

CITY OF HOLLYWOOD
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2018

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2020

GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2018



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

April 22, 2019

Board of Trustees
c/o Ms. Ferrell Jenne, Plan Administrator
2503 Del Prado Blvd. S.
Suite 502
Cape Coral, FL 33904

Re: City of Hollywood Firefighters' Pension Fund

Dear Board:

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

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Chapters 112 and 175, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

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

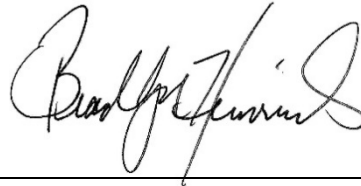
The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Hollywood, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Firefighters' Pension 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 me at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.



By:

Bradley R. Heinrichs, FSA, EA, MAAA
Enrolled Actuary #17-6901

BRH/lke
Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Hollywood Firefighters' Pension Fund, performed as of October 1, 2018, 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, 2020.

The funding requirements for the applicable year, compared with amounts developed in the July 25, 2018 Actuarial Impact Statement, determined as of October 1, 2017, are as follows:

Valuation Date Applicable to Fiscal Year Ending	10/1/2018 <u>9/30/2020</u>	10/1/2017 <u>9/30/2019</u>
Minimum Required Contribution	\$21,138,997	\$20,017,596
Member Contributions (Est.)	1,530,126	1,426,019
City And State Required Contribution	19,608,871	18,591,577
State Contribution (Est.) ¹	1,562,180	1,562,180
City Required Contribution ² <i>% of Total Annual Payroll</i> ³	\$18,046,691 87.5%	\$17,029,397 87.4%

¹ The City may use up to \$1,562,180, if received, to offset their required contribution. If the State Contribution is not received, the City will owe the balance.

² Additionally, the City has a shortfall contribution of \$4,570,135 for the fiscal year ending September 30, 2018 that will need to be paid with interest in addition to the required contributions above.

³ The percentage shown represents the dollar amount shown divided by the Total Annual Payroll as of the applicable valuation date. Please note that the requirements are the City and State Required Contributions shown and the percentage displayed is just for illustrative purposes.

As you can see, the Minimum Required Contribution shows an increase when compared to the results determined in the prior report. The increase is attributable to an increase in the number of active Firefighters, the natural increase as a result of the payroll growth assumption and a change in the interpretation of the plan provisions. The increase was offset in part by favorable plan experience.

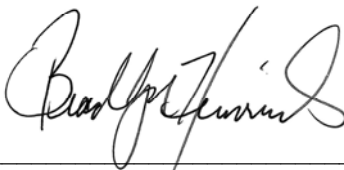
Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of favorable experience included an investment return of 8.89% (Actuarial Asset Basis) which exceeded the 7.50% assumption and an average salary increase of 5.47% which fell short of the 8.62% assumption. The impact of the 13th check and unfavorable turnover and retirement experience were the primary sources of unfavorable experience.


Even with the favorable experience, the contribution increased from the prior year due to an increase in the active headcount resulting in higher normal cost and the natural increase in the amortization of the unfunded liability due to the 3.00% payroll growth assumption. Please note, despite the dollar increase in the contribution, the City's funding requirement, when expressed as a percentage of projected non-DROP payroll, remained relatively consistent over the past year.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By: 
Bradley R. Heinrichs, FSA, EA, MAAA

By: 
Heidi E. Andorfer, FSA, EA, MAAA

CHANGES SINCE PRIOR VALUATION

Plan Changes

Since the prior valuation report there was one benefit change as follows (the impact of which is outlined in the July 25,2018 Actuarial Impact Statement):

Create a Reformed Planned Retirement Benefit (RPRB), with the following two options:

- 1.) The Member will contribute 8.0% of compensation while participating in the RPRB and the provisions would be exactly the same as the original Planned Retirement Benefit (PRB).
- 2.) The Member will contribute 0.5% of compensation while participating in the RPRB and will only have the option to receive a lump sum at termination of employment (the first option provided in Section 33.062(D) of the City's Code of Ordinances). The investment earnings credited to the RPRB will be the actual plan returns, net of investment related expenses (there will no longer be an adjustment if the return exceeds 4.0%). The Member will be allowed to leave the RPRB balance in the Fund at termination of employment. To value this provision, the assumed rate of investment earnings on the PRB balances was changed from 5.7% per year to 7.5% per year.

Members currently participating in the PRB will be given the opportunity to choose either of the above. If they choose the second option, they will be either given a refund of 7.5% of Salary that they have contributed thus far while participating in the PRB, with interest or that same amount will be added to their current PRB Lump Sum Balance that will continue to earn interest until termination of employment.

Actuarial Assumption/Method Changes

In prior reports it was assumed that members participating the PRB/RPRB would receive their first Cost-Of-Living Adjustment (COLA) one year after termination of employment. Based upon an email from the Board's attorney, we now understand that Members participating in RPRB will receive the first COLA three years after their RPRB participation date. The impact of this change in interpretation is outlined in the Comparative Summary of Principal Valuation Results that follows.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Interpretation <u>10/1/2018</u>	Old Interpretation <u>10/1/2018</u>	<u>10/1/2017</u>
A. Participant Data			
Actives	219	219	213
Service Retirees	179	179	176
DROP Retirees	7	7	11
Beneficiaries	41	41	39
Disability Retirees	21	21	21
Terminated Vested	<u>14</u>	<u>14</u>	<u>13</u>
Total	481	481	473
Total Annual Payroll	\$20,634,810	\$20,634,810	\$19,493,091
Payroll Under Assumed Ret. Age	20,634,810	20,634,810	19,493,091
Annual Rate of Payments to:			
Service Retirees	13,489,578	13,489,578	12,997,462
DROP Retirees	468,936	468,936	751,326
Beneficiaries	1,026,870	1,026,870	901,005
Disability Retirees	1,097,494	1,097,494	1,081,823
Terminated Vested	180,950	180,950	140,150
B. Assets			
Actuarial Value (AVA) ¹	240,814,251	240,814,251	224,844,217
Market Value (MVA) ¹	250,486,988	250,486,988	231,470,013
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	156,493,970	150,226,451	141,822,036
Disability Benefits	7,359,816	7,359,816	6,937,011
Death Benefits	1,980,021	1,980,021	1,889,293
Vested Benefits	4,072,878	4,072,878	4,025,949
Refund of Contributions	371,389	371,389	364,577
Service Retirees	175,938,147	175,938,147	169,729,934
DROP Retirees ¹	99,949,719	99,949,719	101,430,221
Beneficiaries	10,473,675	10,473,675	9,915,426
Disability Retirees	13,484,213	13,484,213	13,479,270
Terminated Vested	2,463,589	2,463,589	2,100,454
Share Plan Balances ¹	62,925	62,925	62,925
Excess State Monies Reserve	<u>11,040</u>	<u>11,040</u>	<u>11,040</u>
Total	472,661,382	466,393,863	451,768,136

C. Liabilities - (Continued)	New Interpretation <u>10/1/2018</u>	Old Interpretation <u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	285,546,870	285,546,870	274,479,431
Present Value of Future Member Contributions	20,939,775	20,939,775	19,937,141
Normal Cost (Retirement)	4,968,796	4,812,481	4,571,195
Normal Cost (Disability)	416,122	416,122	417,248
Normal Cost (Death)	106,140	106,140	100,026
Normal Cost (Vesting)	233,541	233,541	261,508
Normal Cost (Refunds)	<u>59,253</u>	<u>59,253</u>	<u>54,437</u>
Total Normal Cost	5,783,852	5,627,537	5,404,414
Present Value of Future Normal Costs	71,778,092	70,703,590	68,566,107
Accrued Liability (Retirement)	94,188,541	88,995,524	82,374,973
Accrued Liability (Disability)	2,106,089	2,106,089	1,915,675
Accrued Liability (Death)	600,403	600,403	564,230
Accrued Liability (Vesting)	1,559,680	1,559,680	1,579,897
Accrued Liability (Refunds)	45,269	45,269	37,984
Accrued Liability (Inactives) ¹	302,309,343	302,309,343	296,655,305
Share Plan Balances ¹	62,925	62,925	62,925
Excess State Monies Reserve	<u>11,040</u>	<u>11,040</u>	<u>11,040</u>
Total Actuarial Accrued Liability (EAN AL)	400,883,290	395,690,273	383,202,029
Unfunded Actuarial Accrued Liability (UAAL)	160,069,039	154,876,022	158,357,812
Funded Ratio (AVA / EAN AL)	60.1%	60.9%	58.7%

D. Actuarial Present Value of Accrued Benefits	New Interpretation <u>10/1/2018</u>	Old Interpretation <u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits			
Inactives + Share Plan Balances ¹	302,372,268	302,372,268	296,718,230
Actives	52,217,623	49,989,121	45,575,003
Member Contributions	<u>13,859,590</u>	<u>13,859,590</u>	<u>12,934,645</u>
Total	368,449,481	366,220,979	355,227,878
Non-vested Accrued Benefits	<u>13,038,416</u>	<u>12,441,746</u>	<u>11,640,405</u>
Total Present Value Accrued Benefits (PVAB)	381,487,897	378,662,725	366,868,283
Funded Ratio (MVA / PVAB)	65.7%	66.2%	63.1%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	2,825,172	0	
Assumption Changes	0	0	
New Accrued Benefits	0	7,138,715	
Benefits Paid	0	(22,033,151)	
Interest	0	26,688,878	
Other	<u>0</u>	<u>0</u>	
Total	2,825,172	11,794,442	

	New Interpretation	Old Interpretation	
Valuation Date	10/1/2018	10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2020</u>	<u>9/30/2019</u>

E. Pension Cost

Normal Cost ²	\$6,434,535	\$6,260,635	\$6,012,411
Administrative Expenses ²	728,369	728,369	622,931
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 30 years (as of 10/1/2018) ²	13,976,093	13,641,488	13,382,254
Minimum Required Contribution	21,138,997	20,630,492	20,017,596
Expected Member Contributions ²	1,530,126	1,530,126	1,426,019
Expected City and State Contribution	19,608,871	19,100,366	18,591,577

F. Past Contributions

Plan Years Ending: 9/30/2018

City and State Requirement 16,373,064

Actual Contributions Made:

Members (excluding buyback)	1,458,572
City	16,373,064
State	<u>0</u>
Total	17,831,636

G. Net Actuarial (Gain)/Loss (3,039,013)

¹ The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2018 and 9/30/2017.

² Contributions developed as of 10/1/2018 displayed above have been adjusted to account for assumed salary increase and interest 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>
2018	160,069,039
2019	158,569,231
2020	156,551,785
2027	123,083,056
2034	49,893,250
2041	15,481,065
2048	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	5.47%	8.62%
Year Ended 9/30/2017	6.07%	8.46%
Year Ended 9/30/2016	7.44%	8.40%
Year Ended 9/30/2015	7.58%	11.38%
Year Ended 9/30/2014	7.05%	10.80%

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

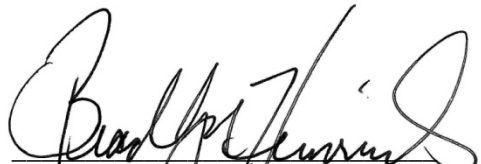
	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2018	9.96%	8.89%	7.50%
Year Ended 9/30/2017	12.82%	9.35%	7.50%
Year Ended 9/30/2016	8.57%	10.38%	7.50%
Year Ended 9/30/2015	1.92%	10.38%	7.50%
Year Ended 9/30/2014	10.77%	12.79%	7.60%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$20,634,810
	10/1/2008	12,207,000
(b) Total Increase		69.04%
(c) Number of Years		10.00
(d) Average Annual Rate		5.39%

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.



Bradley R. Heinrichs, FSA, EA, MAAA
Enrolled Actuary #17-6901

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, 2017	\$158,357,812
(2) Sponsor Normal Cost developed as of October 1, 2017	4,122,599
(3) Expected administrative expenses for the year ended September 30, 2018	559,938
(4) Expected interest on (1), (2) and (3)	12,207,029
(5) Sponsor contributions to the System during the year ended September 30, 2018	16,373,064
(6) Expected interest on (5)	959,279
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	157,915,035
(8) Change to UAAL due to Interpretation Change	5,193,017
(9) Change to UAAL due to Actuarial (Gain)/Loss	(3,039,013)
(10) Unfunded Actuarial Accrued Liability as of October 1, 2018	160,069,039

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2018 Amount</u>	<u>Amortization Amount</u>
Method Change	10/1/2002	14	42,593,779	3,958,203
Experience Gain	10/1/2003	15	(2,449,809)	(216,597)
Assumption Change	10/1/2003	15	3,795,361	335,563
Experience Loss	10/1/2004	16	15,923,656	1,345,247
Plan Amendment	10/1/2004	16	10,847,309	916,392
Experience Loss	10/1/2005	17	21,111,530	1,710,617
Experience Loss	10/1/2006	18	3,868,813	301,665
Experience Gain	10/1/2007	19	(4,711,220)	(354,547)
Experience Loss	10/1/2008	20	17,163,389	1,249,905
Experience Loss	10/1/2009	21	20,109,652	1,420,480
Plan Amendment	10/1/2009	21	(1,350,090)	(95,366)
Assumption Change	10/1/2010	22	6,150,764	422,317
Plan Amendment	10/1/2010	22	(31,221,817)	(2,143,719)
Experience Loss	10/1/2010	22	8,088,088	555,336
Assumption Change	10/1/2011	23	5,487,848	366,966
Experience Loss	10/1/2011	23	7,019,263	469,370
Assumption Change	10/1/2012	24	3,893,814	254,022
Plan Amendment	10/1/2012	24	(215,431)	(14,054)
Experience Loss	10/1/2012	24	1,034,274	67,473

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Reconciliation Base	10/1/2013	25	(143,003)	(9,116)
Experience Gain	10/1/2013	25	(1,433,222)	(91,364)
2012 13th Check	10/1/2013	25	3,167,705	201,932
13th Check Assump	10/1/2013	25	11,851,063	755,471
Assumption Change	10/1/2013	25	2,914,234	185,774
Plan Amendment	10/1/2013	25	387,695	24,714
Assumption Change	10/1/2014	26	2,652,076	165,441
Experience Gain	10/1/2014	26	(7,926,568)	(494,474)
Assumption Change	10/1/2015	27	(1,084,978)	(66,322)
Experience Gain	10/1/2015	27	(529,817)	(32,386)
Experience Gain	10/1/2016	28	(2,740,588)	(164,358)
n Interpretation Change	10/1/2016	28	4,614,602	276,747
Assumption Change	10/1/2016	28	13,823,836	829,042
Actuarial Loss	10/1/2017	29	1,407,231	82,893
Plan Change	10/1/2017	29	3,815,596	224,758
Actuarial Gain	10/1/2018	30	(3,039,013)	(176,013)
Interpretation Change	10/1/2018	30	<u>5,193,017</u>	<u>300,768</u>
			160,069,039	12,562,780

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$158,357,812
(2) Expected UAAL as of October 1, 2018	157,915,035
 (3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(3,110,628)
Salary Increases	(686,311)
Active Decrements	803,326
Inactive Mortality	(231,039)
Impact of 13th Check	1,181,634
Impact of Estimated DROP Balance Update	(188,070)
Other	<u>(807,925)</u>
Increase in UAAL due to (Gain)/Loss	(3,039,013)
Interpretation Change	<u>5,193,017</u>
(4) Actual UAAL as of October 1, 2018	\$160,069,039

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.

Interest Rate

7.50% 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.

13th Check Load

An underlying interest rate of 7.20% is used (0.30% lower than the assumed rate) to account for the 13th check. Additionally, since the DROP Balances are included in the computation of the 13th check, the resulting load on the accrued liabilities is increased by 60% to account for this.

Retirement Rates

For Members with 10 or more years of service as of September 30, 2011:

Age	Years of Service						
	10	11 – 22	23	24-30	31	32	33
45	0.00%	0.00%	5.00%	2.50%	2.50%	2.50%	100.00%
46	0.00	0.00	5.00	2.50	2.50	2.50	100.00
47	0.00	0.00	5.00	2.50	2.50	2.50	100.00
48	0.00	0.00	5.00	2.50	2.50	2.50	100.00
49	0.00	0.00	5.00	2.50	2.50	2.50	100.00
50	5.00	5.00	5.00	2.50	2.50	2.50	100.00
51	5.00	2.50	2.50	2.50	2.50	2.50	100.00
52	5.00	2.50	2.50	2.50	2.50	2.50	100.00
53	5.00	2.50	2.50	2.50	2.50	2.50	100.00
54	5.00	2.50	2.50	2.50	2.50	2.50	100.00
55	10.00	2.50	2.50	2.50	15.00	30.00	100.00
56	10.00	2.50	2.50	2.50	15.00	30.00	100.00
57	10.00	2.50	2.50	2.50	15.00	30.00	100.00
58	15.00	15.00	15.00	15.00	15.00	30.00	100.00
59	15.00	15.00	15.00	15.00	15.00	30.00	100.00
60	100.00	100.00	100.00	100.00	100.00	100.00	100.00

For Members with less than 10 of service as of September 30, 2011:

Age	Years of Service					
	10	11 – 24	25-30	31	32	33
45	0.00%	0.00%	2.50%	2.50%	2.50%	100.00%
46	0.00	0.00	2.50	2.50	2.50	100.00
47	0.00	0.00	2.50	2.50	2.50	100.00
48	0.00	0.00	2.50	2.50	2.50	100.00
49	0.00	0.00	2.50	2.50	2.50	100.00
50	0.00	0.00	2.50	2.50	2.50	100.00
51	0.00	0.00	2.50	2.50	2.50	100.00
52	0.00	0.00	2.50	2.50	2.50	100.00
53	0.00	0.00	2.50	2.50	2.50	100.00
54	0.00	0.00	2.50	2.50	2.50	100.00
55	10.00	2.50	2.50	15.00	30.00	100.00
56	10.00	2.50	2.50	15.00	30.00	100.00
57	10.00	2.50	2.50	15.00	30.00	100.00
58	15.00	15.00	15.00	15.00	30.00	100.00
59	15.00	15.00	15.00	15.00	30.00	100.00
60	100.00	100.00	100.00	100.00	100.00	100.00

We feel these assumptions are reasonable given current Plan provisions.

Termination Rates

See table below. These rates are based on the results of an actuarial experience study issued on April 25, 2016.

Disability Rates

See table below. These rates are based on the results of an actuarial experience study issued on April 25, 2016.

Line of Duty Incidence

Death – 15% in the line of duty.
Disability – 45% in the line of duty.

Age	Termination Rate During the Year	Disability Rate During the Year
20	0.06	0.00077
25	0.05	0.00121
30	0.02	0.00176
35	0.01	0.00242
40	0.01	0.00352
45	0.01	0.00638
50	0.01	0.01089
55	0.01	0.01562

Salary Increases

Years of Service	Rate
0	25.00%
1	15.00
2	15.00
3	10.00
4	10.00
5	8.00
6+	6.00

These rates are based on the results of an actuarial experience study issued on April 25, 2016.

Payroll Growth

3.00% 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

\$654,714 annually, based on actual expenses incurred in the prior fiscal year.

Funding Method

Entry Age Normal Actuarial Cost Method.

Actuarial Asset Method

The Actuarial Value of Assets utilizes a five-year smoothing methodology. The annual difference between expected and actual investment earnings (Market Value, net of investment-related expenses), is phased-in over a five-year period.

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.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Pensioner Repayment	7,620.23	7,620.23
Savings Account	6,029.79	6,029.79
Prepaid Expenses	9,002.00	9,002.00
Money Market	2,871,000.00	2,871,000.00
Cash	37,278.33	37,278.33
 Total Cash and Equivalents	 2,930,930.35	 2,930,930.35
Receivables:		
Member Contributions in Transit	48,935.31	48,935.31
Fiscal Year 2015 City Contributions	1,006,907.57	1,006,907.57
Fiscal Year 2016 City Contributions	1,371,862.67	1,371,862.67
Fiscal Year 2017 City Contributions	766,631.98	766,631.98
Fiscal Year 2018 City Contributions	826,922.36	826,922.36
Interest Due on City Contributions	597,810.55	597,810.55
From Broker for Investments Sold	56,147.24	56,147.24
Tax Reclaims	50,598.28	50,598.28
Investment Income	231,827.90	231,827.90
 Total Receivable	 4,957,643.86	 4,957,643.86
Investments:		
U. S. Bonds and Bills	17,637,506.23	17,474,270.97
Federal Agency Guaranteed Securities	8,265,786.00	8,144,278.00
Corporate Bonds	6,047,146.00	6,086,396.00
Stocks	64,146,611.50	83,976,403.19
Mutual Funds:		
Fixed Income	10,540,623.00	10,165,134.73
Equity	57,936,795.42	76,946,649.09
Pooled/Common/Commingled Funds:		
Timber	5,753,660.34	6,650,636.00
Equity	12,548,711.00	12,738,778.69
Real Estate	15,887,175.42	23,466,956.11
 Total Investments	 198,764,014.91	 245,649,502.78
 Total Assets	 206,652,589.12	 253,538,076.99
 <u>LIABILITIES</u>		
Payables:		
Supplemental Pension (13th check)	2,617,720.00	2,617,720.00
Investment Expenses	399,937.26	399,937.26
Administrative Expenses	33,431.71	33,431.71
 Total Liabilities	 3,051,088.97	 3,051,088.97
 NET POSITION RESTRICTED FOR PENSIONS	 203,601,500.15	 250,486,988.02

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

Member	1,458,571.81
DROP Default Loan Payment	40,967.20
City	16,373,064.00

Total Contributions 17,872,603.01

Investment Income:

Net Realized Gain (Loss)	8,303,048.22	
Unrealized Gain (Loss)	9,607,063.84	
Net Increase in Fair Value of Investments		17,910,112.06
Interest & Dividends		6,251,319.15
Less Investment Expense ¹		(1,251,914.16)

Net Investment Income 22,909,517.05

Total Additions 40,782,120.06

DEDUCTIONS

Distributions to Members:

Benefit Payments	15,154,621.37
Lump Sum DROP Distributions	4,233,626.71
Supplemental Pension (13th check)	2,617,720.00
Refunds of Member Contributions	27,183.11

Total Distributions 22,033,151.19

Administrative Expense 654,713.50

Total Deductions 22,687,864.69

Net Increase in Net Position 18,094,255.37

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 232,392,732.65

End of the Year 250,486,988.02

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

ACTUARIAL ASSET VALUATION
September 30, 2018

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 90% nor greater than 110% of Market Value of Assets.

Plan Year Ending	Gain/(Loss)	<u>Gains/(Losses) Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
09/30/2014	5,744,760	0	0	0	0	0
09/30/2015	(11,166,962)	(2,233,394)	0	0	0	0
09/30/2016	1,601,965	640,786	320,393	0	0	0
09/30/2017	11,228,064	6,736,838	4,491,225	2,245,612	0	0
09/30/2018	5,660,634	4,528,507	3,396,380	2,264,253	1,132,126	0
Total		9,672,737	8,207,998	4,509,865	1,132,126	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, 09/30/2017	232,392,733
Contributions Less Benefit Payments & Expenses	(4,815,262)
Expected Investment Earnings ¹	17,248,883
Actual Investment Earnings	22,909,517
2018 Actuarial Investment Gain/(Loss)	<u>5,660,634</u>

¹ Expected Investment Earnings = 0.075 * [232,392,733 + 0.5 * (4,815,262)]

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2018	250,486,988
(2) Gains/(Losses) Not Yet Recognized	9,672,737
(3) Actuarial Value of Assets, 09/30/2018, (1) - (2)	<u>240,814,251</u>
(A) 09/30/2017 Actuarial Assets:	225,766,937
(I) Investment Income:	
1. Interest, Dividends and Misc Income	6,251,319
2. Realized Gains (Losses)	8,303,048
3. Change in Actuarial Value	6,560,123
4. Investment Related Expenses	(1,251,914)
Total	<u>19,862,576</u>
(B) 09/30/2018 Actuarial Assets:	240,814,251
Actuarial Asset Rate of Return = 2I/(A+B-I):	8.89%
Market Value of Assets Rate of Return:	9.96%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Bas	3,110,628
10/01/2018 Limited Actuarial Assets:	240,814,251

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2018
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	1,458,571.81	
DROP Default Loan Payment	40,967.20	
City	16,373,064.00	
 Total Contributions		 17,872,603.01
Earnings from Investments:		
Interest & Dividends	6,251,319.15	
Net Realized Gain (Loss)	8,303,048.22	
Change in Actuarial Value	6,560,122.84	
 Total Earnings and Investment Gains		 21,114,490.21

EXPENDITURES

Distributions to Members:		
Benefit Payments	15,154,621.37	
Lump Sum DROP Distributions	4,233,626.71	
Refunds of Member Contributions	27,183.11	
 Total Distributions		 22,033,151.19
Expenses:		
Investment related ¹	1,251,914.16	
Administrative	654,713.50	
 Total Expenses		 1,906,627.66
 Change in Net Assets for the Year		 15,047,314.37
 Net Assets Beginning of the Year		 225,766,936.65
 Net Assets End of the Year ²		 240,814,251.02

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

²Net Assets may be limited for actuarial consideration.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2017 to September 30, 2018

Beginning of the Year Balance	89,673,374.87
Plus Additions (including loan payments & recoup of overpayments)	801,116.42
Adjustment to Estimate for Updated DROP Balances (upon audit)	(188,069.81)
Investment Return Earned	6,832,895.88
Less Distributions	(4,233,626.71)
End of the Year Balance	92,885,690.65

RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2018

Fiscal Year 2018 Shortfall (with Interest) as of September 30, 2018

(1) Required City and State Contributions	\$16,373,064.00	
(2) Interest to December 7, 2017	<u>225,409.99</u>	
(3) Required City Contribution for Fiscal 2018 Adjusted to December 7, 2017	16,598,473.99	
(4) Less Actual City Contributions as of December 7, 2017	<u>(15,771,551.63)</u>	
(5) Remaining City Contribution for Fiscal 2018 After Contribution	826,922.36	
(11) Interest on the Remaining Fiscal 2016 Contribution to September 30, 2018	<u>50,464.92</u>	
(12) Remaining 2018 Shortfall as of September 30, 2018		877,387.28

Fiscal Year 2017 Shortfall (with Interest) as of September 30, 2018

(1) Required City and State Contributions	\$14,349,564.34	
(2) Interest to December 7, 2016	<u>197,552.22</u>	
(3) Required City Contribution for Fiscal 2017 Adjusted to December 7, 2016	14,547,116.56	
(4) Less Actual City Contributions as of December 7, 2016	<u>(13,780,484.58)</u>	
(5) Remaining City Contribution for Fiscal 2017 After Contribution	766,631.98	
(6) Interest on the Remaining Fiscal 2017 Contribution to September 30, 2018	<u>104,282.95</u>	
(7) Remaining 2017 Shortfall as of September 30, 2018		870,914.93

Fiscal Year 2016 Shortfall (with Interest) as of September 30, 2018

(1) Required City Contribution for Fiscal 2016 Adjusted to Beginning of the Year	14,398,111.81	
(2) Less Actual City Contributions as of October 1, 2015	<u>(11,137,275.00)</u>	
(3) Remaining City Contribution for Fiscal 2016 After Contribution	3,260,836.81	
(4) Interest on the Remaining Fiscal 2016 Contribution to June 1, 2016	<u>163,488.53</u>	
(5) Remaining City Contribution for Fiscal 2016 as of June 1, 2016	3,424,325.34	
(6) Less Actual City Contributions as of June 1, 2016	<u>(2,052,462.67)</u>	
(7) Remaining City Contribution for Fiscal 2016 as of June 1, 2016 After Contribution	1,371,862.67	
(8) Interest on the Remaining Fiscal 2016 Contribution through September 30, 2018	<u>239,888.04</u>	
(9) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2018 Before Cumulative Shortfall		1,611,750.71

Fiscal Year 2015 Shortfall (with Interest) as of September 30, 2018

(1) 2015 Shortfall	2,510,285.00	
(2) Interest on the 2015 Shortfall to January 22, 2016	<u>58,802.57</u>	
(3) 2015 Shortfall as of January 22, 2016, Before Contribution	2,569,087.57	
(4) Contribution Made Towards 2015 Shortfall	<u>(1,562,180.00)</u>	
(5) 2015 Shortfall as of January 22, 2016, After Contribution	1,006,907.57	
(6) Interest on the Remaining 2015 Shortfall to September 30, 2018	<u>203,174.64</u>	
(7) Remaining 2015 Shortfall as of September 30, 2018		<u>1,210,082.21</u>

Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2018

\$4,570,135.13

STATISTICAL DATA

	<u>10/1/2015</u>	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives</u>				
Number	190	202	213	219
Average Current Age	37.4	37.3	37.3	37.5
Average Age at Employment	26.9	26.7	26.5	26.5
Average Past Service	10.5	10.6	10.8	11.0
Average Annual Salary	\$85,396	\$88,657	\$91,517	\$94,223
<u>Service Retirees</u>				
Number	170	171	176	179
Average Current Age	64.7	64.9	65.2	65.7
Average Annual Benefit	\$71,449	\$72,452	\$73,849	\$75,361
<u>DROP Retirees</u>				
Number	21	18	11	7
Average Current Age	54.5	55.3	55.3	55.7
Average Annual Benefit	\$69,777	\$72,720	\$68,302	\$66,991
<u>Beneficiaries</u>				
Number	38	38	39	41
Average Current Age	73.2	72.7	72.2	72.1
Average Annual Benefit	\$21,887	\$22,040	\$23,103	\$25,046
<u>Disability Retirees</u>				
Number	21	21	21	21
Average Current Age	61.2	62.2	62.3	63.3
Average Annual Benefit	\$47,763	\$49,676	\$51,515	\$52,262
<u>Terminated Vested</u>				
Number	11	11	13	14
Average Current Age ¹	35.2	33.9	33.6	45.2
Average Annual Benefit ²	\$55,452	\$63,510	\$67,065	\$58,310

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	0	0	0	0	0	0	0	0	0	0	0
20 - 24	4	7	1	0	1	0	0	0	0	0	0	13
25 - 29	6	5	12	7	7	7	0	0	0	0	0	44
30 - 34	2	1	3	3	4	24	5	0	0	0	0	42
35 - 39	0	0	1	0	2	11	10	4	0	0	0	28
40 - 44	0	1	0	0	0	7	11	6	1	0	0	26
45 - 49	0	0	0	0	0	3	12	6	13	2	0	36
50 - 54	0	0	0	0	0	1	0	2	9	13	0	25
55 - 59	0	0	0	0	0	0	0	1	0	4	0	5
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	12	14	17	10	14	53	38	19	23	19	0	219

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	213
b. Terminations	
i. Vested (partial or full) with deferred benefits	(3)
ii. Non-vested 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	(3)
f. DROP	<u>0</u>
g. Continuing participants	207
h. New entrants	<u>12</u>
i. Total active life participants in valuation	219

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 <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	176	11	39	21	13	260
Retired	6	(3)	0	0	0	3
DROP	0	0	0	0	0	0
Vested Deferred	0	0	0	0	3	3
Death, With Survivor	(2)	(1)	3	0	0	0
Death, No Survivor	(1)	0	(1)	0	0	(2)
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(2)	(2)
Rehires	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0
b. Number current valuation	179	7	41	21	14	262

SUMMARY OF CURRENT PLAN
(Through Ord. No. O-2018-11)

LATEST AMENDMENT	June 20, 2018.
ELIGIBILITY	Full-time employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.
CREDITED SERVICE	Total years and fractional parts of years of employment with the City as a Firefighter with Member contributions (computed in quarters with one to three months being one-quarter, more than three but not more than six months being one-half of a year, more than six but not more than nine months being three-quarters of a year, and more than nine but not more than twelve months being one years as a Firefighter).
TIER 1 MEMBER	Hired prior to July 16, 2009.
TIER 2 MEMBER	Hired on or after July 16, 2009.
COMPENSATION	<p><u>For Compensation earned prior to October 1, 2011:</u> Fixed remuneration for services rendered to the City as a Firefighter, including accrued sick leave compensation up to 2,200 hours. Compensation for Tier 1 Members shall include workers' compensation/supplemental compensation, expense allowances, cash conversion of holiday benefits, up to 300 hours of overtime, 70% of the cash payment accumulated, unused annual leave paid at the time of retirement or entry into DROP, expense allowances, and education incentive payment from the Insurance Commissioner's Trust Fund.</p> <p><u>For Compensation earned after October 1, 2011:</u> Fixed remuneration for services rendered to the City as a Firefighter, including only wages and education incentive payment from the Insurance Commissioner's Trust Fund and <u>excluding</u> overtime, workers compensation/supplemental compensation, expense allowances, cash conversion of holiday benefits, accrued leave payouts and cash conversion of blood time and compensatory time.</p>
AVERAGE FINAL COMPENSATION (AFC)	
Benefits accrued prior to October 1, 2011	
Tier 1 Members:	Average compensation of the three highest years of Credited Service.
Tier 2 Members:	Average compensation of the five highest years of Credited Service.

Benefits accrued on and after October 1, 2011

Average compensation of the 60 highest consecutive months of the last 120 months of Credited Service.

MEMBER CONTRIBUTIONS

Tier 1 Members: 8.00% of compensation. Once Member has accrued the maximum benefit of 86% of AFC, their contribution percentage reduces to 0.50% of compensation.

Tier 2 Members: 7.50% of compensation. Once Member has accrued the maximum benefit of 82.50% of AFC, their contribution percentage reduces to 0.50% of compensation.

Notwithstanding the above, all Members hired on or after October 1, 2011 will contribute 7.50% of compensation.

RPRB Members: Either 0.5% or 7.5%, depending upon election.

NORMAL RETIREMENT

Date

Tier 1 Members: Less than 10 years of Credited Service as of September 30, 2011:

Prior Benefit: Earlier of 1) Age 50 with 10 years of Credited Service, or 2) 23 Years of Credited Service, regardless of Age.

Future Benefit: Earlier of 1) Age 55 with 10 years of Credited Service, or 2) 25 years of Credited Service.

10 or more years of Credited Service as of September 30, 2011:

Earlier of 1) Age 50 with 10 years of Credited Service, or 2) 23 Years of Credited Service, regardless of Age.

Tier 2 Members: Earlier of 1) Age 55 with 10 years of Credited Service, or 2) 25 years of Credited Service.

Benefit Amount

For benefits accrued prior to October 1, 2011 ("Prior service" piece):

Tier 1 Members: 3.30% of Average Final Compensation times Credited Service. Maximum benefit of 86% of Average Final Compensation.

Tier 2 Members: 3.20% of Average Final Compensation times Credited Service. Maximum benefit of 82.50% of Average Final Compensation.

For benefits accrued on and after October 1, 2011 (“Future service” piece):

Tier 1 Members:	3.00% of Average Final Compensation <u>times</u> Credited Service. Maximum benefit of 86% less 3.30% times the Credited Service accrued through September 30, 2011.
Tier 2 Members:	3.00% of Average Final Compensation <u>times</u> Credited Service. Maximum total benefit (pre and post pieces) of 80.00% of Average Final Compensation.
Form of Benefit	For unmarried Members, Ten Year Certain and Life Annuity. For married Members, 50% Joint and Survivor annuity with Ten Years Certain.

COST OF LIVING INCREASES

“Prior Service” Piece	Retirees (including Disability) receive a 2.00% per year cost-of-living adjustment commencing three years after retiree’s benefit payments have begun. Members hired after July 16, 2009 will not receive a COLA on the “Prior Service” Piece.
“Future Service” Piece	None.

DISABILITY

Eligibility

Service Incurred	Covered from Date of Employment.
Non-Service Incurred	5 years of Credited Service.

Benefit

Service Incurred	75% of compensation at the time of disability. The benefit will be offset by any worker’s compensation, pension, or similar benefit payable to the Member or to his dependents.
Non-Service Incurred	25% of earnings at the time of determination of disability. The benefit will be offset by any worker’s compensation, pension, or similar benefit payable to the Member or to his dependents. Upon attainment of normal retirement age, the benefit will be recomputed as a normal retirement benefit with service included for the period of time that the member was receiving a disability retirement benefit.

Form of Payment

10 Year Certain and Life annuity, with a 100% survivor annuity payable to the spouse until death or remarriage (in the case of a member who dies prior to age 50 while receiving a non-service connected disability) or with a 50% survivor annuity payable to the spouse until death or remarriage (for all other members).

VESTING

Schedule 100% after 10 years of Credited Service.

Benefit Amount

Tier 1 Members: Vested accrued benefit payable at age 50.

Tier 2 Members: Vested accrued benefit payable at age 55.

DEATH BENEFITS

Service Connected 50% of compensation at the date of death payable as a monthly life and 10 years certain benefit to the spouse until death or remarriage.

Non-service Connected For Members with five years of service, greater of accrued benefit or 25% of compensation at the date of death payable as a monthly life and 10 years certain benefit to the spouse until death or remarriage.

DEFERRED RETIREMENT OPTION PLAN

Eligibility Only those Members were eligible to retire as of September 30, 2011. There is no DROP for other Members.

Participation Not to exceed 96 months, but pre-DROP service plus DROP service cannot exceed 33 years.

Rate of Return 4.00%, 6.00% or 8.00%, depending upon DROP Entry Date.

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

REFORMED PLANNED RETIREMENT BENEFIT

Eligibility Same as for Normal Retirement.

Election Any time on or after eligibility for Normal Retirement a Member may declare in writing intent to participate.

Participation Not to exceed 96 months or when the Member completes 33 years of service with the City.

Contribution Rate Either 7.5% of Salary for Members who want the same options at termination of employment as were provided in the original PRB (lump sum, increased annuity, or combination thereof) or 0.5% of Salary for Members who only get the lump sum option at termination of employment.

Benefit

Lump sum option - Benefit calculated as of the date the Member elected participation in the RPRB and accumulated to date of termination of employment with the actual plan earnings, net of investment related expenses.

Larger annuity option – Benefit calculated as of a date in between the Member's first election to participate in the PRB/RPRB and their date of termination of employment and accumulated with earnings to the date of termination.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Pensioner Repayment	7,620
Savings Account	6,030
Prepaid Expenses	9,002
Money Market	2,871,000
Cash	37,278
 Total Cash and Equivalents	 2,930,930
Receivables:	
Member Contributions in Transit	48,935
Fiscal Year 2015 City Contributions	1,006,908
Fiscal Year 2016 City Contributions	1,371,863
Fiscal Year 2017 City Contributions	766,632
Fiscal Year 2018 City Contributions	826,922
Interest Due on City Contributions	597,811
From Broker for Investments Sold	56,147
Tax Reclaims	50,598
Investment Income	231,828
 Total Receivable	 4,957,644
Investments:	
U. S. Bonds and Bills	17,474,271
Federal Agency Guaranteed Securities	8,144,278
Corporate Bonds	6,086,396
Stocks	83,976,403
Mutual Funds:	
Fixed Income	10,165,135
Equity	76,946,649
Pooled/Common/Commingled Funds:	
Timber	6,650,636
Equity	12,738,779
Real Estate	23,466,956
 Total Investments	 245,649,503
 Total Assets	 253,538,077
 <u>LIABILITIES</u>	
Payables:	
Supplemental Pension (13th check)	2,617,720
Investment Expenses	399,937
Administrative Expenses	33,432
 Total Liabilities	 3,051,089
 NET POSITION RESTRICTED FOR PENSIONS	 250,486,988

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

Member	1,458,572	
DROP Default Loan Payment	40,967	
City	16,373,064	
 Total Contributions		 17,872,603
 Investment Income:		
Net Increase in Fair Value of Investments	17,910,112	
Interest & Dividends	6,251,319	
Less Investment Expense ¹	(1,251,914)	
 Net Investment Income		 22,909,517
 Total Additions		 40,782,120

DEDUCTIONS

Distributions to Members:

Benefit Payments	15,154,621	
Lump Sum DROP Distributions	4,233,627	
Lump Sum Planned Retirement Benefit Distributions	0	
Supplemental Pension (13th check)	2,617,720	
Refunds of Member Contributions	27,183	
 Total Distributions		 22,033,151
 Administrative Expense		 654,714
 Total Deductions		 22,687,865
 Net Increase in Net Position		 18,094,255
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		232,392,733
 End of the Year		 250,486,988

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

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended September 30, 2018)

Plan Description

Plan Administration

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of five members: the Fire Chief, a person appointed by the City Commission, and three regularly employed firefighters. The Fire Chief will serve as long as he holds office as chief. The City Commission's appointment shall act as the Chairman of the Board and shall serve as a two-year term. The three Firefighters will be elected by a majority of the regularly employed City Firefighters. Each Firefighter trustee shall serve for a full period of three years and may hold successive terms of office.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	247
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	13
Active Plan Members	213
	473
	473

Benefits Provided

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

Tier 1 Members: Hired prior to July 16, 2009.

Tier 2 Members: Hired on or after July 16, 2009.

Normal Retirement:

Date Tier 1 Members:

Less than 10 years of Credited Service as of September 30, 2011:

Prior Benefit: Earlier of 1) Age 50 with 10 years of Credited Service, or 2) 23 Years of Credited Service, regardless of Age.

Future Benefit: Earlier of 1) Age 55 with 10 years of Credited Service, or 2) 25 years of Credited Service.

10 or more years of Credited Service as of September 30, 2011:

Earlier of 1) Age 50 with 10 years of Credited Service, or 2) 23 Years of Credited Service, regardless of Age.

Date Tier 2 Members:

Earlier of 1) Age 55 with 10 years of Credited Service, or 2) 25 years of Credited Service.

Benefit Amount for benefits accrued prior to October 1, 2011 ("Prior service" piece):

Tier 1 Members: 3.30% of Average Final Compensation times Credited Service. Maximum benefit of 86% of Average Final Compensation.

Tier 2 Members: 3.20% of Average Final Compensation times Credited Service. Maximum benefit of 82.50% of Average Final Compensation.

Benefit Amount for benefits accrued on and after October 1, 2011 ("Future service" piece):

Tier 1 Members: 3.00% of Average Final Compensation times Credited Service. Maximum benefit of 86% less 3.30% times the Credited Service accrued through September 30, 2011.

Tier 2 Members: 3.00% of Average Final Compensation times Credited Service. Maximum benefit of 73.60% of Average Final Compensation.

Cost of Living Increases:

"Prior Service" Piece: Retirees (including Disability) receive a 2.00% per year cost-of living adjustment commencing three years after retiree's benefit payments have begun. Members hired after July 16, 2009 will not receive a COLA on the "Prior Service" Piece.

"Future Service" Piece: None.

Disability:

Eligibility Service Incurred: Covered from Date of Employment.

Eligibility Non-Service Incurred: 5 years of Credited Service.

Service Incurred: 75% of compensation at the time of disability. The benefit will be offset by any worker’s compensation, pension, or similar benefit payable to the Member or to his dependents.

Non-Service Incurred: 25% of earnings at the time of determination of disability. The benefit will be offset by any worker’s compensation, pension, or similar benefit payable to the Member or to his dependents. Upon attainment of normal retirement age, the benefit will be recomputed as a normal retirement benefit with service included for the period of time that the member was receiving a disability retirement benefit.

Vesting:

Schedule: 100% after 10 years of Credited Service.

Benefit Amount Tier 1 Members: Vested accrued benefit payable at age 50.

Benefit Amount Tier 2 Members: Vested accrued benefit payable at age 55.

Death Benefits:

Service Connected: 50% of compensation at the date of death payable as a monthly life and 10 years certain benefit to the spouse until death or remarriage.

Non-service Connected: For Members with five years of service, greater of accrued benefit or 25% of compensation at the date of death payable as a monthly life and 10 years certain benefit to the spouse until death or remarriage.

Reformed Planned Retirement Benefit:

Eligibility: Same as for Normal Retirement.

Election: Any time on or after eligibility for Normal Retirement a Member may declare in writing intent to participate.

Participation: Not to exceed 96 months or when the Member completes 33 years of service with the City.

Contribution Rate: Either 7.5% of Salary for Members who want the same options at termination of employment as were provided in the original PRB (lump sum, increased annuity, or combination thereof) or 0.5% of Salary for Members who only get the lump sum option at termination of employment.

Benefit: Lump sum option - Benefit calculated as of the date the Member elected participation in the RPRB and accumulated to date of termination of employment with the actual plan earnings, net of investment related expenses.

Larger annuity option – Benefit calculated as of a date in between the Member’s first election to participate in the PRB/RPRB and their date of termination of employment and accumulated with earnings to the date of termination.

Contributions

Tier 1 Member Contributions: 8.00% of compensation. Once Member has accrued the maximum benefit of 86% of AFC, their contribution percentage reduces to 0.50% of compensation.

Tier 2 Member Contributions: 7.50% of compensation. Once Member has accrued the maximum benefit of 82.50% of AFC, their contribution percentage reduces to 0.50% of compensation.

Notwithstanding the above, all Members hired on or after October 1, 2011 will contribute 7.50% of compensation.

RPRB Members: Either 0.50% of 7.50%, depending upon election.

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

Investments

Investment Policy:

The following was the Board's adopted asset allocation policy as of September 30, 2018:

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic Equity	50.00%
International Equity	15.00%
Fixed Income (Core)	15.00%
Global Fixed Income	5.00%
Real Estate	10.00%
Private Equity	5.00%
Total	100.00%

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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, 2018, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 9.96 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: Only those Members were eligible to retire as of September 30, 2011. There is no DROP for other Members.

Participation: Not to exceed 96 months, but pre-DROP service plus DROP service cannot exceed 33 years.

Rate of Return: 4.00%, 6.00% or 8.00%, depending upon DROP Entry Date.

The DROP balance as September 30, 2018 is \$92,885,691¹.

¹ Please note that the DROP balance doesn't include any outstanding DROP loans.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2018 were as follows:

Total Pension Liability	\$ 391,831,350
Plan Fiduciary Net Position	\$ (250,486,988)
Sponsor's Net Pension Liability	<u>\$ 141,344,362</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	63.93%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service Based
Discount Rate	7.50%
Investment Rate of Return	7.50%

Mortality Rates 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 most recent actuarial experience study used to review the other significant assumptions was dated April 25, 2016.

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 2018 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, 2018 are summarized in the following table:

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

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Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.50 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 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Sponsor's Net Pension Liability	\$ 174,911,424	\$ 141,344,362	\$ 113,383,899

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2018	09/30/2017	09/30/2016
Total Pension Liability			
Service Cost	5,467,335	4,750,396	4,453,321
Interest	27,748,028	26,389,549	24,500,448
Change in Excess State Money	-	-	-
Changes of benefit terms	2,830,293	-	1,979,452
Differences between Expected and Actual Experience	5,074,190	5,102,275	5,256,660
Changes of assumptions	-	-	11,571,857
DROP Default Loan Payment	40,967	-	-
Contributions - Buy Back	-	-	102,854
Benefit Payments, including Refunds of Employee Contributions	(22,033,151)	(21,319,658)	(22,187,054)
Net Change in Total Pension Liability	19,127,662	14,922,562	25,677,538
Total Pension Liability - Beginning	372,703,688	357,781,126	332,103,588
Total Pension Liability - Ending (a)	\$391,831,350	\$372,703,688	\$357,781,126
Plan Fiduciary Net Position			
Contributions - Employer	16,373,064	14,349,564	14,398,112
Contributions - State	-	-	-
Contributions - Employee	1,458,572	1,360,393	1,304,661
Contributions - Buy Back	-	-	102,854
DROP Default Loan Payment	40,967	-	-
Net Investment Income	22,909,517	26,873,377	17,432,805
Benefit Payments, including Refunds of Employee Contributions	(22,033,151)	(21,319,658)	(22,187,054)
Administrative Expense	(654,714)	(559,938)	(625,368)
Net Change in Plan Fiduciary Net Position	18,094,255	20,703,738	10,426,010
Plan Fiduciary Net Position - Beginning	232,392,733	211,688,995	201,262,985
Plan Fiduciary Net Position - Ending (b)	\$250,486,988	\$232,392,733	\$211,688,995
Net Pension Liability - Ending (a) - (b)	\$141,344,362	\$140,310,955	\$146,092,131
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	63.93%	62.35%	59.17%
Covered Payroll ¹	\$ 18,938,690	\$ 17,401,469	\$ 16,642,582
Net Pension Liability as a percentage of Covered Payroll	746.33%	806.32%	877.82%

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 benefit terms:

For measurement date 09/30/2018, amounts reported as changes of benefit terms resulted from the following change:

Create a Reformed Planned Retirement Benefit (RPRB), with the following two options:

- 1.) The Member will contribute 8.0% of compensation while participating in the RPRB and the provisions would be exactly the same as the original Planned Retirement Benefit (PRB).
- 2.) The Member will contribute 0.5% of compensation while participating in the RPRB and will only have the option to receive a lump sum at termination of employment (the first option provided in Section 33.062(D) of the City's Code of Ordinances). The investment earnings credited to the RPRB will be the actual plan returns, net of investment related expenses (there will no longer be an adjustment if the return exceeds 4.0%). The Member will be allowed to leave the RPRB balance in the Fund at termination of employment. To value this provision, the assumed rate of investment earnings on the PRB balances was changed from 5.7% per year to 7.5% per year.

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Continued Changes of benefit terms:

Members currently participating in the PRB will be given the opportunity to choose either of the two options. If they choose the second option, they will be either given a refund of 7.5% of Salary that they have contributed thus far while participating in the PRB, with interest or that same amount will be added to their current PRB Lump Sum Balance that will continue to earn interest until termination of employment.

For measurement date 09/30/2016, no new Ordinances have been incorporated since the prior measurement date of 09/30/2015, however the Board under advisement from the Plan attorney, has determined that for the benefits accrued prior to October 1, 2011 that the Average Final Compensation is not “frozen” and should be based on the Average Final Compensation at termination. This change in interpretation is reflected as benefit change for measurement date 09/30/2016.

Changes of assumptions:

For measurement date 09/30/2016, the following assumptions were updated, based on the experience study issued on April 25, 2016:

- Termination rates
- Disability rates
- Salary Scale

As mandated by 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.

Additionally, 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

	09/30/2015	09/30/2014
Total Pension Liability		
Service Cost	3,767,328	3,392,835
Interest	23,842,805	23,251,404
Change in Excess State Money	-	62,926
Changes of benefit terms	485,214	-
Differences between Expected and Actual Experience	1,276,360	-
Changes of assumptions	2,607,740	-
DROP Default Loan Payment	-	-
Contributions - Buy Back	-	-
Benefit Payments, including Refunds of Employee Contributions	(20,229,258)	(19,215,460)
Net Change in Total Pension Liability	11,750,189	7,491,705
Total Pension Liability - Beginning	320,353,399	312,861,694
Total Pension Liability - Ending (a)	<u>\$332,103,588</u>	<u>\$320,353,399</u>
Plan Fiduciary Net Position		
Contributions - Employer	14,310,591	10,721,832
Contributions - State	-	1,625,106
Contributions - Employee	1,170,620	1,078,161
Contributions - Buy Back	-	-
DROP Default Loan Payment	-	-
Net Investment Income	3,909,497	19,962,042
Benefit Payments, including Refunds of Employee Contributions	(20,229,258)	(19,215,460)
Administrative Expense	(489,016)	(635,223)
Net Change in Plan Fiduciary Net Position	(1,327,566)	13,536,458
Plan Fiduciary Net Position - Beginning	202,590,551	189,054,093
Plan Fiduciary Net Position - Ending (b)	<u>\$201,262,985</u>	<u>\$202,590,551</u>
Net Pension Liability - Ending (a) - (b)	<u>\$130,840,603</u>	<u>\$117,762,848</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	60.60%	63.24%
Covered Payroll ¹	\$ 16,753,713	\$ 13,712,168
Net Pension Liability as a percentage of Covered Payroll	780.96%	858.82%

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 benefit terms:

For measurement date 09/30/2015, it was assumed that the pending ordinance that would change the following would be implemented:

- In the event that the Board finds that a member is totally and permanently disabled by the plan's definition, the City may assign the member to a modified duty or light duty position. If the City makes available a modified or light duty position, and a member rejects the assignment, said member shall be ineligible for either continued employment or disability retirements.
- Regarding the DROP account benefit of any current City employee who was previously a member of the General Employees Plan and who later moved to a Firefighter position and is a member of the Firefighter's Pension Fund and is now participating in the DROP in the Firefighter's Pension Fund, any DROP benefit being held for that employee in the General Plan may be moved from the General Plan to the Firefighters Plan.

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Changes of assumptions:

For measurement date 09/30/2015, amounts reported as changes of assumptions were resulted from:

- The interest assumption change that was adopted by the Board in conjunction with the September 8, 2011 Experience Study performed by Cavanaugh Macdonald has completed its phase-in, lowering the investment return assumption from 7.6% to 7.5% net of investment related expenses.
- Along those same lines, the salary scale was updated to a full phase in of the rates recommended in the September 8, 2011 Experience Study performed by Cavanaugh Macdonald.
- The retirement rates for Members with 10 or more years of service as of September 30, 2011 have been slightly modified to make sense in conjunction with the plan design changes measured in the February 12, 2015 actuarial impact statement. This change was already reflected as part of the plan design in the actuarial impact statement.

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
09/30/2018	\$ 16,373,064	\$ 16,373,064	\$ -	\$ 18,938,690	86.45%
09/30/2017	\$ 14,349,564	\$ 14,349,564	\$ -	\$ 17,401,469	82.46%
09/30/2016	\$ 14,398,112	\$ 14,398,112	\$ -	\$ 16,642,582	86.51%
09/30/2015	\$ 14,310,591	\$ 14,310,591	\$ -	\$ 16,753,713	85.42%
09/30/2014	\$ 12,284,012	\$ 12,284,012	\$ -	\$ 13,712,168	89.58%

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: 10/01/2016

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 Rates Healthy Lives: Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.
Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Mortality Rates 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.

Mortality Notes: 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, 2015 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality.

Interest Rate: 7.50% 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.

13th Check Load: An underlying interest rate of 7.20% is used (0.3% lower than the assumed rate) to account for the 13th check. Additionally, since the DROP Balances are included in the computation of the 13th check, the resulting load on the accrued liabilities is increased by 60% to account for this.

Termination Rates: See table on following page. These rates are based on the results of an actuarial experience study issued on April 25, 2016.

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Retirement Rates:

For Members with 10 or more years of service as of September 30, 2011:

Age	Years of Service			
	10	11 - 22	23	24 - 30
45	0.00%	0.00%	5.00%	2.50%
46	0.00%	0.00%	5.00%	2.50%
47	0.00%	0.00%	5.00%	2.50%
48	0.00%	0.00%	5.00%	2.50%
49	0.00%	0.00%	5.00%	2.50%
50	5.00%	5.00%	5.00%	2.50%
51	5.00%	2.50%	2.50%	2.50%
52	5.00%	2.50%	2.50%	2.50%
53	5.00%	2.50%	2.50%	2.50%
54	5.00%	2.50%	2.50%	2.50%
55	10.00%	2.50%	2.50%	2.50%
56	10.00%	2.50%	2.50%	2.50%
57	10.00%	2.50%	2.50%	2.50%
58	15.00%	15.00%	15.00%	15.00%
59	15.00%	15.00%	15.00%	15.00%
60	100.00%	100.00%	100.00%	100.00%

Age	Years of Service		
	31	32	33
45	2.50%	2.50%	100.00%
46	2.50%	2.50%	100.00%
47	2.50%	2.50%	100.00%
48	2.50%	2.50%	100.00%
49	2.50%	2.50%	100.00%
50	2.50%	2.50%	100.00%
51	2.50%	2.50%	100.00%
52	2.50%	2.50%	100.00%
53	2.50%	2.50%	100.00%
54	2.50%	2.50%	100.00%
55	15.00%	30.00%	100.00%
56	15.00%	30.00%	100.00%
57	15.00%	30.00%	100.00%
58	15.00%	30.00%	100.00%
59	15.00%	30.00%	100.00%
60	100.00%	100.00%	100.00%

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Retirement Rates:

For Members with less than 10 of service as of September 30, 2011:

Age	Years of Service			
	10	11 - 24	25 - 30	31
45	0.00%	0.00%	2.50%	2.50%
46	0.00%	0.00%	2.50%	2.50%
47	0.00%	0.00%	2.50%	2.50%
48	0.00%	0.00%	2.50%	2.50%
49	0.00%	0.00%	2.50%	2.50%
50	0.00%	0.00%	2.50%	2.50%
51	0.00%	0.00%	2.50%	2.50%
52	0.00%	0.00%	2.50%	2.50%
53	0.00%	0.00%	2.50%	2.50%
54	0.00%	0.00%	2.50%	2.50%
55	10.00%	2.50%	2.50%	15.00%
56	10.00%	2.50%	2.50%	15.00%
57	10.00%	2.50%	2.50%	15.00%
58	15.00%	15.00%	15.00%	15.00%
59	15.00%	15.00%	15.00%	15.00%
60	100.00%	100.00%	100.00%	100.00%

Age	Years of Service	
	32	33
45	2.50%	100.00%
46	2.50%	100.00%
47	2.50%	100.00%
48	2.50%	100.00%
49	2.50%	100.00%
50	2.50%	100.00%
51	2.50%	100.00%
52	2.50%	100.00%
53	2.50%	100.00%
54	2.50%	100.00%
55	30.00%	100.00%
56	30.00%	100.00%
57	30.00%	100.00%
58	30.00%	100.00%
59	30.00%	100.00%
60	100.00%	100.00%

We feel these assumptions are reasonable given current Plan provisions.

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Disability Rates: See table below. These rates are based on the results of an actuarial experience study issued on April 25, 2016.

Line of Duty Incidence: Death - 15% in the line of duty.

Disability - 45% in the line of duty.

Termination and Disability Rate tables:

Age	Termination Rate During the Year	Disability Rate During the Year
20	0.06	0.00077
25	0.05	0.00121
30	0.02	0.00176
35	0.01	0.00242
40	0.01	0.00352
45	0.01	0.00638
50	0.01	0.01089
55	0.01	0.01562

Salary Increases:

Years of Service	Rate
0	25.00%
1	15.00%
2	15.00%
3	10.00%
4	10.00%
5	8.00%
6+	6.00%

These rates are based on the results of an actuarial experience study issued on April 25, 2016.

Payroll Growth: Up to 1.50% per year.

Funding Method: Entry Age Normal Actuarial Cost Method.

Amortization Method: Level Percent, Closed.

Remaining Amortization Period: 30 Years.

Actuarial Asset Method: The Actuarial Value of Assets utilizes a five-year smoothing methodology. The annual difference between expected and actual investment earnings (Market Value, net of investment-related expenses), is phased-in over a five-year period.

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	9.96%
09/30/2017	12.82%
09/30/2016	8.57%
09/30/2015	1.92%
09/30/2014	10.77%

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

General Information about the Pension Plan

Plan Description

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of: five members: the Fire Chief, a person appointed by the City Commission, and three regularly employed firefighters. The Fire Chief will serve as long as he holds office as chief. The City Commission's appointment shall act as the Chairman of the Board and shall serve as a two-year term. The three Firefighters will be elected by a majority of the regularly employed City Firefighters. Each Firefighter trustee shall serve for a full period of three years and may hold successive terms of office. Full-time employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	247
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	13
Active Plan Members	213
	473

Benefits Provided

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

Tier 1 Members: Hired prior to July 16, 2009.

Tier 2 Members: Hired on or after July 16, 2009.

Normal Retirement:

Date Tier 1 Members:

Less than 10 years of Credited Service as of September 30, 2011:

Prior Benefit: Earlier of 1) Age 50 with 10 years of Credited Service, or 2) 23 Years of Credited Service, regardless of Age.

Future Benefit: Earlier of 1) Age 55 with 10 years of Credited Service, or 2) 25 years of Credited Service.

10 or more years of Credited Service as of September 30, 2011:

Earlier of 1) Age 50 with 10 years of Credited Service, or 2) 23 Years of Credited Service, regardless of Age.

Date Tier 2 Members:

Earlier of 1) Age 55 with 10 years of Credited Service, or 2) 25 years of Credited Service.

Benefit Amount for benefits accrued prior to October 1, 2011 ("Prior service" piece):

Tier 1 Members: 3.30% of Average Final Compensation times Credited Service. Maximum benefit of 86% of Average Final Compensation.

Tier 2 Members: 3.20% of Average Final Compensation times Credited Service. Maximum benefit of 82.50% of Average Final Compensation.

Benefit Amount for benefits accrued on and after October 1, 2011 ("Future service" piece):

Tier 1 Members: 3.00% of Average Final Compensation times Credited Service. Maximum benefit of 86% less 3.30% times the Credited Service accrued through September 30, 2011.

Tier 2 Members: 3.00% of Average Final Compensation times Credited Service. Maximum benefit of 73.60% of Average Final Compensation.

Cost of Living Increases:

"Prior Service" Piece: Retirees (including Disability) receive a 2.00% per year cost-of living adjustment commencing three years after retiree's benefit payments have begun. Members hired after July 16, 2009 will not receive a COLA on the "Prior Service" Piece.

"Future Service" Piece: None.

Disability:

Eligibility Service Incurred: Covered from Date of Employment.

Eligibility Non-Service Incurred: 5 years of Credited Service.

Service Incurred: 75% of compensation at the time of disability. The benefit will be offset by any worker's compensation, pension, or similar benefit payable to the Member or to his dependents.

Non-Service Incurred: 25% of earnings at the time of determination of disability. The benefit will be offset by any worker's compensation, pension, or similar benefit payable to the Member or to his dependents. Upon attainment of normal retirement age, the benefit will be recomputed as a normal retirement benefit with service included for the period of time that the member was receiving a disability retirement benefit.

Vesting:

Schedule: 100% after 10 years of Credited Service.

Benefit Amount Tier 1 Members: Vested accrued benefit payable at age 50.

Benefit Amount Tier 2 Members: Vested accrued benefit payable at age 55.

Death Benefits:

Service Connected: 50% of compensation at the date of death payable as a monthly life and 10 years certain benefit to the spouse until death or remarriage.

Non-service Connected: For Members with five years of service, greater of accrued benefit or 25% of compensation at the date of death payable as a monthly life and 10 years certain benefit to the spouse until death or remarriage.

Reformed Planned Retirement Benefit:

Eligibility: Same as for Normal Retirement.

Election: Any time on or after eligibility for Normal Retirement a Member may declare in writing intent to participate.

Participation: Not to exceed 96 months or when the Member completes 33 years of service with the City.

Contribution Rate: Either 7.5% of Salary for Members who want the same options at termination of employment as were provided in the original PRB (lump sum, increased annuity, or combination thereof) or 0.5% of Salary for Members who only get the lump sum option at termination of employment.

Benefit: Lump sum option - Benefit calculated as of the date the Member elected participation in the RPRB and accumulated to date of termination of employment with the actual plan earnings, net of investment related expenses.

Larger annuity option – Benefit calculated as of a date in between the Member's first election to participate in the PRB/RPRB and their date of termination of employment and accumulated with earnings to the date of termination.

Contributions

Tier 1 Member Contributions: 8.00% of compensation. Once Member has accrued the maximum benefit of 86% of AFC, their contribution percentage reduces to 0.50% of compensation.

Tier 2 Member Contributions: 7.50% of compensation. Once Member has accrued the maximum benefit of 82.50% of AFC, their contribution percentage reduces to 0.50% of compensation.

Notwithstanding the above, all Members hired on or after October 1, 2011 will contribute 7.50% of compensation.

RPRB Members: Either 0.50% of 7.50%, depending upon election.

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

Net Pension Liability

The measurement date is September 30, 2018.

The measurement period for the pension expense was October 1, 2017 to September 30, 2018.

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

The Sponsor's Net Pension Liability was measured as of September 30, 2018.

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

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Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service Based
Discount Rate	7.50%
Investment Rate of Return	7.50%

Mortality Rates 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 most recent actuarial experience study used to review the other significant assumptions was dated April 25, 2016.

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 2018 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, 2018 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	50.00%	7.50%
International Equity	15.00%	8.50%
Fixed Income (Core)	15.00%	2.50%
Global Fixed Income	5.00%	3.50%
Real Estate	10.00%	4.50%
Private Equity	5.00%	8.50%
Total	100.00%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.50 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	Plan Fiduciary	Net Pension
	Liability	Net Position	Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2018	\$ 372,703,688	\$ 232,392,733	\$ 140,310,955
Changes for a Year:			
Service Cost	5,467,335	-	5,467,335
Interest	27,748,028	-	27,748,028
Differences between Expected and Actual Experience	5,074,190	-	5,074,190
Changes of assumptions	-	-	-
Changes of benefit terms	2,830,293	-	2,830,293
Contributions - Employer	-	16,373,064	(16,373,064)
Contributions - State	-	-	-
Contributions - Employee	-	1,458,572	(1,458,572)
DROP Default Loan Payment	40,967	40,967	-
Contributions - Buy Back	-	-	-
Net Investment Income	-	22,909,517	(22,909,517)
Benefit Payments, including Refunds of Employee Contributions	(22,033,151)	(22,033,151)	-
Administrative Expense	-	(654,714)	654,714
Net Changes	19,127,662	18,094,255	1,033,407
Reporting Period Ending September 30, 2019	\$ 391,831,350	\$ 250,486,988	\$ 141,344,362

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.50%	7.50%	8.50%
Sponsor's Net Pension Liability	\$ 174,911,424	\$ 141,344,362	\$ 113,383,899

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, 2018**

For the year ended September 30 2018, the has Sponsor recognized a Pension Expense of \$16,706,297.

On September 30, 2018, 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	8,857,480	-
Changes of assumptions	9,755,747	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	7,195,224
Employer and State contributions subsequent to the measurement date	16,373,064	-
Total	\$ 34,986,291	\$ 7,195,224

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date has been recognized as a reduction of the net Pension Liability in the year ended September 30, 2018.

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:		
2019	\$	2,012,116
2020	\$	3,179,735
2021	\$	922,060
2022	\$	1,442,227
2023	\$	3,132,969
Thereafter	\$	728,896

Payable to Pension Plan

On September 30, 2017, the Sponsor reported a payable of \$3,456,843 for the outstanding amount of contributions of the Pension Plan required for the year ended September 30, 2017.

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
FISCAL YEAR SEPTEMBER 30, 2019**

For the year ended September 30 2019, the Sponsor will recognize a Pension Expense of \$19,597,791.

On September 30, 2019, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between Expected and Actual Experience	11,544,599	-
Changes of assumptions	7,730,090	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	10,048,006
Employer and State contributions subsequent to the measurement date	<u>TBD</u>	<u>-</u>
Total	<u><u>TBD</u></u>	<u><u>\$ 10,048,006</u></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, 2019.

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:	
2020	\$ 2,772,492
2021	\$ 514,817
2022	\$ 1,034,984
2023	\$ 2,725,726
2024	\$ 1,453,780
Thereafter	\$ 724,884

Payable to the Pension Plan

On September 30, 2018, the Sponsor reported a payable of \$4,570,136 for the outstanding amount of contributions of the Pension Plan required for the year ended September 30, 2018.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending Measurement Date	09/30/2019 09/30/2018	09/30/2018 09/30/2017	09/30/2017 09/30/2016
Total Pension Liability			
Service Cost	5,467,335	4,750,396	4,453,321
Interest	27,748,028	26,389,549	24,500,448
Change in Excess State Money	-	-	-
Changes of benefit terms	2,830,293	-	1,979,452
Differences between Expected and Actual Experience	5,074,190	5,102,275	5,256,660
Changes of assumptions	-	-	11,571,857
DROP Default Loan Payment	40,967	-	-
Contributions - Buy Back	-	-	102,854
Benefit Payments, including Refunds of Employee Contributions	(22,033,151)	(21,319,658)	(22,187,054)
Net Change in Total Pension Liability	19,127,662	14,922,562	25,677,538
Total Pension Liability - Beginning	372,703,688	357,781,126	332,103,588
Total Pension Liability - Ending (a)	\$391,831,350	\$372,703,688	\$357,781,126
Plan Fiduciary Net Position			
Contributions - Employer	16,373,064	14,349,564	14,398,112
Contributions - State	-	-	-
Contributions - Employee	1,458,572	1,360,393	1,304,661
Contributions - Buy Back	-	-	102,854
DROP Default Loan Payment	40,967	-	-
Net Investment Income	22,909,517	26,873,377	17,432,805
Benefit Payments, including Refunds of Employee Contributions	(22,033,151)	(21,319,658)	(22,187,054)
Administrative Expense	(654,714)	(559,938)	(625,368)
Net Change in Plan Fiduciary Net Position	18,094,255	20,703,738	10,426,010
Plan Fiduciary Net Position - Beginning	232,392,733	211,688,995	201,262,985
Plan Fiduciary Net Position - Ending (b)	\$250,486,988	\$232,392,733	\$211,688,995
Net Pension Liability - Ending (a) - (b)	\$141,344,362	\$140,310,955	\$146,092,131
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	63.93%	62.35%	59.17%
Covered Payroll ¹	\$ 18,938,690	\$ 17,401,469	\$ 16,642,582
Net Pension Liability as a percentage of Covered Payroll	746.33%	806.32%	877.82%

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 benefit terms:

For measurement date 09/30/2018, amounts reported as changes of benefit terms resulted from the following change:

Create a Reformed Planned Retirement Benefit (RPRB), with the following two options:

- 1.) The Member will contribute 8.0% of compensation while participating in the RPRB and the provisions would be exactly the same as the original Planned Retirement Benefit (PRB).
- 2.) The Member will contribute 0.5% of compensation while participating in the RPRB and will only have the option to receive a lump sum at termination of employment (the first option provided in Section 33.062(D) of the City's Code of Ordinances). The investment earnings credited to the RPRB will be the actual plan returns, net of investment related expenses (there will no longer be an adjustment if the return exceeds 4.0%). The Member will be allowed to leave the RPRB balance in the Fund at termination of employment. To value this provision, the assumed rate of investment earnings on the PRB balances was changed from 5.7% per year to 7.5% per year.

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Continued Changes of benefit terms:

Members currently participating in the PRB will be given the opportunity to choose either of the two options. If they choose the second option, they will be either given a refund of 7.5% of Salary that they have contributed thus far while participating in the PRB, with interest or that same amount will be added to their current PRB Lump Sum Balance that will continue to earn interest until termination of employment.

For measurement date 09/30/2016, no new Ordinances have been incorporated since the prior measurement date of 09/30/2015, however the Board under advisement from the Plan attorney, has determined that for the benefits accrued prior to October 1, 2011 that the Average Final Compensation is not “frozen” and should be based on the Average Final Compensation at termination. This change in interpretation is reflected as benefit change for measurement date 09/30/2016.

Changes of assumptions:

For measurement date 09/30/2016, the following assumptions were updated, based on the experience study issued on April 25, 2016:

- Termination rates
- Disability rates
- Salary Scale

As mandated by 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.

Additionally, 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

Reporting Period Ending	09/30/2016	09/30/2015
Measurement Date	<u>09/30/2015</u>	<u>09/30/2014</u>
Total Pension Liability		
Service Cost	3,767,328	3,392,835
Interest	23,842,805	23,251,404
Change in Excess State Money	-	62,926
Changes of benefit terms	485,214	-
Differences between Expected and Actual Experience	1,276,360	-
Changes of assumptions	2,607,740	-
DROP Default Loan Payment	-	-
Contributions - Buy Back	-	-
Benefit Payments, including Refunds of Employee Contributions	<u>(20,229,258)</u>	<u>(19,215,460)</u>
Net Change in Total Pension Liability	11,750,189	7,491,705
Total Pension Liability - Beginning	<u>320,353,399</u>	<u>312,861,694</u>
Total Pension Liability - Ending (a)	<u>\$332,103,588</u>	<u>\$320,353,399</u>
Plan Fiduciary Net Position		
Contributions - Employer	14,310,591	10,721,832
Contributions - State	-	1,625,106
Contributions - Employee	1,170,620	1,078,161
Contributions - Buy Back	-	-
DROP Default Loan Payment	-	-
Net Investment Income	3,909,497	19,962,042
Benefit Payments, including Refunds of Employee Contributions	(20,229,258)	(19,215,460)
Administrative Expense	<u>(489,016)</u>	<u>(635,223)</u>
Net Change in Plan Fiduciary Net Position	(1,327,566)	13,536,458
Plan Fiduciary Net Position - Beginning	<u>202,590,551</u>	<u>189,054,093</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$201,262,985</u>	<u>\$202,590,551</u>
Net Pension Liability - Ending (a) - (b)	<u>\$130,840,603</u>	<u>\$117,762,848</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	60.60%	63.24%
Covered Payroll ¹	\$ 16,753,713	\$ 13,712,168
Net Pension Liability as a percentage of Covered Payroll	780.96%	858.82%

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 benefit terms:

For measurement date 09/30/2015, it was assumed that the pending ordinance that would change the following would be implemented:

- In the event that the Board finds that a member is totally and permanently disabled by the plan's definition, the City may assign the member to a modified duty or light duty position. If the City makes available a modified or light duty position, and a member rejects the assignment, said member shall be ineligible for either continued employment or disability retirements.

- Regarding the DROP account benefit of any current City employee who was previously a member of the General Employees Plan and who later moved to a Firefighter position and is a member of the Firefighter's Pension Fund and is now participating in the DROP in the Firefighter's Pension Fund, any DROP benefit being held for that employee in the General Plan may be moved from the General Plan to the Firefighters Plan.

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Changes of assumptions:

For measurement date 09/30/2015, amounts reported as changes of assumptions were resulted from:

- The interest assumption change that was adopted by the Board in conjunction with the September 8, 2011 Experience Study performed by Cavanaugh Macdonald has completed its phase-in, lowering the investment return assumption from 7.6% to 7.5% net of investment related expenses.
- Along those same lines, the salary scale was updated to a full phase in of the rates recommended in the September 8, 2011 Experience Study performed by Cavanaugh Macdonald.
- The retirement rates for Members with 10 or more years of service as of September 30, 2011 have been slightly modified to make sense in conjunction with the plan design changes measured in the February 12, 2015 actuarial impact statement. This change was already reflected as part of the plan design in the actuarial impact statement.

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
09/30/2018	\$ 16,373,064	\$ 16,373,064	\$ -	\$ 18,938,690	86.45%
09/30/2017	\$ 14,349,564	\$ 14,349,564	\$ -	\$ 17,401,469	82.46%
09/30/2016	\$ 14,398,112	\$ 14,398,112	\$ -	\$ 16,642,582	86.51%
09/30/2015	\$ 14,310,591	\$ 14,310,591	\$ -	\$ 16,753,713	85.42%
09/30/2014	\$ 12,284,012	\$ 12,284,012	\$ -	\$ 13,712,168	89.58%

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: 10/01/2016

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 Rates Healthy Lives: Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.
Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Mortality Rates 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.

Mortality Notes: 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, 2015 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality.

Interest Rate: 7.50% 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.

13th Check Load: An underlying interest rate of 7.20% is used (0.3% lower than the assumed rate) to account for the 13th check. Additionally, since the DROP Balances are included in the computation of the 13th check, the resulting load on the accrued liabilities is increased by 60% to account for this.

Termination Rates: See table on following page. These rates are based on the results of an actuarial experience study issued on April 25, 2016.

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Retirement Rates:

For Members with 10 or more years of service as of September 30, 2011:

Age	Years of Service			
	10	11 - 22	23	24 - 30
45	0.00%	0.00%	5.00%	2.50%
46	0.00%	0.00%	5.00%	2.50%
47	0.00%	0.00%	5.00%	2.50%
48	0.00%	0.00%	5.00%	2.50%
49	0.00%	0.00%	5.00%	2.50%
50	5.00%	5.00%	5.00%	2.50%
51	5.00%	2.50%	2.50%	2.50%
52	5.00%	2.50%	2.50%	2.50%
53	5.00%	2.50%	2.50%	2.50%
54	5.00%	2.50%	2.50%	2.50%
55	10.00%	2.50%	2.50%	2.50%
56	10.00%	2.50%	2.50%	2.50%
57	10.00%	2.50%	2.50%	2.50%
58	15.00%	15.00%	15.00%	15.00%
59	15.00%	15.00%	15.00%	15.00%
60	100.00%	100.00%	100.00%	100.00%

Age	Years of Service		
	31	32	33
45	2.50%	2.50%	100.00%
46	2.50%	2.50%	100.00%
47	2.50%	2.50%	100.00%
48	2.50%	2.50%	100.00%
49	2.50%	2.50%	100.00%
50	2.50%	2.50%	100.00%
51	2.50%	2.50%	100.00%
52	2.50%	2.50%	100.00%
53	2.50%	2.50%	100.00%
54	2.50%	2.50%	100.00%
55	15.00%	30.00%	100.00%
56	15.00%	30.00%	100.00%
57	15.00%	30.00%	100.00%
58	15.00%	30.00%	100.00%
59	15.00%	30.00%	100.00%
60	100.00%	100.00%	100.00%

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Retirement Rates:

For Members with less than 10 of service as of September 30, 2011:

Age	Years of Service			
	10	11 - 24	25 - 30	31
45	0.00%	0.00%	2.50%	2.50%
46	0.00%	0.00%	2.50%	2.50%
47	0.00%	0.00%	2.50%	2.50%
48	0.00%	0.00%	2.50%	2.50%
49	0.00%	0.00%	2.50%	2.50%
50	0.00%	0.00%	2.50%	2.50%
51	0.00%	0.00%	2.50%	2.50%
52	0.00%	0.00%	2.50%	2.50%
53	0.00%	0.00%	2.50%	2.50%
54	0.00%	0.00%	2.50%	2.50%
55	10.00%	2.50%	2.50%	15.00%
56	10.00%	2.50%	2.50%	15.00%
57	10.00%	2.50%	2.50%	15.00%
58	15.00%	15.00%	15.00%	15.00%
59	15.00%	15.00%	15.00%	15.00%
60	100.00%	100.00%	100.00%	100.00%

Age	Years of Service	
	32	33
45	2.50%	100.00%
46	2.50%	100.00%
47	2.50%	100.00%
48	2.50%	100.00%
49	2.50%	100.00%
50	2.50%	100.00%
51	2.50%	100.00%
52	2.50%	100.00%
53	2.50%	100.00%
54	2.50%	100.00%
55	30.00%	100.00%
56	30.00%	100.00%
57	30.00%	100.00%
58	30.00%	100.00%
59	30.00%	100.00%
60	100.00%	100.00%

We feel these assumptions are reasonable given current Plan provisions.

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Disability Rates: See table below. These rates are based on the results of an actuarial experience study issued on April 25, 2016.

Line of Duty Incidence: Death - 15% in the line of duty.

Disability - 45% in the line of duty.

Termination and Disability Rate tables:

Age	Termination Rate During the Year	Disability Rate During the Year
20	0.06	0.00077
25	0.05	0.00121
30	0.02	0.00176
35	0.01	0.00242
40	0.01	0.00352
45	0.01	0.00638
50	0.01	0.01089
55	0.01	0.01562

Salary Increases:

Years of Service	Rate
0	25.00%
1	15.00%
2	15.00%
3	10.00%
4	10.00%
5	8.00%
6+	6.00%

These rates are based on the results of an actuarial experience study issued on April 25, 2016.

Payroll Growth: Up to 1.50% per year.

Funding Method: Entry Age Normal Actuarial Cost Method.

Actuarial Asset Method: The Actuarial Value of Assets utilizes a five-year smoothing methodology. The annual difference between expected and actual investment earnings (Market Value, net of investment-related expenses), is phased-in over a five-year period.

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, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 146,092,131	\$ 4,415,910	\$ 38,321,386	\$ -
Employer and State contributions made after 09/30/2017	-	-	16,373,064	-
Total Pension Liability Factors:				
Service Cost	4,750,396	-	-	4,750,396
Interest	26,389,549	-	-	26,389,549
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	5,102,275	-	5,102,275	-
Current year amortization of experience difference	-	-	(1,662,188)	1,662,188
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(2,025,657)	2,025,657
Benefit Payments, including Refunds of Employee Contributions	(21,319,658)	-	-	-
Net change	<u>14,922,562</u>	<u>-</u>	<u>17,787,494</u>	<u>34,827,790</u>
Plan Fiduciary Net Position:				
Contributions - Employer	14,349,564	-	(14,349,564)	-
Contributions - Employee	1,360,393	-	-	(1,360,393)
Projected Net Investment Income	15,645,313	-	-	(15,645,313)
Difference between projected and actual earnings on Pension Plan investments	11,228,064	11,228,064	-	-
Current year amortization	-	(3,933,400)	(2,257,675)	(1,675,725)
Benefit Payments, including Refunds of Employee Contributions	(21,319,658)	-	-	-
Administrative Expenses	(559,938)	-	-	559,938
Net change	<u>20,703,738</u>	<u>7,294,664</u>	<u>(16,607,239)</u>	<u>(18,121,493)</u>
Ending Balance	<u><u>\$ 140,310,955</u></u>	<u><u>\$ 11,710,574</u></u>	<u><u>\$ 39,501,641</u></u>	<u><u>\$ 16,706,297</u></u>

PRELIMINARY COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 140,310,955	\$ 11,710,574	\$ 39,501,641	\$ -
Employer and State contributions made after 09/30/2018	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	5,467,335	-	-	5,467,335
Interest	27,748,028	-	-	27,748,028
Changes in benefit terms	2,830,293	-	-	2,830,293
DROP Default Loan Payment	40,967	-	-	40,967
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	5,074,190	-	5,074,190	-
Current year amortization of experience difference	-	-	(2,387,071)	2,387,071
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(2,025,657)	2,025,657
Benefit Payments, including Refunds of Employee Contributions	(22,033,151)	-	-	-
Net change	<u>19,127,662</u>	<u>-</u>	<u>661,462</u>	<u>40,499,351</u>
Plan Fiduciary Net Position:				
Contributions - Employer	16,373,064	-	(16,373,064)	-
Contributions - Employee	1,458,572	-	-	(1,458,572)
DROP Default Loan Payment	40,967	-	-	(40,967)
Contributions - Buy Back	-	-	-	-
Projected Net Investment Income	17,248,883	-	-	(17,248,883)
Difference between projected and actual earnings on Pension Plan investments	5,660,634	5,660,634	-	-
Current year amortization	-	(5,065,527)	(2,257,675)	(2,807,852)
Benefit Payments, including Refunds of Employee Contributions	(22,033,151)	-	-	-
Administrative Expenses	(654,714)	-	-	654,714
Net change	<u>18,094,255</u>	<u>595,107</u>	<u>(18,630,739)</u>	<u>(20,901,560)</u>
Ending Balance	<u>\$ 141,344,362</u>	<u>\$ 12,305,681</u>	<u>TBD</u>	<u>\$ 19,597,791</u>

* Employer and State Contributions subsequent to the measurement date made after September 30, 2018 but made on or before September 30, 2019 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)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2014	\$ (5,838,103)	5	\$ (1,167,621)	\$ (1,167,621)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 11,288,376	5	\$ 2,257,675	\$ 2,257,675	\$ 2,257,675	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (2,600,836)	5	\$ (520,167)	\$ (520,167)	\$ (520,167)	\$ (520,167)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (11,228,064)	5	\$ (2,245,612)	\$ (2,245,613)	\$ (2,245,613)	\$ (2,245,613)	\$ (2,245,613)	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (5,660,634)	5	\$ -	\$ (1,132,126)	\$ (1,132,127)	\$ (1,132,127)	\$ (1,132,127)	\$ (1,132,127)	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (1,675,725)	\$ (2,807,852)	\$ (1,640,232)	\$ (3,897,907)	\$ (3,377,740)	\$ (1,132,127)	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

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

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ 2,607,740	7	\$ 372,534	\$ 372,534	\$ 372,534	\$ 372,534	\$ 372,534	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 11,571,857	7	\$ 1,653,123	\$ 1,653,123	\$ 1,653,122	\$ 1,653,122	\$ 1,653,122	\$ 1,653,122	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 2,025,657	\$ 2,025,657	\$ 2,025,656	\$ 2,025,656	\$ 2,025,656	\$ 1,653,122	\$ -	\$ -	\$ -	\$ -	\$ -

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)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ 1,276,360	7	\$ 182,337	\$ 182,337	\$ 182,337	\$ 182,337	\$ 182,337	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 5,256,660	7	\$ 750,952	\$ 750,952	\$ 750,951	\$ 750,951	\$ 750,951	\$ 750,951	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 5,102,275	7	\$ 728,899	\$ 728,896	\$ 728,896	\$ 728,896	\$ 728,896	\$ 728,896	\$ 728,896	\$ -	\$ -	\$ -	\$ -
2018	\$ 5,074,190	7	\$ -	\$ 724,886	\$ 724,884	\$ 724,884	\$ 724,884	\$ 724,884	\$ 724,884	\$ 724,884	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 1,662,188	\$ 2,387,071	\$ 2,387,068	\$ 2,387,068	\$ 2,387,068	\$ 2,204,731	\$ 1,453,780	\$ 724,884	\$ -	\$ -	\$ -