

CITY OF TITUSVILLE
GENERAL EMPLOYEES' PENSION PLAN

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019

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

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



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

January 31, 2020

Board of Trustees
City of Titusville
General Employees' Pension Board

Re: City of Titusville General Employees' Pension Plan

Dear Board:

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

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

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City of Titusville, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2018. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2019 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Titusville, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the General Employees' Pension Plan. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

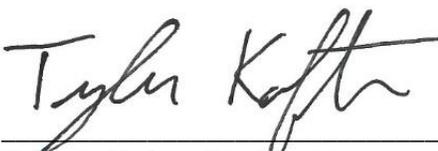
If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By: 

Douglas H. Lozen, EA, MAAA
Enrolled Actuary #17-7778

By: 

Tyler A. Koftan, EA, MAAA
Enrolled Actuary #17-8685

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Titusville General Employees' Pension Plan, performed as of October 1, 2019, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2021.

The contribution requirements, compared with those set forth in the October 1, 2018 actuarial valuation report, are as follows:

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>
Minimum Required Contribution	\$2,029,042	\$2,630,881
Member Contributions (Est.)	350,305	335,002
City Required Contribution ²	\$1,678,737	\$2,295,879

As you can see, the Minimum Required Contribution shows a decrease when compared to the results determined in the October 1, 2018 actuarial valuation report. The decrease is attributable to net favorable experience and the expiration of a charge component of the Unfunded Actuarial Accrued Liability.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. The primary source of actuarial gain was an investment return of 9.16% (Actuarial Asset Basis) which exceeded the 7.75% assumption. There were no significant sources of actuarial loss.

CHANGES SINCE PRIOR VALUATION

Plan Changes

Since the prior valuation, the plan was amended with respect to in-service distributions and to establish a “DROP II” program. These changes did not result in a change to the plan’s funding requirements.

Actuarial Assumption/Method Changes

There have been no changes of actuarial assumptions or methods since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data		
Actives	293	289
Service Retirees	329	321
DROP Retirees	0	0
Beneficiaries	36	35
Disability Retirees	2	3
Terminated Vested	<u>146</u>	<u>132</u>
 Total	 806	 780
 Total Annual Payroll	 \$13,367,477	 \$13,050,112
Payroll Under Assumed Ret. Age	12,845,902	12,315,226
 Annual Rate of Payments to:		
Service Retirees	4,325,824	4,055,261
DROP Retirees	0	0
Beneficiaries	219,109	215,628
Disability Retirees	15,096	39,155
Terminated Vested	394,546	407,386
 B. Assets		
Actuarial Value (AVA) ¹	62,315,479	58,660,023
Market Value (MVA) ¹	61,671,199	61,691,922
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	22,648,467	23,191,942
Disability Benefits	434,547	385,311
Death Benefits	146,471	137,954
Vested Benefits	602,236	626,649
Refund of Contributions	253,924	233,086
Service Retirees	42,742,223	40,139,221
DROP Retirees ¹	0	0
Beneficiaries	2,068,397	2,070,191
Disability Retirees	107,423	265,628
Terminated Vested	<u>2,847,611</u>	<u>2,797,675</u>
 Total	 71,851,299	 69,847,657

C. Liabilities - (Continued)	<u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	81,534,970	77,930,976
Present Value of Future Member Contributions	2,038,374	1,948,274
Normal Cost (Retirement)	826,742	795,497
Normal Cost (Disability)	22,196	19,984
Normal Cost (Death)	7,782	7,579
Normal Cost (Vesting)	53,964	(129,821)
Normal Cost (Refunds)	<u>50,880</u>	<u>233,086</u>
Total Normal Cost	961,564	926,325
Present Value of Future Normal Costs	5,464,961	5,151,175
Accrued Liability (Retirement)	17,826,709	18,664,300
Accrued Liability (Disability)	296,929	260,829
Accrued Liability (Death)	103,189	95,510
Accrued Liability (Vesting)	336,710	403,128
Accrued Liability (Refunds)	57,147	0
Accrued Liability (Inactives) ¹	<u>47,765,654</u>	<u>45,272,715</u>
Total Actuarial Accrued Liability (EAN AL)	66,386,338	64,696,482
Unfunded Actuarial Accrued Liability (UAAL)	4,070,859	6,036,459
Funded Ratio (AVA / EAN AL)	93.9%	90.7%

D. Actuarial Present Value of Accrued Benefits	<u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits		
Inactives ¹	47,765,654	45,272,715
Actives	10,894,518	12,715,107
Member Contributions	<u>1,823,359</u>	<u>1,703,897</u>
Total	60,483,531	59,691,719
Non-vested Accrued Benefits	<u>1,812,674</u>	<u>1,522,799</u>
Total Present Value Accrued Benefits (PVAB)	62,296,205	61,214,518
Funded Ratio (MVA / PVAB)	99.0%	100.8%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	1,011,591	
Benefits Paid	(4,499,667)	
Interest	4,569,763	
Other	<u>0</u>	
Total	1,081,687	

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

E. Pension Cost

Normal Cost ²	\$1,048,866	\$1,007,926
Administrative Expenses ²	112,334	96,843
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 26 years (as of 10/1/2019) ²	867,842	1,526,112
Minimum Required Contribution	2,029,042	2,630,881
Expected Member Contributions ²	350,305	335,002
Expected City Contribution	1,678,737	2,295,879

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
City Requirement	2,628,056
Actual Contributions Made:	
Members (excluding buyback)	323,634
City	<u>2,628,066</u>
Total	2,951,700

G. Net Actuarial (Gain)/Loss (462,347)

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

² Contributions developed as of 10/1/2019 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>
2019	4,070,859
2020	3,529,081
2021	3,205,903
2027	1,485,733
2045	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	4.52%	4.96%
Year Ended 9/30/2018	5.96%	5.00%
Year Ended 9/30/2017	5.32%	5.00%
Year Ended 9/30/2016	10.13%	5.00%
Year Ended 9/30/2015	4.86%	5.00%

(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 9/30/2019	2.66%	9.16%	7.75%
Year Ended 9/30/2018	9.29%	8.44%	8.00%
Year Ended 9/30/2017	14.08%	9.34%	8.00%
Year Ended 9/30/2016	10.92%	9.53%	8.00%
Year Ended 9/30/2015	-0.02%	11.72%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$12,845,902
	10/1/2009	10,560,520
(b) Total Increase		21.64%
(c) Number of Years		10.00
(d) Average Annual Rate		1.98%

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.



Douglas H. Lozen, EA, MAAA
Enrolled Actuary #17-7778

Please let us know when the report is approved by the Board and unless otherwise directed we will provide a copy of the report to the following office to comply with Chapter 112 Florida Statutes:

Mr. Keith Brinkman
Bureau of Local
Retirement Systems
Post Office Box 9000
Tallahassee, FL 32315-9000

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2018	\$6,036,459
(2)	Sponsor Normal Cost developed as of October 1, 2018	618,444
(3)	Expected administrative expenses for the year ended September 30, 2019	89,003
(4)	Expected interest on (1), (2) and (3)	519,204
(5)	Sponsor contributions to the System during the year ended September 30, 2019	2,628,066
(6)	Expected interest on (5)	101,838
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	4,533,206
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(462,347)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2019	4,070,859

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2019 Amount</u>	<u>Amortization Amount</u>
	10/1/1990	1	(51,198)	(51,198)
	10/1/1992	3	(54,790)	(19,642)
	10/1/1993	4	715,873	199,476
	10/1/1995	6	841,563	167,670
Method Change	10/1/2004	15	1,085,814	115,940
Prior Losses	10/1/2004	9	868,412	127,678
Actuarial Loss	10/1/2005	9	975,393	143,407
Actuarial Loss	10/1/2006	9	59,609	8,764
Actuarial Gain	10/1/2007	9	(648,559)	(95,354)
Method Change	10/1/2008	9	892,362	131,200
Assump Change	10/1/2009	10	2,140,524	292,727
Benefit Change	10/1/2009	20	37,816	3,508
Actuarial Loss	10/1/2010	1	293,040	293,040
Actuarial Loss	10/1/2011	2	457,115	237,084
Benefit Change	10/1/2011	22	(2,358,687)	(210,370)
Actuarial Gain	10/1/2012	3	(150,605)	(53,992)
Assump Change	10/1/2012	13	527,687	61,113
Actuarial Gain	10/1/2013	4	(316,457)	(88,180)
Actuarial Gain	10/1/2014	5	(1,272,041)	(293,730)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2019 <u>Amount</u>	Amortization <u>Amount</u>
Actuarial Gain	10/1/2015	6	(955,817)	(190,434)
Benefit Change	10/1/2015	26	(73,698)	(6,190)
Actuarial Gain	10/1/2016	7	(226,982)	(40,116)
Assump Change	10/1/2016	17	1,362,476	136,321
Actuarial Gain	10/1/2017	8	(740,335)	(118,431)
Actuarial Loss	10/1/2018	9	34,611	5,089
Assump Change	10/1/2018	19	1,090,080	103,456
Actuarial Gain	10/1/2019	10	<u>(462,347)</u>	<u>(63,228)</u>
			4,070,859	795,608

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$6,036,459
(2) Expected UAAL as of October 1, 2019	4,533,206
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(815,242)
Salary Increases	30,042
Active Decrements	93,467
Inactive Mortality	92,501
Other	<u>136,885</u>
Increase in UAAL due to (Gain)/Loss	(462,347)
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2019	\$4,070,859

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

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

Male: RP2000 Generational, 50% White Collar / 50% Blue Collar, Scale BB

Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB

Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years

Male: 100% RP2000 Disabled Male setback four years

The assumed rates of mortality are mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption 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, 2018 FRS actuarial valuation report for non-special risk lives. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate

7.75% 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

See table later in this section. This is based on the experience study dated August 20, 2018.

For Members eligible for Normal Retirement as of August 26, 2013:

Projected salary at retirement is increased 25% to account for non-regular compensation.

For Members not eligible for Normal Retirement as of August 26, 2013 with at least 10 years of service as of that date:

The projected frozen benefit as of August 26, 2013 includes a 25% load for the final year included in the averaging period.

For Members with less than 10 years of service as of August 26, 2013:
No load is assumed.

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

\$102,984 annually, based on the average of actual expenses incurred in the prior two fiscal years. Previously, the actual expense in the prior fiscal year was used. Using a two-year average results in a less volatile estimate than the prior method.

Amortization Method

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

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

Retirement Age

See table later in this section. This assumption is based on the experience study dated August 20, 2018.

Early Retirement

See table later in this section. This assumption is based on the experience study dated August 20, 2018.

Disability Rate

See table later in this section (1202 times 50%). This assumption is based on the experience study dated August 20, 2018.

Termination Rate

See table later in this section. This assumption is based on the experience study dated August 20, 2018.

Asset Valuation Method

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

Funding Method

Entry Age Normal Actuarial Cost Method. The following loads are applied for determination of the Sponsor funding requirement:

Interest – a half year, based on the current 7.75% assumption.

Salary – a full year based on the current 5.01% assumption.

Assumption Tables

<u>% Terminating During the Year</u>		<u>% Becoming Disabled During the Year</u>		<u>Salary Scale</u>	
<u>Service</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Service</u>	<u>Rate</u>
0-1	20.0%	20	0.03%	0	9.00%
2-4	12.0%	25	0.03%	1-4	4.50%
5-9	7.0%	30	0.03%	5+	4.00%
10+	4.0%	35	0.03%		
		40	0.06%		
		45	0.11%		
		50	0.21%		
		55	0.45%		
		60	0.81%		

<u>% Retiring During the Year (at least 10 years of service as of August 26, 2013)¹</u>		<u>% Retiring During the Year (less than 10 years of service as of August 26, 2013)²</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
48-57	10.0%	52-61	10.0%
58	50.0%	62-66	40.0%
59-61	20.0%	67+	100.0%
62-66	40.0%		
67+	100%		

¹ 100% is assumed at 28 or more years of service.

² 100% is assumed at 30 or more years of service.

GLOSSARY

Total Annual Payroll is the projected annual rate of pay as of the valuation date for 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.

SPECIAL ACTUARIAL ACCOUNT ACTIVITY
10/1/2018 to 10/1/2019

Growth Assuming 7.75% Return

(1)	10/1/2018 Beginning Balance	70,988,340
	Contributions ¹	2,951,700
	Investment Earnings	5,437,080
	Non-Investment Expenses	116,965
	Investment Expenses	254,745
	Distributions	4,499,667

¹ Excludes Member Service Buyback

(2)	09/30/2019 Ending Balance	74,505,743
(3)	09/30/2019 Actuarial Assets	62,315,479
(4)	Excess Earnings: (3) - (2)	(12,190,264)
(5)	09/30/2019 Actuarial Gain (Loss)	462,347
*	Share Account Allocation: Lesser of: [(4) or (5)] x 50%	(6,095,132)

Share Account Activity

10/1/2018	Account Balance	(107,560,159)
	Interest at 7.75%	(8,335,912)
10/1/2019	Addition	(6,095,132)
10/1/2019	Benefits "Purchase"	0
10/1/2019	Account Balance	(121,991,203)

10/1/2019 Adjusted Actuarial Assets

(6)	Actuarial Assets (3), above	62,315,479
(7)	10/1/2019 Account Balance	(121,991,203)
	Adjusted Actuarial Assets	62,315,479
	Lesser of: (6) or [(6) - (7)]	

* Per Ordinance No. 25-1999.

SPECIAL ACTUARIAL ACCOUNT

History of Benefit "Purchases" and
Actuarial Gains and Losses

<u>Plan Year Ended</u>	<u>Benefit "Purchases"</u>		<u>Net Actuarial Gain (Loss)</u>
9/30/1990	298,200	(1)	(291,699)
9/30/1991	769,309	(2)	350,282
9/30/1992	0		517,853
9/30/1993	0		948,397
9/30/1994	151,939	(3)	170,962
9/30/1995	676,000	(4)	372,601
9/30/1996	1,051,055	(5)	845,165
9/30/1997	0		1,623,510
9/30/1998	1,181,867	(6)	2,155,885
9/30/1999	1,093,450	(7)	1,997,227
9/30/2000	131,451	(8)	83,693
9/30/2001	0		(361,917)
9/30/2002	0		(1,374,030)
9/30/2003	0		(755,227)
9/30/2004	0		(2,509,682)
9/30/2005	0		(1,530,576)
9/30/2006	0		(92,489)
9/30/2007	0		1,050,783
9/30/2008	0		(1,725,825)
9/30/2009	0		(3,318,088)
9/30/2010	0		(2,438,237)
9/30/2011	0		(2,073,660)
9/30/2018	0		483,166
9/30/2013	0		813,750
9/30/2014	0		2,668,364
9/30/2015	(88,773)	(9)	1,605,480
9/30/2016	0		315,334
9/30/2017	0		924,468
9/30/2018	0		(40,985)
9/30/2019	0		462,347
	<hr/>		<hr/>
Total	5,264,498		876,852

- (1) AIS dated 01/25/93 (revised 09/14/93)
- (2) AIS dated 12/08/93
- (3) AIS dated 06/28/96
- (4) AIS dated 01/27/97
- (5) AIS dated 01/26/98
- (6) AIS dated 08/26/99
- (7) AIS dated 05/04/00
- (8) AIS dated 02/23/01
- (9) AIS dated 01/06/17

DISCUSSION OF RISK

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

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

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

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

Impact of Plan Maturity on Risk

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

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

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 68.5% on October 1, 2016 to 66.0% on October 1, 2019, indicating that the plan has been maturing during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 72.0%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 86.9% on October 1, 2016 to 93.9% on October 1, 2019, due to net favorable experience realized by the plan. The increase was offset by assumption changes implemented during the period.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, increased from -4.4% on October 1, 2016 to -2.7% on October 1, 2019. The current Net Cash Flow Ratio of -2.7% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks in this section as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	285	289	289	293
Total Inactives ¹	416	421	436	444
Actives / Inactives ¹	68.5%	68.6%	66.3%	66.0%
<u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	53,281,168	58,318,169	61,691,922	61,671,199
Total Annual Payroll	11,735,047	12,394,932	13,050,112	13,367,477
MVA / Total Annual Payroll	454.0%	470.5%	472.7%	461.4%
<u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	44,739,379	43,987,195	45,272,715	47,765,654
Total Accrued Liability (EAN)	61,454,320	62,003,867	64,696,482	66,386,338
Inactive AL / Total AL	72.8%	70.9%	70.0%	72.0%
<u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	53,430,781	55,984,620	58,660,023	62,315,479
Total Accrued Liability (EAN)	61,454,320	62,003,867	64,696,482	66,386,338
AVA / Total Accrued Liability (EAN)	86.9%	90.3%	90.7%	93.9%
<u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	(2,319,762)	(2,327,235)	(1,965,218)	(1,640,730)
Market Value of Assets (MVA)	53,281,168	58,318,169	61,691,922	61,671,199
Ratio	-4.4%	-4.0%	-3.2%	-2.7%

¹ Excludes terminated participants awaiting a refund of member contributions.

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

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	1,739,832.00	1,739,832.00
Cash	2.96	2.96
Total Cash and Equivalents	1,739,834.96	1,739,834.96
Receivables:		
Investment Income	57,107.88	57,107.88
Total Receivable	57,107.88	57,107.88
Investments:		
Fixed Income	8,528,001.16	8,673,003.03
Equities	24,861,047.60	37,010,402.27
Pooled/Common/Commingled Funds:		
Equity	2,200,000.00	6,610,481.34
Real Estate	4,623,041.21	7,598,006.63
Total Investments	40,212,089.97	59,891,893.27
Total Assets	42,009,032.81	61,688,836.11
<u>LIABILITIES</u>		
Payables:		
Refunds of Member Contributions	17,510.66	17,510.66
Administrative Expenses	126.55	126.55
Total Liabilities	17,637.21	17,637.21
NET POSITION RESTRICTED FOR PENSIONS	41,991,395.60	61,671,198.90

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

ADDITIONS

Contributions:		
Member		323,634.02
Buy-Back		24,202.00
City		2,628,066.00
Total Contributions		2,975,902.02
Investment Income:		
Net Realized Gain (Loss)	582,578.78	
Unrealized Gain (Loss)	88,399.10	
Net Increase in Fair Value of Investments		670,977.88
Interest & Dividends		1,203,773.87
Less Investment Expense ¹		(254,745.19)
Net Investment Income		1,620,006.56
Total Additions		4,595,908.58

DEDUCTIONS

Distributions to Members:		
Benefit Payments		4,418,878.48
Lump Sum DROP Distributions		0.00
Lump Sum PLOP Distributions		36,404.31
Refunds of Member Contributions		44,384.03
Total Distributions		4,499,666.82
Administrative Expense		116,964.50
Total Deductions		4,616,631.32
Net Increase in Net Position		(20,722.74)
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		61,691,921.64
End of the Year		61,671,198.90

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

ACTUARIAL ASSET VALUATION
SEPTEMBER 30, 2019

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

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return ¹	
09/30/2016	10.92%	
09/30/2017	14.08%	
09/30/2018	9.29%	
09/30/2019	2.66%	
Annualized Rate of Return for prior four (4) years:		9.16%
(A) 10/01/2018 Actuarial Assets:		\$58,660,023.23
(I) Net Investment Income:		
1. Interest and Dividends	1,203,773.87	
2. Realized Gains (Losses)	582,578.78	
3. Unrealized Gains (Losses)	88,399.10	
4. Change in Actuarial Value	3,676,178.14	
5. Investment Related Expenses	(254,745.19)	
Total		5,296,184.70
(B) 10/01/2019 Actuarial Assets:		\$62,315,478.63
Actuarial Asset Rate of Return = 2I/(A+B-I):		9.16%
10/01/2019 Limited Actuarial Assets:		\$62,315,478.63
10/01/2019 Market Value of Assets:		\$61,671,198.90
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		\$815,242.40

¹Market Value Basis, net of investment related expenses.

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

REVENUES

Contributions:		
Member	323,634.02	
Buy-Back	24,202.00	
City	2,628,066.00	
Total Contributions		2,975,902.02
Earnings from Investments:		
Interest & Dividends	1,203,773.87	
Net Realized Gain (Loss)	582,578.78	
Unrealized Gain (Loss)	88,399.10	
Change in Actuarial Value	3,676,178.14	
Total Earnings and Investment Gains		5,550,929.89

EXPENDITURES

Distributions to Members:		
Benefit Payments	4,418,878.48	
Lump Sum DROP Distributions	0.00	
Lump Sum PLOP Distributions	36,404.31	
Refunds of Member Contributions	44,384.03	
Total Distributions		4,499,666.82
Expenses:		
Investment related ¹	254,745.19	
Administrative	116,964.50	
Total Expenses		371,709.69
Change in Net Assets for the Year		3,655,455.40
Net Assets Beginning of the Year		58,660,023.23
Net Assets End of the Year²		62,315,478.63

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

²Net Assets may be limited for actuarial consideration.

CITY CONTRIBUTIONS IN EXCESS OF MINIMUM REQUIREMENT
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2019

(1) Required City Contributions	\$2,628,056.00
(2) Less 2018 Prepaid Contribution	0.00
(3) Less Actual City Contributions	<u>(2,628,066.00)</u>
(4) City Contributions in Excess of Minimum Requirement Applied to Reduce Unfunded Actuarial Accrued Liability as of September 30, 2019	(\$10.00)

STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	285	289	289	293
Average Current Age	46.2	47.1	47.5	46.7
Average Age at Employment	38.3	39.0	39.0	38.6
Average Past Service	7.9	8.1	8.5	8.1
Average Annual Salary	\$41,176	\$42,889	\$45,156	\$45,623
<u>Service Retirees</u>				
Number	306	309	321	329
Average Current Age	66.8	67.3	67.7	68.2
Average Annual Benefit	\$12,816	\$12,852	\$12,633	\$13,148
<u>DROP Retirees</u>				
Number	9	2	0	0
Average Current Age	62.7	63.3	N/A	N/A
Average Annual Benefit	\$14,932	\$12,882	N/A	N/A
<u>Beneficiaries</u>				
Number	25	28	35	36
Average Current Age	65.4	67.0	65.0	66.1
Average Annual Benefit	\$5,874	\$6,414	\$6,161	\$6,086
<u>Disability Retirees</u>				
Number	3	3	3	2
Average Current Age	67.7	68.7	69.7	69.5
Average Annual Benefit	\$13,052	\$13,052	\$13,052	\$7,548
<u>Terminated Vested</u>				
Number	96	127	132	146
Average Current Age ¹	51.6	47.0	51.9	52.6
Average Annual Benefit ²	\$5,202	\$5,648	\$5,291	\$5,124

¹ The Average Current Age excludes participants awaiting a refund of contributions.

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

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	9	2	1	2								14
25 - 29	7	5	2	1	3	2						20
30 - 34	5		4	2	1	6	6					24
35 - 39	6	2	4	2	2	6	2	3				27
40 - 44	2	2	3	2	4	2	5	5				25
45 - 49	3	2	4	2	4	10	10	6	3	1		45
50 - 54	1	6	2	1	7	10	5	1	5	1		39
55 - 59	4	5	4	3	5	8	9	11	6	4	1	60
60 - 64	2		2	1	4	7	8	2	1	2		29
65+			1		1	4	4					10
Total	39	24	27	16	31	55	49	28	15	8	1	293

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	289
b. Terminations	
i. Vested (partial or full) with deferred annuity	(3)
ii. Vested in refund of member contributions only	(7)
iii. Refund of member contributions or full lump sum distribution received	(12)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(14)
f. DROP	<u>0</u>
g. Continuing participants	253
h. New entrants	<u>40</u>
i. Total active life participants in valuation	293

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

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	321	0	35	3	77	55	491
Retired	15	0	0	0	(2)	0	13
DROP	0	0	0	0	0	0	0
Vested (Deferred Annuity)	0	0	0	0	3	0	3
Vested (Due Refund)	0	0	0	0	0	7	7
Hired/Terminated in Same Year	0	0	0	0	0	14	14
Death, With Survivor	(1)	0	1	0	0	0	0
Death, No Survivor	(5)	0	0	(1)	0	0	(6)
Disabled	0	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(1)	(7)	(8)
Rehires	0	0	0	0	0	0	0
Expired Annuities	(1)	0	0	0	0	0	(1)
Data Corrections	0	0	0	0	0	0	0
b. Number current valuation	329	0	36	2	77	69	513

SUMMARY OF CURRENT PLAN
(Through Ordinance 41-2019)

<u>Original Effective Date</u>	December 30, 1966.
<u>Credited Service</u>	Years and fractional parts of years of service with the City as a General Employee. City Manager, City Attorney or Assistant City Attorney may opt out within the first year of employment.
<u>Salary</u>	<p><i>Prior to August 26, 2013 (and for Members eligible for Retirement as of that date):</i> Total compensation reportable on Form W-2, plus all tax deferred, tax sheltered, and tax exempt items of income. Expense reimbursements or payments of expense allowances are excluded.</p> <p><i>For the calculation of the frozen accrued benefit as of August 26, 2013:</i> Salary shall include any payments of accrued leave that would have been included in Salary if the Member retired prior to August 26, 2013. However, the accrued leave balance shall be reduced by the amount of vacation or sick leave used subsequent to August 26, 2013 and the frozen accrued benefit shall be adjusted accordingly.</p> <p><i>On and After August 26, 2013:</i> Base pay, excluding overtime and all other forms of compensation.</p>
<u>Average Final Compensation</u>	<p><i>For computing benefits based on Credited Service on and after August 26, 2013:</i> Average of Salary during the five highest years of the last ten, but in no event less than the highest three-year average of the effective date.</p> <p><i>For computing the frozen benefit or for Members eligible for Retirement or who terminate employment prior to August 26, 2013:</i> The Average Final Compensation is the average of the five highest years of the last ten years as of August 26, 2013.</p> <p><i>For Members eligible for Normal Retirement as of August 26, 2013:</i> The average of the highest 5 years of Salary of the last 10 years.</p>

Normal Retirement

For the frozen accrued benefit for all Members and for all benefits for Members with at least 10 Years of Service as of August 26, 2013:

Date	First of the month coinciding with or following the earlier of: 1) age 58 and the completion of 7.50 years of Credited Service, or 2) the completion of 28 years of Credited Service, regardless of age.
Benefit	2.482% of Average Final Compensation as of August 26, 2013 times Credited Service through August 26, 2013 (Members who are eligible for Normal Retirement as of August 26, 2013 continue to accrue benefits under the old benefit structure).
Form of Benefit	Life Annuity (options available).

For the benefits accrued on and after August 26, 2013:

Date	First of the month coinciding with or following the earlier of: 1) age 58 and the completion of 7.50 years of Credited Service, or 2) the completion of 28 years of Credited Service, regardless of age.
Benefit	2.00% of Average Final Compensation times Credited Service on and after August 26, 2013.
Form of Benefit	Life Annuity (options available).

For the benefits accrued on and after August 26, 2013 for Members with less than 10 Years of Service as of that date:

Date	First of the month coinciding with or following the earlier of: 1) age 62 and the completion of 10 years of Credited Service, or 2) the completion of 30 years of Credited Service, regardless of age.
------	--

Early Retirement

For the frozen accrued benefit for all Members and for all benefits for Members with at least 10 Years of Service as of August 26, 2013:

Date	Later of age 48 and the completion of 7.50 years of Credited Service.
Benefit	Same as for Normal Retirement but reduced 3.00% for each year that Early Retirement precedes Normal Retirement.

For benefits accrued on and after August 26, 2013 for Members with less than 10 Years of service as of that date:

Date	Later of age 52 and the completion of 10 years of Credited Service.
Benefit	Same as for Normal Retirement but actuarially reduced for Early Retirement.

Vesting

Schedule	0% for less than 10 years, 100% after 10 years. Members are 100% vested in their frozen accrued benefit as of August 26, 2013.
Benefit	Vested accrued benefit (determined as for Normal Retirement) paid beginning at the otherwise Normal Retirement Date.

Disability

Eligibility	Total and permanent (as determined by the Board) after completion of 10 years of Credited Service.
Benefit	Accrued Benefit (determined as for Normal Retirement).
Form of Benefit	Paid until earlier of death, recovery, Normal Retirement Date, or election by Member to receive Early Retirement benefit.
Maximum	Total of Plan, Workers Compensation, and Social Security benefits shall not exceed 100% of Average Final Compensation.

Death Benefits

Prior to Vesting	None.
Vested	Beneficiary receives a monthly benefit which is the actuarial equivalent of 50% of the Member's accrued benefit at the date of death.
Post-Retirement	According to option selected, if any.

Contributions

Members	2.50% of Salary.
City	Remaining amount necessary to pay the Normal Cost and fund the accrued, past service liability over 30 years.

Board of Trustees

Three full-time General Employees of the System elected by the membership, one General Employee appointed by the Board and confirmed by the City Manager, one citizen selected by the Board and appointed by the City Council as a ministerial duty.

Deferred Retirement Option Plan

Eligibility	The original DROP is closed to any new participants after August 26, 2013. A subsequent program "DROP II" is available to participants effective November 26, 2019.
Participation	Not more than 60 months.
Rate of Return	The Account is credited with the actual net rate of investment return (total return net of investment management fees, brokerage commissions and transaction costs) minus 2% after each fiscal year end. The annual return is subject to a minimum of 0% and a maximum equal to the current valuation investment return assumption as adopted by the Board.
Form of Distribution	Cash lump sum (options available) payable at termination of employment.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	1,739,832
Cash	3
Total Cash and Equivalents	1,739,835
Receivables:	
Investment Income	57,108
Total Receivable	57,108
Investments:	
Fixed Income	8,673,003
Equities	37,010,402
Pooled/Common/Commingled Funds:	
Equity	6,610,481
Real Estate	7,598,007
Total Investments	59,891,893
Total Assets	61,688,836
<u>LIABILITIES</u>	
Payables:	
Refunds of Member Contributions	17,511
Administrative Expenses	126
Total Liabilities	17,637
NET POSITION RESTRICTED FOR PENSIONS	61,671,199

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

ADDITIONS

Contributions:

Member	323,634	
Buy-Back	24,202	
City	2,628,066	
 Total Contributions		 2,975,902
 Investment Income:		
Net Increase in Fair Value of Investments	670,978	
Interest & Dividends	1,203,774	
Less Investment Expense ¹	(254,745)	
 Net Investment Income		 1,620,007
 Total Additions		 4,595,909

DEDUCTIONS

Distributions to Members:

Benefit Payments	4,418,879	
Lump Sum DROP Distributions	0	
Lump Sum PLOP Distributions	36,404	
Refunds of Member Contributions	44,384	
 Total Distributions		 4,499,667
 Administrative Expense		 116,965
 Total Deductions		 4,616,632
 Net Increase in Net Position		 (20,723)
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		61,691,922
 End of the Year		 61,671,199

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

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

Plan Administration

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of: three full-time General Employees of the System elected by the Membership, one General Employee appointed by the Board and confirmed by the City Manager, one citizen selected by the Board and appointed by the City Council as a ministerial duty.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	359
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	132
Active Plan Members	289
	780

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Titusville General Employees' Pension Plan prepared by Foster & Foster Actuaries and Consultants.

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

Contributions

Members: 2.50% of Salary.

City: Remaining amount necessary to pay the Normal Cost and fund the accrued, past service liability over 30 years.

Investments

Investment Policy:

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

Asset Class	Target Allocation
All Cap Value Equity	27.5%
Broad Growth Equity	27.5%
Foreign Equity Securities	10.0%
Broad Market Fixed Income	20.0%
Global Bond	5.0%
Real Estate	10.0%
Total	100.0%

Concentrations:

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

Rate of Return:

For the year ended September 30, 2019, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 2.66 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: Closed to new entrants effective August 26, 2013.

Participation: Not more than 60 months.

Rate of Return: At election of member (may change once during DROP period) either: 1) actual net rate of investment return (total return net of brokerage commissions, transaction costs, and management fees), or 2) 6.5%. Earnings are credited each fiscal quarter.

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

NET PENSION LIABILITY OF THE SPONSOR

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

Total Pension Liability	\$ 65,413,423
Plan Fiduciary Net Position	<u>\$ (61,671,199)</u>
Sponsor's Net Pension Liability	<u>\$ 3,742,224</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	94.28%

Actuarial Assumptions:

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

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.75%
Investment Rate of Return	7.75%

Mortality Rate Healthy Active Lives:

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

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years.

Male: 100% RP2000 Disabled Male setback four years.

The assumed rates of mortality are mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2016 FRS actuarial valuation report for non-special risk lives. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated August 20, 2018.

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

For 2019 the inflation rate assumption of the investment advisor was 2.50%.

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

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2019 are summarized in the following table:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return</u>
All Cap Value Equity	7.50%
Broad Growth Equity	7.50%
Foreign Equity Securities	8.50%
Broad Market Fixed Income	2.50%
Global Bond	3.50%
Real Estate	4.50%

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Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.75 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 6.75%	Current Discount Rate 7.75%	1% Increase 8.75%
Sponsor's Net Pension Liability	\$ 10,317,507	\$ 3,742,224	\$ (1,826,131)

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

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	997,001	989,921	933,328
Interest	4,836,266	4,831,550	4,718,214
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	399,357	(355,627)	411,551
Changes of assumptions	-	1,044,973	-
Contributions - Buy Back	24,202	28,879	-
Benefit Payments, including Refunds of Employee Contributions	(4,499,667)	(4,575,782)	(4,830,173)
Net Change in Total Pension Liability	1,757,159	1,963,914	1,232,920
Total Pension Liability - Beginning	63,656,264	61,692,350	60,459,430
Total Pension Liability - Ending (a)	<u>\$ 65,413,423</u>	<u>\$ 63,656,264</u>	<u>\$ 61,692,350</u>
Plan Fiduciary Net Position			
Contributions - Employer	2,628,066	2,358,577	2,293,318
Contributions - Employee	323,634	312,111	296,609
Contributions - Buy Back	24,202	28,879	-
Net Investment Income	1,620,007	5,338,971	7,364,236
Benefit Payments, including Refunds of Employee Contributions	(4,499,667)	(4,575,782)	(4,830,173)
Administrative Expense	(116,965)	(89,003)	(86,989)
Net Change in Plan Fiduciary Net Position	(20,723)	3,373,753	5,037,001
Plan Fiduciary Net Position - Beginning	61,691,922	58,318,169	53,281,168
Plan Fiduciary Net Position - Ending (b)	<u>\$ 61,671,199</u>	<u>\$ 61,691,922</u>	<u>\$ 58,318,169</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 3,742,224</u>	<u>\$ 1,964,342</u>	<u>\$ 3,374,181</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	94.28%	96.91%	94.53%
Covered Payroll ¹	\$ 12,986,665	\$ 12,485,720	\$ 11,864,349
Net Pension Liability as a percentage of Covered Payroll	28.82%	15.73%	28.44%

Notes to Schedule:

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

Changes of assumptions:

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

1. The investment return assumption was reduced from 8.00% to 7.75% per year, net of investment-related expenses.
2. The assumptions for salary increases, withdrawal, disability, Early Retirement, and Normal Retirement were updated to better align with anticipated future plan experience.

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

	<u>09/30/2016</u>	<u>09/30/2015</u>
Total Pension Liability		
Service Cost	821,468	738,499
Interest	4,552,082	4,573,039
Changes of benefit terms	(88,592)	-
Differences between Expected and Actual Experience	5,321	(870,999)
Changes of assumptions	1,589,756	-
Contributions - Buy Back	11,869	-
Benefit Payments, including Refunds of Employee Contributions	(5,201,251)	(4,192,511)
Net Change in Total Pension Liability	<u>1,690,653</u>	<u>248,028</u>
Total Pension Liability - Beginning	<u>58,768,777</u>	<u>58,520,749</u>
Total Pension Liability - Ending (a)	<u><u>\$ 60,459,430</u></u>	<u><u>\$ 58,768,777</u></u>
Plan Fiduciary Net Position		
Contributions - Employer	2,659,078	3,260,781
Contributions - Employee	274,825	234,781
Contributions - Buy Back	11,869	-
Net Investment Income	5,382,430	(10,393)
Benefit Payments, including Refunds of Employee Contributions	(5,201,251)	(4,192,511)
Administrative Expense	(64,283)	(66,386)
Net Change in Plan Fiduciary Net Position	<u>3,062,668</u>	<u>(773,728)</u>
Plan Fiduciary Net Position - Beginning	<u>50,218,500</u>	<u>50,992,228</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 53,281,168</u></u>	<u><u>\$ 50,218,500</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 7,178,262</u></u>	<u><u>\$ 8,550,277</u></u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	88.13%	85.45%
Covered Payroll ¹	\$ 10,993,097	\$ 9,798,102
Net Pension Liability as a percentage of Covered Payroll	65.30%	87.26%

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 09/30/2016, amounts reported as changes of benefit terms resulted from presuming passage of a proposed ordinance which clarifies that the normal form of payment for the benefit accrued on and after August 23, 2013 is a life annuity instead of a life annuity with the first 120 payments guaranteed. An Impact Statement was submitted for this proposed clarification.

Changes of assumptions:

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

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

	<u>09/30/2014</u>	<u>09/30/2013</u>
Total Pension Liability		
Service Cost	751,425	695,764
Interest	4,541,119	4,491,722
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Contributions - Buy Back	4,201	-
Benefit Payments, including Refunds of Employee Contributions	<u>(5,577,127)</u>	<u>(3,674,232)</u>
Net Change in Total Pension Liability	(280,382)	1,513,254
Total Pension Liability - Beginning	<u>58,801,131</u>	<u>57,287,877</u>
Total Pension Liability - Ending (a)	<u><u>\$ 58,520,749</u></u>	<u><u>\$ 58,801,131</u></u>
Plan Fiduciary Net Position		
Contributions - Employer	3,318,730	2,696,739
Contributions - Employee	217,529	401,924
Contributions - Buy Back	4,201	-
Net Investment Income	6,042,957	6,162,982
Benefit Payments, including Refunds of Employee Contributions	<u>(5,577,127)</u>	<u>(3,674,232)</u>
Administrative Expense	<u>(63,273)</u>	<u>(56,206)</u>
Net Change in Plan Fiduciary Net Position	3,943,017	5,531,207
Plan Fiduciary Net Position - Beginning	<u>47,049,211</u>	<u>41,518,004</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 50,992,228</u></u>	<u><u>\$ 47,049,211</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 7,528,521</u></u>	<u><u>\$ 11,751,920</u></u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	87.14%	80.01%
Covered Payroll ¹	\$ 8,701,160	\$ 8,550,218
Net Pension Liability as a percentage of Covered Payroll	86.52%	137.45%

Notes to Schedule:

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

SCHEDULE OF CONTRIBUTIONS
Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 2,628,056	\$ 2,628,066	\$ (10)	\$ 12,986,665	20.24%
09/30/2018	\$ 2,358,554	\$ 2,358,577	\$ (23)	\$ 12,485,720	18.89%
09/30/2017	\$ 2,293,207	\$ 2,293,318	\$ (111)	\$ 11,864,349	19.33%
09/30/2016	\$ 2,659,078	\$ 2,659,078	\$ -	\$ 10,993,097	24.19%
09/30/2015	\$ 3,260,781	\$ 3,260,781	\$ -	\$ 9,798,102	33.28%
09/30/2014	\$ 3,318,730	\$ 3,318,730	\$ -	\$ 8,701,160	38.14%
09/30/2013	\$ 2,696,739	\$ 2,696,739	\$ -	\$ 8,550,218	31.54%

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

Notes to Schedule

Valuation Date: 10/01/2017

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

Methods and assumptions used to determine contribution rates:

Mortality Rate:

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.
Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.
Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Disabled Lives

Female: 100% RP2000 Disabled Female set forward two years.
Male: 100% RP2000 Disabled Male setback four years.

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption 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 other than special risk participants. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

8.00% per year compounded annually, net of related expenses. This assumption is supported by the Plan’s investment policy and expected long-term returns by asset class.

Retirement Age: Those with at least 10 years of service as of August 26, 2013:
 Earlier of: 1) age 58 and 7.5 years of service or 2) 28 years of service, regardless of age. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year.
 Those with less than 10 years of service as of August 26, 2013:
 Earlier of: 1) age 62 and 10 years of service or 2) 30 years of service, regardless of age. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year.
 We consider the above rates reasonable for the associated Plan provisions.

Early Retirement: Commencing at eligibility for Early Retirement, Members are assumed to retire with an immediate benefit at the rate of 5% per year. This assumption was adopted with the 10/1/2009 valuation as the result of an Experience Study.

Disability Rates: See table below (1202). These rates are consistent with other Florida municipal general employee plans.

Termination Rates: See table below (Mod T-3). This assumption was adopted with the 10/1/2009 valuation as the result of an Experience Study.

Payroll Growth: None.

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

Salary Increases: 5.00% per year until the assumed retirement age. This assumption is consistent with long-term Plan experience.
 For Members eligible for Normal Retirement as of August 26, 2013:
 Projected salary at retirement is increased 25% to account for non-regular compensation.
 For Members not eligible for Normal Retirement as of August 26, 2013 with at least 10 years of service as of that date:
 The projected frozen benefit as of August 26, 2013 includes a 25% load for the final year included in the averaging period.
 For Members with less than 10 years of service as of August 26, 2013:
 No load is assumed.

Funding Method: Entry Age Normal Actuarial Cost Method. The following loads are applied for determination of the Sponsor funding requirement:
 Interest – a half year, based on the current 8.00% assumption.
 Salary – a full year based on the current 5.00% assumption.

Amortization Method: Level percentage of pay, closed.

Remaining Amortization Period: 28 Years (as of 10/01/2017 Valuation).

Termination and Disability Rate Tables:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	38.0%	0.051%
30	24.0%	0.058%
40	13.2%	0.121%
50	7.0%	0.429%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2019	2.66%
09/30/2018	9.29%
09/30/2017	14.08%
09/30/2016	10.92%
09/30/2015	-0.02%
09/30/2014	12.97%
09/30/2013	14.89%

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: three full-time General Employees of the System elected by the Membership, one General Employee appointed by the Board and confirmed by the City Manager, one citizen selected by the Board and appointed by the City Council as a ministerial duty.

Each person employed by the City as a full-time General Employee becomes a member of the Plan as a condition of his employment. All General Employees are therefore eligible for all plan benefits, as provided for in the plan document and by applicable law, except that the City Manager, City Attorney or Asst. City Attorney may notify the Board and the City, within the first 12 months of his employment as City Manager, City Attorney or Asst. City Attorney, of his election to not be a member of the system. In the event of such election, he shall be barred from future membership in the system.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	359
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	132
Active Plan Members	289
	780

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Titusville General Employees' Pension Plan prepared by Foster & Foster Actuaries and Consultants.

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

Contributions

Members: 2.50% of Salary.

City: Remaining amount necessary to pay the Normal Cost and fund the accrued, past service liability over 30 years.

Net Pension Liability

The measurement date is September 30, 2019.

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

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

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

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

Actuarial Assumptions:

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

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.75%
Investment Rate of Return	7.75%

Mortality Rate Healthy Active Lives:

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

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years.

The assumed rates of mortality are mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2016 FRS actuarial valuation report for non-special risk lives. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated August 20, 2018.

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

For 2019 the inflation rate assumption of the investment advisor was 2.50%.

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

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2019 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
All Cap Value Equity	27.5%	7.50%
Broad Growth Equity	27.5%	7.50%
Foreign Equity Securities	10.0%	8.50%
Broad Market Fixed Income	20.0%	2.50%
Global Bond	5.0%	3.50%
Real Estate	10.0%	4.50%
Total	<u>100.0%</u>	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.75 percent.

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

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Balances at September 30, 2018	\$ 63,656,264	\$ 61,691,922	\$ 1,964,342
Changes for a Year:			
Service Cost	997,001	-	997,001
Interest	4,836,266	-	4,836,266
Differences between Expected and Actual Experience	399,357	-	399,357
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	2,628,066	(2,628,066)
Contributions - Employee	-	323,634	(323,634)
Contributions - Buy Back	24,202	24,202	-
Net Investment Income	-	1,620,007	(1,620,007)
Benefit Payments, including Refunds of Employee Contributions	(4,499,667)	(4,499,667)	-
Administrative Expense	-	(116,965)	116,965
Net Changes	1,757,159	(20,723)	1,777,882
Balances at September 30, 2019	\$ 65,413,423	\$ 61,671,199	\$ 3,742,224

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.75%	7.75%	8.75%
Sponsor's Net Pension Liability	\$ 10,317,507	\$ 3,742,224	\$ (1,826,131)

Pension Plan Fiduciary Net Position.

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

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

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$1,759,552.

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	266,238	118,542
Changes of assumptions	348,324	-
Net difference between Projected and Actual Earnings on Pension Plan investments	457,277	-
Total	<u>\$ 1,071,839</u>	<u>\$ 118,542</u>

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	\$ (98,530)
2021	\$ (36,764)
2022	\$ 469,083
2023	\$ 619,508
2024	\$ -
Thereafter	\$ -

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

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	997,001	989,921	933,328
Interest	4,836,266	4,831,550	4,718,214
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	399,357	(355,627)	411,551
Changes of assumptions	-	1,044,973	-
Contributions - Buy Back	24,202	28,879	-
Benefit Payments, including Refunds of Employee Contributions	(4,499,667)	(4,575,782)	(4,830,173)
Net Change in Total Pension Liability	1,757,159	1,963,914	1,232,920
Total Pension Liability - Beginning	63,656,264	61,692,350	60,459,430
Total Pension Liability - Ending (a)	<u>\$ 65,413,423</u>	<u>\$ 63,656,264</u>	<u>\$ 61,692,350</u>
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Net Pension Liability - Ending (a) - (b)	<u>\$ 3,742,224</u>	<u>\$ 1,964,342</u>	<u>\$ 3,374,181</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	94.28%	96.91%	94.53%
Covered Payroll ¹	\$ 12,986,665	\$ 12,485,720	\$ 11,864,349
Net Pension Liability as a percentage of Covered Payroll	28.82%	15.73%	28.44%

Notes to Schedule:

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

Changes of assumptions:

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

1. The investment return assumption was reduced from 8.00% to 7.75% per year, net of investment-related expenses.
2. The assumptions for salary increases, withdrawal, disability, Early Retirement, and Normal Retirement were updated to better align with anticipated future plan experience.

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

	<u>09/30/2016</u>	<u>09/30/2015</u>
Total Pension Liability		
Service Cost	821,468	738,499
Interest	4,552,082	4,573,039
Changes of benefit terms	(88,592)	-
Differences between Expected and Actual Experience	5,321	(870,999)
Changes of assumptions	1,589,756	-
Contributions - Buy Back	11,869	-
Benefit Payments, including Refunds of Employee Contributions	<u>(5,201,251)</u>	<u>(4,192,511)</u>
Net Change in Total Pension Liability	1,690,653	248,028
Total Pension Liability - Beginning	<u>58,768,777</u>	<u>58,520,749</u>
Total Pension Liability - Ending (a)	<u>\$ 60,459,430</u>	<u>\$ 58,768,777</u>
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Contributions - Employer	2,659,078	3,260,781
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Administrative Expense	<u>(64,283)</u>	<u>(66,386)</u>
Net Change in Plan Fiduciary Net Position	3,062,668	(773,728)
Plan Fiduciary Net Position - Beginning	<u>50,218,500</u>	<u>50,992,228</u>
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Plan Fiduciary Net Position as a percentage of the Total Pension Liability	88.13%	85.45%
Covered Payroll ¹	\$ 10,993,097	\$ 9,798,102
Net Pension Liability as a percentage of Covered Payroll	65.30%	87.26%

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 09/30/2016, amounts reported as changes of benefit terms resulted from presuming passage of a proposed ordinance which clarifies that the normal form of payment for the benefit accrued on and after August 23, 2013 is a life annuity instead of a life annuity with the first 120 payments guaranteed. An Impact Statement was submitted for this proposed clarification.

Changes of assumptions:

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

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

	<u>09/30/2014</u>	<u>09/30/2013</u>
Total Pension Liability		
Service Cost	751,425	695,764
Interest	4,541,119	4,491,722
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Contributions - Buy Back	4,201	-
Benefit Payments, including Refunds of Employee Contributions	<u>(5,577,127)</u>	<u>(3,674,232)</u>
Net Change in Total Pension Liability	(280,382)	1,513,254
Total Pension Liability - Beginning	<u>58,801,131</u>	<u>57,287,877</u>
Total Pension Liability - Ending (a)	<u>\$ 58,520,749</u>	<u>\$ 58,801,131</u>
Plan Fiduciary Net Position		
Contributions - Employer	3,318,730	2,696,739
Contributions - Employee	217,529	401,924
Contributions - Buy Back	4,201	-
Net Investment Income	6,042,957	6,162,982
Benefit Payments, including Refunds of Employee Contributions	(5,577,127)	(3,674,232)
Administrative Expense	<u>(63,273)</u>	<u>(56,206)</u>
Net Change in Plan Fiduciary Net Position	3,943,017	5,531,207
Plan Fiduciary Net Position - Beginning	<u>47,049,211</u>	<u>41,518,004</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 50,992,228</u>	<u>\$ 47,049,211</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 7,528,521</u>	<u>\$ 11,751,920</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	87.14%	80.01%
Covered Payroll ¹	\$ 8,701,160	\$ 8,550,218
Net Pension Liability as a percentage of Covered Payroll	86.52%	137.45%

Notes to Schedule:

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

SCHEDULE OF CONTRIBUTIONS
Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 2,628,056	\$ 2,628,066	\$ (10)	\$ 12,986,665	20.24%
09/30/2018	\$ 2,358,554	\$ 2,358,577	\$ (23)	\$ 12,485,720	18.89%
09/30/2017	\$ 2,293,207	\$ 2,293,318	\$ (111)	\$ 11,864,349	19.33%
09/30/2016	\$ 2,659,078	\$ 2,659,078	\$ -	\$ 10,993,097	24.19%
09/30/2015	\$ 3,260,781	\$ 3,260,781	\$ -	\$ 9,798,102	33.28%
09/30/2014	\$ 3,318,730	\$ 3,318,730	\$ -	\$ 8,701,160	38.14%
09/30/2013	\$ 2,696,739	\$ 2,696,739	\$ -	\$ 8,550,218	31.54%

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

Notes to Schedule

Valuation Date: 10/01/2017

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

Methods and assumptions used to determine contribution rates:

Mortality Rate:

Healthy Active Lives:

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

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Disabled Lives

Female: 100% RP2000 Disabled Female set forward two years.

Male: 100% RP2000 Disabled Male setback four years.

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption 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 other than special risk participants. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

8.00% per year compounded annually, net of related expenses. This assumption is supported by the Plan's investment policy and expected long-term returns by asset class.

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Retirement Age: Those with at least 10 years of service as of August 26, 2013:
 Earlier of: 1) age 58 and 7.5 years of service or 2) 28 years of service, regardless of age. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year.
 Those with less than 10 years of service as of August 26, 2013:
 Earlier of: 1) age 62 and 10 years of service or 2) 30 years of service, regardless of age. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year.
 We consider the above rates reasonable for the associated Plan provisions.

Early Retirement: Commencing at eligibility for Early Retirement, Members are assumed to retire with an immediate benefit at the rate of 5% per year. This assumption was adopted with the 10/1/2009 valuation as the result of an Experience Study.

Disability Rates: See table below (1202). These rates are consistent with other Florida municipal general employee plans.

Termination Rates: See table below (Mod T-3). This assumption was adopted with the 10/1/2009 valuation as the result of an Experience Study.

Payroll Growth: None.

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

Salary Increases: 5.00% per year until the assumed retirement age. This assumption is consistent with long-term Plan experience.
 For Members eligible for Normal Retirement as of August 26, 2013:
 Projected salary at retirement is increased 25% to account for non-regular compensation.
 For Members not eligible for Normal Retirement as of August 26, 2013 with at least 10 years of service as of that date:
 The projected frozen benefit as of August 26, 2013 includes a 25% load for the final year included in the averaging period.
 For Members with less than 10 years of service as of August 26, 2013:
 No load is assumed.

Funding Method: Entry Age Normal Actuarial Cost Method. The following loads are applied for determination of the Sponsor funding requirement:
 Interest – a half year, based on the current 8.00% assumption.
 Salary – a full year based on the current 5.00% assumption.

Amortization Method: Level percentage of pay, closed.

Remaining Amortization Period: 28 Years (as of 10/01/2017 Valuation).

Termination and Disability Rate Tables:

Age	% Terminating During the Year	% Becoming Disabled During the Year
20	38.0%	0.051%
30	24.0%	0.058%
40	13.2%	0.121%
50	7.0%	0.429%

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 1,964,342	\$ 3,338,778	\$ 1,645,679	\$ -
Total Pension Liability Factors:				
Service Cost	997,001	-	-	997,001
Interest	4,836,266	-	-	4,836,266
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	24,202	-	-	24,202
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	399,357	-	399,357	-
Current year amortization of experience difference	-	(118,542)	(270,303)	151,761
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(348,324)	348,324
Benefit Payments, including Refunds of Employee Contributions	(4,499,667)	-	-	-
Net change	<u>1,757,159</u>	<u>(118,542)</u>	<u>(219,270)</u>	<u>6,357,554</u>
Plan Fiduciary Net Position:				
Contributions - Employer	2,628,066	-	-	-
Contributions - Employee	323,634	-	-	(323,634)
Contributions - Buy Back	24,202	-	-	(24,202)
Projected Net Investment Income	4,717,546	-	-	(4,717,546)
Difference between projected and actual earnings on Pension Plan investments	(3,097,539)	-	3,097,539	-
Current year amortization	-	(1,080,939)	(1,431,354)	350,415
Benefit Payments, including Refunds of Employee Contributions	(4,499,667)	-	-	-
Administrative Expenses	(116,965)	-	-	116,965
Net change	<u>(20,723)</u>	<u>(1,080,939)</u>	<u>1,666,185</u>	<u>(4,598,002)</u>
Ending Balance	<u>\$ 3,742,224</u>	<u>\$ 2,139,297</u>	<u>\$ 3,092,594</u>	<u>\$ 1,759,552</u>

AMORTIZATION SCHEDULE - INVESTMENTS

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 3,097,539	5	\$ 619,507	\$ 619,508	\$ 619,508	\$ 619,508	\$ 619,508	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (752,126)	5	\$ (150,425)	\$ (150,425)	\$ (150,425)	\$ (150,425)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (3,194,832)	5	\$ (638,966)	\$ (638,966)	\$ (638,966)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (1,457,740)	5	\$ (291,548)	\$ (291,548)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 4,059,238	5	\$ 811,847	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 350,415	\$ (461,431)	\$ (169,883)	\$ 469,083	\$ 619,508	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2018	\$ 1,044,973	3	\$ 348,324	\$ 348,324	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 348,324	\$ 348,324	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - EXPERIENCE

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

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 399,357	3	\$ 133,119	\$ 133,119	\$ 133,119	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (355,627)	3	\$ (118,542)	\$ (118,542)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 411,551	3	\$ 137,184	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 151,761	\$ 14,577	\$ 133,119	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -