

Actuarial Valuation and Review as of October 1, 2014





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April 21, 2015

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, 2014. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for the fiscal year beginning October 1, 2015.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement Plan. 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 meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

I 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. 14-7009

## **SECTION 1**

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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, 2014. 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 Pension Plan, as administered by the Board;

The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of September 30, 2014, provided by the Retirement System Administrative Office;

The assets of the Plan as of September 30, 2014, 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.

The assumptions used in this valuation are based on a five-year review of plan experience for the period October 1, 2007 – September 30, 2012 and an interim review of plan experience for the two-year period ended September 30, 2014.

## **Significant Issues in Valuation Year**

- 1. This valuation determines the recommended contribution for the fiscal year beginning October 1, 2015. The recommended contribution has increased from \$17,618,896 for the fiscal year beginning October 1, 2014 to \$18,863,935 for the fiscal year beginning October 1, 2015. As a percentage of pay, the contribution has increased from 62.81% of projected pay to 68.64% of projected pay.
- 2. As approved at the February 26, 2015 Board meeting, the discount rate was lowered from 7.75% to 7.50%, the payroll growth assumption was lowered from 3.00% to 2.75%, and the mortality assumption was updated to introduce generational projection of mortality improvements using a base table which reflects mortality experience through September 30, 2014. The Board also approved a one-time recognition of deferred asset gains in the actuarial value of assets, to offset half the impact of assumption changes. Unrecognized asset gains were originally \$12,338,927 and \$8,894,571 (72%) of this amount has been recognized immediately, leaving \$3,444,356 in asset gains to be recognized over the next five years.
- 3. 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 preceding ten years. As a result, for amortization purposes only, the payroll growth assumption was lowered from 0.64% to 0.39% for this valuation.



4. The recommended contribution for the plan years beginning October 1, 2014 and October 1, 2015 are shown below

October 1, 2014 recommended contribution \$17,618,896, or 62.81% of projected pay
 October 1, 2015 recommended contribution, prior to any assumption changes
 October 1, 2015 recommended contribution, after payroll growth assumption change \$18,393,880, or 66.93% of projected pay
 October 1, 2015 recommended contribution, after discount rate and mortality assumption change \$19,568,405, or 71.21% of projected pay
 October 1, 2015 recommended contribution, after discount rate and mortality assumption change \$19,568,405, or 71.21% of projected pay

after asset method change \$18,863,935, or 68.64% of projected pay

- 5. The investment rate of return on an actuarial basis for the year ended September 30, 2014 was 11.80%. Since the rate of return was more than the assumed rate of return of 7.75% for the year ending September 30, 2014, there was an actuarial investment gain amounting to \$4,920,049. The return on a market value basis was 11.66%.
- 6. As of the valuation date, the smoothed actuarial value of assets was equal to 91.7% of market value, prior to the partial recognition of deferred gains. After the accelerated recognition of some of the gains, the actuarial value is 97.7% of market value. To illustrate the effect of the remaining unrecognized investment gains, if the current year's actuarial value of assets were equal to the current market value of assets, the recommended contribution of \$18,863,935 (68.64% of projected pay) would be \$18,591,134 (67.65% of projected pay).
- 7. On an actuarial value basis, the funded ratio has increased from 44.62% as of October 1, 2013 to 48.09% as of October 1, 2014. On a market value basis, the funded ratio has increased from 48.75% as of October 1, 2013 to 49.23% as of October 1, 2014. The last ten years of funding progress are shown in Exhibit III of Section 4.
- 8. The following assumptions were changed in this valuation:
  - > Based on lower inflation expectations and continued expectations of lower real returns, the discount rate was lowered from 7.75% to 7.50%;
  - ➤ Based on lower inflation expectations, the payroll growth rate assumption was lowered from 3.00% to 2.75%;
  - ➤ As mandated by Part VII, Chapter 112.64(5)(a) of Florida Statutes, the payroll growth rate was lowered from 0.64% to 0.39%;



- ➤ Based on plan experience through September 30, 2014 and expectations of future increased life expectancy, the mortality assumption for active and inactive vested participants was changed from the RP-2000 Employee Mortality Table, set forward one year and projected to 2013 with Scale BB to the RP-2014 Blue Collar Employee Mortality Table, set forward four years for males and three years for females, projected generationally with Scale MP-2014;
- ➤ Based on plan experience through September 30, 2014 and expectations of future increased life expectancy, the mortality assumption for healthy retirees and beneficiaries was changed from the RP-2000 Annuitant Mortality Table, set forward one year and projected to 2013 with Scale BB to the RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward four years for males and three years for females, projected generationally with Scale MP-2014;
- > Coordinating with the mortality assumption for healthy lives, the mortality assumption for disabled retirees was changed from the RP-2000 Disabled Retiree Mortality Table to the RP-2014 Disabled Retiree Mortality Table, set forward four years for both males and females, projected generationally with Scale MP-2014.
- > Normal Cost has been removed for participants who are assumed to retire with 100% certainty in the upcoming plan year based on the retirement assumptions.
- 9. The asset method was changed in this valuation in the following manner:
  - > The Board accelerated the recognition of prior asset gain/loss bases by reflecting 72% of the outstanding asset gains/losses immediately.
- 10. There were no plan changes since the prior valuation.
- 11. IRS Section 415(b) limits increased from \$205,000 for 2013 to \$210,000 for 2014.
- 12. 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.
- 13. Governmental Accounting Standards Board (GASB) Statement No. 67 is effective for plan fiscal years beginning after June 15, 2013, and Statement No. 68 is effective for employer fiscal years beginning after June 15, 2014. Segal will work with the City and their auditor to provide the necessary disclosures, under separate cover. The disclosures for GASB Statement No. 27, however, are included in Section 4 of this report, and the exhibits that were previously required for GASB 25 are included as well, for informational purposes.



## **Summary of Key Valuation Results**

	2015	2014	2013
Contributions for fiscal year beginning October 1:			
Recommended	\$18,863,935	\$17,618,896	\$14,884,963
As a percentage of projected payroll	68.64%	62.81%	49.93%
Actual			\$13,522,000*
Actual percentage of payroll contributed			49.93%
Funding elements for plan year beginning October 1:			
Normal cost, including administrative expenses		\$7,435,060	\$6,931,081
Market value of assets		148,721,000	132,154,000
Actuarial value of assets		145,276,644	120,947,042
Actuarial accrued liability		302,122,370	271,073,724
Unfunded actuarial accrued liability		156,845,726	150,126,682
Funded ratio – actuarial value of assets		48.09%	44.62%
Funded ratio – market value of assets		49.23%	48.75%
Demographic data for plan year beginning October 1:			
Number of retired participants and beneficiaries		306	274
Number of vested former participants		1	1
Number of active participants		616	631
Covered payroll		\$27,373,702	\$27,871,010
Average payroll		44,438	44,170
Projected payroll for next fiscal year		27,480,459	28,049,384

<sup>\*</sup>Per City of Jacksonville Ordinance 2013-464-E, the City contributed 49.93% of covered payroll to the Corrections Officers Retirement Plan for the fiscal year beginning October 1, 2013. Actual dollar contributions were less than recommended dollar contributions due to actual payroll being less than projected payroll.



## 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: 2005 – 2014

Year Ended September 30	Active Participants	Vested Terminated Participants	Retired Participants and Beneficiaries*	Ratio of Non-Actives to Actives
2005	577	1	11	0.02
2006	596	3	15	0.03
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

<sup>\*</sup>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 616 active participants with an average age of 37.4, average years of service of 8.3 years and average payroll of \$44,438. The 631 active participants in the prior valuation had an average age of 37.6, average service of 8.4 years and average payroll of \$44,170.

## **Inactive Participants**

In this year's valuation, there was one participant 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, 2014

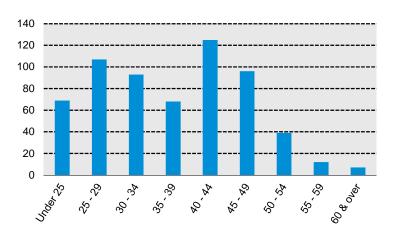
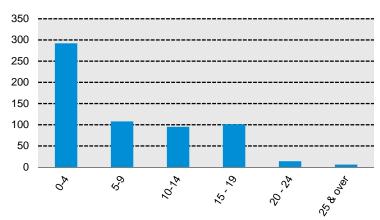


CHART 3
Distribution of Active Participants by Years of Service as of September 30, 2014





## **Retired Participants and Beneficiaries**

As of September 30, 2014, 290 retired participants and 16 beneficiaries were receiving, or reserving for future receipt in the case of DROP retirees, total monthly benefits of \$1,080,965. For comparison, in the previous valuation, there were 259 retired participants and 15 beneficiaries receiving monthly benefits of \$958,249

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, 2014

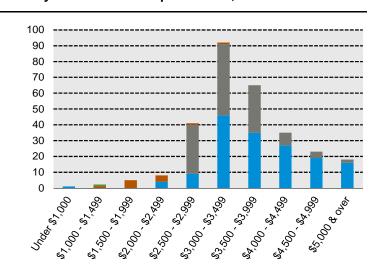
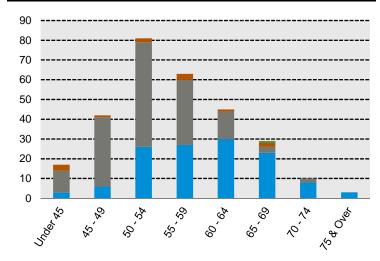


CHART 5
Distribution of Retired Participants by Type and by Age as of September 30, 2014





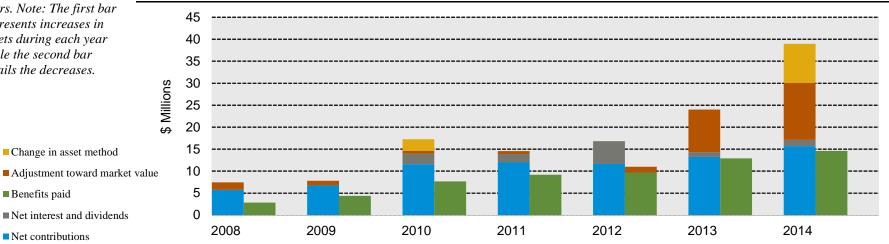
#### **B. FINANCIAL INFORMATION**

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 seven 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 - 2014





■ Benefits paid

■ Net contributions

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, 2014

1. Market value of assets, September 30, 2014					\$148,721,000
	Original Amount*	Unrecognized Return**	Additional One Time Recognition	Updated Unrecognized Return***	
2. Calculation of unrecognized return					
(a) Year ended September 30, 2014	\$5,183,479	\$4,146,783	\$2,989,227	\$1,157,556	
(b) Year ended September 30, 2013	9,681,685	5,809,011	4,187,452	1,621,559	
(c) Year ended September 30, 2012	9,359,561	3,743,824	2,698,752	1,045,072	
(d) Year ended September 30, 2011	-6,803,453	-1,360,691	-980,860	-379,831	
(e) Year ended September 30, 2010	2,836,270	0	0	0	
		\$12,338,927	\$8,894,571	\$3,444,356	
(f) Total unrecognized return					3,444,356
3. Preliminary actuarial value: (1) - (2f)					145,276,644
4. Adjustment to be within 20% corridor					0
5. Final actuarial value of assets as of September 30, 2014: (3) + (4)					\$145,276,644
6. Actuarial value as a percentage of market value: $(5) \div (1)$					97.7%
7. Amount deferred for future recognition: (1) - (5)					\$3,444,356***

<sup>\*</sup>Total return minus expected return on a market value basis

<sup>\*\*\*</sup>Deferred return as of September 30, 2014 recognized in each of the next four years:



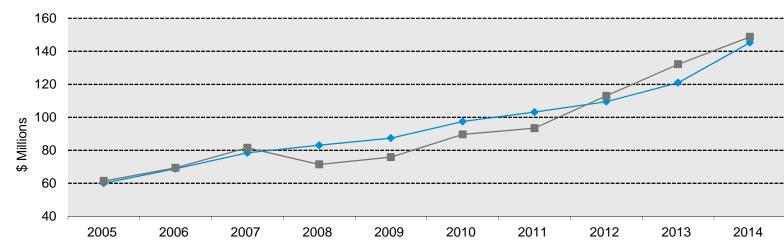
<sup>\*\*</sup>Recognition at 20.00% per year over five years

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 8

Actuarial Value of Assets vs. Market Value of Assets as of September 30, 2005 – 2014



Actuarial Value

Market Value



### 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 \$2,482,035, consisting of \$4,920,049 from investment gains and \$7,402,084 in losses from all other sources. The net experience variation from individual sources other than investments was 2.5% 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 9 Actuarial Experience for Year Ended September 30, 2014

1.	Net gain from investments*	\$4,920,049
2.	Net loss from administrative expenses	-8,256
3.	Net loss from other experience	<u>-7,393,828</u>
4.	Net experience loss: $(1) + (2) + (3)$	-\$2,482,035

<sup>\*</sup> Details in Chart 10



### **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 7.75% for the year ended September 30, 2014. The actual rate of return on an actuarial basis for the 2014 plan year was 11.80%.

Since the actual return for the year was greater than the assumed return, the Plan experienced an actuarial gain during the year ended September 30, 2014 with regard to its investments.

This chart shows the gain due to investment experience.

## **CHART 10**

## Actuarial Value Investment Experience for Year Ended September 30, 2014

Actual return	\$14,336,031
2. Average value of assets	121,496,542
3. Actual rate of return: (1) ÷ (2)	11.80%
4. Assumed rate of return	7.75%
5. Expected return: (2) x (4)	\$9,415,982
6. Actuarial gain: (1) – (5)	<u>\$4,920,049</u>

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 the most recent five-year averages. The Retirement System Board has lowered the assumed rate of return from 7.75% to 7.50%, effective with this valuation.

CHART 11
Investment Return – Actuarial Value vs. Market Value: 2008 - 2014

	Net Intere		Recognition Apprec	•	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
2005								8.08%		9.34%
2006								8.96		7.68
2007								10.03		14.71
2008								2.14		-15.61
2009								1.23		1.49
2010	\$2,378,000	2.65%	\$707,747	0.77%	\$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	<u>1,401,000</u>	1.15	12,935,031	10.65	<u>8,894,571</u>	7.32	23,230,602	19.12	15,468,000	11.66
Total	\$11,985,000		\$22,736,865		\$11,484,677		\$46,206,542		\$61,208,000	
						Five-year	average return	7.53%		12.00%

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

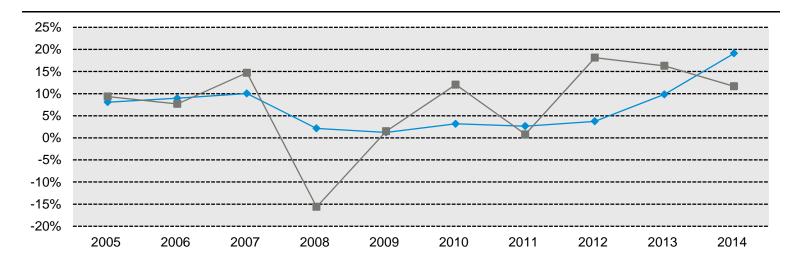


Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

This chart illustrates how this leveling effect has actually worked over the years 2005 - 2014. Returns for years ended September 30, 2010 and 2014 include changes in asset method.

CHART 12

Market and Actuarial Rates of Return for Years Ended September 30, 2005 - 2014



Actuarial Value



## **Administrative Expenses**

Administrative expenses for the year ended September 30, 2014 totaled \$65,000 compared to the assumption of \$50,000. This resulted in a loss of \$8,256 for the year.

## **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 loss from this other experience for the year ended September 30, 2014 amounted to \$7,393,828, which is 2.5% of the actuarial accrued liability.

Factors contributing to the loss include a 36% increase in monthly benefit payments, higher than expected interest credits on DROP account balances due to higher than expected market value returns, and salary increases greater than expected for continuing active participants.



#### D. RECOMMENDED 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 funding rate of 68.64% of payroll.

The City and the Pension Board have adopted financing periods of 30 years for experience gains and losses and for benefit, assumption and method changes. Required

contribution amounts have been determined using those periods.

The contribution requirements as of October 1, 2014 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.

Veer Designing October 4

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

## CHART 13 Recommended Contribution

		Year Beginning October 1				
		2014		2013		
		Amount	% of Payroll	Amount	% of Payroll	
1.	Total normal cost	\$7,370,060	26.92%	\$6,881,081	24.69%	
2.	Administrative expenses	65,000	0.24%	50,000	0.18%	
3.	Expected employee contributions	<u>-2,189,896</u>	<u>-8.00%</u>	<u>-2,229,681</u>	<u>-8.00%</u>	
4.	Employer normal cost: $(1) + (2) + (3)$	\$5,245,164	19.16%	\$4,701,400	16.87%	
5.	Actuarial accrued liability	302,122,370		271,073,724		
6.	Actuarial value of assets	145,276,644		120,947,042		
7.	Unfunded actuarial accrued liability: (5) - (6)	\$156,845,726		\$150,126,682		
8.	Payment on unfunded actuarial accrued liability	12,827,530	46.86%	12,115,612	43.47%	
9.	Total contribution: (4) + (8), adjusted for timing*	18,790,651	68.64%	17,506,853	62.81%	
10.	Total payroll	27,373,702		27,871,010		
11.	Total recommended contribution, projected to next fiscal year	<u>\$18,863,935</u>	<u>68.64%</u>	<u>\$17,618,896</u>	<u>62.81%</u>	
12.	Projected payroll	\$27,480,459		\$28,049,384		



<sup>\*</sup>Recommended 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 14 Reconciliation of Recommended Contribution from October 1, 2014 to October 1, 2015

Recommended Contribution as of October 1, 2014	\$17,618,896
Effect of change in actuarial assumptions	1,174,525
Effect of lowering payroll growth assumption for amortization purposes due to Florida Statutes	234,416
Effect of change in asset method	-704,470
Effect of investment gain	-390,513
Effect of other gains and losses on accrued liability	587,516
Effect of expected change in amortization payment due to payroll growth	81,237
Effect of contribution deferral to budget year	327,368
Effect of net other changes	<u>-65,040</u>
Total change	<u>\$1,245,039</u>
Recommended Contribution as of October 1, 2015	\$18,863,935



SECTION 3: Supplemental Information for the City of Jacksonville Corrections Officers Retirement Plan

EXHIBIT A

Table of Plan Coverage

	Year Ended		
Category	2014	2013	Change From Prior Year
Active participants in valuation:			
Number	616	631	-2.4%
Average age	37.4	37.6	N/A
Average years of service	8.3	8.4	N/A
Projected total payroll	\$27,373,702	\$27,871,010	-1.8%
Projected average payroll	44,438	44,170	0.6%
Account balances	15,902,761	16,339,375	-2.7%
Total active vested participants	324	328	-1.2%
Vested terminated participants	1	1	0.0%
Retired participants in pay status:			
Number in pay status	158	121	30.6%
Average age	58.7	59.0	N/A
Average monthly benefit (excluding supplemental benefits)	\$3,800	\$3,860	-1.6%
DROP participants: not yet in pay status:			
Number in DROP	120	126	-4.8%
Average age	52.2	52.2	N/A
Average monthly benefit (excluding supplemental benefits)	\$3,303	\$3,267	1.1%
Disabled participants:			
Number in pay status	12	12	0.0%
Average age	52.4	51.4	N/A
Average monthly benefit	\$2,077	\$2,019	2.9%
Beneficiaries in pay status:			
Number in pay status	16	15	6.7%
Average age (excluding minors)	63.6	62.6	N/A
Average monthly benefit (excluding minors benefits)	\$2,269	\$2,309	-1.7%

<sup>\*</sup>Count includes 5 minors in 2014 and 4 minors in 2013 receiving benefits until age 18.



SECTION 3: Supplemental Information for the City of Jacksonville Corrections Officers Retirement Plan

EXHIBIT B
Participants in Active Service as of September 30, 2014
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	69	69							
	\$34,110	\$34,110							
25 - 29	107	82	25						
	37,829	36,880	\$40,942						
30 - 34	93	42	33	18					
	42,014	38,760	42,304	\$49,075					
35 - 39	68	21	13	23	11				
	46,813	40,763	42,960	51,468	\$53,184				
40 - 44	125	37	16	26	40	6			
	49,781	41,759	44,495	48,744	57,702	\$65,034			
45 - 49	96	27	7	19	33	5	5		
	50,037	41,096	42,761	50,281	54,203	55,289	\$74,832		
50 - 54	39	8	9	6	12	3	1		
	50,893	44,518	44,423	48,700	55,375	70,443	60,828		
55 - 59	12	4	3	2	3				
	44,372	41,097	41,029	45,398	51,396				
60 & over	7	2	2	1	2				
	48,344	40,553	48,416	48,844	55,812				
Total	616	292	108	95	101	14	6		
	\$44,438	\$38,075	\$42,676	\$49,701	\$55,565	\$62,713	\$72,498		



SECTION 3: Supplemental Information for the City of Jacksonville Corrections Officers Retirement Plan

EXHIBIT C
Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Disableds	DROP Participants	Retired Participants	Beneficiaries	Total
Number as of October 1, 2013	631	1	12	126	121	15	906
New participants	51	N/A	N/A	0	N/A	N/A	51
Terminations – with vested rights	0	0	0	0	0	0	0
Terminations – without vested rights	-20	N/A	N/A	N/A	N/A	N/A	-20
New DROP participants	-29	0	N/A	29	0	0	0
Retirements	-3	0	N/A	-35	38	N/A	0
New disabilities	0	0	0	0	N/A	N/A	0
New beneficiary	0	0	0	0	0	1	1
Deceased	0	0	0	0	-1	0	-1
Lump sum payoffs	-13	0	0	0	0	0	-13
Certain period expired	N/A	N/A	0	0	0	0	0
Data adjustments	-3	0	0	0	0	0	-3
Net Transfers (to)/from General Employees Plan	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>
Number as of October 1, 2014	616	1	12	120	158	16	923



EXHIBIT D
Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended Sept	ember 30, 2014	Year Ended Sept	ember 30, 2013
Net assets at actuarial value at the beginning of the year		\$120,947,042		\$109,473,919
Contribution income:				
Employer contributions	\$13,522,000		\$10,742,000	
Employee contributions	2,253,000		2,525,000	
Less administrative expenses	<u>-65,000</u>		<u>-50,000</u>	
Net contribution income		15,710,000		13,217,000
Other income		0		392,000
Investment income:				
Interest, dividends and other income	\$2,166,000		\$1,634,000	
Recognition of capital appreciation	12,935,031		9,711,123	
Less investment fees	<u>-765,000</u>		<u>-556,000</u>	
Net investment income		14,336,031		10,789,123
Total income available for benefits		\$30,046,031		\$24,398,123
Less benefit payments:				
Benefit payments	-\$7,115,000		-\$5,214,000	
Reserve - DROP	-6,936,000		-7,350,000	
Refunds	<u>-560,000</u>		<u>-361,000</u>	
Net benefit payments		-\$14,611,000		-\$12,925,000
Change in actuarial asset method		\$8,894,571		\$0
Change in reserve for future benefits		\$24,329,602		\$11,473,123
Net assets at actuarial value at the end of the year		\$145,276,644		\$120,947,042



**EXHIBIT E**Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended Sept	ember 30, 2014	Year Ended September 30, 2013		
Net assets at market value at the beginning of the year		\$132,154,000		\$113,004,000	
Contribution income:					
Employer contributions	\$13,522,000		\$10,742,000		
Employee contributions	2,253,000		2,525,000		
Less administrative expenses	<u>-65,000</u>		<u>-50,000</u>		
Net contribution income		15,710,000		13,217,000	
Other income		0		392,000	
Investment income:					
Interest, dividends and other income	\$2,166,000		\$1,634,000		
Asset appreciation	14,067,000		17,388,000		
Less investment and administrative fees	<u>-765,000</u>		<u>-556,000</u>		
Net investment income		15,468,000		18,466,000	
Total income available for benefits		\$31,178,000		\$32,075,000	
Less benefit payments:					
Benefit payments	-\$7,115,000		-\$5,214,000		
Reserve - DROP	-6,936,000		-7,350,000		
Refunds	<u>-560,000</u>		<u>-361,000</u>		
Net benefit payments		-\$14,611,000		-\$12,925,000	
Change in reserve for future benefits		\$16,567,000		\$19,150,000	
Net assets at market value at the end of the year		\$148,721,000		\$132,154,000	



EXHIBIT F
Summary Statement of Plan Assets

	Year Ended Sept	ember 30, 2014	Year Ended Sept	ember 30, 2013
Cash equivalents		\$234,000		\$21,693,000
Accounts receivable		413,000		371,000
Investments:				
Equity in pooled investments*	\$163,009,000		\$125,107,000	
Total investments at market value		\$163,009,000		125,107,000
Total assets		\$0		\$147,171,000
Less accounts payable:				
Accounts payable and accrued liabilities	\$85,000		-\$101,000	
DROP reserve	14,850,000		<u>-14,916,000</u>	
Total accounts payable		\$14,935,000		-\$15,017,000
Net assets at market value		\$148,721,000		\$132,154,000
Net assets at actuarial value		\$145,276,644		\$120,947,042

<sup>\*</sup>The plan's assets are pooled with other City of Jacksonville retirement plans. The investment allocation for the pooled fund as of September 30, 2014 consists of 60.67% equities, 19.85% fixed income, 19.19% in real estate and master limited partnership, and 0.29% in cash.



EXHIBIT G

Development of the Fund Through September 30, 2014

Year Ended September 30	Employer Contributions	Employee Contributions	Other Contributions and Miscellaneous Items <sup>1</sup>	Net Investment Return <sup>2</sup>	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	1,042,671	1,043,474	560,000	4,364,550	87,391,102
2010	9,491,000	2,632,000	485,000	$5,675,8533^3$	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	23,230,6024	65,000	14,611,000	145,276,644

<sup>&</sup>lt;sup>1</sup> Includes miscellaneous income and adjustments to the market value of assets

<sup>&</sup>lt;sup>2</sup> Net of investment fees

<sup>&</sup>lt;sup>3</sup> Includes a change in asset method of \$2,590,106

<sup>&</sup>lt;sup>4</sup> Includes a change in asset method of \$8,894,571

# EXHIBIT H Development of Unfunded Actuarial Accrued Liability for Year Ended September 30, 2014

Unfunded actuarial accrued liability at beginning of year		\$150,126,682
2. Employer normal cost at beginning of year		4,701,400
3. Employer contributions		-13,522,000
4. Interest		
(a) For whole year on $(1) + (2)$	\$11,999,177	
(b) For monthly payments on (3)	<u>-473,840</u>	
(c) Total interest		11,525,337
5. Expected unfunded actuarial accrued liability		\$152,831,419
6. Changes due to:		
(a) Net experience loss (excluding impact of contribution deferral to budget year)	\$2,482,035	
(b) Assumptions	10,426,843	
(c) Asset method	<u>-8,894,571</u>	
(d) Total changes		4,014,307
7. Unfunded actuarial accrued liability at end of year		<u>\$156,845,726</u>



EXHIBIT I

Table of Amortization Bases

Type*	Date Established	Initial Years	Initial Amount	Annual Payment**	Years Remaining	Outstanding Balance
Fresh start	10/01/2004	29		\$1,789,169	19	\$19,680,063
Liability decrease	10/01/2004	30		-226,018	20	-2,547,684
Liability decrease	10/01/2005	30		-84,445	21	-973,362
Liability increase	10/01/2006	30		1,620,604	22	19,065,052
Liability increase	10/01/2006	30		456,625	22	5,371,811
Liability increase	10/01/2007	30		547,729	23	6,565,127
Liability increase	10/01/2007	30		47,123	23	564,817
Liability increase	10/01/2008	30	\$8,945,587	776,713	24	9,470,725
Plan amendment	10/01/2008	30	29,032,009	2,508,627	24	30,588,518
Experience loss	10/01/2010	30	19,146,644	1,584,725	26	19,916,207
Change in assumptions	10/01/2010	30	3,963,142	328,020	26	4,122,432
Change in asset method	10/01/2010	30	-2,590,106	-214,377	26	-2,694,209
Plan amendment	10/01/2010	30	343,771	28,453	26	357,590
Experience loss	10/01/2011	30	11,931,785	960,041	27	12,227,465
Experience loss	10/01/2012	30	8,306,777	649,629	28	8,376,327
Change in assumptions	10/01/2012	30	11,171,194	873,640	28	11,264,727
Experience loss	10/01/2013	30	7,381,814	563,699	29	7,351,323
Experience loss	10/01/2014	30	6,606,525	501,304	30	6,606,525
Change in assumptions	10/01/2014	30	10,426,843	791,191	30	10,426,843
Change in asset method	10/01/2014	30	-8,894,571	<u>-674,922</u>	30	<u>-8,894,571</u>
Total				\$12,827,530		\$156,845,726

<sup>\*</sup>Level percentage of payroll; per Part VII, Chapter 112.64(5)(a) of Florida Statutes, outstanding balances were amortized using a 0.39% payroll growth rate for the October 1, 2014 actuarial valuation.



<sup>\*\*</sup>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 noncompliance 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 2014. 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) <u>Investment return</u> the rate of investment yield that the Plan will earn over the long-term future;
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates:
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age;
- (d) <u>Withdrawal rates</u> 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
2004	\$26,323,969			
2005	26,256,000	-0.26%		
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%

*Note: The average total payroll growth for the most recent ten years was 0.39% per year.* 

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



<sup>\*</sup>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
2010	2008	31.78%	\$28,628,837	\$9,096,850	\$9,491,000
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	
2016	2014	68.64%	27,480,459	18,863,935	

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



<sup>\*</sup>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.

EXHIBIT L (continued)

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

	Year Ended S		
	New Assumptions and Asset Method	Old Assumptions and Asset Method	Year Ended September 30, 2013
Participant data			
Active members	616	616	631
Total annual payroll	\$27,373,702	\$27,373,702	\$27,871,010
Retired members and beneficiaries	186	186	148
Total annualized benefit	\$8,050,633	\$8,050,633	\$6,383,668
Terminated vested members	1	1	1
Total annualized benefit	\$21,756	\$21,756	\$21,756
DROP participants	120	120	126
Total current balance	\$4,920,951	\$4,920,951	\$5,115,322
Actuarial value of assets	\$145,276,644	\$136,382,073	\$120,947,042
Present value of all future expected benefit payments:			
Active members:			
Retirement benefits	\$132,624,603	\$122,957,973	\$124,099,789
Vesting benefits	2,276,771	2,282,534	2,253,343
Disability benefits	3,407,756	2,991,343	2,909,901
Death benefits	1,338,540	1,079,424	1,060,717
Return of contributions	<u>15,902,761</u>	15,902,761	16,339,375
Total	\$155,550,431	\$145,214,035	\$146,663,125
Terminated vested members	284,559	285,382	263,141
Retired members and beneficiaries	124,577,116	121,638,857	95,283,403
DROP participants	<u>83,156,595</u>	80,793,769	83,871,310
Total	\$363,568,701	\$347,932,043	\$326,080,979



EXHIBIT L (continued)

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

	Year Ended Septe		
	New Assumptions and Asset Method	Old Assumptions and Asset Method	Year Ended September 30, 2013
Unfunded actuarial accrued liability	\$156,845,726	\$155,313,454	\$150,126,682
Actuarial present value of accrued benefits			
Vested accrued benefits			
Active members	\$74,357,645	\$70,541,580	\$76,507,578
Inactive members	284,559	285,382	263,141
Pensioners and beneficiaries	124,577,116	121,638,857	95,283,403
DROP participants	83,156,595	80,793,769	83,871,310
Nonvested active members	<u>2,417,311</u>	1,784,936	<u>1,596,958</u>
Total	\$284,793,226	\$275,044,524	\$257,522,390
Pension cost			
Normal cost, including administrative expenses	\$7,435,060	\$6,829,216	\$6,931,081
Expected employee contributions	-2,189,896	-2,189,896	-2,229,681
Level % of payroll payment to amortize unfunded actuarial accrued liability	12,827,530	12,693,657	12,115,612
Total minimum annual cost payable monthly at valuation date	18,790,651	18,043,983	17,506,853
Total employer cost projected to budget year	18,863,935	18,159,464	17,618,896
As % of payroll	68.64%	65.92%	62.81%
Present value of active members' future salaries at attained age	\$229,348,273	\$229,629,051	\$225,385,641



### **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, 2013	\$257,522,390
Benefits accumulated, net experience gain or loss, changes in data	\$12,788,506
Change in assumptions	9,748,702
Benefits paid	-14,611,000
Interest	<u>19,344,628</u>
Net increase	<u>\$27,270,836</u>
Actuarial present value of accumulated benefits as of October 1, 2014	\$284,793,226



SECTION 3: Supplemental Information for the City of Jacksonville Corrections Officers Retirement Plan

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	332	0	0	0
40	26	1	0	1
41	27	1	0	1
42	25	5	0	2
43	28	4	0	3
44	28	4	0	1
45	27	4	1	2
46	20	4	0	2
47	19	3	1	1
48	19	5	0	3
49	14	3	0	1
50	9	1	0	1
51	8	2	0	1
52	9	1	0	0
53	6	3	0	1
54	4	0	0	0
55	8	3	0	3
56	5	2	0	2
57	5	1	0	2
58	1	0	0	0
59	1	0	0	0
60	3	1	0	1
61	2	0	0	0
62	2	0	0	0
63	1	0	0	0
64	0	0	0	0
65	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>
Total	631	49	3	29



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 16 beneficiaries in pay status)		306
2. Participants inactive during year ended September 30, 2014 with vested rights		1
3. Participants active during the year ended September 30, 2014		616
Fully vested	324	
Not vested	292	
The actuarial factors as of the valuation date are as follows:		
. Normal cost, including administrative expenses		\$7,435,060
2. Actuarial accrued liability		302,122,370
Retired participants and beneficiaries	\$207,733,711	
Inactive participants with vested rights	284,559	
Active participants	94,104,100	
3. Actuarial value of assets (\$148,721,000 at market value as reported by the City)		145,276,644
4. Unfunded actuarial accrued liability		\$156,845,726
The determination of the recommended contribution is as follows:		
. Total normal cost		\$7,370,060
2. Administrative expenses		65,000
B. Expected employee contributions		<u>-2,189,896</u>
Employer normal cost: $(1) + (2) + (3)$		\$5,245,164
Payment on unfunded actuarial accrued liability		12,827,530
5. Total recommended contribution: (4) + (5), adjusted for timing and projected to October 1, 2015		\$13,389,133
7. Payroll projected to October 1, 2015		\$18,863,935
8. Total recommended contribution as a percentage of projected payroll: (7) ÷ (8)		68.64%



EXHIBIT II
History of Employer Contributions

Plan Year Ended September 30	Actuarially Determined Employer Contributions (ADEC)	Actual Contributions	Percentage Contributed
2007	\$1,830,000	\$2,482,000	135.6%
2008	4,329,000	4,350,000	100.5%
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		
2016	18,863,935		

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

<sup>\*</sup> 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.

<sup>\*\*</sup> 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 AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
10/01/2005	\$60,106,000	\$75,151,000	\$15,045,000	79.98%	\$26,256,000	57.30%
10/01/2006	68,791,000	104,126,000	35,335,000	66.07%	27,702,000	127.55%
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%

All results prior to October 1, 2010 were taken from the City's September 30, 2009 Comprehensive Annual Financial Report.

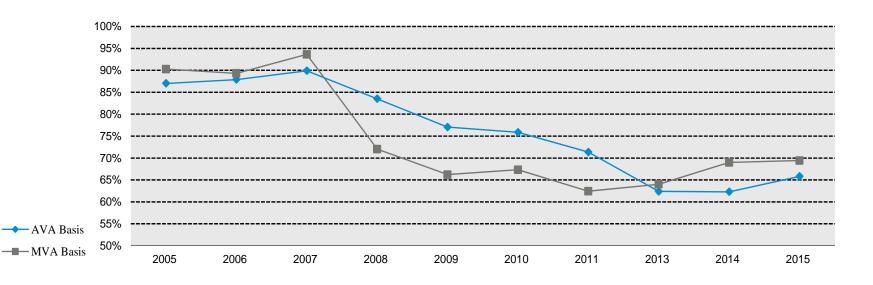
<sup>\*</sup>An actuarial valuation was not performed for the plan year beginning October 1, 2009.

### **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 value (AVA) basis and market value (MVA) basis.





### **EXHIBIT V**

### Supplementary Information Required by the GASB

Valuation date	October 1, 2014
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level percent of payroll
Remaining amortization period	All new bases are amortized over 30 years.
	The net effective amortization period is 25 years as of October 1, 2014.
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	7.50%
Inflation rate	0.39%*
Projected salary increases	3.00% - 6.00%, of which 2.75% is the Plan's long-term payroll inflation assumption
Cost of living adjustments	The Plan provisions contain a 3.00% COLA.
Plan membership:	
Retired participants and beneficiaries receiving benefits	306
Terminated participants entitled to, but not yet receiving benefits	1
Active participants	<u>616</u>
Total	923

<sup>\*</sup>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 0.39% was used for amortization purposes in this valuation.



EXHIBIT VI

Development of the Net Pension Obligation (NPO) and the Annual Pension Cost Pursuant to GASB 27

Plan Year Ended September 30	Employer Annual Required Contribution (a)	Employer Amount Contributed (b)	Interest on NPO (h) x Rate* (c)	ARC Adjustment (h) / (e) (d)	Amortization Factor (e)	Pension Cost (a) + (c) - (d) (f)	Change in NPO (f) – (b) (g)	NPO Balance NPO + (g) (h)
2009								\$146,000
2010	\$9,096,850	\$9,491,000	\$12,264	\$10,211	14.2986	\$9,098,903	-\$392,097	-246,097
2011	8,884,794	9,711,000	-20,303	-17,211	14.2986	8,881,702	-829,298	-1,075,395
2012	11,860,912	9,066,000	-88,720	-72,781	14.7757	11,844,973	2,778,973	1,703,578
2013	12,884,770	10,742,000	140,545	116,767	14.5895	12,908,548	2,166,548	3,870,126
2014	14,884,963	13,522,000	299,935	266,283	14.5339	14,918,615	1,396,615	5,266,741

Amounts prior to the year ending September 30, 2011 were determined by the prior actuary.

<sup>\* 8.40%</sup> for years prior to 2011; 8.25% for 2011 and 2012; 7.75% for 2013 and 2014

<sup>\*\*</sup>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.

### **EXHIBIT VII**

### **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 mortality and investment return have been made this year. Based on professional judgment, no additional assumption changes are warranted at this time.

### **Mortality Rates:**

Pre-retirement: RP-2014 Blue Collar Employee Mortality Table, set forward four years for males and

three years for females, projected generationally with Scale MP-2014

Healthy annuitants: RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward four years for

males and three years for females, projected generationally with Scale MP-2014

Disabled annuitants: RP-2014 Disabled Retiree Mortality Table, set forward four years, projected

generationally with Scale MP-2014

RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward four years for males and three years for females, reasonably reflects the healthy annuitant mortality experience of the Corrections Officers Retirement Plan as of the measurement date. The mortality table was then adjusted to future years using generational projection under Scale MP-2014 to reflect future mortality improvement.

RP-2000 Disabled Retiree Mortality table, set forward four years, reasonably reflects the disabled annuitant mortality experience of the Corrections Officers Retirement Plan as of the measurement date. The mortality table was then adjusted to future years using generational projection under Scale MP-2014 to reflect future mortality improvement.



SECTION 4: Reporting Information for the City of Jacksonville Corrections Officers Retirement Plan

Termination	Rates hefe	re Retiren	nent•

		Rate	(%)	
•	Mor	tality	Disa	bility*
Age	Male	Female	Male	Female
20	0.03	0.02	0.04	0.02
25	0.04	0.02	0.04	0.03
30	0.05	0.03	0.06	0.05
35	0.08	0.05	0.08	0.08
40	0.11	0.07	0.12	0.11
45	0.16	0.12	0.18	0.17
50	0.22	0.17	0.31	0.27
55	0.32	0.25	0.49	0.43
60	0.48	0.37	0.82	0.56
65	0.68	0.53	0.00	0.00

<sup>\*100%</sup> 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

<sup>\*\*</sup>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 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

<sup>\*</sup>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:** 

**Percent Married:** 50%

**Age of Spouse:** Females three years younger than males

65

**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:** 7.50%

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

0-4 6.0 5-9 5.0 10-14 4.0 15+ 3.0

The salary scale assumption is based analysis completed in conjunction with an Experience Study Report for the five-year period ended September 30, 2012.

**Inflation Rate:** 2.75%

**Payroll Growth Rate:** 0.39% 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. The Fund's long-term payroll

growth assumption is equal to the inflation assumption of 2.75%.

**Administrative Expenses:** Previous year's actual expenses; \$65,000 for October 1, 2014.

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.



<sup>\*</sup>For purposes other than determining entry age normal cost, the above rates are reduced by 3% for three years beginning October 1, 2012.

### **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 changes were reflected in this valuation:

- > Based on lower inflation expectations and continued expectations of lower real returns, the discount rate was lowered from 7.75% to 7.50%;
- ➤ Based on lower inflation expectations, the payroll growth rate assumption was lowered from 3.00% to 2.75%:
- ➤ As mandated by Part VII, Chapter 112.64(5)(a) of Florida Statutes, the payroll growth rate was lowered from 0.64% to 0.39%;
- ➤ Based on plan experience through September 30, 2014 and expectations of future increased life expectancy, the mortality assumption for active and inactive vested participants was changed from the RP-2000 Employee Mortality Table, set forward one year and projected to 2013 with Scale BB to the RP-2014 Blue Collar Employee Mortality Table, set forward four years for males and three years, projected generationally with Scale MP-2014;
- ➤ Based on plan experience through September 30, 2014 and expectations of future increased life expectancy, the mortality assumption for healthy retirees and beneficiaries was changed from the RP-2000 Annuitant Mortality Table, set forward one year and projected to 2013 with Scale BB to the RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward four years for males and three years, projected generationally with Scale MP-2014;
- > Coordinating with the mortality assumption for healthy lives, the mortality assumption for disabled retirees was changed from the RP-2000 Disabled Retiree Mortality Table to the RP-2014 Disabled Retiree Mortality Table, set forward four years, projected generationally with Scale MP-2014.



Normal Cost has been removed for participants who are assumed to retire with 100% certainty in the upcoming plan year based on the retirement assumptions.

## **Change in Asset Method:**

The Plan accelerated the recognition of prior asset gain/loss bases by reflecting 72% of the outstanding asset gains/losses immediately.

### **EXHIBIT VIII**

### **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	\$54.78 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1 <sup>st</sup> .			
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 \$54.78 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 \$54.78 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 \$54.78 per whole year of Credited Service, not to exceed 30. Minimum accrual rate

increases 4% each October 1st.



Snaugala Duo Datinamant Daath Da	most to
Spouse's Pre-Retirement Death Be	
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 \$54.78 per whole year of Member's Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1 <sup>st</sup> .
<b>Spouse's Post-Retirement Death Bo</b>	enefit:
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.
<b>Member Contributions:</b>	8% of Earnable Compensation; 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.
<b>Final Monthly Compensation:</b>	Average monthly rate of Earnable Compensation during the highest 36 consecutive months (78 pay periods) out of the last ten years of employment.
<b>Earnable Compensation:</b>	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 1 <sup>st</sup> after the initial benefit commencement date, and on each December 1 <sup>st</sup> 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.

There have been no changes in plan provisions since the last valuation.

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**Changes in Plan Provisions:** 

### **EXHIBIT 1**

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

### **Plan Description**

*Plan administration.* The sole and exclusive administration of and the responsibility for the proper, effective operation of the Retirement System and for implementing the provisions of Chapter 120 of the City Charter is vested in a Board of Trustees.

The Board of Trustees shall consist of nine persons who shall be elected as follows:

- (1) The Mayor's Chief Administrative Officer or designee.
- (2) The City's Chief Financial Officer or designee.
- (3) The City's Chief Human Resources Officer, by whatever title known.
- (4) Chairperson of the General Employees' Pension Advisory Committee.
- (5) A General Employees' Pension Plan retiree elected by the General Employees' Retired Employees' Association.
- (6) Chairperson of the Corrections Officers' Advisory Committee.
- (7) The Vice-Chairperson of the Corrections Officers' Advisory Committee until October 1, 2012; effective October 1, 2012 and continuing until October 1, 2014, a Corrections Officers' Plan retiree chosen by the Corrections Officers' Advisory Committee; and effective on and after October 1, 2014, a retired Corrections Officer elected by the Corrections Officers' Retired Employees' Association.
- (8) Two citizens shall be appointed by the City Council. Each citizen shall have professional experience in at least one of the following disciplines: finance, investments, economics, pension management, pension administration and/or accounting.

*Plan membership.* Consistent with the provisions of Chapter 16 of the City Charter, full-time civil service employees not eligible for membership in another City-sponsored pension plan shall become members of the Plan. Appointed and elected officials and permanent employees not in the civil service system may opt to become members of the Plan, consistent with Section 16.04 of the City Charter. Elected officials eligible to receive benefits under this System or any prior Plan shall be permitted to continue to receive those benefits. Notwithstanding the foregoing or anything to the contrary in Chapter 120 of the City Charter, appointed employees hired on or after July 1, 2013 within the City of Jacksonville's Office of Ethics, Compliance and Oversight, pursuant to Section 602.612(a), Ordinance Code, who choose to join a City-sponsored retirement program, shall only be eligible to join the General Employees Defined Contribution Plan.

### At September 30, 2014, pension plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits	306
Inactive employees entitled to but not yet receiving benefits	1
Active employees	<u>616</u>
Total	923

### **EXHIBIT 2**

### **Summary of Plan Provisions**

Benefits provided. 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 of more than \$150 per month.
Minimum Benefit Amount	\$54.78 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1 <sup>st</sup> .
Early Retirement:	None

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 \$54.78 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 \$54.78 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 \$54.78 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 \$54.78 per whole year of Member's Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1 <sup>st</sup> .		
Spouse's Post-Retirement Death Be	enefit:		
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.		
<b>Member Contributions:</b>	8% of Earnable Compensation; 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 1 <sup>st</sup> after the initial benefit commencement date, and on each December 1 <sup>st</sup> 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.

### **EXHIBIT 3**

### **Net Pension Liability**

The components of the net pension liability of the Jacksonville Corrections Officers Retirement Plan at September 30, 2014 were as follows:

Total pension liability \$321,905,638
Plan fiduciary net position 163,571,000
Association's net pension liability \$158,334,638

Plan fiduciary net position as a percentage of the total pension liability 50.81%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of September 30, 2014, 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

Investment rate of return 7.50%, net of pension plan investment expense, including inflation

Pre-retirement mortality rates RP-2014 Blue Collar Employee Mortality Table, set forward four years for

males and three years for females, projected generationally with Scale MP-

2014

Healthy annuitant mortality rates RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward four

years for males and three years for females, projected generationally with

Scale MP-2014

\* 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 0.39% was used for amortization purposes in the October 1, 2014 valuation.

### Disabled annuitant mortality rates

RP-2014 Disabled Retiree Mortality Table, set forward four years, projected generationally with Scale MP-2014

RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward four years for males and three years for females, reasonably reflects the healthy annuitant mortality experience of the General Employees Retirement Plan as of the measurement date. The mortality table was then adjusted to future years using generational projection under Scale MP-2014 to reflect future mortality improvement.

RP-2000 Disabled Retiree Mortality table, set forward four years, reasonably reflects the disabled annuitant mortality experience of the General Employees Retirement Plan as of the measurement date. The mortality table was then adjusted to future years using generational projection under Scale MP-2014 to reflect future mortality improvement.

The actuarial assumptions used in the October 1, 2014 valuation were based on the results of an experience study for the period October 1, 2007 to September 30, 2012, with additional changes based on an interim study of mortality experience through September 30, 2014.

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, 2014 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 Rogerscasey.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	35%	6.57%
International equity	20%	7.27%
Fixed income	19%	1.47%
Real estate	25%	4.37%
Cash	<u>1%</u>	0.87%
Total	100%	

Discount rate: The discount rate used to measure the total pension liability is 7.50%. 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 7.50%, as well as what the Jacksonville's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

		Current	
	1% Decrease (6.50%)	Discount (7.50%)	1% Increase (8.50%)
Jacksonville Corrections Officers Retirement Plan's net pension liability	\$204,053,052	\$158,334,638	\$121,493,218

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, 2015 CAFR)

For the year ended September 30, 2015 the City's recognized pension expense is \$16,635,383. At September 30, 2015, 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	\$5,111,532	
Changes of assumptions	9,227,070	
Changes of benefit terms		
Net difference between projected and actual earnings on pension plan investments		<u>\$(3,224,036)</u>
Total	\$14,338,602	(\$3,224,036)

Contributions of **\$X** were reported as deferred outflows of resources related to pensions resulting from City contributions subsequent to the September 30, 2014 measurement date will be recognized as a reduction of the net pension liability in the year ended September 30, 2015. 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, 2015	\$1,583,758
September 30, 2016	1.583.758
September 30, 2017	1,583,758
September 30, 2018	1,583,758
September 30, 2019	2,389,767
Thereafter	2,389,767

EXHIBIT 4
Schedules of Changes in Jacksonville CORP Net Pension Liability – Last Ten Fiscal Years

	2014	2013	2012	2011	2010
Total pension liability					
Service cost	\$6,680,120	\$6,904,010	(Historical information prior to implementation of GA 67/68 is not required.)		ation of GASB
Interest	21,997,460	20,475,861		•	
Change of benefit term	0	0			
Differences between expected and actual					
experience	5,963,454	5,776,658			
Changes of assumptions	10,764,915	0			
Benefit payments, including refunds of					
employee contributions	-14,677,000	-12,369,000			
Net change in total pension liability	30,728,949	\$20,787,529			
Total pension liability – beginning	291,176,689	270,389,160			
Total pension liability – ending (a)	\$321,905,638	<u>\$291,176,689</u>			
Plan fiduciary net position					
Contributions – employer	\$13,522,000	\$10,742,000			
Contributions – employee	2,253,000	2,525,000			
Net investment income	15,468,000	18,466,000			
Benefit payments, including refunds of					
employee contributions	-14,677,000	-12,369,000			
Administrative expense	-65,000	-50,000			
Other	0	392,000			
Net change in plan fiduciary net position	\$16,501,000	\$19,706,000			
Plan fiduciary net position – beginning	147,070,000	127,364,000			
Plan fiduciary net position – ending (b)	\$163,571,000	\$147,070,000			
Net pension liability – ending (a) – (b)	\$158,334,638	<u>\$144,106,689</u>			
Plan fiduciary net position as a percentage of					
the total pension liability	50.81%	50.51%			
Covered employee payroll	\$27,373,702	\$27,871,010			
Net pension liability as percentage of covered					
employee payroll	578.42%	517.05%			

### **Notes to Schedule:**

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

*Change of Assumptions:* In 2014, the assumed investment return was lowered from 7.75% to 7.50% and the mortality assumptions were changed to reflect recent experience and to include generational projection of mortality improvements.

EXHIBIT 5
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*	Contributions as a Percentage of Covered Employee Payroll	Percentage of Payroll Actually Contributed Throughout the Year**
2005	\$3,233,000	\$3,233,000	\$0	\$26,256,000	12.31%	
2006	1,917,000	1,917,000	0	27,702,000	6.92%	
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%

<sup>\*</sup>Pensionable payroll as of the valuation measurement date.

<sup>\*\*</sup>For years ended September 30, 2005 and 2006, the City contributed the dollar amount of the actuarially determined contributions. For the years ended September 30, 2007 and after, the City contributed 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 than projected payroll.

### **EXHIBIT 6**

### **Notes to Required Supplementary Information**

Valuation date October 1, 2014 Methods and used assumptions to determine contribution rates: Entry Age Normal Cost Method Actuarial cost method **Amortization method** Level percent of payroll, using 0.39% annual increases\* Remaining amortization period All new bases are amortized over 30 years. Effective period of 25 years remaining as of October 1, 2014 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 7.75%, including inflation, net of pension plan investment expense 2.75%\* Inflation rate Projected salary increases 3.00% - 6.00%, of which 2.75% is the Plan's long-term payroll inflation assumption Cost-of-living adjustments The Plan provisions contain a 3.00% COLA.

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<sup>\*</sup> 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 0.39% was used for amortization purposes in the October 1, 2014 valuation.

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

<sup>\*</sup>Above rates are adjusted by a factor of 75% for ages under 45.

Mortality:	
Pre-retirement	RP-2014 Blue Collar Employee Mortality Table, set forward four years for males and three years for females, projected generationally with Scale MP-2014
Healthy annuitants	RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward four years for males and three years for females, projected generationally with Scale MP-2014
Disabled annuitants	RP-2014 Disabled Retiree Mortality Table, set forward four years, projected generationally with Scale MP-2014
Other information:	See Exhibit 4 for the history of changes to plan provisions and assumptions, if any.