

**ACTUARIAL VALUATION OF
CITY OF MIRAMAR
MUNICIPAL POLICE OFFICERS'
RETIREMENT PLAN
AS OF OCTOBER 1, 2016**

May, 2017

Determination of Contribution for the
Plan Year ending September 30, 2018
Contribution to be
Paid in Fiscal Year October 1, 2017
through September 30, 2018

**DuLaney and Company, Inc.
Actuarial Services**

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May 10, 2017

Board of Trustees
City of Miramar Municipal Police
Officers' Retirement Plan
c/o Mr. Doug Falcon
FHA-TPA, Benefit Administrators
6941 SW 196th Avenue
Suite 27
Fort Lauderdale, FL 33332

Dear Board Members:

We are pleased to present our October 1, 2016 Actuarial Valuation for the City of Miramar Municipal Police Officers' Retirement Plan. The purpose of this report is to indicate appropriate contribution levels and to satisfy State requirements. The report is prepared for and at the request of the Board of Trustees.

This report consists of this commentary, detail Tables I through XV and State Required Exhibit - Table XVI. The Tables contain basic Retirement Plan cost figures plus significant detail on the benefits, liabilities and experience of your Plan.

Costs for Fiscal Year Beginning October 1, 2017

This Actuarial Valuation develops the required minimum Retirement Plan payment for the fiscal year beginning October 1, 2017 and ending September 30, 2018 under the Florida Protection of Public Employee Retirement Benefits Act and Chapter 185. The minimum payment consists of payment of annual normal cost plus amortization of the unfunded actuarial accrued liability over various periods as prescribed by law. This amount is **\$11,542,243** (computed under the fixed-dollar method) or **88.1%** of covered payroll if the payment requirement is met by September 30, 2018. Please note that Chapter 185 states that employer contributions must be made at least quarterly.

This cost must be met by Member, City and State contributions. We anticipate that Member contributions will be **\$1,755,939 (13.4%)**. The assumed State (Chapter 185) contribution available (limited by rules under Chapter 99-1) is **\$962,925** (same as amount received in 2016). The resulting City contribution will be **\$8,823,379 which is 67.3% of covered payroll including up to 300 hours of overtime pay.**

Changes in Plan Provisions, Actuarial Methods or Assumptions Recognized in this Valuation

This valuation recognizes the same benefits as those considered for the October 1, 2015 valuation, except for an improved death benefit for married members (described on page 21, Item 11.) and except that the Ad Hoc Variable Benefit for fiscal year October 1, 2016 through September 30, 2017 was changed from thirty one hundredths of one percent (0.30%) to thirty-two one hundredths of one percent (0.32%) to adjust for the actual excess Chapter 185 contributions available, as required. This was a result of the change in usage of Chapter 185 contributions (described on page 23, Item 17). Plan provisions are outlined in Table XI.

For this valuation, the assumed mortality table was changed as stated in Table XII. All other methods and assumptions utilized in this valuation remained the same as those used in the October 1, 2015 valuation. Table XII contains an outline of the assumptions and methods used.

Comparison of Costs With Previous Valuation Year of 2015/2016

Table II provides a comparison of the results for the 2015/2016 and 2016/2017 plan years.

The left column of Table II contains the results as of October 1, 2015 while the center and right columns display the results as of October 1, 2016, prior to and after the assumptions change, respectively. A comparison of the left and center columns provides an indication of plan experience. Covered payroll increased by 10.1% while the number of active participants increased by 7.1%. The number of members in the Deferred Retirement Option Plan increased from 35 to 39. Unfunded actuarial accrued liability increased from \$62,384,288 to \$66,719,275 primarily due to the actuarial loss of \$5,470,811 experienced during the plan year. Total normal cost increased from \$3,959,595 (33.3% of pay) to \$4,311,884 (32.9% of pay). Net City cost increased from \$7,638,789 (64.2% of pay) to \$8,286,005 (63.2% of pay).

The effect of the change in assumptions and plan amendment can be seen by comparing the center and right columns of Table II. Total normal cost increased from \$4,311,884 (32.9% of pay) to \$4,456,779 (34.0% of pay). Unfunded actuarial accrued liability increased by \$5,286,085. Net City cost increased from \$8,286,005 (63.2% of pay) to \$8,823,379 (67.3% of pay).

Plan Experience

Table VIII indicates that the plan had an actuarial loss of \$5,470,811 for the fiscal year. This means that experience was less favorable than anticipated under the actuarial assumptions employed.

Table XV shows that the rate of return on actuarial value of assets was 7.8% for the 2015/2016 fiscal year, as compared to the assumed 7.50%. Investment return was a source of actuarial gain. Actual employee turnover was approximately 17% lower than the expected

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Board of Trustees
May 10, 2017
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turnover during the last fiscal year and was a source of actuarial gain. Average salary increase was 9.77%, as compared to the assumed 5.50%. Employee salary increase was a source of actuarial loss. A more detailed analysis would be needed to determine the gain or loss attributable to each of these elements.

Participant Census and Financial Data

Participant census data for the fiscal year October 1, 2015 through September 30, 2016 was provided by the City. Supplemental information was also received on retirees and terminations from the plan custodian and the plan administrator. The data was reviewed for consistency and is believed to be reliable.

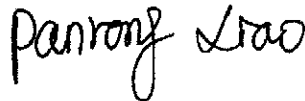
Information on Plan assets was received from the Plan's auditors. We did not audit this information, however, we believe it to be reliable.

We look forward to discussing the results of this report with you. If you should have any questions, please let us know.

Sincerely,



Donald A. DuLaney, Jr., A.S.A., E.A.
Senior Consulting Actuary



Panrong Xiao, E.A., M.A.A.A.
Enrolled Actuary

DAD/PX/
Enclosures

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Table I

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN

Summary of Retirement Plan Costs as of October 1, 2016

| | <u>Cost Data</u> | <u>% of Payroll</u> |
|---|-------------------|-------------------------|
| A. <u>Participant Data Summary</u> | | |
| 1. Active employees (70 Tier 2) | 167 | N/A |
| 2. Terminated vested | 1 | N/A |
| 3. Receiving benefits | 84 | N/A |
| 4. DROP participants | 39 | N/A |
| 5. Annual payroll of active employees | \$ 13,104,019 | 100.0% |
| B. <u>Total Normal Costs</u> | | |
| 1. Age retirement benefits | \$ 3,376,003 | 25.8% |
| 2. Deferred vesting benefits | 418,335 | 3.2% |
| 3. Death benefits | 76,818 | 0.6% |
| 4. Disability benefits | 312,046 | 2.4% |
| 5. Estimated expenses | <u>273,577</u> | <u>2.1%</u> |
| 6. Total annual normal costs | \$ 4,456,779 | 34.0% |
| C. <u>Total Actuarial Accrued Liability</u> | | |
| 1. Age retirement benefits active employees | \$ 61,259,335 | 467.5% |
| 2. Termination benefits active employees | 1,814,323 | 13.8% |
| 3. Death benefits active employees | 475,772 | 3.6% |
| 4. Disability benefits active employees | <u>1,146,089</u> | <u>8.7%</u> |
| 5. Subtotal active employees | \$ 64,695,519 | 493.7% |
| 6. Retired or terminated vested participants receiving benefits | \$ 51,576,292 | 393.6% |
| 7. DROP participants | 51,306,282 | 391.5% |
| 8. Terminated vested participants entitled to future benefits | 300,884 | 2.3% |
| 9. Deceased participants whose beneficiaries are receiving benefits | 1,737,184 | 13.3% |
| 10. Miscellaneous | 0 | 0.0% |
| 11. Disabled participants receiving benefits | <u>13,076,265</u> | <u>99.8%</u> |
| 12. Subtotal Inactives | \$ 117,996,907 | 900.5% |
| 13. Total actuarial accrued liability | \$ 182,692,426 | 1394.2% |
| D. <u>Value of Assets</u> | | |
| 1. Actuarial value | \$ 110,687,066 | 844.7% |
| 2. Market value | \$ 108,705,850 | 829.6% |
| E. <u>Unfunded Actuarial Accrued Liability (C13.-D1.)</u> | \$ 72,005,360 | 549.5% |

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Table I
(continued two)

| | <u>Cost Data</u> | <u>% of Payroll</u> |
|---|-------------------|-------------------------|
| F. <u>Minimum Funding Requirements</u> | | |
| 1. Total normal cost | \$ 4,456,779 | 34.0% |
| 2. Expected employee contributions | <u>1,755,939</u> | <u>13.4%</u> |
| 3. Net employer normal cost (1. - 2. increased for payment timing by 3%) | \$ 2,781,865 | 21.2% |
| 4. Amortization of unfunded liability bases | 6,572,020 | 50.2% |
| 5. Interest | <u>432,419</u> | <u>3.3%</u> |
| 6. Total payment | \$ 9,786,304 | 74.7% |
| G. <u>Contribution Sources</u> | | |
| 1. City | \$ 8,823,379 | 67.3% |
| 2. State | \$ 962,925 | 7.3% |
| H. <u>Actuarial Gains / (Losses)</u> | \$ (5,470,811) | (41.7%) |
| I. <u>Actuarial Present Value of Vested Accrued Benefits</u> | | |
| 1. Retired, terminated vested, beneficiaries and disabled receiving benefits | \$ 66,389,741 | 506.6% |
| 2. DROP participants | 51,306,282 | 391.5% |
| 3. Terminated vested participants entitled to future benefits | 300,884 | 2.3% |
| 4. Active participants entitled to future benefit | <u>35,436,019</u> | <u>270.4%</u> |
| 5. Total actuarial present value of vested accrued benefits | \$ 153,432,926 | 1170.9% |
| J. <u>Unfunded Actuarial Present Value of Vested Accrued Benefits (I. - D.2.)</u> | \$ 44,727,076 | 341.3% |
| K. <u>Vested Benefit Security Ratio (D.2. ÷ I.)</u> | 70.8% | N/A |

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Table II

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLANComparison of Cost Data of October 1, 2015 and October 1, 2016 Actuarial Valuations

| | October 1, 2015 | | Prior Assumptions October 1, 2016 | | Current Assumptions October 1, 2016 | |
|---|-----------------|-----------------------------|--------------------------------------|-----------------------------|--|-----------------------------|
| | Cost Data | % of Annual Compensation | Cost Data | % of Annual Compensation | Cost Data | % of Annual Compensation |
| A. Participants | | | | | | |
| 1. Active employees | | | | | | |
| - Tier One | 108 | N/A | 97 | N/A | 97 | N/A |
| - Tier Two | 48 | N/A | 70 | N/A | 70 | N/A |
| - Total | 156 | N/A | 167 | N/A | 167 | N/A |
| 2. Terminated vested | 2 | N/A | 1 | N/A | 1 | N/A |
| 3. Receiving benefits | 75 | N/A | 84 | N/A | 84 | N/A |
| 4. DROP participants | 35 | N/A | 39 | N/A | 39 | N/A |
| 5. Annual payroll of active employees | \$ 11,902,101 | 100.0% | \$ 13,104,019 | 100.0% | \$ 13,104,019 | 100.0% |
| B. Total Normal Costs | \$ 3,959,595 | 33.3% | \$ 4,311,884 | 32.9% | \$ 4,456,779 | 34.0% |
| C. Total Actuarial Accrued Liability | \$ 163,045,240 | 1369.9% | \$ 177,406,341 | 1353.8% | \$ 182,692,426 | 1394.2% |
| D. Actuarial Value of Assets | \$ 100,660,952 | 845.7% | \$ 110,687,066 | 844.7% | \$ 110,687,066 | 844.7% |
| E. Unfunded Actuarial Accrued Liability | \$ 62,384,288 | 524.1% | \$ 66,719,275 | 509.2% | \$ 72,005,360 | 549.5% |
| F. Net City Cost | \$ 7,638,789 | 64.2% | \$ 8,286,005 | 63.2% | \$ 8,823,379 | 67.3% |
| G. Unfunded Actuarial Present Value of Vested Accrued Benefits ¹ | \$ 36,311,622 | 305.1% | \$ 40,026,586 | 305.5% | \$ 44,727,076 | 341.3% |
| H. Vested Benefit Security Ratio ¹ | 72.7% | N/A | 73.1% | N/A | 70.8% | N/A |

¹ Computed based on market value of assets.**D**

Table III

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLANCharacteristics of Participants in
Actuarial Valuation as of October 1, 2016A. Characteristic of Active Participants

| | | |
|-----|---|---------------|
| 1. | Active participants as of beginning of prior year | 156 |
| 2. | Entrants during prior year | 26 |
| 3. | Exits during prior year | (15) |
| 4. | Active participants as of beginning of year | 167 |
| 5. | Active participants fully vested | 77 |
| 6. | Active participants partially vested | 0 |
| 7. | Active participants non-vested | 90 |
| 8. | Annual payroll of active participants | \$ 13,104,019 |
| 9. | Average pay | \$ 78,467 |
| 10. | Average hire age | 27.6 years |
| 11. | Average attained age | 36.9 years |
| 12. | Percent female | 27.5% |

B. Characteristics of Inactive Participants

| | | |
|-----|--|--------------|
| 1. | Inactives as of beginning of prior year | 112 |
| 2. | Newly inactive during prior year | 13 |
| 3. | Exits during prior year | (1) |
| 4. | Inactives as of beginning of year | 124 |
| 5. | Age retirees | 63 |
| 6. | Annual benefit for age retirees | \$ 3,604,452 |
| 7. | DROP participants | 39 |
| 8. | Annual benefit for DROP participants | \$ 3,158,798 |
| 9. | Beneficiaries receiving benefits | 4 |
| 10. | Annual benefits for beneficiaries | \$ 128,898 |
| 11. | Disabled participants receiving benefits | 17 |
| 12. | Annual benefits for disabled participants | \$ 894,978 |
| 13. | Terminated vested due deferred benefits | 1 |
| 14. | Annual benefits for terminated vested participants | \$ 23,621 |

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Table IV

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**Statement of Assets as of October 1, 2016¹**

| <u>Assets</u> | <u>Market Value</u> |
|---|-----------------------------|
| A. <u>General Investments</u> | |
| 1. Cash and cash equivalents | \$ 1,787,813 |
| 2. Government securities | 19,108,753 |
| 3. Common stocks | 59,267,584 |
| 4. Corporate bonds | 12,566,771 |
| 5. Alternative investments | 8,915,064 |
| 6. International equity funds | 15,564,386 |
| 7. Real estate funds | 17,960,687 |
| 8. Prepaid expenses | <u>401,422</u> |
| | \$135,572,480 |
| B. <u>Receivables</u> | |
| 1. Accrued interest and dividends receivable | \$ 144,786 |
| 2. City contributions | 0 |
| 3. State contributions | 962,925 |
| 4. Employee contributions | 0 |
| 5. Proceeds from securities sold | <u>150,070</u> |
| | \$ 1,257,781 |
| C. <u>Payables</u> | |
| 1. Accounts payable | \$ 148,607 |
| 2. DROP accounts payable | 28,363,282 |
| 3. Payables from securities sold | 250,051 |
| 4. State contribution reserve | <u>0</u> |
| | \$ 28,761,940 |
| D. <u>DROP forfeiture</u> | \$ 637,529 |
| E. <u>Total Fund</u> (A. + B. - C. + D.) | <u>\$108,705,850</u> |

Reconciliation of DROP Accounts Balance

| | |
|--|---------------------|
| A. DROP Accounts Balance as of October 1, 2015 | \$ 23,677,397 |
| B. Transfer-in of Unused Leave Pay during year | \$ 654,735 |
| C. Benefit Payments into DROP accounts during year | \$ 3,014,359 |
| D. Disbursements from DROP accounts during year | \$ (874,342) |
| E. Investment Gains/(Losses) during year | <u>\$ 1,891,133</u> |
| F. DROP Accounts Balance as of September 30, 2016 | \$ 28,363,282 |

¹ As reported by Plan's Auditors.

Table V

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**Reconciliation of Plan Assets¹**

| | | | |
|----|---|------------------|------------------|
| A. | <u>Market Value of Assets as of October 1, 2015 as Shown on prior Impact Statement after transfer of Available Excess Reserve balance</u> | | \$ 96,914,127 |
| B. | <u>Receipts During Period</u> | | |
| 1. | Contributions | | |
| a. | Employee | \$ 1,840,133 | |
| b. | City | 7,191,828 | |
| c. | State | <u>962,925</u> | |
| d. | Total | | \$ 9,994,886 |
| 2. | Investment income | | |
| a. | Interest, dividends and miscellaneous income | \$ 4,496,438 | |
| b. | Investment expenses | <u>(845,105)</u> | |
| c. | Net | | 3,651,333 |
| 3. | Net appreciation | | |
| a. | Realized | \$ 0 | |
| b. | Unrealized | <u>6,088,704</u> | |
| c. | Total net appreciation | | <u>6,088,704</u> |
| 4. | Total receipts during period | | \$ 19,734,923 |
| C. | <u>Disbursements During Period</u> | | |
| 1. | Pension payments | | \$ 4,357,640 |
| 2. | DROP payments | | 3,014,359 |
| 3. | Contribution refunds | | 297,624 |
| 4. | Administrative and miscellaneous expenses | | 273,577 |
| 5. | Increase / (decrease) in State contribution reserve | | <u>0</u> |
| 6. | Total disbursements during period | | \$ 7,943,200 |
| D. | <u>Market Value of Assets as of October 1, 2016</u> | | \$108,705,850 |

¹ As reported by Plan's Auditors.

Table VI

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**Development of Actuarial Value of Assets**

| | <u>10/1/2015 – 9/30/2016</u> | <u>10/1/2014 – 9/30/2015</u> | <u>10/1/2013 – 9/30/2014</u> | <u>10/1/2012 – 9/30/2013</u> |
|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| A. Market value of assets as of beginning of year | \$ 96,914,127 | \$ 98,070,833 | \$ 86,734,787 | \$ 71,101,858 |
| B. Contributions | 9,994,886 | 9,869,048 | 10,069,596 | 9,748,642 |
| C. Benefit payments and expenses | 8,788,305 | 7,732,945 | 7,011,221 | 6,086,825 |
| D. Expected investment income (A. x .075 + (B.-C.) x .0375) | 7,313,806 | 7,435,416 | 6,840,458 | 5,652,289 |
| E. Expected assets at end of year (A. + B. – C. + D.) | 105,434,514 | 107,642,352 | 96,633,620 | 80,415,964 |
| F. Actual market value at end of year | 108,705,850 | 96,914,127 | 98,070,833 | 86,734,787 |
| G. Excess/(shortfall) of actual over expected assets (F. – E.) | | | | |
| 1. From previous plan year | 3,271,336 | (10,728,225) | 1,437,213 | 6,318,823 |
| 2. From two plan years ago | (10,728,225) | 1,437,213 | 6,318,823 | 7,229,491 |
| 3. From three plan years ago | 1,437,213 | 6,318,823 | 7,229,491 | (6,353,595) |
| 4. From four plan years ago | 6,318,823 | 7,229,491 | (6,353,595) | (820,940) |
| H. Deferred recognized amounts of excess/(shortfall) | | | | |
| 1. 80% from previous plan year | 2,617,069 | (8,582,580) | 1,149,770 | 5,055,058 |
| 2. 60% from two plan years ago | (6,436,935) | 862,328 | 3,791,294 | 4,337,695 |
| 3. 40% from three plan years ago | 574,885 | 2,527,529 | 2,891,796 | (2,541,438) |
| 4. 20% from four plan years ago | <u>1,263,765</u> | <u>1,445,898</u> | <u>(1,270,719)</u> | <u>(164,188)</u> |
| 5. Total | (1,981,216) | (3,746,825) | 6,562,141 | 6,687,127 |
| I. Preliminary actuarial value of assets at end of year (F. – H.5.) | \$ 110,687,066 | \$ 100,660,952 | \$ 91,508,692 | \$ 80,047,660 |
| J. State Ch. 185 contribution reserve | 0 | 0 | 0 | 0 |
| K. 80% of end of year market value of assets | 86,964,680 | 77,531,302 | 78,456,666 | 69,387,830 |
| L. 120% of end of year market value of assets | 130,447,020 | 116,296,952 | 117,685,000 | 104,081,744 |
| M. Actuarial value of assets (I. – J., but not less than K. and not more than L.) | \$ 110,687,066 | \$ 100,660,952 | \$ 91,508,692 | \$ 80,047,660 |

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Table VII

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**History of Chapter 185 Contribution Usage**

Under the provisions of Florida Statutes Chapter 185, as amended by Chapter 99-1, increments in Chapter 185 contributions over the amount for 1997 must first be used to fund the cost of meeting minimum benefit requirements. After the minimum requirements are met, any additional Chapter 185 contributions received must be used to provide extra benefits. The following is an accounting of the contributions received and the amounts used for compliance since the 1997 plan year.

| | | |
|----|---|-----------------------------|
| A. | 1997 Chapter 185 contributions received (Base Amount)\$ | 185,627 |
| B. | Benefit improvements purchased: | |
| | Inclusion of up to 100 hours of overtime pay per year as pension earnings effective October 1, 2001 | \$ 114,932 |
| | Inclusion of up to 300 hours of overtime pay per year as pension earnings effective October 1, 2002 | \$ 175,040 |
| | | + one time use of \$198,800 |
| C. | Benefit improvements needed to meet Ch. 185 minimum benefits: | None |
| D. | History of Chapter 185 contribution usage: | |

| During Plan Year | Base Amount | | | Actual Amount Received | | |
|------------------|----------------------|-----------------------|---------------------------------|------------------------|-----------------------------------|--|
| | Ch. 185 Contribution | Cost for New Benefits | Total Ch. 185 Contribution Used | Ch. 185 Contribution | Excess of Actual over Base Amount | Cumulative Excess of Actual over Base Amount w/ 8.0% Interest* |
| 1997/1998 | \$ 185,627 | \$ 0 | | \$ 185,627 | \$ 0 | \$ 0 |
| 1998/1999 | \$ 185,627 | \$ 0 | \$ 185,627 | \$ 185,221 | \$ 0 | \$ 0 |
| 1999/2000 | \$ 185,627 | \$ 0 | \$ 185,627 | \$ 176,891 | \$ 0 | \$ 0 |
| 2000/2001 | \$ 185,627 | \$ 0 | \$ 185,627 | \$ 209,484 | \$ 23,857 | \$ 23,857 |
| 2001/2002 | \$ 185,627 | \$ 0 | \$ 185,627 | \$ 252,604 | \$ 66,977 | \$ 90,834 |
| 2002/2003 | \$ 185,627 | \$ 114,932 | \$ 300,559 | \$ 318,247 | \$ 17,688 | \$ 115,789 |
| 2003/2004 | \$ 300,559 | \$ 0 | \$ 300,559 | \$ 514,299 | \$ 213,740 | \$ 338,792 |
| 2004/2005 | \$ 300,559 | \$ 175,040 | \$ 475,599 | \$ 589,458 | \$ 113,859 | \$ 280,954 |
| 2005/2006 | \$ 475,599 | \$ 0 | \$ 475,599 | \$ 617,118 | \$ 141,519 | \$ 444,949 |
| 2006/2007 | \$ 475,599 | \$ 0 | \$ 475,599 | \$ 658,663 | \$ 183,064 | \$ 663,609 |
| 2007/2008 | \$ 475,599 | \$ 0 | \$ 475,599 | \$ 677,111 | \$ 201,512 | \$ 918,210 |
| 2008/2009 | \$ 475,599 | \$ 0 | \$ 475,599 | \$ 742,362 | \$ 266,763 | \$1,258,430 |
| 2009/2010 | \$ 475,599 | \$ 0 | \$ 475,599 | \$ 764,456 | \$ 288,857 | \$1,647,961 |
| 2010/2011 | \$ 475,599 | \$ 273,824 | \$ 749,423 | \$ 680,689 | \$ 0 | \$ 0** |
| 2011/2012 | \$ 749,423 | \$ 0 | \$ 749,423 | \$ 739,504 | \$ 0 | \$ 0 |
| 2012/2013 | \$ 749,423 | \$ 0 | \$ 749,423 | \$ 798,782 | \$ 0 | \$ 0 |
| 2013/2014 | \$ 749,423 | \$ 0 | \$ 749,423 | \$ 864,308 | \$ 0 | \$ 0 |

* Interest accumulation begins with the 2002/2003 plan year, and applies to the cumulative excess of actual over base amount from prior plan year.

** A one-time use of \$1,647,961 from the Cumulative Excess was used to fund a portion of the Ad Hoc Variable Benefit: 0.14%. The remaining portion is funded by the annual available excess.

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11(b)

Table VII
(continued two)

Ordinance No. 17-02 changed the usage of Chapter 185 contributions such that the first \$500,000 is to be used to fund existing defined benefits. Any amount in excess of \$500,000 is to be divided equally, with 50% used to fund the Ad Hoc Variable Benefit and 50% used to fund the minimum defined pension costs.

| (a) Received During Plan Year | (b) Ch. 185 Contribution | (c) 50% of Excess Above \$500,000 | (d) Ad Hoc Variable Benefit Purchased by (c) | (e) Total Ad Hoc Variable Benefit for Following Plan Year |
|-------------------------------------|--------------------------------|---|---|---|
| 2014/2015 | \$ 882,631 | \$ 191,316 | 0.16% | 0.30%*** |
| 2015/2016 | \$ 962,925 | \$ 231,463 | 0.18% | 0.32%*** |

*** (d) + 0.14%, the amount of Ad Hoc Variable Benefit funded by one-time use of \$1,647,961 from the Cumulative Excess, as shown on prior page

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Table VIII

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**Actuarial Gains / (Losses) for Plan Year Ended September 30, 2016****A. Derivation of Actuarial Gain / (Loss)**

| | | |
|--|----------------|----------------|
| 1. City and State normal cost | | \$ 2,435,654 |
| 2. Unfunded actuarial accrued liability previous impact statement | | \$ 62,384,288 |
| 3. City and State contributions previous year | | \$ 8,154,753 |
| 4. Interest on: | | |
| (a) City normal costs | \$ 182,674 | |
| (b) Unfunded actuarial accrued liability | 4,678,822 | |
| (c) City and State contributions | <u>278,221</u> | |
| (d) Net total: (a) + (b) - (c) | | \$ 4,583,275 |
| 5. (Decrease) / increase from ad-hoc Benefit Rate annual adjustment and plan amendment | | \$ (2,781,936) |
| 6. Increase / (decrease) due to assumption change | | \$ 8,068,021 |
| 7. Expected unfunded actuarial accrued liability current year: 1. + 2. - 3. + 4. + 5. + 6. | | \$ 66,534,549 |
| 8. Actual unfunded actuarial accrued liability current year | | \$ 72,005,360 |
| 9. Actuarial gain / (loss): 7. - 8. | | \$ (5,470,811) |

B. Approximate Portion of Gain / (Loss) Due to Investments

| | | |
|---|--|---------------------|
| 1. Actuarial value of assets | | \$100,660,952 |
| 2. Contributions during year | | \$ 10,630,550 |
| 3. Disbursements during year (expenses & benefits) | | \$ 8,788,305 |
| 4. Expected appreciation for period | | \$ <u>7,578,369</u> |
| 5. Expected actuarial value of assets current year 1. + 2. - 3. + 4. | | \$110,081,566 |
| 6. Actual actuarial value of assets current year | | \$110,687,066 |
| 7. Approximate gain / (loss): 6. - 5. | | \$ 605,500 |

C. Approximation Portion of Gain / (Loss) Due to Liabilities: A. - B. \$ (6,076,311)**D**

Table IX

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**Amortization of Unfunded Liability**

| <u>Date</u> | <u>Total Unfunded Liability</u> | <u>Amortization Payment</u> |
|-------------|---------------------------------|-----------------------------|
| 10/01/2016 | \$ 72,005,360 | \$ 6,572,020 |
| 10/01/2017 | \$ 70,340,840 | \$ 6,553,559 |
| 10/01/2018 | \$ 68,571,327 | \$ 6,541,297 |
| 10/01/2019 | \$ 66,682,283 | \$ 6,492,651 |
| 10/01/2046 | \$ 0 | \$ 0 |

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Table X

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**Accounting Disclosure Exhibit**

| I. <u>Number of Plan Participants</u> | <u>10/01/2015</u> | <u>10/01/2016</u> |
|---|--------------------------|--------------------------|
| 1. Retirees, disabled and beneficiaries receiving benefits | 75 | 84 |
| 2. Terminated plan participants entitled to but not yet receiving benefits | 2 | 1 |
| 3. DROP participants | 35 | 39 |
| 4. Active plan participants | <u>156</u> | <u>167</u> |
| 5. Total | 268 | 291 |
| | | |
| II. <u>Accumulated Plan Benefits as of October 1, 2016</u> | | |
| A. <u>Statement of Accumulated Plan Benefits</u> | | |
| 1. Actuarial present value of accumulated vested plan benefits | | |
| a. Participants currently receiving benefits | \$ 53,652,568 | \$ 66,389,741 |
| b. DROP participants | 45,705,374 | 51,306,282 |
| c. Others | <u>33,867,807</u> | <u>35,736,903</u> |
| d. Total | \$133,225,749 | \$153,432,926 |
| 2. Actuarial present value of accumulated non-vested plan benefits | <u>5,021,376</u> | <u>5,464,972</u> |
| 3. Total actuarial present value of accumulated plan benefits | \$138,247,125 | \$158,897,898 |
| | | |
| B. <u>Statement of Change in Accumulated Plan Benefits</u> | | |
| 1. Actuarial present value of accumulated plan benefits as of October 1, 2015 | | \$ 138,247,125 |
| 2. Increase (decrease) during year attributable to: | | |
| a. Plan amendment | | \$ 79,002 |
| b. Actuarial assumptions and method changes | | 4,995,445 |
| c. Benefits paid and contribution refunds | | (4,655,264) |
| d. DROP benefits credited | | (3,014,359) |
| e. Other, including benefits accumulated and increase for interest due to decrease in the discount period | | <u>23,245,949</u> |
| f. Net increase | | \$ 20,650,773 |
| 3. Actuarial present value of accumulated plan benefits as of October 1, 2016 | | \$ 158,897,898 |

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Table X
(continued two)

C. Significant Matters Affecting Calculations

1. Assumed rate of return used in determining actuarial present values
2. Plan amendments
3. Change in actuarial assumptions

7.50%

See Table XI, Item 18.

See Table XII, Item 11.

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Table X
(continued three)

III. Schedule of Funding Progress (As required by GASB #25)

| (1) Valuation Date | (2) Actuarial Value of Assets (AVA) | (3) Actuarial Accrued Liability (AAL) | (4) Unfunded Actuarial Accrued Liability (UAAAL)(3)-(2) | (5) Funded Ratio (2)/(3) | (6) Annual Covered Payroll | (7) UAAAL as % of Payroll (4)/(6) |
|------------------------------|---|---|--|--------------------------------|----------------------------------|---|
| October 1, 1991 | \$ 6,923 | \$ 9,241 | \$ 2,318 | 74.9% | \$ 2,170 | 85.5% |
| October 1, 1992 | \$ 8,201 | \$ 10,360 | \$ 2,159 | 79.2% | \$ 2,804 | 77.0% |
| October 1, 1993 | \$ 9,358 | \$ 11,931 | \$ 2,573 | 78.4% | \$ 3,071 | 83.8% |
| October 1, 1994 | \$ 9,960 | \$ 13,613 | \$ 3,653 | 73.2% | \$ 3,431 | 106.5% |
| October 1, 1995 | \$ 12,127 | \$ 15,158 | \$ 3,031 | 80.0% | \$ 3,828 | 79.2% |
| October 1, 1996 | \$ 14,218 | \$ 18,102 | \$ 3,884 | 78.5% | \$ 4,313 | 90.6% |
| October 1, 1997 | \$ 18,010 | \$ 20,461 | \$ 2,451 | 88.0% | \$ 4,731 | 51.8% |
| October 1, 1998 | \$ 20,896 | \$ 22,460 | \$ 1,564 | 93.0% | \$ 5,177 | 30.2% |
| October 1, 1999 | \$ 23,928 | \$ 24,941 | \$ 1,013 | 95.9% | \$ 5,010 | 20.2% |
| October 1, 2000 | \$ 26,085 | \$ 28,668 | \$ 2,583 | 91.0% | \$ 5,969 | 43.3% |
| October 1, 2001 | \$ 26,404 | \$ 32,799 | \$ 6,395 | 80.5% | \$ 6,838 | 93.5% |
| October 1, 2002 | \$ 26,583 | \$ 38,376 | \$ 11,793 | 69.3% | \$ 7,761 | 152.0% |
| October 1, 2003 | \$ 28,845 | \$ 42,905 | \$ 14,060 | 67.2% | \$ 8,409 | 167.2% |
| October 1, 2003 ¹ | \$ 28,845 | \$ 43,985 | \$ 15,140 | 65.6% | \$ 8,865 | 170.8% |
| October 1, 2004 | \$ 30,834 | \$ 49,529 | \$ 18,695 | 62.3% | \$ 9,397 | 198.9% |
| October 1, 2005 | \$ 33,698 | \$ 55,266 | \$ 21,568 | 61.0% | \$ 9,883 | 218.2% |
| October 1, 2005 ² | \$ 34,072 | \$ 57,128 | \$ 23,056 | 59.6% | \$ 10,384 | 222.0% |
| October 1, 2006 | \$ 38,746 | \$ 68,203 | \$ 29,456 | 56.8% | \$ 12,234 | 240.8% |
| October 1, 2007 | \$ 45,048 | \$ 72,004 | \$ 26,956 | 62.6% | \$ 11,595 | 232.5% |
| October 1, 2008 | \$ 50,322 | \$ 87,443 | \$ 37,121 | 57.5% | \$ 12,710 | 292.1% |
| October 1, 2009 | \$ 54,831 | \$ 97,512 | \$ 42,681 | 56.2% | \$ 13,631 | 313.1% |
| October 1, 2010 | \$ 59,669 | \$ 105,397 | \$ 45,728 | 56.6% | \$ 13,481 | 339.2% |
| October 1, 2011 | \$ 65,585 | \$ 120,581 | \$ 54,996 | 54.4% | \$ 13,153 | 418.1% |
| October 1, 2012 | \$ 70,278 | \$ 128,311 | \$ 58,033 | 54.8% | \$ 12,877 | 450.7% |
| October 1, 2013 | \$ 80,048 | \$ 137,496 | \$ 57,448 | 58.2% | \$ 12,704 | 452.2% |
| October 1, 2014 | \$ 91,509 | \$ 150,339 | \$ 58,830 | 60.9% | \$ 13,026 | 451.6% |
| October 1, 2015 | \$ 100,661 | \$ 163,045 | \$ 62,384 | 61.7% | \$ 11,902 | 524.1% |
| October 1, 2016 | \$ 110,687 | \$ 182,692 | \$ 72,005 | 60.6% | \$ 13,104 | 549.5% |

Note: Dollar amounts in thousands

¹ Reflects the inclusion of up to 100 hours of overtime pay per year as pension earnings effective October 1, 2001.

² Reflects the inclusion of up to 300 hours of overtime pay per year as pension earnings effective October 1, 2002.

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Table X
(continued four)

IV. Schedule of Employer Contributions (As required by GASB #25)

| (1) Plan Year Ending 9/30 | (2) Annual Required Contribution | (3) Percentage Contributed |
|---------------------------------|--|----------------------------------|
| 1992 | \$ 468,000 | 100% |
| 1993 | 504,159 | 100% |
| 1994 | 508,992 | 100% |
| 1995 | 558,674 | 100% |
| 1996 | 691,679 | 100% |
| 1997 | 743,136 | 100% |
| 1998 | 918,431 | 100% |
| 1999 | 873,437 | 100% |
| 2000 | 839,165 | 100% |
| 2001 | 769,233 | 100% |
| 2002 | 977,249 | 100% |
| 2003 | 1,412,410 | 100% |
| 2004 | 1,759,573 | 100% |
| 2005 | 2,207,297 | 100% |
| 2006 | 2,538,769 | 100% |
| 2007 | 3,002,005 | 100% |
| 2008 | 4,032,857 | 100% |
| 2009 | 4,629,745 | 100% |
| 2010 | 5,615,572 | 100% |
| 2011 | 6,078,837 | 100% |
| 2012 | 6,148,835 | 100% |
| 2013 | 7,079,367 | 100% |
| 2014 | 7,381,064 | 100% |
| 2015 | 7,243,910 | 100% |
| 2016 | 7,191,828 | 100% |

V. Notes to Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

| | |
|-------------------------------|--|
| Valuation Date | October 1, 2016 |
| Actuarial cost method | Entry Age Normal |
| Amortization method | Layered amortization |
| Remaining amortization period | 30 years. 25 years for plan change bases and assumptions change bases established on or after October 1, 2011. |
| Asset valuation method | See Table XII, Item 8 |
| Actuarial assumptions: | |
| Investment rate of return* | 7.50% |
| Projected salary increases* | 5.50% |
| Cost-of-living adjustments | 2.00% with 5-year delay |
| * Includes inflation at 3.00% | |

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Table X
(continued five)

Accounting Disclosure Exhibit

VI. Revenues by Source and Expenses by Type

| Plan Year | Revenues by Source | | | | |
|--------------|---------------------------|---------------------------|------------------------|----------------------|---------------|
| | Employee Contributions | Employer Contributions | State Contributions | Investment Income | Total |
| 2016 | \$ 1,840,133 | \$ 7,191,828 | \$ 962,925 | \$ 10,585,142 | \$ 20,580,028 |
| 2015 | \$ 1,742,507 | \$ 7,243,910 | \$ 882,631 | \$ (3,292,810) | \$ 6,576,238 |
| 2014 | \$ 1,824,224 | \$ 7,381,064 | \$ 864,308 | \$ 8,277,671 | \$ 18,347,267 |
| 2013 | \$ 1,870,493 | \$ 7,079,367 | \$ 798,782 | \$ 11,971,112 | \$ 21,719,754 |
| 2012 | \$ 1,846,623 | \$ 6,148,835 | \$ 739,504 | \$ 11,716,042 | \$ 20,451,004 |
| 2011 | \$ 1,835,674 | \$ 6,078,837 | \$ 680,689 | \$ (1,834,773) | \$ 6,760,427 |
| 2010 | \$ 1,832,875 | \$ 5,615,572 | \$ 764,456 | \$ 3,156,087 | \$ 11,368,990 |
| 2009 | \$ 1,841,736 | \$ 4,629,745 | \$ 742,362 | \$ (368,679) | \$ 6,845,164 |
| 2008 | \$ 1,643,775 | \$ 4,032,857 | \$ 677,111 | \$ (5,920,883) | \$ 432,860 |
| 2007 | \$ 1,608,272 | \$ 3,002,005 | \$ 658,663 | \$ 5,346,823 | \$ 10,615,763 |

| Plan Year | Expenses by Type | | | | |
|--------------|------------------|---------------|-------------|------------|--------------|
| | Benefits | DROP Payments | Expenses | Refunds | Total |
| 2016 | \$4,357,640 | \$ 3,014,359 | \$1,118,682 | \$ 297,624 | \$ 8,788,305 |
| 2015 | \$3,837,416 | \$ 2,651,889 | \$1,051,908 | \$ 191,731 | \$ 7,732,944 |
| 2014 | \$3,640,415 | \$ 2,150,417 | \$ 992,488 | \$ 227,901 | \$ 7,011,221 |
| 2013 | \$3,252,636 | \$ 1,962,865 | \$ 839,570 | \$ 31,754 | \$ 6,086,825 |
| 2012 | \$3,133,307 | \$ 1,782,920 | \$ 747,018 | \$ 82,037 | \$ 5,745,282 |
| 2011 | \$2,639,322 | \$ 1,729,797 | \$ 675,817 | \$ 58,992 | \$ 5,103,928 |
| 2010 | \$2,502,592 | \$ 1,309,429 | \$ 616,025 | \$ 43,426 | \$ 4,471,472 |
| 2009 | \$2,513,354 | \$ 930,849 | \$ 507,743 | \$ 20,555 | \$ 3,972,501 |
| 2008 | \$2,293,633 | \$ 527,698 | \$ 552,550 | \$ 68,621 | \$ 3,442,502 |
| 2007 | \$1,770,361 | \$ 500,303 | \$ 542,202 | \$ 143,014 | \$ 2,955,880 |

Contributions were made in accordance with actuarially determined contribution requirements.

Table XI

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN**Outline of Principal Provisions of the Plan**1. **Effective date:**

The initial effective date of the plan is October 11, 1965. The provisions in this report reflect the adoption of Ordinance No. 12-01, adopted October 5, 2011; Ordinance No. 17-01, adopted November 14, 2016 and Ordinance No. 17-02, adopted November 14, 2016.

2. **Eligibility Requirements:**

Police Officer of the City of Miramar, Florida. Tier One members are members hired prior to June 10, 2008 and Tier Two members are members hired on or after such date.

3. **Pension Earnings:**

Basic rate of pay from the City, exclusive of all overtime pay, bonuses, commissions and any other extraordinary compensation. Effective October 1, 2002, up to 300 hours of overtime pay per year is included as pension earnings.

4. **Member Contributions:**

13.4% of pension earnings on a *pick-up* basis.

5. **Credited Service:**

Service computed in completed years and months from date of employment to actual retirement date (or date of termination, if earlier). Service earned under other City sponsored retirement plans will be included for vesting and eligibility purposes, but not for benefit accrual. Credited Service can be purchased for prior active military service (maximum 4 years) and prior sworn police officer service (maximum 4 years).

6. **Average Monthly Earnings (AME):**

For Tier One members, AME is the average monthly pension earnings during the highest three (3) years of the last 10 years preceding date of retirement (or termination). For Tier Two members, AME is the average monthly pension earnings during the highest five (5) years of the last 10 years preceding date of retirement (or termination).

Table XI
(continued two)

7. Normal Retirement:

For Tier One Members:

- a. Eligibility: Earlier of (i) or (ii), where
- (i) is the attainment of age 55 and completion of 10 years of Credited Service, and
- (ii) is the completion of 20 years of Credited Service regardless of age.
- b. Benefit: 3.25% (.0325) of AME per year of Credited Service, subject to a maximum accrual of 80% of AME. However, after 40 years of Credited Service, benefits shall commence at a rate of two percent (2.0%) of AME per year. Accrued benefits as of September 30, 1994 are protected. For members with 20 or more years of Credited Service as of April 5, 1995 who remain employed as of October 1, 2004, there would be no maximum benefit accruals, as permitted by State law. Effective October 1, 2007, members retiring with 20 or more years of Credited Service receive the maximum 80% of AME.

For Tier Two Members:

- a. Eligibility: Earlier of (i) or (ii), where
- (i) is the attainment of age 55 and completion of 10 years of Credited Service, and
- (ii) is the completion of 25 years of Credited Service regardless of age.
- b. Benefit: 3.00% (.0300) of AME per year of Credited Service, subject to a maximum accrual of 75% of AME. However, after 37½ years of Credited Service, benefits shall commence at a rate of two percent (2.0%) of AME per year.

8. Early Retirement:

- a. Eligibility: Attainment of age 50 and completion of 10 years of Credited Service.
- b. Benefit: Benefit accrued to date of retirement, but reduced by 3.0% for each year by which benefit commencement precedes normal retirement date.

9. Delayed Retirement:

Computed in the same manner as for normal retirement benefit but based upon AME and Credited Service as of delayed retirement date.

Table XI
(continued three)

10. Disability Retirement

Service Connected Disability:

- a. Eligibility: Total and permanent disability in line of duty prior to normal retirement date.
- b. Benefit: 66 2/3% of AME as of date of disability.

Non-Service Connected Disability:

- a. Eligibility: Total and permanent disability not in line of duty after completion of 10 years of Credited Service but prior to normal retirement date.
- b. Benefit: Greater of accrued benefit or 25% of AME as of date of disability.

11. Death Benefit:

If any member has 10 or more years of Credited Service as of date of death, the accrued benefit will be paid for 10 years certain. If the death is duty related, the spouse of a Tier One member will receive the greater of the accrued benefit or eighty percent (80%) [seventy-five percent (75%) if Tier Two] of Final Monthly Earnings at the date of death, adjusted as if the member had retired on the date of death and had elected a joint and 100% survivor benefit. If a member dies with less than 10 years of Credited Service, employee contributions with interest are refunded plus any benefit payable under a group life insurance contract funded by plan.

12. Vested Benefit Upon Termination:

- a. Eligibility: Completion of 10 years of Credited Service at date of termination.
- b. Benefit: Either a refund of contributions or accrued benefit as of date of termination based upon AME and Credited Service as of date of termination. For members terminated on or before November 25, 2004, the accrued benefit would be payable on the 20th anniversary of service. Members terminated after November 26, 2004 or hired on or after February 21, 2002 would commence receiving their accrued benefits upon completion of 20 years of actual Credited Service, or the attainment of age 55 with 10 years of actual Credited Service.

13. Termination Benefit

- a. Eligibility: Less than 10 years of Credited Service at date of termination.
- b. Benefit: Return of employee contributions with 3.0% interest.

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Table XI
(continued four)

14. Normal Form of Retirement Income

10 years certain and life thereafter.

15. Deferred Retirement Option Plan (DROP)

Participants who have met the eligibility for normal retirement are eligible to participate in the DROP for a maximum period of eight (8) years, after which the participant shall be deemed separated from the City.

The maximum period of DROP participation shall decrease by one month for each month following the attainment of 25 years of Credited Service. Total number of years of Credited Service and DROP participation may not exceed 30 years.

Members of the DROP who are eligible to receive accumulated sick leave, accumulated vacation leave or any other accumulated leave payable upon separation may have the leave transferred into the members' DROP accounts.

If the participant dies or becomes disabled during DROP participation, the participant will be assumed to have retired under normal retirement on the day prior to DROP participation.

No payment will be made from the DROP until the participant actually separates from service with the City.

Upon entry into the DROP, a participant shall elect to have his or her DROP account be credited with either the actuarial funding rate (currently 8.0% per year) or at the actual rate of return the fund earns.

16. Cost of Living Adjustment (COLA)

An annual 2.0% COLA is payable to all retirees and DROP participants who were active employees on or after October 1, 2001, including DROP participants who had entered the DROP prior to October 1, 2001. COLA payments shall commence five (5) years after retirement or entry into the DROP. Tier Two members are not eligible for the COLA.

Table XI
(continued five)

17. Ad Hoc Variable Benefit

Effective October 1, 2010, an annual Ad Hoc Variable Benefit was created for all members and retirees, and is cumulative. Payments commence five (5) years after retirement. The Ad Hoc Variable Benefit is solely funded by available Chapter 185 contributions in excess of those committed to existing benefits that were in place on September 30, 2010. The amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2010 through September 30, 2011 was forty-two one hundredths of one percent (0.42%). The amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2011 through September 30, 2012 is thirty-five one hundredths of one percent (0.35%). The amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2012 through September 30, 2013 is thirty-nine one hundredths of one percent (0.39%). The amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2013 through September 30, 2014 is forty-four one hundredths of one percent (0.44%). The amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2014 through September 30, 2015 is forty-eight one hundredths of one percent (0.48%). The amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2015 through September 30, 2016 was computed to be forty-nine one hundredths of one percent (0.49%), but was changed upon the adoption of Ordinance No. 17-02.

This ordinance changed the usage of the Chapter 185 contributions beginning with the funds for 2015 (received in 2016) such that the first \$500,000 is used to fund existing defined benefits. Any amount in excess of \$500,000 is to be split in half, with 50% to be used to fund the Ad Hoc Variable Benefit and 50% to be used to fund minimum defined benefit pension costs. The re-computed amount for fiscal year October 1, 2015 through September 30, 2016 was 0.30%. The amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2016 through September 30, 2017 is thirty-two one hundredths of one percent (0.32%).

18. Changes from Most Recent Actuarial valuation

To adjust for the actual amount of excess Chapter contributions available, the amount of the Ad Hoc Variable Benefit for fiscal year October 1, 2016 through September 30, 2017 was changed from thirty one hundredths of one percent (0.30%) to thirty-two one hundredths of one percent (0.32%).

The death benefit, if duty related, to a surviving spouse was enhanced, as described in Item 11.

Table XII

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN

Actuarial Assumptions and Actuarial Cost Method

1. **Mortality:**

Female Non-Disabled: RP2000 Generational, 100% Annuitant White Collar, Scale BB
 Male Non-Disabled: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB
 Female Disabled: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale
 Male Disabled: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

2. **Interest to be Earned by Fund:**

7.50%, net of investment expenses, compounded annually.

3. **Allowances for Expenses or Contingencies:**

Actual expenses paid during previous year less direct investment expense.

4. **Employee Withdrawal Rates:**

Withdrawal rates were used in accordance with published tables per the following illustrative example:

| <u>Age</u> | <u>Withdrawal Rates Per 100 Employees</u> | |
|------------|---|---------------|
| | <u>Male</u> | <u>Female</u> |
| 20 | 11.9 | 19.9 |
| 25 | 7.9 | 11.9 |
| 30 | 5.5 | 7.9 |
| 35 | 3.9 | 5.5 |
| 40 | 2.2 | 3.9 |
| 45 | 1.4 | 2.2 |
| 50 | 0.3 | 1.4 |
| 55 | 0.0 | 0.3 |
| 60 & over | 0.0 | 0.0 |

Table XII
(continued two)

5. Disability Rates:

The 1985 Disability Study - Class 2 separate male and female rates were used. 75% of disabilities assumed to be service incurred, 25% assumed to be non-service incurred.

6. Salary Increase Factors:

Current salary is assumed to increase at a rate of 5.50% per year until retirement.

7. Rates of Retirement:

The following are the retirement rates assumed for the participants eligible for retirement:

Tier One Members:

| Participants with 20 or more years of Credited Service | | Participants with less than 20 years of Credited Service | |
|--|---------------------|--|---------------------|
| Years of Credited Service | Percentage Retiring | Age | Percentage Retiring |
| 20 or more | 100% | 50-54 | 25% |
| | | 55-59 | 50% |
| | | 60 | 100% |

Active participants with less than 20 years of Credited Service and who are eligible for retirement as of the valuation date are assumed to have a minimum of one (1) year future service.

Tier Two Members:

| Participants with 25 or more years of Credited Service | | Participants with less than 25 years of Credited Service | |
|--|---------------------|--|---------------------|
| Years of Credited Service | Percentage Retiring | Age | Percentage Retiring |
| 25 or more | 100% | 50-54 | 25% |
| | | 55-59 | 50% |
| | | 60 | 100% |

Active participants with less than 25 years of Credited Service and who are eligible for retirement as of the valuation date are assumed to have a minimum of one (1) year future service.

Table XII
(continued three)

8. Asset Valuation Method:

The actuarial value of assets is determined by smoothing the differences between actual investment earnings and assumed investment return over five (5) years. This method was adopted effective October 1, 2001 with no phase-in. The resulting value would then be limited to between 80% and 120% of market value.

9. Cost Methods:

Retirement, Termination, Disability and Pre-Retirement Death Benefits: Entry-Age-Actuarial Cost Method.

Under this method the normal cost for each active participant is calculated to be a level percentage of pay amount that would be required annually from his or her date of hire to retirement age in order to fund his or her projected benefits, assuming the plan had always been in effect. The normal cost for the plan is then the sum of the individual normal costs for all active participants. The employer net normal cost is assumed to increase at the same annual rate as the covered payroll: 3.0%. The actuarial accrued liability at any valuation date for each active or inactive participant who is eligible to receive benefits under the plan is the excess of the actuarial present value of projected future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability at any valuation date is the excess of the actuarial accrued liability over the actuarial value of assets of the plan.

The amortization bases would be funded by the excess of actual contributions over prior year's normal cost, adjusted with interest. For each existing base, the funding is done proportionally, determined based on the individual base's required amortization payment as a percentage of the overall total required total amortization payment for the prior year. New bases are then added to the total outstanding unfunded actuarial accrued liability as new layers.

10. Marriage Assumptions:

100% of active participants were assumed married, with husbands three (3) years older than wives.

11. Changes from Most Recent Actuarial Valuation:

1. The mortality table was changed to that described in Item 1.
2. The assumed administrative expenses were changed from \$188,604 to \$273,577 for the plan/fiscal year.

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Table XIII

CITY OF MIRAMAR MUNICIPAL POLICE OFFICERS' RETIREMENT PLAN

Distribution of Active Participants by Age and Service Groups
as of October 1, 2016

Years of Credited Service

| <u>Age</u> | <u>0 - 4</u> | <u>5 - 9</u> | <u>10 - 14</u> | <u>15 - 19</u> | <u>20 - 24</u> | <u>25 - 29</u> | <u>30 & Over</u> | <u>Total</u> |
|--------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------------|--------------|
| Under 25 | 16 | . | . | . | . | . | . | 16 |
| 25 - 29 | 20 | 3 | . | . | . | . | . | 23 |
| 30 - 34 | 10 | 18 | 11 | . | . | . | . | 39 |
| 35 - 39 | 3 | 6 | 13 | 5 | . | . | . | 27 |
| 40 - 44 | . | 7 | 13 | 13 | . | . | . | 33 |
| 45 - 49 | . | 5 | 5 | 7 | . | . | . | 17 |
| 50 - 54 | 1 | . | 4 | 4 | . | . | . | 9 |
| 55 - 59 | . | 1 | . | 2 | . | . | . | 3 |
| 60 - 64 | . | . | . | . | . | . | . | 0 |
| 65 & Over | . | . | . | . | . | . | . | 0 |
| TOTAL | 50 | 40 | 46 | 31 | 0 | 0 | 0 | 167 |

10/01/2015 10/01/2016

Average Attained Age 38.0 years
 Average Hire Age 27.9 years
 Average Pay \$ 76,296
 Percent Female 25.6%

36.9 years
 27.6 years
 \$ 78,467
 27.5%



Table XIV

CITY OF MIRAMAR MUNICIPAL POLICE OFFICER'S RETIREMENT PLANReconciliation of Participant DataA. Active Participants

| | |
|--|------------|
| 1. Active participants previous year | 156 |
| 2. Retired during year | (4) |
| 3. Entered DROP during year | (8) |
| 4. Died during year | 0 |
| 5. Disabled during year | (0) |
| 6. Terminated vested during year | (0) |
| 7. Terminated non-vested during period | (3) |
| 8. Rehired during period | 0 |
| 9. New active participants | 26 |
| 10. Active participants current year | <u>167</u> |

B. Participants Receiving Benefits

| | |
|---|-----------|
| 1. Participants receiving benefits previous year | 75 |
| 2. New retired participants | 3 |
| 3. New terminated vested receiving benefits | 1 |
| 4. New disabled receiving benefits | 0 |
| 5. New beneficiaries receiving benefits | 1 |
| 6. Exited DROP participants who retired | 4 |
| 7. Died or ceased payment during year | (0) |
| 8. Retired or terminated vested receiving benefits current year | <u>84</u> |

C. Terminated Participants Entitled to Future Benefits

| | |
|---|----------|
| 1. Terminated entitled to future benefits previous year | 2 |
| 2. Died during year | 0 |
| 3. Commenced receiving benefits during year | (1) |
| 4. New terminated participants | 0 |
| 5. Rehired | 0 |
| 6. Terminated participants entitled to future benefits current year | <u>1</u> |

D. DROP Participants

| | |
|------------------------------------|-----------|
| 1. DROP participants previous year | 35 |
| 2. New entrants during year | 8 |
| 3. Died during year | 0 |
| 4. Exited and retired during year | (4) |
| 5. DROP participants current year | <u>39</u> |

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Table XV

CITY OF MIRAMAR MUNICIPAL POLICE OFFICER'S RETIREMENT PLAN**Recent Investment, Salary Increase, and Turnover Experience****A. Investment Return**

Comparison of actual to assumed investment return for the last five years:

| Year Ended | Rate of Return ¹ | | Assumed |
|--------------|-----------------------------|------------------------|---------|
| | Estimated Actuarial Value | Estimated Market Value | |
| 09/30/2016 | 7.8% | 9.4% | 7.50% |
| 09/30/2015 | 6.6% | (1.8%) | 7.50% |
| 09/30/2014 | 9.2% | 9.5% | 7.75% |
| 09/30/2013 | 7.5% | 14.3% | 7.75% |
| 09/30/2012 | 1.7% | 18.8% | 7.75% |
| 09/30/2011 | 0.4% | (1.2%) | 8.00% |
| 09/30/2010 | 2.6% | 6.8% | 8.00% |
| 09/30/2009 | 3.1% | (0.8%) | 8.00% |
| 09/30/2008 | 5.7% | (10.9%) | 8.00% |
| 09/30/2007 | 10.6% | 14.0% | 8.00% |
| Last 3 Yrs. | 7.9% | 5.6% | 7.58% |
| Last 5 Yrs. | 6.5% | 9.8% | 7.65% |
| Last 10 Yrs. | 5.5% | 5.4% | 7.82% |

B. Recent Salary Increase and Turnover Experience

| Year Ended | % of Salary Increase | | Ratio of Actual Turnover to Expected |
|-------------|----------------------|---------|--------------------------------------|
| | Actual | Assumed | |
| 09/30/2016 | 9.8% | 5.50% | 0.8 |
| 09/30/2015 | 1.3% | 5.50% | 2.0 |
| 09/30/2014 | 3.4% | 6.25% | 0.9 |
| 09/30/2013 | 2.2% | 6.25% | 1.5 |
| 09/30/2012 | 3.1% | 6.25% | 1.0 |
| Last 3 Yrs. | 4.8% | 5.75% | 1.2 |
| Last 5 Yrs. | 3.9% | 5.95% | 1.2 |

¹ Computed as $2I / (A + B - I)$, where A is beginning value, B is ending value, and I is investment return. See Item C. for computation details.

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Table XV
(continued two)

| | | |
|---|----------------|----------------|
| C. <u>Computation of Actuarial Value Rate of Return</u> | | |
| 1. Beginning of year value | | \$ 100,660,952 |
| 2. Contributions during year | | |
| a. Employee | \$ 1,840,133 | |
| b. City | 7,191,828 | |
| c. State (Chapter 185) | <u>962,925</u> | |
| d. Total | | \$ 9,994,886 |
| 3. Distributions during year | | |
| a. Benefit payments (regular and DROP) | \$ 7,371,999 | |
| b. Refunds | 297,624 | |
| c. Administrative expenses | <u>273,577</u> | |
| d. Total | | \$ 7,943,200 |
| 4. End of year value | | \$ 110,687,066 |
| 5. Asset return (4. - 1. - 2.d. + 3.d.) | | \$ 7,974,428 |
| 6. Weighted fund value (1. + ½ (2. - 3.)) | | \$ 110,686,795 |
| 7. Actuarial value rate of return (5. ÷ 6.) | | 7.84% |

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Table XVI

CITY OF MIRAMAR MUNICIPAL POLICE OFFICER'S RETIREMENT PLAN**State Required Exhibit**

| | <u>10/01/2015</u> | <u>10/01/2016</u> |
|--|-------------------|-------------------|
| A. <u>Participant Data</u> | | |
| 1. Active participants | 156 | 167 |
| 2. Retired participants and beneficiaries receiving benefits | 58 | 67 |
| 3. DROP participants | 35 | 39 |
| 4. Disabled participants receiving benefits | 17 | 17 |
| 5. Terminated vested participants | 2 | 1 |
| 6. Annual payroll of active participants | \$ 11,902,101 | \$ 13,104,019 |
| 7. Annual benefits payable to those currently receiving benefits | \$ 3,957,788 | \$ 4,628,328 |
| 8. Annual benefits payable to DROP participants | \$ 2,854,441 | \$ 3,158,798 |
| B. <u>Value of Assets</u> | | |
| 1. Actuarial value | \$ 100,660,952 | \$ 110,687,066 |
| 2. Market value | \$ 96,914,127 | \$ 108,705,850 |
| C. <u>Liabilities</u> | | |
| 1. Actuarial present value of future expected benefit payments for active members | | |
| a. Age retirement benefit | \$ 79,175,205 | \$ 82,766,614 |
| b. Death benefit | 665,974 | 707,068 |
| c. Disability retirement benefit | 2,445,960 | 3,137,841 |
| d. Vested | <u>3,378,466</u> | <u>3,723,253</u> |
| e. Total | \$ 85,665,605 | \$ 90,334,776 |
| 2. Actuarial present value of future expected benefit payments for terminated vested members | \$ 496,158 | \$ 300,884 |
| 3. Actuarial present value of future expected benefit payments for those receiving benefits | | |
| a. Service retired | \$ 41,396,929 | \$ 51,576,292 |
| b. DROP participants | 45,705,374 | 51,306,282 |
| c. Disability retired | 11,448,282 | 13,076,265 |
| d. Beneficiaries | <u>807,357</u> | <u>1,737,184</u> |
| e. Total | \$ 99,357,942 | \$ 117,696,023 |

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Table XVI
(continued two)

| | <u>10/01/2015</u> | <u>10/01/2016</u> |
|---|-------------------|-------------------|
| 4. Total actuarial present value of future expected benefit payments | \$185,519,705 | \$208,331,683 |
| 5. Actuarial accrued liabilities | \$ 163,045,240 | \$182,692,426 |
| 6. Unfunded actuarial liabilities (see footnote 1/ for separation) | \$ 62,384,288 | \$ 72,005,360 |
| D. <u>Statement of Accumulated Plan Benefits</u> | | |
| 1. Actuarial present value of accumulated vested plan benefits | | |
| a. Participants currently receiving benefits | \$ 53,652,568 | \$ 66,389,741 |
| b. DROP participants | 45,705,374 | 51,306,282 |
| c. Other participants | <u>33,867,807</u> | <u>35,736,903</u> |
| d. Total | \$133,225,749 | \$153,432,926 |
| 2. Actuarial present value of accumulated non-vested plan benefits | <u>5,021,376</u> | <u>5,464,972</u> |
| 3. Total actuarial present value of accumulated plan benefits | \$138,247,125 | \$158,897,898 |
| E. <u>Statement of Change in Accumulated Plan Benefits</u> | | |
| 1. Actuarial present value of accumulated plan benefits as of October 1, 2015 | | \$ 138,247,125 |
| 2. Increase (decrease) during year attributable to: | | |
| a. Plan amendment | \$ | 79,002 |
| b. Actuarial assumptions and methods changes | | 4,995,445 |
| c. Benefits paid and contribution refunds | | (4,655,264) |
| d. DROP benefits credited | | (3,014,359) |
| e. Other, including benefits accumulated and increase for interest due to decrease in the discount period | | <u>23,245,949</u> |
| f. Net increase (decrease) | | \$ 20,650,773 |
| 3. Actuarial present value of accumulated plan benefits as of October 1, 2016 | | \$ 158,897,898 |

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Table XVI
(continued three)

| | <u>10/01/2015</u> | <u>10/01/2016</u> |
|--|--------------------------|-------------------|
| F. <u>Pension Cost</u> | | |
| 1. Total normal cost | \$ 3,959,595 | \$ 4,456,779 |
| 2. Expected member contribution | 1,594,882 | 1,755,939 |
| 3. Item 2. as percentage of payroll | 13.4% | 13.4% |
| 4. Net employer normal cost x 1.03 | \$ 2,435,654 | \$ 2,781,865 |
| 5. Payment required to amortize unfunded liability | <u>5,709,234</u> | <u>6,572,020</u> |
| 6. Total required contribution (including interest) | \$ 8,521,420 | \$ 9,786,304 |
| 7. Item 6. as a percentage of payroll | 71.6% | 74.7% |
| 8. Estimated State contributions | \$ 882,631 | \$ 962,925 |
| 9. Item 8. as a percentage of payroll | 7.4% | 7.3% |
| 10. Net amount payable by City | \$ 7,638,789 | \$ 8,823,379 |
| 11. Item 10. as a percentage of payroll | 64.2% | 67.3% |
| G. <u>Past Contributions</u> | | |
| 1. Total contribution required as determined by prior year's valuation | \$ 9,801,615 | \$ 10,116,302 |
| 2. Actual contributions made: | | |
| a. Employees | 1,840,133 | N/A |
| b. City | 7,191,828 | N/A |
| c. State | <u>962,925</u> | <u>N/A</u> |
| d. Total | 9,994,886 | N/A |
| H. <u>Net Actuarial Gain (Loss)</u> | \$ 687,419 | \$ (5,470,811) |
| I. <u>Disclosure of Following Items:</u> | | |
| 1. Actuarial present value of future salaries - attained age | \$ 76,987,712 | \$ 90,079,194 |
| 2. Actuarial present value of future employee contributions - attained age | \$ 10,316,353 | \$ 12,070,612 |
| 3. Actuarial present value of future contributions from other sources | N/A | N/A |
| 4. Amount of active members' accumulated contributions | \$ 13,568,371 | \$ 13,410,520 |
| 5. Actuarial present value of future salaries and future benefits at entry age | Not provided by software | |
| 6. Actuarial present value of future employee contributions at entry age | Not provided by software | |

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Table XVI
(continued four)

1/ Unfunded Actuarial Accrued Liabilities

| Description and Amount of Original Liability | Amortization Period | Unamortized Amount as of Valuation Date | Amortization Payment |
|---|-------------------------|---|-------------------------|
| 1/1/1987 liability | 30 years from 1/1/1987 | \$ 18,461 | 18,461 |
| Increase in UAL of \$138,465 due to gains, and changes in assumptions and methods | 30 years from 1/1/1989 | 33,411 | 15,522 |
| Increase in UAL of \$7,392 due to plan amendment | 30 years from 1/1/1989 | 1,782 | 828 |
| Actuarial gain of \$552,941 for the 1989 plan year | 30 years from 1/1/1990 | (186,518) | (62,125) |
| Increase in UAL of \$1,083,036 due to plan amendment | 30 years from 1/1/1990 | 364,887 | 121,536 |
| Actuarial loss of \$603,756 for the 1990 plan year | 30 years from 10/1/1990 | 237,215 | 65,883 |
| Decrease in UAL of \$895,007 due to changes in assumptions and methods | 30 years from 10/1/1990 | (351,647) | (97,665) |
| Increase in UAL of \$1,031,280 due to plan amendment | 30 years from 10/1/1990 | 405,188 | 112,536 |
| Actuarial gain of \$293,297 for the 1991 plan year | 30 years from 10/1/1991 | (132,636) | (30,496) |
| Actuarial gain of \$155,919 for the 1992 plan year | 30 years from 10/1/1992 | (79,837) | (15,822) |
| Actuarial loss of \$446,973 for the 1993 plan year | 30 years from 10/1/1993 | 255,478 | 44,869 |
| Increase in UAL of \$4,896 due to plan amendment | 30 years from 10/1/1993 | 2,798 | 491 |
| Actuarial loss of \$1,081,469 for the 1994 plan year | 30 years from 10/1/1994 | 667,358 | 105,987 |
| Actuarial gain of \$841,463 for the 1995 plan year | 30 years from 10/1/1995 | (542,976) | (79,182) |

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Table XVI
(continued five)

| <u>Description and Amount of Original Liability</u> | <u>Amortization Period</u> | <u>Unamortized Amount as of Valuation Date</u> | <u>Amortization Payment</u> |
|---|--------------------------------|--|---------------------------------|
| Increase in UAL of \$145,364 due to changes in assumptions | 30 years from 10/1/1995 | \$ 93,803 | \$ 13,679 |
| Actuarial gain of \$89,982 for the 1996 plan year | 30 years from 10/1/1996 | (63,391) | (8,591) |
| Increase in UAL of \$1,058,236 due to plan amendment | 30 years from 10/1/1996 | 745,506 | 101,032 |
| Increase in UAL of \$17,778 due to change in assumptions | 30 years from 10/1/1996 | 12,021 | 1,629 |
| Actuarial gain of \$1,474,750 for the 1997 plan year | 30 years from 10/1/1997 | (1,072,511) | (136,381) |
| Actuarial gain of \$699,047 for the 1998 plan year | 30 years from 10/1/1998 | (556,622) | (66,938) |
| Actuarial gain of \$397,624 for the 1999 plan year | 30 years from 10/1/1999 | (345,321) | (39,532) |
| Actuarial loss of \$1,746,945 for the 2000 plan year | 30 years from 10/1/2000 | 1,695,836 | 185,828 |
| Decrease in UAL of \$2,455 due to plan amendment | 30 years from 10/1/2000 | (2,382) | (261) |
| Actuarial loss of \$4,973,947 for the 2001 plan year | 30 years from 10/1/2001 | 4,577,687 | 482,413 |
| Increase in UAL of \$1,310,298 due to plan amendment | 29 years from 10/1/2001 | 1,174,884 | 128,743 |
| Decrease in UAL of \$2,687,019 due to plan amendment | 30 years from 10/1/2001 | (2,472,953) | (260,608) |
| Increase in UAL of \$2,757,570 due to plan amendment | 30 years from 10/1/2002 | 2,201,762 | 224,050 |
| Actuarial loss of \$2,443,131 for the 2002 plan year | 30 years from 10/1/2002 | 2,466,493 | 259,928 |
| Actuarial loss of \$2,167,351 for the 2003 plan year | 30 years from 10/1/2003 | 1,980,193 | 195,256 |
| Increase in UAL of \$1,080,138 Due to plan amendment | 30 years from 10/1/2003 | 986,864 | 97,309 |
| Actuarial loss of \$3,310,974 for the 2004 plan year | 30 years from 10/1/2004 | 3,012,834 | 288,753 |
| Actuarial loss of \$2,909,164 for the 2005 plan year | 30 years from 10/1/2005 | 2,675,264 | 249,884 |
| Increase in UAL of \$1,487,987 Due to plan amendment | 29 years from 10/1/2005 | 1,348,391 | 129,231 |

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Table XVI
(continued six)

| Description and Amount of Original Liability | Amortization Period | Unamortized Amount as of Valuation Date | Amortization Payment |
|---|-------------------------|---|-------------------------|
| Actuarial loss of \$2,730,128 for the 2006 plan year | 30 years from 10/1/2006 | \$ 2,525,872 | \$ 230,482 |
| Increase in UAL of \$3,625,163 Due to plan amendment | 30 years from 10/1/2006 | 3,353,943 | 306,042 |
| Actuarial gain of \$3,007,843 for the 2007 plan year | 30 years from 10/1/2007 | (2,755,675) | (246,163) |
| Actuarial loss of \$4,570,993 for the 2008 plan year | 30 years from 10/1/2008 | 4,311,381 | 377,745 |
| Increase in UAL of \$6,365,385 Due to plan amendment | 30 years from 10/1/2008 | 6,003,857 | 526,032 |
| Actuarial loss of \$5,594,854 for the 2009 plan year | 30 years from 10/1/2009 | 5,289,387 | 455,307 |
| Decrease in UAL of \$23,184 Due to assumptions change | 30 years from 10/1/2009 | (21,919) | (1,887) |
| Actuarial loss of \$3,335,462 for the 2010 plan year | 30 years from 10/1/2010 | 3,173,869 | 268,820 |
| Increase in UAL of \$1,869,846 Due to Ad Hoc Benefit amendment | 30 years from 10/1/2010 | 1,779,260 | 150,699 |
| Actuarial loss of \$4,926,592 for the 2011 plan year | 30 years from 10/1/2011 | 4,731,042 | 394,814 |
| Decrease in UAL of \$674,023 Due to Ad Hoc Benefit reduction | 25 years from 10/1/2011 | (628,045) | (57,308) |
| Increase in UAL of \$3,697,379 Due to assumptions change | 25 years from 10/1/2011 | 3,445,172 | 314,367 |
| Actuarial loss of \$2,708,073 for the 2012 plan year | 30 years from 10/1/2012 | 2,597,594 | 213,847 |
| Increase in UAL of \$430,584 Due to Ad Hoc Benefit increase | 25 years from 10/1/2012 | 403,428 | 36,038 |
| Actuarial gain of \$292,622 for the 2013 plan year | 30 years from 10/1/2013 | (283,196) | (23,025) |
| Increase in UAL of \$587,656 Due to Ad Hoc Benefit increase | 25 years from 10/1/2013 | 559,205 | 48,995 |
| Actuarial gain of \$1,242,179 for the 2014 plan year | 30 years from 10/1/2014 | (1,220,461) | (98,097) |
| Increase in UAL of \$510,750 Due to Ad Hoc Benefit increase | 25 years from 10/1/2014 | 496,562 | 42,744 |

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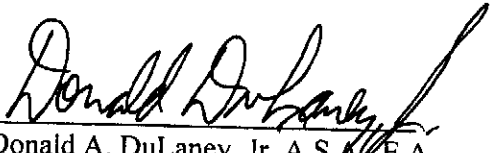
Table XVI
(continued seven)

| Description and Amount of Original Liability | Amortization Period | Unamortized Amount as of Valuation Date | Amortization Payment |
|--|-------------------------|---|-------------------------|
| Increase in UAL of \$3,516,209 Due to assumptions change | 25 years from 10/1/2014 | 3,418,542 | 294,266 |
| Actuarial gain of \$687,419 for the 2015 plan year | 30 years from 10/1/2015 | (683,831) | (54,387) |
| Increase in UAL of \$143,047 Due to Ad Hoc Benefit increase | 25 years from 10/1/2015 | 141,618 | 11,995 |
| Increase in UAL of \$5,514,643 Due to assumptions change | 25 years from 10/1/2015 | 5,459,537 | 462,410 |
| Actuarial LOSS of \$5,470,811 for the 2016 plan year | 30 years from 10/1/2016 | 5,470,811 | 430,903 |
| Decrease in UAL of \$2,860,938 Due to Ad Hoc Benefit decrease | 25 years from 10/1/2016 | (2,860,938) | (238,750) |
| Increase in UAL of \$8,068,021 Due to assumptions change | 25 years from 10/1/2016 | 8,068,021 | 673,291 |
| Increase in UAL of \$79,002 Due to plan amendment | 25 years from 10/1/2016 | 79,002 | 6,593 |
| TOTAL | | <u>\$ 72,005,360</u> | <u>\$6,572,020</u> |

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Table XVI
(continued eight)

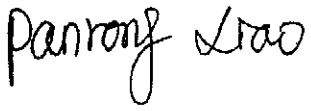
This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable 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 provided for 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.



Donald A. DuLaney, Jr. A.S.A., E.A.
Senior Consulting Actuary

5/10/2017
Date

17-04191
Enrollment Number



Panrong Xiao, E.A., M.A.A.A.
Enrolled Actuary

5/10/2017
Date

17-07551
Enrollment Number

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