

CITY OF BROOKSVILLE
FIREFIGHTERS' RETIREMENT TRUST FUND

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2021

GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2019



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

March 18, 2020

Susan Mae McCrary
Plan Administrator
City of Brooksville
Firefighters' Pension Board
85 Veterans Drive
Brooksville, FL 34601

Re: City of Brooksville Firefighters' Retirement Trust Fund

Dear Susan:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Brooksville Firefighters' Retirement Trust Fund. 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 175, 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. 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 Brooksville, 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, 2018. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2019 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 Brooksville, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Firefighters' Retirement Trust Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

Foster & Foster, Inc.

By: 
Patrick T. Donlan, EA, ASA, MAAA
Enrolled Actuary #17-6595


By: 
Sara E. Carlson, ASA, EA, MAAA
Enrolled Actuary #17-8546

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Brooksville Firefighters' Retirement Trust Fund, performed as of October 1, 2019, 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, 2021.

The contribution requirements, compared with those set forth in the March 16, 2020 actuarial impact statement, are as follows:

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	9/30/2021	9/30/2020
Minimum Required Contribution % of Projected Annual Payroll	33.34%	38.11%
Member Contributions (Est.) % of Projected Annual Payroll	3.29%	3.29%
City And State Required Contribution % of Projected Annual Payroll	30.05%	34.82%
State Contribution (Est.) ¹ % of Projected Annual Payroll	\$74,872 8.60%	\$74,872 8.60%
City Required Contribution ² % of Projected Annual Payroll	21.45%	26.22%

¹ Represents the amount received in calendar 2019. As per a Mutual Consent Agreement, all State Monies received each year, up to \$103,781.86, can be used by the City to offset their funding requirements. Additionally, the City can use the prior Excess State Monies Reserve amount of \$1,273.09 to help offset their fiscal 2020 requirement.

² The required contribution from the combination of City and State sources for the year ending September 30, 2021, is 30.05% of the actual payroll realized in that year. As a budgeting tool, the City may contribute 21.45% of each Member's Salary and then make a one-time adjustment to account for the actual State Monies received. Please note that a shortfall contribution of \$6,384.73 is due in addition to the above stated requirements for the fiscal year ending September 30, 2020.

As you can see, the Minimum Required Contribution shows a decrease when compared to the results determined in the March 16, 2020 actuarial impact statement. The decrease is mainly attributable to the UAAL decreasing more than expected, an increase in annual payroll, and favorable plan experience during the year.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial gain included an average salary increase of 5.16% which fell short of the 7.38% assumption and fewer retirements than expected. These gains were offset in part by losses associated with less turnover than expected, inactive mortality experience, and an investment return of 7.51% (Actuarial Asset Basis) which fell short of the 7.65% assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

Chapter 2019-21, Laws of Florida was signed into effect granting certain disability benefits to firefighters participating in an employer-sponsored retirement plan. Effective July 1, 2019, "the retirement plan must consider the firefighter totally and permanently disabled in the line of duty if he or she meets the retirement plan's definition of totally and permanently disabled due to the diagnosis of cancer or circumstances that arise out of the treatment of cancer." For this purpose, "cancer" is as defined in Section 112.1816(1), Florida Statutes.

Please note that the benefit changes only relate to the disability benefits for the Pension Fund and do not provide for other additional benefits that are provided for in Florida Statutes Section 112.1816.

Actuarial Assumption/Method Changes

There have been no changes of actuarial assumptions or methods since the prior valuation other than an increase in the expected percentage of disabilities that are in line-of-duty, as a result of the plan change described above.

CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2018	24.47%
(2) Summary of Contribution Impact by component:	
Change in State Contribution Percentage	1.75%
Change in Normal Cost Rate	1.15%
Change in Administrative Expense Percentage	-1.01%
Payroll Change Effect on UAAL Amortization	-2.14%
Investment Return (Actuarial Asset Basis)	0.15%
Salary Increases	-0.82%
Active Decrements	0.04%
Inactive Mortality	0.69%
Assumption Change	0.00%
UAAL decrease more than expected	-2.26%
Other	-0.57%
Total Change in Contribution	-3.02%
(3) Contribution Determined as of October 1, 2019	21.45%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data		
Actives	19	18
Service Retirees	16	16
DROP Retirees	0	0
Beneficiaries	2	2
Disability Retirees	0	0
Terminated Vested	<u>22</u>	<u>24</u>
 Total	 59	 60
 Total Annual Payroll	 \$1,014,954	 \$884,878
Payroll Under Assumed Ret. Age	870,426	723,426
 Annual Rate of Payments to:		
Service Retirees	411,137	409,364
DROP Retirees	0	0
Beneficiaries	14,238	14,196
Disability Retirees	0	0
Terminated Vested	42,570	42,570
 B. Assets		
Actuarial Value (AVA) ¹	7,053,931	6,623,420
Market Value (MVA) ¹	6,893,126	6,631,932
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	2,815,806	2,487,979
Disability Benefits	25,193	16,700
Death Benefits	6,617	5,739
Vested Benefits	195,853	192,400
Refund of Contributions	42,722	31,539
Service Retirees	4,872,505	4,887,971
DROP Retirees ¹	0	0
Beneficiaries	75,443	79,448
Disability Retirees	0	0
Terminated Vested	232,939	223,769
Excess State Monies Reserve	<u>1,273</u>	<u>1,273</u>
 Total	 8,268,351	 7,926,818

C. Liabilities - (Continued)	<u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	5,263,857	4,664,351
Present Value of Future Member Contributions	173,181	153,457
Normal Cost (Retirement)	116,336	87,124
Normal Cost (Disability)	4,396	2,575
Normal Cost (Death)	533	473
Normal Cost (Vesting)	14,226	14,713
Normal Cost (Refunds)	<u>7,133</u>	<u>5,617</u>
Total Normal Cost	142,624	110,502
Present Value of Future Normal Costs	816,402	694,371
Accrued Liability (Retirement)	2,151,841	1,937,667
Accrued Liability (Disability)	2,690	1,502
Accrued Liability (Death)	3,284	2,674
Accrued Liability (Vesting)	104,671	96,535
Accrued Liability (Refunds)	7,303	1,608
Accrued Liability (Inactives) ¹	5,180,887	5,191,188
Excess State Monies Reserve	<u>1,273</u>	<u>1,273</u>
Total Actuarial Accrued Liability (EAN AL)	7,451,949	7,232,447
Unfunded Actuarial Accrued Liability (UAAL)	398,018	609,027
Funded Ratio (AVA / EAN AL)	94.7%	91.6%

D. Actuarial Present Value of Accrued Benefits	<u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits		
Inactives ¹	5,180,887	5,191,188
Actives	1,460,994	1,374,687
Member Contributions	<u>168,735</u>	<u>139,347</u>
Total	6,810,616	6,705,222
Non-vested Accrued Benefits	<u>346,956</u>	<u>261,577</u>
Total Present Value Accrued Benefits (PVAB)	7,157,572	6,966,799
Funded Ratio (MVA / PVAB)	96.3%	95.2%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	104,746	
Benefits Paid	(430,468)	
Interest	516,495	
Other	<u>0</u>	
Total	190,773	

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>

E. Pension Cost

Normal Cost (with interest) % of Total Annual Payroll ²	17.01	15.86
Administrative Expenses (with interest) % of Total Annual Payroll ²	5.83	6.84
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years (as of 10/1/2019, with interest) % of Total Annual Payroll ²	10.50	15.41
Minimum Required Contribution % of Total Annual Payroll ²	33.34	38.11
Expected Member Contributions % of Total Annual Payroll ²	3.29	3.29
Expected City and State Contribution % of Total Annual Payroll ²	30.05	34.82

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
Total Required Contribution	416,210
City and State Requirement	385,265
Actual Contributions Made:	
Members (excluding buyback)	30,945
City	310,392
State	74,872
Total	<u>416,209</u>

G. Net Actuarial (Gain)/Loss (2,897)

¹ The asset values and liabilities include accumulated DROP Plan Balances as of 9/30/2019 and 9/30/2018.

² Contributions developed as of 10/1/2019 are expressed as a percentage of total annual payroll at 10/1/2019 of \$870,426.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2019	398,018
2020	333,696
2021	264,452
2024	23,286
2048	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	5.16%	7.38%
Year Ended 9/30/2018	2.04%	6.50%
Year Ended 9/30/2017	8.58%	6.50%
Year Ended 9/30/2016	16.09%	6.50%
Year Ended 9/30/2015	2.18%	6.50%

(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 9/30/2019	4.98%	7.51%	7.65%
Year Ended 9/30/2018	7.22%	5.77%	7.75%
Year Ended 9/30/2017	11.82%	6.43%	7.75%
Year Ended 9/30/2016	6.14%	6.08%	7.75%
Year Ended 9/30/2015	-1.64%	8.66%	7.75%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$870,426
	10/1/2009	831,397
(b) Total Increase		4.69%
(c) Number of Years		10.00
(d) Average Annual Rate		0.46%

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.



Patrick T. Donlan, EA, ASA, MAAA
Enrolled Actuary #17-6595

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, 2018	\$609,027
(2) Sponsor Normal Cost developed as of October 1, 2018	86,701
(3) Expected administrative expenses for the year ended September 30, 2019	47,646
(4) Expected interest on (1), (2) and (3)	55,046
(5) Sponsor contributions to the System during the year ended September 30, 2019	385,265
(6) Expected interest on (5)	12,240
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	400,915
(8) Change to UAAL due to Assumption Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	(2,897)
(10) Unfunded Actuarial Accrued Liability as of October 1, 2019	398,018

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2019 Amount</u>	<u>Amortization Amount</u>
Fresh Start	10/1/2018	6	540,225	107,405
Benefit Change	10/1/2018	29	(157)	(13)
Reconciliation Base	10/1/2019	10	(139,153)	(18,961)
Actuarial Gain	10/1/2019	10	<u>(2,897)</u>	<u>(395)</u>
			398,018	88,036

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$609,027
(2) Expected UAAL as of October 1, 2019	400,915
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	9,227
Salary Increases	(50,146)
Active Decrements	2,389
Inactive Mortality	42,136
Other	<div style="border-top: 1px solid black;">(6,503)</div>
Increase in UAAL due to (Gain)/Loss	(2,897)
Assumption Changes	<div style="border-top: 1px solid black;">0</div>
(4) Actual UAAL as of October 1, 2019	\$398,018

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB

Disabled Lives:

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

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

The above 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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

7.65% 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.

Interest Rate

See table later in this section.

These rates were developed in a September 18, 2018 Experience Study.

Salary Increases

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.

Payroll Growth

Administrative Expenses

\$48,909 annually, based on the average of actual expenses incurred in the prior two fiscal years. Previously, the actual expense in the prior fiscal year was used. Using a two-year average results in a less volatile estimate than the prior method.

Termination Rates

See table later in this section.
These rates were developed in a September 18, 2018 Experience Study

Disability Rates

See Sample rates later in this section.
These rates were deemed reasonable in the September 18, 2018 Experience Study.
90% of disabilities are assumed to occur in the line of duty.

Normal Retirement

See table later in this section.
These rates were developed in a September 18, 2018 Experience Study.

Early Retirement

Commencing upon a Member's eligibility for Early Retirement (Age 50 with 10 years of Credited Service), Members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year.
This rate was deemed reasonable in the September 18, 2018 Experience Study.

Funding Method

Entry Age Normal Cost Method.

Asset Valuation Method

Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric four-year average Market Value return (net of fees). It is possible that over time this technique will produce an insignificant bias above or below Market Value of Assets.

Amortization Method

New UAAL amortization bases are established according to the following amortization periods:

Experience: 10 Years.
Assumption/Method Changes: 20 Years.
Benefit Changes: 30 Years.

<u>% Terminating During the Year</u>		<u>% Becoming Disabled During the Year</u>		<u>Salary Scale</u>		<u>% Retiring During the Year Years after First Eligibility for Normal Retirement</u>	
<u>Service</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Service</u>	<u>Rate</u>	<u>ment</u>	<u>Rate</u>
0 - 1	20%	20	0.03%	0 - 1	10%	0-2	50%
2 - 9	10%	30	0.04%	2+	5%	3+	100%
10+	6%	40	0.07%				
		50	0.18%				

GLOSSARY

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

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

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.

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.

DISCUSSION OF RISK

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

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

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

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

Impact of Plan Maturity on Risk

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

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

- The Support Ratio, determined as the ratio of active to inactive members, has increased from 50.0% on October 1, 2016 to 79.2% on October 1, 2019, indicating that the plan has experienced a significant growth in active population.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 69.5%. 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 87.5% on October 1, 2016 to 94.7% on October 1, 2019.
- 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 -8.9% on October 1, 2016 to -0.9% on October 1, 2019. The current Net Cash Flow Ratio of -0.9% 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>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	12	15	18	19
Total Inactives ¹	24	24	24	24
Actives / Inactives ¹	50.0%	62.5%	75.0%	79.2%
<u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	5,763,900	6,272,256	6,631,932	6,893,126
Total Annual Payroll	633,398	792,733	884,878	1,014,954
MVA / Total Annual Payroll	910.0%	791.2%	749.5%	679.2%
<u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability				
Total Accrued Liability (EAN)				
Inactive AL / Total AL				
<u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)				
Total Accrued Liability (EAN)				
AVA / Total Accrued Liability (EAN)	6,254,990 6,984,197	6,354,430 7,174,812	6,693,480 7,232,447	7,080,887 7,451,949
	83.5%	88.8%	91.6%	89.3%
<u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	(511,337)	(155,341)	(84,808)	(64,429)
Market Value of Assets (MVA)	5,763,900	6,272,256	6,631,932	6,893,126
Ratio	-8.9%	-2.5%	-1.3%	-0.9%

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

Received During Fiscal Year	Amount	Increase from Previous Year
1998		_____%
	84,812.44	
1999		-21.3%
	66,771.57	
2000		21.8%
	81,354.16	
2001		-1.1%
	80,419.06	
2002		11.7%
	89,799.33	
2003		6.6%
	95,688.18	
2004		-3.9%
	91,992.46	
2005		1.6%
	93,472.70	
2006		5.7%
	98,795.12	
2007		9.2%
	107,921.42	
2008		28.5%
	138,717.80	
2009		-1.7%
	136,311.29	
2010		-24.9%
	102,370.58	
2011		-10.0%
	92,150.49	
2012		-30.7%
	63,865.78	
2013		62.5%
	103,781.86	
2014		-15.0%
	88,211.68	
2015		-4.5%
	84,221.88	
2016		-15.0%
	71,579.90	
2017		21.3%
	86,827.52	
2018		-11.2%
	77,142.30	
2019		-2.9%
	74,872.41	

EXCESS STATE MONIES RESERVE

	Regular Distribution			Special Distribution		
	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>
1998	\$40,338.78	\$40,338.78	\$0.00	N/A	N/A	N/A
1999	48,689.93	40,338.78	8,351.15	18,081.64	18,081.64	0.00
2000	54,769.53	58,161.78	0.00	26,584.63	27,081.64	0.00
2001	49,168.27	49,168.27	0.00	31,250.79	36,075.15	0.00
2002	63,962.83	59,406.92	4,555.91	25,836.50	25,836.50	0.00
Amount used in implementing Ordinance 525-F (3.1% BR plus 20 & Out)			(12,907.06)			
2003	60,230.34	49,785.58	10,444.76	35,457.84	35,457.84	0.00
Amount used in implementing Ordinance 525-G (Re-evaluate 525-F annually)			(10,444.76)			
2004	58,432.41	53,598.37	4,834.04	33,560.05	33,560.05	0.00
Amount used in implementing Ordinance 525-G (Re-evaluate 525-F annually)			(4,834.04)			
2005	58,380.46	59,996.18	0.00	35,092.24	35,092.24	0.00
2006	65,077.58	61,370.88	3,706.70	33,717.54	33,717.54	0.00
2007	68,870.04	68,870.04	0.00	39,051.38	26,218.38	12,833.00
Amount used in implementing Ordinance 754 (Re-evaluate 525-F annually)			(3,706.70)			
2008	80,062.85	80,062.85	0.00	58,654.95	18,732.57	39,922.38
Amount used in implementing Ordinance 754-A (Re-evaluate 525-F annually)						(12,833.00)
Amount used in implementing Ordinance 754-B (re-evaluate 525-F annually)						(39,922.38)
2009	73,468.75	73,468.75	0.00	62,842.54	30,202.67	32,639.87
Amount used in implementing Ordinance 754-D (re-evaluate 525-F annually)						(32,639.87)
2010	75,623.60	75,623.60	0.00	26,746.98	28,047.82	0.00
2011	74,233.63	74,233.63	0.00	17,916.86	29,437.79	0.00
2012	52,910.31	52,910.31	0.00	10,955.47	43,634.94	0.00
2013	75,052.08	75,052.08	0.00	28,729.78	28,619.34	110.44
2014	77,423.44	77,423.44	0.00	10,788.24	26,247.98	0.00
2015	76,947.39	76,947.39	0.00	7,274.49	26,724.03	0.00
2016	71,579.90	71,579.90	0.00	0.00	32,091.52	0.00
2017	86,752.43	85,589.78	1,162.65	75.09	18,081.64	0.00
2018	71,579.90	71,579.90	0.00	0.00	32,091.52	0.00
2019	74,872.41	74,872.41	0.00	0.00	0.00	0.00
			<u>1,162.65</u>			<u>110.44</u>
Accumulated Regular Excess			1,162.65			
Accumulated Special Excess			<u>110.44</u>			
Total Excess State Monies			1,273.09			

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	45,500.00	45,500.00
Prepaid Benefits	35,296.69	35,296.69
Prepaid Expenses	2,643.00	2,643.00
Cash	37,513.66	37,513.66
 Total Cash and Equivalents	 120,953.35	 120,953.35
Receivables:		
Member Contributions in Transit	1,132.52	1,132.52
City Contributions in Transit	10,487.68	10,487.68
Additional City Contributions	6,384.73	6,384.73
From Broker for Investments Sold	10,548.06	10,548.06
Investment Income	12,034.49	12,034.49
 Total Receivable	 40,587.48	 40,587.48
Investments:		
U. S. Bonds and Bills	253,876.25	280,389.94
Federal Agency Guaranteed Securities	641,673.00	652,839.00
Corporate Bonds	904,931.00	956,235.00
Mutual Funds:		
Fixed Income	287,524.99	243,767.85
Equity	3,368,794.22	3,981,980.84
Pooled/Common/Commingled Funds:		
Real Estate	641,851.05	651,774.87
 Total Investments	 6,098,650.51	 6,766,987.50
 Total Assets	 6,260,191.34	 6,928,528.33
 <u>LIABILITIES</u>		
Payables:		
Investment Expenses	7,002.26	7,002.26
Administrative Expenses	1,010.00	1,010.00
To Broker for Investments Purchased	27,390.28	27,390.28
 Total Liabilities	 35,402.54	 35,402.54
 NET POSITION RESTRICTED FOR PENSIONS	 6,224,788.80	 6,893,125.79

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:

Member	30,945.33
City	310,392.25
State	74,872.41

Total Contributions 416,209.99

Investment Income:

Net Realized Gain (Loss)	9,138.01	
Unrealized Gain (Loss)	26,579.42	
Net Increase in Fair Value of Investments		35,717.43
Interest & Dividends		317,672.18
Less Investment Expense ¹		(27,767.12)

Net Investment Income 325,622.49

Total Additions 741,832.48

DEDUCTIONS

Distributions to Members:

Benefit Payments	423,119.91
Lump Sum DROP Distributions	0.00
Refunds of Member Contributions	7,348.09

Total Distributions 430,468.00

Administrative Expense 50,170.82

Total Deductions 480,638.82

Net Increase in Net Position 261,193.66

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 6,631,932.13

End of the Year 6,893,125.79

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

ACTUARIAL ASSET VALUATION
SEPTEMBER 30, 2019

Actuarial Assets for funding purposes are developed by increasing the Actuarial Assets used in the most recent actuarial valuation of the Fund by the average annual market value rate of return (net of investment related expenses) for the past four years. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return ¹	
09/30/2016	6.14%	
09/30/2017	11.82%	
09/30/2018	7.22%	
09/30/2019	4.98%	
Annualized Rate of Return for prior four (4) years:		7.51%
(A) 10/01/2018 Actuarial Assets:		\$6,623,419.89
(I) Net Investment Income:		
1. Interest and Dividends	317,672.18	
2. Realized Gains (Losses)	9,138.01	
3. Unrealized Gains (Losses)	26,579.42	
4. Change in Actuarial Value	169,317.87	
5. Investment Related Expenses	(27,767.12)	
Total		494,940.36
(B) 10/01/2019 Actuarial Assets:		\$7,053,931.42
Actuarial Asset Rate of Return = $2I/(A+B-I)$:		7.51%
10/01/2019 Limited Actuarial Assets:		\$7,053,931.42
10/01/2019 Market Value of Assets:		\$6,893,125.79
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		(\$9,226.58)

¹Market Value Basis, net of investment related expenses.

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2019
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	30,945.33	
City	310,392.25	
State	74,872.41	
Total Contributions		416,209.99
Earnings from Investments:		
Interest & Dividends	317,672.18	
Net Realized Gain (Loss)	9,138.01	
Unrealized Gain (Loss)	26,579.42	
Change in Actuarial Value	169,317.87	
Total Earnings and Investment Gains		522,707.48
EXPENDITURES		
Distributions to Members:		
Benefit Payments	423,119.91	
Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	7,348.09	
Total Distributions		430,468.00
Expenses:		
Investment related ¹	27,767.12	
Administrative	50,170.82	
Total Expenses		77,937.94
Change in Net Assets for the Year		430,511.53
Net Assets Beginning of the Year		6,623,419.89
Net Assets End of the Year ²		7,053,931.42

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

²Net Assets may be limited for actuarial consideration.

RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2019

(1)	Total Required Contribution Rate	44.25%
(2)	Pensionable Payroll Derived from Member Contributions	\$940,587.54
(3)	Total Required Contribution (1) x (2)	416,209.99
(4)	Less Actual Member Contributions	(30,945.33)
(5)	Less Allowable State Contribution	(74,872.41)
(6)	Equals Required City Contribution for Fiscal 2019	310,392.25
(7)	Less 2018 Prepaid Contribution	0.00
(8)	Less Actual City Contributions	(304,007.52)
(9)	Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2019	-\$6,384.73

STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	12	15	18	19
Average Current Age	35.0	33.2	36.5	39.7
Average Age at Employment	27.8	26.9	31.4	34.0
Average Past Service	7.2	6.3	5.1	5.7
Average Annual Salary	\$52,783	\$52,849	\$49,160	\$53,419
<u>Service Retirees</u>				
Number	15	16	16	16
Average Current Age	64.2	64.3	65.3	66.3
Average Annual Benefit	\$25,738	\$25,478	\$25,585	\$25,696
<u>DROP Retirees</u>				
Number	1	0	0	0
Average Current Age	49.7	N/A	N/A	N/A
Average Annual Benefit	\$19,615	N/A	N/A	N/A
<u>Beneficiaries</u>				
Number	2	2	2	2
Average Current Age	68.8	69.8	70.8	71.8
Average Annual Benefit	\$7,058	\$7,078	\$7,098	\$7,119
<u>Disability Retirees</u>				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
<u>Terminated Vested</u>				
Number	17	16	24	22
Average Current Age ¹	40.3	41.0	44.7	45.7
Average Annual Benefit ²	\$6,893	\$6,879	\$7,095	\$7,095

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		1		1								2
25 - 29		2		1								3
30 - 34		3										3
35 - 39							2					2
40 - 44		1						1				2
45 - 49												0
50 - 54	1	3										4
55 - 59	1								1			2
60 - 64								1				1
65+												0
Total	2	10	0	2	0	0	2	2	1	0	0	19

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	18
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions or full lump sum distribution received	(1)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	0
g. Continuing participants	17
h. New entrants	2
i. Total active life participants in valuation	19

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

	Service Retirees, Vested Receiving <u>Benefits</u>	<u>DROP 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	16	0	2	0	6	18	42
Retired	0	0	0	0	0	0	0
DROP	0	0	0	0	0	0	0
Vested (Deferred Annuity)	0	0	0	0	0	0	0
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	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0	0
Disabled	0	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	(2)	(2)
Rehires	0	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0	0
b. Number current valuation	16	0	2	0	6	16	40

SUMMARY OF CURRENT PLAN
(Through Ordinance 754-F)

<u>Date of Latest Restatement</u>	January 7, 2011
<u>Eligibility</u>	Employees who are classified as full-time and volunteer Firefighters shall participate in the System as a condition of employment.
<u>Credited Service</u>	Total years and fractional parts of years of service with the City as a Firefighter.
<u>Salary</u>	W-2 Earnings, plus tax deferred, tax sheltered and tax exempt income. Overtime is limited to 300 hours per year and pensionable lump sick and vacation payouts are limited to the amounts accrued as of July 1, 2013.
<u>Average Final Compensation</u>	Average Salary for the best 5 years during the 10 years immediately preceding retirement or termination.
<u>Member Contributions</u>	3.29% of Salary effective 10/1/2010.
<u>City and State Contributions</u>	Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any. In no event will the City's contribution be less than 5% of the total Salary of the Members, as provided in Part VII of Chapter 112, Florida Statutes.
<u>Normal Retirement</u>	
Date	Earlier of age 60, age 55 and 10 years of Credited Service, or 20 years of Credited Service regardless of age.
Benefit	3.1% of Average Final Compensation times Credited Service
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 10 Years of Credited Service.
Benefit	Accrued benefit, reduced 3% per year.
<u>Cost of Living Adjustment</u>	3% increase each January 1 from age 55 through age 65.
<u>Vesting</u>	
Schedule	100% after 10 years of Credited Service.
Benefit Amount	Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

Disability

Eligibility

Service Incurred

Covered from Date of Employment.

Non-Service Incurred

10 years of Credited Service.

Exclusions

Disability resulting from use of drugs, illegal participation in riots, service in military, etc.

Benefit

Benefit accrued to date of disability but not less than 42% of Average Final Compensation (Service Incurred).

Duration

Payable for life, with 120 payments guaranteed, or until recovery (as determined by the Board; options available).

Death Benefits

Pre-Retirement

Vested

Monthly accrued benefit payable to designated beneficiary for 10 years.

Non-Vested

Refund of accumulated contributions, without interest.

Post-Retirement

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

Board of Trustees

a. Two Council appointees,

b. Two Members of the Department elected by the membership, and

c. Fifth Member elected by other 4 and appointed by Council.

Deferred Retirement Option Plan

Eligibility

Satisfaction of Normal Retirement requirements.

Participation

Not to exceed the earlier of 60 months or the completion of 30 years of service with the City as a Firefighter.

Rate of Return

At Member's election: 6.5% or Net Investment Return

Distribution

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

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	45,500
Prepaid Benefits	35,297
Prepaid Expenses	2,643
Cash	37,513
 Total Cash and Equivalents	 120,953
 Receivables:	
Member Contributions in Transit	1,132
City Contributions in Transit	10,488
Additional City Contributions	6,385
From Broker for Investments Sold	10,548
Investment Income	12,034
 Total Receivable	 40,587
 Investments:	
U. S. Bonds and Bills	280,390
Federal Agency Guaranteed Securities	652,839
Corporate Bonds	956,235
Mutual Funds:	
Fixed Income	243,768
Equity	3,981,981
Pooled/Common/Commingled Funds:	
Real Estate	651,775
 Total Investments	 6,766,988
 Total Assets	 6,928,528
 <u>LIABILITIES</u>	 7,002
Payables:	
Investment Expenses	1,010
Administrative Expenses	27,390
To Broker for Investments Purchased	35,402
 Total Liabilities	 6,893,126
 NET POSITION RESTRICTED FOR PENSIONS	

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:

Member	30,945	
City	310,392	
State	74,873	
 Total Contributions		 416,210
 Investment Income:		
Net Increase in Fair Value of Investments	35,718	
Interest & Dividends	317,672	
Less Investment Expense ¹	(27,767)	
 Net Investment Income		 325,623
 Total Additions		 741,833

DEDUCTIONS

Distributions to Members:

Benefit Payments	423,120	
Lump Sum DROP Distributions	0	
Refunds of Member Contributions	7,348	
 Total Distributions		 430,468
 Administrative Expense		 50,171
 Total Deductions		 480,639
 Net Increase in Net Position		 261,194
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		6,631,932
 End of the Year		 6,893,126

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

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended September 30, 2019)

Plan Administration

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

- a. Two Council appointees,
- b. Two Members of the Department elected by the Membership, and
- c. Fifth Member elected by other four and appointed by Council.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	18
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	24
Active Plan Members	18
	60

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Brooksville Firefighters' Retirement Trust Fund prepared by Foster & Foster Actuaries and Consultants.

Incorporated are the benefit changes for measurement date 09/30/2019 as noted under the Notes to Schedule of Changes in Net Pension Liability and Related Ratios.

Contributions

Member Contribution: 3.29% of Salary effective 10/1/2010.

City and State Contributions: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any. In no event will the City's contribution be less than 5% of the total Salary of the Members, as provided in Part VII of Chapter 112, Florida Statutes.

Investments

Investment Policy:

The following was the Board's adopted asset allocation policy as of September 30, 2019:

Asset Class	Target Allocation
Domestic Equity	45.00%
International Equity	15.00%
Domestic Fixed Income	25.00%
Global Fixed Income	5.00%
Real Estate	10.00%
Total	100.00%

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, 2019, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 4.98 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 the earlier of 60 months or the completion of 30 years of service with the City as a Firefighter.

Rate of Return: At Member's election: 6.5% or Net Investment Return.

The DROP balance as September 30, 2019 is \$0.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2019 were as follows:

Total Pension Liability	\$ 7,444,195
Plan Fiduciary Net Position	\$ (6,893,126)
Sponsor's Net Pension Liability	<u>\$ 551,069</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	<u>92.60%</u>

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.65%
Investment Rate of Return	7.65%

Mortality Rate Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

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

The above 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, 2016 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated September 18, 2018.

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 2019 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, 2019 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	7.50%
International Equity	8.50%
Domestic Fixed Income	2.50%
Global Fixed Income	3.50%
Real Estate	4.50%

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Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.65 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	Current Discount Rate	1% Increase
	6.65%	7.65%	8.65%
Sponsor's Net Pension Liability	\$ 1,409,232	\$ 551,069	\$ (158,673)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	110,943	151,872	125,632
Interest	556,749	543,429	544,778
Change in Excess State Money	-	-	1,162
Changes of benefit terms	(207)	-	-
Differences between Expected and Actual Experience	(176,362)	82,081	(221,245)
Changes of assumptions	-	(33,387)	-
Benefit Payments, including Refunds of Employee Contributions	(430,468)	(443,693)	(541,923)
Net Change in Total Pension Liability	60,655	300,302	(91,596)
Total Pension Liability - Beginning	7,383,540	7,083,238	7,174,834
Total Pension Liability - Ending (a)	<u>\$ 7,444,195</u>	<u>\$ 7,383,540</u>	<u>\$ 7,083,238</u>
Plan Fiduciary Net Position			
Contributions - Employer	310,392	303,377	311,939
Contributions - State	74,873	77,143	86,827
Contributions - Employee	30,945	26,011	25,888
Net Investment Income	325,623	444,484	663,697
Benefit Payments, including Refunds of Employee Contributions	(430,468)	(443,693)	(541,923)
Administrative Expense	(50,171)	(47,646)	(38,072)
Net Change in Plan Fiduciary Net Position	261,194	359,676	508,356
Plan Fiduciary Net Position - Beginning	6,631,932	6,272,256	5,763,900
Plan Fiduciary Net Position - Ending (b)	<u>\$ 6,893,126</u>	<u>\$ 6,631,932</u>	<u>\$ 6,272,256</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 551,069</u>	<u>\$ 751,608</u>	<u>\$ 810,982</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	92.60%	89.82%	88.55%
Covered Payroll ¹	\$ 940,588	\$ 790,608	\$ 786,866
Net Pension Liability as a percentage of Covered Payroll	58.59%	95.07%	103.06%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82.

Changes in benefit terms:

For measurement date 09/30/2019, amounts reported as changes of benefit terms resulted from the provisions of Chapter 112.1816, Florida Statutes. The Statutes state that, effective July 1, 2019, a death or disability (under the Plan's definition of total and permanent disability) for a Firefighter due to the diagnosis of cancer or circumstances that arise out of the treatment of cancer will be treated as duty-related.

Changes of assumptions:

For measurement date 09/30/2018, amounts reported as changed of assumptions resulted from the actuarial experience study dated September 18, 2018, the Board adopted the following changes:

- Reduced interest rate to 7.65%.
- Modified salary increase rates to use a service-based table.
- Updated retirement and termination rates.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2016	09/30/2015
Total Pension Liability		
Service Cost	127,478	122,018
Interest	539,879	554,808
Change in Excess State Money	-	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	(103,758)	(277,496)
Changes of assumptions	213,065	-
Benefit Payments, including Refunds of Employee Contributions	(881,295)	(313,547)
Net Change in Total Pension Liability	(104,631)	85,783
Total Pension Liability - Beginning	7,279,465	7,193,682
Total Pension Liability - Ending (a)	<u>\$ 7,174,834</u>	<u>\$ 7,279,465</u>
Plan Fiduciary Net Position		
Contributions - Employer	315,784	263,827
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Net Change in Plan Fiduciary Net Position	(168,928)	(91,358)
Plan Fiduciary Net Position - Beginning	5,932,828	6,024,186
Plan Fiduciary Net Position - Ending (b)	<u>\$ 5,763,900</u>	<u>\$ 5,932,828</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,410,934</u>	<u>\$ 1,346,637</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	80.33%	81.50%
Covered Payroll ¹	\$ 749,109	\$ 732,006
Net Pension Liability as a percentage of Covered Payroll	188.35%	183.97%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Changes of assumptions:

For measurement date 09/30/2016, as a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.

The inflation assumption rate was lowered from 3.00% to 2.50%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2014	09/30/2013
Total Pension Liability		
Service Cost	140,185	130,102
Interest	528,251	501,977
Change in Excess State Money	-	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Benefit Payments, including Refunds of Employee Contributions	(301,643)	(304,630)
Net Change in Total Pension Liability	366,793	327,449
Total Pension Liability - Beginning	6,826,889	6,499,440
Total Pension Liability - Ending (a)	<u>\$ 7,193,682</u>	<u>\$ 6,826,889</u>
Plan Fiduciary Net Position		
Contributions - Employer	248,414	213,304
Contributions - State	88,212	103,782
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Benefit Payments, including Refunds of Employee Contributions	(301,643)	(304,630)
Administrative Expense	(30,968)	(25,208)
Net Change in Plan Fiduciary Net Position	567,279	519,720
Plan Fiduciary Net Position - Beginning	5,456,907	4,937,187
Plan Fiduciary Net Position - Ending (b)	<u>\$ 6,024,186</u>	<u>\$ 5,456,907</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,169,496</u>	<u>\$ 1,369,982</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	83.74%	79.93%
Covered Payroll ¹	\$ 614,729	\$ 612,631
Net Pension Liability as a percentage of Covered Payroll	190.25%	223.62%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82.

SCHEDULE OF CONTRIBUTIONS
Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 385,265	\$ 385,265	\$ -	\$ 940,588	40.96%
09/30/2018	\$ 380,520	\$ 380,520	\$ -	\$ 790,608	48.13%
09/30/2017	\$ 397,604	\$ 397,604	\$ -	\$ 786,866	50.53%
09/30/2016	\$ 387,364	\$ 387,364	\$ -	\$ 749,109	51.71%
09/30/2015	\$ 348,049	\$ 348,049	\$ -	\$ 732,006	47.55%
09/30/2014	\$ 336,626	\$ 336,626	\$ -	\$ 614,729	54.76%
09/30/2013	\$ 316,975	\$ 316,975	\$ -	\$ 612,631	51.74%
09/30/2012	\$ 291,265	\$ 291,265	\$ -	\$ 650,368	44.78%
09/30/2011	\$ 310,150	\$ 310,150	\$ -	\$ 764,108	40.59%
09/30/2010	\$ 299,293	\$ 299,293	\$ -	\$ 800,247	37.40%

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Notes to Schedule

Valuation Date: 10/01/2017

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:

Mortality Rate :

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

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

Termination Rates:

The assumed rates of mortality 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 the July 1, 2016 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

See Tables on the following page (1302). This assumption is based on the results of an experience study performed March 28, 2012.

See Tables on the following page (1201). It is assumed that 75% of disablements and active Member deaths are service related. This assumption was developed from those used by other plans containing Florida municipal Firefighters.

Disability Rates:

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Retirement Age: Earlier of age 55 and the completion of 10 years of service, or the completion of 20 years of service regardless of age, or age 60, regardless of service. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year. We feel this assumption is reasonable based on the plan provisions.

Early Retirement: Commencing upon a Member’s eligibility for Early Retirement (Age 50 with 10 years of Credited Service), Members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. We feel this assumption is reasonable based on the plan provisions.

Interest Rate: 7.75% per year, compounded annually, net of investment related expenses. This is supported by the target asset class allocation of the trust and the expected long-term return by asset class.

Salary Increases: 6.5% per year until retirement age; see Table on the following page. This assumption is consistent with long term Plan experience. Final salary in year of retirement is increased individually to account for additional non-regular

Payroll Increase: None.

Cost of Living Adjustments: 3.0% per year, from age 55 to 65.

Funding Method: Entry Age Normal Actuarial Cost Method.

Actuarial Asset Method: Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric four-year average Market Value return (net of fees). It is possible that over time this technique will produce an insignificant bias above or below Market Value of Assets.

Termination and Disability Rate Table:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	12.0%	0.03%
30	10.0%	0.04%
40	5.2%	0.07%
50	1.6%	0.18%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2019	4.98%
09/30/2018	7.22%
09/30/2017	11.82%
09/30/2016	6.14%
09/30/2015	-1.64%
09/30/2014	9.91%
09/30/2013	10.35%

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended September 30, 2019)

Plan Description

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

- a. Two Council appointees,
- b. Two Members of the Department elected by the Membership, and
- c. Fifth Member elected by other four and appointed by Council.

Employees who are classified as full-time and volunteer Firefighters shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	18
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	24
Active Plan Members	18
	60
	60

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Brooksville Firefighters' Retirement Trust Fund prepared by Foster & Foster Actuaries and Consultants.

Incorporated are the benefit changes for measurement date 09/30/2019 as noted under the Notes to Schedule of Changes in Net Pension Liability and Related Ratios.

Contributions

Member Contribution: 3.29% of Salary effective 10/1/2010.

City and State Contributions: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any. In no event will the City's contribution be less than 5% of the total Salary of the Members, as provided in Part VII of Chapter 112, Florida Statutes.

Net Pension Liability

The measurement date is September 30, 2019.

The measurement period for the pension expense was October 1, 2018 to September 30, 2019.

The reporting period is October 1, 2018 through September 30, 2019.

The Sponsor's Net Pension Liability was measured as of September 30, 2019.

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, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.50%	
Salary Increases	Service based	
Discount Rate	7.65%	
Investment Rate of Return	7.65%	

Mortality Rate Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

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The above 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, 2016 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated September 18, 2018.

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 2019 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, 2019 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	45.00%	7.50%
International Equity	15.00%	8.50%
Domestic Fixed Income	25.00%	2.50%
Global Fixed Income	5.00%	3.50%
Real Estate	10.00%	4.50%
Total	100.00%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.65 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)
Balances at September 30, 2018	\$ 7,383,540	\$ 6,631,932	\$ 751,608
Changes for a Year:			
Service Cost	110,943	-	110,943
Interest	556,749	-	556,749
Differences between Expected and Actual Experience	(176,362)	-	(176,362)
Changes of assumptions	-	-	-
Changes of benefit terms	(207)	-	(207)
Contributions - Employer	-	310,392	(310,392)
Contributions - State	-	74,873	(74,873)
Contributions - Employee	-	30,945	(30,945)
Net Investment Income	-	325,623	(325,623)
Benefit Payments, including Refunds of Employee Contributions	(430,468)	(430,468)	-
Administrative Expense	-	(50,171)	50,171
Net Changes	60,655	261,194	(200,539)
Balances at September 30, 2019	\$ 7,444,195	\$ 6,893,126	\$ 551,069

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.65%	7.65%	8.65%
Sponsor's Net Pension Liability	\$ 1,409,232	\$ 551,069	\$ (158,673)

Pension Plan Fiduciary Net Position.

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

PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$249,584.

On September 30, 2019, 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	-	88,181
Changes of assumptions	-	-
Net difference between Projected and Actual Earnings on Pension Plan investments	96,710	-
Total	\$ 96,710	\$ 88,181

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:		
2020	\$	(69,753)
2021	\$	(1,086)
2022	\$	43,517
2023	\$	35,851
2024	\$	-
Thereafter	\$	-

Payable to the Pension Plan

On September 30, 2019, the Sponsor reported a payable of \$6,385 for the outstanding amount of contributions of the Pension Plan required for the year ended September 30, 2019.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
Last 10 Fiscal Years

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	110,943	151,872	125,632
Interest	556,749	543,429	544,778
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Net Pension Liability - Ending (a) - (b)	<u>\$ 551,069</u>	<u>\$ 751,608</u>	<u>\$ 810,982</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	92.60%	89.82%	88.55%
Covered Payroll ¹	\$ 940,588	\$ 790,608	\$ 786,866
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Net Pension Liability - Ending (a) - (b)	<u>\$ 1,169,496</u>	<u>\$ 1,369,982</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	83.74%	79.93%
Covered Payroll ¹	\$ 614,729	\$ 612,631
Net Pension Liability as a percentage of Covered Payroll	190.25%	223.62%

Notes to Schedule:

¹ The Covered Payroll numbers shown are in compliance with GASB 82.

SCHEDULE OF CONTRIBUTIONS
Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 385,265	\$ 385,265	\$ -	\$ 940,588	40.96%
09/30/2018	\$ 380,520	\$ 380,520	\$ -	\$ 790,608	48.13%
09/30/2017	\$ 397,604	\$ 397,604	\$ -	\$ 786,866	50.53%
09/30/2016	\$ 387,364	\$ 387,364	\$ -	\$ 749,109	51.71%
09/30/2015	\$ 348,049	\$ 348,049	\$ -	\$ 732,006	47.55%
09/30/2014	\$ 336,626	\$ 336,626	\$ -	\$ 614,729	54.76%
09/30/2013	\$ 316,975	\$ 316,975	\$ -	\$ 612,631	51.74%
09/30/2012	\$ 291,265	\$ 291,265	\$ -	\$ 650,368	44.78%
09/30/2011	\$ 310,150	\$ 310,150	\$ -	\$ 764,108	40.59%
09/30/2010	\$ 299,293	\$ 299,293	\$ -	\$ 800,247	37.40%

¹ The Covered Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period which includes DROP payroll.

Notes to Schedule

Valuation Date: 10/01/2017

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:

Mortality Rate :

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90%

Combined Healthy Blue Collar, Scale BB.

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue

Collar, Scale BB.

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.

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

The assumed rates of mortality 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 the July 1, 2016 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality See Tables on the following page (1302). This assumption is based on the results of an experience study performed March 28, 2012.

See Tables on the following page (1201). It is assumed that 75% of disablements and active Member deaths are service related. This assumption was developed from those used by other plans containing Florida municipal Firefighters.

Termination Rates:

Disability Rates:

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Retirement Age:	Earlier of age 55 and the completion of 10 years of service, or the completion of 20 years of service regardless of age, or age 60, regardless of service. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year. We feel this assumption is reasonable based on the plan provisions.
Early Retirement:	Commencing upon a Member's eligibility for Early Retirement (Age 50 with 10 years of Credited Service), Members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. We feel this assumption is reasonable based on the plan provisions.
Interest Rate:	7.75% per year, compounded annually, net of investment related expenses. This is supported by the target asset class allocation of the trust and the expected long-term return by asset class.
Salary Increases:	6.5% per year until retirement age; see Table on the following page. This assumption is consistent with long term Plan experience. Final salary in year of retirement is increased individually to account for additional non-regular
Payroll Increase:	None.
Cost of Living Adjustments:	3.0% per year, from age 55 to 65.
Funding Method:	Entry Age Normal Actuarial Cost Method.
Actuarial Asset Method:	Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric four-year average Market Value return (net of fees). It is possible that over time this technique will produce an insignificant bias above or below Market Value of Assets.

Termination and Disability Rate Table:	Age	% Terminating During the Year	% Becoming Disabled During the Year
	20	12.0%	0.03%
	30	10.0%	0.04%
	40	5.2%	0.07%
	50	1.6%	0.18%

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EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 751,608	\$ 150,503	\$ 223,890	\$ -
Total Pension Liability Factors:				
Service Cost	110,943	-	-	110,943
Interest	556,749	-	-	556,749
Changes in benefit terms	(207)	-	-	(207)
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(176,362)	176,362	-	-
Current year amortization of experience difference	-	(88,181)	(41,041)	(47,140)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	(16,694)	-	(16,694)
Benefit Payments, including Refunds of Employee Contributions	(430,468)	-	-	-
Net change	<u>60,655</u>	<u>71,487</u>	<u>(41,041)</u>	<u>603,651</u>
Plan Fiduciary Net Position:				
Contributions - Employer	310,392	-	-	-
Contributions - State	74,873	-	-	-
Contributions - Employee	30,945	-	-	(30,945)
Projected Net Investment Income	504,878	-	-	(504,878)
Difference between projected and actual earnings on Pension Plan investments	(179,255)	-	179,255	-
Current year amortization	-	(44,603)	(176,188)	131,585
Benefit Payments, including Refunds of Employee Contributions	(430,468)	-	-	-
Administrative Expenses	(50,171)	-	-	50,171
Net change	<u>261,194</u>	<u>(44,603)</u>	<u>3,067</u>	<u>(354,067)</u>
Ending Balance	<u>\$ 551,069</u>	<u>\$ 177,387</u>	<u>\$ 185,916</u>	<u>\$ 249,584</u>

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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 179,255	5	\$ 35,851	\$ 35,851	\$ 35,851	\$ 35,851	\$ 35,851	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 38,330	5	\$ 7,666	\$ 7,666	\$ 7,666	\$ 7,666	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (223,014)	5	\$ (44,603)	\$ (44,603)	\$ (44,603)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 97,571	5	\$ 19,514	\$ 19,514	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 565,785	5	\$ 113,157	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 131,585	\$ 18,428	\$ (1,086)	\$ 43,517	\$ 35,851	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions											
			2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
2018	\$ (33,387)	2	\$ (16,694)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
			\$ (16,694)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense														

AMORTIZATION 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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ (176,362)	2	\$ (88,181)	\$ (88,181)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 82,081	2	\$ 41,041	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (47,140)	\$ (88,181)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -