

CITY OF PARKLAND  
POLICE OFFICERS RETIREMENT PLAN

ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2017

DETERMINES THE CONTRIBUTION  
FOR THE 2017/18 FISCAL YEAR



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February 7, 2018

### Introduction

This report presents the results of the October 1, 2017 actuarial valuation for the City of Parkland Police Officers Retirement Plan. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2017 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2017/18 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the normal cost rate.

### Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2017/18 plan year. The minimum required contribution is \$83,106, which represents a decrease of \$48,454 from the prior valuation.

Table I-C provides a breakdown of the sources of change in the minimum required contribution. Significantly, the minimum required contribution decreased by \$19,048 due to investment gains, decreased by \$39,720 due to a change in the expected amortization payments, decreased by another \$2,482 due to demographic experience, and increased by \$12,796 due to the assumption changes that are described below. The market value of assets earned 10.99% during the 2016/17 plan year, whereas a 7.00% annual investment return was required to maintain a stable contribution rate.





Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City must contribute an amount equal to the annual normal cost of the plan plus an adjustment as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2017/18 minimum required contribution will be equal to \$83,106 and reduced by the portion of the Chapter 175/185 contribution that is allowed to be recognized during the 2017/18 plan year. As of the date of this report, the allowable portion of the Chapter 175/185 contribution is \$69,006 per year. However, this amount is subject to change depending on the amount of the Chapter 175/185 contribution for the 2017/18 plan year.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$2,489,809 without regard to future administrative expenses. As illustrated in Table I-A, current assets are sufficient to cover \$2,229,766 of this amount and the employer's 2017/18 expected contribution will cover \$83,106 of this amount, leaving \$176,937 to be covered by future employer funding beyond the 2017/18 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

### Contents of the Report

Tables I-D through I-H provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Tables III-A through III-D provide statistical information concerning the plan's participant population. In particular, Table III-D gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of participants. Finally, Tables IV-A and IV-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits as of October 1, 2017, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

### Assumption Changes

The assumed interest (or discount) rate was decreased from 7.00% per annum to 6.50% per annum to reflect lowered expected investment earnings. This change increased the minimum required contribution for the 2017/18 plan year by \$17,996.

In addition to the interest rate change, the assumed administrative expenses were decreased from \$35,000 per year to \$30,000 per year. This change decreased the minimum required contribution for the 2017/18 plan year by \$5,200.

### Certification

This actuarial valuation was prepared 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 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 change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,



Charles T. Carr  
Consulting Actuary  
Southern Actuarial Services Company, Inc.

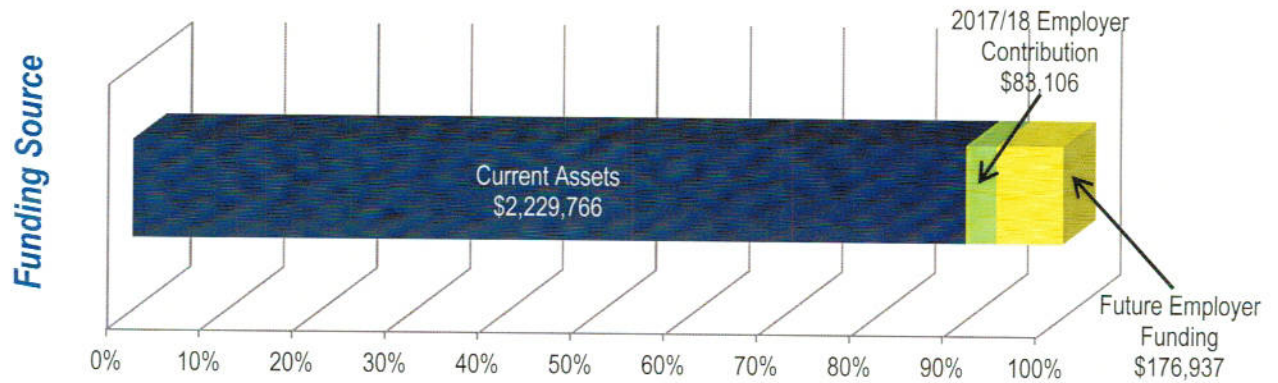
Enrolled Actuary No. 17-04927

*The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.*



## Minimum Required Contribution

Table I-A

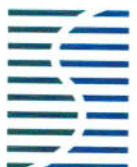


\* without the expense loading

### For the 2017/18 Plan Year

Entry Age Normal Cost	\$0
Unfunded Liability Amortization Payment	\$49,911
Expense Allowance	\$30,000
Expected Employee Contribution	\$0
	<hr/>
	\$79,911
Adjustment to Reflect End-of-Quarter Employer Contributions	<hr/>
	\$3,195

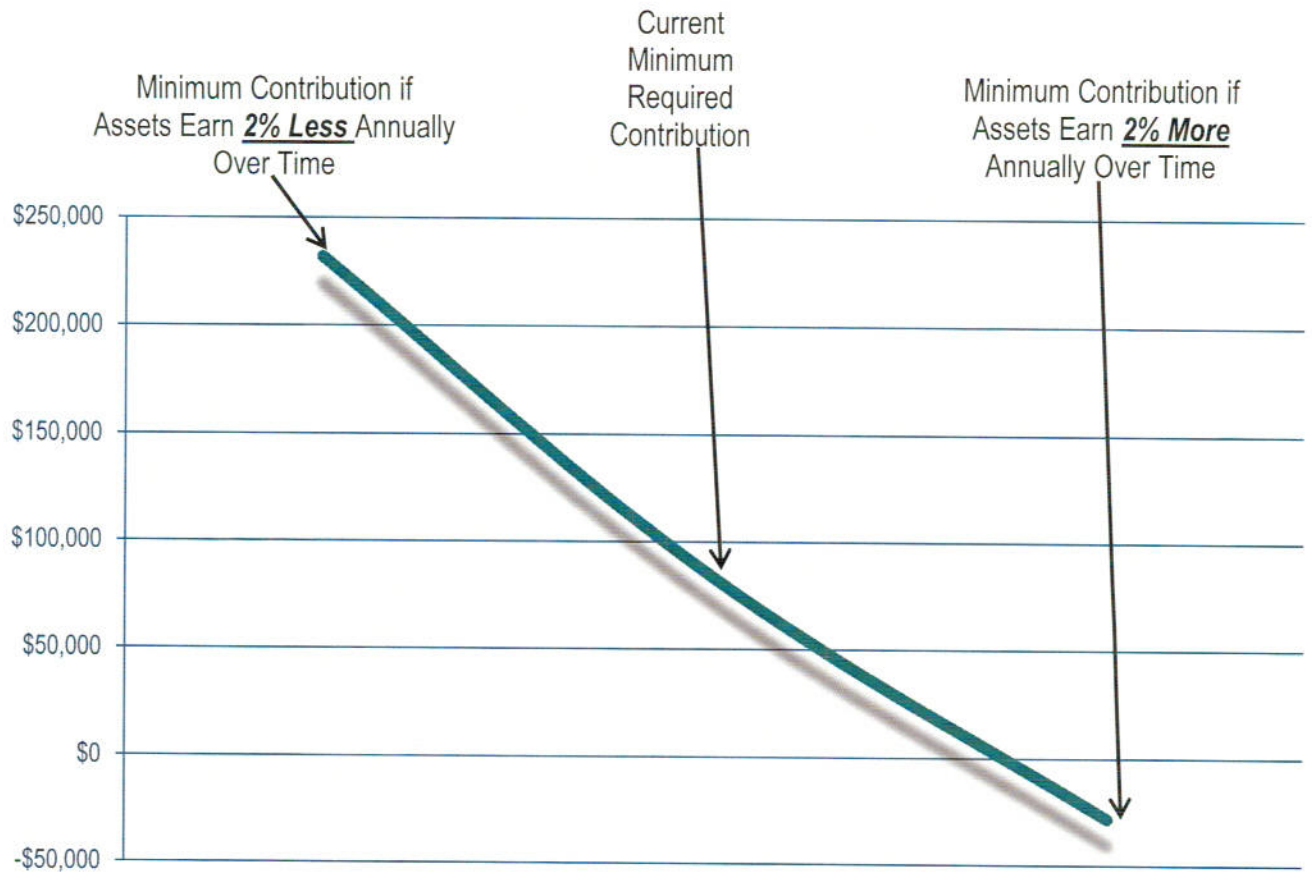
<b>Minimum Required Contribution</b>	<b>\$83,106</b>
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Sensitivity Analysis

Table I-B



*The line above illustrates the sensitivity of the minimum required contribution to changes in the long-term investment return.*



## Gain and Loss Analysis

Table I-C

Previous minimum required contribution	\$131,560
Increase (decrease) due to investment gains and losses	(\$19,048)
Increase (decrease) due to change in expected amortization pmts.	(\$39,720)
Increase (decrease) due to other experience	(\$2,482)
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	\$12,796
Increase (decrease) due to actuarial method changes	\$0
Current minimum required contribution	<u>\$83,106</u>





## Present Value of Future Benefits

Table I-D

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$1,827,302	\$1,827,302	\$1,931,484
Disability retirements	\$530,025	\$530,025	\$558,325
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,357,327</b>	<b>\$2,357,327</b>	<b>\$2,489,809</b>
<u>Grand Total</u>	<b><u>\$2,357,327</u></b>	<b><u>\$2,357,327</u></b>	<b><u>\$2,489,809</u></b>
Present Value of Future Payroll	\$0	\$0	\$0
Present Value of Future Employee Contribs.	\$0	\$0	\$0
Present Value of Future Employer Contribs. (without the expense loading)	\$127,561	\$127,561	\$260,043



## Present Value of Accrued Benefits

Table I-E

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$1,827,302	\$1,827,302	\$1,931,484
Disability retirements	\$530,025	\$530,025	\$558,325
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,357,327</b>	<b>\$2,357,327</b>	<b>\$2,489,809</b>
<u>Grand Total</u>	<b><u>\$2,357,327</u></b>	<b><u>\$2,357,327</u></b>	<b><u>\$2,489,809</u></b>
<u>Funded Percentage</u>	94.59%	94.59%	89.56%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)



## Present Value of Vested Benefits

Table I-F

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$1,827,302	\$1,827,302	\$1,931,484
Disability retirements	\$530,025	\$530,025	\$558,325
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,357,327</b>	<b>\$2,357,327</b>	<b>\$2,489,809</b>
<u>Grand Total</u>	<b><u>\$2,357,327</u></b>	<b><u>\$2,357,327</u></b>	<b><u>\$2,489,809</u></b>





## Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$1,827,302	\$1,827,302	\$1,931,484
Disability retirements	\$530,025	\$530,025	\$558,325
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,357,327</b>	<b>\$2,357,327</b>	<b>\$2,489,809</b>
<u>Grand Total</u>	<b><u>\$2,357,327</u></b>	<b><u>\$2,357,327</u></b>	<b><u>\$2,489,809</u></b>
less Actuarial Value of Assets	(\$2,229,766)	(\$2,229,766)	(\$2,229,766)
<u>Unfunded Accrued Liability</u>	<b><u>\$127,561</u></b>	<b><u>\$127,561</u></b>	<b><u>\$260,043</u></b>



## Unfunded Liability Bases

Table I-H

<u>Description</u>	<u>Original Amount</u>	<u>Outstanding Balance</u>	<u>Amortization Payment</u>	<u>Years Rem.</u>
	<b>Total</b>	<b>\$260,043</b>	<b>\$49,911</b>	
		↓	↓	
2007/08 Experience Loss	\$177,981	\$23,678	\$23,678	1
2008/09 Experience Loss	(\$37,260)	(\$9,589)	(\$4,945)	2
10/1/2009 Assumption Change	(\$161,252)	(\$41,506)	(\$21,406)	2
2012/13 Experience Gain	(\$23,235)	(\$5,296)	(\$5,296)	1
10/1/2013 Assumption Change	\$22,017	\$14,939	\$2,898	6
2013/14 Experience Loss	\$23,200	\$10,230	\$5,276	2
2014/15 Experience Loss	\$139,615	\$89,360	\$31,681	3
2015/16 Experience Loss	\$15,857	\$13,100	\$3,591	4
10/1/2016 Assumption Change	\$130,126	\$120,708	\$17,028	9
2016/17 Experience Gain	(\$88,063)	(\$88,063)	(\$19,898)	5
10/1/2017 Assumption Change	\$132,482	\$132,482	\$17,304	10



## Actuarial Value of Assets

Table II-A

Market Value of Assets as of October 1, 2017	\$2,229,766
Minus advance employer contributions	\$0
Minus excess Chapter 175/185 contributions	\$0
<b>Actuarial Value of Assets as of October 1, 2017</b>	<b><u>\$2,229,766</u></b>

**Historical Actuarial Value of Assets**

October 1, 2008	\$896,556
October 1, 2009	\$1,078,605
October 1, 2010	\$1,346,172
October 1, 2011	\$1,416,392
October 1, 2012	\$1,756,197
October 1, 2013	\$1,952,986
October 1, 2014	\$2,062,405
October 1, 2015	\$1,961,246
October 1, 2016	\$2,054,583
October 1, 2017	\$2,229,766



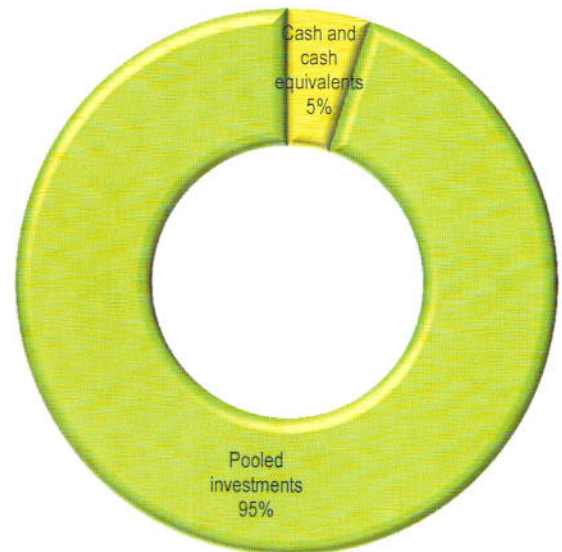


## Market Value of Assets

Table II-B

As of October 1, 2017

<b>Market Value of Assets</b>	<b><u>\$2,229,766</u></b>
Cash and cash equivalents	\$109,366
Pooled investments	\$2,122,595
Accounts payable	(\$2,195)

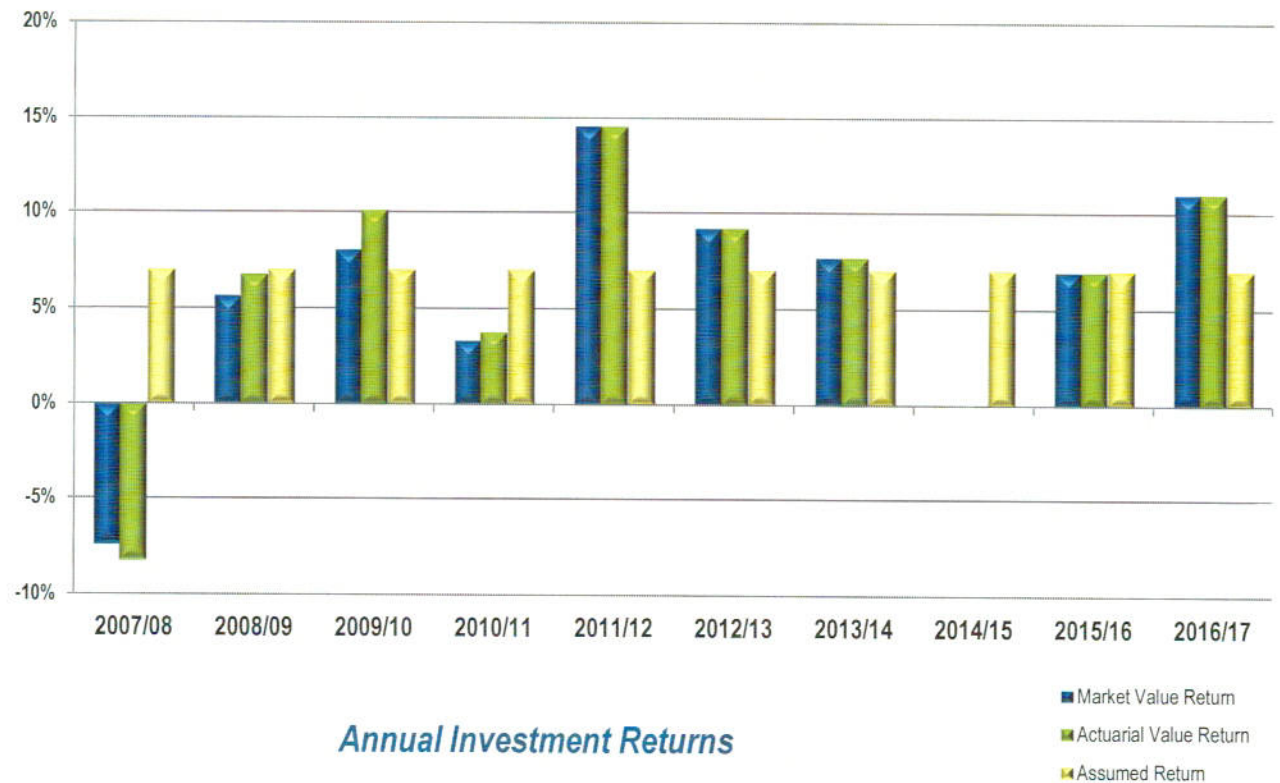
Historical Market Value of Assets

October 1, 2008	\$1,033,383
October 1, 2009	\$1,314,133
October 1, 2010	\$1,694,567
October 1, 2011	\$1,416,392
October 1, 2012	\$1,756,197
October 1, 2013	\$1,952,986
October 1, 2014	\$2,062,405
October 1, 2015	\$1,961,246
October 1, 2016	\$2,054,583
October 1, 2017	\$2,229,766



## Investment Return

Table II-C

*Annual Investment Returns*

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2007/08	-7.39%	-8.21%	7.00%
2008/09	5.65%	6.76%	7.00%
2009/10	8.06%	10.10%	7.00%
2010/11	3.34%	3.77%	7.00%
2011/12	14.54%	14.54%	7.00%
2012/13	9.17%	9.17%	7.00%
2013/14	7.66%	7.66%	7.00%
2014/15	0.01%	0.01%	7.00%
2015/16	6.95%	6.95%	7.00%
2016/17	10.99%	10.99%	7.00%
10yr. Avg.	5.73%	5.99%	7.00%



## Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2016	\$2,054,583	\$2,054,583
<i>Increases Due To:</i>		
Employer Contributions	\$62,554	\$62,554
Chapter 175/185 Contributions	\$271,388	\$271,388
Employee Contributions	\$0	\$0
Total Contributions	<u>\$333,942</u>	<u>\$333,942</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	<u>\$228,333</u>	
Total Investment Income	\$228,333	\$20,727
Other Income	\$0	
Total Income	<u>\$562,275</u>	<u>\$354,669</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$154,006)	(\$154,006)
Refund of Employee Contributions	\$0	\$0
Transfer to Share Plan	<u>(\$202,382)</u>	
Total Benefit Payments	(\$356,388)	(\$154,006)
Investment Expenses	(\$5,224)	
Administrative Expenses	(\$25,480)	(\$25,480)
Advance Employer Contribution		\$0
Excess Chapter 175/185 Contribution		\$0
Total Expenses	<u>(\$387,092)</u>	<u>(\$179,486)</u>
As of October 1, 2017	<u><u>\$2,229,766</u></u>	<u><u>\$2,229,766</u></u>





## Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Chapter	Employee	Interest /	Realized	Unrealized	Other
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Dividends</u>	<u>Gains /</u> <u>Losses</u>	<u>Gains /</u> <u>Losses</u>	<u>Income</u>
2007/08	\$165,177	\$138,420	\$3,775	\$0	\$0	-\$75,501	\$0
2008/09	\$181,139	\$167,707	\$3,777	\$0	\$0	\$64,540	\$0
2009/10	\$205,726	\$181,873	\$4,111	\$0	\$0	\$116,539	\$0
2010/11	\$94,376	\$170,714	\$3,089	\$0	\$0	\$51,136	\$0
2011/12	\$221,653	\$193,256	\$0	\$0	\$0	\$214,966	\$0
2012/13	\$144,592	\$216,205	\$0	\$0	\$0	\$162,590	\$0
2013/14	\$77,179	\$233,777	\$0	\$0	\$0	\$148,145	\$0
2014/15	\$9,187	\$254,476	\$0	\$0	\$0	\$293	\$0
2015/16	\$75,994	\$281,953	\$0	\$0	\$0	\$134,955	\$0
2016/17	\$62,554	\$271,388	\$0	\$0	\$0	\$228,333	\$0

Expenses

Plan	Monthly	Contrib.	Admin.	Invest.	<u>Other Actuarial Adjustments</u>		
<u>Year</u>	<u>Benefit</u> <u>Payments</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>	<u>Transfer to</u> <u>Share Plan</u>	<u>Advance</u> <u>Employer</u> <u>Contribs.</u>	<u>Excess</u> <u>Chapter</u> <u>Contribs.</u>
2007/08	\$91,484	\$0	\$42,447	\$0	\$0	\$0	\$69,414
2008/09	\$93,159	\$0	\$43,254	\$0	\$0	\$0	\$98,701
2009/10	\$95,023	\$0	\$32,792	\$0	\$0	\$0	\$112,867
2010/11	\$107,130	\$0	\$40,257	\$0	\$450,103	\$0	-\$348,395
2011/12	\$139,688	\$0	\$26,132	\$0	\$124,250	\$0	\$0
2012/13	\$142,278	\$0	\$37,121	\$0	\$147,199	\$0	\$0
2013/14	\$145,124	\$0	\$39,787	\$0	\$164,771	\$0	\$0
2014/15	\$148,026	\$0	\$31,619	\$0	\$185,470	\$0	\$0
2015/16	\$150,987	\$0	\$35,631	\$0	\$212,947	\$0	\$0
2016/17	\$154,006	\$0	\$25,480	\$5,224	\$202,382	\$0	\$0

Note: Information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source.



## Other Reconciliations

Table II-F

**Advance Employer Contribution**

Advance Employer Contribution as of October 1, 2016	\$0
Additional Employer Contribution	\$131,560
Minimum Required Contribution	(\$131,560)
Net Increase in Advance Employer Contribution	\$0
Advance Employer Contribution as of October 1, 2017	\$0

**Excess Chapter 175/185 Contribution**

Excess Chapter 175/185 Contribution as of October 1, 2016	\$0
Additional Chapter 175/185 Contribution	\$271,388
Transfer to Share Plan	(\$202,382)
Allowable Chapter 175/185 Contribution	(\$69,006)
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2017	\$0



## Allowable Chapter 175/185 Contribution

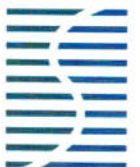
Table II-G

1997 Base Amounts

Chapter 175 Regular Distribution	\$0
Chapter 175 Supplemental Distribution	\$0
Chapter 185 Distribution	\$0

Qualifying Benefit Improvements

Ordinance 2006-45	\$69,006
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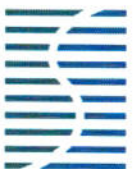




## Historical Chapter 175/185 Contributions

Table II-H

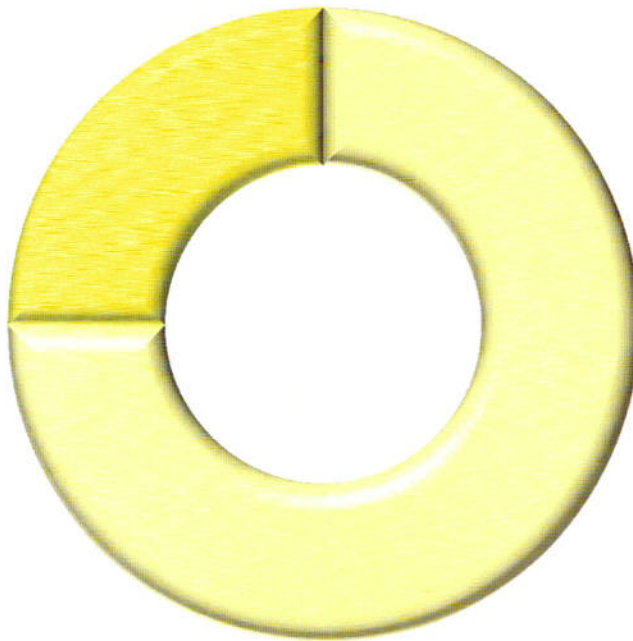
<i>Total Accumulated Excess Chapter 175/185 Contribution</i>				<b>\$0</b>
	<u>Chapter 175 Regular Distribution</u>	<u>Chapter 175 Supplemental Distribution</u>	<u>Chapter 185 Distribution</u>	<u>Allowable Amount</u>
1998 Distribution	\$0	\$0	\$0	\$0
1999 Distribution	\$0	\$0	\$0	\$0
2000 Distribution	\$0	\$0	\$0	\$0
2001 Distribution	\$0	\$0	\$0	\$0
2002 Distribution	\$0	\$0	\$0	\$0
2003 Distribution	\$0	\$0	\$0	\$0
2004 Distribution	\$0	\$0	\$88,495	\$0
2005 Distribution	\$0	\$0	\$106,003	\$0
2006 Distribution	\$0	\$0	\$136,419	(\$263,504)
2007 Distribution	\$0	\$0	\$138,420	(\$69,006)
2008 Distribution	\$0	\$0	\$167,707	(\$69,006)
2009 Distribution	\$0	\$0	\$181,873	(\$69,006)
2010 Distribution	\$0	\$0	\$170,714	(\$69,006)
2011 Distribution	\$0	\$0	\$193,256	(\$69,006)
2012 Distribution	\$0	\$0	\$216,205	(\$69,006)
2013 Distribution	\$0	\$0	\$233,777	(\$69,006)
2014 Distribution	\$0	\$0	\$254,476	(\$69,006)
2015 Distribution	\$0	\$0	\$281,953	(\$69,006)
2016 Distribution	\$0	\$0	\$271,388	(\$69,006)
Transfer to Share Plan				(\$1,487,122)



## Summary of Participant Data

Table III-A

As of October 1, 2017

*Participant Distribution by Status*Actively Employed Participants

◆ Active Participants	0
◆ DROP Participants	0

Inactive Participants

◆ Deferred Vested Participants	0
◆ Due a Refund of Contributions	0
◆ Deferred Beneficiaries	0

Participants Receiving a Benefit

◆ Service Retirements	3
◆ Disability Retirements	1
◆ Beneficiaries Receiving	0

**Total Participants 4**Number of Participants Included in Prior Valuations

	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
October 1, 2008	1	0	0	3	4
October 1, 2009	1	0	0	3	4
October 1, 2010	1	0	0	3	4
October 1, 2011	1	0	0	3	4
October 1, 2012	0	0	0	4	4
October 1, 2013	0	0	0	4	4
October 1, 2014	0	0	0	4	4
October 1, 2015	0	0	0	4	4
October 1, 2016	0	0	0	4	4
October 1, 2017	0	0	0	4	4



## Data Reconciliation

Table III-B

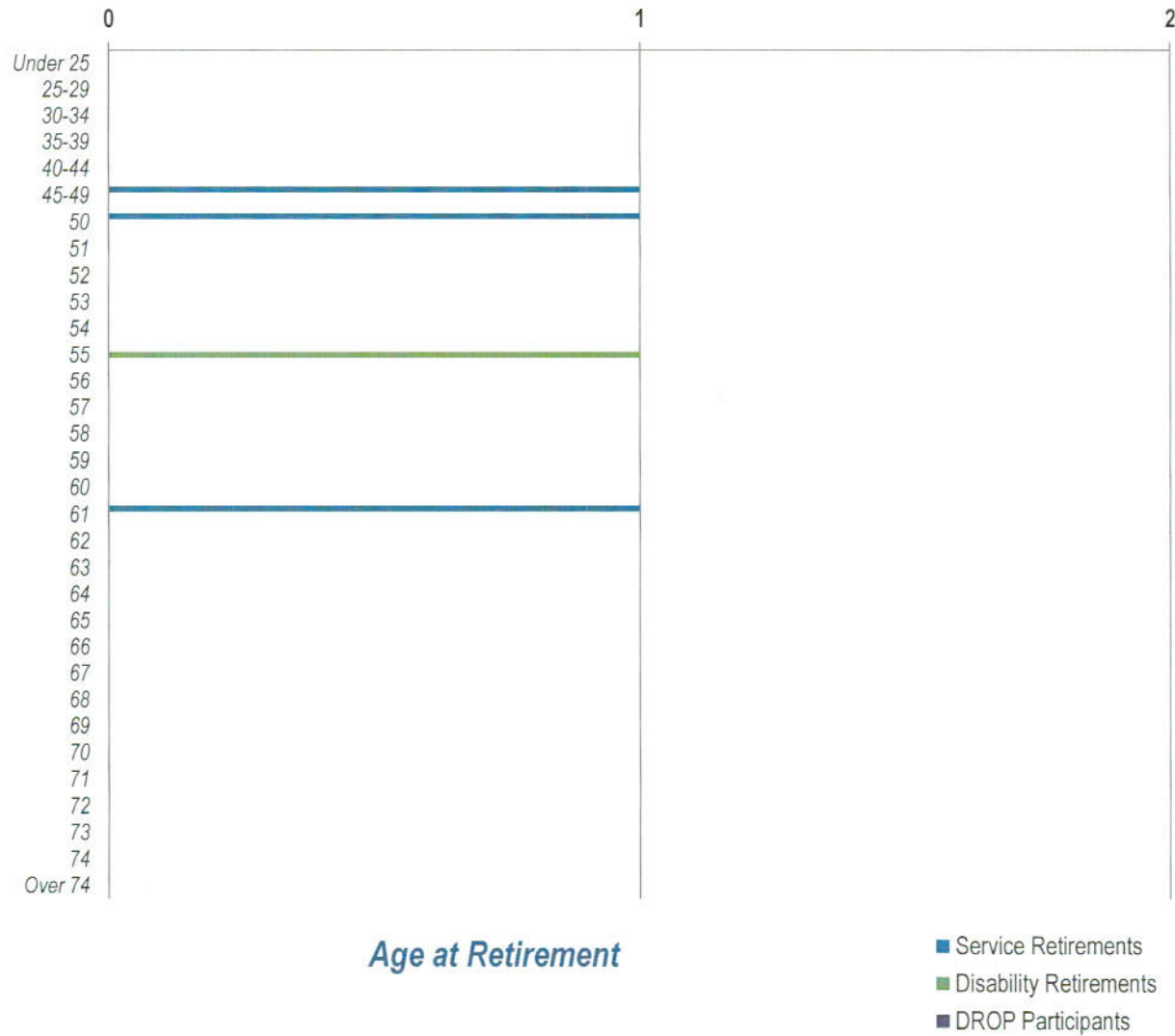
	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2016</u>	0	0	0	0	0	3	1	0	4
<u>Change in Status</u>									
Re-employed									
Terminated									
Retired									
<u>Participation Ended</u>									
Transferred Out									
Cashed Out									
Died									
<u>Participation Began</u>									
Newly Hired									
Transferred In									
New Beneficiary									
<u>Other Adjustment</u>									
<u>October 1, 2017</u>	0	0	0	0	0	3	1	0	4





Inactive Participant Data

Table III-C



Age at Retirement

- Service Retirements
- Disability Retirements
- DROP Participants

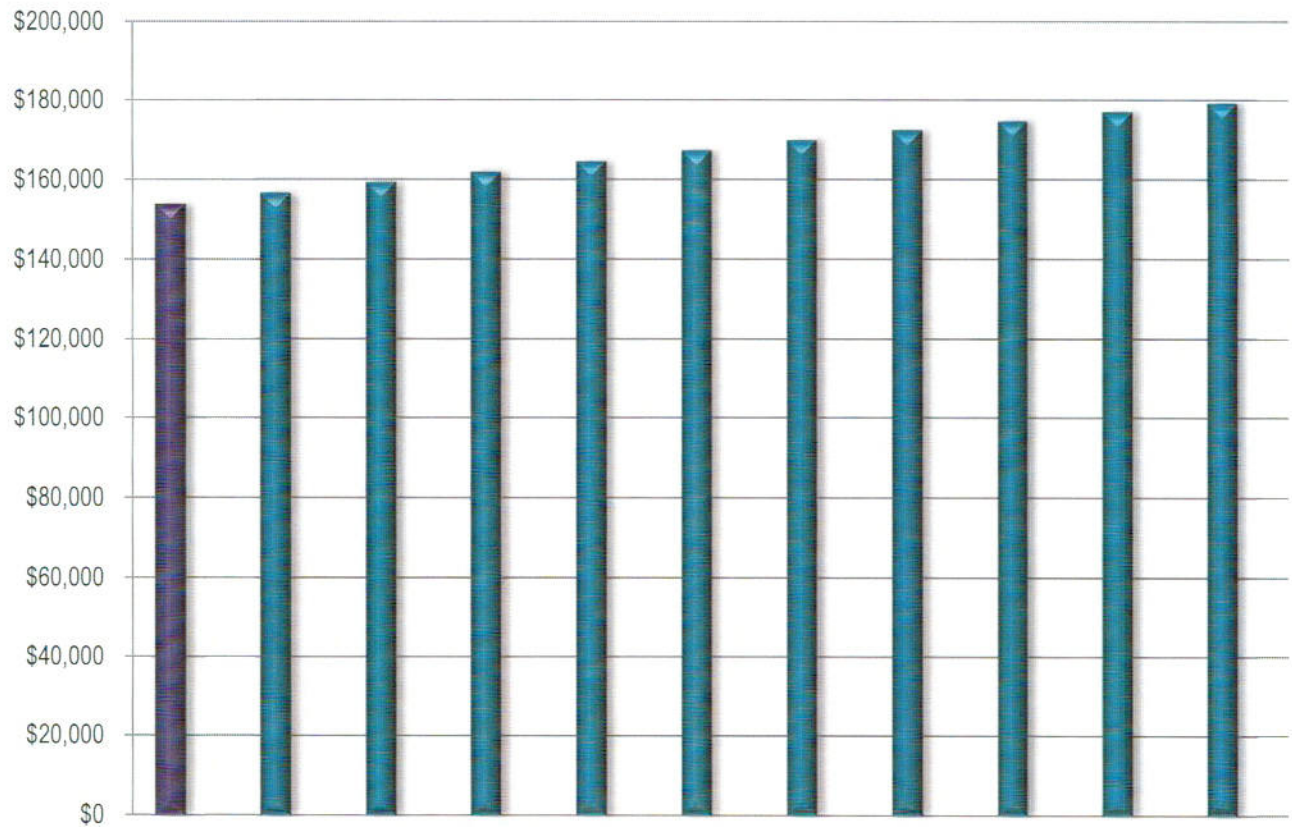
Average Monthly Benefit

Service Retirements	\$3,383.21
Disability Retirements	\$2,940.90
Beneficiaries Receiving	Not applicable
DROP Participants	Not applicable
Deferred Vested Participants	Not applicable
Deferred Beneficiaries	Not applicable



## Projected Benefit Payments

Table III-D

Actual

For the period October 1, 2016 through September 30, 2017

\$154,006

Projected

For the period October 1, 2017 through September 30, 2018

\$156,700

For the period October 1, 2018 through September 30, 2019

\$159,392

For the period October 1, 2019 through September 30, 2020

\$162,068

For the period October 1, 2020 through September 30, 2021

\$164,718

For the period October 1, 2021 through September 30, 2022

\$167,326

For the period October 1, 2022 through September 30, 2023

\$169,888

For the period October 1, 2023 through September 30, 2024

\$172,378

For the period October 1, 2024 through September 30, 2025

\$174,780

For the period October 1, 2025 through September 30, 2026

\$177,070

For the period October 1, 2026 through September 30, 2027

\$179,225



## Summary of Actuarial Methods and Assumptions

## Table IV-A

NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.

1. **Actuarial Cost Method**

Individual entry age normal cost method (nominally)

2. **Amortization Method**

The unfunded accrued liability has been amortized as a level-dollar payment; experience gains and losses are amortized over a five-year period and assumption changes are amortized over a 10-year period.

3. **Asset Method**

The actuarial value of assets is equal to the market value of assets.

4. **Interest (or Discount) Rate**

6.50% per annum

5. **Decrements**

- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB

6. **Expenses**

Administrative expenses payable from the plan have been assumed to be \$30,000 per year. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.





## Changes in Actuarial Methods and Assumptions

## Table IV-B

Since the completion of the previous valuation, the interest (or discount) rate was decreased from 7.00% per annum to 6.50% per annum and the assumed administrative expenses were decreased from \$35,000 per year to \$30,000 per year.

*The following additional assumption and method changes were made during the past 10 years:*

- (1) Effective October 1, 2016, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table as required by State law.*
- (2) Effective October 1, 2016, the assumed administrative expenses were increased from \$25,000 per year to \$35,000 per year.*
- (3) Effective October 1, 2013, the mortality basis was changed from the RP-2000 Mortality Table for annuitants, projected to 2007 by Scale AA, to the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, both as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.*
- (4) Effective October 1, 2012, the administrative expense assumption was reduced from \$40,000 per year to \$25,000 per year.*
- (5) Effective October 1, 2011, the administrative expense assumption was changed from 50% of covered payroll to \$40,000 per year.*
- (6) Effective October 1, 2010, the amortization period for experience gains and losses was decreased from 10 years to five years.*
- (7) Effective October 1, 2009, the administrative expense assumption was changed from a 7.50% loading of all costs and liabilities to 50.00% of covered payroll.*

