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# City of Rockledge

# Police Employees Retirement Plan

## Actuarial Valuation as of October 1, 2015

February 14, 2016

REPORT TO DETERMINE MINIMUM FUNDING REQUIREMENTS
FOR THE PLAN AND FISCAL YEAR
BEGINNING OCTOBER 1, 2015

FREIMAN LITTLE ACTUARIES

February 14, 2016

Board of Trustees
City of Rockledge Police Employees Retirement Plan
Rockledge, Florida

## RE: Actuarial Valuation as of October 1, 2015

Dear Board Members:

We are pleased to present the actuarial valuation as of October 1, 2015 for the City of Rockledge Police Employees Retirement Plan (the Plan). This report provides a review of the current funded status of the Plan, establishes the minimum funding requirements for the fiscal year ending September 30, 2016, and provides an analysis of experience since the last valuation. In addition to providing the summary and derivation of actuarial findings, this report describes the data, assumptions, and methods used to create these results.

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

Statement by Enrolled Actuary:

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

Please let us know when we may present these results to you in person and answer any questions you may have.

Sincerely,


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

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

## Table of Contents

# Section 1 Board Summary

This report presents the results of the October 1, 2015 actuarial valuation of the City of Rockledge Police Employees Retirement Plan (the Plan). A summary of the key valuation findings are compared with the results of the prior valuation below.

## Summary of Principal Valuation Results

### Minimum Funding Requirements

| **Fiscal Year Ending September 30,** | **2015** | **2016** |
|---|---|---|
| Minimum Funding Requirement | | |
| Minimum Required City Contribution | $218,989 | $229,299 |
| Estimated State Contribution | 175,891 | 175,977 |
| Total Minimum Funding Requirement (City plus State) | $394,880 | $405,276 |
| | | |
| Minimum Required City Contribution | 9.46% | 10.23% |
| Estimated State Contribution | 7.59% | 7.86% |
| Total Minimum Funding Requirement (City plus State) | 17.05% | 18.09% |

Note: $405,276 is the minimum funding requirement for fiscal 2016 including both contributions from the City and those from the State of Florida. We have estimated the City portion as $229,299 which should be deposited during fiscal 2016 on at least a quarterly basis. The quarterly estimate is $57,325. The annual contribution paid by the City should take into account the actual amount of premium tax revenues received from the State of Florida so that total minimum funding deposited to the Plan for fiscal 2016 is $405,276.

### Funded Status

| **Valuation as of October 1,** | **2014** | **2015** |
|---|---|---|
| Accrued Liability (AL) | $11,107,526 | $11,854,959 |
| Actuarial Value of Assets | (10,643,865) | (11,164,802) |
| Unfunded Accrued Liability (UAL) | $463,661 | $690,157 |
| Funded Percentage | 95.83% | 94.18% |

### Key Assumptions

| **Valuation as of October 1,** | **2014** | **2015** |
|---|---|---|
| Assumed Investment Return, Net of Expenses | 8.00% | 8.00% |
| Salary Increase Assumption | 6.00% | 6.00% |

# Summary of Significant Events

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

## City Policy Contribution

The City policy had been to contribute 7.5% of total payroll including the pay of DROP members. However, a contribution on this basis does not result in funding the minimum required contribution.

Of the $218,903 City minimum required contribution for fiscal 2015, only $181,813 was actually deposited creating a contribution receivable for fiscal 2015 in the amount of $37,090. Pension plan receivables should be short term and consist of contributions due as of the end of the reporting period. Contribution receivables should be deposited as soon as possible after the fiscal year end. When the minimum required contribution is not actually deposited to the fund, the contributions cannot be invested. Underfunding on this basis will cause the level of future minimum required contributions to rise.

The actual premium tax distribution for the fiscal ending September 30, 2016 is not yet known. $405,276 is the minimum funding requirement for fiscal 2016 including both contributions from the City and those from the State of Florida. We have estimated the City portion as $229,299 which should be deposited during fiscal 2016 on at least a quarterly basis. The quarterly estimate is $57,325. The annual contribution paid by the City should take into account the actual amount of premium tax revenues received from the State of Florida so that total minimum funding deposited to the Plan for fiscal 2016 is $405,276.

## Participant Data

During the year active membership changed from 48 to 45 members due to 3 new hires, 1 retirement, 1 DROP entrant and 4 non-vested terminations. The following provides a summary comparing the actual and expected pay increases for the 12 month periods ending on the date specified.

| **Year Ended** | **Individual** | | **Total Payroll** |
|---|---|---|---|
| **September 30,** | **Actual** | **Expected** | **Increase** |
| 2015 | 4.1% | 6.0% | (3.3%) |
| 2014 | 5.3% | 6.0% | 10.1% |
| 2013 | 6.0% | 6.0% | (7.5%) |
| 2012 | (6.7%) | 6.0% | (5.7%) |
| 2011 | 5.3% | 6.0% | 4.5% |
| 2010 | 0.3% | 6.0% | 1.4% |
| 2009 | 2.4% | 6.0% | 5.8% |
| 2008 | 2.0% | 6.0% | 4.3% |
| 2007 | 7.1% | 6.0% | 7.5% |
| 2006 | 0.5% | 6.0% | (0.8%) |
| Average: | 2.6% | 6.0% | 1.5% |

Pay increases were less than expected with the actual average pay increase amongst continuing actives at 4.1% in comparison to the 6.0% salary increase assumption. In addition, total payroll increased 1.5% on average over the last 10 years. As in the prior valuation, a 1.5% average payroll growth assumption is used to amortize unfunded accrued liability as a level percentage of pay per Florida Statues 112.64(5)(a).

Overall, there was a small demographic gain. Should a pattern of consistent gains or losses develop, assumptions will be adjusted as needed. We recommend a review of actuarial experience be conducted.

## Assets

The investment return on the Market Value of Assets was 0.11% and the return on the Actuarial Value of Assets was 4.77%, each in comparison to the 8.0% rate of return assumed in the valuation of the Plan. Because the return on the Actuarial Value of Assets was less than the assumed rate of net investment return, there was an actuarial investment loss for the year ending September 30, 2015.

The table below provides a comparison of the investment return on the Market Value of Assets and the Actuarial Value of Assets in comparison to the investment return assumed in the valuation of the Plan.

| **12-Month Period Ended September 30,** | **% Market Return** | **% Actuarial Return** | **% Assumed Return** |
|---|---|---|---|
| 2015 | 0.11 % | 4.77 % | 8.0 % |
| 2014 | 9.65 % | 7.59 % | 8.0 % |
| 2013 | 8.84 % | 5.84 % | 8.0 % |
| 2012 | 12.43 % | 0.96 % | 8.0 % |
| 2011 | (2.80) % | 0.57 % | 8.0 % |
| 2010 | 7.44 % | 2.13 % | 8.0 % |
| 2009 | 0.78 % | 2.10 % | 8.0 % |
| 2008 | (13.54)% | (13.79)% | 8.0 % |
| 2007 | 9.97 % | 10.23 % | 8.0 % |
| 2006 | 8.82 % | 9.11 % | 8.0 % |
| Average | 3.87 % | 2.74 % | 8.0 % |

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

## Plan Provisions

Ordinance 1672-2015 was adopted August 19, 2015 to clarify multiple beneficiaries may be selected when electing the 10-year certain and life form of benefit. Also, the Normal Form of Payment under the Police Plan is a 10-year certain and life annuity. Language was stricken in the proposed ordinance to clarify this to be true for unmarried members. An impact statement dated April 29, 2015 indicated this ordinance is not anticipated to have a material impact on the liability of the Plans.

## Methods

Effective October 1, 2015 all changes to the Unfunded Accrued Liability are amortized over a 25 year period.

## Assumptions

The mortality table continues to be based on the RP-2000 Combined Mortality Table (where disabled tables are used for disabled lives). Scale AA has been applied to reflect mortality improvements to the valuation year.

## State Premium Tax Dollars Used Toward Minimum Funding

Upon review of a study performed to demonstrate additional premium tax revenues for fiscal 2012 were not sufficient to fund the minimum benefit provisions under F.S. Section 185, the State of Florida approved the use of the full premium tax revenues toward minimum funding for fiscal 2012. Valuations to determine required funding for fiscal 2013 through 2016 have been performed assuming that the additional premium tax revenues are not sufficient to fund minimum benefit provisions as well.

## State Contributions

The actual premium tax distribution for the fiscal ending September 30, 2016 is not yet known. $405,276 is the minimum funding requirement for fiscal 2016 including both contributions from the City and those from the State of Florida. We have estimated the City portion as $229,299 which should be deposited during fiscal 2016 on at least a quarterly basis. The quarterly estimate is $57,325. The annual contribution paid by the City should take into account the actual amount of premium tax revenues received from the State of Florida so that total minimum funding deposited to the Plan for fiscal 2016 is $405,276.

# Section 2 Results Derivation

In this section, the assets and liabilities of the Plan are shown in detail. Assets and liabilities are then compared to determine the funded status and minimum funding requirements.

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

## Financial Information

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

### Investment Allocation

| **Valuation Date** | **October 1, 2014** | | **October 1, 2015** | |
|---|---|---|---|---|
| Stocks | $7,185,562 | 66% | $7,051,757 | 66% |
| Fixed Income Securities | 3,113,318 | 29% | 3,292,337 | 31% |
| Cash and Cash Equivalents | 178,766 | 2% | 120,763 | 1% |
| Net Receivables | 321,855 | 3% | 233,847 | 2% |
| Fair Market Value of Assets | $10,799,501 | 100% | $10,698,704 | 100% |

## Reconciliation of Market Value of Assets

| Year Ending September 30, | | 2014 | 2015 |
|---|---|---|---|
| 1. | **Market Value of Assets at Beginning of Year** | | |
| a. | Prior Year Ending Balance | $9,694,311 | $10,799,501 |
| b. | Adjustment to Beginning Value | 0 | (125,000) |
| c. | Market Value of Assets Beginning of Year | $9,694,311 | $10,674,501 |
| 2. | Contributions | | |
| a. | Employer | $175,170 | $218,903 |
| b. | State | 175,891 | 175,977 |
| c. | Plan Members | 158,054 | 158,642 |
| d. | Total Contributions | $509,115 | $553,522 |
| 3. | Investment Income | | |
| a. | Realized Appreciation (Depreciation) | $17,292 | $(20,122) |
| b. | Unrealized Appreciation (Depreciation) | 690,811 | (244,209) |
| c. | Interest plus Dividends | 266,339 | 297,789 |
| d. | Investment Expense | (31,362) | (22,000) |
| e. | Net Investment Income | $943,080 | $11,458 |
| 4. | Deductions | | |
| a. | Benefits | $(241,507) | $(314,961) |
| b. | Refund of Contributions | (35,759) | (56,004) |
| c. | DROP Balance Disbursement | 0 | (99,377) |
| d. | Administrative Expense | (69,739) | (70,435) |
| e. | Total Deductions | $(347,005) | $(540,777) |
| 5. | Net Increase | $1,105,190 | $24,203 |
| 6. | **Market Value of Assets at End of Year** | $10,799,501 | $10,698,704 |
| 7. | **Return on Market Value of Assets = 2I / (A + B – I)** | 9.65% | 0.11% |

## Development of Actuarial Value of Assets

The Market Value of Assets is adjusted to recognize investment earnings greater than (or less than) the assumed net investment return over a five-year period. The Actuarial Value of Assets is no more than 120% and no less than 80% of the Market Value of Assets.

| | | | | | |
|---|---|---|---|---|---|
| 1. | Gross Market Value of Assets as of October 1, 2015 | | | | $10,698,704 |
| 2. | Phase-In Gains (Losses) Over Five Year Period | | | | |
| | | Year Ending | Original Gain (Loss) | Percent Unrecognized | Unrecognized Gain (Loss) |
| | a. | September 30, 2015 | $(835,973) | 80% | $(668,778) |
| | b. | September 30, 2014 | 168,086 | 60% | 100,852 |
| | c. | September 30, 2013 | 80,921 | 40% | 32,368 |
| | d. | September 30, 2012 | 347,298 | 20% | 69,460 |
| | e. | Total | | | $(466,098) |
| 3. | Preliminary Gross Actuarial Value of Assets | | | | $11,164,802 |
| 4. | Corridor Around Market Value | | | | |
| | a. | Minimum = 80% of Market Value of Assets | | | $8,558,963 |
| | b. | Maximum = 120% of Market Value of Assets | | | $12,838,445 |
| | c. | Corridor Adjustment to Preliminary Actuarial Value | | | $0 |
| 5. | Gross Actuarial Value of Assets as of October 1, 2015 | | | | $11,164,802 |
| 6. | State Contribution Reserve | | | | $0 |
| 7. | Actuarial Value of Assets as of October 1, 2015 | | | | $11,164,802 |

## Development of Historical Gain or Loss on Market Value of Assets

| Fiscal Year End | | 2015 | 2014 |
|---|---|---|---|
| 1. | Market Value of Assets - Beginning of Year | $10,674,501 | $9,694,311 |
| 2. | Expected Interest on Assets | 853,960 | 775,545 |
| 3. | Contributions | 553,522 | 509,115 |
| 4. | Benefit Payments + Administrative Expenses | (540,777) | (347,005) |
| 5. | Interest on items (3) and (4) | (6,529) | (551) |
| 6. | Expected Value of Assets at End of Year | $11,534,677 | $10,631,415 |
| 7. | Market Value of Assets - End of Year | $10,698,704 | $10,799,501 |
| 8. | Gain (Loss) for Plan Year = (7) - (6) | $(835,973) | $168,086 |

| Fiscal Year End | | 2013 | 2012 |
|---|---|---|---|
| 1. | Market Value of Assets - Beginning of Year | $8,762,060 | $7,566,604 |
| 2. | Expected Interest on Assets | 700,965 | 605,328 |
| 3. | Contributions | 543,751 | 513,139 |
| 4. | Benefit Payments + Administrative Expenses | (392,604) | (272,938) |
| 5. | Interest on items (3) and (4) | (782) | 2,629 |
| 6. | Expected Value of Assets at End of Year | $9,613,390 | $8,414,762 |
| 7. | Market Value of Assets - End of Year | $9,694,311 | $8,762,060 |
| 8. | Gain (Loss) for Plan Year = (7) - (6) | $80,921 | $347,298 |

## Historical Asset Values

| Value as of October 1, | Actuarial Value of Assets | Market Value of Assets | % Market Return | % Actuarial Return | % Assumed Return |
|---|---|---|---|---|---|
| 2015 | $11,164,802 | $10,698,704 | 0.11 % | 4.77 % | 8.00 % |
| 2014 | 10,643,865 | 10,799,501 | 9.65 % | 7.59 % | 8.00 % |
| 2013 | 9,402,198 | 9,694,311 | 8.84 % | 5.84 % | 8.00 % |
| 2012 | 8,736,203 | 8,762,060 | 12.43 % | 0.96 % | 8.00 % |
| 2011 | 8,414,417 | 7,566,604 | (2.80)% | 0.57 % | 8.00 % |
| 2010 | 8,262,345 | 7,614,445 | 7.44 % | 2.13 % | 8.00 % |
| 2009 | 8,021,574 | 6,963,511 | 0.78 % | 2.10 % | 8.00 % |
| 2008 | 7,682,097 | 6,671,261 | (13.54)% | (13.79)% | 8.00 % |
| 2007 | 7,339,570 | 7,449,379 | 9.97 % | 10.23 % | 8.00 % |
| 2006 | 6,378,390 | 6,614,964 | 8.82 % | 9.11 % | 8.00 % |

## Historical Contribution Amounts

| Year Ending September 30, | Employer | State | Members | Total |
|---|---|---|---|---|
| 2015 | $218,903 | $175,977 | $158,642 | $553,522 |
| 2014 | 175,170 | 175,891 | 158,054 | 509,115 |
| 2013 | 170,374 | 170,685 | 202,692 | 543,751 |
| 2012 | 176,060 | 174,478 | 162,601 | 513,139 |
| 2011 | 167,856 | 166,718 | 167,856 | 502,430 |
| 2010 | 159,519 | 162,716 | 159,519 | 481,754 |
| 2009 | 161,204 | 167,324 | 161,204 | 489,732 |
| 2008 | 157,357 | 166,345 | 157,357 | 481,059 |
| 2007 | 139,993 | 169,433 | 139,993 | 449,419 |
| 2006 | 147,596 | 164,202 | 129,770 | 441,568 |

## Historical Deductions from Fund

| Year Ending September 30, | Benefits | Refunds | Administrative Expense | Total |
|---|---|---|---|---|
| 2015 | $414,338 | $56,004 | $70,435 | $540,777 |
| 2014 | 241,507 | 35,759 | 69,739 | 347,005 |
| 2013 | 241,507 | 93,581 | 57,516 | 392,604 |
| 2012 | 242,060 | 2,045 | 28,833 | 272,938 |
| 2011 | 247,648 | 38,828 | 48,140 | 334,616 |
| 2010 | 247,648 | 61,665 | 44,177 | 353,490 |
| 2009 | 211,230 | 8,015 | 30,998 | 250,243 |
| 2008 | 180,589 | 17,654 | 35,844 | 234,087 |
| 2007 | 137,855 | 88,084 | 56,866 | 282,805 |
| 2006 | 804,017 | 50,257 | 21,277 | 875,551 |

## Derivation of State Contribution Funding Reserves

| Year Ending 9/30 | State Conts | One-time Use Benefit Imprvmnts | Recurring Cost Benefit Imprvmnts | Base Plus Benefit Imprvmnts | Recognized State Funding | Cumulative Balance Available for Benefit Imprvmnt | |
|---|---|---|---|---|---|---|---|
| 2015 | $175,977 | $0 | $0 | $103,196 | $175,977 | $0 | |
| 2014 | 175,891 | 0 | 0 | 103,196 | 175,891 | 359,515 | * |
| 2013 | 170,685 | 0 | 0 | 103,196 | 170,685 | 359,515 | |
| 2012 | 174,478 | 0 | 0 | 103,196 | 174,478 | 359,515 | |
| 2011 | 166,718 | 0 | 0 | 103,196 | 103,196 | 359,515 | |
| 2010 | 162,716 | 665 | 26 | 103,196 | 103,196 | 295,993 | |
| 2009 | 167,324 | 0 | 0 | 103,170 | 103,170 | 237,138 | |
| 2008 | 166,345 | 0 | 0 | 103,170 | 103,170 | 172,984 | |
| 2007 | 169,433 | 193,028 | 15,214 | 103,170 | 103,170 | 109,809 | |
| 2006 | 164,202 | 0 | 0 | 87,956 | 87,956 | 236,574 | |
| 2005 | 155,180 | 0 | 0 | 87,956 | 87,956 | 160,328 | |
| 2004 | 144,978 | 0 | 0 | 87,956 | 87,956 | 93,104 | |
| 2003 | 110,868 | 0 | 0 | 87,956 | 87,956 | 36,082 | |
| 2002 | 101,126 | 0 | 0 | 87,956 | 87,956 | 13,170 | |
| 2001 | 85,770 | 0 | 3,000 | 87,956 | 85,770 | 0 | |
| 2000 | 78,865 | 0 | 4,085 | 84,956 | 78,865 | 0 | |
| 1999 | 79,929 | 0 | 0 | 80,871 | 79,929 | 0 | |
| 1998 | 80,871 | 0 | 0 | 80,871 | 80,871 | 0 | |

Ordinance No. 1366-2005 was adopted on February 2, 2005. We understand no impact statement was completed for the benefit increases described in this ordinance at that time. As such, we created an impact statement on September 27, 2007 using data as of October 1, 2005. The one-time use benefit improvement and recurring cost benefit improvement amounts shown above for 2007 are based on this impact statement. Since inclusion of up to 300 hours of overtime was included in pensionable earnings commencing in June of 2007, overtime was reflected for the first time in the actuarial valuation as of October 1, 2007. The dollar increase in accrued liability and normal cost as stated in our impact statement has been increased with two years of assumed payroll growth to approximate the effect of the inclusion of up to 300 hours of overtime effective October 1, 2007. State reserves totaling $193,028 have been used towards paying for the increase in accrued liability. On an on-going basis, the annual contribution received from the State has been increased from $87,956 in the prior valuation of the plan to $103,170 for fiscal 2008 to reflect the increase in normal cost due to inclusion of overtime effective October 1, 2007.

Disability benefits were modified such that in no event will the benefit payable be less than the benefit required under section 185.18 of the Florida Statutes. The $665 one-time use and $26 recurring cost benefit improvements in fiscal 2010 were for this change in Plan provisions.

*As of September 30, 2014 the $359,515 cumulative balance of State contributions available for benefit improvement has been released into the general assets of the Plan to pay for current benefits.

# Present Value of Benefits

| Valuation as of October 1, | | 2014 | 2015 |
|---|---|---|---|
| 1. | **Active Members** | | |
| a. | Retirement Benefits | $9,716,972 | $9,451,898 |
| b. | Deferred Benefits | 542,484 | 502,804 |
| c. | Survivor Benefits | 168,768 | 157,217 |
| d. | Disability Retirement | 335,738 | 322,675 |
| e. | Total for Active Members | $10,763,962 | $10,434,594 |
| 2. | **Inactive Members** | | |
| a. | Retired Members | $3,453,743 | $4,280,484 |
| b. | Terminated members | 615,904 | 651,883 |
| c. | Beneficiaries | 0 | 0 |
| d. | Disability Retirement | 132,288 | 130,457 |
| e. | Total for Inactive Members | $4,201,935 | $5,062,824 |
| 3. | **Present Value of Benefits** | $14,965,897 | $15,497,418 |

# Accrued Liability

| Valuation as of October 1, | | | 2014 | 2015 |
|---|---|---|---|---|
| 1. | **Active Members** | | | |
| | a. | Retirement Benefits | $6,649,868 | $6,550,701 |
| | b. | Deferred Benefits | 26,440 | 21,178 |
| | c. | Survivor Benefits | 76,473 | 72,859 |
| | d. | Disability Retirement | 152,810 | 147,397 |
| | e. | Total for Active Members | $6,905,591 | $6,792,135 |
| 2. | **Inactive Members** | | | |
| | a. | Retired Members | $3,453,743 | $4,280,484 |
| | b. | Terminated members | 615,904 | 651,883 |
| | c. | Beneficiaries | 0 | 0 |
| | d. | Disability Retirement | 132,288 | 130,457 |
| | e. | Total for Inactive Members | $4,201,935 | $5,062,824 |
| 3. | **Accrued Liability** | | $11,107,526 | $11,854,959 |

# Normal Cost

| Valuation as of October 1, | | | 2014 | 2015 |
|---|---|---|---|---|
| 1. | **Preliminary Normal Cost** | | | |
| | a. | Retirement Benefits | $337,740 | $328,235 |
| | b. | Deferred Benefits | 56,305 | 53,327 |
| | c. | Survivor Benefits | 10,085 | 9,374 |
| | d. | Disability Retirement | 20,608 | 20,154 |
| | e. | Total | $424,738 | $411,090 |
| 2. | **Total Normal Cost** | | | |
| | a. | Preliminary Normal Cost | $424,738 | $411,090 |
| | b. | Estimated Administrative Expense | 69,739 | 70,435 |
| | c. | Total Normal Cost | $494,477 | $481,525 |
| | d. | Total Normal Cost as a Percent of Pay | 21.3% | 21.5% |
| 3. | **Employer Normal Cost** | | | |
| | a. | Preliminary Normal Cost | $424,738 | |
| | b. | Actual Administrative Expense | 70,435 | |
| | c. | Actual Employee Contributions | (158,642) | |
| | d. | Employer Normal Cost | $336,531 | |
| 4. | **Valuation Payroll** | | $2,316,202 | $2,239,986 |

# Unfunded Accrued Liability

## Derivation of Unfunded Accrued Liability (UAL)

### *Unfunded Accrued Liability*

| | | |
|---|---|---|
| 1. | Accrued Liability | $11,854,959 |
| 2. | Actuarial Value of Assets | (11,164,802) |
| 3. | Unfunded Accrued Liability | $690,157 |

### *Determination of Expected Unfunded Accrued Liability*

| | | |
|---|---|---|
| 1. | Unfunded Accrued Liability as of Prior Year | $463,661 |
| 2. | Interest for a full year on (1) | 37,093 |
| 3. | Employer Normal Cost (Including Administrative Expenses) as of Prior Year | 336,531 |
| 4. | Interest for a full year on (3) | 26,922 |
| 5. | City Plus State Contribution | (394,880) |
| 6. | Interest on Contribution for Time on Deposit | (8,756) |
| 7. | Change in Plan, Methods or Assumptions | 11,608 |
| 8. | Expected Unfunded Accrued Liability | $472,179 |

### *Calculation of (Gain) or Loss*

| | | |
|---|---|---|
| 1. | Actual Unfunded Accrued Liability | $690,157 |
| 2. | Expected Unfunded Accrued Liability | 472,179 |
| 3. | Total (Gain) or Loss | $217,978 |

### *Reconciliation of Unfunded Accrued Liability*

| | | |
|---|---|---|
| 1. | Unfunded Accrued Liability as of Prior Year | $463,661 |
| 2. | Total Change in Unfunded Accrued Liability | |
| | a. Expected Change in Unfunded Accrued Liability | $(3,090) |
| | b. Change in Plan, Methods or Assumptions | 11,608 |
| | c. Change Due to (Gain) or Loss | |
| | i. Portion of (Gain) / Loss Due to Investments | $336,788 |
| | ii. Portion of (Gain) / Loss Due to Demographic Experience | (118,810) |
| | iii. Total (Gain) or Loss | $217,978 |
| | d. Total Change in Unfunded Accrued Liability | $226,496 |
| 3. | Unfunded Accrued Liability | $690,157 |

## Amortization of Unfunded Liability

The Unfunded Actuarial Accrued Liability is being amortized as a level percentage of payroll based on the interest and payroll growth assumptions. Changes in the Unfunded Actuarial Accrued Liability due to plan changes, assumption changes, method changes, or gains and losses are all amortized over a 25 year period (30 years in the prior valuation).

## Amortization Bases

| | Effective 10/1 | Source | Original Balance | Remaining Balance | Adjusted Remaining Balance | Years Remain | 1.5% Amortization Payment |
|---|---|---|---|---|---|---|---|
| 1. | 2005 | Method Change | $(129,220) | $(71,731) | $(71,252) | 20 | $(6,031) |
| 2. | 2006 | Actuarial Gain | (154,247) | (85,272) | (84,704) | 21 | (6,999) |
| 3. | 2007 | Actuarial Gain | (538,306) | (295,734) | (293,764) | 22 | (23,739) |
| 4. | 2008 | Actuarial Loss | 1,693,799 | 917,581 | 911,468 | 22 | 73,656 |
| 5. | 2008 | Method Change | 7,606 | 4,145 | 4,117 | 23 | 326 |
| 6. | 2008 | Method Change | (1,183,820) | (645,071) | (640,773) | 23 | (50,735) |
| 7. | 2009 | Actuarial Loss | 449,531 | 242,535 | 240,919 | 24 | 18,720 |
| 8. | 2010 | Actuarial Loss | 46,391 | 24,743 | 24,578 | 25 | 1,877 |
| 9. | 2011 | Actuarial Loss | 489,026 | 257,463 | 255,748 | 26 | 19,219 |
| 10. | 2012 | Actuarial Gain | (278,260) | (144,419) | (143,457) | 27 | (10,622) |
| 11. | 2012 | Asmp/Method Chg | 363,487 | 188,653 | 187,396 | 27 | 13,875 |
| 12. | 2013 | Actuarial Loss | 22,767 | 11,635 | 11,557 | 28 | 844 |
| 13. | 2013 | Update Mortality | 10,161 | 5,192 | 5,157 | 28 | 377 |
| 14. | 2014 | Actuarial Loss | 42,565 | 42,695 | 42,411 | 29 | 3,058 |
| 15. | 2014 | Update Mortality | 11,211 | 11,245 | 11,170 | 29 | 805 |
| 16. | 2015 | Actuarial Loss | 217,978 | 217,978 | 217,978 | 25 | 16,646 |
| 17. | 2015 | Update Mortality | 11,608 | 11,608 | 11,608 | 25 | 886 |
| | Scheduled Amortization Payment | | | | | | $52,163 |
| | Outstanding Bases | | | $693,246 | $690,157 | | |
| | Unfunded Accrued Liability | | | $690,157 | $690,157 | | |

## Projected Unfunded Accrued Liability and Amortization Payments

| Plan Year Beginning October 1 | Total Outstanding Bases | Total Amortization Payment |
|---|---|---|
| 2015 | $690,157 | $52,163 |
| 2016 | 689,034 | 52,946 |
| 2017 | 686,975 | 53,740 |
| 2018 | 683,893 | 54,548 |
| 2019 | 679,693 | 55,365 |
| 2020 | 674,274 | 56,194 |
| 2021 | 667,527 | 57,038 |
| 2022 | 659,328 | 57,894 |
| 2023 | 649,548 | 58,762 |
| 2024 | 638,049 | 59,644 |
| 2025 | 624,678 | 60,538 |
| 2026 | 609,271 | 61,446 |
| 2027 | 591,651 | 62,368 |
| 2028 | 571,625 | 63,302 |
| 2029 | 548,989 | 64,251 |
| 2030 | 523,517 | 65,216 |
| 2031 | 494,965 | 66,196 |
| 2032 | 463,071 | 67,187 |
| 2033 | 427,555 | 68,195 |
| 2034 | 388,109 | 69,216 |
| 2035 | 344,404 | 78,380 |
| 2036 | 287,306 | 89,124 |
| 2037 | 214,036 | 21,195 |
| 2038 | 208,268 | 92,506 |
| 2039 | 125,023 | 67,136 |
| 2040 | 62,518 | 39,982 |
| 2041 | 24,338 | 12,277 |
| 2042 | 13,025 | 7,599 |
| 2043 | 5,860 | 5,860 |
| 2044 | 0 | 0 |

## Actions Taken to Reduce Unfunded Actuarial Accrued Liability

The required contributions calculated each year include a payment for the amortization of the unfunded actuarial accrued liability. This payment is designed to reduce the unfunded actuarial accrued liability in an orderly fashion over the next 25 years (30 years in the prior valuation).

# Minimum Funding Requirements

## Determination of Required Contribution

| **Valuation as of October 1,**<br>**Funding for Year Ending September 30,** | | **2014**<br>**2015** | **2015**<br>**2016** |
|---|---|---|---|
| 1. | **Determination of Minimum Required Contribution** | | |
| | a. Total Normal Cost | $494,477 | $481,525 |
| | b. Amortization of Unfunded Accrued Liability | 34,348 | 52,163 |
| | c. Beginning of Year Contribution | $528,825 | $533,688 |
| | d. Interest for Monthly Payments | 28,189 | 28,387 |
| | e. Minimum Required Contribution Payable Monthly | $557,014 | $562,075 |
| | f. Percent of Pay | 24.05% | 25.09 % |
| 2. | **Computation of Expected Member Contributions** | | |
| | a. Expected Member Contributions | $162,134 | $156,799 |
| | b. Percent of Pay | 7.00% | 7.00% |
| 3. | **Expected Contributions from State** | | |
| | a. Expected State Contribution | $175,891 | $175,977 |
| | b. Percent of Pay | 7.59% | 7.86% |
| 4. | **City Policy Contribution** | | |
| | a. City Policy Contribution | $218,989 | $229,299 |
| | b. Percent of Valuation Payroll | 9.46% | 10.23 % |
| 5. | **Valuation Payroll** | $2,316,202 | $2,239,986 |

Note: The actual premium tax distribution for the fiscal ending September 30, 2016 is not yet known. $405,276 is the minimum funding requirement for fiscal 2016 including both contributions from the City and those from the State of Florida. We have estimated the City portion as $229,299 which should be deposited during fiscal 2016 on at least a quarterly basis. The quarterly estimate is $57,325. The annual contribution paid by the City should take into account the actual amount of premium tax revenues received from the State of Florida so that total minimum funding deposited to the Plan for fiscal 2016 is $405,276.

# Reconciliations

## Reconciliation of Funded Status

| | Unfunded Actuarial Accrued Liability | Funded Percentage | Change in Unfunded Actuarial Accrued Liability | Change in Funded Percentage |
|---|---|---|---|---|
| **As of Prior Valuation** | **$463,661** | **95.83 %** | | |
| Changes in due to: | | | | |
| Normal Operation of Plan | 460,571 | 96.15 % | $(3,090) | 0.32 % |
| Investment Experience | 797,359 | 93.33 % | 336,788 | (2.82)% |
| Demographic Experience | 678,549 | 94.27 % | (118,810) | 0.94 % |
| Mortality Improvement | 690,157 | 94.18 % | 11,608 | (0.09)% |
| Total Changes | | | $226,496 | (1.65)% |
| **As of Current Valuation** | **$690,157** | **94.18 %** | | |

## Reconciliation of City Minimum Funding Requirement

| | Dollar Amount | % of Pay |
|---|---|---|
| **As of Prior Valuation** | **$218,989** | **9.46 %** |
| Changes in Contribution due to: | | |
| Normal Operation of Plan | $5,817 | 0.10 % |
| Change in State $ | (83) | (0.01)% |
| Change in Expenses | 724 | 0.03 % |
| Investment Experience | 26,747 | 1.14 % |
| Demographic Experience | (24,214) | (0.55)% |
| Mortality Improvement | 1,319 | 0.06 % |
| Total Changes | $10,310 | 0.77 % |
| **As of Current Valuation** | **$229,299** | **10.23 %** |

# Section 3 Accounting Information

## Information Required by GASB 67/68

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

## Statement of Accumulated Plan Benefits

The present value of accrued benefits is an estimate of the liability for all benefits accrued to date.

| Valuation as of October 1, | 2014 | 2015 |
|---|---|---|
| 1. Actuarial present value of accumulated benefits | | |
| a. Participants currently receiving benefits | $3,586,031 | $4,410,941 |
| b. Other participants | 5,537,589 | 5,481,125 |
| c. Vested participants | $9,123,620 | $9,892,066 |
| d. Nonvested participants | 615,782 | 584,434 |
| e. Total | $9,739,402 | $10,476,500 |
| 2. Change in actuarial present value of accumulated benefits | | |
| a. Actuarial present value of accumulated benefits beginning of year | | $9,739,402 |
| b. Increase (decrease) during year attributable to: | | |
| i. Plan amendment | | $0 |
| ii. Change in assumptions or methods | | 9,776 |
| iii. Increase for interest and probability of payment due to decrease in discount period and benefits accrued | | 1,197,664 |
| iv. Benefits paid | | (470,342) |
| v. Other | | 0 |
| vi. Net increase (decrease) | | $737,098 |
| c. Actuarial present value of accumulated benefits end of year | | $10,476,500 |

## Other Disclosures Required by the State of Florida

| Valuation as of October 1, | 2014 | 2015 |
|---|---|---|
| Present value of active member: | | |
| Future salaries (attained age) | $21,750,051 | $20,666,795 |
| Future contributions (attained age) | $1,522,504 | $1,446,676 |
| Balance of contributions with interest for actives | $2,066,901 | $2,038,484 |

# Required Disclosure Under F.S. 112.664(1)

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

(a) Total pension liability calculated assuming mortality under the RP-2000 Combined Mortality Table for healthy participants (by gender) with fully generational projection using Scale AA.

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

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

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

| | RP 2000 Fully Generational Scale AA | | | Actual Valuation Results - 8.0% and RP-2000 Projected to 2015 Using Scale AA |
|---|---|---|---|---|
| | 2% Decrease (6.00%) | Current Discount Rate (8.00%) | 2% Increase (10.00%) | |
| Total pension liability | $15,443,222 | $12,120,894 | $9,765,277 | $11,854,959 |
| Plan fiduciary net position | (10,698,704) | (10,698,704) | (10,698,704) | (10,698,704) |
| Net pension liability | $4,744,518 | $1,422,190 | $(933,427) | $1,156,255 |
| Plan fiduciary net position as a percentage of the total pension liability | 69.28% | 88.27% | 109.56% | 90.25% |
| Years of benefit payments: | | | | |
| Expected for current members: | 97 | 97 | 97 | 96 |
| Paid for with current assets: | 16.00 | 19.86 | 28.09 | 20.02 |
| City Plus State Contribution Requirement, Plus Expected Employee Contributions | | | | |
| Dollar Amount | $1,032,255 | $596,208 | $380,805 | $562,075 |
| Percent of Payroll | 46.08% | 26.62% | 17.00% | 25.09% |

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

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

| **Year Ending September 30,** | **2015** | **2014** | **2013** | **2012** | **2011** | **2010** |
|---|---|---|---|---|---|---|
| Assumed rate of return | 8.0% | 8.0% | 8.0% | 8.0% | 8.0% | 8.0% |
| Actual rate of return | 0.1% | 9.6% | 8.8% | 12.4% | (2.8%) | 7.4% |
| Percentages of assets in: | | | | | | |
| Cash | 1% | 2% | 0% | 4% | 4% | 5% |
| Equity | 66% | 66% | 57% | 57% | 55% | 57% |
| Bond | 31% | 29% | 40% | 35% | 39% | 34% |
| Alternative | 2% | 3% | 3% | 4% | 2% | 4% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% |

# Section 4 Supplementary Information

## Summary of Participant Data

### Member Statistics

| **Valuation as of October 1,** | **2014** | **2015** |
|---|---|---|
| Active Participants | | |
| Number | 48 | 45 |
| Average Age | 40.1 | 40.5 |
| Average Credited Service | 11.0 | 11.3 |
| Percent Male | 85.4 | 80.0 |
| Average Valuation Salary | $48,254 | $49,777 |
| Total Valuation Salary | $2,316,202 | $2,239,986 |
| Payroll Covered in Valuation | $2,316,202 | $2,239,986 |
| Terminated With Rights to Deferred Benefits | | |
| Number | 2 | 2 |
| Average Age | 45.9 | 46.9 |
| Percent Male | 100.0 | 100.0 |
| Average Monthly Benefit | $2,645 | $2,645 |
| DROP Participants | | |
| Number | 1 | 1 |
| Average Age | 56.5 | 52.2 |
| Percent Male | 100.0 | 100.0 |
| Average Monthly Benefit | $6,126 | $3,077 |
| Total of DROP Account Balances September 30 | $98,864 | $3,080 |

| Valuation as of October 1, | 2014 | 2015 |
|---|---|---|
| Service Retirements | | |
| Number | 7 | 9 |
| Average Age | 63.5 | 62.2 |
| Percent Male | 100.0 | 100.0 |
| Average Monthly Benefit | $2,698 | $3,171 |
| Disability Retirements | | |
| Number | 1 | 1 |
| Average Age | 53.1 | 54.1 |
| Percent Male | 100.0 | 100.0 |
| Average Monthly Benefit | $1,239 | $1,239 |
| Total In Payment Status | | |
| Number | 8 | 10 |
| Average Age | 62.2 | 61.4 |
| Percent Male | 100.0 | 100.0 |
| Average Monthly Benefit | $2,516 | $2,978 |

## Number of Active Members by Age and Service as of October 1, 2015

| Age | < 1 | < 5 | < 10 | < 15 | < 20 | < 25 | < 30 | < 35 | Total |
|---|---|---|---|---|---|---|---|---|---|
| < 20 | | | | | | | | | |
| < 25 | 2 | | | | | | | | 2 |
| < 30 | | 3 | 1 | | | | | | 4 |
| < 35 | | 3 | 5 | 2 | | | | | 10 |
| < 40 | 1 | 2 | 1 | 1 | 1 | | | | 6 |
| < 45 | | | 2 | 1 | 1 | | | | 4 |
| < 50 | | 1 | 1 | 3 | 1 | 4 | 1 | | 11 |
| < 55 | | 1 | | | 3 | 1 | 2 | | 7 |
| < 60 | | | | | 1 | | | | 1 |
| < 65 | | | | | | | | | |
| Total | 3 | 10 | 10 | 7 | 7 | 5 | 3 | | 45 |

## Active Valuation Pay by Age and Service as of October 1, 2015

| Age | < 1 | < 5 | < 10 | < 15 | < 20 | < 25 | < 30 | < 35 | Total |
|---|---|---|---|---|---|---|---|---|---|
| < 20 | | | | | | | | | |
| < 25 | 36,480 | | | | | | | | 36,480 |
| < 30 | | 38,208 | 42,000 | | | | | | 39,156 |
| < 35 | | 38,665 | 47,197 | 48,404 | | | | | 44,879 |
| < 40 | 36,000 | 38,732 | 43,783 | 44,868 | 51,323 | | | | 42,240 |
| < 45 | | | 43,863 | 46,646 | 54,744 | | | | 47,279 |
| < 50 | | 36,000 | 40,290 | 50,743 | 53,317 | 61,427 | 68,196 | | 54,158 |
| < 55 | | 89,016 | | | 61,238 | 67,357 | 64,758 | | 67,086 |
| < 60 | | | | | 53,717 | | | | 53,717 |
| < 65 | | | | | | | | | |
| Total | 36,320 | 43,310 | 44,978 | 48,650 | 56,688 | 62,613 | 65,904 | | 49,777 |

## Reconciliation of Plan Participants

| | Active | Retired | DROP | Deferred Vested | Disabled | Survivor | Total |
|---|---|---|---|---|---|---|---|
| **October 1, 2011** | **50** | **8** | **0** | **0** | **1** | **0** | **59** |
| Active | | | | | | | |
| To Terminated Vested | (1) | | | 1 | | | 0 |
| To Refund of Contribs | (1) | | | | | | (1) |
| Retired | | | | | | | |
| To Death | | (1) | | | | | (1) |
| Additions | 2 | | | | | | 2 |
| **October 1, 2012** | **50** | **7** | **0** | **1** | **1** | **0** | **59** |
| Active | | | | | | | |
| To DROP | (1) | | 1 | | | | 0 |
| To Refund of Contribs | (8) | | | | | | (8) |
| Additions | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| **October 1, 2013** | **44** | **7** | **1** | **1** | **1** | **0** | **54** |
| Active | | | | | | | |
| To Terminated Vested | (1) | | | 1 | | | 0 |
| Additions | 5 | 0 | 0 | 0 | 0 | 0 | 5 |
| **October 1, 2014** | **48** | **7** | **1** | **2** | **1** | **0** | **59** |
| Active | | | | | | | |
| To Retired | (1) | 1 | | | | | 0 |
| To DROP | (1) | | 1 | | | | 0 |
| To Refund of Contribs | (4) | | | | | | (4) |
| DROP | | | | | | | |
| To Retired | | 1 | (1) | | | | 0 |
| Additions | 3 | 0 | 0 | 0 | 0 | 0 | 3 |
| **October 1, 2015** | **45** | **9** | **1** | **2** | **1** | **0** | **58** |

## Outline of Plan Provisions

Plan Type: Single-employer Defined Benefit Pension Plan

Effective Date: November 1, 1969. Amended and restated effective October 1, 1999 and subsequently amended by Ordinance No. 1222-2000, 1262-2001, 1336-2004, 1366-2005, 1492-2008, 1509-2008, 1520-2009, 1545-2010, 1546-2010, 1570-2010, 1588-2011, 1589-2011, 1630-2013, 1645-2014, 1662-2014, and 1672-2015.

Plan Administrator: The Board of Trustees

Board Composition: Two members are elected from among the police employees of the City, who are members of the plan, two city residents appointed by the Commission and one person is chosen by a majority of the previous four members.

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

Plan Year: The 12-month period from October 1$^{st}$ to the next September 30$^{th}$.

Member: Full-time police officers participate in the Plan immediately upon hire.

Credited Service: Employee service computed in years and completed calendar months. Military service purchases up to five years are allowed.

Vesting: Members become 100% vested after earning 10 years of Credited Service.

Basic Compensation: Total compensation actually paid in a Plan Year by the City including tax deferred compensation, as well as educational incentive monies, and excluding overtime in excess of 300 hours, commissions, bonuses, expense allowances and payment for accrued annual leave, accrued sick leave, and accrued compensatory leave.

Employee Contributions: 7.0% of Basic Compensation credited with 5% interest compounded annually. Members receive benefits under the Plan no less than the value of their accumulated Employee Contributions with interest.

Members who terminate non-vested are entitled to the return of Employee Contributions accumulated with interest at 5% to the first day of the month in which termination occurs.

Average Monthly Compensation: The sum of the highest five successive Plan Years of Basic Compensation in the last ten Plan Years of employment divided by 60.

Normal Retirement Date: The first day of the month coincident with or next following attainment of age 52 and 10 years of Credited Service.

Accrued Benefit: For Members hired before January 2, 2013, the amount of monthly retirement income payable at the Normal Retirement Date is determined according to the following formula:

3% x Average Monthly Compensation x Credited Service up to 25 years

Plus

1.5% x Average Monthly Compensation x Credited Service between 25 and 35 years

For Members hired on or after January 2, 2013, the amount of monthly retirement income payable at the Normal Retirement Date is determined according to the following formula:

3% x Average Monthly Compensation x Credited Service up to 25 years

The Accrued Benefit is payable in the form of a 10-year certain and continuous annuity. However, any member with a spouse shall receive an actuarially equivalent 50% joint and survivor annuity unless the member chooses another Optional Form of Retirement Income with spousal consent.

Members who terminate employment 100% vested prior the Normal Retirement Date are eligible to receive their Accrued Benefit once the age requirements for the Normal Retirement Date are met, provided Employee Contributions remain in the Plan.

<u>Late Retirement Benefit:</u> The amount of monthly retirement income payable to a Member who retires after the Normal Retirement Date is the greater of (i) the monthly retirement income which can be provided by the single-sum value of the Accrued Benefit payable if he had retired at the Normal Retirement Date, accumulated with interest from the Normal Retirement Date to the date the monthly retirement income payments are to commence, and (ii) the monthly retirement income computed as described for the Accrued Benefit using Credited Service and Average Monthly Compensation determined at the Member's actual retirement date.

<u>Early Retirement Date:</u> The first day of the month coincident with or next following the date an employee retires prior to the Normal Retirement Date after the earlier of attainment of age 44 and 25 years of Credited Service or age 50 and 10 years of Credited Service.

<u>Early Retirement Benefit:</u> The Accrued Benefit is reduced for commencement earlier than the Normal Retirement Date at a rate of 3/12% per month. However, the minimum monthly retirement income for a Member who retires before the Normal Retirement Date with 25 years Credited Service is 50% x Average Monthly Compensation.

Members who terminate employment 100% vested prior to reaching the Early Retirement Date age requirements may elect to receive an Early Retirement Benefit once the age requirements are met, provided Employee Contributions remain in the Plan.

Members who terminate employment 100% vested prior the Normal Retirement Date but on or after their Early Retirement Date but do not commence receipt of an Early Retirement Benefit at that time will receive a monthly retirement income not less than the monthly retirement income which can be provided by the single-sum value of the monthly early retirement income which would have been payable if he had retired immediately upon termination, accumulated with interest from termination to the date the monthly retirement income payments are to commence.

Members who recover from Disability Retirement and who were eligible for an Early Retirement Benefit at the date of disability may elect to receive this benefit upon recovery from disability.

<u>Disability Retirement:</u> This benefit is payable from the first day of the month coincident with or next following the date the Retirement Committee approves the Member's Disability Retirement. The benefit is payable in the form of a 10 year certain and continuous annuity. The last payment is that due next preceding the earlier of (1) the date of recovery prior to the Normal Retirement Date and (2) the later of the date of death or the 120$^{th}$ payment. The amount of monthly retirement income is determined as follows:

(a) <u>Non-Line of Duty: Members with less than 10 years of Credited Service</u> upon disability receive a monthly retirement income which can be provided by the greater of (i) the single-sum value of the Accrued Benefit and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding disability. The monthly retirement income which can be provided by (ii) is limited to 60% x Anticipated Monthly Retirement Income at the Normal Retirement Date. Effective with this valuation, the benefit has been modified such that in no event shall the benefit payable be less than the benefit required under section 185.18 of the Florida Statutes.

(b) Non-Line of Duty: Members with 10 years of Credited Service or more upon disability receive a monthly retirement income which is the greater of (i) the monthly retirement income which can be provided by the single-sum value of the Accrued Benefit and (ii) 30% x Basic Compensation paid in the Plan Year immediately preceding disability where the single-sum value of this monthly amount does not exceed 100 x the Anticipated Monthly Retirement Income at the Normal Retirement Date. Effective with this valuation, the benefit has been modified such that in no event shall the benefit payable be less than the benefit required under section 185.18 of the Florida Statutes.

(c) Line of Duty: Members receive a monthly retirement income which is 50% x Basic Compensation paid in the Plan Year immediately preceding disability where the single-sum value of this monthly amount does not exceed 100 x the Anticipated Monthly Retirement Income at the Normal Retirement Date. Effective with this valuation, the benefit has been modified such that in no event shall the benefit payable be less than the benefit required under section 185.18 of the Florida Statutes.

Members who recover from disability and re-enter the service of the City within 30 days of recovery will be deemed to have continuous service except that the period beginning with the first month for which Disability Retirement income was received and ending with the date of service re-entry is not considered as Credited Service.

Anticipated Monthly Retirement Income at the Normal Retirement Date: Determined as described for the Accrued Benefit, but instead using Anticipated Credited Service and Anticipated Average Monthly Compensation. Anticipated Credited Service is employee service computed in years and completed calendar months as if the member remains employed to the Normal Retirement Date. Anticipated Average Monthly Compensation is computed assuming that the last complete Plan Year of Basic Compensation is paid in each Plan Year, without change, to the Normal Retirement Date.

Survivor Benefit at Death of Disabled Member Prior to Disability Retirement: The designated beneficiary of a disabled Member who dies prior to receipt of Disability Retirement benefits is eligible to receive a monthly retirement income payable in the form of a 10 year certain and continuous annuity payable commencing on the first of the month coincident with or next following the date of the disabled Member's death. The designated beneficiary will receive a monthly retirement income which can be provided by the greater of (i) the single-sum value of the Accrued Benefit and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding disability not more than 100 x Anticipated Monthly Retirement Income at the Normal Retirement Date.

Survivor Benefit at Death of Vested Terminated Members: The designated beneficiary of vested Member who dies prior to retirement is eligible to receive a monthly retirement income payable in the form of a 10 year certain and continuous annuity payable commencing on the first of the month coincident with or next following the Member's death, which can be provided by the single-sum value of the Member's Accrued Benefit or Early Retirement Benefit.

Survivor Benefit at Death of Active Employee Prior to Normal Retirement Date: The designated beneficiary of a Member who dies while in active service prior to the Normal Retirement Date is eligible to receive, commencing on the first of the month coincident with or next following the Member's death, a monthly retirement income (payable in the form of a 10 year certain and continuous annuity) which can be provided by the greater of (i) the single-sum value of the Accrued Benefit as of the date of death, not less than the single-sum value of the Early Retirement Benefit which would have been payable if the Member had retired early on the date of death, and (ii) 2 x Basic Compensation paid in the Plan Year immediately preceding death not more than 100 x Anticipated Monthly Retirement Income at the Normal Retirement Date.

Survivor Benefit at Death of Active Employee After Normal Retirement Date: The designated beneficiary of a Member who dies while in active service after the Normal Retirement Date is eligible to receive, commencing on the first of the month coincident with or next following the Member's death, a monthly retirement income (payable in the form of a 10 year certain and continuous annuity) which can be provided by the single-sum value of the Late Retirement Benefit.

Optional Forms of Retirement Income: In addition to the 10 year certain and continuous form of annuity, also available under the terms of the Plan are the life only annuity and the joint and 50%, 66 2/3%, 75%, or 100% survivor annuity. With the joint and survivor options, the member may also elect the pop-up feature. The Plan also allows for other amounts and forms of retirement income that will meet the circumstances of the Participant, in the opinion of the Retirement Committee, and will not substantially affect the actuarial soundness of the Plan.

Deferred Retirement Option Program (DROP): Members are eligible to enter the DROP at the Normal Retirement Date. The Accrued Benefit is frozen and no further Employee Contributions are payable at DROP entry. The Accrued Benefit accumulates with interest in the DROP account and is payable as a single-lump sum (or as an actuarially equivalent annuity) upon DROP exit. The DROP account earns interest at a rate equal to the funds net rate of investment return minus 1% in administration fees, unless the DROP participant, as a one-time irrevocable option, elects a self-directed DROP as approved by the board of trustees. The maximum DROP participation duration is 5 years and participation will end if the employee resigns, dies or is terminated with cause prior to completion of the 5 years.

# Description of Assumptions and Methods

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

Salary Increase – Individual: 6.0% per year (It is assumed that overtime hours are not increased at the end of the member's career.)

Salary Increase – Total Payroll:

Florida Statues 112.64(5)(a) requires that the payroll growth assumption not exceed the average payroll growth for the prior ten years. The assumed total payroll increase assumption has been set at 1.5% for this valuation.

Inflation: 2.5% per year

Mortality: RP-2000 Combined Mortality Table projected to the valuation year using Scale AA. Disabled tables are used for disabled lives.

Retirement: Unisex rates based on the experience of the Rockledge police officers from 1999 through 2005 (and expectations of the future), as follows:

| Age | Rate | Age | Rate |
|---|---|---|---|
| 52 | 0.250 | 57 | 0.350 |
| 53 | 0.300 | 58 | 0.400 |
| 54 | 0.300 | 59 | 0.500 |
| 55 | 0.300 | 60 | 1.000 |
| 56 | 0.300 | | |

Termination: Unisex rates based on the experience of the Rockledge police officers from 1999 through 2005, as follows:

| Service | Rate | Service | Rate | Service | Rate | Service | Rate |
|---|---|---|---|---|---|---|---|
| 0 | 0.0600 | 7 | 0.0425 | 14 | 0.0250 | 21 | 0.0150 |
| 1 | 0.0575 | 8 | 0.0400 | 15 | 0.0200 | 22 | 0.0150 |
| 2 | 0.0550 | 9 | 0.0375 | 16 | 0.0175 | 23 | 0.0150 |
| 3 | 0.0525 | 10 | 0.0350 | 17 | 0.0150 | 24 | 0.0150 |
| 4 | 0.0500 | 11 | 0.0325 | 18 | 0.0150 | >=25 | 0.0000 |
| 5 | 0.0475 | 12 | 0.0300 | 19 | 0.0150 | | |
| 6 | 0.0450 | 13 | 0.0275 | 20 | 0.0150 | | |

Disability: Sex distinct rates as used for special risk employees in the Florida Retirement System actuarial valuation report as of July 1, 2005. Linear interpolation has been used between the rates shown in five year age increments, as follows:

| | Line-of-Duty | | | Not Line-of-Duty | |
|---|---|---|---|---|---|
| Age | Male | Female | Age | Male | Female |
| 20 | 0.012% | 0.008% | 20 | 0.037% | 0.036% |
| 25 | 0.012% | 0.008% | 25 | 0.037% | 0.036% |
| 30 | 0.017% | 0.016% | 30 | 0.043% | 0.046% |
| 35 | 0.029% | 0.037% | 35 | 0.055% | 0.075% |
| 40 | 0.051% | 0.068% | 40 | 0.087% | 0.118% |
| 45 | 0.087% | 0.106% | 45 | 0.140% | 0.259% |
| 50 | 0.138% | 0.153% | 50 | 0.292% | 0.318% |
| 55 | 0.215% | 0.230% | 55 | 0.446% | 0.492% |
| 60 | 0.301% | 0.285% | 60 | 0.628% | 0.597% |
| 65+ | 0.231% | 0.143% | 65+ | 0.698% | 0.380% |

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

## Glossary of Actuarial Terms

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

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

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

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

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