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City of Melbourne

Firefighters' Pension Plan

Actuarial Valuation as of October 1, 2016

January 24, 2017

REPORT TO DETERMINE MINIMUM FUNDING REQUIREMENTS
FOR THE PLAN AND FISCAL YEAR
ENDING SEPTEMBER 30, 2018

January 24, 2017

Board of Trustees
City of Melbourne Firefighters' Pension Plan
Melbourne, Florida

RE: Actuarial Valuation as of October 1, 2016

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2016 for the City of Melbourne Firefighters' Pension Plan (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal year ending September 30, 2018 and provides an analysis of experience since the last valuation. In addition to providing the summary and derivation of actuarial findings, this report describes the data, assumptions, and methods used to create these results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Statement by Enrolled Actuary:

"This actuarial valuation and/or cost determination 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."

We look forward to presenting these results to you in person and are always available to answer any questions you may have.

Sincerely,

Chad M. Little, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-6619

Paula C. Freiman, ASA, EA
Partner, Consulting Actuary
Enrollment Number 14-5796

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Section 1 Board Summary

This report presents the results of the October 1, 2015 actuarial valuation.

Summary of Principal Valuation Results

Minimum Funding Requirements

Fiscal Year Ending September 30,	**2017**	**2018**
Expected Contribution from City	$2,712,369	$2,645,963
Estimated State Contribution	569,837	545,561
City Plus State Contribution Requirement	$3,282,206	$3,191,524
Expected Contribution from City % Payroll	39.97%	35.72%
Estimated State Contribution % Payroll	8.40%	7.37%
City Plus State Contribution % Payroll	48.37%	43.09%
Expected Contribution from City % Payroll Including DROP Member Payroll	32.56%	31.24%

Funded Status

Plan Year Beginning October 1,	**2015**	**2016**
Accrued Liability (AL)	$77,908,382	$81,060,815
Actuarial Value of Assets	58,722,492	63,670,662
Unfunded Accrued Liability (UAL)	$19,185,890	$17,390,153
Funded Percentage	75.37%	78.55%

Key Assumptions

Plan Year Beginning October 1,	**2015**	**2016**
Assumed Rate of Investment Return	8.0%	8.0%
Individual Salary Increase Assumption	6.0%	6.0%
Funding Method	Entry Age	Entry Age

Summary of Significant Events

Determination of the funded status of the Plan and minimum funding requirements are based on participant data, asset information, Plan provisions, actuarial methods and assumptions, as well as contributions made to the Plan by the State of Florida. Any significant events associated with these items are discussed in the following.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the Plan Administrator. This information includes, but is not limited to, statutory provisions, employee census, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

Participant Data

The number of active members increased by 9 along with a decrease in the inactive population of 1. Average individual salary increases amongst continuing active members were less than expected at 4.6% compared to the 6.0% individual salary increase assumption. A demographic gain was experienced primarily due to pay increases less than expected along with the death of three retirees and one beneficiary.

The following provides a summary of the actual to expected pay increases over the last ten years. The 6.0% long-term individual salary increase assumption still appears reasonable.

Fiscal Year Ending 9/30	Average Individual Salary		Actual Total Payroll	Actual Payroll Increase
	Actual	Expected		
2016	4.6 %	6.0 %	6,893,083	5.82 %
2015	3.7 %	6.0 %	6,513,920	7.21 %
2014	5.6 %	6.0 %	6,075,965	(2.73)%
2013	2.6 %	6.0 %	6,246,560	(10.32)%
2012	3.3 %	6.0 %	6,965,758	(2.65)%
2011	3.1 %	6.0 %	7,155,492	(8.47)%
2010	3.6 %	6.0 %	7,817,408	(2.11)%
2009	2.9 %	6.0 %	7,986,115	3.72 %
2008	8.7 %	6.0 %	7,700,032	6.85 %
2007	14.3 %	6.0 %	7,206,220	15.57 %
10-Yr Avg	5.2 %	6.0 %		1.01 %

The actual total payroll upon which employee contributions were collected increased 5.82% from the prior year. Florida Statutes 112.64(5)(a) requires that the payroll growth assumption not exceed the average payroll growth for the prior ten years. For this reason, an assumption of 1.01% is used to amortize the Unfunded Accrued Liability as a percent of pay which has changed from 1.26% used in the prior valuation of the Plan.

In general, should a pattern of consistent gains or losses develop, assumptions may require revision.

Assets

While the return on the Market Value of Assets was 10.60%, the return on the Actuarial Value of Assets was 9.93% producing a gain on an actuarial basis. The following provides a summary of the actual to the expected return on investments for the 12 month periods ending on the date specified.

Fiscal Year Ending 9/30	% Market Return	% Actuarial Return	% Assumed Return
2016	10.6 %	9.9 %	8.0 %
2015	0.2 %	8.7 %	8.0 %
2014	11.2 %	10.2 %	8.0 %
2013	13.4 %	3.1 %	8.0 %
2012	19.3 %	(2.5)%	8.0 %
2011	(1.8)%	(0.2)%	8.0 %
2010	6.6 %	3.2 %	8.0 %
2009	(4.2)%	0.7 %	8.0 %
2008	(11.3)%	4.7 %	8.0 %
2007	12.7 %	10.4 %	8.0 %
2006	8.7 %	11.2 %	8.0 %
2005	10.7 %	7.0 %	8.0 %
2004	9.7 %	3.6 %	8.0 %
2003	16.5 %	3.6 %	8.0 %
2002	(7.4)%	2.7 %	8.0 %
2001	(3.0)%	6.0 %	8.0 %
2000	9.9 %	13.5 %	8.0 %
1999	12.5 %	14.5 %	8.0 %
1998	5.2 %	15.7 %	8.0 %
1997	30.2 %	17.2 %	8.0 %
1996	13.3 %	11.4 %	8.0 %
21 Yr Avg	7.3 %	7.2 %	8.0 %
10 Yr Avg	5.3 %	4.7 %	8.0 %
5 Yr Avg	10.8 %	5.8 %	8.0 %

Effective for the 12-month period ended September 30, 2009 the return on the market value of assets has been computed to include DROP balances. Effective for the 12-month period ended September 30, 2014 the return on the actuarial value of assets has been computed to include DROP balances.

Investment returns less than the assumed rate of return result in increased annual minimum required contributions.

Plan Provisions

There have been no changes in Plan provisions since the prior actuarial valuation.

Assumptions and Methods

Florida Statutes 112.64(5)(a) requires that the payroll growth assumption not exceed the average payroll growth for the prior ten years. An assumption of 1.01% is used to amortize the Unfunded Accrued Liability as a percent of pay effective October 1, 2016 based on the average payroll growth for the prior ten years. This assumption has changed from 1.26% used in the prior valuation of the Plan.

In the prior valuation, the mortality table was the RP-2000 Combined Mortality Table where Scale AA was applied to reflect mortality improvements to the valuation year. The mortality table has been revised to the mortality assumption used for special risk employees in the valuation of the Florida Retirement System (FRS), as required by state statute. The mortality rates are as follows:

Healthy mortality:	Males: 10% RP-00 Annuitant White Collar + 90% RP-00 Annuitant Blue Collar
	Females: 100% RP-00 Annuitant White Collar
	Both male and female rates fully generational using Scale BB
Disabled mortality:	Males: 60% RP-00 Disabled Retiree Set Back 4 Years + 40% RP-00 Annuitant White Collar
	Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs + 40% RP-00 Annuitant White Collar
	No mortality improvement is assumed for disabled lives.

State Contributions

Previously State law defined the term “additional premium tax revenues,” otherwise known as APTR, to be premium taxes received for a fiscal year in excess of the amount received for the 1998 fiscal year. A study was performed to show that the APTR is not sufficient to pay for minimum benefit provisions in effect at that time. Starting with fiscal 2012 all premium tax revenues received have been used to offset the City's contribution toward the actuarially determined minimum required contribution. There have been significant changes in state law related to the use of premium tax revenues. Florida Statutes Section 175.131(1) states changes become effective upon entering into a Collective Bargaining Agreement (CBA) on or after July 1, 2015. We understand that there has not been a CBA entered into on or after July 1, 2015. As confirmed with the secretary of the Board of Trustees and the Plan attorney, this actuarial valuation assumes no changes in the treatment of premium tax revenues and assumes the entire amount received from the State is used to offset the City's contribution toward the actuarially determined minimum required contribution.

The “Minimum Funding Requirement Expected Contribution from City” shown on page 1 assumes that the premium tax money received from the State will be in the same amount received in the prior year. Should the amounts received be less than expected, the City will need to contribute any potential shortfall to the Plan.

Section 2 Results Derivation

In this section, the assets and liabilities of the Plan are shown in detail. Assets and liabilities are then compared to determine the funded status and minimum funding requirements. Finally, analysis is performed to explain movement in results from the prior valuation.

While asset information is based on the fair market value of assets, along with any techniques used to smooth out market fluctuations, liabilities are determined through a combination of the benefit provisions, participant census data which contains information for the members who will receive those benefits, and the methods and assumptions used with regard to how benefits will be paid to members. A summary of participant data, an outline of the benefit provisions, and a description of the methods and assumptions used in this valuation are described in Section 4.

Financial Information

Over the life of the Plan, the majority of assets are typically generated from investment return. In this section, we describe how the assets of the Plan are invested, show how the actuarial value of assets is derived, and review the investment results since the prior valuation.

Investment Allocation

Valuation Date		**October 1, 2015**			**October 1, 2016**	
U.S. government and agency securities	$	9,056,077	15%	$	8,301,428	14 %
Corporate bonds		4,524,018	8%		5,406,161	8 %
Common/preferred stocks		42,953,446	74%		48,299,941	76 %
Cash and cash equivalents		1,968,827	3%		2,007,693	3 %
Net receivables		(161,149)	0%		(376,227)	(1)%
Fair Market Value of Assets	$	58,341,219	100%	$	63,638,996	100 %

Reconciliation of Market Value of Assets

Year Ending			September 30, 2016	
			Market Value	Actuarial Value
1.	Beginning of year		$58,341,219	$58,722,492
2.	Contributions			
	a.	City	$2,622,565	$2,622,565
	b.	State	545,561	545,561
	c.	Members	578,536	578,536
	d.	Total	$3,746,662	$3,746,662
3.	Investment earnings			
	a.	Unrealized gains and losses	$3,494,116	
	b.	Realized gains and losses	1,105,457	
	c.	Interest and dividends	1,882,708	
	d.	Investment expense	(343,818)	
	e.	Total	$6,138,463	$5,788,856
4.	Deductions			
	a.	Pension benefits	$(4,459,046)	
	b.	Contribution refunds	0	
	c.	Administrative expenses	(128,302)	
	d.	Total	$(4,587,348)	$(4,587,348)
5.	Net increase		$5,297,777	$4,948,170
6.	End of year		$63,638,996	$63,670,662

Development of Historical Asset Gains (Losses)

			2016		2015
1.	Market Value of Assets - Beginning of Year	$	58,341,219	$	58,760,194
2.	Expected Interest on Assets		4,667,298		4,700,816
3.	Contributions		3,746,662		3,738,624
4.	Benefit Payments + Administrative Expenses		(4,587,348)		(4,283,601)
5.	Interest on items (3) and (4)		(55,450)		(44,593)
6.	Expected Value of Assets at End of Year	$	62,112,381	$	62,871,440
7.	Market Value of Assets - End of Year	$	63,638,996	$	58,341,219
8.	Gain (Loss) for Plan Year = (7) - (6)	$	1,526,615	$	(4,530,221)

			2014		2013
1.	Market Value of Assets - Beginning of Year	$	53,786,580	$	47,932,356
2.	Expected Interest on Assets		4,302,926		3,834,588
3.	Contributions		3,329,157		2,752,787
4.	Benefit Payments + Administrative Expenses		(4,320,839)		(3,269,353)
5.	Interest on items (3) and (4)		(63,828)		(44,176)
6.	Expected Value of Assets at End of Year	$	57,033,996	$	51,206,202
7.	Market Value of Assets - End of Year	$	58,760,194	$	53,786,580
8.	Gain (Loss) for Plan Year = (7) - (6)	$	1,726,198	$	2,580,378

Note: These gain (loss) calculations include State contribution reserves and DROP account balances in the Market Value of Assets.

Development of Actuarial Value of Assets

The Market Value of Assets is adjusted to recognize investment earnings greater than (or less than) the assumed investment return over a five-year period. The Actuarial Value of Assets shall not be more than 120% or less than 80% of the Market Value of Assets.

1.	Gross Market Value of Assets as of September 30, 2016					$	63,638,996
2.	Phase-In Gains (Losses) Over Five Year Period						
		Year Ending		Original Gain (Loss)	Percent Unrecognized		Unrecognized Gain (Loss)
	a.	September 30, 2016	$	1,526,615	80%	$	1,221,292
	b.	September 30, 2015		(4,530,221)	60%		(2,718,133)
	c.	September 30, 2014		1,726,198	40%		690,479
	d.	September 30, 2013		2,580,378	20%		516,076
	e.	Total				$	(290,286)
3.	Preliminary Gross Actuarial Value of Assets					$	63,929,282
4.	Corridor Around Market Value						
	a.	Minimum = 80% of Market Value of Assets				$	50,911,197
	b.	Maximum = 120% of Market Value of Assets				$	76,366,795
	c.	Corridor Adjustment to Preliminary Actuarial Value				$	0
5.	Gross Actuarial Value of Assets as of September 30, 2016					$	63,929,282
6.	State Contribution Reserve					$	258,620
7.	Actuarial Value of Assets as of September 30, 2016					$	63,670,662

Reconciliation of DROP Account Balances

Year Ending September 30,	**2015**	**2016**
DROP Balances as of Beginning of Year	$6,804,458	$7,627,400
Additions	1,445,242	1,081,478
Investment Return	451,728	511,426
Distributions	(1,074,028)	(1,011,013)
DROP Balances as of End of Year	$7,627,400	$8,209,291

Derivation of State Contribution Funding Reserves

Year Ending September 30	Regular	Supplemental	Total	Recurring Cost
2016	$510,798	$34,763	$545,561	$0
2015	499,843	69,994	569,837	0
2014	500,390	103,616	604,006	0
2013	512,084	75,762	587,845	0
2012	489,487	78,491	567,978	2,299[6]
2011	495,487	49,815	545,302	0
2010	525,935	37,974	563,909	0
2009	505,855	62,143	567,998	0
2008	519,992	262,030	782,022	0
2007	497,785	187,105	684,890	0
2006	481,939	8,382	490,321	0
2005	468,885	0	468,885	0
2004	424,627	0	424,627	0
2003	392,038	0	392,038	211,825[4]
2002	340,995	0	340,995	0
2001	295,965	0	295,965	0
2000	310,698	0	310,698	16,309[1]
1999	286,709	0	286,709	0
1998	267,933	0	267,933	0

Year Ending September 30	Base Plus Benefit Improvements	One-time Use Benefit Improvements	Recognized State Funding	Balance Available Upon Benefit Improvements
2016	$498,366	$0	$545,561	$258,620
2015	498,366	0	569,837	258,620
2014	498,366	0	604,006	258,620
2013	498,366	0	587,845	258,620
2012	498,366	0	498,366	258,620
2011	496,067	0	496,067	189,008
2010	496,067	0	496,067	139,773
2009	496,067	474,778[5]	970,845	71,931
2008	496,067	0	496,067	474,778
2007	496,067	0	496,067	188,823
2006	496,067	0	490,321	0
2005	496,067	0	468,885	0
2004	496,067	0	424,627	0
2003	496,067	56,753[3]	448,791	0
2002	284,242	56,955[2]	341,197	56,753
2001	284,242	0	284,242	56,955
2000	284,242	0	284,242	45,232
1999	267,933	0	267,933	18,776
1998	267,933	0	267,933	0

Notes:
1. The base plus benefit improvements increased by $16,309 to fund Chapter 175 minimum benefits defined in Ordinance No. 2000-27.
2. The reserve amount of $56,955 was used to fund benefit improvements defined in Ordinance No. 2002-72.
3. The reserve amount of $56,753 was used to fund benefit improvements defined in Ordinance No. 2003-66.
4. The base plus benefit improvements increased $48,009 for Ordinance No. 2000-27 (subsequent to having met minimum benefits), $23,049 for Ordinance No. 2002-72 (remaining minimum benefits), and $140,767 for Ordinance No. 2003-66 (monthly supplement), a total of $211,825.
5. The reserve amount of $474,778 was used to fund benefit improvements defined in Ordinance No. 2009-35
6. The base plus benefit improvements increased $2,299 to fund benefit improvements defined in Ordinance No. 2009-35, as adopted in Ordinance No. 2011-57.

Enhanced Benefit Account (EBA)

Year Ended September 30,			**2016**
1.	Enhanced Benefit Account at Beginning of Year		$(7,031,055)
2.	Interest on Beginning Balance at Actuarial Rate of Return		
	a.	Return on Actuarial Value of Assets	9.9 %
	b.	Interest on Beginning Balance	$(696,074)
3.	Net Investment Income Allocation		
	a.	Actuarial Value Beginning of Year (A)	$58,722,492
	b.	Actuarial Value End of Year (B)	63,670,662
	c.	Contributions (C)	3,746,662
	d.	Benefits Paid (P)	(4,459,046)
	e.	Administrative Expenses (E)	(128,302)
	f.	Net Investment Income (I) = (B) - (A) - (C) - (P) - (E)	5,788,856
	g.	Return on Actuarial Value of Assets = 2I / (A + B - I)	9.9 %
	h.	Net Investment Income had 8% Return Occurred	4,642,349
		i. Reduction to Net Investment Income	1,146,507
		ii. Actuarial Value End of Year After Reduction	62,524,155
	i.	Net Investment Income in Excess of 8%	1,146,507
	j.	50% of Net Investment Income in Excess of 8%	573,254
4.	Premium Tax Distribution Allocation		
	a.	Premium Tax Distribution During Year	$545,561
	b.	Covered Payroll During Year*	6,619,701
	c.	Premium Tax as % of Covered Payroll	8.2 %
	d.	Excess of Premium Tax Over 5.6%	2.6 %
	e.	50% x (b) x (d)	86,056
5.	Allocation to Members in Payment Status and DROP		0
6.	Total Allocation to Enhanced Benefit Account		$(36,764)
7.	Enhanced Benefit Account at End of Year		$(7,067,819)

*The covered payroll during year is calculated as an average of the total valuation salary for the current and prior years.

Present Value of Benefits

Valuation as of October 1,			2015	2016
1.	**Active Members**			
	a.	Retirement Benefits	$31,121,625	$32,647,540
	b.	Deferred Benefits	638,612	677,750
	c.	Survivor Benefits	299,861	1,001,950
	d.	Disability Retirement	2,904,831	2,773,289
	e.	Total for Active Members	$34,964,929	$37,100,529
2.	**Inactive Members**			
	a.	Retirement Including DROP	$52,017,601	$52,926,187
	b.	Terminated Vested	666,303	1,562,494
	c.	Beneficiaries	2,818,979	3,214,803
	d.	Disability Retirement	791,225	572,340
	e.	Total in Payment Status	$56,294,108	$58,275,824
3.	**Enhanced Benefit Account Reserve***		$0	$0
4.	**Present Value of Benefits**		$91,259,037	$95,376,353

*Enhanced Benefit Account balances less than zero are limited to zero.

Accrued Liability

Valuation as of October 1,			2015	2016
1.	**Active Members**			
	a.	Retirement Benefits	$20,786,863	$21,880,262
	b.	Deferred Benefits	128,779	141,684
	c.	Survivor Benefits	60,090	181,178
	d.	Disability Retirement	638,542	581,867
	e.	Total for Active Members	$21,614,274	$22,784,991
2.	**Inactive Members**			
	a.	Retirement Including DROP	$52,017,601	$52,926,187
	b.	Terminated Vested	666,303	1,562,494
	c.	Beneficiaries	2,818,979	3,214,803
	d.	Disability Retirement	791,225	572,340
	e.	Total in Payment Status	$56,294,108	$58,275,824
3.	**Enhanced Benefit Account Reserve***		$0	$0
4.	**Accrued Liability**		$77,908,382	$81,060,815

*Enhanced Benefit Account balances less than zero are limited to zero.

Normal Cost

Valuation as of October 1,			2015	2016
1.	**Preliminary Normal Cost**			
	a.	Retirement Benefits	$1,238,846	$1,243,487
	b.	Deferred Benefits	57,127	57,822
	c.	Survivor Benefits	28,678	92,931
	d.	Disability Retirement	271,832	249,001
	e.	Total	$1,596,483	$1,643,241
2.	**Total Normal Cost**			
	a.	Preliminary Normal Cost	$1,596,483	$1,643,241
	b.	Estimated Administrative Expense	132,078	128,302
	c.	Total Normal Cost	$1,728,561	$1,771,543
	d.	Total Normal Cost as a % of Pay	25.79%	24.16%
3.	**Employer Normal Cost**			
	a.	Total Normal Cost	$1,596,483	
	b.	Actual Administrative Expense	128,302	
	c.	Actual Employee Contributions	(578,536)	
	d.	Employer Normal Cost	$1,146,249	
	e.	Employer Normal Cost as a % of Pay	17.10%	
4.	**Valuation Payroll**		$6,701,288	$7,332,478

Unfunded Accrued Liability

Actuarial Valuation as of October 1,		2016
Unfunded Accrued Liability		
1.	Actuarial Accrued Liability	$81,060,815
2.	Actuarial Value of Assets	(63,670,662)
3.	Unfunded Accrued Liability	$17,390,153
Determination of Expected Unfunded Accrued Liability		
1.	Unfunded Accrued Liability as of Prior Year	$19,185,890
2.	Employer Normal Cost (Including Administrative Expenses)	1,146,249
3.	Interest for a full year on (1) and (2)	1,626,571
4.	Contribution from City and State	
	a. Contribution from City	$(2,622,565)
	b. Recognized Contribution from State	(545,561)
	c. Total Contribution	$(3,168,126)
5.	Interest on Contribution for Time on Deposit	(104,903)
6.	Change in Plan, Methods or Assumptions	586,275
7.	Expected Unfunded Accrued Liability	$19,271,956
Calculation of (Gain) or Loss		
1.	Actual Unfunded Accrued Liability	$17,390,153
2.	Expected Unfunded Accrued Liability	19,271,956
3.	Total (Gain) or Loss	(1,881,803)
Reconciliation of Unfunded Accrued Liability		
1.	Unfunded Actuarial Liability as of Prior Year	$19,185,890
2.	Total Change in Unfunded Accrued Liability	
	a. Expected Change in Unfunded Accrued Liability	(500,209)
	b. Change in Plan, Methods or Assumptions	586,275
	c. Change Due to (Gain) or Loss	
	i. Portion of (Gain) / Loss Due to Investments	(1,146,507)
	ii. Portion of (Gain) / Loss Due to Demographics	(735,296)
	iii. Total (Gain) or Loss	(1,881,803)
	d. Total Change in Unfunded Accrued Liability	(1,795,737)
3.	Unfunded Accrued Liability	$17,390,153

Amortization of Unfunded Liability

The Unfunded Actuarial Accrued Liability is being amortized as a level percentage of payroll based on the interest and payroll growth assumptions. New bases set up for changes in the Unfunded Actuarial Accrued Liability due to plan changes, assumption changes, method changes, or gains and losses are all amortized over a 25-year period effective October 1, 2015.

Amortization Bases

	10/1	Type	Before Adjustment	Outstanding Amount	Years Remaining	Amortization Amount
1.	1992	UAL 9/30/02	$(26,940)	$(26,543)	1	$(26,543)
2.	1993	Assump+Method Chg	(1,009,768)	(994,938)	7	(172,185)
3.	1994	Benefits	1,822,576	1,795,808	8	280,405
4.	1995	Assump	315,539	310,905	9	44,480
5.	1996	(Gain)/Loss+EBA	(123,498)	(121,684)	22	(10,221)
6.	1997	(Gain)/Loss+EBA	(524,577)	(516,873)	22	(43,415)
7.	1998	(Gain)/Loss+EBA	(317,731)	(313,065)	22	(26,296)
8.	1999	(Gain)/Loss+EBA	(481,224)	(474,156)	22	(39,827)
9.	1999	Assump	764,893	753,659	13	83,958
10.	2000	Benefits	371,395	365,940	14	38,948
11.	2000	(Gain)/Loss+EBA	(165,120)	(162,695)	22	(13,666)
12.	2001	Method Chg	912,926	899,518	15	91,905
13.	2002	Benefits	384,174	378,532	16	37,279
14.	2004	Method Chg	2,880,238	2,837,937	18	262,347
15.	2005	(Gain)/Loss+EBA	1,867,203	1,839,780	19	165,487
16.	2006	Method Chg	1,605,135	1,581,561	20	138,760
17.	2006	(Gain)/Loss+EBA	9,825	9,681	20	849
18.	2007	Method Chg	333,099	328,207	21	28,148
19.	2007	(Gain)/Loss+EBA	(653,044)	(643,453)	22	(54,047)
20.	2008	(Gain)/Loss+EBA	1,693,274	1,668,405	22	140,138
21.	2008	Method Chg	(2,358,359)	(2,323,723)	22	(195,181)
22.	2009	(Gain)/Loss+EBA	1,760,543	1,734,686	23	142,950
23.	2009	Method Chg	(325,692)	(320,909)	23	(26,445)
24.	2010	(Gain)/Loss	1,520,776	1,498,441	24	121,336
25.	2011	(Gain)/Loss	3,935,227	3,877,432	25	308,953
26.	2012	(Gain)/Loss	4,801,257	4,730,743	26	371,390
27.	2012	Assumption Change	1,811,554	1,784,948	26	140,128
28.	2013	(Gain)/Loss	455,697	449,004	27	34,770
29.	2013	Assumption Change	70,022	68,994	27	5,343
30.	2014	(Gain)/Loss	(1,772,985)	(1,746,946)	28	(133,582)
31.	2014	Assumption Change	71,900	70,844	28	5,417
32.	2014	Method Change	1,098,459	1,082,326	28	82,761
33.	2014	Plan Change	(1,025,747)	(1,010,682)	28	(77,283)
34.	2015	(Gain)/Loss	(813,178)	(801,235)	24	(64,880)
35.	2015	Assumption Change	76,353	75,232	24	6,092
36.	2016	(Gain)/Loss	(1,881,803)	(1,881,803)	25	(149,942)
37.	2016	Assumption Change	586,275	586,275	25	46,714
			$17,668,674	$17,390,153		$1,545,045

Projected Unfunded Accrued Liability and Amortization Payments

Plan Year Beginning October 1	Outstanding Bases	Amortization Payment
2016	$17,390,153	$1,545,045
2017	17,112,717	1,587,464
2018	16,767,273	1,603,499
2019	16,376,876	1,619,689
2020	15,937,762	1,636,050
2021	15,445,849	1,652,576
2022	14,896,734	1,669,270
2023	14,285,662	1,870,860
2024	13,407,986	1,585,878
2025	12,767,876	1,553,205
2026	12,111,845	1,568,891
2027	11,386,390	1,584,737
2028	10,585,786	1,600,743
2029	9,703,846	1,521,234
2030	8,837,222	1,491,767
2031	7,933,091	1,399,978
2032	7,055,761	1,370,334
2033	6,140,261	1,384,176
2034	5,136,572	1,083,792
2035	4,377,002	894,432
2036	3,761,177	732,779
2037	3,270,669	705,418
2038	2,770,471	1,015,065
2039	1,895,839	878,518
2040	1,098,707	807,783
2041	314,197	551,456
2042	(256,239)	(107,230)
2043	(160,930)	(160,930)
2044	0	0

Actions Taken to Reduce Unfunded Actuarial Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded actuarial accrued liability. This payment is designed to reduce the unfunded actuarial accrued liability in an orderly fashion over the next 25 to 28 years. Effective October 1, 2015, new bases are set up over 25 years. Prior to the change a 30 year period was used.

Minimum Funding Requirements

Actuarial Valuation as of October 1,		2015	2016
Minimum Funding for FYE September 30,		2017	2018
1.	**Total Required Contribution (Prior to Projection)**		
a.	Total Normal Cost	$1,728,561	$1,771,543
b.	Amortization of Unfunded Accrued Liability	1,626,444	1,545,045
c.	Total Required Contribution	$3,355,005	$3,316,588
2.	**Total Required Contribution (Projected to Beginning of Next Fiscal Year)**		
a.	Total Required Contribution	$3,623,405	$3,581,915
b.	Projection Rate to Next Fiscal Year	8.00%	8.00%
3.	**Contribution (Adjusted for Periodic Payments)**	$3,791,135	$3,747,014
4.	**Total Required Contribution (Adjusted for Periodic Payments)**		
a.	Expected City Contributions	$2,712,369	$2,645,963
b.	Estimated State Contributions	569,837	545,561
c.	Expected Member Contributions	508,929	555,490
d.	Total Required Contribution	$3,791,135	$3,747,014
e.	Expected City Contributions as a % of Pay	39.97%	35.72%
f.	Estimated State Contributions as a % of Pay	8.40%	7.37%
g.	Expected Member Contributions as a % of Pay	7.50%	7.50%
h.	Total Required Contribution as a % of Pay	55.87%	50.59%
5.	**Valuation Payroll**		
a.	Payroll Expected	$6,701,288	$7,332,478
b.	Projected to Next Valuation Year	6,785,724	7,406,536
c.	Expected Total Payroll Increase	1.26%	1.01%

Note: Actual funding required from the City will be based on actual contributions received from the state when those amounts are known.

Reconciliations

Change in Funded Percentage

	Unfunded Accrued Liability	Funded Percentage	Change in Unfunded Accrued Liability	Change in Funded Percentage
As of Prior Valuation	$19,185,890	75.37%		
Changes in Funded Ratio due to:				
Normal Operation of Plan	$18,685,681	76.99%	$(500,209)	1.62%
Actuarial Investment Experience	17,539,174	78.40%	(1,146,507)	1.41%
Demographic Experience	16,803,878	79.12%	(735,296)	0.72%
Required Mortality Change	17,390,153	78.55%	586,275	(0.57%)
Total Changes			$(1,795,737)	3.18%
As of Current Valuation	17,390,153	78.55%		

Changes in City Contribution Rate

	Dollar Amount	% of Pay
As of Prior Valuation	$2,712,369	39.97 %
Changes in Contribution due to:		
Normal Operation of Plan	$34,170	0.00 %
Change in Expected State Contribution	23,305	0.34 %
Actuarial Investment Experience	(100,418)	(1.46)%
Demographic Experience	(104,321)	(4.30)%
Required Mortality Change	48,336	0.65 %
Revise Total Payroll Increase Assumption	32,522	0.52 %
Total Changes	$(66,406)	(4.25)%
As of Current Valuation	$2,645,963	35.72 %

Section 3 Accounting Information

Information Required by GASB 67/68

A supplemental report provides information under the Governmental Accounting Standards Board No. 67/68.

Statement of Accumulated Plan Benefits

Valuation as of October 1,	2015	2016
1. Actuarial present value of accumulated plan benefits		
a. Participants currently receiving benefits	$55,627,805	$56,713,330
b. Inactive vested with deferred benefits and active vested including contributions	14,145,211	17,325,282
c. Total vested plan benefits	$69,773,016	$74,038,612
d. Total non-vested plan benefits	3,158,849	2,225,463
e. Total accumulated plan benefits	$72,931,865	$76,264,075
2. Change in accumulated plan benefits		
a. Accumulated plan benefits beginning of year		$72,931,865
b. Increase (decrease) during year attributable to:		
i. Plan amendment		$0
ii. Add DROP balance to liability		0
iii. Change in assumptions or methods		757,623
iv. Benefits paid		(4,459,046)
v. Increase for interest and probability of payment due to decrease in discount period and benefits accrued		7,033,633
vi. Net increase (decrease)		$3,332,210
c. Accumulated plan benefits end of year		$76,264,075

Other Disclosures Required by the State of Florida

Valuation as of October 1,	2015	2016
Other Disclosures (where applicable)		
Present value of active member:		
Future salaries (attained age)	$58,186,560	$63,983,914
Future contributions (attained age)	$4,363,992	$4,798,794
Employee contributions without interest	$3,058,668	$3,375,228

Required Disclosure Under F.S. 112.664(1)

As required under F.S. Section 112.664(1) we have produced the following information:

(a) Total pension liability calculated based on mortality used in one of the last two Florida Retirement System (FRS) valuations. This actuarial valuation assumes healthy mortality as follows: Male: 10% RP-2000 Annuitant White Collar + 90% RP-2000 Annuitant Blue Collar / Female:100% RP-2000 Annuitant White Collar, where both the male and female rates are fully generational from 2000 using Scale BB. Disabled mortality is as follows: Male: 60% RP-2000 Disabled Retiree Set Back 4 years + 40% RP-2000 Annuitant White Collar / Female: 60% RP-2000 Disabled Retiree Set Forward 2 Years + 40% RP-2000 Annuitant White Collar, where no mortality improvement is assumed for disabled lives.

(b) Total pension liability calculated using an assumed interest rate that is 200 basis points lower than that assumed in the valuation of the Plan.

(c) Determination of the number of months or years for which the current market value of assets is adequate to sustain the payment of expected retirement benefits.

(d) Recommended contribution to the Plan using the most recent valuation and the contributions necessary prepared pursuant to (a) and (b) stated as a dollar amount and % of payroll.

	2% Decrease (6.0%)	Current Discount Rate (8.0%)	2% Increase (10.0%)
Total pension liability	$99,007,328	$81,319,435	$68,811,515
Plan fiduciary net position	(63,638,996)	(63,638,996)	(63,638,996)
Net pension liability	$35,368,332	$17,680,439	$5,172,519
Plan fiduciary net position as a percentage of the total pension liability	64.28%	78.26%	92.48%
Years of benefit payments:			
Expected for current members:	100	100	100
Paid for with current assets:	12.28	14.57	18.51
City Plus State Contribution Requirement, Plus Expected Employee Contributions			
Dollar Amount	$5,609,036	$3,747,014	$2,175,478
Percent of Payroll	75.73%	50.59%	29.38%

Required Disclosure Under F.S. 112.664(2)(b)2.

F.S. Section 112.664(2)(b)2. - For the previous five years, beginning with 2013, a side-by-side comparison of the plan's assumed rate of return compared to the actual rate of return, as well as the percentages of cash, equity, bond and alternative investments in the plan portfolio.

Year Ending September 30,	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**
Assumed rate of return	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Actual rate of return	10.6%	0.2%	11.2%	13.4%	19.3%	(1.8%)
Percentages of assets in:						
Cash	3%	3%	5%	2%	2%	4%
Equity	76%	74%	70%	76%	73%	63%
Bond	22%	23%	25%	22%	24%	33%
Alternative	(1%)	0%	0%	0%	1%	0%
Total	100%	100%	100%	100%	100%	100%

Section 4 Supplementary Information

Summary of Participant Data

Member Statistics

Valuation as of October 1,	**2015**	**2016**
Active Participants		
Number	108	117
Average Age	38.7	38.4
Average Credited Service	10.4	10.0
Percent Male	99.1	99.2
Average Valuation Salary	$58,537	$59,123
Total Valuation Salary	$6,321,970	$6,917,432
Total Valuation Salary (Imputed)	$6,701,288	$7,332,478
Terminated With Rights to Deferred Benefits		
Number	4	6
Average Age	42.9	45.1
Percent Male	75.0	83.3
Average Monthly Benefit	$1,998	$2,817
DROP Participants		
Number	21	14
Average Age	55.2	56.3
Percent Male	90.5	92.9
Average Monthly Benefit	$5,279	$5,213
DROP Account Balances	$4,734,384	$3,205,241

Member Statistics (Continued)

Valuation as of October 1,	2015	2016
Retirees		
Number	74	79
Average Age	66.7	66.1
Percent Male	98.7	97.5
Average Monthly Benefit	$3,238	$3,477
DROP Account Balances	$2,893,016	$4,822,043
Beneficiaries		
Number	10	10
Average Age	70.5	68.9
Percent Male	0.0	0.0
Average Monthly Benefit	$2,669	$2,812
DROP Account Balances	$0	$182,008
Disability Retirements		
Number	6	5
Average Age	53.0	53.9
Percent Male	83.3	80.0
Average Monthly Benefit	$970	$953
Total In Payment Status		
Number	90	94
Average Age	66.1	65.7
Percent Male	86.7	86.2
Average Monthly Benefit	$3,024	$3,272

Note: One survivor is in receipt of an annuity for the remainder of a 10-year certain period. The average age for beneficiaries shown above is the average for other survivors who are in receipt of a life only annuity.

Number of Active Members by Age and Service as of October 1, 2016

	x < 1	x < 5	x < 10	x < 15	x < 20	x < 25	x < 30	Total
x < 20	1							1
x < 25		3						3
x < 30	9	6	3					18
x < 35	3	6	8	8				25
x < 40	1	3	3	12				19
x < 45		2	4	5	11			22
x < 50				7	7	5		19
x < 55		1		2	2	3		8
x < 60				1	1			2
60+								
Total	14	21	18	35	21	8		117

Active Valuation Pay by Age and Service as of October 1, 2016

	x < 1	x < 5	x < 10	x < 15	x < 20	x < 25	x < 30	Total
x < 20	38,274							38,274
x < 25		49,031						49,031
x < 30	40,968	46,398	55,099					45,133
x < 35	41,758	46,639	52,424	62,990				53,137
x < 40	41,236	43,250	56,152	58,968				55,108
x < 45		64,006	55,845	59,403	77,230			68,088
x < 50				61,845	72,931	74,417		69,238
x < 55		123,601		58,321	74,136	71,080		75,219
x < 60				53,721	75,258			64,489
60+								
Total	40,964	51,747	54,252	60,338	75,408	73,166		59,123

Reconciliation of Plan Participants

	Active	Vested Term.	DROP	Retired	Survivor	Disabled	Total
October 1, 2015	108	4	21	74	10	6	223
Enter DROP	(1)		1				0
Vested Termination	(2)	2					0
Nonvested	(2)						(2)
Survivor				(1)	1		0
Retired			(8)	8			0
Death - No Benefits				(2)	(1)	(1)	(4)
Additions	14	0	0	0	0	0	14
October 1, 2016	117	6	14	79	10	5	231

Outline of Plan Provisions

Plan Type: Single-employer Defined Benefit Pension Plan

Legal Authority: The Plan was established and is amended by local ordinance.

Board Composition: The Board consists of five Trustees, two of whom are legal residents of the city who are appointed by the City Commission, two of whom are full-time firefighters who are members of the Plan and who are elected by a majority of the Firefighters, and a fifth Trustee who is chosen by a majority of the first majority of the first four Trustees.

Plan Administrator: The Board of Trustees

Funding Requirements: Employer contributions are actuarially determined and subject to State statute. Employee contributions are as described below and may be amended by ordinance.

Effective Date: Ordinance No. 2006-07 adopted January 24, 2006 amended the Plan provisions in their entirety. The following provides the history of subsequent ordinances:

- Ordinance No. 2009-17 adopted effective May 12, 2009 amended the definition of Actuarial Equivalence to be based on assumptions adopted by the Board, includes USERRA military service as Credited Service, updated ordinance language with respect to IRC Section 401(a) qualification, 401(a)(9) minimum required distributions, 401(a)(17) pay limitations, 414(d) qualification, 415 benefit limitations, and 503(b) prohibited transactions, simplified language to indicate City contributions are based on the applicable actuarial valuation, revisions to language regarding optional form of benefits payable to disability retiree and when payments end, reduction of maximum lump sum threshold to $1,000, along with language revision to pertaining to domestic relations orders, forfeitures and rollovers.
- Ordinance No. 2009-25 adopted effective June 23, 2009 amended the section of the Plan regarding finances and management to provide for more liberal investment options, including an increase in the allowable percentage for international investments.
- Ordinance No. 2009-35 adopted effective October 13, 2009 changed employee contributions from 4.75% to 6.0% of pay, increased the benefit accrual rate from 3.0% to 3.25% for retirements on and after October 1, 2008 (which is partially paid for with a one-time deduction from the Enhanced Benefit Account), clarified the Enhanced Benefit Account carry-forward methodology, changed the Supplemental Benefit to be payable for the life of the member only, and provides for an additional Supplemental Benefit of $2.50 x Credited Service in the fifth year of retirement from available Enhanced Benefit Account funds.
- Ordinance No. 2010-04 adopted effective January 26, 2010 revised Section 23-93 regarding the repeal or termination of the system, added Section 23-94(b) to allow for retiree directed payments, amended the form of distribution for DROP payments in Section 23-100 to no longer allow the purchase of a non-forfeitable fixed annuity, amended Section 23-100.1 and 23-100.2 to allow the purchase of military and prior firefighter service over a up to a five year period, amended Section 23-100.2 to allow the purchase of certain prior firefighter outside the state of Florida.
- Ordinance 2011-57 was adopted December 13, 2011. This amendment provides for the use of up to 50% of the cumulative balance is State contributions available for benefit improvement to pay for any increase in the total normal cost rate more than 1.25% of pay. This ordinance states that the 6.0% of pay employee contribution rate is set for three years and that for the fiscal year beginning October 1, 2011 and October 1, 2014 an actuarial valuation is performed to recalculate the cost of the benefit improvement.

- Ordinance No. 2015-06 became effective upon adoption on March 24, 2015 revising (1) the definition of Salary to exclude payments for overtime in excess of 300 hours per fiscal year as well as payment for accrued sick and annual leave are excluded from the definition of Salary [except that for members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement], (2) employee contributions effective April 1, 2015 from 6.0% to 7.5% of Salary, (3) the Supplemental Benefit to indicate that if there are insufficient funds available in the EBA to pay for both the increased supplement and the variable COLA, the monthly supplement is payable first and then for the remaining funds in the EBA are used to provide the variable COLA on a prorate basis, (4) the maximum pension benefit to be $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue], and (5) DROP interest crediting for members who elect the fixed rate is revised from an annual rate of 6.5% to 1.3% for those who enter the DROP on or after March 24, 2015.

Plan Year: The 12-month period from October 1st to the following September 30th.

Member: Full-time firefighters become Members immediately upon hire.

Actuarial Equivalence: Using the funding assumptions as adopted by the board.

Credited Service: Total years and fractional parts of years of service as a firefighter with Member contributions, when required. Credited Service also includes certain military service. Additional Credited Service may be purchased.

Vesting: 100% upon the earlier of earning ten years of Credited Service and reaching the Normal Retirement Date.

Salary: Total compensation for services rendered to the City as a firefighter reported on Form W-2 plus all tax-deferred, tax sheltered, or tax exempt items of income derived from elective employee payroll deductions.

Effective March 24, 2015 Salary excludes payments for overtime in excess of 300 hours per fiscal year as well as payment for accrued sick and annual leave are excluded from the definition of Salary [except that for members employed on March 24, 2015 Salary does include the lesser of (a) the amount of sick and annual leave accrued as of March 24, 2015 and (b) the actual amount of sick and annual leave for which the member receives payment at retirement].

Regular Base Salary: One-twelfth of the employee's annual base pay rate plus any incentive pay.

Employee Contributions: Prior to Ordinance No. 2009-35 adopted October 13, 2009, employees hired prior to May 9, 1978 contributed 5.0% of Salary. Employees hired after May 9, 1978 contributed 4.75% of Salary. Effective October 13, 2009, Ordinance No. 2009-35 revised employee contributions to 6.0% of Salary. Effective April 1, 2015, Ordinance No. 2015-06 revised employee contributions from 6.0% to 7.5% of Salary.

A Member who terminates non-vested is entitled to refund of accumulated Employee Contributions with interest at 4% per year. Contributions may be repaid with interest upon reentry into the Plan due to rehire.

Vested Members who terminate employment prior to being eligible to receive an annuity may leave their accumulated contributions in the fund, and upon as early as age 50 begin commencement of the reduced Accrued Benefit plus the Supplemental Benefit, as defined under Early Retirement.

Average Final Compensation: Average of Salary for the five highest years out of the last 10 years of Credited Service.

Normal Retirement Date: For those who were Members prior to May 9, 1978, the first day of the month coincident with or next following the earliest of (i) age 50, regardless of Credited Service, or (ii) 25 years Credited Service, regardless of age. For those becoming Members on or after May 9, 1978, the first day of the month coincident with or next following the earliest of (i) age 55 and completion of 10 years of Credited Service, or (ii) 25 years Credited Service, regardless of age.

Normal Retirement Benefit: The Accrued Benefit plus the Supplemental Benefit.

Per Ordinance No. 2015-06, the maximum pension benefit is limited to $90,000 annually for members hired on or after March 24, 2015 and also members employed on March 24, 2015 who have not reached the normal retirement date [except that the accrued a benefit in excess of $90,000 annually as of March 24, 2015 is not reduced to $90,000 but no additional benefits will accrue].

Accrued Benefit: Effective for Members retiring on or after October 1, 2008:

3.25% x Average Final Compensation x Credited Service

The multiplier was 3.0% in the October 1, 2008 actuarial valuation of the Plan.

This benefit is payable as a 10 year certain and continuous annuity.

Supplemental Benefit: Effective October 1, 2003, a Supplemental Benefit is payable monthly for the joint lives of the member and their beneficiary equal to $5 x Credited Service. Prior to October 1, 2007, valuation liability had been computed as if this benefit were only payable over the life of the member. Effective October 13, 2009, Ordinance No. 2009-35 clarified that this benefit is payable over only the life of the member. In addition, Ordinance No. 2009-35 provided for all current and future retirees to potentially receive an additional $2.50 x Credited Service (for a total of $7.50 x Credited Service) beginning on the fifth anniversary of retirement. DROP participation counts toward the satisfaction of the five years of retirement. The additional $2.50 is only provided through available funds from the Enhanced Benefit Account, if any.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the Enhanced Benefit Account to pay for both the increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then for the remaining funds in the Enhanced Benefit Account are used to provide the variable cost of living adjustment on a prorate basis.

Early Retirement Date: The first day of the month coincident with or next following the earlier of attainment of age 50 or the completion of 20 years of Credited Service.

Early Retirement Benefit: The Accrued Benefit reduced by 3% per year by which the commencement of benefits precedes the Normal Retirement Date, plus the Supplemental Benefit.

Enhanced Benefit Account: Provides for a lump sum variable cost of living adjustment for all members who retired, became disabled, or terminated vested on or after September 30, 1996, and their beneficiaries.

Commencing annually from March 1, 1997, the sum of (a) and (b), as follows, shall be credited to or deducted from the Enhanced Benefit Account to provide a lump sum variable cost of living adjustment:

(a) 50% of positive or negative net investment income compared to fund's investment objective of 8% for the preceding fiscal year, and

(b) 50% of the amount by which the premium taxes collected and distributed by the state exceed 5.6% of covered payroll during the preceding fiscal year.

Effective October 13, 2009, Ordinance No. 2009-35 reduced EBA funds retroactively to October 1, 2008 by a one-time deduction equal to the cost to provide the increased 3.25% benefit accrual rate minus the amount of any unallocated premium tax money; and defined use of EBA funds to first pay for an additional Supplemental Benefit of $2.50 x Credited Service after the fifth year of retirement, prior to the payment of any lump sum variable cost of living adjustment described in the following.

Each April 1 the Enhanced Benefit Account is allocated among the retirees as of the preceding September 30 based upon (i) the number of full months of retirement during the preceding fiscal year, and (ii) in proportion to the amount of each retiree's actual monthly retirement benefit. The allocation is limited to a maximum of 3% of the pension benefit (prorated if retired less than a full year). In the event that in any year the balance in the fund would result in a higher payment, the excess is returned to the Enhanced Benefit Account and carried forward to the next year. Any funds carried forward in the Enhanced Benefit Account are credited with the rate of return achieved by the fund.

Effective March 24, 2015 Ordinance No. 2015-06 provides that if there are insufficient funds available in the Enhanced Benefit Account to pay for both the increased supplement and the variable cost of living adjustment, the monthly supplement is payable first and then for the remaining funds in the Enhanced Benefit Account are used to provide the variable cost of living adjustment on a prorate basis.

<u>Death Benefits:</u> In the event of death in the line of duty prior to retirement eligibility, 40% of Regular Base Salary is payable to the spouse until their death. If there is no spouse, or upon the death of the spouse, 15% of Regular Base Salary is payable for each unmarried child until the age of 18 (or age 22 if a full-time student). The maximum amount payable to all such children is 40% of Regular Base Salary.

In the event of death not in the line of duty prior to retirement eligibility, the Employee Contributions accumulated with interest is payable or 10-year certain annuity reduced actuarially from the early retirement date.

For Members eligible for retirement at their date of death, the benefit payable is that greater in actuarial value between (i) the benefit defined for line of duty death prior to retirement eligibility and (ii) the benefit payable if the Member had retired on the date of death. The resulting amount is payable on a monthly basis for ten years, or on such other actuarially equivalent basis as approved by the board.

<u>Disability Retirement:</u> The benefit payable to any Member who becomes totally and permanently disabled in the line of duty is the greater of (i) 2% of Average Final Compensation times Credited Service, (ii) 42% x Average Final Compensation, and (iii) 40% of Regular Base Salary. The Supplemental Benefit is also payable.

The benefit payable to any Member who becomes totally and permanently disabled not in the line of duty after having earned 10 years of Credited Service is the greater of (a) 2% of Average Final Compensation times Credited Service, and (b) the Accrued Benefit as reduced for Early Retirement, further reduced actuarially in the event of disability prior to the Early Retirement Date. In any event the minimum amount payable is 25% of Average Final Compensation. The Supplemental Benefit is also payable.

Optional Forms of Benefit: The Accrued Benefit described above is payable in the form of a 10 year certain and continuous annuity. Members may optionally choose an actuarially equivalent single life annuity, joint and survivor annuity (with 50%, 66 2/3, 75% or 100% continuance), or a Social Security level income option. Members who do not participate in the DROP may elect to receive 20% of the present value of their benefits as a single lump sum and the remainder of the value of their benefits as a 10 year certain and continuous annuity, a single life annuity, or a joint and survivor annuity (with 50%, 66 2/3%, 75% or 100% continuance).

Deferred Retirement Option Plan (DROP): Members are eligible to enter the DROP at the Normal Retirement Date. DROP participants are not eligible for death or disability benefits. The maximum DROP participation duration is 60 months. The Accrued Benefit plus Supplemental Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates in the DROP account with interest, credited quarterly, as elected by the Member (where this election may be changed by the Member annually):

(a) An annual rate of 6.5%, compounded monthly, on the prior month's ending balance for members who enter the DROP before March 24, 2015, and 1.3%, compounded monthly, on the prior month's ending balance for members who enter the DROP on or after March 24, 2015.
(b) The average daily balance in the member's DROP account is credited or debited at a rate equal to the net investment return realized for the quarter.
(c) 50% of (a) plus 50% of (b).

A Member's final DROP account value for distribution is the value of the account at the end of the quarter immediately preceding termination of participation in the DROP, plus any monthly periodic additions made to the DROP account subsequent to the end of the previous quarter and prior to distribution.

The Supplemental Benefit is payable once the member actually terminates from employment and begins to receive monthly pension payments after the end of the DROP.

Description of Assumptions and Methods

Assumed Rate of Investment Return: 8.0% per year, net of investment expenses

Salary Increase – Individual: 6.0% per year.

The final year salary is increased using individualized percentages equal to the actual total accrued leave hours as of October 1, 2014 multiplied by the hourly rate of pay at October 1, 2014 divided by annualized fiscal 2014 salary after removing pay for overtime in excess of 300 hours.

Administrative Expenses: Prior year's actual expenses added to Normal Cost

Salary Increase – Total Payroll: The payroll growth assumption has been lowered to 1.01% for this October 1, 2016 actuarial valuation of the plan. In the prior valuation an assumption of 1.26% was used.

Inflation: 2.5% per year

Mortality: In the prior valuation, the mortality table was the RP-2000 Combined Mortality Table where Scale AA was applied to reflect mortality improvements to the valuation year. The mortality table has been revised to the mortality assumption used for special risk employees in the valuation of the Florida Retirement System (FRS), as required by state statute. The mortality rates are as follows as of October 1, 2016:

Healthy mortality:	Males: 10% RP-00 Annuitant White Collar + 90% RP-00 Annuitant Blue Collar
	Females: 100% RP-00 Annuitant White Collar
	Both male and female rates fully generational using Scale BB
Disabled mortality:	Males: 60% RP-00 Disabled Retiree Set Back 4 Years + 40% RP-00 Annuitant White Collar
	Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs + 40% RP-00 Annuitant White Collar
	No mortality improvement is assumed for disabled lives.

Retirement: Unisex rates, as follows:

	Service			
Age	<=9	10-19	20-24	>=25
<=39	0%	0%	0%	0%
40-54	0%	0%	5%	100%
>=55	5%	100%	100%	100%

Termination: Unisex rates, as follows:

Age	Rate	Age	Rate	Age	Rate	Age	Rate
<=19	0.00%	27	2.65%	35	1.90%	43	1.06%
20	3.00%	28	2.60%	36	1.78%	44	0.98%
21	2.95%	29	2.55%	37	1.66%	45	0.90%
22	2.90%	30	2.50%	38	1.54%	46	0.82%
23	2.85%	31	2.38%	39	1.42%	47	0.74%
24	2.80%	32	2.26%	40	1.30%	48	0.66%
25	2.75%	33	2.14%	41	1.22%	49	0.58%
26	2.70%	34	2.02%	42	1.14%	50	0.50%
						>=51	0.00%

Disability: Unisex rates, as follows:

Age	Rate	Age	Rate
<=19	0.000%	40	0.940%
20-30	0.300%	41	0.990%
31	0.364%	42	1.040%
32	0.428%	43	1.090%
33	0.492%	44	1.140%
34	0.556%	45	1.190%
35	0.620%	46	1.240%
36	0.684%	47	1.290%
37	0.748%	48	1.340%
38	0.812%	49	1.390%
39	0.876%	>=50	1.440%

On and Off Duty Disability and Death: 100% of deaths and disabilities are assumed to be in the line of duty.

Funding Method: Entry Age Normal (level percent of salary).

Glossary of Actuarial Terms

Present Value of Benefits (PVB): The present value, as of the valuation date, of all benefits that will become payable by the Plan for the current group of members in the census.

Normal Cost (NC): The value of the portion of the total benefit for active members which accrues in the year following the valuation date. Under the Entry Age Normal (Level Percent of Salary) funding method, the NC is a constant fraction of salary from the member's date of entry into the Plan to the member's assumed date of termination, retirement, disability or death.

Accrued Liability (AL): This is the portion of the PVB attributable to the past at the valuation date. For active members, AL is the annual NC accumulated from date of entry to the valuation date for each member. For retired and terminated members, the PVB and the AL are equal. The AL is the estimated liability owed by the pension fund at the valuation date.

Unfunded Accrued Liability (UAL): Any excess of the Accrued Liability over the fund assets. A negative UAL indicates fund assets are greater than the Accrued Liability, otherwise known as a surplus.

Actuarial Value of Assets: The value of assets used in the actuarial valuation of the Plan which is compared to the AL to determine the UAL and minimum funding requirements. A method may be used to smooth out short term volatility in the fair market value of assets.