



September 28, 2017

Mr. Shawn Boyle
Finance and Administrative Services Director
City of Winter Springs
1126 East State Road 434
Winter Springs, Florida 32708

**Re: City of Winter Springs Defined Benefit Plan
October 1, 2016 Chapter 112.664 Compliance Report**

Dear Board Members:

As requested, we are pleased to enclose eleven (11) copies of the October 1, 2016 Chapter 112.664 Compliance Report for the City of Winter Springs Defined Benefit Plan (Plan).

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

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

- 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
- for the previous five years - 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
- the Plan's funded ratio as determined in the most recent actuarial valuation – 78.5% 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". The signature is written in a cursive, flowing style.

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

Enclosures

City of Winter Springs Defined Benefit Plan

CHAPTER 112.664, F.S. COMPLIANCE REPORT

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





September 28, 2017

Board of Trustees
c/o Mr. Shawn Boyle
Finance and Administrative Services Director
City of Winter Springs Defined Benefit Plan
1126 East State Road 434
Winter Springs, Florida 32708

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 of Winter Springs Defined Benefit Plan (Plan) 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: 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. 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 Plan benefits, Plan provisions and Plan 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 Plan 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 assumptions are based on past and expected future Plan experience and represent an estimate of future Plan experience. The mortality assumptions are prescribed by statute and were last updated in 2016.

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 Plan experience nor an 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. The inclusion of the additional 2% higher assumption shows a more complete assessment of the range of potential 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, Plan assets will be sufficient to pay all Plan benefits, future contributions are expected to remain relatively stable as a percentage of payroll and the funded status of the Plan is expected to improve. Plan minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act with normal cost determined as a level percent of covered payroll and a level dollar amortization payment using an initial closed amortization period of 30 years.

The Plan's funded ratio as of October 1, 2016 is 78.5% defined as the ratio of the market value of Plan assets to the actuarial accrued liability.

The Plan's funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Plan 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 Plan 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 Plan 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: September 28, 2017

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SECTION A

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>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 808,281
Interest	4,059,813
Benefit Changes	0
Difference Between Actual and Expected Experience	275,994
Assumption Changes	0
Benefit Payments	(2,450,972)
Other	<u>0</u>
Net Change in Total Pension Liability	\$ 2,693,116
Total Pension Liability (TPL) - (beginning of year)	<u>50,888,868</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 53,581,984</u></u>
 B. <u>Plan Fiduciary Net Position</u>	
Contributions - County and City	\$ 2,586,936
Contributions - Member	479,257
Net Investment Income	4,077,452
Benefit Payments	(2,450,972)
Administrative Expenses	(28,208)
Other	<u>0</u>
Net Change in Plan Fiduciary Net Position	\$ 4,664,465
Plan Fiduciary Net Position - (beginning of year)	<u>37,362,769</u>
Plan Fiduciary Net Position - (end of year)	<u><u>\$ 42,027,234</u></u>
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	 \$ 11,554,750
 Valuation Date	 October 1, 2015

Certain Key Assumptions

Investment Return Assumption 8%

Mortality Table:

Healthy General Members: 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. Healthy Firefighter and Police Officer Members: RP-2000 Combined Healthy Participant Mortality Tables with Blue Collar Adjustment, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA. Disabled Members: RP-2000 Disabled 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.

Measurement Date	<u>September 30, 2016</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 819,021
Interest	4,092,293
Benefit Changes	0
Difference Between Actual and Expected Experience	257,455
Assumption Changes	0
Benefit Payments	(2,450,972)
Other	<u>0</u>
Net Change in Total Pension Liability	\$ 2,717,797
Total Pension Liability (TPL) - (beginning of year)	<u>51,302,677</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 54,020,474</u></u>
 B. <u>Plan Fiduciary Net Position</u>	
Contributions - County and City	\$ 2,586,936
Contributions - Member	479,257
Net Investment Income	4,077,452
Benefit Payments	(2,450,972)
Administrative Expenses	(28,208)
Other	<u>0</u>
Net Change in Plan Fiduciary Net Position	\$ 4,664,465
Plan Fiduciary Net Position - (beginning of year)	<u>37,362,769</u>
Plan Fiduciary Net Position - (end of year)	<u><u>\$ 42,027,234</u></u>
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	 \$ 11,993,240
 Valuation Date	 October 1, 2015

Certain Key Assumptions

Investment Return Assumption 8%

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>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 1,356,387
Interest	3,917,493
Benefit Changes	0
Difference Between Actual and Expected Experience	311,486
Assumption Changes	0
Benefit Payments	(2,450,972)
Other	<u>0</u>
Net Change in Total Pension Liability	\$ 3,134,394
Total Pension Liability (TPL) - (beginning of year)	<u>64,849,156</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 67,983,550</u></u>
 B. <u>Plan Fiduciary Net Position</u>	
Contributions - County and City	\$ 2,586,936
Contributions - Member	479,257
Net Investment Income	4,077,452
Benefit Payments	(2,450,972)
Administrative Expenses	(28,208)
Other	<u>0</u>
Net Change in Plan Fiduciary Net Position	\$ 4,664,465
Plan Fiduciary Net Position - (beginning of year)	<u>37,362,769</u>
Plan Fiduciary Net Position - (end of year)	<u><u>\$ 42,027,234</u></u>
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	 \$ 25,956,316
 Valuation Date	 October 1, 2015

Certain Key Assumptions

Investment Return Assumption 6%

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>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 505,898
Interest	4,116,730
Benefit Changes	0
Difference Between Actual and Expected Experience	211,164
Assumption Changes	0
Benefit Payments	(2,450,972)
Other	0
Net Change in Total Pension Liability	\$ 2,382,820
Total Pension Liability (TPL) - (beginning of year)	<u>41,675,725</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 44,058,545</u></u>
B. <u>Plan Fiduciary Net Position</u>	
Contributions - County and City	\$ 2,586,936
Contributions - Member	479,257
Net Investment Income	4,077,452
Benefit Payments	(2,450,972)
Administrative Expenses	(28,208)
Other	0
Net Change in Plan Fiduciary Net Position	\$ 4,664,465
Plan Fiduciary Net Position - (beginning of year)	<u>37,362,769</u>
Plan Fiduciary Net Position - (end of year)	<u><u>\$ 42,027,234</u></u>
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 2,031,311
Valuation Date	October 1, 2015

Certain Key Assumptions

Investment Return Assumption 10%

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	\$ 42,027,234	\$ 3,243,140	\$ 2,779,726	\$ 42,490,648
2018	42,490,648	3,274,254	2,918,874	42,846,028
2019	42,846,028	3,290,691	3,198,955	42,937,764
2020	42,937,764	3,290,680	3,370,574	42,857,870
2021	42,857,870	3,277,508	3,528,908	42,606,470
2022	42,606,470	3,244,776	3,823,617	42,027,629
2023	42,027,629	3,189,201	4,040,031	41,176,799
2024	41,176,799	3,115,374	4,174,530	40,117,643
2025	40,117,643	3,022,488	4,364,925	38,775,206
2026	38,775,206	2,909,705	4,490,760	37,194,151
2027	37,194,151	2,778,434	4,602,538	35,370,047
2028	35,370,047	2,628,117	4,705,002	33,293,162
2029	33,293,162	2,458,813	4,778,649	30,973,326
2030	30,973,326	2,269,631	4,862,599	28,380,358
2031	28,380,358	2,060,764	4,895,987	25,545,135
2032	25,545,135	1,833,025	4,917,496	22,460,664
2033	22,460,664	1,585,955	4,924,769	19,121,850
2034	19,121,850	1,320,480	4,886,716	15,555,614
2035	15,555,614	1,036,606	4,853,432	11,738,788
2036	11,738,788	734,062	4,788,000	7,684,850
2037	7,684,850	410,123	4,779,237	3,315,736
2038	3,315,736	81,491	4,749,795	-
2039	-	-	4,680,604	-
2040	-	-	4,596,190	-
2041	-	-	4,485,308	-
2042	-	-	4,380,745	-
2043	-	-	4,258,055	-
2044	-	-	4,128,104	-
2045	-	-	4,004,287	-
2046	-	-	3,863,016	-

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, County or Members: 21.67

Certain Key Assumptions

Investment return assumption 8%

Mortality Table:

Firefighter and Police Officer participants: 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. General Employee participants: For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, set back four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include future contributions from the City, County or Members. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, County and Member contributions, the Plan 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	\$ 42,027,234	\$ 2,432,097	\$ 2,779,726	\$ 41,679,605
2018	41,679,605	2,406,757	2,918,874	41,167,488
2019	41,167,488	2,367,009	3,198,955	40,335,542
2020	40,335,542	2,311,564	3,370,574	39,276,532
2021	39,276,532	2,242,923	3,528,908	37,990,547
2022	37,990,547	2,156,271	3,823,617	36,323,201
2023	36,323,201	2,049,260	4,040,031	34,332,430
2024	34,332,430	1,925,481	4,174,530	32,083,381
2025	32,083,381	1,784,406	4,364,925	29,502,862
2026	29,502,862	1,625,521	4,490,760	26,637,623
2027	26,637,623	1,450,006	4,602,538	23,485,091
2028	23,485,091	1,257,554	4,705,002	20,037,643
2029	20,037,643	1,048,335	4,778,649	16,307,329
2030	16,307,329	821,812	4,862,599	12,266,542
2031	12,266,542	578,289	4,895,987	7,948,844
2032	7,948,844	318,535	4,917,496	3,349,883
2033	3,349,883	59,952	4,924,769	-
2034	-	-	4,886,716	-
2035	-	-	4,853,432	-
2036	-	-	4,788,000	-
2037	-	-	4,779,237	-
2038	-	-	4,749,795	-
2039	-	-	4,680,604	-
2040	-	-	4,596,190	-
2041	-	-	4,485,308	-
2042	-	-	4,380,745	-
2043	-	-	4,258,055	-
2044	-	-	4,128,104	-
2045	-	-	4,004,287	-
2046	-	-	3,863,016	-

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, County or Members: 16.67

Certain Key Assumptions

Investment return assumption 6%

Mortality Table:

Firefighter and Police Officer participants: 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. General Employee participants: For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, set back four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include future contributions from the City, County or Members. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, County and Member contributions, the Plan 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	\$ 42,027,234	\$ 4,054,347	\$ 2,779,726	\$ 43,301,855
2018	43,301,855	4,174,382	2,918,874	44,557,363
2019	44,557,363	4,284,982	3,198,955	45,643,390
2020	45,643,390	4,384,424	3,370,574	46,657,240
2021	46,657,240	4,477,358	3,528,908	47,605,690
2022	47,605,690	4,556,472	3,823,617	48,338,545
2023	48,338,545	4,618,206	4,040,031	48,916,720
2024	48,916,720	4,668,844	4,174,530	49,411,034
2025	49,411,034	4,708,112	4,364,925	49,754,221
2026	49,754,221	4,735,714	4,490,760	49,999,175
2027	49,999,175	4,754,243	4,602,538	50,150,880
2028	50,150,880	4,763,944	4,705,002	50,209,822
2029	50,209,822	4,765,907	4,778,649	50,197,080
2030	50,197,080	4,760,152	4,862,599	50,094,633
2031	50,094,633	4,748,125	4,895,987	49,946,771
2032	49,946,771	4,732,191	4,917,496	49,761,466
2033	49,761,466	4,713,272	4,924,769	49,549,969
2034	49,549,969	4,694,154	4,886,716	49,357,407
2035	49,357,407	4,676,674	4,853,432	49,180,649
2036	49,180,649	4,662,491	4,788,000	49,055,140
2037	49,055,140	4,650,408	4,779,237	48,926,311
2038	48,926,311	4,639,096	4,749,795	48,815,612
2039	48,815,612	4,631,720	4,680,604	48,766,728
2040	48,766,728	4,631,337	4,596,190	48,801,875
2041	48,801,875	4,640,771	4,485,308	48,957,338
2042	48,957,338	4,661,898	4,380,745	49,238,491
2043	49,238,491	4,696,562	4,258,055	49,676,998
2044	49,676,998	4,747,350	4,128,104	50,296,244
2045	50,296,244	4,815,883	4,004,287	51,107,840
2046	51,107,840	4,904,584	3,863,016	52,149,408

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, County or Members: 99.99

Certain Key Assumptions

Investment return assumption 10%

Mortality Table:

Firefighter and Police Officer participants: 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. General Employee participants: For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, RP 2000 Disabled Male Mortality Table, set back four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

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

ACTUARIALLY DETERMINED CONTRIBUTION			
	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	\$ 5,916,189	\$ 5,916,189	\$ 5,916,189
D. Total Minimum Funding Requirement			
1. Total Normal Cost	\$ 725,667	\$ 1,181,174	\$ 464,542
2. Annual Payment to Amortize Unfunded Actuarial Liability	1,098,033	1,933,103	275,535
3. Interest Adjustment	<u>85,657</u>	<u>112,046</u>	<u>41,019</u>
4. Total Minimum Funding Requirement	\$ <u>1,909,357</u>	\$ <u>3,226,323</u>	\$ <u>781,096</u>
E. Expected Payroll of Active Employees for Following Plan Year (\$ / % of pay) (C x 1.000)	\$ 5,916,189 100.00%	\$ 5,916,189 100.00%	\$ 5,916,189 100.00%
F. Expected Contribution Sources (\$ / % of pay)			
1. County and City	\$ 1,613,548 27.27%	\$ 2,930,514 49.53%	\$ 485,287 8.20%
2. Member	<u>295,809 5.00%</u>	<u>295,809 5.00%</u>	<u>295,809 5.00%</u>
3. Total	\$ <u>1,909,357 32.27%</u>	\$ <u>3,226,323 54.53%</u>	\$ <u>781,096 13.20%</u>

Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

<u>Amortization Base</u>	<u>Current Unfunded Liabilities</u>	<u>Amortization Payment</u>			<u>Remaining Funding Period</u>
		<u>Valuation and 112.664(1)(a), F.S. Assumptions</u>	<u>112.664(1)(b), F.S. Assumptions</u>	<u>112.664(1)(a), F.S. Assumptions Plus 2%</u>	
10/01/2000 Initial	\$ 1,622,636	\$ 182,241	\$ 164,690	\$ 200,242	14 years
10/01/2002 Assumption Change	(21,573)	(2,257)	(2,014)	(2,507)	16 years
10/01/2003 Plan Amendment	138,402	14,049	12,462	15,685	17 years
10/01/2004 Plan Amendment	212,442	20,989	18,510	23,548	18 years
10/01/2005 Plan Amendment	445,008	42,905	37,625	48,363	19 years
10/01/2006 Plan Amendment	516,833	48,741	42,509	55,188	20 years
10/01/2007 Plan Amendment	533,452	49,311	42,779	56,073	21 years
10/01/2008 Plan Amendment and Assumption Change	2,413,114	219,039	189,055	250,097	22 years
10/01/2008 Method Change	5,393,669	489,586	422,566	559,005	22 years
10/01/2009 Actuarial Loss / (Gain)	2,322,052	207,312	178,050	237,634	23 years
10/01/2010 Actuarial Loss / (Gain)	(431,920)	(37,984)	(32,467)	(43,702)	24 years
10/01/2010 Plan Amendment	(2,504,169)	(220,223)	(188,236)	(253,376)	24 years
10/01/2011 Actuarial Loss / (Gain)	2,754,085	238,888	203,248	275,829	25 years
10/01/2012 Actuarial Loss / (Gain)	934,515	80,046	67,800	92,737	26 years
10/01/2013 Actuarial Loss / (Gain)	(731,562)	(61,944)	(52,243)	(71,997)	27 years
10/01/2014 Actuarial Loss / (Gain)	(782,313)	(65,547)	(55,052)	(76,418)	28 years
10/01/2014 Assumption Change	7,348	616	517	718	28 years
10/01/2015 Actuarial Loss / (Gain)	(315,339)	(26,167)	(21,889)	(30,596)	29 years
10/01/2016 Actuarial Loss / (Gain)	(1,517,855)	(124,840)	(104,029)	(146,375)	30 years
10/01/2016 Assumption Change	526,115	43,272	36,058	50,736	30 years
10/01/2016 Assumption Change - 112.664(1)(b), F.S. Assumptions	14,199,165	N/A	973,164	N/A	30 years
10/01/2016 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(10,010,288)	N/A	N/A	(965,349)	30 years

SECTION B

SUMMARY OF PLAN PROVISIONS

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

A. Effective Date

Plan adopted as a Money Purchase Floor Offset plan on October 1, 1997. Plan amended and restated as a Defined Benefit Plan effective October 1, 2000. Plan most recently amended by Resolution 2011-57 adopted December 12, 2011.

B. Eligibility Requirements

General Employees hired prior to October 1, 2011, Police Officers and Forensic Professionals working 30 or more hours per week are eligible to join the Plan on the first day of the month following completion of six (6) months of service. Electing transferring Firefighters as of October 2, 2008 under the Agreement with the County.

C. Accrual Service

Years of Accrual Service are any Plan Years during which an Employee completes at least 1,000 hours of service, including years of service completed prior to participation in the Plan.

D. Compensation

Wages, salaries and other amounts received (whether or not paid in cash) for personal services actually rendered in the course of employment. Effective October 10, 2011 Compensation shall exclude commissions, bonuses, overtime pay in excess of one hundred fifty (150) hours per Plan year and payments for accrued leave in excess of the dollar amount of an Employee's accrued leave balance on July 1, 2011.

E. Final Average Compensation

Average earnings during the best five (5) consecutive years out of the last ten (10) years preceding termination or retirement, but not less than the three (3) highest consecutive compensation periods during employment with the City as of September 30, 2011.

F. Normal Retirement

1. Eligibility:

- (a) Attainment of age 65; or
- (b) Completion of 30 years of service and determined to be disabled under the City's long term disability insurance policy.

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

2. **Benefit:**

For Firefighters, Police Officers and Forensic Professionals, 3.00% times Final Average Compensation multiplied by Accrual Service, up to a maximum of 30 years.

For General Employees, 3.00% times Accrual Service earned through September 30, 2011 times Final Average Compensation plus 2.50% times Accrual Service earned after September 30, 2011 times Final Average Compensation, up to a maximum of 30 years of Accrual Service.

G. Early Retirement

1. **Eligibility:**

- (a) Attainment of age 55 and completion of 15 years of service; or
- (b) Completion of 25 years of service.

2. **Benefit:**

Benefit accrued to date of early retirement, actuarially reduced for each year early retirement benefit commencement precedes age 55.

H. Late Retirement

1. **Eligibility:**

Continued employment beyond Normal Retirement Date.

2. **Benefit:**

Greater of (a) and (b):

- (a) Accrued benefit calculated as for Normal Retirement based upon service and pay at Late Retirement Date.
- (b) Actuarially increased benefit as of Late Retirement Date.

I. Disability Retirement

1. **Eligibility:**

Completion of 30 years of service and determined to be disabled under the City's long term disability insurance policy.

2. **Benefit:**

Accrued benefit calculated as for Normal Retirement based upon service and pay at Disability Retirement Date.

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

J. Death Benefit

Beneficiary entitled to a monthly benefit supported by the present value of the non-forfeitable accrued benefit at the time of the participant's death. If death occurs after actual retirement, the beneficiary receives whatever is payable under the form of benefit option elected.

K. Participant Contributions

Five percent (5%) of compensation for all employees.

L. Vested Benefit Upon Termination

100% vested in required participant contributions. Participant contributions made after October 1, 2000 are included in the deferred vested benefit payable at normal or early retirement date.

Upon termination of service prior to normal or early retirement date a participant shall be entitled to a benefit payable at normal or early retirement date calculated as for normal retirement. Based on pay and service at date of termination multiplied by a percentage from the following table.

<u>Years of Service</u>	<u>Vested Percentage</u>
Less Than 7	0%
7 or More	100%

M. Normal Form of Payment of Retirement Income

Monthly benefit payable for life.

Other Options

Actuarially equivalent joint and survivor at 50%, 75%, 100%; or ten (10) years certain and life.

N. Changes Since Previous Valuation

None.

SECTION C

ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

A. Mortality

Firefighter and Police Officer participants:

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

General Employee participants:

For healthy male participants during employment, RP 2000 Combined Male Healthy Participant Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants during employment, RP 2000 Combined Female Healthy Participant Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

A. Mortality (continued)

For healthy male participants post employment, RP 2000 Annuitant Male Mortality Table, with 50% White Collar / 50% Blue Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy female participants post employment, RP 2000 Annuitant Female Mortality Table, with White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For disabled male participants, RP 2000 Disabled Male Mortality Table, set back four years, without projected mortality improvements. For disabled female participants, RP 2000 Disabled Female Mortality Table, set forward two years, without projected mortality improvements.

Sample Ages (2016)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	30.30	33.37	29.88
60	25.37	28.35	25.21	28.25
62	23.47	26.40	23.37	26.33

Sample Ages (2036)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	32.47	35.23	32.06
60	27.57	30.20	27.42	30.12
62	25.66	28.23	25.57	28.17

B. Investment Return

8.0%, compounded annually, net of investment expenses - 2.75% inflation.

C. Allowances for Expenses or Contingencies

Prior year's actual administrative expenses are included in normal cost.

D. Salary Increase Factors

Current salary is assumed to increase at a rate based on the table below per year until retirement.

Service	General	Forensic Professionals
	Employees	Firefighters and Police Officers
Less than 5 years	6.5%	7.5%
5 - 9 years	5.5%	5.5%
10 - 14 years	4.5%	5.5%
15+ years	3.0%	3.5%

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

E. Employee Withdrawal Rates

1. Withdrawal rates for male General Employees were used in accordance with the following illustrative example:

Age	Withdrawal Rates per 100 Employees										
	Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	32.8	25.4	22.7	18.4	15.8	11.7	11.1	11.1	11.0	10.0	9.8
25	27.2	18.5	17.2	14.6	12.7	9.7	8.5	8.4	7.7	6.3	6.2
30	25.8	15.4	14.0	13.2	11.8	8.8	7.8	7.1	6.4	5.5	4.7
35	25.8	14.3	12.8	12.6	10.9	8.5	7.5	6.8	6.2	5.3	4.2
40	24.4	12.6	12.0	10.7	9.0	7.4	6.7	6.2	5.8	5.3	3.0
45	24.4	12.5	11.6	10.3	8.8	6.8	6.5	6.0	5.1	5.1	2.7
50	23.4	12.2	10.7	9.4	7.9	6.0	5.5	5.3	4.6	4.6	3.0
55	27.4	12.2	10.7	9.3	7.8	6.8	5.4	5.2	4.4	4.3	4.5
60	27.4	12.2	10.7	9.3	7.8	6.8	5.4	5.1	4.3	4.2	5.3
65	27.4	12.2	10.7	9.3	7.8	6.8	5.4	5.1	4.3	4.2	3.7

2. Withdrawal rates for female General Employees were used in accordance with the following illustrative example:

Age	Withdrawal Rates per 100 Employees										
	Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	30.3	25.8	22.1	17.4	15.4	13.5	11.4	11.3	10.5	10.2	11.6
25	26.6	19.8	17.1	13.0	12.9	10.7	9.7	9.2	7.8	7.1	5.3
30	25.4	16.9	14.5	11.6	11.3	9.4	8.7	8.1	7.1	6.5	5.4
35	25.4	15.9	13.5	11.2	10.9	9.0	8.0	7.8	6.8	6.2	4.6
40	24.4	14.0	12.1	10.0	9.1	7.0	6.5	6.3	6.1	5.0	3.3
45	24.4	13.9	11.9	9.8	8.8	6.7	6.5	6.1	5.8	4.7	3.0
50	23.2	13.4	11.0	8.8	8.4	6.2	5.9	5.5	5.5	4.6	3.0
55	23.2	13.4	11.0	8.7	8.3	6.1	5.8	5.4	5.4	4.5	3.0
60	23.2	13.4	11.0	8.7	8.3	6.1	5.8	5.4	5.4	4.5	3.0
65	23.2	13.4	11.0	8.7	8.3	6.1	5.8	5.4	5.4	4.5	3.0

The withdrawal assumptions are the withdrawal assumptions used in the July 1, 2016 Florida Retirement System (FRS) Actuarial Valuation.

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

E. Employee Withdrawal Rates (continued)

3. Withdrawal rates for male Forensic Professionals, Firefighters and Police Officers were used in accordance with the following illustrative example:

Age	Withdrawal Rates per 100 Employees										
	Service										
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10+</u>
20	21.4	10.3	8.6	8.4	7.5	5.3	5.2	3.1	2.9	2.6	2.3
25	20.6	9.8	8.1	7.9	7.0	5.3	5.2	3.1	2.9	2.6	2.3
30	20.6	9.5	7.7	7.5	6.7	5.3	5.2	3.1	2.9	2.6	2.1
35	20.6	8.8	7.4	7.2	6.5	5.3	5.1	3.1	2.9	2.6	2.0
40	20.6	8.0	6.8	6.7	6.0	4.8	4.6	3.1	2.9	2.6	1.9
45	20.6	7.3	6.0	6.0	5.5	4.3	4.1	3.1	2.9	2.6	1.8
50	20.6	6.5	5.3	5.3	5.0	3.8	3.6	3.1	2.9	2.6	1.8
55	20.6	5.8	4.7	4.7	4.6	3.3	3.2	3.1	2.9	2.6	1.8
60	20.6	5.3	4.7	4.7	4.6	3.3	3.2	3.1	2.9	2.6	1.8
65	20.6	5.3	4.7	4.7	4.6	3.3	3.2	3.1	2.9	2.6	1.8

4. Withdrawal rates for female Forensic Professionals, Firefighters and Police Officers were used in accordance with the following illustrative example:

Age	Withdrawal Rates per 100 Employees										
	Service										
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10+</u>
20	21.3	15.5	12.3	10.3	9.7	6.1	5.9	5.0	4.2	4.2	1.9
25	21.3	14.2	11.6	9.8	9.2	6.1	5.9	5.0	4.2	4.2	1.9
30	21.3	13.2	10.6	9.3	8.7	6.1	5.9	5.0	4.2	4.2	1.7
35	21.3	12.2	9.6	8.8	8.4	6.1	5.9	5.0	4.2	4.1	1.5
40	21.3	11.2	8.6	8.3	7.6	6.1	5.9	5.0	4.1	4.1	2.5
45	21.3	10.2	7.6	7.6	7.0	6.1	5.9	5.0	4.1	4.1	2.5
50	21.3	9.2	6.6	6.6	6.4	6.1	5.9	5.0	4.1	4.0	1.6
55	21.3	8.4	5.8	5.6	5.4	5.3	5.1	5.0	4.1	4.0	4.0
60	21.3	8.4	5.8	5.6	5.4	5.3	5.1	5.0	4.1	4.0	4.0
65	21.3	8.4	5.8	5.6	5.4	5.3	5.1	5.0	4.1	4.0	4.0

The withdrawal assumptions are the withdrawal assumptions used in the July 1, 2016 FRS Actuarial Valuation.

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

F. Disability Rates

1. Line-of-duty disability rates for General Employees were used in accordance with the following illustrative example.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.000%	0.000%
25	0.001%	0.001%
30	0.001%	0.001%
35	0.001%	0.001%
40	0.001%	0.001%
45	0.004%	0.001%
50	0.006%	0.006%
55	0.006%	0.006%
60	0.010%	0.013%
65	0.010%	0.010%

2. Non-duty disability rates for General Employees were used in accordance with the following illustrative example.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.000%	0.000%
25	0.010%	0.010%
30	0.010%	0.010%
35	0.020%	0.010%
40	0.020%	0.020%
45	0.080%	0.060%
50	0.160%	0.100%
55	0.250%	0.160%
60	0.300%	0.260%
65	0.100%	0.080%

The disability assumptions are the disability assumptions used in the July 1, 2016 FRS Actuarial Valuation.

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

F. Disability Rates (continued)

3. Line-of-duty disability rates for Forensic Professionals, Firefighters and Police Officers were used in accordance with the following illustrative example.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.010%	0.000%
25	0.010%	0.004%
30	0.010%	0.004%
35	0.010%	0.004%
40	0.020%	0.040%
45	0.060%	0.040%
50	0.140%	0.050%
55	0.100%	0.080%
60	0.140%	0.150%
65	0.260%	0.150%

4. Non-duty disability rates for Forensic Professionals, Firefighters and Police Officers were used in accordance with the following illustrative example.

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.020%	0.000%
25	0.020%	0.020%
30	0.030%	0.020%
35	0.030%	0.030%
40	0.030%	0.030%
45	0.030%	0.060%
50	0.080%	0.110%
55	0.050%	0.110%
60	0.050%	0.110%
65	0.050%	0.110%

The disability assumptions are the disability assumptions used in the July 1, 2016 FRS Actuarial Valuation.

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

G. Assumed Retirement Age

Retirement rates were used in accordance with the following tables.

1. For Forensic Professionals, Police Officers and Firefighters:

<u>Age</u>	<u>Years of Service</u>				
	<u>0 - 10</u>	<u>10 - 15</u>	<u>15 - 25</u>	<u>25 - 30</u>	<u>30 or more</u>
Under 55	0%	0%	0%	4%	5%
55	0%	10%	15%	40%	50%
56 - 64	0%	10%	15%	15%	20%
65 and above	100%	100%	100%	100%	100%

2. For General Employees:

<u>Age</u>	<u>Years of Service</u>				
	<u>0 - 10</u>	<u>10 - 15</u>	<u>15 - 25</u>	<u>25 - 30</u>	<u>30 or more</u>
Under 55	0%	0%	0%	2%	2%
55	0%	5%	10%	20%	25%
56 - 64	0%	5%	10%	4%	5%
65 and above	100%	100%	100%	100%	100%

H. Marital Assumptions

1. 100% of active members are assumed to be married.
2. Females are assumed to be three (3) years younger than their male spouses.

I. Interest on Future Participant Contributions

3.75%, compounded annually.

Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2016)

J. Asset Valuation Method

The method used for determining the smoothed actuarial value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. The smoothed actuarial value of assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of plan assets and whose upper limit is 120% of the fair market value of plan assets - adjusted for equation of balance October 1, 2010.

K. 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 Plan had always been in effect. The normal cost for the Plan 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 Plan 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 Plan.

L. Changes Since Previous Valuation

Mortality was:

For healthy General Employee participants, 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.

For healthy Firefighter and Police Officer participants, RP-2000 Combined Healthy Participant Mortality Tables with Blue Collar Adjustment, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

For disabled participants, RP-2000 Disabled Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

SECTION D

GLOSSARY

GLOSSARY

<i>Actuarial Accrued Liability</i>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<i>Actuarial Assumptions</i>	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.
<i>Actuarial Cost Method</i>	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.
<i>Actuarial Equivalent</i>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<i>Actuarial Present Value</i>	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.
<i>Actuarial Present Value of Future Benefits</i>	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.
<i>Actuarial Valuation</i>	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.
<i>Actuarial Value of Assets</i>	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.

<i>Amortization Method</i>	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.
<i>Amortization Payment</i>	That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<i>Amortization Period</i>	The period used in calculating the Amortization Payment.
<i>Annual Required Contribution</i>	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.
<i>Closed Amortization Period</i>	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.
<i>Employer Normal Cost</i>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<i>Equivalent Single Amortization Period</i>	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.
<i>Experience Gain/Loss</i>	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.
<i>Funded Ratio</i>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.

<i>GASB</i>	Governmental Accounting Standards Board.
<i>GASB No. 67 and GASB No. 68</i>	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.
<i>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<i>Open Amortization Period</i>	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.
<i>Unfunded Actuarial Accrued Liability</i>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<i>Valuation Date</i>	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.