

CITY OF SANIBEL  
MUNICIPAL POLICE OFFICERS' RETIREMENT TRUST 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

January 8, 2019

Board of Trustees  
City of Sanibel Municipal Police Officers'  
Retirement Trust Fund  
800 Dunlop Road  
Sanibel, FL 33957-4096

Re: City of Sanibel Municipal Police Officers' Retirement Trust Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Sanibel Municipal Police Officers' Retirement Trust Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Chapters 112 and 185, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuations, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. 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 valuations, we have relied on personnel, plan design, and asset information supplied by the City of Sanibel, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2017. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2018 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

The undersigned 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 Sanibel, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Municipal Police Officers' Retirement Trust Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

Foster & Foster, Inc.

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

SEC/lke  
Enclosures

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## SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Sanibel Municipal Police Officers' Retirement Trust 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 contribution requirements, compared with those set forth in the October 1, 2017 actuarial valuation report, 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 % of Projected Annual Payroll	76.18%	78.03%
Member Contributions (Est.) % of Projected Annual Payroll	8.00%	8.00%
City And State Required Contribution % of Projected Annual Payroll	68.18%	70.03%
State Contribution (Est.) <sup>1</sup> % of Projected Annual Payroll	\$90,240 4.65%	\$90,240 4.65%
City Required Contribution <sup>2</sup> % of Projected Annual Payroll	63.53%	65.38%

<sup>1</sup> Represents the amount received in calendar 2018. As per a Mutual Consent Agreement between the Membership and the City, all State Monies received each year will be available to offset the City's required contribution.

<sup>2</sup> The required contribution from the combination of City and State sources for the year ending September 30, 2020, is 68.18% of the actual payroll realized in that year. As a budgeting tool, the City may contribute 63.53% of each Member's Salary and then make a one-time adjustment to account for the actual State Monies received. Please note that a shortfall contribution of \$155,177.99 is due in addition to the above stated requirements for the fiscal year ending September 30, 2019. The Division of Retirement requires an interest charge of \$969.86 for each complete month after September 30, 2018 until this deposit is made, based on the 7.50% valuation assumption for interest return.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of unfavorable experience included an investment return of 5.16% (Actuarial Asset Basis) which fell short of the 7.50% assumption, less inactive mortality than expected, and an average salary increase of 12.22% which exceeded the 5.99% assumption. There were no significant sources of favorable experience.

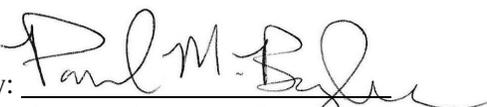
In spite of this unfavorable actuarial experience, the Minimum Required Contribution shows a decrease when compared to the results determined in the October 1, 2017 actuarial valuation report. The decrease is mainly attributable to an amortization charge from 2008 being fully paid off.

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 any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By:   
Sara E. Carlson, ASA, EA, MAAA

By:   
Paul M. Baugher, FSA, EA, MAAA

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

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

### Actuarial Assumption/Method Changes

In conjunction with this actuarial valuation, a "fresh-start" of the actuarial asset value has been implemented to be equal to the market value of assets. Effective October 1, 2018, the asset valuation method is such that all assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period. The fresh-start in conjunction with the change to the actuarial asset method has been implemented in order to align with the investment gain-loss recognition required by GASB and to eliminate necessary periodic adjustments that exist with the prior actuarial asset method.

## CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2017	65.53%
(2) Summary of Contribution Impact by component:	
Change in State Contribution Percentage	-0.1%
Change in Normal Cost Rate	-0.4%
Change in Administrative Expense Percentage	-0.2%
Payroll Change Effect on UAAL Amortization	-2.7%
Investment Return (Actuarial Asset Basis)	3.1%
Salary Increases	0.8%
Active Decrements	0.2%
Inactive Mortality	0.9%
Amortization Charge Fully Recognized	-2.5%
Asset Method Change	-0.7%
Other	-0.4%
Total Change in Contribution	-2.00%
(3) Contribution Determined as of October 1, 2018	63.53%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Method <u>10/1/2018</u>	Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
<b>A. Participant Data</b>			
Actives	23	23	24
Service Retirees	20	20	20
DROP Retirees	2	2	2
Beneficiaries	2	2	2
Disability Retirees	3	3	3
Terminated Vested	<u>8</u>	<u>8</u>	<u>7</u>
<b>Total</b>	<b>58</b>	<b>58</b>	<b>58</b>
Total Annual Payroll	\$1,940,617	\$1,940,617	\$1,827,484
Payroll Under Assumed Ret. Age	1,940,617	1,940,617	1,827,484
Annual Rate of Payments to:			
Service Retirees	1,075,682	1,075,682	1,052,416
DROP Retirees	127,944	127,944	124,217
Beneficiaries	37,778	37,778	36,981
Disability Retirees	56,988	56,988	56,988
Terminated Vested	101,959	101,959	101,959
<b>B. Assets</b>			
Actuarial Value (AVA) <sup>1</sup>	19,811,071	19,674,479	18,436,160
Market Value (MVA) <sup>1</sup>	19,811,071	19,811,071	18,440,697
<b>C. Liabilities</b>			
<b>Present Value of Benefits</b>			
<b>Actives</b>			
Retirement Benefits	11,745,143	11,745,143	10,359,056
Disability Benefits	312,845	312,845	297,102
Death Benefits	89,047	89,047	80,347
Vested Benefits	0	0	0
Refund of Contributions	43,753	43,753	52,314
Service Retirees	15,018,896	15,018,896	14,907,499
DROP Retirees <sup>1</sup>	2,196,968	2,196,968	2,043,480
Beneficiaries	391,868	391,868	393,973
Disability Retirees	491,964	491,964	504,370
Terminated Vested	<u>794,900</u>	<u>794,900</u>	<u>720,838</u>
<b>Total</b>	<b>31,085,384</b>	<b>31,085,384</b>	<b>29,358,979</b>

C. Liabilities - (Continued)	New Method <u>10/1/2018</u>	Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	17,345,378	17,345,378	16,372,023
Present Value of Future Member Contributions	1,387,630	1,387,630	1,309,762
Normal Cost (Retirement)	547,685	547,685	514,253
Normal Cost (Disability)	25,235	25,235	27,432
Normal Cost (Death)	5,260	5,260	4,932
Normal Cost (Vesting)	0	0	0
Normal Cost (Refunds)	<u>11,370</u>	<u>11,370</u>	<u>15,818</u>
Total Normal Cost	589,550	589,550	562,435
Present Value of Future Normal Costs	5,144,798	5,144,798	4,895,831
Accrued Liability (Retirement)	6,866,033	6,866,033	5,743,841
Accrued Liability (Disability)	125,526	125,526	100,915
Accrued Liability (Death)	42,553	42,553	36,780
Accrued Liability (Vesting)	0	0	0
Accrued Liability (Refunds)	11,878	11,878	11,452
Accrued Liability (Inactives) <sup>1</sup>	<u>18,894,596</u>	<u>18,894,596</u>	<u>18,570,160</u>
Total Actuarial Accrued Liability (EAN AL)	25,940,586	25,940,586	24,463,148
Unfunded Actuarial Accrued Liability (UAAL)	6,129,515	6,266,107	6,026,988
Funded Ratio (AVA / EAN AL)	76.4%	75.8%	75.4%

D. Actuarial Present Value of Accrued Benefits	New Method <u>10/1/2018</u>	Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits			
Inactives <sup>1</sup>	18,894,596	18,894,596	18,570,160
Actives	2,730,221	2,730,221	1,902,084
Member Contributions	<u>895,316</u>	<u>895,316</u>	<u>773,335</u>
Total	22,520,133	22,520,133	21,245,579
Non-vested Accrued Benefits	<u>721,339</u>	<u>721,339</u>	<u>816,529</u>
Total Present Value Accrued Benefits (PVAB)	23,241,472	23,241,472	22,062,108
Funded Ratio (MVA / PVAB)	85.2%	85.2%	83.6%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	0	0	
New Accrued Benefits	0	729,926	
Benefits Paid	0	(1,161,658)	
Interest	0	1,611,096	
Other	<u>0</u>	<u>0</u>	
Total	0	1,179,364	

	New Method	Old Method	
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 (with interest)			
% of Total Annual Payroll <sup>2</sup>	31.52	31.52	31.93
Administrative Expenses (with interest)			
% of Total Annual Payroll <sup>2</sup>	2.39	2.39	2.57
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years (as of 10/1/2018, with interest)			
% of Total Annual Payroll <sup>2</sup>	42.27	42.94	43.53
Minimum Required Contribution			
% of Total Annual Payroll <sup>2</sup>	76.18	76.85	78.03
Expected Member Contributions			
% of Total Annual Payroll <sup>2</sup>	8.00	8.00	8.00
Expected City and State Contribution			
% of Total Annual Payroll <sup>2</sup>	68.18	68.85	70.03

F. Past Contributions

Plan Years Ending:	<u>9/30/2018</u>
City and State Requirement	1,338,286
Actual Contributions Made:	
Members (excluding buyback)	148,719
City	1,248,046
State	<u>90,240</u>
Total	1,487,005

G. Net Actuarial (Gain)/Loss 672,713

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

<sup>2</sup> Contributions developed as of 10/1/2018 are expressed as a percentage of total annual payroll at 10/1/2018 of \$1,940,617.

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	6,129,515
2019	5,739,257
2020	5,220,373
2025	2,910,108
2029	1,003,682
2034	117,397
2038	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	12.22%	5.99%
Year Ended 9/30/2017	28.33%	6.14%
Year Ended 9/30/2016	4.71%	7.00%
Year Ended 9/30/2015	8.41%	7.00%
Year Ended 9/30/2014	5.43%	7.00%

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

	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2018	5.91%	5.16%	7.50%
Year Ended 9/30/2017	9.83%	6.38%	7.50%
Year Ended 9/30/2016	10.07%	6.90%	7.50%
Year Ended 9/30/2015	-4.50%	8.48%	7.50%
Year Ended 9/30/2014	10.91%	9.35%	7.50%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$1,940,617
	10/1/2008	2,089,004
(b) Total Increase		-7.10%
(c) Number of Years		10.00
(d) Average Annual Rate		-0.73%

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.

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

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	\$6,026,988
(2) Sponsor Normal Cost developed as of October 1, 2017	416,236
(3) Expected administrative expenses for the year ended September 30, 2018	45,206
(4) Expected interest on (1), (2) and (3)	484,937
(5) Sponsor contributions to the System during the year ended September 30, 2018	1,338,286
(6) Expected interest on (5)	41,687
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	5,593,394
(8) Change to UAAL due to Asset Method Change	(136,592)
(9) Change to UAAL due to Actuarial (Gain)/Loss	672,713
(10) Unfunded Actuarial Accrued Liability as of October 1, 2018	6,129,515

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2018 Amount</u>	<u>Amortization Amount</u>
	10/1/1994	6	132,010	26,162
	10/1/2000	12	(132,863)	(15,978)
	10/1/2001	13	306,280	35,062
method change	10/1/2004	16	1,036,886	105,513
actuarial loss	10/1/2004	10	854,531	115,808
benefit change	10/1/2005	17	541,180	53,363
assum. change	10/1/2005	17	(112,241)	(11,067)
actuarial gain	10/1/2005	10	(116,118)	(15,737)
actuarial loss	10/1/2006	10	251,082	34,027
actuarial loss	10/1/2007	10	705,446	95,603
method change	10/1/2008	10	221,434	30,009
actuarial gain	10/1/2009	1	(92,427)	(92,427)
actuarial loss	10/1/2010	2	130,619	67,670
assum. change	10/1/2010	12	205,893	24,760
assum. change	10/1/2010	12	(113,042)	(13,594)
actuarial loss	10/1/2011	3	161,598	57,805
actuarial loss	10/1/2012	4	330,105	91,682
actuarial gain	10/1/2013	5	(180,153)	(41,421)
actuarial gain	10/1/2014	6	(117,089)	(23,205)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
actuarial gain	10/1/2015	7	(303,458)	(53,296)
actuarial gain	10/1/2016	8	(80,880)	(12,845)
assum. change	10/1/2016	18	648,627	62,165
actuarial loss	10/1/2017	9	1,315,974	191,908
actuarial loss	10/1/2018	10	672,713	91,167
method change	10/1/2018	20	<u>(136,592)</u>	<u>(12,464)</u>
			6,129,515	790,670

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$6,026,988
(2) Expected UAAL as of October 1, 2018	5,593,394
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	434,322
Salary Increases	115,424
Active Decrements	21,675
Inactive Mortality	118,305
Other	<u>(17,013)</u>
Increase in UAAL due to (Gain)/Loss	672,713
Asset Method Change	<u>(136,592)</u>
(4) Actual UAAL as of October 1, 2018	\$6,129,515

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, 2016 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.

Salary Increases

<u>Years of Service</u>	<u>Increase</u>
0	7.25%
1	7.00
2	6.75
3	6.50
4	6.25
5 - 9	6.00
10 – 14	5.25
15+	4.50

The assumed rates of salary increase were approved from our April 29, 2016 Special Actuarial Analysis.

Projected salary in the year of retirement is increased 10% for Members who had 10 or more years of Credited Service as of September 30, 2011 and 5% for Members who had less than 10 years of Credited Service as of September 30, 2011. These increases are to account for non-regular compensation.

Payroll Growth

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

Administrative Expenses

\$44,763 annually, based on actual expenses incurred in the prior fiscal year.

Retirement Age

Two years after the earlier of Age 60 with 5 years of service, age 55 with 10 years of service, or 25 years of service regardless of age. Also, any member who has reached Normal Retirement plus two years is assumed to continue employment for one additional year. We feel this is reasonable based upon plan provisions.

Early Retirement

Commencing at eligibility for Early Retirement (age 50), members are assumed to retire with an immediate benefit at the rate of 2% per year. We feel this is reasonable based upon plan provisions.

Termination Rate

<u>Credited Service</u>	<u>Termination Probability</u>
0-1	15%
2-4	10%
5+	0

The assumed rates of termination were approved by the Board in conjunction with an actuarial experience analysis dated May 2, 2013.

Disability Rate

See table below (1202). It is assumed that 75% of disablements are service related. The assumed rates of disablement were developed from those used by other plans containing Florida municipal Police Officers.

<u>Age</u>	<u>% Becoming Disabled During the Year</u>
20	0.051%
30	0.058
40	0.121
50	0.429

Cost-of-Living Adjustment

3.00% automatic COLA to Normal and Early Retirees, beginning one year after retirement.

Funding Method

Entry Age Normal Actuarial Cost Method

Actuarial Asset Method

All assets are valued at market value with an adjustment to uniformly spread actuarial investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period. Previously, the prior actuarial value of assets were brought forward utilizing the historical geometric 4-year average market value return.

## GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year beginning as of 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.

Normal (Current Year's) Cost is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

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.

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

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.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	30,273.87	_____%
1999	31,593.25	4.4%
2000	36,011.30	14.0%
2001	35,448.08	-1.6%
2002	38,571.02	8.8%
2003	43,515.50	12.8%
2004	46,642.40	7.2%
2005	-	-100.0%
2006	98,026.48	N/A
2007	50,725.64	-48.3%
2008	53,654.13	5.8%
2009	57,459.31	7.1%
2010	58,716.36	2.2%
2011	57,486.63	-2.1%
2012	63,573.88	10.6%
2013	62,541.87	-1.6%
2014	65,861.56	5.3%
2015	77,753.70	18.1%
2016	85,154.04	9.5%
2017	82,262.97	-3.4%
2018	90,240.37	9.7%

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Pooled Cash	362.21	362.21
Money Market	643,406.10	643,406.10
Cash	2.15	2.15
 Total Cash and Equivalents	 643,770.46	 643,770.46
Receivables:		
Additional City Contributions	155,177.99	155,177.99
Investment Income	8,394.01	8,394.01
 Total Receivable	 163,572.00	 163,572.00
Investments:		
Fixed Income	6,960,602.63	7,061,440.49
Equities	6,847,039.76	8,827,724.19
Pooled/Common/Commingled Funds:		
Equity	871,359.80	2,262,390.76
Master Limited Partnership	1,177,815.88	889,475.19
 Total Investments	 15,856,818.07	 19,041,030.63
 Total Assets	 16,664,160.53	 19,848,373.09
 <u>LIABILITIES</u>		
Payables:		
Investment Expenses	13,894.87	13,894.87
Administrative Expenses	2,000.00	2,000.00
To Broker for Investments Purchased	21,407.22	21,407.22
 Total Liabilities	 37,302.09	 37,302.09
 NET POSITION RESTRICTED FOR PENSIONS	 16,626,858.44	 19,811,071.00

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

ADDITIONS

Contributions:			
Member		148,719.14	
City		1,248,045.99	
State		90,240.37	
Total Contributions			1,487,005.50
Investment Income:			
Net Realized Gain (Loss)	128,058.59		
Unrealized Gain (Loss)	263,259.27		
Net Increase in Fair Value of Investments		391,317.86	
Interest & Dividends		771,640.25	
Less Investment Expense <sup>1</sup>		(73,168.56)	
Net Investment Income			1,089,789.55
Total Additions			2,576,795.05

DEDUCTIONS

Distributions to Members:			
Benefit Payments		1,151,860.44	
Lump Sum DROP Distributions		0.00	
Refunds of Member Contributions		9,797.50	
Total Distributions			1,161,657.94
Administrative Expense			44,763.00
Total Deductions			1,206,420.94
Net Increase in Net Position			1,370,374.11
NET POSITION RESTRICTED FOR PENSIONS			
Beginning of the Year			18,440,696.89
End of the Year			19,811,071.00

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION  
SEPTEMBER 30, 2018

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

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return <sup>1</sup>	
09/30/2015	-4.50%	
09/30/2016	10.07%	
09/30/2017	9.83%	
09/30/2018	5.91%	
Annualized Rate of Return for prior four (4) years:		5.16%
(A) 10/01/2017 Actuarial Assets:		\$18,436,159.84
(I) Net Investment Income:		
1. Interest and Dividends	771,640.25	
2. Realized Gains (Losses)	128,058.59	
3. Change in Actuarial Value	131,204.78	
4. Investment Related Expenses	(73,168.56)	
Total		957,735.06
(B) 10/01/2018 Actuarial Assets <sup>2</sup> :		\$19,674,479.46
Actuarial Asset Rate of Return = 2I/(A+B-I):		5.16%
10/01/2018 Limited Actuarial Assets <sup>2</sup> :		\$19,674,479.46
10/01/2018 Market Value of Assets:		\$19,811,071.00
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		(\$434,321.71)

<sup>1</sup>Market Value Basis, net of investment related expenses.

<sup>2</sup>Due to the asset method change, the Actuarial Value of Assets reflected in this valuation is \$19,811,071.00.

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

REVENUES

Contributions:		
Member	148,719.14	
City	1,248,045.99	
State	90,240.37	
Total Contributions		1,487,005.50
Earnings from Investments:		
Interest & Dividends	771,640.25	
Net Realized Gain (Loss)	128,058.59	
Change in Actuarial Value	131,204.78	
Total Earnings and Investment Gains		1,030,903.62
EXPENDITURES		
Distributions to Members:		
Benefit Payments	1,151,860.44	
Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	9,797.50	
Total Distributions		1,161,657.94
Expenses:		
Investment related <sup>1</sup>	73,168.56	
Administrative	44,763.00	
Total Expenses		117,931.56
Change in Net Assets for the Year		1,238,319.62
Net Assets Beginning of the Year		18,436,159.84
Net Assets End of the Year <sup>2</sup>		19,674,479.46

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup>Net Assets may be limited for actuarial consideration. Due to the asset method change, the Actuarial Value of Assets reflected in this valuation is \$19,811,071.00.

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

Beginning of the Year Balance	197,063.93
Plus Additions	124,217.16
Investment Return Earned	10,557.80
Less Distributions	0.00
End of the Year Balance	331,838.89

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

(1)	Total Required Contribution Rate	79.99%
(2)	Pensionable Payroll Derived from Member Contributions	\$1,858,989.25
(3)	Total Required Contribution (1) x (2)	1,487,005.50
(4)	Less Actual Member Contributions	(148,719.14)
(5)	Less Allowable State Contribution	<u>(90,240.37)</u>
(6)	Equals Required City Contribution for Fiscal 2018	1,248,045.99
(7)	Less 2017 Prepaid Contribution	0.00
(8)	Less Actual City Contributions	<u>(1,092,868.00)</u>
(9)	Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2018	\$155,177.99

## 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	20	21	24	23
Average Current Age	42.8	41.7	41.9	42.5
Average Age at Employment	33.7	34.1	35.5	35.0
Average Past Service	9.1	7.6	6.4	7.5
Average Annual Salary	\$71,022	\$66,345	\$76,145	\$84,375
<u>Service Retirees</u>				
Number	18	18	20	20
Average Current Age	66.0	67.0	65.4	66.4
Average Annual Benefit	\$42,125	\$42,890	\$52,621	\$53,784
<u>DROP Retirees</u>				
Number	2	4	2	2
Average Current Age	55.6	56.2	56.9	57.9
Average Annual Benefit	\$97,181	\$80,198	\$62,109	\$63,972
<u>Beneficiaries</u>				
Number	2	2	2	2
Average Current Age	72.5	73.5	74.5	75.5
Average Annual Benefit	\$17,729	\$18,104	\$18,491	\$18,889
<u>Disability Retirees</u>				
Number	3	3	3	3
Average Current Age	63.7	64.7	65.7	66.7
Average Annual Benefit	\$18,996	\$18,996	\$18,996	\$18,996
<u>Terminated Vested</u>				
Number	7	7	7	8
Average Current Age <sup>1</sup>	46.4	49.1	50.1	49.4
Average Annual Benefit <sup>2</sup>	\$20,392	\$20,392	\$20,392	\$20,392

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

<sup>2</sup> 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	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	2	0	0	0	0	0	0	0	0	0	2
30 - 34	0	1	2	2	0	0	0	0	0	0	0	5
35 - 39	1	0	0	0	0	1	2	0	0	0	0	4
40 - 44	0	0	0	0	0	0	0	0	0	0	0	0
45 - 49	0	1	0	0	0	1	2	0	1	0	0	5
50 - 54	0	0	0	0	0	1	2	0	1	0	0	4
55 - 59	0	0	1	0	0	1	0	0	0	0	0	2
60 - 64	0	0	1	0	0	0	0	0	0	0	0	1
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	4	4	2	0	4	6	0	2	0	0	23

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	24
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	(1)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>0</u>
g. Continuing participants	22
h. New entrants	<u>1</u>
i. Total active life participants in valuation	23

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

	Service Retirees, Vested Receiving <u>Benefits</u>	<u>DROP Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	<u>Vested Deferred</u>	<u>Total</u>
a. Number prior valuation	20	2	2	3	7	34
Retired	0	0	0	0	0	0
DROP	0	0	0	0	0	0
Vested Deferred	0	0	0	0	1	1
Death, With Survivor	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	0
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	20	2	2	3	8	35

SUMMARY OF CURRENT PLAN  
(Through Ordinance 11-010)

CREDITED SERVICE	Years and completed months of continuous employment as a Police Officer.
AVERAGE FINAL COMPENSATION	Average compensation (excluding OT in excess of 300 hours per year, but including lump sum accruals determined as of 9/30/2011) paid during the five (5) highest years of service.
NORMAL RETIREMENT	
Eligibility	Earlier of 1) age 60 with 5 vesting credits, or 2) age 55 with 10 vesting credits, or 3) 25 vesting credits regardless of age.
Benefit Amount	3% of Average Final Compensation <u>times</u> Credited Service.
Form of Benefit	10 years certain and life thereafter. Options available
Maximum Benefit	90% of Average Final Compensation.
EARLY RETIREMENT	
Eligibility	Age 50 and attainment of 5 vesting credits.
Benefit Amount	Accrued benefit, reduced 2.5% for each year prior to Normal Retirement Date.
VESTING (TERMINATION)	
Less than 5 years of Credited Service	Refund of Member Contributions.
5 years or more	Accrued benefit payable at Early Retirement Date (reduced) or Normal Retirement Date (unreduced).
COST-OF-LIVING ADJUSTMENT	To all Normal and Early Retirees after October 17, 2006, 3% automatic COLA, beginning on the first October 1 following one year of retirement.

## DISABILITY

Eligibility	10 years of contributing service for non-service related; coverage from date of hire for service-incurred.
Benefit Amount	3% of Average Final Compensation times Credited Service, but not less than 42% of Average Final Compensation for service related disabilities

## DEATH

Vested Member	Accrued pension paid to beneficiary at otherwise Early Retirement Date (reduced basis) or Normal Retirement Date. Benefit paid for 10 years only.
Non-Vested Member	Beneficiary receives refund of Member's Contributions.

## SUPPLEMENTAL BENEFIT

\$36.00 times Credited Service paid monthly to Age 67. Minimum payment period is 5 years.

## CONTRIBUTIONS

Employee	8% of total pay until Normal Retirement Age, 4% thereafter.
Premium Tax	0.85% tax on premiums for casualty insurance.
City	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over 30 years.

## BOARD OF TRUSTEES

- a) Two City Council appointees,
- b) Two Members of the System elected by a majority of the other covered Police Officers, and
- c) A fifth Member elected by the other 4 and appointed by Council.

## DEFERRED RETIREMENT OPTION PLAN

Eligibility	Satisfaction of Normal Retirement Requirements.
Participation	Not to exceed 60 months.
Rate of Return	4% annual rate, credited quarterly
Distribution	Lump sum at termination of employment.

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Pooled Cash	362
Money Market	643,406
Cash	2
Total Cash and Equivalents	643,770
Receivables:	
Additional City Contributions	155,178
Investment Income	8,394
Total Receivable	163,572
Investments:	
Fixed Income	7,061,441
Equities	8,827,724
Pooled/Common/Commingled Funds:	
Equity	2,262,391
Master Limited Partnership	889,475
Total Investments	19,041,031
Total Assets	19,848,373
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	13,895
Administrative Expenses	2,000
To Broker for Investments Purchased	21,407
Total Liabilities	37,302
NET POSITION RESTRICTED FOR PENSIONS	19,811,071

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

ADDITIONS

## Contributions:

Member	148,719	
City	1,248,046	
State	90,240	
 Total Contributions		 1,487,005
 Investment Income:		
Net Increase in Fair Value of Investments	391,318	
Interest & Dividends	771,640	
Less Investment Expense <sup>1</sup>	(73,168)	
 Net Investment Income		 1,089,790
 Total Additions		 2,576,795

DEDUCTIONS

## Distributions to Members:

Benefit Payments	1,151,860	
Lump Sum DROP Distributions	0	
Refunds of Member Contributions	9,798	
 Total Distributions		 1,161,658
 Administrative Expense		 44,763
 Total Deductions		 1,206,421
 Net Increase in Net Position		 1,370,374
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		18,440,697
 End of the Year		 19,811,071

<sup>1</sup>Investment 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:

- a) Two City Council appointees,
- b) Two Members of the System elected by a majority of the other covered Police Officers, and
- c) A fifth Member elected by the other four and appointed by Council.

*Plan Membership as of October 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	27
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	24
	58

*Benefits Provided*

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

Normal Retirement:

Eligibility: Earlier of 1) age 60 with 5 vesting credits, or 2) age 55 with 10 vesting credits, or 3) 25 vesting credits regardless of age.

Benefit Amount: 3% of Average Final Compensation times Credited Service.

Maximum Benefit: 90% of Average Final Compensation.

Early Retirement:

Eligibility: Age 50 and attainment of 5 vesting credits.

Benefit Amount: Accrued benefit, reduced 2.5% for each year prior to Normal Retirement Date.

Vesting (Termination):

Less than 5 years of Credited Service: Refund of Member Contributions.

5 years or more: Accrued benefit payable at Early Retirement Date (reduced) or Normal Retirement Date (unreduced).

Cost-of-Living Adjustment:

To all Normal and Early Retirees after October 17, 2006, 3% automatic COLA, beginning on the first October 1 following retirement.

Disability:

Eligibility: 10 years of contributing service for non-service related; coverage from date of hire for service-incurred.

Benefit Amount: 3% of Average Final Compensation times Credited Service, but not less than 42% of Average Final Compensation for service related disabilities.

Death Benefits:

Vested Member: Accrued pension paid to beneficiary at otherwise Early Retirement Date (reduced basis) or Normal Retirement Date. Benefit paid for 10 years only.

Non-Vested Member: Beneficiary receives refund of Member's Contributions.

Supplemental Benefit:

\$36.00 times Credited Service paid monthly to Age 67. Minimum payment period is 5 years.

*Contributions*

Employee: 8% of total pay until Normal Retirement Age, 4% thereafter.

Premium Tax: 0.85% tax on premiums for casualty insurance.

City: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over 30 years.

## GASB 67

### 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	35.0%
International Equity	15.0%
Bonds	30.0%
Convertibles	10.0%
REITS	5.0%
MLPs	5.0%
<u>Total</u>	<u>100.0%</u>

#### *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 5.91 percent.

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

#### Deferred Retirement Option Program

Eligibility: Satisfaction of Normal Retirement requirements.

Participation: Not to exceed 60 months.

Rate of Return: 4% annual rate, credited quarterly.

The DROP balance as September 30, 2018 is \$331,839.

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	\$ 25,623,417
Plan Fiduciary Net Position	<u>\$ (19,811,071)</u>
Sponsor's Net Pension Liability	<u>\$ 5,812,346</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	77.32%

*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	2.70%
Salary Increases	Service based
Discount Rate	7.50%
Investment Rate of Return	7.50%

*Mortality Rate Healthy Active Lives:*

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

*Mortality Rate Healthy Inactive Lives:*

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

*Mortality Rate Disabled Lives:*

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

The most recent actuarial experience study used to review the other significant assumptions was dated May 2, 2012.

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:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return</u>
Domestic Equity	8.1%
International Equity	3.4%
Bonds	3.6%
Convertibles	6.7%
REITS	6.8%
MLPs	9.4%

## GASB 67

### 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	\$ 9,241,325	\$ 5,812,346	\$ 3,014,407

**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	559,426	432,384	492,835
Interest	1,733,759	1,688,084	1,620,290
Change in Excess State Money	-	-	(27,317)
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	1,353,706	(35,929)	(287,593)
Changes of assumptions	-	-	594,128
Benefit Payments, including Refunds of Employee Contributions	(1,161,658)	(2,043,514)	(867,064)
Net Change in Total Pension Liability	2,485,233	41,025	1,525,279
Total Pension Liability - Beginning	23,138,184	23,097,159	21,571,880
Total Pension Liability - Ending (a)	<u>\$ 25,623,417</u>	<u>\$ 23,138,184</u>	<u>\$ 23,097,159</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,248,046	1,124,726	1,050,108
Contributions - State	90,240	82,263	85,154
Contributions - Employee	148,719	134,446	117,033
Net Investment Income	1,089,790	1,682,372	1,607,425
Benefit Payments, including Refunds of Employee Contributions	(1,161,658)	(2,043,514)	(867,064)
Administrative Expense	(44,763)	(45,206)	(42,535)
Net Change in Plan Fiduciary Net Position	1,370,374	935,087	1,950,121
Plan Fiduciary Net Position - Beginning	18,440,697	17,505,610	15,555,489
Plan Fiduciary Net Position - Ending (b)	<u>\$ 19,811,071</u>	<u>\$ 18,440,697</u>	<u>\$ 17,505,610</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 5,812,346</u>	<u>\$ 4,697,487</u>	<u>\$ 5,591,549</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.32%	79.70%	75.79%
Covered Employee Payroll <sup>1</sup>	\$ 1,858,989	\$ 1,680,575	\$ 1,462,915
Net Pension Liability as a percentage of Covered Employee Payroll	312.66%	279.52%	382.22%

**Notes to Schedules:**

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

*Changes of assumptions:*

For measurement date 09/30/2016, amounts reported as changes of assumptions resulted from the following changes:

- As a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.
- The salary increase assumption was changed from a flat 7.00% per year to one based on service. This change was adopted based on the results of our April 29, 2016 Special Actuarial Analysis.
- The inflation assumption rate was lowered from 3.00% to 2.70%, 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	09/30/2013
Total Pension Liability			
Service Cost	469,734	509,101	473,582
Interest	1,528,830	1,445,430	1,373,741
Change in Excess State Money	-	-	-
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	58,554	-	-
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(854,438)	(751,882)	(1,102,107)
Net Change in Total Pension Liability	1,202,680	1,202,649	745,216
Total Pension Liability - Beginning	20,369,200	19,166,551	18,421,335
Total Pension Liability - Ending (a)	<u>\$ 21,571,880</u>	<u>\$ 20,369,200</u>	<u>\$ 19,166,551</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,138,692	961,952	2,072,711
Contributions - State	77,754	65,862	62,542
Contributions - Employee	108,536	114,679	105,628
Net Investment Income	(730,080)	1,564,849	1,435,540
Benefit Payments, including Refunds of Employee Contributions	(854,438)	(751,882)	(1,102,107)
Administrative Expense	(41,503)	(38,332)	(32,304)
Net Change in Plan Fiduciary Net Position	(301,039)	1,917,128	2,542,010
Plan Fiduciary Net Position - Beginning	15,856,528	13,939,400	11,397,390
Plan Fiduciary Net Position - Ending (b)	<u>\$ 15,555,489</u>	<u>\$ 15,856,528</u>	<u>\$ 13,939,400</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 6,016,391</u>	<u>\$ 4,512,672</u>	<u>\$ 5,227,151</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	72.11%	77.85%	72.73%
Covered Employee Payroll <sup>1</sup>	\$ 1,599,122	\$ 1,433,491	\$ 1,320,347
Net Pension Liability as a percentage of Covered Employee Payroll	376.23%	314.80%	395.89%

**Notes to Schedules:**

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

**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 Employee Payroll <sup>1</sup>	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,338,286	\$ 1,338,286	\$ -	\$ 1,858,989	71.99%
09/30/2017	\$ 1,206,989	\$ 1,206,989	\$ -	\$ 1,680,575	71.82%
09/30/2016	\$ 1,162,579	\$ 1,162,579	\$ -	\$ 1,462,915	79.47%
09/30/2015	\$ 967,464	\$ 1,216,446	\$ (248,982)	\$ 1,599,122	76.07%
09/30/2014	\$ 1,027,813	\$ 1,027,813	\$ -	\$ 1,433,491	71.70%
09/30/2013	\$ 729,756	\$ 2,135,253	\$ (1,405,497)	\$ 1,320,347	161.72%

<sup>1</sup> The Covered Employee 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 Rate: *Healthy Lives:*  
Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.  
Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.  
*Disabled Lives:*  
Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale.  
Male: 60% RP2000 Disabled Male setback four years /40% Annuitant White Collar with no setback, no projection scale.  
The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the mortality 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, 2014 FRS actuarial 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.

Retirement Age: Two years after the earlier of Age 60 with 5 years of service, age 55 with 10 years of service, or 25 years of service regardless of age. Also, any member who has reached Normal Retirement plus two years is assumed to continue employment for one additional year. We feel this is reasonable based upon plan provisions.

Early Retirement: Commencing at eligibility for Early Retirement (age 50), members are assumed to retire with an immediate benefit at the rate of 2% per year. We feel this is reasonable based upon plan provisions.

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Disability Rates: See table below (1202). It is assumed that 75% of disablements and active Member deaths are service related. The assumed rates of disablement were developed from those used by other plans containing Florida municipal Police Officers.

Termination Rates:

Credited Service	Termination Probability
0-1	15%
2-4	10%
5+	0%

The assumed rates of termination were approved by the Board in conjunction with an actuarial experience analysis dated May 2, 2013.

Salary Increases:

Years of Service	Increase
0	7.25%
1	7.00%
2	6.75%
3	6.50%
4	6.25%
5-9	6.00%
10-14	5.25%
15+	4.50%

The assumed rates of salary increase were approved from our April 29, 2016 Special Actuarial Analysis. Previously, the rate was a flat 7.00% per year until the assumed retirement age.

Projected salary in the year of retirement is increased 10% for Members who had 10 or more years of Credited Service as of September 30, 2011 and 5% for Members who had less than 10 years of Credited Service as of September 30, 2011. These increases are to account for non-regular compensation.

Cost-of-Living Adjustment:

3.00% automatic COLA to Normal and Early Retirees, beginning one year after retirement.

Payroll Growth Assumption:

None.

Funding Method:

Entry Age Normal Actuarial Cost Method.

Amortization Method:

Level Percentage of Pay, Closed.

Remaining Amortization Period:

20 Years (as of 10/01/2016).

Actuarial Asset Method:

Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric 4-year average Market Value returns, net of fees. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Disability Rate Table:

Age	% Becoming Disabled During the Year
20	0.051%
30	0.058%
40	0.121%
50	0.429%

**SCHEDULE OF INVESTMENT RETURNS**  
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	5.91%
09/30/2017	9.83%
09/30/2016	10.07%
09/30/2015	-4.50%
09/30/2014	10.91%
09/30/2013	12.01%

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:

- a) Two City Council appointees,
- b) Two Members of the System elected by a majority of the other covered Police Officers, and
- c) A fifth Member elected by the other four and appointed by Council.

Each full-time Police Officer employee of the City becomes a Participant on the first day of full-time service.

*Plan Membership as of October 1, 2017:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	27
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	24
	58
	58

*Benefits Provided*

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

Normal Retirement:

Eligibility: Earlier of 1) age 60 with 5 vesting credits, or 2) age 55 with 10 vesting credits, or 3) 25 vesting credits regardless of age.

Benefit Amount: 3% of Average Final Compensation times Credited Service.

Maximum Benefit: 90% of Average Final Compensation.

Early Retirement:

Eligibility: Age 50 and attainment of 5 vesting credits.

Benefit Amount: Accrued benefit, reduced 2.5% for each year prior to Normal Retirement Date.

Vesting (Termination):

Less than 5 years of Credited Service: Refund of Member Contributions.

5 years or more: Accrued benefit payable at Early Retirement Date (reduced) or Normal Retirement Date (unreduced).

Cost-of-Living Adjustment:

To all Normal and Early Retirees after October 17, 2006, 3% automatic COLA, beginning on the first October 1 following retirement.

Disability:

Eligibility: 10 years of contributing service for non-service related; coverage from date of hire for service-incurred.

Benefit Amount: 3% of Average Final Compensation times Credited Service, but not less than 42% of Average Final Compensation for service related disabilities.

Death Benefits:

Vested Member: Accrued pension paid to beneficiary at otherwise Early Retirement Date (reduced basis) or Normal Retirement Date. Benefit paid for 10 years only.

Non-Vested Member: Beneficiary receives refund of Member's Contributions.

Supplemental Benefit:

\$36.00 times Credited Service paid monthly to Age 67. Minimum payment period is 5 years.

*Contributions*

Employee: 8% of total pay until Normal Retirement Age, 4% thereafter.

Premium Tax: 0.85% tax on premiums for casualty insurance.

City: Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over 30 years.

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.

*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	2.70%
Salary Increases	Service based
Discount Rate	7.50%
Investment Rate of Return	7.50%

*Mortality Rate Healthy Active Lives:*

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

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

*Mortality Rate Healthy Inactive Lives:*

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

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

*Mortality Rate Disabled Lives:*

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

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

The most recent actuarial experience study used to review the other significant assumptions was dated May 2, 2012.

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	35.0%	8.10%
International Equity	15.0%	3.40%
Bonds	30.0%	3.60%
Convertibles	10.0%	6.70%
REITS	5.0%	6.80%
MLPs	5.0%	9.40%
Total	100.0%	

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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.

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2018	\$ 23,138,184	\$ 18,440,697	\$ 4,697,487
Changes for a Year:			
Service Cost	559,426	-	559,426
Interest	1,733,759	-	1,733,759
Differences between Expected and Actual Experience	1,353,706	-	1,353,706
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	1,248,046	(1,248,046)
Contributions - State	-	90,240	(90,240)
Contributions - Employee	-	148,719	(148,719)
Net Investment Income	-	1,089,790	(1,089,790)
Benefit Payments, including Refunds of Employee Contributions	(1,161,658)	(1,161,658)	-
Administrative Expense	-	(44,763)	44,763
Net Changes	2,485,233	1,370,374	1,114,859
Reporting Period Ending September 30, 2019	\$ 25,623,417	\$ 19,811,071	\$ 5,812,346

*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	\$ 9,241,325	\$ 5,812,346	\$ 3,014,407

*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 Sponsor has recognized a Pension Expense of \$951,186.

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	14,639	172,540
Changes of assumptions	297,064	-
Net difference between Projected and Actual Earnings on Pension Plan investments	98,201	-
Employer and State contributions subsequent to the measurement date	1,338,286	-
<b>Total</b>	<b>\$ 1,748,190</b>	<b>\$ 172,540</b>

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.

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	\$	204,855
2020	\$	291,453
2021	\$	(172,263)
2022	\$	(86,681)
2023	\$	-
Thereafter	\$	-

**Payable to the Pension Plan**

On September 30, 2017, the Sponsor reported a payable of \$175,446 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 \$1,332,008.

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

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	1,082,964	93,456
Changes of assumptions	148,532	-
Net difference between Projected and Actual Earnings on Pension Plan investments	220,461	-
Employer and State contributions subsequent to the measurement date	TBD	-
Total	TBD	\$ 93,456

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. 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	\$	622,951
2021	\$	159,235
2022	\$	244,817
2023	\$	331,498
2024	\$	-
Thereafter	\$	-

**Payable to the Pension Plan**

On September 30, 2018, the Sponsor reported a payable of \$155,178 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	559,426	432,384	492,835
Interest	1,733,759	1,688,084	1,620,290
Change in Excess State Money	-	-	(27,317)
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	1,353,706	(35,929)	(287,593)
Changes of assumptions	-	-	594,128
Benefit Payments, including Refunds of Employee Contributions	(1,161,658)	(2,043,514)	(867,064)
Net Change in Total Pension Liability	2,485,233	41,025	1,525,279
Total Pension Liability - Beginning	23,138,184	23,097,159	21,571,880
Total Pension Liability - Ending (a)	<u>\$ 25,623,417</u>	<u>\$ 23,138,184</u>	<u>\$ 23,097,159</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,248,046	1,124,726	1,050,108
Contributions - State	90,240	82,263	85,154
Contributions - Employee	148,719	134,446	117,033
Net Investment Income	1,089,790	1,682,372	1,607,425
Benefit Payments, including Refunds of Employee Contributions	(1,161,658)	(2,043,514)	(867,064)
Administrative Expense	(44,763)	(45,206)	(42,535)
Net Change in Plan Fiduciary Net Position	1,370,374	935,087	1,950,121
Plan Fiduciary Net Position - Beginning	18,440,697	17,505,610	15,555,489
Plan Fiduciary Net Position - Ending (b)	<u>\$ 19,811,071</u>	<u>\$ 18,440,697</u>	<u>\$ 17,505,610</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 5,812,346</u>	<u>\$ 4,697,487</u>	<u>\$ 5,591,549</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	77.32%	79.70%	75.79%
Covered Employee Payroll <sup>1</sup>	\$ 1,858,989	\$ 1,680,575	\$ 1,462,915
Net Pension Liability as a percentage of Covered Employee Payroll	312.66%	279.52%	382.22%

**Notes to Schedules:**

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

*Changes of assumptions:*

For measurement date 09/30/2016, amounts reported as changes of assumptions resulted from the following changes:

- As a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.
- The salary increase assumption was changed from a flat 7.00% per year to one based on service. This change was adopted based on the results of our April 29, 2016 Special Actuarial Analysis.
- The inflation assumption rate was lowered from 3.00% to 2.70%, 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 Measurement Date	09/30/2016 09/30/2015	09/30/2015 09/30/2014	09/30/2014 09/30/2013
Total Pension Liability			
Service Cost	469,734	509,101	473,582
Interest	1,528,830	1,445,430	1,373,741
Change in Excess State Money	-	-	-
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	58,554	-	-
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(854,438)	(751,882)	(1,102,107)
Net Change in Total Pension Liability	1,202,680	1,202,649	745,216
Total Pension Liability - Beginning	20,369,200	19,166,551	18,421,335
Total Pension Liability - Ending (a)	<u>\$ 21,571,880</u>	<u>\$ 20,369,200</u>	<u>\$ 19,166,551</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,138,692	961,952	2,072,711
Contributions - State	77,754	65,862	62,542
Contributions - Employee	108,536	114,679	105,628
Net Investment Income	(730,080)	1,564,849	1,435,540
Benefit Payments, including Refunds of Employee Contributions	(854,438)	(751,882)	(1,102,107)
Administrative Expense	(41,503)	(38,332)	(32,304)
Net Change in Plan Fiduciary Net Position	(301,039)	1,917,128	2,542,010
Plan Fiduciary Net Position - Beginning	15,856,528	13,939,400	11,397,390
Plan Fiduciary Net Position - Ending (b)	<u>\$ 15,555,489</u>	<u>\$ 15,856,528</u>	<u>\$ 13,939,400</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 6,016,391</u>	<u>\$ 4,512,672</u>	<u>\$ 5,227,151</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	72.11%	77.85%	72.73%
Covered Employee Payroll <sup>1</sup>	\$ 1,599,122	\$ 1,433,491	\$ 1,320,347
Net Pension Liability as a percentage of Covered Employee Payroll	376.23%	314.80%	395.89%

**Notes to Schedules:**

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

**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 Employee Payroll <sup>1</sup>	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,338,286	\$ 1,338,286	\$ -	\$ 1,858,989	71.99%
09/30/2017	\$ 1,206,989	\$ 1,206,989	\$ -	\$ 1,680,575	71.82%
09/30/2016	\$ 1,162,579	\$ 1,162,579	\$ -	\$ 1,462,915	79.47%
09/30/2015	\$ 967,464	\$ 1,216,446	\$ (248,982)	\$ 1,599,122	76.07%
09/30/2014	\$ 1,027,813	\$ 1,027,813	\$ -	\$ 1,433,491	71.70%
09/30/2013	\$ 729,756	\$ 2,135,253	\$ (1,405,497)	\$ 1,320,347	161.72%

<sup>1</sup> The Covered Employee 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 Rate:

*Healthy Lives:*

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

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

*Disabled Lives:*

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

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

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the mortality 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, 2014 FRS actuarial 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.

Retirement Age:

Two years after the earlier of Age 60 with 5 years of service, age 55 with 10 years of service, or 25 years of service regardless of age. Also, any member who has reached Normal Retirement plus two years is assumed to continue employment for one additional year. We feel this is reasonable based upon plan provisions.

Early Retirement:

Commencing at eligibility for Early Retirement (age 50), members are assumed to retire with an immediate benefit at the rate of 2% per year. We feel this is reasonable based upon plan provisions.

## GASB 68

Disability Rates: See table below (1202). It is assumed that 75% of disablements and active Member deaths are service related. The assumed rates of disablement were developed from those used by other plans containing Florida municipal Police Officers.

Termination Rates:	Credited Service	Termination Probability
	0-1	15%
	2-4	10%
	5+	0%

The assumed rates of termination were approved by the Board in conjunction with an actuarial experience analysis dated May 2, 2013.

Salary Increases:	Years of Service	Increase
	0	7.25%
	1	7.00%
	2	6.75%
	3	6.50%
	4	6.25%
	5-9	6.00%
	10-14	5.25%
	15+	4.50%

The assumed rates of salary increase were approved from our April 29, 2016 Special Actuarial Analysis. Previously, the rate was a flat 7.00% per year until the assumed retirement age.

Projected salary in the year of retirement is increased 10% for Members who had 10 or more years of Credited Service as of September 30, 2011 and 5% for Members who had less than 10 years of Credited Service as of September 30, 2011. These increases are to account for non-regular compensation.

Cost-of-Living Adjustment: 3.00% automatic COLA to Normal and Early Retirees, beginning one year after retirement.

Payroll Growth Assumption: None.

Funding Method: Entry Age Normal Actuarial Cost Method.

Amortization Method: Level Percentage of Pay, Closed.

Remaining Amortization Period: 20 Years (as of 10/01/2016).

Actuarial Asset Method: Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric 4-year average Market Value returns, net of fees. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Disability Rate Table:	% Becoming Disabled During the Year
	Age
	20
	30
	40
	50

0.051%
0.058%
0.121%
0.429%

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	\$ 5,591,549	\$ 760,497	\$ 2,843,109	\$ -
Employer and State Contributions made after 09/30/2017	-	-	1,338,286	-
Total Pension Liability Factors:				
Service Cost	432,384	-	-	432,384
Interest	1,688,084	-	-	1,688,084
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(35,929)	35,929	-	-
Current year amortization of experience difference	-	(79,083)	(14,639)	(64,444)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(148,532)	148,532
Benefit Payments, including Refunds of Employee Contributions	(2,043,514)	-	-	-
Net change	<u>41,025</u>	<u>(43,154)</u>	<u>1,175,115</u>	<u>2,204,556</u>
Plan Fiduciary Net Position:				
Contributions - Employer	1,124,726	-	(1,124,726)	-
Contributions - State	82,263	-	(82,263)	-
Contributions - Employee	134,446	-	-	(134,446)
Projected Net Investment Income	1,284,898	-	-	(1,284,898)
Difference between projected and actual earnings on Pension Plan investments	397,474	397,474	-	-
Current year amortization	-	(266,314)	(387,082)	120,768
Benefit Payments, including Refunds of Employee Contributions	(2,043,514)	-	-	-
Administrative Expenses	(45,206)	-	-	45,206
Net change	<u>935,087</u>	<u>131,160</u>	<u>(1,594,071)</u>	<u>(1,253,370)</u>
Ending Balance	<u>\$ 4,697,487</u>	<u>\$ 848,503</u>	<u>\$ 2,424,153</u>	<u>\$ 951,186</u>

**PRELIMINARY COMPONENTS OF PENSION EXPENSE**  
**FISCAL YEAR SEPTEMBER 30, 2019**

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 4,697,487	\$ 848,503	\$ 2,424,153	\$ -
Employer and State Contributions made after 09/30/2018	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	559,426	-	-	559,426
Interest	1,733,759	-	-	1,733,759
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	1,353,706	-	1,353,706	-
Current year amortization of experience difference	-	(79,084)	(285,381)	206,297
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(148,532)	148,532
Benefit Payments, including Refunds of Employee Contributions	(1,161,658)	-	-	-
Net change	<u>2,485,233</u>	<u>(79,084)</u>	<u>919,793</u>	<u>2,648,014</u>
Plan Fiduciary Net Position:				
Contributions - Employer	1,248,046	-	(1,248,046)	-
Contributions - State	90,240	-	(90,240)	-
Contributions - Employee	148,719	-	-	(148,719)
Projected Net Investment Income	1,393,574	-	-	(1,393,574)
Difference between projected and actual earnings on Pension Plan investments	(303,784)	-	303,784	-
Current year amortization	-	(266,314)	(447,838)	181,524
Benefit Payments, including Refunds of Employee Contributions	(1,161,658)	-	-	-
Administrative Expenses	(44,763)	-	-	44,763
Net change	<u>1,370,374</u>	<u>(266,314)</u>	<u>(1,482,340)</u>	<u>(1,316,006)</u>
Ending Balance	<u>\$ 5,812,346</u>	<u>\$ 503,105</u>	<u>TBD</u>	<u>\$ 1,332,008</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	2028
2014	\$ (506,184)	5	\$ (101,237)	\$ (101,237)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 1,935,409	5	\$ 387,082	\$ 387,082	\$ 387,082	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (427,912)	5	\$ (85,583)	\$ (85,582)	\$ (85,582)	\$ (85,582)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (397,474)	5	\$ (79,494)	\$ (79,495)	\$ (79,495)	\$ (79,495)	\$ (79,495)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 303,784	5	\$ -	\$ 60,756	\$ 60,757	\$ 60,757	\$ 60,757	\$ 60,757	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 120,768	\$ 181,524	\$ 282,762	\$ (104,320)	\$ (18,738)	\$ 60,757	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

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

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2016	\$ 594,128	4	\$ 148,532	\$ 148,532	\$ 148,532	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 148,532	\$ 148,532	\$ 148,532	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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	\$ 58,554	4	\$ 14,639	\$ 14,639	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (287,593)	4	\$ (71,898)	\$ (71,898)	\$ (71,898)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (35,929)	5	\$ (7,185)	\$ (7,186)	\$ (7,186)	\$ (7,186)	\$ (7,186)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 1,353,706	5	\$ -	\$ 270,742	\$ 270,741	\$ 270,741	\$ 270,741	\$ 270,741	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (64,444)	\$ 206,297	\$ 191,657	\$ 263,555	\$ 263,555	\$ 270,741	\$ -	\$ -	\$ -	\$ -	\$ -