



June 16, 2017

Mr. James F. Fisher  
Plan Administrator  
City Pension Fund for Firefighters and Police Officers  
in the City of Pembroke Pines, Florida  
Hampton Professional Center  
1951 NW 150th Avenue – Suite 104  
Pembroke Pines, Florida 33028

**Re: October 1, 2016 Chapter 112.664 Compliance Report**

Dear Jim:

As requested, we are pleased to enclose fifteen (15) bound copies and one (1) unbound copy of the October 1, 2016 Chapter 112.664 Compliance Report for the City Pension Fund for Firefighters and Police Officers in the City of Pembroke Pines, Florida (Fund).

As required, we will timely upload the required data to the State's online portal.

Please note we understand the following items must be posted on the Fund's website and must be posted on any website containing budget information relating to the City or actuarial or performance information relating to the Fund:

- this compliance report
- most recent financial statement
- most recent actuarial valuation report
- a link to the Division of Retirement Actuarial Summary Fact Sheet  
[http://www.dms.myflorida.com/workforce\\_operations/retirement/local\\_retirement\\_plans/local\\_retirement\\_section/actuarial\\_summary\\_fact\\_sheets](http://www.dms.myflorida.com/workforce_operations/retirement/local_retirement_plans/local_retirement_section/actuarial_summary_fact_sheets)
- for the previous five years - a side-by-side comparison of the Fund'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 Fund portfolio
- the Fund's funded ratio as determined in the most recent actuarial valuation – 71.0% on a market value of assets basis as of October 1, 2016

We appreciate the opportunity to work with the Board on this important assignment.

If you should have any questions concerning the above, please do not hesitate to contact us.

Sincerest regards,

A handwritten signature in black ink that reads "L. F. Wilson".

Lawrence F. Wilson, A.S.A.  
Senior Consultant and Actuary

Enclosures

# City Pension Fund For Firefighters and Police Officers In The City Of Pembroke Pines

## CHAPTER 112.664, F.S. COMPLIANCE REPORT

In Connection with the October 1, 2016 Funding Actuarial Valuation Report and the Fund's Financial Reporting for the Year Ended September 30, 2016







June 16, 2017

Board of Trustees  
c/o Mr. James F. Fisher  
Plan Administrator  
City Pension Fund for Firefighters and Police Officers  
in the City of Pembroke Pines, Florida  
Hampton Professional Center  
1951 NW 150th Avenue – Suite 104  
Pembroke Pines, Florida 33028

**Re: October 1, 2016 Chapter 112.664 Compliance Report**

Dear Board Members:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Board of Trustees (Board) of the City Pension Fund for Firefighters and Police Officers in the City of Pembroke Pines, Florida (Fund) to prepare a disclosure report to satisfy the requirements set forth in Chapter 112.664, F.S. and as further required pursuant to Chapter 60T-1.0035, F.A.C.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board.

The purpose of the report is to provide the required information specified in Chapter 112.664, F.S. and to supplement this information with additional exhibits. This report should not be relied on for any purpose other than the purpose described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Fund 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 Fund's funded status); and changes in Fund provisions or applicable law. The scope of this engagement does not include an analysis of the potential range of such measurements.

This report is based upon information furnished by the City and the Board concerning Fund benefits, Fund provisions and Fund members as used in the corresponding Actuarial Valuation Reports for the Valuation Dates indicated. Financial information was provided by the City and

Board as of September 30, 2016. We reviewed the information provided for internal and year-to-year consistency, but did not audit the data. The Fund is responsible for the accuracy of the data.

Except where specific assumptions are required by Chapter 112.664, F.S, this report was prepared using actuarial assumptions adopted by the Board as described in Section C. The Board's actuarial assumptions are based on the results of an actuarial Experience Study for the period October 1, 2009 – September 30, 2014. The mortality assumptions are prescribed by statute. The actuarial assumptions represent an estimate of future Fund experience.

The investment return assumption of 2% higher than the investment return assumption utilized in the Actuarial Valuation Report does not represent an estimate of future Fund experience nor observation of the estimates inherent in market data. This assumption is provided as a counterpart to the Chapter 112.664, F.S. requirement to utilize an investment return assumption of 2% lower than the investment return assumption utilized in the Actuarial Valuation Report. Inclusion of an investment return 2% higher than the investment return assumption utilized in the Actuarial Valuation Report shows a more complete assessment of the potential range of results as opposed to the *one-sided* range required by statute.

If all actuarial assumptions are met and if all current and future minimum required contributions are paid Fund assets will be sufficient to pay all Fund benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to improve. Fund minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act, Firefighters Retirement Chapter 175 and Police Officers Retirement Chapter 185 with normal cost determined as a level percent of covered payroll and a level percent amortization payment using an initial amortization period of 30 years.

The Fund's funded ratio as of October 1, 2016 is 71.0% defined as the ratio of the market value of Fund assets to the actuarial accrued liability.

The Fund's funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Fund assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the Fund sponsor.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and presents the actuarial position of the Fund as of the valuation date as required by statute. All calculations have been made in conformity with generally accepted

actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

With respect to the reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were 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, meet the requirements of Section 112.664(1), F.S., and Section 60T-1.0035, F.A.C.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

By *L. F. Wilson*  
Lawrence F. Wilson, M.A.A.A  
Enrolled Actuary No. 17-02802  
Senior Consultant & Actuary

By *Jennifer Borregard*  
Jennifer M. Borregard, M.A.A.A  
Enrolled Actuary No. 17-07624  
Consultant & Actuary

Date: June 16, 2017

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## **SECTION A**

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### **CHAPTER 112.664, F.S. RESULTS**

**Net Pension Liability**  
**Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68**

Measurement Date	<u>September 30, 2016</u>
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 9,537,905
Interest	56,386,139
Benefit Changes	22,338
Difference Between Actual and Expected Experience	399,811
Assumption Changes	8,511,772
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Other	<u>0</u>
Net Change in Total Pension Liability	\$ 45,795,428
Total Pension Liability (TPL) - (beginning of year)	<u>705,325,311</u>
Total Pension Liability (TPL) - (end of year)	<u>\$ 751,120,739</u>
 <b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 23,908,967
Contributions - State	2,445,532
Contributions - Member	2,819,814
Net Investment Income	44,141,730
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Administrative Expenses	(627,306)
Other	<u>26,207</u>
Net Change in Fund Fiduciary Net Position	\$ 43,652,407
Fund Fiduciary Net Position - (beginning of year)	<u>495,206,739</u>
Fund Fiduciary Net Position - (end of year)	<u>\$ 538,859,146</u>
 <b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	 \$ 212,261,593
 Valuation Date	 October 1, 2015

**Certain Key Assumptions**

Investment Return Assumption 7.95%

Mortality Table:

For healthy male participants, RP-2000 Annuitant Male Mortality Table with 10% White Collar / 90% Blue Collar Adjustment, with fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants, RP-2000 Annuitant Female Mortality Table with White Collar Adjustment, with fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP-2000 Disabled Male Mortality Table setback four years / 40% RP-2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP-2000 Disabled Female Mortality Table set forward two years / 40% RP-2000 Annuitant Female Mortality Table with White Collar Adjustment, without projected mortality improvements.

**Net Pension Liability**  
**Using Assumptions Required Under 112.664(1)(a), F.S.**

Measurement Date	<u>September 30, 2016</u>
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 9,678,426
Interest	56,576,999
Benefit Changes	22,255
Difference Between Actual and Expected Experience	114,462
Assumption Changes	3,890,265
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Other	0
Net Change in Total Pension Liability	\$ 41,219,870
Total Pension Liability (TPL) - (beginning of year)	<u>712,492,476</u>
Total Pension Liability (TPL) - (end of year)	<u>\$ 753,712,346</u>
 <b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 23,908,967
Contributions - State	2,445,532
Contributions - Member	2,819,814
Net Investment Income	44,141,730
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Administrative Expenses	(627,306)
Other	26,207
Net Change in Fund Fiduciary Net Position	\$ 43,652,407
Fund Fiduciary Net Position - (beginning of year)	<u>495,206,739</u>
Fund Fiduciary Net Position - (end of year)	<u>\$ 538,859,146</u>
 <b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	 \$ 214,853,200

Valuation Date October 1, 2015

**Certain Key Assumptions**

Investment Return Assumption 7.95%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

**Net Pension Liability**  
**Using Assumptions Required Under 112.664(1)(b), F.S.**

Measurement Date	<u>September 30, 2016</u>
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 15,536,451
Interest	54,114,079
Benefit Changes	24,298
Difference Between Actual and Expected Experience	2,144,118
Assumption Changes	4,628,187
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Other	0
Net Change in Total Pension Liability	\$ 47,384,596
Total Pension Liability (TPL) - (beginning of year)	<u>903,820,304</u>
Total Pension Liability (TPL) - (end of year)	<u>\$ 951,204,900</u>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 23,908,967
Contributions - State	2,445,532
Contributions - Member	2,819,814
Net Investment Income	44,141,730
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Administrative Expenses	(627,306)
Other	26,207
Net Change in Fund Fiduciary Net Position	\$ 43,652,407
Fund Fiduciary Net Position - (beginning of year)	<u>495,206,739</u>
Fund Fiduciary Net Position - (end of year)	<u>\$ 538,859,146</u>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ 412,345,754</b>

Valuation Date October 1, 2015

**Certain Key Assumptions**

Investment Return Assumption 5.95%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

**Net Pension Liability**

**Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption**

Measurement Date	<u>September 30, 2016</u>
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 6,286,546
Interest	57,934,382
Benefit Changes	20,978
Difference Between Actual and Expected Experience	(1,912,972)
Assumption Changes	3,457,265
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Other	0
Net Change in Total Pension Liability	\$ 36,723,662
Total Pension Liability (TPL) - (beginning of year)	586,805,287
Total Pension Liability (TPL) - (end of year)	<u>\$ 623,528,949</u>
<b>B. <u>Fund Fiduciary Net Position</u></b>	
Contributions - City	\$ 23,908,967
Contributions - State	2,445,532
Contributions - Member	2,819,814
Net Investment Income	44,141,730
Benefit Payments	(28,838,780)
Contribution Refunds	(223,757)
Administrative Expenses	(627,306)
Other	26,207
Net Change in Fund Fiduciary Net Position	\$ 43,652,407
Fund Fiduciary Net Position - (beginning of year)	495,206,739
Fund Fiduciary Net Position - (end of year)	<u>\$ 538,859,146</u>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	\$ 84,669,803

Valuation Date October 1, 2015

**Certain Key Assumptions**

Investment Return Assumption 9.95%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68  
and Using Assumptions Required Under 112.664(1)(a), F.S.

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2017	\$ 423,429,106	\$ 32,126,085	\$ 31,323,471	\$ 424,231,720
2018	424,231,720	32,080,319	33,904,713	422,407,326
2019	422,407,326	31,861,803	35,663,534	418,605,595
2020	418,605,595	31,495,806	37,215,978	412,885,423
2021	412,885,423	30,963,166	39,125,116	404,723,473
2022	404,723,473	30,240,803	40,959,130	394,005,146
2023	394,005,146	29,313,884	42,854,671	380,464,359
2024	380,464,359	28,172,415	44,551,036	364,085,738
2025	364,085,738	26,819,798	45,939,059	344,966,477
2026	344,966,477	25,249,011	47,366,321	322,849,167
2027	322,849,167	23,447,122	48,657,756	297,638,533
2028	297,638,533	21,402,146	49,918,817	269,121,862
2029	269,121,862	19,106,346	50,935,101	237,293,107
2030	237,293,107	16,550,524	51,912,775	201,930,856
2031	201,930,856	13,718,223	52,827,377	162,821,702
2032	162,821,702	10,592,210	53,687,770	119,726,142
2033	119,726,142	7,153,865	54,486,818	72,393,189
2034	72,393,189	3,381,827	55,260,805	20,514,211
2035	20,514,211	228,019	56,006,606	-
2036	-	-	56,727,622	-
2037	-	-	57,430,511	-
2038	-	-	58,051,655	-
2039	-	-	58,643,236	-
2040	-	-	59,131,559	-
2041	-	-	59,525,098	-
2042	-	-	59,810,866	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 18.33

**Certain Key Assumptions**

Investment return assumption 7.9%

**Mortality Table:**

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Member or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.**

**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
Using Assumptions Required Under 112.664(1)(b), F.S.

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2017	\$ 423,429,106	\$ 23,990,038	\$ 31,323,471	\$ 416,095,673
2018	416,095,673	23,475,596	33,904,713	405,666,556
2019	405,666,556	22,804,561	35,663,534	392,807,583
2020	392,807,583	21,996,703	37,215,978	377,588,308
2021	377,588,308	21,038,287	39,125,116	359,501,479
2022	359,501,479	19,913,065	40,959,130	338,455,414
2023	338,455,414	18,611,300	42,854,671	314,212,043
2024	314,212,043	17,127,202	44,551,036	286,788,209
2025	286,788,209	15,465,226	45,939,059	256,314,376
2026	256,314,376	13,622,056	47,366,321	222,570,111
2027	222,570,111	11,590,234	48,657,756	185,502,589
2028	185,502,589	9,363,302	49,918,817	144,947,074
2029	144,947,074	6,938,332	50,935,101	100,950,305
2030	100,950,305	4,311,551	51,912,775	53,349,081
2031	53,349,081	1,474,106	52,827,377	1,995,810
2032	1,995,810	-	53,687,770	-
2033	-	-	54,486,818	-
2034	-	-	55,260,805	-
2035	-	-	56,006,606	-
2036	-	-	56,727,622	-
2037	-	-	57,430,511	-
2038	-	-	58,051,655	-
2039	-	-	58,643,236	-
2040	-	-	59,131,559	-
2041	-	-	59,525,098	-
2042	-	-	59,810,866	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 15.00

**Certain Key Assumptions**

Investment return assumption 5.9%

Mortality Table:

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Member or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.**

**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2017	\$ 423,429,106	\$ 40,263,982	\$ 31,323,471	\$ 432,369,617
2018	432,369,617	41,012,670	33,904,713	439,477,574
2019	439,477,574	41,623,401	35,663,534	445,437,441
2020	445,437,441	42,131,378	37,215,978	450,352,841
2021	450,352,841	42,517,102	39,125,116	453,744,827
2022	453,744,827	42,755,977	40,959,130	455,541,674
2023	455,541,674	42,833,683	42,854,671	455,520,686
2024	455,520,686	42,741,949	44,551,036	453,711,599
2025	453,711,599	42,489,490	45,939,059	450,262,030
2026	450,262,030	42,072,550	47,366,321	444,968,259
2027	444,968,259	41,480,212	48,657,756	437,790,715
2028	437,790,715	40,702,986	49,918,817	428,574,884
2029	428,574,884	39,736,906	50,935,101	417,376,689
2030	417,376,689	38,576,613	51,912,775	404,040,527
2031	404,040,527	37,207,995	52,827,377	388,421,145
2032	388,421,145	35,616,202	53,687,770	370,349,577
2033	370,349,577	33,784,886	54,486,818	349,647,645
2034	349,647,645	31,694,488	55,260,805	326,081,328
2035	326,081,328	29,322,006	56,006,606	299,396,728
2036	299,396,728	26,642,124	56,727,622	269,311,230
2037	269,311,230	23,626,511	57,430,511	235,507,230
2038	235,507,230	20,247,086	58,051,655	197,702,661
2039	197,702,661	16,473,168	58,643,236	155,532,593
2040	155,532,593	12,272,522	59,131,559	108,673,556
2041	108,673,556	7,612,678	59,525,098	56,761,136
2042	56,761,136	2,462,880	59,810,866	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 25.92

**Certain Key Assumptions**

Investment return assumption 9.9%  
Mortality Table:

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Member or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.**

<b>ACTUARIALLY DETERMINED CONTRIBUTION</b>			
	Valuation Assumptions and 112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	112.664(1)(a), F.S. Assumptions Plus 2% on Investment Return Assumption
A. Valuation Date	October 1, 2016	October 1, 2016	October 1, 2016
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2018	September 30, 2018	September 30, 2018
C. Annual Payroll of Active Employees	\$ 26,123,963	\$ 26,123,963	\$ 26,123,963
D. Total Minimum Funding Requirement			
1. Total Normal Cost	\$ 9,801,798	\$ 15,436,597	\$ 6,568,542
2. Annual Payment to Amortize Unfunded Actuarial Liability	20,465,889	31,973,124	10,076,659
3. Interest Adjustment	1,450,730	1,709,836	992,137
4. Total Minimum Funding Requirement	\$ 31,718,417	\$ 49,119,557	\$ 17,637,338
E. Expected Payroll of Active Employees for Following Fund Year (\$ / % of pay) (C x 1.000)	\$ 26,123,963 100.00%	\$ 26,123,963 100.00%	\$ 26,123,963 100.00%
F. Expected Contribution Sources (\$ / % of pay)			
1. City	\$ 26,750,473 102.40%	\$ 44,151,613 169.01%	\$ 12,669,394 48.50%
2. Members	2,522,412 9.66%	2,522,412 9.66%	2,522,412 9.66%
3. State	2,445,532 9.36%	2,445,532 9.36%	2,445,532 9.36%
4. Total	\$ 31,718,417 121.42%	\$ 49,119,557 188.02%	\$ 17,637,338 67.51%

**Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments**

<u>Amortization Base</u>	Current Unfunded <u>Liabilities</u>	<u>Amortization Payment</u>			Remaining Funding <u>Period</u>
		<u>Valuation and</u> 112.664(1)(a), F.S. <u>Assumptions</u>	112.664(1)(b), F.S. <u>Assumptions</u>	112.664(1)(a), F.S. <u>Assumptions Plus 2%</u>	
10/01/2003 Gain and Loss Bases	\$ 12,864,352	\$ 1,900,618	\$ 1,778,208	\$ 2,024,478	9 years
10/01/2003 Others	749,993	110,806	103,670	118,027	9 years
10/01/2003 Plan Amendment	63,331,856	6,391,837	5,666,945	7,139,594	17 years
10/01/2004 Plan Amendment	40,088,954	3,936,929	3,469,994	4,419,249	18 years
10/01/2004 Plan Amendment	365,720	35,915	31,656	40,316	18 years
10/01/2006 Assumption Change	7,120,970	667,190	581,500	755,891	20 years
10/01/2006 Plan Amendment	30,984,423	2,903,043	2,530,193	3,288,998	20 years
10/01/2006 Plan Amendment	2,428,422	227,528	198,305	257,777	20 years
10/01/2009 Assumption Change	13,402,293	1,187,943	1,019,419	1,362,705	23 years
10/01/2009 Method Change	26,406,170	2,340,572	2,008,534	2,684,901	23 years
05/01/2010 Plan Amendment	(35,192,012)	(3,091,080)	(2,645,038)	(3,553,711)	23.583 years
10/01/2010 Actuarial (Gain) / Loss	13,993,538	1,221,512	1,043,163	1,406,513	24 years
10/01/2011 Actuarial (Gain) / Loss	10,933,869	941,183	800,010	1,087,637	25 years
10/01/2011 Assumption Change	(1,703,526)	(146,639)	(124,644)	(169,457)	25 years
10/01/2012 Actuarial (Gain) / Loss	4,452,771	378,425	320,211	438,814	26 years
10/01/2013 Actuarial (Gain) / Loss	(646,047)	(54,266)	(45,718)	(63,132)	27 years
10/01/2013 Plan Amendment	766,121	64,352	54,216	74,866	27 years
10/01/2014 Actuarial (Gain) / Loss	(5,082,803)	(422,389)	(354,357)	(492,932)	28 years
10/01/2014 Plan Amendment	13,113	1,090	914	1,272	28 years
10/01/2015 Actuarial (Gain) / Loss	4,119,515	338,987	283,233	396,775	29 years
10/01/2015 Plan Amendment	9,239	760	635	890	29 years
10/01/2015 Assumption Change	8,521,487	701,218	585,887	820,754	29 years
10/01/2016 Actuarial (Gain) / Loss	4,391,458	358,116	298,044	420,347	30 years
10/01/2016 Assumption Change	5,790,909	472,239	393,023	554,301	30 years
10/01/2016 Assumption Change - 112.664(1)(b), F.S. Assumptions	205,913,200	N/A	13,975,121	N/A	30 years
10/01/2016 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(135,168,495)	N/A	N/A	(12,938,214)	30 years

**SECTION B**

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**SUMMARY OF FUND PROVISIONS**

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

A. Effective Date:

October 1, 1973, revised and restated as of February 19, 1981. Most recently amended Ordinance 1824.

B. Eligibility Requirements:

1. Participants in previous Retirement Plan as of February 19, 1981 are automatically and immediately included.
2. Mandatory participation (with satisfactory physical) for Police Officers and Firefighters upon date of hire or attainment of age 18, if later. The Fire Chief and Police Chief may elect to participate.

C. Continuous Service:

Years and completed months of uninterrupted service from the date of hire to date of retirement or termination.

D. Earnings:

Base wages, regular longevity, overtime, voluntary deductions and IRC 457 deferred compensation. Earnings shall include payment of up to 1,000 hours of accrued unused sick and vacation leave, but limited to amounts accrued as of May 1, 2010. Maximum annual earnings limited to \$265,000 subject to annual increase.

E. Average Monthly Earnings:

Average monthly earnings (AME) during the highest two years of continuous service for Firefighters and Police Officers preceding the date on which the participant retires or terminates.

F. Regular Wages:

Base pay including any incentive pay, regular longevity, assignment pay and any current or future additional pensionable compensation, but excluding overtime or accrued unused leave. Regular wages shall be used to calculate the maximum retirement benefit for Firefighters hired on or after April 1, 2006.

G. Average Monthly Regular Wages:

Average monthly regular wages coinciding with the highest two years of continuous service for Firefighters preceding the date on which the participant retires or terminates, used in the AME.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

H. Normal Retirement:

1. Eligibility:

Earliest of:

- (a) Attainment of age 50 and completion of 10 years of continuous service.
- (b) Completion of 20 years of continuous service.

2. Benefit:

- (a) For Firefighters, 3.0% times AME times years of Continuous Service. Maximum 80% of average monthly earnings for the highest two years of continuous service.

Firefighters hired on or before June 18, 2003 shall receive a benefit amount equal to 4.0% per year of continuous service prior to May 1, 2010 plus 3.5% per year of continuous service after April 30, 2010 times AME - maximum 80% of AME, provided they retire or enter the DROP anytime on or after attaining age 50 with 10 years of continuous service but no later than the date they accrue the maximum 80% benefit.

Firefighters hired after June 18, 2003 but before May 1, 2010 shall receive a benefit amount equal to 4.0% per year of continuous service prior to May 1, 2010 plus 3.5% per year of continuous service after April 30, 2010 times AME - maximum 80% of AME. To obtain this benefit, such Firefighters were previously required to retire or enter the DROP upon the earlier of completion of 20 years of continuous service or attainment of age 50 with 10 years of service. To obtain this benefit, such Firefighters now are required to retire or enter the DROP no earlier than upon completion of 20 years of continuous service or attainment of age 50 with 10 years of service, and no later than the date they accrue the same accrual percentage they would have reached under the terms of the Fund in effect prior to April 30, 2010.

In no event shall the benefit for firefighters hired after March 31, 2006 exceed 98% of average monthly regular wages.

Firefighters hired after April 30, 2010 shall receive a benefit amount equal to 3.0% times AME times years of continuous service – maximum 80% of AME.

- (b) For Police Officers, 3.0% times AME times years of Continuous Service up to 20 years of service plus 3.5% times AME times years of Continuous Service in excess of 20 years. Maximum 80% of average monthly earnings for the highest two years of continuous service.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

H. Normal Retirement (cont'd):

Police Officers hired before May 1, 2010 shall receive a benefit amount equal to 4.0% per year of continuous service prior to May 1, 2010 plus 3.5% per year of continuous service after April 30, 2010 times AME - maximum 80% of AME, provided they retire or enter the DROP anytime on or after attaining age 50 with 10 years of continuous service but no later than the date they accrue the maximum 80% benefit.

Police Officers hired after April 30, 2010 shall receive a benefit amount equal to 3.0% times AME times years of continuous service – maximum 80% of AME.

I. Deferred Retirement:

1. Eligibility:

Any first day of a month past Normal Retirement Date.

2. Benefit:

Benefit calculated as for Normal Retirement based upon service and pay to Deferred Retirement Date.

J. Disability Retirement:

1. Eligibility:

Totally and permanently disabled meaning incapacity to perform regular duty as Firefighter or Police Officer (and completion of at least 10 years of continuous service for non-service incurred disability).

2. Benefit:

(a) Service Incurred:

Greater of:

- Accrued benefit
- 66 2/3% of monthly earnings rate on date of disability.

(b) Non-Service Incurred:

Greater of:

- Accrued benefit
- 35% of AME on date of disability.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

K. Death Benefit:

1. Service Incurred:

To spouse, 50% of AME payable for life. To unmarried children, 5% of AME until death or attainment of age 18 (if full time student attainment of age 22). Total monthly benefit not to exceed 60% of AME. Upon death of spouse, the 5% child allowance shall be increased to 10%, subject to a maximum combined total of 35% of AME.

Benefit above reduced by the actuarial equivalent of payment of:

- if the Member had less than ten (10) years of Continuous Service, Member contributions to the beneficiary with 3% simple interest, or
- if the Member had ten (10) or more years of Continuous Service, benefit otherwise payable to the Member at the Member's Normal Retirement Date, if applicable, for ten years certain.

2. Non-Service Incurred:

- Less than five (5) years of Continuous Service, the designated beneficiary receives a lump sum of \$2,500 or return of Member contributions with 3% interest, whichever is greater.
- Five (5) or more years of Continuous Service, the designated beneficiary receives a lump sum of the greater of Member contributions (without interest) or \$2,500, plus, if married, the spouse receives a monthly benefit equal to 50% of the Accrued Benefit as of Member's date of death but not less than 20% of the monthly Earnings rate. To unmarried children of the deceased Member, same benefits as are payable for Service Incurred death. Combined monthly benefit not to exceed 50% of AME, or 35% of AME after the death or remarriage of spouse.

Benefit above reduced by the actuarial equivalent of payment of:

- if the Member had ten (10) or more years of Continuous Service, benefit otherwise payable to the Member at the Member's Normal Retirement Date, if applicable, for ten years certain.

L. Employee Contributions:

10.4% (6% prior to April 1, 1991) of annual earnings until completion of 26 2/3 years of Continuous Service.

For Firefighters and Police Officers hired on or after May 1, 2010, 7% of annual earnings until completion of 26 2/3 years of Continuous Service.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

M. Vested Benefit Upon Termination:

1. Eligibility:

Completion of at least ten (10) years of Continuous Service at date of termination.

2. Benefit:

Accrued benefit based upon AME and years of Continuous Service as of date of termination payable at attainment of age 50.

3. Alternate Benefit:

In lieu of the above, deferred benefit payable at Normal Retirement Date; otherwise, a Member can elect to withdraw his employee contributions plus 3% simple interest per annum.

N. Termination Benefit:

1. Eligibility:

Termination of service prior to eligibility for vested benefit upon termination.

2. Benefit:

Refund of Member contributions plus 3% simple interest per annum.

O. Normal Form of Payment of Retirement Income:

Monthly accrued benefit for ten (10) years certain and life thereafter with 100% of benefit continuing to spouse for one year and 50% of benefit payable to spouse thereafter until death.

Other Options:

Actuarially equivalent joint and survivor or joint and last survivor at 25%, 50%, 66 2/3%, 75%, 100%; life annuity; or ten years certain and life; or other option (except lump sum), subject to Board approval.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

P. **Deferred Retirement Option Plan (DROP):**

1. **Eligibility:**

A Member who has reached Normal Retirement Date is eligible to elect to participate in DROP. A Firefighter who reaches Normal Retirement Date before age 50 may participate for the lesser of five years or until age 55, provided that Firefighters employed as of December 20, 2000 and hired after their 30th birthday, may participate in the DROP no later than completion of 20 years of Continuous Service in order to participate in the DROP for a full five years. A Police Officer hired after his 25th birthday may participate in the DROP no later than completion of 25 years of Continuous Service in order to participate in the DROP for a full five years. An election to participate in the DROP is irrevocable.

2. **Benefit:**

Accrued benefit as of entry into DROP.

3. **Interest Credits:**

Members entering the DROP prior to May 1, 2010 could elect annually in advance interest credits of a fixed 8% per annum or Fund return.

Members hired before May 1, 2010 entering the DROP after April 30, 2010, may elect annually in advance DROP interest credits based upon either Fund gross return or Fund gross return subject to a minimum of 5% and a maximum of 8% per annum.

For Members hired after April 30, 2010 entering the DROP, DROP interest credits will be based upon Fund gross return.

4. **DROP Loan Program:**

Current DROP participants or retirees may borrow against their DROP account balance up to the maximum amount permitted by the IRS.

No interest shall be earned or paid by the Plan on funds loaned from the DROP account until repaid.

The DROP loan program administered in accordance with loan policy adopted by the Board of Trustees and shall comply with all applicable IRS rules and regulations governing such loans.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

Q. 13th Check Program (Police Officers only)

1. Eligibility:

Service or disabled retired Police Officer or beneficiary receiving pension or DROP benefits.

2. Benefit:

For Police Officers retired prior to October 1, 2003, up to 2% of investment return in excess of 8% based upon present value of future pension payments of current Police Officer members, not to exceed outstanding balance of cumulative net actuarial gains. Any distributable amount allocated to eligible members based upon years of service with prorata share during first year of entitlement. See Item R. regarding election.

For Police Officers retired on or after October 1, 2003 but before October 1, 2006, up to 2% of investment return in excess of 9% based upon present value of future pension payments of current Police Officer members, not to exceed outstanding balance of cumulative net actuarial gains. Any distributable amount allocated to eligible members based upon years of service with prorata share during first year of entitlement. See Item R. regarding election.

For Police Officers retired on or after October 1, 2006 there is no 13th check.

R. Cost of Living Adjustment

For Firefighters, effective April 1, 2005 and each April 1st thereafter, retirees, beneficiaries and DROP participants who were receiving benefits on June 18, 2003 will receive either a 2% cost of living adjustment or an adjustment equal to the total percentage increase in base wages, excluding performance or merit adjustments, whichever is greater.

For Firefighters, effective April 1, 2005 and each April 1st thereafter, retirees, beneficiaries and DROP participants who were hired on or before June 18, 2003 and retire or enter the DROP prior to May 1, 2010 and anytime on or after attaining age 50 with 10 years of service but no later than attainment of 20 years of service will receive either a 2% cost of living adjustment or an adjustment equal to the total percentage increase in base wages, excluding performance or merit adjustments, whichever is greater. For those receiving for less than one year the increase shall be prorated.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

R. Cost of Living Adjustment (cont'd)

Firefighter members who were hired prior to April 1, 2006 who retire prior to May 1, 2010, current retirees and DROP participants shall have the option within sixty (60) days of the effective date of Ordinance 2006-10 to irrevocably elect to receive the cost of living adjustment provided above in lieu of their current cost of living adjustment.

For Firefighters, effective April 1, 2011 and each April 1st thereafter, retirees, beneficiaries and DROP participants who were hired before May 1, 2010 and retire or enter the DROP after April 30, 2010 at their normal retirement age receive a 2% cost of living adjustment – prorated for less than one year receipt of benefits.

For Firefighters hired after April 30, 2010, the cost of living adjustment is 1.5%.

Police Officer retirees, DROPs, disabilities and their beneficiaries who retired prior to October 1, 2003 eligible for any supplemental benefit based upon an 8% Fund return threshold subject to cumulative actuarial gains may elect within 60 days to replace this supplemental benefit eligibility entitlement with an annual 2.0% cost of living adjustment retroactive to October 1, 2004.

Police Officer retirees, DROPs, disabilities and their beneficiaries who retired on or after October 1, 2003 but not later than September 30, 2006 or were in the DROP on or after October 1, 2003 and entered the DROP not later than September 30, 2006 eligible for any supplemental benefit based upon a 9% Fund return threshold subject to cumulative actuarial gains along with a 1.5% cost of living adjustment effective October 1, 2009 and each October 1st thereafter may elect within 60 days to replace this supplemental benefit eligibility and 1.5% deferred cost of living adjustment entitlement with an annual 2.5% cost of living adjustment retroactive to October 1, 2004.

Police Officer retirees, DROPs, disabilities and their beneficiaries who retire or enter the DROP on or after October 1, 2006 but not later than April 30, 2010 will receive a 3.0% cost of living adjustment effective October 1, 2009 and each October 1st thereafter.

For Police Officers, effective October 1, 2010 and each October 1st thereafter, retirees, beneficiaries and DROP participants who were hired before May 1, 2010 and retire or enter the DROP after April 30, 2010 at their normal retirement age receive a 2% cost of living adjustment – prorated for less than one year receipt of benefits.

For Police Officers hired after April 30, 2010, the cost of living adjustment is 1.5%.

**Outline of Principal Provisions of the Retirement Plan**  
**(as of October 1, 2016)**

S. Excess Benefit Plan

An excess benefits plan is established to pay retirement benefits above the limits permitted by the Internal Revenue Code. Excess Benefit Plan benefits are not included in this actuarial valuation.

T. Additional Benefits Upon Rehire

Retired members receiving benefits who are rehired as certified police officers or firefighters who work 30 or more hours per week and 52 weeks per year will again become contributing members of the Fund and accrue benefits during their period of reemployment.

Rehired members shall continue to receive retirement benefit, earnings on DROP accounts and may elect to receive payments from DROP accounts.

U. Changes Since Previous Valuation

None.

## SECTION C

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### **ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING**

**Actuarial Assumptions and Actuarial Cost Methods**  
**(as of October 1, 2016)**

A. Mortality

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.

Sample Ages (2016)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	29.61	32.40	29.10
60	24.73	27.36	24.52	27.21
62	22.86	25.40	22.74	25.29

  

Sample Ages (2036)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	31.85	34.35	31.35
60	27.00	29.30	26.81	29.17
62	25.12	27.32	25.01	27.23

B. Investment Return

7.9%, compounded annually, net of investment expenses - includes inflation at 2.75%.

C. Allowances for Expenses or Contingencies

Average of actual administrative expenses during prior three (3) years.

**Actuarial Assumptions and Actuarial Cost Methods**  
**(as of October 1, 2016)**

D. Employee Withdrawal Rates

Withdrawal rates for males and for females were used in accordance with the following illustrative example:

<u>Age</u>	<u>Withdrawal Rates</u> <u>Per 100 Employees</u>			
	<u>Males</u>		<u>Females</u>	
	<u>First 5 Years</u>	<u>5+ Years</u>	<u>First 5 Years</u>	<u>5+ Years</u>
20	2.50	2.19	5.75	3.93
25	2.50	1.59	5.75	2.58
30	2.50	1.16	5.75	1.79
35	2.50	0.68	5.75	1.08
40	2.50	0.38	5.75	0.76
45	2.50	0.18	5.75	0.41
50	2.50	0.03	5.75	0.23
55	2.50	0.02	5.75	0.14
60	2.50	0.00	5.75	0.04
62 & Over	0.00	0.00	0.00	0.00

E. Disability Rates

1. The 1985 Disability Study - Class 2, with separate rate for males and females.
2. 80% of disabilities are assumed to be service incurred - 20% non-service incurred.

F. Payroll Growth Assumption

5.3%, per annum - not greater than historical 10-year average (0.0% as of October 1, 2016).

G. Load for Future Rehires

The normal cost and accrued liabilities are loaded 0.1% for assumed future rehired members.

**Actuarial Assumptions and Actuarial Cost Methods**  
**(as of October 1, 2016)**

H. Salary Increase Factors

Current salary is assumed to increase at a rate based on the table below per year until retirement - includes wage inflation of 3.0%.

<u>Service</u>	<u>Salary Increase</u>
0 years	8%
1	8%
2	7%
3	6%
4	5%
5	4%
6	4%
7+ years	3%

For members hired before May 1, 2010, average monthly earnings for retirements and DROPs are increased between 5.5% and 28.0% to reflect additional earnings during the averaging period including the inclusion in pensionable earnings of up to 1,000 hours of accrued unused leave as of April 30, 2010 payable at retirement or DROP entry.

The increase is calculated as follows:

$$5.5\% + \frac{\text{Total Hours of Accrued Unused Leave (1,000 maximum)}}{1,000} \times 22.5\%$$

For members hired on or after May 1, 2010, average monthly earnings for retirements and DROPs are increased 5.5% to reflect additional earnings during the averaging period.

The assumed salary increase rate after 7+ years of service reflects frozen longevity pay as of April 30, 2010.

I. Assumed Retirement Age

The retirement rates ***for members hired before May 1, 2010 who are expected to reach the 80% of AME maximum benefit in the 21st year of service*** are as follows:

1. 75% of members are assumed to retire the first year after attaining age fifty (50) and ten (10) years of credited service.
2. 50% of members are assumed to retire each year thereafter until reaching twenty (20) years of credited service.
3. 60% of members are assumed to retire after completing twenty (20) years of credited service.
4. 100% of members are assumed to retire upon attainment of twenty-one (21) years of credited service.

**Actuarial Assumptions and Actuarial Cost Methods**  
**(as of October 1, 2016)**

I. Assumed Retirement Age (cont'd)

The retirement rates **for members hired before May 1, 2010 who are expected to reach the 80% of AME maximum benefit in the 22nd year of service** are as follows:

1. 70% of members are assumed to retire the first year after attaining age fifty (50) and ten (10) years of credited service.
2. 20% of members are assumed to retire each year thereafter until reaching twenty (20) years of credited service.
3. 60% of members are assumed to retire after completing twenty (20) years of credited service.
4. 15% of members are assumed to retire after completing twenty-one (21) years of credited service.
5. 100% of members are assumed to retire upon attainment of twenty-two (22) years of credited service.

The retirement rates **for members hired before May 1, 2010 who are expected to reach the 80% of AME maximum benefit in the 23rd year of service** are as follows:

1. 60% of members are assumed to retire the first year after attaining age fifty (50) and ten (10) years of credited service.
2. 18% of members are assumed to retire each year thereafter until reaching twenty (20) years of credited service.
3. 40% of members are assumed to retire after completing twenty (20) years of credited service.
4. 15% of members are assumed to retire after completing twenty-one (21) years of credited service.
5. 15% of members are assumed to retire after completing twenty-two (22) years of credited service.
6. 100% of members are assumed to retire upon attainment of twenty-three (23) years of credited service.

**For Firefighters hired after June 18, 2003 but before May 1, 2010 who are expected to reach age 50 before completion of twenty (20) years of service**, 100% are assumed to retire upon reaching the same multiplier (% of AME) they would have reached under the Plan in effect prior to April 30, 2010.

The retirement rates **for members hired on or after May 1, 2010** are as follows:

1. 50% of members who complete ten (10) years of service after reaching age 50 are assumed to retire upon completion of ten (10) years of credited service.
2. 15% of members who reach age 50 after completion of ten (10) years of credited service are assumed to retire upon reaching age 50.
3. 15% of members are assumed to retire each year thereafter, until reaching twenty (20) years of credited service.
4. 20% of members are assumed to retire upon reaching twenty (20) years of credited service.
5. 15% of members are assumed to retire each year thereafter, until reaching twenty-five (25) years of credited service.
6. 100% of members are assumed to retire upon reaching twenty-five (25) years of credited service.

**Actuarial Assumptions and Actuarial Cost Methods**  
**(as of October 1, 2016)**

J. Marital Assumptions

1. 50% of deaths are assumed to be service incurred - 50% non-service incurred.
2. There are no children eligible for benefits.
3. 95% of participants are married.
4. Spouses are assumed to be the same age as members.

K. Cost of Living Adjustment

Firefighters: For Firefighters who retired or entered the DROP prior to May 1, 2010, 2.0% for those who elected the fluctuating COLA and 3.0% for those who elected the fixed COLA. 2.0% for Firefighters hired before May 1, 2010 who are expected to retire or enter the DROP after April 30, 2010. 1.5% for Firefighters hired after April 30, 2010.

Police Officers: 0.0%, 2.0% or 2.5% based upon election for Police Officers who retired or entered the DROP prior to October 1, 2006. 3.0% for Police Officers who retired or entered the DROP on or after October 1, 2006 but before May 1, 2010. 2.0% for Police Officers hired before May 1, 2010 who are expected to retire or enter the DROP after April 30, 2010. 1.5% for Police Officers hired after April 30, 2010.

L. Smoothed Asset Valuation Method

Smoothed actuarial value of assets is equal to the expected smoothed actuarial value of assets adjusted by 20% of the difference between the expected smoothed actuarial value and market value.

M. Cost Method

Normal Retirement, Termination, Disability, and Death Benefits: Entry Age Normal Cost Method

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his entry age to his assumed retirement age to fund his estimated benefits, assuming the Fund had always been in effect. The normal cost for the Fund is the sum of such amounts for all employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the Fund is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the assets of the Fund.

The DROP accounts balance is included in the assets and liabilities as of the valuation date.

**Actuarial Assumptions and Actuarial Cost Methods**  
**(as of October 1, 2016)**

N. Changes Since Previous Valuation

Mortality was:

For healthy male participants, RP-2000 Annuitant Male Mortality Table with 10% White Collar / 90% Blue Collar Adjustment, with fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants, RP-2000 Annuitant Female Mortality Table with White Collar Adjustment, with fully generational mortality improvements projected to each future decrement date with Scale BB.

For disabled male participants, 60% RP-2000 Disabled Male Mortality Table setback four years / 40% RP-2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP-2000 Disabled Female Mortality Table set forward two years / 40% RP-2000 Annuitant Female Mortality Table with White Collar Adjustment, without projected mortality improvements.

Investment Return was:

7.95%, compounded annually, net of investment expenses.

## **SECTION D**

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### **GLOSSARY**

## GLOSSARY

<b><i>Actuarial Accrued Liability</i></b>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<b><i>Actuarial Assumptions</i></b>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members and other items.
<b><i>Actuarial Cost Method</i></b>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<b><i>Actuarial Equivalent</i></b>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b><i>Actuarial Present Value</i></b>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<b><i>Actuarial Present Value of Future Benefits</i></b>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<b><i>Actuarial Valuation</i></b>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.
<b><i>Actuarial Value of Assets</i></b>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution.

<b><i>Amortization Method</i></b>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<b><i>Amortization Payment</i></b>	That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<b><i>Amortization Period</i></b>	The period used in calculating the Amortization Payment.
<b><i>Annual Required Contribution</i></b>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.
<b><i>Closed Amortization Period</i></b>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<b><i>Employer Normal Cost</i></b>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<b><i>Equivalent Single Amortization Period</i></b>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<b><i>Experience Gain/Loss</i></b>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. Losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<b><i>Funded Ratio</i></b>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued

Liability.

**GASB**

Governmental Accounting Standards Board.

**GASB No. 67 and  
GASB No. 68**

These are the governmental accounting standards that set the accounting rules for public retirement plans and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the plans themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement plans.

**Normal Cost**

The annual cost assigned, under the Actuarial Cost Method, to the current plan year.

**Open Amortization Period**

An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

**Unfunded Actuarial Accrued  
Liability**

The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.

**Valuation Date**

The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.