requirements.

Participation: Not to exceed 60 months.

Rate of Return Member who entered DROP Prior to January 1, 2013: 4.00% annual interest.

Rate of Return Member who entered DROP On or after January 1, 2013: 1.30% annual interest.

The DROP balance as September 30, 2020 is \$1,345,690.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2020 were as follows:

Total Pension Liability	\$ 137,999,913
Plan Fiduciary Net Position	\$ (111,724,639)
Less reserve accounts	\$ 769,559
Sponsor's Net Pension Liability	<u>\$ 27,044,833</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	80.96%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2019 updated to September 30, 2020 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	4.00%
Discount Rate	7.125%
Investment Rate of Return	7.125%

Mortality Rate Healthy Active Lives:

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

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

Mortality Rate Healthy Retiree Lives:

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

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

Mortality Rate Beneficiary Lives:

Female: PubG.H-2010 for Healthy Retirees.

Male: PubG.H-2010 for Healthy Retirees, set back one year.

Mortality Rate Disabled Lives:

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

All rates 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, 2019 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

15% of active deaths are assumed to be service-incurred.

The most recent actuarial experience study used to review the other significant assumptions was not available.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2020 the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2020 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return ¹
All Cap Value Equity	7.50%
Broad Growth Equity	7.50%
International Equity	8.50%
Fixed Income (Core)	2.50%
Global Bond	3.50%
Real Estate	4.50%

¹ Source: AndCo Consulting

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.125 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

	1% Decrease 6.125%	Current Discount Rate 7.125%	1% Increase 8.125%
Sponsor's Net Pension Liability	\$ 44,898,255	\$ 27,044,833	\$ 12,400,755

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 2 Fiscal Years

	09/30/2020	09/30/2019
Total Pension Liability		
Service Cost	825,932	786,760
Interest	9,511,040	9,193,908
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	699,810	1,361,896
Changes of assumptions	(1,978,840)	-
Contributions - Buy Back	51,726	-
Benefit Payments, including Refunds of Employee Contributions	(7,544,199)	(6,317,326)
Net Change in Total Pension Liability	\$ 1,565,469	5,025,238
Total Pension Liability - Beginning	\$ 136,434,444	131,409,206
Total Pension Liability - Ending (a)	<u>\$ 137,999,913</u>	<u>\$ 136,434,444</u>
Plan Fiduciary Net Position		
Contributions - Employer	4,254,519	4,445,468
Contributions - State	623,811	601,682
Contributions - Employee	219,429	211,533
Contributions - Buy Back	51,726	-
Net Investment Income	9,020,508	4,289,802
Benefit Payments, including Refunds of Employee Contributions	(7,544,199)	(6,317,326)
Administrative Expense	(38,631)	(48,723)
Net Change in Plan Fiduciary Net Position	6,587,163	3,182,436
Plan Fiduciary Net Position - Beginning	105,137,476	101,955,040
	<u>\$ 111,724,639</u>	<u>\$ 105,137,476</u>
Less reserve accounts	\$ 769,559	\$ 668,865
Plan Fiduciary Net Position - Ending (b)	<u>\$ 110,955,080</u>	<u>\$ 104,468,611</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 27,044,833</u>	<u>\$ 31,965,833</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	80.96%	77.06%
Covered Payroll	\$ 4,219,813	\$ 4,067,890
Net Pension Liability as a percentage of Covered Payroll	640.90%	785.81%

Notes to Schedule:*Changes of assumptions:*

For measurement date 09/30/2020, as mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the rates used in Milliman's July 1, 2019 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

SCHEDULE OF CONTRIBUTIONS

Last 2 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions ¹	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
09/30/2020	\$4,822,795	\$4,822,795	\$ -	\$4,219,813	114.29%
09/30/2019	\$4,983,613	\$4,983,613	\$ -	\$4,067,890	122.51%

¹ Including amounts from Contribution Surplus Account.

Notes to Schedule

Valuation Date: 10/01/2018

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

Methods and assumptions used to determine contribution rates can be found in the October 1, 2018 Actuarial Valuation for the City of Pensacola Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

SCHEDULE OF INVESTMENT RETURNS
Last 2 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2020	8.50%
09/30/2019	4.15%

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2021)

Plan Description

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Two City Council appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member chosen by a majority of the other four.

Employees who are classified as full-time Police Officers hired prior to January 1, 2013 shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2019:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	169
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	14
Active Plan Members	67
	250
	250

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

A summary of the benefit provisions can be found in the October 1, 2019 Actuarial Valuation Report for the City of Pensacola Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member: 5.20% of Salary.

City and State: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII of Chapter 112, Florida Statutes.

Net Pension Liability

The measurement date is September 30, 2020.

The measurement period for the pension expense was October 1, 2019 to September 30, 2020.

The reporting period is October 1, 2020 through September 30, 2021.

The Sponsor's Net Pension Liability was measured as of September 30, 2020.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2019 updated to September 30, 2020 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	4.00%
Discount Rate	7.125%
Investment Rate of Return	7.125%

Mortality Rate Healthy Active Lives:

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

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

Mortality Rate Healthy Retiree Lives:

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

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

Mortality Rate Beneficiary Lives:

Female: PubG.H-2010 for Healthy Retirees.

Male: PubG.H-2010 for Healthy Retirees, set back one year.

Mortality Rate Disabled Lives:

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

All rates 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, 2019 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

The most recent actuarial experience study used to review the other significant assumptions was not available.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2020 the inflation rate assumption of the investment advisor was 2.50%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2020 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return ¹
All Cap Value Equity	22.50%	7.50%
Broad Growth Equity	22.50%	7.50%
International Equity	15.00%	8.50%
Fixed Income (Core)	25.00%	2.50%
Global Bond	5.00%	3.50%
Real Estate	10.00%	4.50%
Total	100.00%	

¹ Source: AndCo Consulting

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.125 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2020	\$ 136,434,444	\$ 104,468,611	\$ 31,965,833
Changes for a Year:			
Service Cost	825,932	-	825,932
Interest	9,511,040	-	9,511,040
Differences between Expected and Actual Experience	699,810	-	699,810
Changes of assumptions	(1,978,840)	-	(1,978,840)
Changes of benefit terms	-	-	-
Contributions - Employer	-	4,254,519	(4,254,519)
Contributions - State	-	623,811	(623,811)
Contributions - Employee	-	219,429	(219,429)
Contributions - Buy Back	51,726	51,726	-
Net Investment Income	-	9,020,508	(9,020,508)
Benefit Payments, including Refunds of Employee Contributions	(7,544,199)	(7,544,199)	-
Administrative Expense	-	(38,631)	38,631
Change in reserve accounts	-	(100,694)	100,694
Net Changes	1,565,469	6,486,469	(4,921,000)
Reporting Period Ending September 30, 2021	\$ 137,999,913	\$ 110,955,080	\$ 27,044,833

Sensitivity of the Net Pension Liability to changes in the Discount Rate.

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.125%	7.125%	8.125%
Sponsor's Net Pension Liability	\$ 44,898,255	\$ 27,044,833	\$ 12,400,755

Pension Plan Fiduciary Net Position.

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

**FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED
INFLOWS OF RESOURCES RELATED TO PENSIONS**
FISCAL YEAR SEPTEMBER 30, 2020

For the year ended September 30, 2020, the Sponsor has recognized a Pension Expense of \$2,491,164.

On September 30, 2020, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	907,930	-
Changes of assumptions	-	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	2,127,811
Employer and State contributions subsequent to the measurement date	4,878,330	-
Total	<u>\$ 5,786,260</u>	<u>\$ 2,127,811</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2020.

Other amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended September 30:	
2021	\$ (1,187,894)
2022	\$ (646,332)
2023	\$ 27,336
2024	\$ 587,009
2025	\$ -
Thereafter	\$ -

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
FISCAL YEAR SEPTEMBER 30, 2021**

For the year ended September 30, 2021, the Sponsor will recognize a Pension Expense of \$701,871.

On September 30, 2021, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	803,870	-
Changes of assumptions	-	989,420
Net difference between Projected and Actual Earnings on Pension Plan investments	-	1,778,872
Employer and State contributions subsequent to the measurement date	TBD	-
Total	<u>TBD</u>	<u>\$ 2,768,292</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2021.

Other amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended September 30:	
2022	\$ (1,609,077)
2023	\$ (295,894)
2024	\$ 263,779
2025	\$ (323,230)
2026	\$ -
Thereafter	\$ -

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 2 Fiscal Years

Reporting Period Ending	09/30/2021	09/30/2020
Measurement date	09/30/2020	09/30/2019
Total Pension Liability		
Service Cost	825,932	786,760
Interest	9,511,040	9,193,908
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	699,810	1,361,896
Changes of assumptions	(1,978,840)	-
Contributions - Buy Back	51,726	-
Benefit Payments, including Refunds of Employee Contributions	(7,544,199)	(6,317,326)
Net Change in Total Pension Liability	\$ 1,565,469	\$ 5,025,238
Total Pension Liability - Beginning	\$ 136,434,444	\$ 131,409,206
Total Pension Liability - Ending (a)	\$ 137,999,913	\$ 136,434,444
Plan Fiduciary Net Position		
Contributions - Employer	4,254,519	4,445,468
Contributions - State	623,811	601,682
Contributions - Employee	219,429	211,533
Contributions - Buy Back	51,726	-
Net Investment Income	9,020,508	4,289,802
Benefit Payments, including Refunds of Employee Contributions	(7,544,199)	(6,317,326)
Administrative Expense	(38,631)	(48,723)
Net Change in Plan Fiduciary Net Position	6,587,163	3,182,436
Plan Fiduciary Net Position - Beginning	105,137,476	101,955,040
	\$ 111,724,639	\$ 105,137,476
Less reserve accounts	\$ 769,559	\$ 668,865
Plan Fiduciary Net Position - Ending (b)	\$ 110,955,080	\$ 104,468,611
Net Pension Liability - Ending (a) - (b)	\$ 27,044,833	\$ 31,965,833
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	80.96%	77.06%
Covered Payroll	\$ 4,219,813	\$ 4,067,890
Net Pension Liability as a percentage of Covered Payroll	640.90%	785.8%

Notes to Schedule:

Changes of assumptions:

For measurement date 09/30/2020, as mandated by Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the rates used in Milliman's July 1, 2019 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

SCHEDULE OF CONTRIBUTIONS

Last 2 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions ¹	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
09/30/2020	\$4,822,795	\$4,822,795	\$ -	\$4,219,813	114.29%
09/30/2019	\$4,983,613	\$4,983,613	\$ -	\$4,067,890	122.51%

¹ Including amounts from Contribution Surplus Account.

Notes to Schedule

Valuation Date: 10/01/2018

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

Methods and assumptions used to determine contribution rates can be found in the October 1, 2018 Actuarial Valuation for the City of Pensacola Police Officers' Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

FINAL COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2020

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 29,825,853	\$ 6,506,151	\$ 5,637,454	\$ -
Employer and State Contributions made after 09/30/2019	-	-	4,878,330	-
Total Pension Liability Factors:				
Service Cost	786,760	-	-	786,760
Interest	9,193,908	-	-	9,193,908
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	1,361,896	-	1,361,896	-
Current year amortization of experience difference	-	(884,560)	(453,966)	(430,594)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	-	-	-
Net change	5,025,238	(884,560)	907,930	9,550,074
Plan Fiduciary Net Position:				
Contributions - Employer	4,445,468	-	(4,445,468)	-
Contributions - State	601,682	-	(601,682)	-
Contributions - Employee	211,533	-	-	(211,533)
Contributions - Buy Back	-	-	-	-
Projected Net Investment Income	7,224,847	-	-	(7,224,847)
Difference between projected and actual earnings on Pension Plan investments	(2,935,045)	-	2,935,045	-
Current year amortization	-	(1,687,306)	(1,718,875)	31,569
Benefit Payments, including Refunds of Employee Contributions	(6,317,326)	-	-	-
Administrative Expenses	(48,723)	-	-	48,723
Other: Change in reserve accounts	(297,178)	-	-	297,178
Net change	2,885,258	(1,687,306)	(3,830,980)	(7,058,910)
Ending Balance	\$ 31,965,833	\$ 3,934,285	\$ 7,592,734	\$ 2,491,164

PRELIMINARY COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2021

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 31,965,833	\$ 3,934,285	\$ 7,592,734	\$ -
Employer and State Contributions made after 09/30/2020	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	825,932	-	-	825,932
Interest	9,511,040	-	-	9,511,040
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	51,726	-	-	51,726
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	699,810	-	699,810	-
Current year amortization of experience difference	-	-	(803,870)	803,870
Change in assumptions about future economic or demographic factors or other inputs	(1,978,840)	1,978,840	-	-
Current year amortization of change in assumptions	-	(989,420)	-	(989,420)
Benefit Payments, including Refunds of Employee Contributions	(7,544,199)	-	-	-
Net change	<u>1,565,469</u>	<u>989,420</u>	<u>(104,060)</u>	<u>10,203,148</u>
Plan Fiduciary Net Position:				
Contributions - Employer	4,254,519	-	(4,254,519)	-
Contributions - State	623,811	-	(623,811)	-
Contributions - Employee	219,429	-	-	(219,429)
Contributions - Buy Back	51,726	-	-	(51,726)
Projected Net Investment Income	7,404,357	-	-	(7,404,357)
Difference between projected and actual earnings on Pension Plan investments	1,616,151	1,616,151	-	-
Current year amortization	-	(2,552,099)	(587,009)	(1,965,090)
Benefit Payments, including Refunds of Employee Contributions	(7,544,199)	-	-	-
Administrative Expenses	(38,631)	-	-	38,631
Other: Change in reserve accounts	(100,694)	-	-	100,694
Net change	<u>6,486,469</u>	<u>(935,948)</u>	<u>(5,465,339)</u>	<u>(9,501,277)</u>
Ending Balance	<u>\$ 27,044,833</u>	<u>\$ 3,987,757</u>	<u>TBD</u>	<u>\$ 701,871</u>

* Employer and State Contributions subsequent to the measurement date made after September 30, 2020 but made on or before September 30, 2021 need to be added.

AMORTIZATION SCHEDULE - INVESTMENTS

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2020	\$ (1,616,151)	5	\$ -	\$ (323,231)	\$ (323,230)	\$ (323,230)	\$ (323,230)	\$ (323,230)	\$ -	\$ -	\$ -	\$ -
2019	\$ 2,935,045	5	\$ 587,009	\$ 587,009	\$ 587,009	\$ 587,009	\$ 587,009	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (2,798,363)	5	\$ (559,673)	\$ (559,673)	\$ (559,673)	\$ (559,673)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (5,638,164)	5	\$ (1,127,633)	\$ (1,127,633)	\$ (1,127,633)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (2,505,006)	5	\$ 1,131,866	\$ (541,562)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 31,569	\$ (1,965,090)	\$ (1,423,527)	\$ (295,894)	\$ 263,779	\$ (323,230)	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

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

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2020	\$ (1,978,840)	2	\$ -	\$ (989,420)	\$ (989,420)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ -	\$ (989,420)	\$ (989,420)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORITIZATION SCHEDULE - EXPERIENCE

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

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2020	\$ 699,810	2	\$ -	\$ 349,905	\$ 349,905	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 1,361,896	3	\$ 453,966	\$ 453,965	\$ 453,965	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (2,653,681)	3	\$ (884,560)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (430,594)	\$ 803,870	\$ 803,870	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -