City of Jacksonville Corrections Officers Retirement Plan

Actuarial Valuation and Review as of October 1, 2016

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May 24, 2017

Board of Trustees
City of Jacksonville Corrections Officers Retirement Plan
117 West Duval Street, Suite 330
Jacksonville, FL 32202

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of October 1, 2016. The census information on which our calculations were based was prepared by the Retirement System Administrative Office and the financial information was provided by the City's Finance Department. That assistance is gratefully acknowledged .

Statement by Enrolled Actuary: This actuarial valuation and/or cost determination was prepared and completed by me, or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

The measurements shown in this actuarial valuation may not be applicable for other purposes. 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); and changes in plan provisions or applicable law.

The actuarial calculations were directed under my supervision. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By: ______________________________

Jeffrey S. Williams, FCA, ASA, MAAA, EA
Vice President and Consulting Actuary
Enrolled Actuary No. 17-7009

SECTION 1

VALUATION SUMMARY

SECTION 2

VALUATION RESULTS

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Purpose

This report has been prepared by Segal Consulting to present a valuation of the City of Jacksonville Corrections Officers Retirement Plan as of October 1, 2016. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Retirement Plan, as administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of September 30, 2016, provided by the Retirement System Administrative Office;
- The assets of the Plan as of September 30, 2016, provided by the City's Finance Department;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

1. This valuation determines the Actuarially Determined Employer Contribution (ADEC), or recommended contribution, for the fiscal year beginning October 1, 2017. The recommended contribution has decreased from $19,155,820 for the fiscal year beginning October 1, 2016 to $18,643,233 for the fiscal year beginning October 1, 2017. As a percentage of projected pay, the contribution has increased from 67.73% of projected pay to 69.26% of projected pay.
2. This valuation includes the calculation of an offset for discounted allocated surtax revenue, amortized over 30 years, pursuant to Florida Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E. The offset applicable as of October 1, 2016 is $4,438,450. After this offset is adjusted for the timing of contributions and projected to October 1, 2017, the City’s required contribution for fiscal year beginning October 1, 2017 is $13,973,105, or 51.91% of projected pay.
3. Throughout the report, $18,643,233 will be referred to as the ADEC, or recommended contribution; $13,973,105 will be referred to as the City’s required contribution.
4. Actuarial Standard of Practice No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, states that an actuary preparing calculations of actuarially determined contributions should assess the

material implications of the funding policy. This report includes two distinct contribution amounts, each with different implications.

a. The **Actuarially Determined Employer Contribution (ADEC)** is an amount consistent with a funding policy which seeks to stabilize the unfunded actuarial accrued liability (UAAL) as a percentage of total Corrections Officers Retirement Plan (CORP) payroll, including Defined Contribution (DC) participants, where UAAL is measured relative to assets currently available to make benefit payments. Under this policy, assuming that all assumptions are met in aggregate, the UAAL is expected to be reduced to zero over a period of 30 years after reflecting an amortization period reset. Over the short term, this contribution policy would be expected to keep the UAAL roughly level over the next few years, primarily making payments on interest, and begin paying down the UAAL after that point.

b. The **City's required contribution**, which is the ADEC adjusted to comply with state law, reduced by amortization of discounted allocated surtax revenue, is an amount consistent with a funding policy which seeks to stabilize the contribution requirement as a percentage of total CORP payroll, including Corrections Officers Defined Contribution Plan participants, relative to an anticipated increase in contribution income set to begin in the fiscal year beginning October 1, 2030. Under this policy, assuming that all assumptions are met in aggregate, the UAAL is expected to be reduced to zero by October 1, 2060, after all of the surtax revenue allocated to the plan is collected and contributed. Over the short term, this contribution policy is expected to lead to an increase in the UAAL, prior to the revenue stream commencing and paying it down.

   Use of this contribution policy has been authorized by the Florida State Legislature and Jacksonville City Council.

5. GASB accounting does not permit any recognition of the allocated surtax revenue in determining the Net Pension Liability or Pension Expense. Segal has previously made the City aware of this fact and it is our understanding the City has had a similar discussion with their external auditors.

6. Per Part VII, Chapter 112.64(5)(a) of Florida Statutes, the payroll growth assumption used for amortization of the unfunded liability is not allowed to exceed the average annual payroll growth for the proceeding ten years. Based on applying this limitation to plan payroll as shown in Exhibit L, the payroll growth assumption for amortization purposes would decrease from 0.68% to 0.00%. However, pursuant to Chapter 112.64(5)(b), and after adjusting this analysis to account for bargained pay level increases and inclusion of DC plan participants in the total payroll, the assumption was set at 1.25%.

7. The following plan and funding policy changes were reflected in this valuation:

- The Plan will be closed to new active members effective September 30, 2017 and new employees hired after this date will enter the Corrections Officers Defined Contribution Plan with a 25% employer contribution rate and a 10% employee contribution rate.
- Ongoing CORP participants will have their employee contribution rate increased from 8% to 10% of pay effective October 1, 2017.
- Pursuant to state legislation, the payroll growth assumption is set based on the combined payroll of the Corrections Officers Retirement Plan and the Corrections Officers Defined Contribution Plan.
- Pursuant to state legislation, the amortization period for the unfunded liabilities as of October 1, 2016 will be set to 30 years.
- Pursuant to state legislation, the amortization of the unfunded liability must be offset by the amortized discounted value of allocated surtax revenue.

8. The following assumption changes were reflected in this valuation:
   - Mortality was updated pursuant to Florida Statute Section 112.63(f).
   - Discount rate was lowered from 7.50% to 7.40%.
   - Based on the proposed agreement with unions representing Corrections employees, the inflation component of the salary scale has been adjusted from 2.75% to 6.50% for the first two years, 7.00% for the third year, with subsequent increases resuming at the assumed inflation rate of 2.75%.
   - Based on inclusion of Corrections Officers Defined Contribution Plan payroll in the ten year payroll history used to support the payroll growth and analysis of the impact of these pay increases over the next three years, the payroll growth rate for funding purposes was changed from 0.00% to 1.25%.
9. The recommended contribution is calculated as of October 1, 2016 and projected to October 1, 2017 for payment by the City in fiscal 2018. Since employee contributions are 8% during the year beginning October 1, 2016, expected contributions have been valued at 8% of pay in this valuation. Beginning with the October 1, 2017 actuarial valuation, expected employee contributions will be valued at 10% of pay.
10. The City is solely responsible for the assumption as to what percentage the surtax revenue will grow and Segal relies on the City for this assumption. This rate was initially set at 4.25% by the City for the projection period October 1, 2017 through September 30, 2060, and will be recalculated every year. Segal will ask the City each year to provide actual surtax revenue for the preceding fiscal year and an assumption as to future growth. The difference in actual and projected surtax revenue each year will be amortized as a gain or loss over 30 years. If surtax revenue grows more slowly or more quickly than expected, contribution requirements will increase or decrease accordingly.

11. In the October 1, 2016 actuarial valuation, CORP was allocated 6% of the present value of projected surtax revenue. The allocation methodology was determined by the City based on the October 1, 2015 unfunded actuarial accrued liabilities of the Corrections Officers Retirement Plan, the General Employees Retirement Plan, and the Police and Fire Pension Plan. The City is responsible for the determination as to when and how this allocation method should change.
12. The present value of the projected surtax revenue was determined and used in determination of the City's required contribution as follows:
    a. Actual 2016 surtax revenue was projected to increase by 4.62% for fiscal 2017, based on actual collections to date, and then 4.25% each year thereafter through fiscal 2060.
    b. A share of 6% of the projected revenue for fiscal years 2031 through 2060 was allocated to CORP.
    c. The revenue allocated to CORP was discounted at the valuation discount rate of 7.40% to October 1, 2016.
    d. The present value of projected surtax revenue as of October 1, 2016 allocated to CORP is $64,295,005.
    e. The present value amount of $64,295,005 was then amortized over a 30-year period (Section 3, Exhibit I).
    f. After the amortized value amount was adjusted for the timing of contributions and projected to October 1, 2017, this amount was used as an offset to the Actuarially Determined Employer Contribution to determine the City's required contribution.
13. The present value of projected surtax revenue does not decrease the UAAL. The amortized value of the projected surtax revenue is used as an offset to the ADEC.
14. By resetting the amortization period to 30 years as of October 1, 2016, and by making contributions that are expected to be less than recommended for the foreseeable future, it is anticipated that CORP's UAAL will increase for several years before it begins to once again decline, even if all assumptions are exactly met. This is due to the negative amortization that occurs in the early years of a 30-year level percentage of pay amortization period.
15. Since the projected surtax revenue is being included now as an offset to the City's contribution, it should not be counted again as an offset once the surtax begins. At that time, as has been discussed with the City, the surtax contributions should be an additional contribution in addition to the recommended contribution.

16. As indicated in Section 2, Subsection B of this report, the total unrecognized investment loss as of September 30, 2016 is $7,946,405. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 7.40% per year (net of expenses) on a **market value** basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual market return is equal to the assumed 7.40% rate and all other actuarial assumptions are met, the contribution requirements would still increase in each of the next few years.
17. The financial information received states all results rounded to the nearest thousand. The results in this valuation are shown to the nearest dollar. Therefore, occasionally rounded numbers are combined with unrounded ones.

Summary of Key Valuation Results

	2017	2016	2015
Contributions for fiscal year beginning October 1:			
Actuarially determined employer contribution	$18,643,233	$19,155,820	$18,863,935
As a percentage of projected payroll	69.26%	67.73%	68.64%
Actual employer contribution	--	--	$18,864,000
Actual percentage of payroll contributed	--	--	68.64%
City's required contribution*	13,973,105	N/A	N/A
As a percentage of projected payroll	51.91%	N/A	N/A
Funding elements for plan year beginning October 1:			
Normal cost, including administrative expenses		$7,495,160	$7,608,973
Market value of assets		167,387,000	150,223,000
Actuarial value of assets		175,333,405	159,914,247
Actuarial accrued liability		354,234,673	319,655,728
Unfunded actuarial accrued liability		178,901,268	159,741,481
Funded ratio – actuarial value of assets		49.50%	50.03%
Funded ratio – market value of assets		47.25%	47.00%
Demographic data for plan year beginning October 1:			
Number of retired participants and beneficiaries		355	328
Number of vested former participants		4	1
Number of active participants		610	651
Covered payroll		$26,585,054	$28,091,083
Average payroll		43,582	43,151
Projected payroll for next fiscal year		26,917,387	28,282,102

**Pursuant to State Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E*

Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the Retirement System Administrative Office. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** The valuation is based on the market value of assets as of the valuation date, as provided by the City's Finance Department. The Plan uses an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the Retirement Board. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If the City is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Retirement Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, vested terminated participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the participant population has changed over the past ten valuations can be seen in this chart.

CHART 1

Participant Population: 2007 – 2016

Year Ended September 30	Active Participants	Vested Terminated Participants*	Retired Participants and Beneficiaries**	Ratio of Non-Actives to Actives
2007	581	1	52	0.09
2008	553	1	87	0.16
2009	545	1	136	0.25
2010	688	1	164	0.24
2011	675	1	199	0.30
2012	629	1	241	0.38
2013	631	1	274	0.44
2014	616	1	306	0.50
2015	651	1	328	0.51
2016	610	4	355	0.59

**Excludes terminated participants due a refund of employee contributions*

***Includes DROP participants*

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 610 active participants with an average age of 37.1, average years of service of 8.3 years and average payroll of $43,582. The 651 active participants in the prior valuation had an average age of 37.0, average service of 8.1 years and average payroll of $43,151.

Inactive Participants

In this year's valuation, there were four participants with a vested right to a deferred or immediate vested benefit.

These graphs show a distribution of active participants by age and by years of service.

CHART 2

Distribution of Active Participants by Age as of September 30, 2016

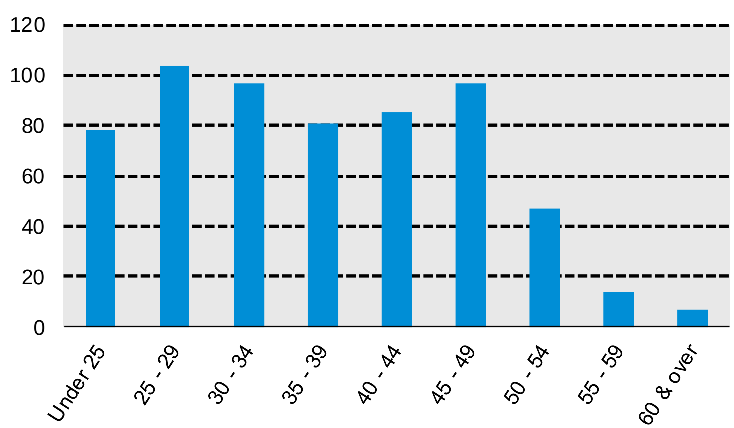
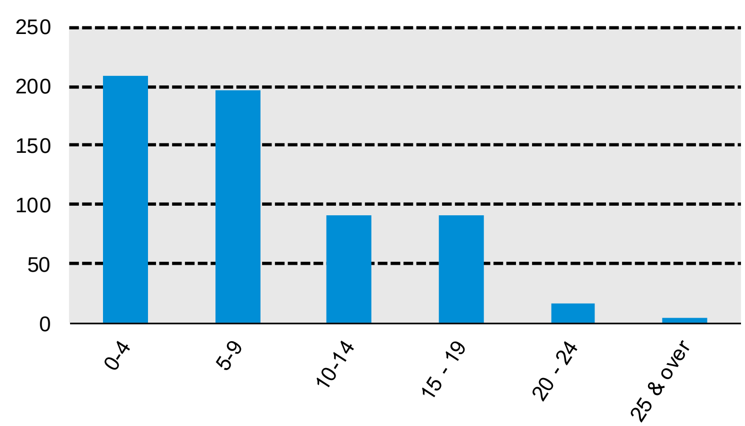


CHART 3

Distribution of Active Participants by Years of Service as of September 30, 2016



Retired Participants and Beneficiaries

As of September 30, 2016, 338 retired participants and 17 beneficiaries were receiving, or reserving for future receipt in the case of DROP retirees, total monthly benefits of $1,297,376. For comparison, in the previous valuation, there were 309 retired participants and 19 beneficiaries receiving monthly benefits of $1,168,158.

These graphs show a distribution of the current retired participants based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Participants by Type and by Monthly Amount as of September 30, 2016

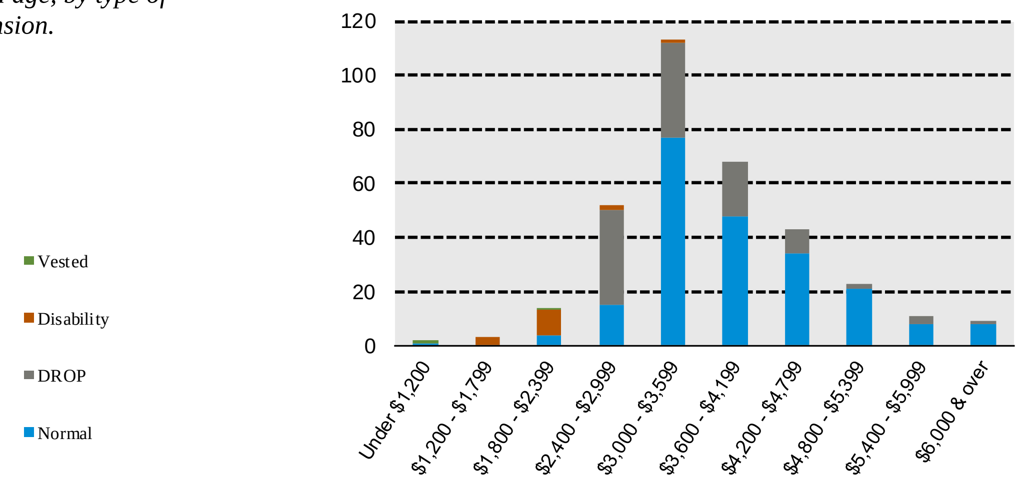
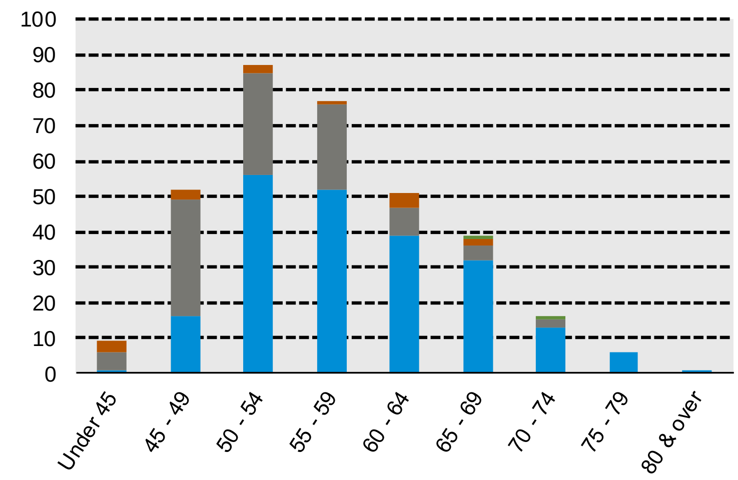


CHART 5

Distribution of Retired Participants by Type and by Age as of September 30, 2016



Segal Consulting

B. FINANCIAL INFORMATION

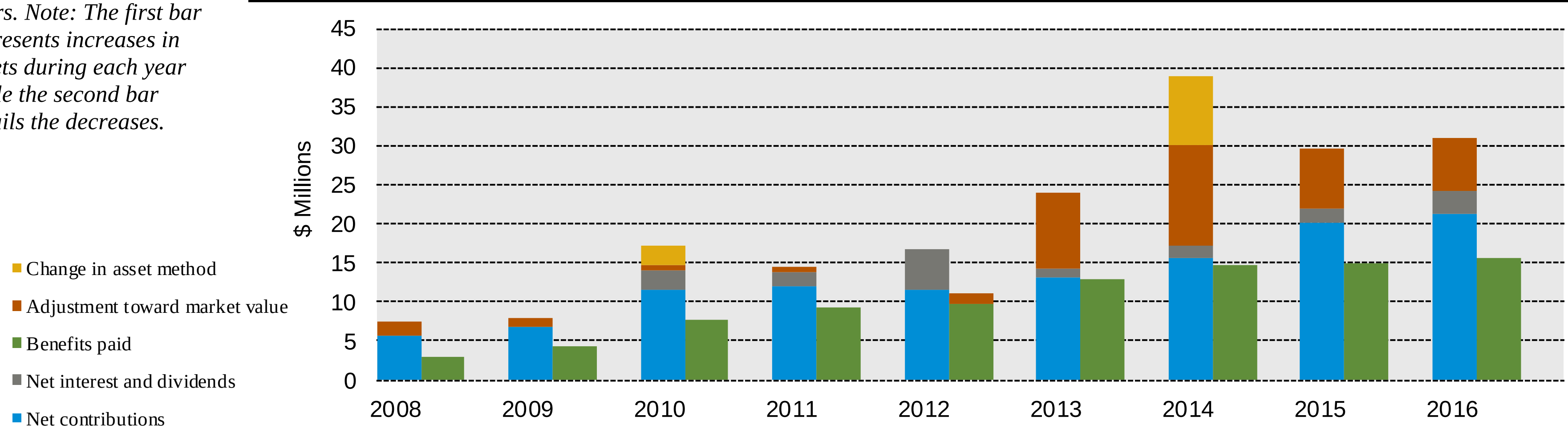
Retirement plan funding anticipates that, over the long term, both contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

The chart depicts the components of changes in the actuarial value of assets over the last nine years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 6

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended September 30, 2008 – 2016



The chart shows the determination of the actuarial value of assets as of the valuation date.

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

CHART 7

Determination of Actuarial Value of Assets for Year Ended September 30, 2016

1. Market value of assets, September 30, 2016			$167,387,000
	Original	Unrecognized	
2. Calculation of unrecognized return	Amount *	Return**	
(a) Year ended September 30, 2016	$70,675	$56,540	
(b) Year ended September 30, 2015	-15,203,738	-9,122,243	
(c) Year ended September 30, 2014	5,183,479	578,778	
(d) Year ended September 30, 2013	9,681,685	540,520	
(e) Year ended September 30, 2012	9,359,561	0	
(f) Total unrecognized return			-7,946,405
3. Preliminary actuarial value: (1) - (2f)			175,333,405
4. Adjustment to be within 20% corridor			0
5. Final actuarial value of assets as of September 30, 2016: (3) + (4)			$175,333,405
6. Actuarial value as a percentage of market value: (5) ÷ (1)			104.7%
7. Amount deferred for future recognition: (1) - (5)			-$7,946,405

**Total return minus expected return on a market value basis*

***Recognition at 20% per year over five years; effective October 1, 2014, the Plan accelerated the recognition of prior asset gain/loss bases by reflecting 72% of the outstanding assets gain/loss immediately.*

****Deferred return as of September 30, 2016 recognized in each of the next four years:*

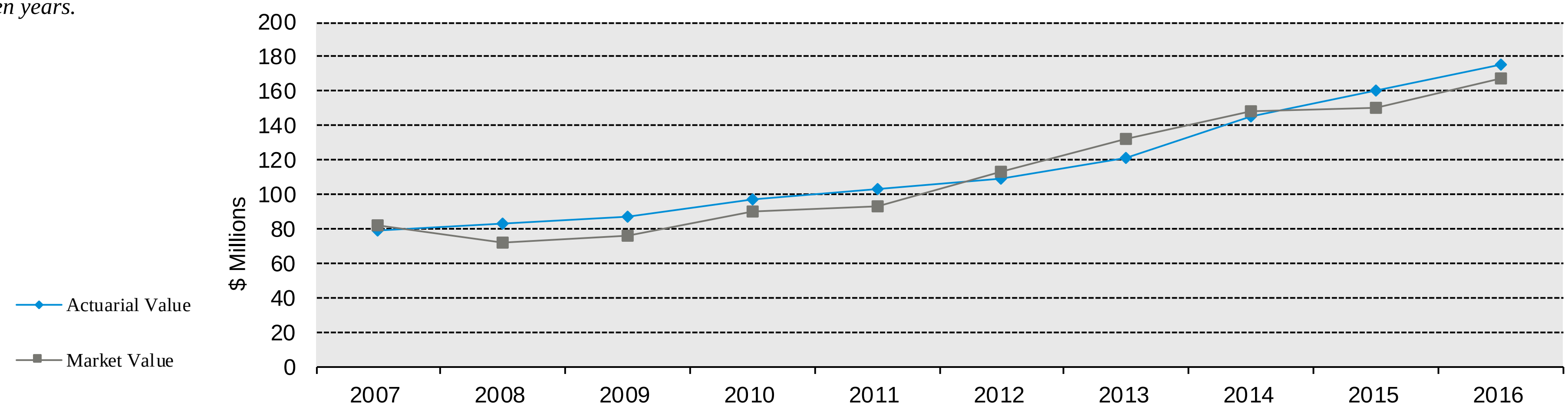
(a) Amount recognized on September 30, 2017 -$2,196,704
(b) Amount recognized on September 30, 2018 -2,737,224
(c) Amount recognized on September 30, 2019 -3,026,613
(d) Amount recognized on September 30, 2020 14,135

Both the actuarial value and market value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in the actuarial value of assets versus the market value over the past ten years.

CHART 7

Actuarial Value of Assets vs. Market Value of Assets as of September 30, 2007 – 2016



C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss is $1,871,984, consisting of $2,401,011 from investment losses and $529,027 in gains from all other sources. The net experience variation from individual sources other than investments was 0.2% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 8

Actuarial Experience for Year Ended September 30, 2016

1.	Net loss from investments*	-$2,401,011
2.	Net gain from administrative expenses	931
3.	Net gain from other experience	528,096
4.	Net experience loss: (1) + (2) + (3)	-$1,871,984

** Details in Chart 9*

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Plan's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets was 7.50% for fiscal 2016. The actual rate of return on an actuarial basis for the 2016 plan year was 6.02%.

Since the actual return for the year was less than the assumed return, the Plan experienced an actuarial loss during the year ended September 30, 2016 with regard to its investments.

This chart shows the loss due to investment experience.

CHART 9

Actuarial Value Investment Experience for Year Ended September 30, 2016

1.	Actual return	$9,803,158
2.	Average value of assets	162,722,247
3.	Actual rate of return: (1) ÷ (2)	6.02%
4.	Assumed rate of return	7.50%
5.	Expected return: (2) x (4)	$12,204,169
6.	Actuarial loss: (1) – (5)	-$2,401,011

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last ten years, including five-year and seven-year averages.

Based upon this experience and future expectations, the Board has changed the assumed rate of return to 7.40%.

CHART 10

Investment Return – Actuarial Value vs. Market Value: 2007 - 2016

	Net Interest and Dividend Income		Recognition of Capital Appreciation		Change in Asset Method		Actuarial Value Investment Return		Market Value Investment Return	
Year Ended September 30	**Amount**	**Percent**	**Amount**	**Percent**	**Amount**	**Percent**	**Amount**	**Percent**	**Amount**	**Percent**
2007								10.03%		14.71%
2008								2.14		-15.61
2009								1.23		1.49
2010	$2,378,000	2.65%	$707,747	0.79%	$2,590,106	2.89%	$5,675,853	6.33	$9,391,000	12.03
2011	1,935,000	1.95	685,301	0.69	- -	- -	2,620,301	2.65	717,000	0.79
2012	5,193,000	4.98	-1,302,337	-1.25	- -	- -	3,890,663	3.73	17,166,000	18.14
2013	1,078,000	0.98	9,711,123	8.84	- -	- -	10,789,123	9.82	18,466,000	16.29
2014	1,401,000	1.15	12,935,031	10.65	8,894,571	7.32	23,230,602	19.12	15,468,000	11.66
2015	1,703,000	1.15	7,583,603	5.13	- -	- -	9,286,603	6.28	-3,849,000	-2.54
2016	3,097,000	1.90	6,706,158	4.12	- -	- -	9,803,158	6.02	11,548,000	7.55
Total	$16,785,000		$37,026,626		$11,484,677		$65,296,303		$68,907,000	
							Five-year average return	8.82%		9.11%
							Seven-year average return	7.82%		8.96%

Note: Each year's yield is weighted by the average asset value in that year.

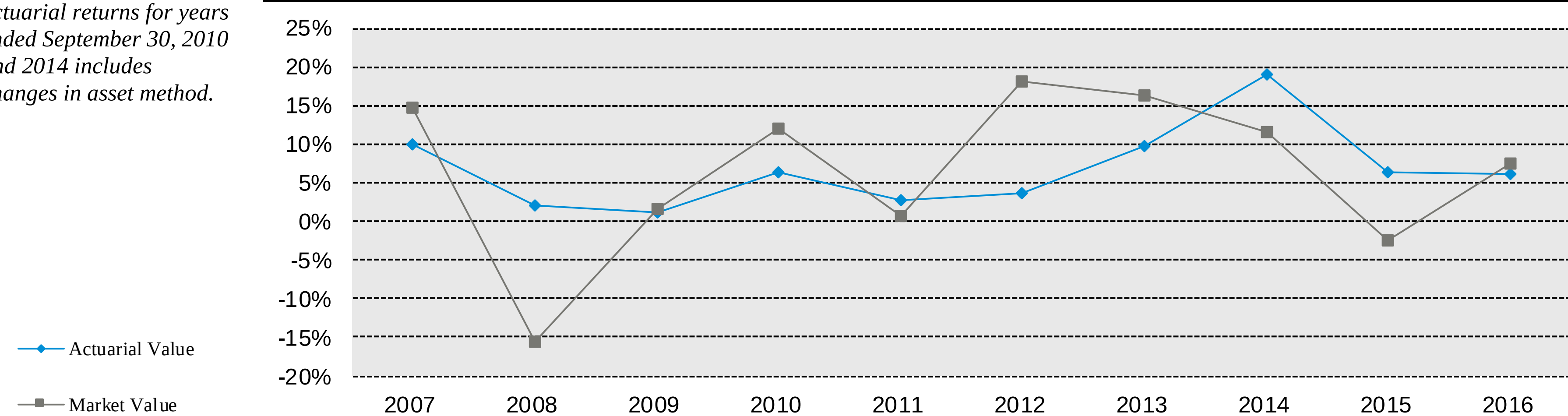
Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

Administrative Expenses
Administrative expenses for the year ended September 30, 2016 totaled $75,000 throughout the year, compared to the assumption of $73,000 payable at the beginning of the year. This resulted in a gain of $931 for the year.

This chart illustrates how this leveling effect has actually worked over the years 2007 - 2016. The actuarial returns for years ended September 30, 2010 and 2014 includes changes in asset method.

CHART 11

Market and Actuarial Rates of Return for Years Ended September 30, 2007 - 2016



Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than expected),
- mortality (more or fewer deaths than expected),
- the number of disability retirements, and
- salary increases different than assumed.

The net gain from this other experience for the year ended September 30, 2016 amounted to $528,097, which is 0.2% of the actuarial accrued liability.

D. ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the projected payroll for active members to determine the recommended funding rate of 69.26% of payroll.

The contribution requirements as of October 1, 2016 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

The chart compares this valuation's recommended contribution and City's required contribution with the prior valuation.

CHART 12

Actuarially Determined Employer Contribution and City's Required Contribution

	Year Beginning October 1			
	2016		2015	
	Amount	% of Payroll	Amount	% of Payroll
1. Total normal cost	$7,420,160	27.91%	$7,535,973	26.83%
2. Administrative expenses	75,000	0.28%	73,000	0.26%
3. Expected employee contributions	-2,126,804	-8.00%	-2,247,287	-8.00%
4. Employer normal cost: (1) + (2) + (3)	$5,368,356	20.19%	$5,361,686	19.09%
5. Actuarial accrued liability	354,234,673		319,655,728	
6. Actuarial value of assets	175,333,405		159,914,247	
7. Unfunded actuarial accrued liability: (5) - (6)	$178,901,268		$159,741,481	
8. Payment on unfunded actuarial accrued liability	12,350,015	46.45%	12,937,787	46.06%
9. Total actuarially determined employer contribution: (4) + (8)*	18,643,233	69.26%	19,155,820	67.73%
10. Amortized value of discounted value of projected surtax revenue*	-4,670,128	-17.35%	N/A	
11. City's required contribution: (9) + (10)*	$13,973,105	51.91%	N/A	N/A
12. Projected payroll	$26,917,367		$28,282,102	

**Adjusted for timing and projected to next fiscal year; contributions are assumed to be paid at the end of every month.*

Reconciliation of Recommended Contribution
The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.

CHART 13

Reconciliation of Recommended Contribution from October 1, 2016 to October 1, 2017

Recommended Contribution as of October 1, 2016	$19,155,820
Effect of expected change in amortization payment due to payroll growth	92,094
Effect of resetting amortization period to 30 years	-2,890,307
Effect of change in other actuarial assumptions	2,387,603
Effect of contribution deferral to budget year	5,863
Effect of investment loss	185,404
Effect of other gains and losses on accrued liability	-40,851
Effect of net other changes	-252,393
Total change	-$512,587
Recommended Contribution as of October 1, 2017	$18,643,233

EXHIBIT A

Table of Plan Coverage

Category	Year Ended September 30 2016	Year Ended September 30 2015	Change From Prior Year
Active participants in valuation:			
Number	610	651	-6.3%
Average age	37.1	37.0	N/A
Average years of service	8.3	8.1	N/A
Projected total payroll	$26,585,054	$28,091,083	-5.4%
Projected average payroll	43,582	43,151	1.0%
Account balances	15,946,800	16,594,172	-3.9%
Total active vested participants	401	429	-6.5%
Vested terminated participants	4	1	300.0%
Retired participants:			
Number in pay status	218	181	20.4%
Average age	58.9	59.0	N/A
Average monthly benefit	$3,975	$3,952	0.6%
DROP participants not yet in pay status:			
Number in pay status	105	113	-7.1%
Average age	52.9	52.7	N/A
Average monthly benefit	$3,488	$3,459	0.8%
Disabled participants:			
Number in pay status	15	15	0.0%
Average age	53.6	52.6	N/A
Average monthly benefit	$2,166	$2,105	2.9%
Beneficiaries in pay status:			
Number in pay status	17	19	-10.5%
Average age (excluding minors)	65.1	63.1	N/A
Average monthly benefit	$1,885	1,635	15.3%

EXHIBIT B

Participants in Active Service as of September 30, 2016
By Age, Years of Service, and Average Payroll

		Years of Service					
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 & over
Under 25	78	77	1	- -	- -	- -	- -
	$33,047	$32,978	$38,340				
25 - 29	104	70	33	1	- -	- -	- -
	36,178	34,116	40,329	$43,536	- -	- -	- -
30 - 34	97	31	48	18	- -	- -	- -
	40,275	34,452	42,000	45,701	- -	- -	- -
35 - 39	81	11	29	27	14	- -	- -
	46,184	34,088	42,262	51,218	$54,103	- -	- -
40 - 44	85	3	29	17	30	6	- -
	51,824	36,732	44,168	49,638	58,253	$70,418	- -
45 - 49	97	12	31	14	28	9	3
	50,286	34,927	44,778	49,743	54,721	68,214	$76,014
50 - 54	47	2	16	9	16	2	2
	50,211	35,742	44,242	48,272	54,584	56,112	80,267
55 - 59	14	1	6	4	3	- -	- -
	47,443	33,144	44,696	48,561	56,212	- -	- -
60 & Over	7	2	4	1	- -	- -	- -
	41,489	33,222	45,036	43,836	- -	- -	- -
Total	610	209	197	91	91	17	5
	$43,582	$33,832	$42,822	$49,031	$55,815	$67,568	$77,715

EXHIBIT C

Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Disableds	DROP Participants	Retired Participants	Beneficiaries	Total
Number as of October 1, 2015	651	1	15	113	181	19	980
New participants	42	N/A	N/A	N/A	N/A	N/A	42
Terminations – with vested rights	-2	2	N/A	N/A	0	0	0
Terminations – without vested rights	-49	N/A	N/A	N/A	N/A	N/A	-49
Retirements	-6	0	N/A	-31	37	N/A	0
New disabilities	0	0	0	N/A	N/A	N/A	0
New DROP participants	-25	N/A	N/A	25	N/A	N/A	0
New beneficiaries	0	N/A	N/A	0	0	1	1
Deceased	-2	0	0	0	0	0	-2
Rehire	0	0	0	0	0	N/A	0
Certain period expired	N/A	N/A	0	0	0	-3	-3
Data adjustments	2	1	0	-2	0	0	1
Net transfers (to)/from General	-1	0	0	0	0	0	-1
Number as of October 1, 2016	610	4	15	105	218	17	969

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended September 30, 2016		Year Ended September 30, 2015	
Net assets at actuarial value at the beginning of the year		$159,914,247		$145,276,644
Contribution income:				
Employer contributions	$18,864,000		$17,832,000	
Employee contributions	2,410,000		2,466,000	
Less administrative expenses	-75,000		-73,000	
Net contribution income		21,199,000		20,225,000
Investment income:				
Interest, dividends and other income	$3,502,000		$2,528,000	
Recognition of capital appreciation	6,706,158		7,583,603	
Less investment fees	-405,000		-825,000	
Net investment income		9,803,158		9,286,603
Total income available for benefits		$31,002,158		$29,511,603
Less benefit payments and net DROP reserve accumulation		-$15,583,000		-$14,874,000
Change in actuarial value of assets		$15,419,158		$14,637,603
Net assets at actuarial value at the end of the year		$175,333,405		$159,914,247

EXHIBIT E

Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended September 30, 2016		Year Ended September 30, 2015	
Net assets at market value at the beginning of the year		$150,223,000		$148,721,000
Contribution income:				
Employer contributions	$18,864,000		$17,832,000	
Employee contributions	2,410,000		2,466,000	
Less administrative expenses	-75,000		-73,000	
Net contribution income		21,199,000		20,225,000
Investment income:				
Interest, dividends and other income	$3,502,000		$2,528,000	
Asset appreciation	8,451,000		-5,552,000	
Less investment fees	-405,000		-825,000	
Net investment income		11,548,000		-3,849,000
Total income available for benefits		$32,747,000		$16,376,000
Less benefit payments and net DROP reserve accumulation		-$15,583,000		-$14,874,000
Change in market value of assets		$17,164,000		$1,502,000
Net assets at market value at the end of the year		$167,387,000		$150,223,000

EXHIBIT F

Summary Statement of Plan Assets

	Year Ended September 30, 2016		Year Ended September 30, 2015	
Equity in pooled cash equivalents		-$1,736,000		$4,836,000
Accounts receivable		704,000		636,000
Investments:				
Equity in pooled investments*	$183,408,000		$161,576,000	
Total investments at market value		183,408,000		161,576,000
Total assets		$182,376,000		$167,048,000
Less accounts payable:				
Obligations under securities lending agreement (less collateral)	-$39,000		-$60,000	
Other Accounts payable and accrued liabilities	-210,000		-122,000	
DROP reserve	-14,740,000		-16,643,000	
Total accounts payable		-$14,989,000		-$16,825,000
Net assets at market value		$167,387,000		$150,223,000
Net assets at actuarial value		$175,333,405		$159,914,247

**The plan's assets are pooled with other City of Jacksonville Retirement Plans.*

EXHIBIT G

Development of the Fund Through September 30, 2016

Year Ended September 30	Employer Contributions	Employee Contributions	Other Contributions and Miscellaneous Items[1]	Net Investment Return[2]	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2008	$4,170,687	$2,162,565	-$21,139	$1,707,996	$560,000	$2,861,628	$83,056,043
2009	4,899,676	2,278,788	1,642,671	1,043,474	560,000	4,364,550	87,391,102
2010	9,491,000	2,632,000	485,000	5,675,853[3]	560,000	7,651,000	97,463,955
2011	9,711,000	2,807,000	309,000	2,620,301	560,000	9,197,000	103,154,256
2012	9,066,000	2,621,000	472,000	3,890,663	55,000	9,675,000	109,473,919
2013	10,742,000	2,525,000	392,000	10,789,123	50,000	12,925,000	120,947,042
2014	13,522,000	2,253,000	0	23,230,602[4]	65,000	14,611,000	145,276,644
2015	17,832,000	2,466,000	0	9,286,603	73,000	14,874,000	159,914,247
2016	18,864,000	2,410,000	0	9,803,158	75,000	15,583,000	175,333,405

[1] *Includes miscellaneous income and adjustments to the market value of assets.*
[2] *Net of investment fees*
[3] *Includes a change in asset method of $2,590,106*
[4] *Includes a change in asset method of $8,894,571*

EXHIBIT H

Development of Unfunded Actuarial Accrued Liability for Year Ended September 30, 2016

1. Unfunded actuarial accrued liability at beginning of year		$159,741,481
2. Employer normal cost at beginning of year		5,361,686
3. Employer contributions		-18,864,000
4. Interest		
(a) For whole year on (1) + (2)	$12,382,738	
(b) For monthly payments year on (3)	-639,983	
(c) Total interest		11,742,755
5. Expected unfunded actuarial accrued liability		$157,981,921
6. Changes due to:		
(a) Net experience loss (excluding impact of contribution deferral to budget year)	$1,871,984	
(b) Assumptions	19,047,363	
(c) Total changes		20,919,347
7. Unfunded actuarial accrued liability at end of year		$178,901,268

EXHIBIT I

Table of Amortization Bases

Type*	Date Established	Initial Years	Initial Amount	Annual Payment**	Years Remaining	Outstanding Balance
Fresh Start	10/01/2016	30	$178,901,268	$12,350,015	30	$178,901,268
Total				$12,350,015		$178,901,268
Discounted surtax revenue applied	10/01/2016	30	-$64,295,005	-$4,438,450		-$64,295,005

**Level percentage of payroll; per Part VII, Chapter 112.64(5)(a) and 112.64(5)(b) of Florida Statutes, outstanding balances were amortized using a 1.25% payroll growth rate for the October 1, 2016 actuarial valuation.*

***Experience gain/loss bases include impact of contributions deferred to budget years on outstanding balance of prior year bases.*

EXHIBIT J

Section 415 Limitations

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $210,000 for 2016. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as form of benefits chosen and after tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

EXHIBIT K
Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions: The estimates on which the cost of the Plan is calculated including:

(a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;

(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates — the rate or probability of retirement at a given age;

(d) Withdrawal rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost: The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial Accrued Liability For Actives: The value of all projected benefit payments for current members less the portion that will be paid by future normal costs.

Actuarial Accrued Liability For Pensioners: The single-sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded Actuarial Accrued Liability: The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded Actuarial Accrued Liability:	Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

EXHIBIT L

Supplementary State of Florida Information - Summary of Salary Changes

Year Ended September 30	Total Salary	Percent Change in Total Salary	Percent Change in Salary of Employees Remaining Active	Expected Percent Change in Salary of Employees Remaining Active
2006	$27,702,000	5.51%	4.19%	5.49%
2007	27,083,000	-2.23%	3.99%	5.59%
2008	26,334,000	-2.77%	3.58%	5.58%
2009	27,661,000	5.04%	3.93%	5.18%
2010*	27,869,052	0.75%	N/A	N/A
2010	32,329,400	16.88%	2.45%	5.28%
2011	31,832,037	-1.54%	3.09%	5.80%
2012	28,944,158	-9.07%	0.78%	6.15%
2013	27,871,010	-3.71%	3.03%	1.72%
2014	27,373,702	-1.78%	3.89%	1.70%
2015	28,091,083	2.62%	3.08%	1.66%
2016	26,585,054	-5.36%	2.63%	4.26%

Note: The average total payroll growth for the most recent ten years was 0.00% per year. Additional analysis of bargained pay increases applicable for the next three years was used to support a payroll growth rate of 1.25%.

Salary history prior to October 1, 2010 was taken from the City's Comprehensive Annual Financial Reports.

Prior to the inclusion of new participants with greater than one year of employment.

EXHIBIT L (continued)

Supplementary State of Florida Information – Recent History of Recommended and Actual Contributions

Fiscal Year Ended September 30	Valuation Date September 30	Contribution Rate as Percent of Valuation Payroll	Valuation Payroll	Recommended Contribution	Actual Contribution
2011	2008*	31.78%	$27,957,188	$8,884,794	$9,711,000
2012	2010	35.45%	33,460,929	11,860,912	9,066,000
2013	2011	39.11%	32,946,158	12,884,770	10,742,000
2014	2012	49.93%	29,812,483	14,884,963	13,522,000
2015	2013	62.81%	28,049,384	17,618,896	17,832,000
2016	2014	68.64%	27,480,459	18,863,935	18,864,000
2017	2015	67.73%	28,282,102	19,155,820	- -
2018	2016	69.26%	26,917,306	18,643,233	- -

All amounts prior to the 2010 valuation were prepared by the prior actuary.

** An actuarial valuation was not preformed for the plan year beginning October 1, 2009. The recommended contribution is based on the 2008 valuation's contribution rate.*

EXHIBIT L (continued)

Supplementary State of Florida Information - Comparative Summary of Principal Valuation Results

	Year Ended September 30, 2016			
	New Plan New Mortality, Salary, and Payroll Growth Assumptions	Old Plan New Mortality and Interest Assumptions	Old Plan Old Assumptions	Year Ended September 30, 2015
Participant data				
Active members	610	610	610	651
Total annual payroll	$26,585,054	$26,585,054	$26,585,054	$28,091,083
Retired members and beneficiaries	250	250	250	215
Total annualized benefit	$11,173,284	$11,173,284	$11,173,284	$9,327,954
Terminated vested members	4	4	4	1
Total annualized benefit	$68,436	$68,436	$68,436	$12,048
DROP participants	105	105	105	113
Total annualized benefit	$4,395,226	$4,395,226	$4,395,226	$4,689,936
Actuarial value of assets	$175,333,405	$175,333,405	$175,333,405	$159,914,247
Present value of all future expected benefit payments:				
Active members:				
Retirement benefits	$150,811,090	$136,709,883	$131,762,615	$140,573,392
Vesting benefits	2,355,617	2,270,669	2,257,400	2,369,874
Disability benefits	3,550,766	3,275,018	3,416,263	3,537,670
Death benefits	1,745,078	1,596,976	1,283,288	1,345,204
Return of contributions	15,946,800	15,946,800	15,946,800	16,594,172
Total	$174,409,351	$159,799,346	$154,666,366	$164,420,312
Terminated vested members	473,417	473,417	458,642	130,383
Retired members and beneficiaries	174,002,520	174,002,520	168,753,803	140,797,777
DROP participants	74,564,562	74,564,562	72,453,825	78,861,609
Total	$423,449,850	$408,839,845	$396,332,636	$384,210,081

EXHIBIT L (continued)

Supplementary State of Florida Information – Comparative Summary of Principal Valuation Results

	Year Ended September 30, 2016			
	New Plan New Mortality, Salary, and Payroll Growth Assumptions	Old Plan New Mortality and Interest Assumptions	Old Plan Old Assumptions	Year Ended September 30, 2015
Unfunded actuarial accrued liability	$178,901,268	$170,042,765	$159,853,905	$159,741,481
Actuarial present value of accrued benefits				
Vested accrued benefits				
Active members	$74,586,156	$74,586,156	$72,137,331	$78,538,219
Inactive members	473,417	473,417	458,642	130,383
Pensioners and beneficiaries	174,002,520	174,002,520	168,753,803	140,797,777
DROP participants	74,564,562	74,564,562	72,453,825	78,861,609
Non-vested active members	1,002,110	1,002,110	885,883	937,475
Total	$324,628,765	$324,628,765	$314,689,484	$299,265,463
Pension cost				
Normal cost, including administrative expenses	$7,495,160	$7,495,160	$7,247,381	$7,608,973
Expected employee contributions	-2,126,804	-2,126,804	-2,126,804	-2,247,287
Level % of payroll payment to amortize unfunded actuarial accrued liability	12,350,015	14,602,297	13,169,456	12,937,787
Amortized value of discounted value of allocated surtax revenue	-4,438,450	0	0	0
Total City annual cost payable monthly at valuation date	$13,800,598	$19,970,653	$19,016,624	$19,026,440
Total employer cost projected to budget year	13,973,105	20,753,658	19,145,937	19,155,820
As % of payroll	51.91%	78.07%	71.53%	67.73%
Present value of active members' future salaries at attained age	$247,984,129	$227,380,804	$227,488,117	$239,608,380
Present value expected future employee contributions	24,286,712	18,190,464	18,124,279	19,168,670

EXHIBIT L (continued)
Supplementary State of Florida Information - Reconciliation of DROP Accounts

Attained Age	Total Actives*	Eligible for Normal**	Number Retiring	Number Entering DROP
Under 40	3	0	0	0
40	365	0	0	0
41	15	1	0	0
42	18	2	0	0
43	24	6	1	3
44	24	3	0	1
45	24	3	0	1
46	28	7	1	1
47	27	5	0	3
48	21	7	0	6
49	16	1	0	1
50	15	1	0	1
51	14	5	2	2
52	13	1	0	0
53	8	1	0	1
54	7	3	1	1
55	10	2	0	2
56	4	0	0	0
57	3	0	0	0
58	4	1	0	1
59	2	0	0	0
60	3	0	0	0
61	1	0	0	0
62	1	0	0	0
63	1	0	0	0
64	1	1	0	1
65	1	1	1	0
Total	651	51	6	25

**Number of active participants from prior valuation.*
***Number of active participants either eligible to retire as of October 1, 2015 or who became eligible during plan year ended September 30, 2016.*

EXHIBIT L (continued)

Supplementary State of Florida Information - Actuarial Present Value of Accumulated Plan Benefits

The factors that affected the change in the actuarial present value of accumulated plan benefits from the preceding to the current benefit information date are as follows:

Factors		Change in Actuarial Present Value of Accumulated Plan Benefits
Actuarial present value of accumulated benefits as of October 1, 2015		$299,265,463
Benefits accumulated, net experience gain or loss, changes in data	$9,195,171	
Change in assumptions	9,939,281	
Benefits paid	-15,583,000	
Interest	21,811,850	
Net increase		$25,363,302
Actuarial present value of accumulated benefits as of October 1, 2016		$324,628,765

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

1.	Retired participants as of the valuation date (including 17 beneficiaries in pay status)		355
2.	Participants inactive during year ended September 30, 2016 with vested rights		4
3.	Participants active during the year ended September 30, 2016		610
	Fully vested	401	
	Not vested	209	

The actuarial factors as of the valuation date are as follows:

1.	Normal cost, including administrative expenses		$7,495,160
2.	Actuarial accrued liability		354,234,673
	Retired participants and beneficiaries	$248,567,082	
	Inactive participants with vested rights	473,417	
	Active participants	105,194,174	
3.	Actuarial value of assets ($167,387,000 at market value as reported by the City)		175,333,405
4.	Unfunded actuarial accrued liability		$178,901,268

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

The determination of the actuarially determined employer contribution and City's required contribution is as follows:

1.	Total normal cost	$7,420,160
2.	Administrative expenses	75,000
3.	Expected employee contributions	-2,126,804
4.	Employer normal cost: (1) + (2) + (3)	$5,368,356
5.	Payment on unfunded actuarial accrued liability	12,350,015
6.	Total actuarially determined employer contribution: (4) + (5)*	$18,643,233
7.	Projected payroll to October 1, 2017	$26,917,367
8.	Total ADEC as a percentage of projected payroll: (6) ÷ (7)	69.26%
9.	Amortized value of discounted value of projected surtax revenue*	$4,670,218
10.	City's required contribution: (6) – (9)	13,973,105
11.	City's required contribution as a percentage of projected payroll: (10) ÷ (7)*	51.91%

**Adjusted for timing and projected to October 1, 2017*

EXHIBIT II

History of Employer Contributions

Plan Year Ended September 30	Actuarially Determined Employer Contributions (ADEC)	Actual Contributions	Percentage Contributed
2009	$5,268,000	$5,247,000	99.6%
2010	9,096,850	9,491,000	104.3%
2011*	8,884,794	9,711,000	109.3%
2012	11,860,912	9,066,000	76.4%**
2013	12,884,770	10,742,000	83.4%**
2014	14,884,963	13,522,000	90.8%**
2015	17,618,896	17,832,000	101.2%
2016	18,863,935	18,864,000	100.0%
2017	19,155,820	- -	- -
2018	18,643,233	- -	- -

Note: The Actuarially Determined Employer Contribution was previously referred to as the Annual Required Contribution.

* *An actuarial valuation was not performed for the plan year beginning October 1, 2009. The recommended contribution is based on the 2008 valuation's contribution rate.*

** *The City contributes based on the contribution rate percentage. Actual dollar contributions were less than recommended dollar contributions due to actual payroll being less than projected payroll.*

EXHIBIT III

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll* [(b) - (a)] / (c)
10/01/2007	$78,458,000	$116,945,000	$38,487,000	67.09%	$27,083,000	142.11%
10/01/2008	83,056,000	137,830,000	54,774,000	60.26%	26,334,000	208.00%
10/01/2009*	86,358,000	181,031,000	94,673,000	47.70%	27,661,000	342.26%
10/01/2010	97,463,955	204,384,334	106,920,379	47.69%	32,329,400	330.72%
10/01/2011	103,154,256	223,575,233	120,420,977	46.14%	31,832,037	378.30%
10/01/2012	109,473,919	251,035,516	141,561,597	43.61%	28,944,158	489.09%
10/01/2013	120,947,042	271,073,724	150,126,682	44.62%	27,871,010	538.65%
10/01/2014	145,276,644	302,122,370	156,845,726	48.09%	27,373,702	572.98%
10/01/2015	159,914,247	319,655,728	159,741,481	50.03%	28,091,083	568.66%
10/01/2016	175,333,405	354,234,673	178,901,268	49.50%	26,585,054	672.94%

** All results prior to October 1, 2010 were taken from the City's September 30, 2009 Comprehensive Annual Financial Report.*
*** An actuarial valuation was not performed for the plan year beginning October 1, 2009.*

EXHIBIT IV

Funded Ratio

A critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

The chart below depicts a history of the funded ratios for this plan, on both an actuarial (AVA) basis and market value (MVA) basis.

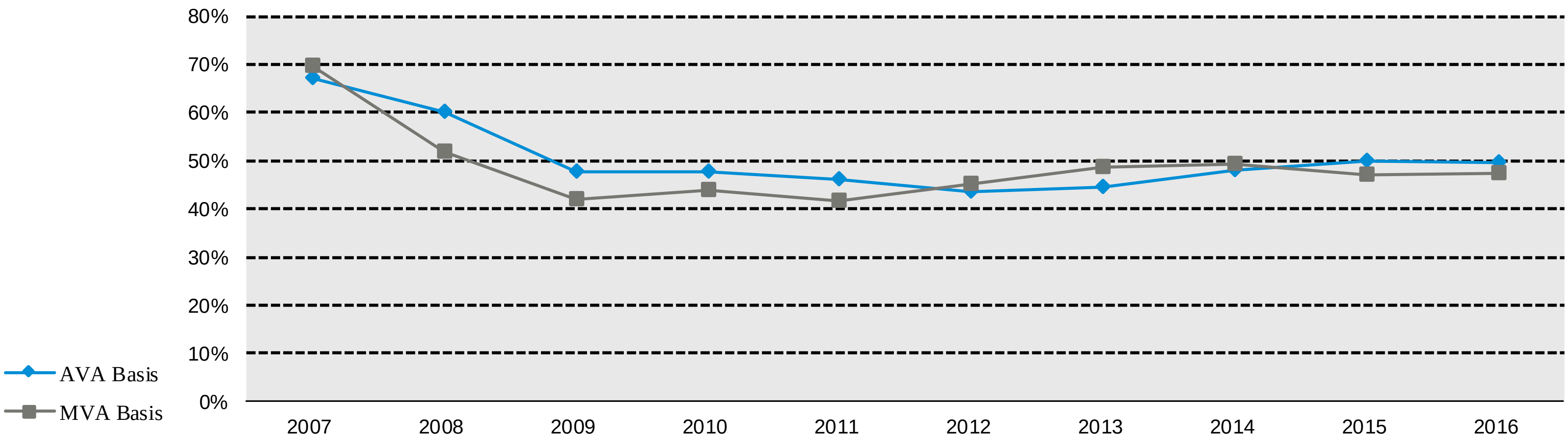


EXHIBIT V

Actuarial Assumptions and Actuarial Cost Method

Rationale for Demographic and Noneconomic Assumptions:	The information and analysis used in selecting each demographic assumption that has a significant effect on this actuarial valuation is shown in the Experience Study Report for the five-year period ended September 30, 2012. Experience data is reviewed in conjunction with each annual valuation, and updates to the mortality improvement scale and discount rate have been made this year. Based on professional judgment, no additional assumption changes are warranted at this time.
Mortality Rates:	
Pre-retirement:	Male Non-Disabled (Special Risk): RP2000, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, set forward 2.5 years, projected generationally with Scale BBM
	Female Non-Disabled: RP2000, 100% Combined Healthy White Collar, set forward 2.5 years, projected generationally with Scale BBF
Healthy annuitants:	Male Non-Disabled (Special Risk): RP2000, 10% Annuitant White Collar / 90% Annuitant Blue Collar, set forward 2.5 years, projected generationally with Scale BBM
	Female Non-Disabled: RP2000, 100% Annuitant White Collar, set forward 2.5 years, projected generationally with Scale BBF
Disabled annuitants:	RP-2000 Disabled Retiree Mortality Table, set back four years for males and set forward two years for females
	The FRS Special Risk Tables, set forward 2.5 years reasonably reflects the healthy annuitant mortality experience of the Corrections Officers Retirement Plan as of the measurement date. The RP-2000 Disabled Retiree Mortality Table, set back four years for males and set forward two years for females reasonably reflect the disabled annuitant mortality experience as of the measurement date. The mortality improvement assumptions are mandated under state law.

Termination Rates before Retirement:

	Rate (%)			
	Mortality*		Disability**	
Age	Male	Female	Male	Female
20	0.04	0.02	0.04	0.02
25	0.04	0.02	0.04	0.03
30	0.09	0.04	0.06	0.05
35	0.12	0.05	0.08	0.08
40	0.15	0.08	0.12	0.11
45	0.20	0.13	0.18	0.17
50	0.31	0.20	0.31	0.27
55	0.58	0.35	0.49	0.43
60	1.12	0.64	0.82	0.56
65	2.00	1.16	0.00	0.00

** Mortality rates shown for base table*
***100% of disabilities are assumed to be non-service incurred.*

Service	Withdrawal**
0-1	7.00
1-2	7.00
2-3	5.00
3-4	5.00
4-5	5.00
5-6	5.00
6-7	4.00
7-8	4.00
8-9	4.00
9-10	4.00
10+	1.00

***Rate set to 1.00% after age 45. All withdrawal rates are set to 0% after eligibility for retirement.*

Retirement Rates: 100% retirement assumed at age 65 with 5 years of service; for ages less than 65, retirement rate assumptions are based on service as follows:

Service	Rate (%)*
Under 20	0%
20	50
21-23	30
24	40
25-29	50
30 & Over	100

**Above rates are adjusted by a factor of 75% for ages under 45.*

Refund of Contributions: 95% of participants that are vested and terminate are assumed to take a refund of their employee contributions in lieu of their accrued benefit deferred to age 65.

Retirement Age for Inactive Vested Participants: 65

Percent Married: 50%

Age of Spouse: Females three years younger than males

Unknown Data for Participants: Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

Net Investment Return: 7.40%

The net investment return assumption was chosen by the Retirement System's Board of Trustees, with input from the actuary. This assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the Plan's target asset allocation.

Salary Increases (including inflation):

Service	Rate (%)
0-4	6.0
5-9	5.0
10-14	4.0
15+	3.0

The inflation component of the salary scale has been adjusted from 2.75% to 6.50% for the first two years, 7.00% for the third year, with subsequent increases resuming at the assumed inflation rate of 2.75%.

Inflation Rate: 2.75%

Payroll Growth Rate: 1.25% used for amortization of unfunded liability amounts, based on the requirement in the Florida Statutes that the assumption for this purpose may not exceed the average annual growth for the preceding ten years. Negotiated pay level increases were taken into consideration in setting a payroll growth that is expected to be achieved and maintained on a ten-year average basis. The Fund's long-term payroll growth assumption is equal to the inflation assumption of 2.75%.

Initial Value of Applicable Tax Revenue: Actual revenue of $82,875,723 for fiscal 2016 is used as the basis of the City's revenue projection. This amount is prior to application of the allocation percentage.

Tax Revenue Growth Rate: 4.62% for fiscal 2017 and 4.25% thereafter. This assumption is determined by the City. Segal has not reviewed the information used to set this assumption, but Segal has reviewed the sensitivity of this assumption.

Projected Tax Revenue Allocation: 6%. This method is determined by the City.

Administrative Expenses:	Previous year's actual expenses; $75,000 for October 1, 2016.
Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected market return, and is recognized over a five - year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by compensation, with Normal Cost determined as if the current benefit accrual rate had always been in effect. Normal Cost is not included for participants who are assumed to retire with 100% certainty in the upcoming plan year based on the retirement assumptions.
Changes in Assumptions:	The following assumption and method changes were reflected in this valuation: ➤ Mortality was updated pursuant to Florida Statute Section 112.63(f). ➤ Discount rate was lowered from 7.50% to 7.40%. ➤ Based on the proposed agreement with unions representing Corrections employees, the inflation component of the salary scale has been adjusted from 2.75% to 6.50% for the first two years, 7.00% for the third year, with subsequent increases resuming at the assumed inflation rate of 2.75%. ➤ Based on inclusion of Corrections Officers Defined Contribution Plan payroll in the ten year payroll history used to support the payroll growth and analysis of the impact of these pay increases over the next three years, the payroll growth rate for funding purposes was changed from 0.00% to 1.25%. ➤ The City's required contribution was determined based on Florida Statute 112.64(6) as follows: • A fresh-start 30-year amortization base equal to the unfunded actuarial accrued liability was determined.

- The actuarially determined employer contribution (ADEC) is calculated. Once that amount has been determined, it is reduced by the amortized value of the discounted value of allocated surtax revenue.

➤ The City provided actual surtax revenue for 2016 and projected surtax revenue for 2017. The projected 2017 surtax revenue was projected to 2060 at 4.25%, an assumption provided by the City. The Corrections Officers' Retirement Plan is allocated 6% of the projected revenue. For each year from 2031 – 2060, the Corrections Officers allocated share was discounted to 2016 at the discount rate of 7.40%. The sum of these discounted values were then amortized over a 30-year period, and this amortized amount was subtracted from the ADEC to determine the amount the City will contribute.

EXHIBIT VI

Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	October 1 through September 30
Normal Retirement:	
Age Requirement	Age 65 with five years of Credited Service or any age with 20 years of Credited Service.
Regular Benefit Amount	3.0% of Final Monthly Compensation times years of Credited Service for the first 20 years plus 2.0% of Final Monthly Compensation times years of Credited Service for years in excess of 20. However, the benefit may not exceed 80% of Final Monthly Compensation.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	$59.25 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Early Retirement:	None
Service-Incurred Disability:	
Age Requirement	None
Service Requirement	None
Regular Benefit Amount	50% of the average salary earned in the last three years immediately preceding disability retirement.

Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	$59.25 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Non-service Incurred Disability:	
Age Requirement	None
Service Requirement	5 years of Credited Service
Regular Benefit Amount	25% percent of the average salary earned in the last three years immediately preceding disability retirement. For each year of service in excess of 5 years, the benefit shall be increased 2.5%, to a maximum of 50%.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	$59.25 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Vesting:	
Age Requirement	None
Service Requirement	5 years of Credited Service
Regular Benefit Amount	Accrued Normal Retirement Benefit payable at age 65.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month. Payable at Age 65.
Minimum Benefit Amount	$59.25 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.

Spouse's Pre-Retirement Death Benefit:	
Age Requirement	None
Service Requirement	None
Regular Benefit Amount	If the Member is eligible for retirement, the surviving spouse is entitled to 75% of the member's accrued retirement benefit. If the Member is not eligible for retirement, the surviving spouse is entitled to 75% of the pension the Member would have received if the Member had worked to eligibility for Normal Retirement at current salary, using a 2% annual accrual rate.
Supplemental Benefit Amount	Monthly benefit of $5 times years of Member's Credited Service, not less than $25 per month or more than $150 per month.
Minimum Benefit Amount	75% of $59.25 per whole year of Member's Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Spouse's Post-Retirement Death Benefit:	
Regular Benefit Amount	Surviving spouse is entitled to 75% of the Member's regular benefit.
Supplemental Benefit Amount	Surviving spouse is entitled to 100% of the Member's supplemental benefit.
Minimum Benefit Amount	75% of the Member's Minimum Benefit Amount at retirement.
Member:	All City corrections officers are eligible for membership in the Plan upon date of hire.
Member Contributions:	8% of Earnable Compensation for the fiscal year beginning October 1, 2016 and 10% of Earnable Compensation thereafter; additional 2% of Earnable Compensation during DROP participation.
Credited Service:	The number of full years and months worked from date of participation to date of termination or retirement, plus any prior service purchased.
Final Monthly Compensation:	Average monthly rate of Earnable Compensation during the highest 36 consecutive months (78 pay periods) out of the last ten years of employment.
Earnable Compensation:	Base pay for regular hours worked as an employee, plus service raises and excluding bonuses, adjusted compensation, overtime or any extra compensation over and above regularly budgeted salaries.

Cost of Living Adjustment:	On the December 1st after the initial benefit commencement date, and on each December 1st thereafter, the regular benefit is increased by 3%.
DROP:	Members with 20 or more years of service may elect to defer receipt of their retirement benefits while continuing employment with the City for up to 5 years. Upon the effective date of participating in the DROP, a member's years of service and Final Monthly Compensation become frozen for purposes of determining pension benefits. Additional service beyond the date of DROP participation no longer accrues any additional benefits under the Retirement System. Benefits that would have been payable are accumulated at interest to date of termination and paid or rolled over in a single sum, and payments are made directly to the Member thereafter based on the accrued retirement benefit at the DROP start date. COLA increases start at termination of employment rather than at the start of the DROP.
Changes in Plan Provisions:	The following plan changes have been reflected in this valuation: The Plan will be closed to new active members effective September 30, 2017 and new employees hired after this date will enter the Corrections Officers Defined Contribution Plan with a 25% employer contribution rate and a 10% employee contribution rate. Ongoing CORP participants will have their employee contribution rate increase from 8% to 10% of pay effective October 1, 2017.

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EXHIBIT 1

General Information – "Financial Statements", Note Disclosures and Required Supplementary Information for a Single Employer Pension Plan

Plan Membership

At September 30, 2016, pension plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits	355
Inactive employees entitled to but not yet receiving benefits	4
Active employees	610
Total	969

EXHIBIT 2
Summary of Plan Provisions

Please see Section 4, Exhibit VI, of the October 1, 2016 actuarial valuation for a summary of plan provisions.

EXHIBIT 3

Net Pension Liability

The components of the net pension liability of the Jacksonville Corrections Officers Retirement Plan at September 30, 2016 were as follows:

Total pension liability	$370,091,633
Plan fiduciary net position	182,127,000
Net pension liability	187,964,633
Plan fiduciary net position as a percentage of the total pension liability	49.21%

Actuarial assumptions. The total pension liability was determined based on an actuarial valuation as of September 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%*
Salary increases	3.00% - 6.00%, of which 2.75% is the Plan's long-term payroll inflation assumption. The inflation component of the salary increase assumption was adjusted to reflect bargained increases over the next three years.
Investment rate of return	7.40%, net of pension plan investment expenses, including inflation
Pre-retirement mortality rates	10% RP2000 Combined Healthy White Collar and 90% RP2000 Combined Healthy Blue Collar, set forward 2.5 years, projected generationally with Scale BB for males; RP2000 Combined Healthy White Collar, set forward 2.5 years, projected generationally with Scale BB for females.
Healthy annuitant mortality rates	10% RP2000 White Collar Annuitant and 90% RP2000 Blue Collar Annuitant, set forward 2.5 years, projected generationally with Scale BB for

* *The Plan's payroll inflation assumption is 2.75%. However, based on Part VII, Chapter 112.64(5)(a) of Florida Statutes, an assumption of 1.25% was used for amortization purposes in the October 1, 2016 valuation.*

	males; RP2000 White Collar Annuitant, set forward 2.5 years, projected generationally with Scale BB for females.
Disabled annuitant mortality rates	RP-2000 Disabled Retiree Mortality Table, setback four years for males and set forward two years for females

The FRS Special Risk Tables, set forward 2.5 years reasonably reflect the healthy annuitant mortality experience of the Corrections Officers Retirement Plan as of the measurement date. The RP-2000 Disabled Retiree Mortality Table, set back four years for males and set forward two years for females reasonably reflect the disabled annuitant mortality experience as of the measurement date. The mortality improvement assumptions are mandated under state law.

With the exception of the mortality assumption, the demographic assumptions used in the October 1, 2016 valuation were based on the results of an experience study for the period October 1, 2007 to September 30, 2012. The base tables and projection scale used in the mortality assumptions are mandated by law and have been adjusted based on an interim study of the Plan’s mortality experience through September 30, 2016.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2016 are summarized in the following table. The long-term expected real rates of return are based on 20-year projections of capital market assumptions provided by Segal Marco Advisors.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	35%	6.71%
International equity	20%	7.71%
Fixed income	19%	2.11%
Real estate	25%	5.21%
Cash	1%	1.10%
Total	100%	

Discount rate: The discount rate used to measure the total pension liability is 7.40%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at their applicable contribution rates and that City contributions will be made at rates equal to the actuarially determined contribution rates. Based on these assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on the Plan's investments was applied to all periods of projected benefit payments to determine the total pension liability. Cash flow projections were run for a 120-year period.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the Jacksonville Corrections Officers Retirement Plan, calculated using the discount rate of 7.40%, as well as what the Jacksonville Corrections Officers Retirement Plan's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.40%) or 1-percentage-point higher (8.40%) than the current rate:

	1% Decrease (6.40%)	Current Discount (7.40%)	1% Increase (8.40%)
Jacksonville Corrections Officers Retirement Plan's net pension liability	$241,133,156	$187,964,633	$145,186,254

EXHIBIT 4

Schedules of Changes in Jacksonville CORP Net Pension Liability – Last Four Fiscal Years

	2016	2015	2014	2013
Total pension liability				
Service cost	$7,090,819	$7,260,679	$6,680,120	$6,904,010
Interest	25,390,625	23,652,385	21,997,460	20,475,861
Change of benefit term	0	0	0	0
Differences between expected and actual experience	-1,418,089	1,699,155	5,963,454	5,776,658
Changes of assumptions	16,320,426	-1,243,005	10,764,915	0
Benefit payments, including refunds of employee contributions	-17,486,000	-13,081,000	-14,677,000	-12,369,000
Net change in total pension liability	$29,897,781	$18,288,214	$30,728,949	$20,787,529
Total pension liability – beginning	340,193,852	321,905,638	291,176,689	270,389,160
Total pension liability – ending (a)	$370,091,633	$340,193,852	$321,905,638	$291,176,689
Plan fiduciary net position				
Contributions – employer	$18,864,000	$17,832,000	$13,522,000	$10,742,000
Contributions – employee	2,410,000	2,466,000	2,253,000	2,525,000
Net investment income	11,548,000	-3,849,000	15,468,000	18,466,000
Benefit payments, including refunds of employee contributions	-17,486,000	-13,081,000	-14,677,000	-12,369,000
Administrative expense	-75,000	-73,000	-65,000	-50,000
Other	0	0	0	392,000
Net change in plan fiduciary net position	15,261,000	3,295,000	$16,501,000	$19,706,000
Plan fiduciary net position – beginning	166,866,000	163,571,000	147,070,000	127,364,000
Plan fiduciary net position – ending (b)	182,127,000	166,866,000	163,571,000	147,070,000
Net pension liability – ending (a) – (b)	$187,964,633	$173,327,852	$158,334,638	$144,106,689
Plan fiduciary net position as a percentage of the total pension liability	49.21%	49.05%	50.81%	50.51%
Covered employee payroll	$26,585,054	$28,091,083	$27,373,702	$27,871,010
Net pension liability as percentage of covered employee payroll	707.03%	617.02%	578.42%	517.05%

Prior to 2016, the service cost was calculated to include interest to the end of the measurement year. After 2016, this interest is reflected under the interest on the total pension liability, consistent with typical actuarial practice.

Notes to Schedule:

Benefit changes: There have been no changes in benefit provisions since GASB 67 implementation.

Change of Assumptions: As of September 30, 2015 based on the Society of Actuaries' most recently published analysis and guidance on projected national mortality improvements, the mortality improvement scale was changed from MP2014 to MP2015.

As of September 30, 2016, the mortality assumption was updated pursuant to Florida Statute Section 112.63(f), the assumed investment return was lowered from 7.50% to 7.40% and the inflation component of the salary scale was adjusted for the following three years to reflect bargained increases with employee unions.

EXHIBIT 5

Development of Pension Expense

	Fiscal Year Ending September 30, 2017
Components of pension expense	
Service cost	$7,090,819
Interest on the total pension liability	25,390,625
Projected earnings on plan investments	-12,654,188
Employee contributions	-2,410,000
Administrative expense	75,000
Current year recognition of:	
Changes of assumptions	2,331,492
Difference between expected and actual experience	-202,585
Difference between projected and actual earnings on pension plan investments	221,236
Change of benefit terms	0
Deferred outflows established in prior years	5,909,448
Deferred inflows established in prior years	-983,581
Total pension expense	$24,768,266

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions
(GASB 68 Only; information drafted for inclusion in a September 30, 2017 CAFR)

For the year ended September 30, 2017 the City's recognized pension expense is $24,768,266. At September 30, 2017, the City reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$4,621,368	1,215,504
Changes of assumptions	20,140,314	887,860
Net difference between projected and actual earnings on pension plan investments	9,103,769	- -
Total	$33,865,451	$2,103,364

Contributions of $X were reported as deferred outflows of resources related to pensions resulting from City of Jacksonville contributions subsequent to the September 30, 2016 measurement date and will be recognized as a reduction of the net pension liability in the year ended September 30, 2017. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended	Recognition of deferred outflows/(inflows)
September 30, 2018	$7,276,010
September 30, 2019	7,276,010
September 30, 2020	8,082,019
September 30, 2021	4,805,074
September 30, 2022	2,194,069
Thereafter	2,128,905

EXHIBIT 6

Schedule of Jacksonville CORP's Contributions – Last Ten Fiscal Years

Year Ended September 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered-Employee Payroll[1]	Contributions as a Percentage of Covered Employee Payroll	Percentage of Payroll Actually Contributed Throughout the Year[2]
2007	$1,830,000	$2,482,000	($652,000)	$27,083,000	9.16%	6.17%
2008	4,329,000	4,350,000	(21,000)	26,334,000	16.52%	13.86%
2009	5,268,000	5,247,000	21,000	27,661,000	18.97%	17.16%
2010	9,096,850	9,491,000	(394,150)	32,329,400	29.36%	31.78%
2011	8,884,794	9,711,000	(826,206)	31,832,037	30.51%	31.78%
2012	11,860,912	9,066,000	2,794,912	28,944,158	31.32%	35.45%
2013	12,884,770	10,742,000	2,142,770	27,871,010	38.54%	39.11%
2014	14,884,963	13,522,000	1,362,963	27,373,702	49.40%	49.93%
2015	17,618,896	17,832,000	(213,104)	28,091,083	63.48%	62.81%
2016	18,863,935	18,864,000	(65)	26,585,054	70.96%	68.64%

[1]Pensionable payroll as of the valuation measurement date.

[2]The City contributes the percentage of payroll represented by the actuarially determined contribution in the corresponding actuarial valuation. Actual dollar contributions may be more or less than the actuarially determined contributions due to actual payroll being different from projected payroll.

EXHIBIT 7

Notes to Required Supplementary Information

Valuation date	October 1, 2016
Methods and used assumptions to determine contribution rates:	
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll, using 1.25% annual increases*
Remaining amortization period	All new bases are amortized over 30 years. The amortization schedule was reset to 30 years effective October 1, 2016. The effective period was 23 years remaining as of October 1, 2015 prior to this reset.
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial assumptions:	
Investment rate of return	7.40%, including inflation, net of pension plan investment expense
Inflation rate	2.75%*
Projected salary increases	3.00% - 6.00%, of which 2.75% is the Plan's long-term payroll inflation assumption. The inflation component of the salary increase assumption was adjusted to reflect bargained increases over the next three years.
Cost-of-living adjustments	The Plan provisions contain a 3.00% COLA.

* *The Fund's payroll inflation assumption is 2.75%. However, based on Part VII, Chapter 112.64(5)(a) of Florida Statutes, an assumption of 1.25% was used for amortization purposes in the October 1, 2016 valuation.*

Retirement rates	100% retirement assumed at age 65 with 20 years of service; for ages less than 65, retirement rate assumptions are based on service as follows:

Service	Rate (%)*
Under 20	0%
20	50
21-23	30
24	40
25-29	50
30 & Over	100

**Above rates are adjusted by a factor of 75% for ages under 45.*

Mortality:	
Pre-retirement	10% RP2000 Combined Healthy White Collar and 90% RP2000 Combined Healthy Blue Collar, set forward 2.5 years, projected generationally with Scale BB for males; RP2000 Combined Healthy White Collar, set forward 2.5 years, projected generationally with Scale BB for females
Healthy annuitants	10% RP2000 White Collar Annuitant and 90% RP2000 Blue Collar Annuitant, set forward 2.5 years, projected generationally with Scale BB for males; RP2000 White Collar Annuitant, set forward 2.5 years, projected generationally with Scale BB for females
Disabled annuitants	RP-2000 Disabled Retiree Mortality Table, setback four years for males and set forward two years for females
Other information:	See Exhibit 4 for the history of changes to plan provisions and assumptions, if any.