

# Firemen's Retirement System of St. Louis

Annual Actuarial Valuation as of October 1, 2017



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January 22, 2018

The Pension Board  
Firemen's Retirement System of St. Louis  
1601 South Broadway  
St. Louis, Missouri 63104

Dear Board Members:

We are pleased to present the report of the actuarial valuation of the Firemen's Retirement System of St. Louis ("FRS" or "System") as of October 1, 2017. This actuarial valuation was prepared at your request and is intended for use by the FRS and those designated or approved by the System. This actuarial valuation may be provided to parties other than the System only in its entirety and only with the permission of the System. GRS is not responsible for unauthorized use of this report.

An actuarial valuation of the system is performed annually as required by the Missouri State statutes. The actuarial valuation was performed to measure the funding status of the System and determine the contribution for the following year.

Effective with fiscal year ending September 30, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting requirements and effective with fiscal year ending September 30, 2015, GASB Statement No. 68 replaced GASB Statement No. 27 for employer financial reporting requirements. Information required by GASB Statement Nos. 67 and 68 is provided in a separate report.

This actuarial valuation is based upon:

- a) **Data Relative to the Members of the System** — Data as of October 1, 2017, for active members and persons receiving benefits, including frozen accrued benefits as of February 1, 2013, was provided by the System's staff. We have tested this data for reasonableness.
- b) **Asset Values** — The System's asset values as of October 1, 2017, were provided by the System's auditor. An actuarial value of assets was used to develop the sponsor's funding requirements.
- c) **Actuarial Method** — The actuarial cost method utilized by the System as required by Missouri State statutes is the Frozen Entry Age Actuarial Cost Method. The objective of this method is to recognize the cost of the System on an aggregate basis as a level percentage of compensation. Any frozen unfunded actuarial accrued liability resulting from changes in plan provisions, assumptions or methods is separately amortized. All actuarial gains and losses under this method are reflected in future normal costs.
- d) **Actuarial Assumptions** — The actuarial assumptions are unchanged from the previous actuarial valuation and are based on the experience review for the period October 1, 2010, through September 30, 2014, first effective with the actuarial valuation as of October 1, 2015.

**e) Plan Provisions** — The actuarial valuation is based on plan provisions in effect as of October 1, 2017, including the provisions of Ordinance 69245, Ordinance 69353 and Judge Dierker's subsequent ruling (Board Bill 109 or BB109).

The funding objective is to provide employer and employee contributions sufficient to provide the benefits of the System when due. The employer contributes the normal contribution rate (normal cost under Frozen Entry Age Actuarial Cost Method) plus the accrued liability rate (amortization of the frozen unfunded actuarial liability).

The actuarial valuation results set forth in this report are based on the data and actuarial techniques described above, and upon the provisions of the System as of the actuarial valuation date. Based on these items, we certify these results to be true and correct.

This report is based upon information, furnished to us by the System, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different, please let us know. This information was checked for internal consistency, but it was not audited.

To the best of our knowledge, this actuarial statement is complete and accurate, fairly presents the actuarial position of the Firemen's Retirement System of St. Louis as of October 1, 2017, and has been prepared in accordance with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions, contribution amounts or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements in this report.

The signing actuaries are independent of the plan sponsor.

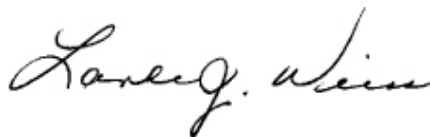
This report should not be relied on for any purpose other than the purpose stated.

Alex Rivera and Lance J. Weiss are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully yours,



Alex Rivera, FSA, EA, MAAA, FCA  
Senior Consultant



Lance J. Weiss, EA, MAAA, FCA  
Senior Consultant



# Introduction

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## Purposes of the Actuarial Valuation

At your request, we have performed the actuarial valuation of the Firemen's Retirement System of St. Louis ("FRS") as of October 1, 2017.

The purposes of the actuarial valuation are as follows:

- To determine the funding status of the System as of the actuarial valuation date;
- To determine the current contribution level of the System required to fund the current benefit provisions; and
- To provide other data required by the System.

## Plan Provisions and Board Bill 109

The actuarial valuation is based on plan provisions in effect as of October 1, 2017, including the provisions of Board Bill 109.

First effective with the actuarial valuation as of October 1, 2013, the actuarial valuation reflects the changes attributable to Ordinance 69245, Ordinance 69353 and Judge Dierker's subsequent ruling (Board Bill 109 or BB109). Our understanding of the key changes to the FRS is as follows:

- FRS is frozen as of February 1, 2013. That is, benefits paid from FRS will be based on the member's service and salary earned as of February 1, 2013. Participants with benefit service in FRS are classified as "grandfathered" members.
- Firefighters hired after February 1, 2013, are not members of FRS.
- Vesting and eligibility service earned after February 1, 2013, in the newly established Firemen's Retirement Plan of St. Louis ("FRP") will count towards vesting and eligibility service in FRS.
- Ancillary benefits, for disability or death occurring after February 1, 2013, are assumed to be paid from the newly established FRP. FRS members who become disabled or die before retirement are eligible for a refund of contributions made to FRS.
- Employer contributions to the frozen FRS will continue to be calculated under the Frozen Initial Liability cost method.
- Member contributions after February 1, 2013, from "grandfathered" participants in FRS will be paid to the FRP.
- Grandfathered members with 20 or more years of service as of February 1, 2013, are eligible to retire with unreduced FRP benefits if retirement commences before age 55.
- Grandfathered members with less than 20 years of service as of February 1, 2013, are eligible to retire with actuarially reduced FRP benefits if retirement commences before age 55.

As a result of BB109, the following assumptions were made:

- Since benefits paid under FRS will no longer depend on future salary increases, we have eliminated the future salary increase assumption in the projection of pay and valuation of benefits. Costs will continue to be spread over the present value of future salary which includes future salary increases.
- It is assumed that grandfathered members with less than 20 years of service as of February 1, 2013, will not retire prior to age 55. The retirement rates were adjusted to reflect accelerated retirement when these members first become eligible at age 55.

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- The proportion of ordinary and accidental disabilities was changed from 20 percent ordinary and 80 percent accidental to 60 percent ordinary and 40 percent accidental.

Finally, plan liabilities for FRS after BB109 are predominantly for retired members and their beneficiaries. That is, the proportion of retired liabilities to total plan liabilities is projected to be over 80 percent within 10 years. This implies a much shorter duration of liabilities. As a result of this relationship, it is recommended that the discount rate be reviewed annually as the duration decreases and the investment policy is modified.

Under the 2015 Settlement Agreement, accrued sick leave earned through February 1, 2013, and unused as of the member's retirement date can be converted to a pension benefit.

Plan provisions are described in Section C.

## Actuarial Assumptions and Methods

The actuarial assumptions are unchanged from the previous actuarial valuation and are based on an experience review of the Firemen's Retirement System of St. Louis for the period October 1, 2010, to September 30, 2014. The actuarial assumptions and methods are disclosed in Section C.

## Asset Information

The market value of the assets of the fund, which are available for benefits, increased from \$453.6 million at the end of FY 2016 to \$483.6 million at the end of FY 2017. The market value of assets reflects a transfer of \$166,792, from the FRS Future Benefit Fund to the FRS General Reserve Fund, as part of the 2015 Settlement Agreement. The actuarial value of assets decreased from \$465.3 million at the end of fiscal year 2016 to \$462.2 million at the end of fiscal year 2017.

The detailed determinations of asset values utilized in this actuarial valuation and asset changes in the last year are set forth in Section A.

## Report Highlights

The table on the following page compares the key actuarial results from the October 1, 2017, actuarial valuation to the prior year's results. The key difference between this year's actuarial valuation results and the prior year's actuarial valuation results is a decrease in the City contribution from \$3.31 million for plan year ending September 30, 2017, to \$2.72 million for plan year ending September 30, 2018.

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<b>Summary of Results</b>	<b>October 1, 2016</b>	<b>October 1, 2017</b>
Total Contribution	\$ 3,313,603	\$ 2,715,141
Present Value of Benefits	503,718,897	477,053,392
Actuarial Value of Assets	465,333,704	462,244,910
Market Value of Assets <sup>a</sup>	453,640,021	483,611,287

<sup>a</sup> Excluding Future Benefit Fund

The present value of benefits decreased by \$26.7 from \$503.7 million as of October 1, 2016, to \$477.1 million as of October 1, 2017. The key reasons for the decrease include:

- \$10.7 million reduction in expected liability, for the closed and frozen FRS plan, due to the payment of expected benefits and adjustments for interest.
- \$1.2 million gain due to deaths or disabilities during the year. Under current provisions, FRP pays death and disability benefits to FRS members who accrue or have accrued benefits under FRP, resulting in an actuarial gain to FRS.
- \$8.6 million gain due to changes in the spouse's dates of birth of retired members. In prior valuations the spouse's date of birth was based on either historical data or a three year offset if data was not readily available.
- \$6.2 million gain due to other demographic experience and updates to the valuation of death and disability benefits.

During the plan year, the market value of assets earned 13.5 percent, and increased from \$453.6 million at October 1, 2016, to \$483.6 million at October 1, 2017. The actuarial value of assets earned 5.8 percent during the year and decreased from \$465.3 million at October 1, 2016, to \$462.2 million at October 1, 2017. The actuarial value of assets is based on a three-year smoothing of investment gains and losses. The investment loss in 2015 was partially offset by investment gains in 2016 and 2017.

The City's contribution for plan year 2018 is based on a normal cost contribution plus a fixed amortization of \$2.7 million per year for the initial actuarial liability due to the 2015 change in assumptions. A normal cost contribution is generated if the present value of benefits less the actuarial value of assets less the remaining balance of the initial actuarial liability is greater than zero. The City's expected normal cost contribution for 2018, before recognizing any plan year 2017 experience, was zero. After recognizing the experience factors discussed in the preceding two paragraphs, the City's normal cost contribution was also zero. However, for plan year 2018, the City is required to contribute the fixed amortization annual contribution of \$2.7 million.

The actuarial valuation results are presented in Section A of the report.

## Membership Characteristics

The following table shows the changes in the population of the fund. Because FRS is closed to new members, the active population has continued to decrease.

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<b>Population</b>	<b>October 1, 2016</b>	<b>October 1, 2017</b>
Retired Members	366	348
Disabled Members	286	283
Widows and Children	292	293
<b>Total Inactive Members</b>	<b>944</b>	<b>924</b>
Actives - Non-DROP	478	470
Actives - DROP <sup>a</sup>	62	59
<b>Total Active and DROP Members</b>	<b>540</b>	<b>529</b>

<sup>a</sup> As of October 1, 2017, there are 214 employees with DROP account balances, of which 59 are active members participating in the DROP.

More detailed breakouts of the membership can be found in Section B.

## GASB Disclosure

Effective with fiscal year ending September 30, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting requirements. Effective with fiscal year ending September 30, 2015, GASB Statement No. 68 replaced GASB Statement No. 27 for employer financial reporting. Information required by GASB Statements Nos. 67 and 68 is provided in a separate report.



## **SECTION A**

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### **ACTUARIAL VALUATION RESULTS AND ASSET INFORMATION**

# Summary of Actuarial Valuation Results

## Determination of City Contributions - Frozen Initial Liability

	<u>October 1, 2016</u>	<u>October 1, 2017</u>
<b>Present Value of All Future Benefits</b>		
Retirees and Beneficiaries	\$ 344,798,628	\$ 325,427,379
Active Firemen	112,535,128	103,275,785
DROP Firemen	46,314,159	48,265,226
System Employees Benefit Fund	70,982	85,002
<b>Total</b>	<b>\$ 503,718,897</b>	<b>\$ 477,053,392</b>
<b>Assets</b>		
Actuarial Asset Value (3-year smoothing)	\$465,333,704	\$ 462,244,910
Present Value of Future Employee Contributions	-	-
<b>Total</b>	<b>\$ 465,333,704</b>	<b>\$ 462,244,910</b>
<b>Unfunded Accrued Liability</b>	<b>\$ 33,335,610</b>	<b>\$ 32,953,962</b>
<b>Present Value of Future Normal Costs</b>	<b>\$ 5,049,583</b>	<b>\$ (18,145,480)</b>
<b>Present Value of Future Salary <sup>a</sup></b>	<b>\$ 290,130,906</b>	<b>\$ 285,197,383</b>
<b>Normal Contribution Percent</b>	<b>1.740%</b>	<b>0.000%</b>
<b>Total Salary <sup>a</sup></b>	<b>\$ 34,394,355</b>	<b>\$ 35,337,439</b>
<b>Annual City Contributions for Plan Year Ending 9/30/2018</b>		
Normal Contribution	\$ 598,462	\$ -
Accrued Liability Amortization Payment	2,715,141	2,715,141
<b>Grand Total</b>	<b>\$ 3,313,603</b>	<b>\$ 2,715,141</b>
<b>Normal Contribution as a % of Total Salary</b>	<b>1.740%</b>	<b>0.000%</b>
<b>Total Contribution as a % of Total Salary</b>	<b>9.634%</b>	<b>7.683%</b>

<sup>a</sup> Includes salary of all active members.

# Summary of Actuarial Valuation Results

## Present Value of Future Benefits

	<u>October 1, 2016</u>	<u>October 1, 2017</u>
<b>Retirees</b>		
1960 Plan	\$ 135,246,378	\$ 130,341,201
Prospective Widows and Children of Retired Firemen	19,768,835	11,168,877
<b>Ordinary Disability</b>		
1960 Plan	5,714,753	5,435,124
Prospective Widows and Children of Retired Firemen	1,100,695	621,687
<b>Accidental Disability</b>		
1960 Plan	140,168,889	138,010,250
Prospective Widows and Children of Retired Firemen	11,121,238	8,396,244
<b>Widows</b>		
1960 Plan	31,139,244	30,932,282
Old Plan	6,549	-
<b>Children</b>		
1960 Plan	532,047	521,714
<b>Total Inactives</b>	<u>\$ 344,798,628</u>	<u>\$ 325,427,379</u>
<b>Active Firemen</b>		
Service Retirement	\$ 108,962,285	\$ 99,877,172
Ordinary Disability Retirement <sup>a</sup>	960,993	898,282
Accidental Disability Retirement <sup>a</sup>	640,663	598,858
Withdrawal Benefit	322,129	249,777
Ordinary Death <sup>a</sup>	824,529	825,848
Accidental Death <sup>a</sup>	824,529	825,848
<b>Total Actives</b>	<u>\$ 112,535,128</u>	<u>\$ 103,275,785</u>
<b>DROP Firemen <sup>b</sup></b>		
Retiree Account Balances	\$ 16,269,758	\$ 17,810,165
Active Firemen <sup>c</sup>	30,044,401	30,455,061
<b>Total DROPS</b>	<u>\$ 46,314,159</u>	<u>\$ 48,265,226</u>
<b>System Employees Benefit Fund</b>	<u>\$ 70,982</u>	<u>\$ 85,002</u>
<b>Total Present Value Future Benefits</b>	<u>\$ 503,718,897</u>	<u>\$ 477,053,392</u>

<sup>a</sup> FRS members are eligible for a refund of contributions made to FRS upon pre-retirement death or disability.

<sup>b</sup> As of October 1, 2017, there are 214 members with DROP account balances, of which 59 are active members participating in the DROP.

<sup>c</sup> Includes active DROP balances, Refund of Member Contributions, and Future Account Additions and Benefits.

# Summary of Actuarial Valuation Results

## Actuarial Value of Assets

### (1) Expected Return on Market Value of Assets for Prior Year

(a) Market Value of Assets as of 9/30/16 <sup>a</sup>				\$ 453,640,021
(b) Actual Income and Disbursements in Prior Year Weighted for Timing				
	<b>Item</b>	<b>Amount</b>	<b>Weight for Timing</b>	<b>Weighted Amount</b>
i) Member Contributions	\$ -	50.0%	\$ -	
ii) City Contributions & Misc.	3,313,603	50.0%	1,656,802	
iii) Benefit Payments	(32,015,540)	50.0%	(16,007,770)	
iv) Refunds	(816,435)	50.0%	(408,218)	
v) Transfer Due to Sick Leave Settlement	166,792	50.0%	83,396	
vi) Total	\$ (29,351,580)		\$ (14,675,790)	
(c) Market Value of Assets Adj. for Actual Income and Disbursements [(a) + (b)(vi)]				\$ 438,964,231
(d) Assumed Rate of Return on Plan Assets for the Year				7.000%
(e) Expected Return Over Twelve Month Period				30,727,496
(f) Expected Market Value of Assets 10/1/17				\$ 455,015,937

### (2) Actual Return on Market Value of Assets for Prior Year

(a) Market Value of Assets as of 9/30/16 <sup>a</sup>	\$ 453,640,021
(b) Income (less investment income and expenses) for Prior Plan Year	(29,351,580)
(c) Market Value of Assets as of 10/1/17 <sup>a</sup>	483,611,287
(d) Actual Return, Net of Expenses [(c) - (b) - (a)]	\$ 59,322,846

### (3) Investment Gain/(Loss) for Prior Period [2(d) - 1(e)]

\$ 28,595,350

### (4) Actuarial Value of Assets as of 10/1/17

(a) Market Value of Assets as of 10/1/17 <sup>a</sup>	\$ 483,611,287
(b) Deferred Investment Gains and (Losses) for Last 3 Years	

	<b>Plan Year</b>	<b>Gain/(Loss)</b>	<b>Weight for Timing</b>	<b>Deferred Amount</b>
i)	2015	(48,897,911)	0.00%	\$ -
ii)	2016	6,908,431	33.33%	2,302,810
iii)	2017	28,595,350	66.67%	19,063,567
iv)	Total	\$ (13,394,130)		\$ 21,366,377

(c) Actuarial Value of Assets [(a) - (b) (iv)]	\$ 462,244,910
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The calculated value is determined by adjusting the market value of assets to reflect the investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last 3 years at the rate of 33.33% per year.

<sup>a</sup> Excluding Future Benefit Fund of \$5,051,183 as of September 30, 2016, and \$5,236,926 as of September 30, 2017

# Summary of Actuarial Valuation Results

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## Amortization Schedule of Unfunded Accrued Liability

<u>Date Established</u>	<u>Original Period</u>	<u>Outstanding Period 10/1/17</u>	<u>Payment End of Year</u>	<u>Outstanding Balance 10/1/17</u>
10/1/2015	30	28 Years, 0 Months	2,715,141	32,953,962
<b>Total*</b>			<b>\$ 2,715,141</b>	<b>\$ 32,953,962</b>

*\*The reduction in unfunded accrued liability for FRS due to plan and assumption changes attributable to BB109 on October 1, 2013, was greater than the remaining frozen initial liability. Consequently, the frozen initial liability for FRS was set equal to zero. A new base was established as of October 1, 2015, for the change in actuarial assumptions.*

# Summary of Actuarial Valuation Results

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The actuarial valuation balance sheet shown below demonstrates the sources of income required to fund the current present value of future benefits as of the actuarial valuation date.

## Valuation Balance Sheet

### Sources of Funds

<b>Actuarial Asset Value</b>		<b>\$ 462,244,910</b>
<b>Present Value of Future Employee Contributions</b>		<b>\$ -</b>
<b>Present Value of City's Future Contributions</b>		
Normal Cost	\$ (18,145,480)	
Accrued Liability	<u>32,953,962</u>	
<b>Total</b>		<b><u>\$ 14,808,482</u></b>
<b>Grand Total</b>		<b><u>\$ 477,053,392</u></b>

# Summary of Actuarial Valuation Results

## Change in Market Value of Assets<sup>a</sup>

		<b>Receipts</b>	
Paid by City			
	Allocated to General Reserve Fund		\$ 3,313,603
Members' Contribution			
	To Members' Savings Fund		\$ -
Income Received on Investments			
	Allocated to Member's Savings Fund	\$10,371,777	
	Allocated to Benefit Reserve Fund	44,442,138	
	Allocated to General Reserve Fund	4,508,931	
	Allocated to Future Benefit Fund	661,871	
	Allocated to Expense Fund	<u>1,067,626</u>	<u>\$ 61,052,343</u>
<b>Total Receipts</b>			<b><u>\$ 64,365,946</u></b>
		<b>Disbursements</b>	
Payment to Retired Members and Dependents:			
	From Benefit Reserve Fund		
	To Retirees, Beneficiaries, and Dependents		\$ (32,015,540)
	From Future Benefit Fund		
	To Retirees, Beneficiaries, and Dependents		\$ (309,336)
	From Members Savings Fund		
	Withdrawals, Deaths, and Retirements		\$ (816,435)
	Operating Expenses		\$ (1,067,626)
<b>Total Disbursements</b>			<b>\$ (34,208,937)</b>
<b>Net Operating Income</b>			<b>\$ 30,157,009</b>
<b>Fund Balance October 1, 2016<sup>a</sup></b>			<b>\$ 458,691,204</b>
<b>Fund Balance October 1, 2017<sup>a</sup></b>			<b>\$488,848,213</b>

<sup>a</sup> Includes Future Benefit Fund Assets of \$5,051,183 as of October 1, 2016, and \$5,236,926 as of October 1, 2017.

# Fund Balance Split

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## Description of Funds

For administrative purposes, the assets of the System are accounted for as four separate funds, as described below. The first three funds were established by Ordinance 49623. The other fund, the Future Benefit Fund, was established by Ordinance 61414. Only the assets of the first three funds are considered when determining the actuarial funding requirements.

**Member's Savings Fund:** All contributions by members are credited to this Fund. Interest at a rate determined by the Board is credited annually on the minimum balance in each member's account during the preceding year. Withdrawal of refunds of member's accumulated contribution is charged to this Fund. Upon retirement or death of an active member after October 2, 1983, the member's own contributions are refunded to the member while the balance of the member's accumulated contribution fund is transferred to the Benefit Reserve Fund.

**Benefit Reserve Fund:** Upon retirement or death, this fund is credited with the remaining balance of the member's accumulated contribution fund after the member's own contributions have been refunded from the Member's Savings Fund. It is also credited with an additional amount from the General Reserve Fund which, when added to the Benefit Reserve Fund, will be adequate to provide the present value of all benefits payable to all members and beneficiaries currently receiving benefits. All annuities granted are payable from this Fund.

**General Reserve Fund:** Contributions made by the City are credited to this Fund, and the reserves for benefits not provided by member's contributions are accumulated in this fund.

**Future Benefit Fund:** The Future Benefit Fund is excluded from the assets used to determine the contribution requirement for the upcoming year. Through the SHARE program, three-fourths of the return on the fund is used to provide ad hoc increases for members not eligible for other benefit increases. One-half of the return was used for the SHARE program prior to September 1, 2016.

Under the 2015 Settlement Agreement, starting in plan year October 1, 2015, \$166,792 will be transferred each year from the Future Benefit Fund to the General Reserve Fund for the next 15-year period.



# Fund Balance Split

## Change in Fund Balances

	<u>Total</u>	<u>Members Savings Fund</u>	<u>Benefit Reserve Fund</u>	<u>General Reserve Fund</u>	<u>Future Benefit Fund</u>
<b>Market Value, September 30, 2016</b>	\$ 458,691,204	\$ 77,140,271	\$ 344,798,628	\$ 31,701,122	\$ 5,051,183
<b>Additions</b>					
City Appropriations	3,313,603	-	-	3,313,603	-
Interest and Dividends Received <sup>1</sup>	59,984,717	10,371,777	44,442,138	4,508,931	661,871
<b>Transfer Due to Surplus/Deficit</b>	-	(6,636,299)	(31,797,847)	38,434,146	-
<b>Total Additions</b>	<u>63,298,320</u>	<u>3,735,478</u>	<u>12,644,291</u>	<u>46,256,680</u>	<u>661,871</u>
<b>Deductions</b>					
Benefit Payments	(32,324,876)	-	(32,015,540)	-	(309,336)
Refunds w/o Interest and Withdrawals w/ Interest	(816,435)	(816,435)	-	-	-
Transfer in accordance with Sick Leave Settlement	-	-	-	166,792	(166,792)
<b>Total Deductions</b>	<u>(33,141,311)</u>	<u>(816,435)</u>	<u>(32,015,540)</u>	<u>166,792</u>	<u>(476,128)</u>
<b>Market Value, September 30, 2017</b>	<u>\$ 488,848,213</u>	<u>\$ 80,059,314</u>	<u>\$ 325,427,379</u>	<u>\$ 78,124,594</u>	<u>\$ 5,236,926</u>

<sup>1</sup> Net of administrative expenses

## **SECTION B**

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### **DATA REFLECTING PLAN MEMBERSHIP**

# Data Reflecting Plan Membership

## Summary of Membership as of October 1, 2017

### Retirees and Dependents

	<u>Number</u>	<u>Monthly Pension</u>
<b>Retirees</b>		
1960 Plan	348	\$ 1,138,875
<b>Ordinary Disability</b>		
1960 Plan	21	38,820
<b>Accidental Disability</b>		
1960 Plan	262	1,044,848
<b>Widows</b>		
1960 Plan	276	322,586
Old Plan	0	-
<b>Children</b>		
1960 Plan	<u>17</u>	<u>8,448</u>
<b>Total</b>	<b>924</b>	<b>\$ 2,553,577</b>

### Active and DROP

	<u>Number</u>	<u>Member's Annual</u>	
		<u>Compensation</u>	<u>Contribution</u>
<b>Actives - Non-DROP</b>	470	\$ 31,079,373	\$ 0
<b>Actives - DROP</b>	<u>59</u>	<u>4,258,066</u>	<u>0</u>
<b>Total</b>	<b>529</b>	<b>\$ 35,337,439</b>	<b>\$ 0</b>

# Data Reflecting Plan Membership

## Active Non-DROP Members as of October 1, 2017 By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34		35 & Up
20-24									\$ -
25-29		1							\$ 55,873
30-34		15							\$ 860,330
35-39		20	26						\$ 2,882,197
40-44		13	26	32	4				\$ 4,784,096
45-49		4	23	52	18	9			\$ 6,908,378
50-54		1	16	33	17	65	2		\$ 9,018,316
55-59			5	9	6	43	8	1	\$ 4,942,104
60-64			3	3	3		5	6	\$ 1,566,285
65-69				1					\$ 61,794
<b>Totals: Count</b>	<b>0</b>	<b>54</b>	<b>99</b>	<b>130</b>	<b>48</b>	<b>117</b>	<b>15</b>	<b>7</b>	<b>470</b>
<b>Totals: Payroll</b>	<b>\$0</b>	<b>\$3,237,112</b>	<b>\$6,139,513</b>	<b>\$8,268,648</b>	<b>\$3,355,920</b>	<b>\$8,312,362</b>	<b>\$1,064,509</b>	<b>\$701,309</b>	<b>\$31,079,373</b>

# Data Reflecting Plan Membership

## Active DROP Members as of October 1, 2017 By Attained Age and Years of Service

Attained		20-24	25-29	30 & Up	Totals
Age					
<b>40-44</b>					\$ -
<b>45-49</b>	2				2
		\$ 125,300	\$ -	\$ -	\$ 125,300
<b>50-54</b>	3	7	3		13
		\$ 187,802	\$ 489,935	\$ 238,158	\$ 915,894
<b>55-59</b>	11	5	20		36
		\$ 704,381	\$ 349,511	\$ 1,611,086	\$ 2,664,977
<b>60-64</b>	5	1	2		8
		\$ 328,767	\$ 79,316	\$ 143,811	\$ 551,894
<b>Totals:</b>	<b>Count</b>	<b>21</b>	<b>13</b>	<b>25</b>	<b>59</b>
	<b>Payroll</b>	<b>\$ 1,346,250</b>	<b>918,761</b>	<b>1,993,055</b>	<b>\$ 4,258,066</b>

# Data Reflecting Plan Membership

## Service Retirees - 1960 Plan

<u>Age</u> <u>9/30/2017</u>	<u>Number</u>	<u>Monthly</u> <u>Allowance</u>	<u>Age</u> <u>9/30/2017</u>	<u>Number</u>	<u>Monthly</u> <u>Allowance</u>
46	1	\$ 1,846.85	73	1	\$ 4,069.75
49	3	6,133.03	74	6	25,849.60
50	3	6,522.79	75	11	36,150.82
51	8	19,727.80	76	13	45,284.22
52	7	15,988.89	77	10	38,196.48
53	8	21,774.15	78	21	64,228.98
54	3	7,278.78	79	12	37,910.56
55	10	22,382.58	80	9	24,292.33
56	7	18,966.62	81	7	19,557.00
57	2	9,419.99	82	8	24,994.71
58	10	30,921.59	83	4	9,661.02
59	11	37,213.80	84	7	20,204.26
60	9	42,172.94	85	8	20,910.57
61	10	39,076.80	86	9	18,658.73
62	9	32,987.32	87	4	8,614.23
63	7	25,997.21	88	5	12,067.54
64	10	42,314.13	89	4	8,042.64
65	8	34,548.06	90	2	7,257.78
66	10	41,104.95	91	3	7,364.78
67	13	46,321.96	92	3	9,500.07
68	9	41,421.94	93	1	1,726.76
69	9	23,540.85	94	1	3,092.02
70	12	49,744.69	96	1	3,286.89
71	9	40,245.64	97	2	5,025.48
72	8	25,274.01			
<b>Total</b>				<b>348</b>	<b>\$ 1,138,874.59</b>
<b>Average Monthly Allowance</b>					<b>\$ 3,272.63</b>
<b>Average Age</b>					<b>70.3</b>

# Data Reflecting Plan Membership

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## Ordinary Disability Retirees - 1960 Plan

<u>Age</u> <u>9/30/2017</u>	<u>Number</u>		<u>Monthly</u> <u>Allowance</u>
43	2	\$	4,263.46
48	1		1,943.70
49	3		4,218.23
50	1		1,253.85
52	1		1,102.89
53	1		3,977.39
56	1		1,702.33
62	1		1,019.36
63	1		1,300.66
64	1		1,316.84
65	1		1,456.90
66	1		1,409.70
69	2		4,433.64
74	1		2,848.56
75	2		2,890.54
76	1		3,681.68
<b>Total</b>	<b>21</b>	<b>\$</b>	<b>38,819.73</b>
<b>Average Monthly Allowance</b>		<b>\$</b>	<b>1,848.56</b>
<b>Average Age</b>			<b>59.5</b>

# Data Reflecting Plan Membership

## Accidental Disability Retirees - 1960 Plan

<u>Age</u> <u>9/30/2017</u>	<u>Number</u>	<u>Monthly</u> <u>Allowance</u>	<u>Age</u> <u>9/30/2017</u>	<u>Number</u>	<u>Monthly</u> <u>Allowance</u>
35	1	\$ 4,007.04	66	5	\$ 23,333.82
40	1	4,346.41	67	9	40,641.85
41	1	4,346.41	68	8	31,822.37
42	1	4,007.04	69	6	31,553.51
43	1	4,007.04	70	6	25,032.64
45	1	3,829.21	71	5	21,320.64
46	2	9,152.46	72	3	14,959.02
47	3	12,433.32	73	3	12,651.07
48	3	12,160.58	74	11	43,969.21
49	2	7,886.18	75	4	18,069.60
50	5	20,268.20	76	3	11,141.36
51	4	16,673.15	77	10	35,423.41
52	6	24,989.18	78	4	10,818.70
53	11	46,194.99	79	8	30,692.27
54	10	42,513.07	80	8	23,147.35
55	12	48,717.22	81	4	11,967.88
56	12	51,294.85	82	12	39,589.33
57	8	35,801.09	83	3	7,179.96
58	2	10,244.69	84	2	3,400.60
59	11	50,977.06	85	3	12,572.51
60	9	39,996.92	86	3	9,788.37
61	2	7,645.64	87	4	11,890.04
62	4	16,020.76	88	1	820.63
63	10	45,625.21	89	2	5,553.05
64	4	16,215.59	90	1	2,334.67
65	4	16,462.74	91	4	9,357.62
<b>Total</b>				<b>262</b>	<b>\$ 1,044,847.53</b>
<b>Average Monthly Allowance</b>					<b>\$ 3,987.97</b>
<b>Average Age</b>					<b>66.1</b>



# Data Reflecting Plan Membership

## Widows - 1960 Plan

<u>Age</u> <u>9/30/2017</u>	<u>Number</u>	<u>Monthly</u> <u>Allowance</u>	<u>Age</u> <u>9/30/2017</u>	<u>Number</u>	<u>Monthly</u> <u>Allowance</u>
29	1	\$ 1,953.57	75	14	\$ 17,280.49
51	1	1,868.76	76	12	14,930.33
52	2	3,623.35	77	19	22,538.05
53	2	3,473.04	78	11	10,047.88
54	2	4,087.68	79	9	12,137.11
55	1	1,987.96	80	6	7,562.32
56	2	3,718.74	81	12	13,257.34
57	1	1,590.88	82	7	8,526.12
58	2	2,109.32	83	7	8,094.14
59	3	5,840.94	84	7	6,081.78
60	3	6,551.24	85	12	10,749.72
61	2	2,946.54	86	15	14,482.21
62	2	3,265.16	87	10	10,262.50
63	2	3,416.60	88	7	7,315.12
64	4	7,183.50	89	10	10,089.42
65	3	4,743.44	90	11	7,685.03
66	6	9,320.96	91	4	3,292.10
67	3	4,238.73	92	2	2,056.42
68	6	8,161.69	93	5	3,514.15
69	1	2,221.95	94	5	3,613.76
70	5	6,602.40	95	4	2,123.94
71	7	8,589.34	96	3	2,467.74
72	6	6,642.72	97	2	1,014.02
73	7	10,989.31	99	1	491.58
74	7	7,845.21			
<b>Total</b>				<b>276</b>	<b>\$ 322,586.30</b>
<b>Average Monthly Allowance</b>					<b>\$ 1,168.79</b>
<b>Average Age</b>					<b>78.3</b>

# Data Reflecting Plan Membership

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## Children - 1960 Plan

<u>Age</u> <u>9/30/2017</u>	<u>Number</u>	<u>Monthly</u> <u>Allowance</u>
15	1	\$ 318.18
16	1	544.96
17	1	433.49
19	2	822.42
20	2	1,608.11
21	1	352.83
23	2	860.83
24	2	976.42
25	2	999.07
36	1	931.01
47	1	286.01
61	<u>1</u>	<u>314.61</u>
<b>Total</b>	<b>17</b>	<b>\$ 8,447.94</b>
<b>Average Monthly Allowance</b>		<b>\$ 496.94</b>
<b>Average Age</b>		<b>25.6</b>

## SECTION C

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### ACTUARIAL VALUATION PROCEDURES

# Actuarial Cost Method

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**The Actuarial Cost Method.** The method used in this actuarial valuation is the Frozen Entry Age Actuarial Cost Method. This method determines a normal cost on an aggregate basis expressed as a level percentage of pay. The normal cost rate equals the ratio of (a) the present value of future benefits less the actuarial value of assets less the frozen unfunded actuarial liability, to (b) the present value of future salaries. Under this method, the actuarial gains (losses), as they occur, reduce (increase) future normal costs.

**Amortization of Frozen Unfunded Accrued Liabilities.** Unfunded actuarial accrued liabilities attributable to changes in assumptions, plan provisions or methods are amortized on a level dollar basis over 30 years from the creation of the unfunded base. A schedule of the frozen unfunded accrued liability amortization is shown in section A of this report.

The total contribution is equal to the normal cost plus the amortization of the frozen unfunded accrued liabilities.

**Actuarial Value of Assets.** The calculated value is determined by adjusting the market value of assets, excluding the future benefit fund, to reflect the investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last three years at a rate of 33 percent per year.

# Actuarial Assumptions

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**The assumed rate of investment return used** was 7.00 percent, net of investment and administrative expenses, annually.

**The post-retirement healthy mortality rates** are based on the RP-2014 Healthy Annuitant mortality table, sex distinct. This assumption is used to measure the probabilities of members dying after retirement and the probabilities of each benefit payment being made after retirement. Illustrative rates are shown below. This table provides a margin, of approximately 41 percent based on the most recent experience study, for near-term and long-term mortality improvements.

<b>Post Retirement Mortality</b>		
<b>Rate Per 1,000 Employees</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
45	2.7430	2.1130
50	4.0640	2.7680
55	5.7350	3.6220
60	7.7710	5.1910
65	11.0130	8.0480
70	16.7690	12.8680
75	26.8260	20.9380
80	44.7220	34.8440
85	77.4970	60.5040

**The pre-retirement mortality rates** are based on the RP-2014 Employee mortality tables, sex distinct. Illustrative rates are shown below.

<b>Ordinary Pre Retirement Mortality</b>		
<b>Rate Per 1,000 Employees</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
25	0.4840	0.1730
35	0.5230	0.2860
45	0.9730	0.6570
55	2.7880	1.6730
65	8.2770	3.6960

# Actuarial Assumptions

**The post-disability mortality rates** are assumed to be 20 percent higher than post-retirement mortality rates. Illustrative rates are shown below.

Post - Disability Mortality Rate Per 1,000 Employees		
Age	Male	Female
45	3.2916	2.5356
55	6.8820	4.3464
65	13.2156	9.6576
75	32.1912	25.1256
85	92.9964	72.6048

**Rates of separation from active membership** are represented by the following table (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members terminating employment.

Employee Withdrawal Rate Per 1,000 Employees	
Years of Service	Rate of Withdrawal
0	75.0
1	100.0
2	50.0
3	50.0
4	22.5
5	22.5
6	22.5
7	22.5
8	22.5
9	22.5
10	22.5
11	12.5
12	12.5
13	12.5
14	12.5
15	12.5
16	5.0
17	5.0
18	5.0
19	5.0
20 or more	0.0

# Actuarial Assumptions

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*The annual rates of salary increase* used for individual members are shown below and include a wage inflation assumption of 3.00 percent. This assumption is used to project a member's current salary for purposes of determining the present value of future salaries. Because FRS benefits have been frozen as of February 1, 2013, this assumption is not used to determine benefits.

Sample Service	Salary Increase Assumptions For an Individual Member	
	Increase Next Year	
0	4.00%	
1	4.00%	
2	4.00%	
3	4.00%	
4	4.00%	
5	3.50%	
6	3.50%	
7	3.50%	
8	3.50%	
9	3.50%	
10	3.00%	
11	3.00%	
12	3.00%	
13	3.00%	
14	3.00%	
15 or more	3.00%	

# Actuarial Assumptions

**The rates of disability** for active members are broken out between ordinary and accidental disability. Ordinary disability accounts for 60 percent of total disabilities and accidental disability accounts for 40 percent of total disabilities.

Employee Disablement Rate Per 1,000 Employees		
Age	Ordinary	Accidental
25	3.00	2.00
30	3.00	2.00
35	3.00	2.00
40	6.00	4.00
45	6.00	4.00
50	6.00	4.00
55	6.00	4.00
60	9.00	6.00

**Probabilities of retirement** for members eligible to retire during the next year were as follows:

Rates of Retirement	
Years of Service	Rate of Retirement
20	4.00 %
21	2.00
22	2.00
23	2.00
24	2.00
25	3.00
26	4.00
27	4.00
28	4.00
29	4.00
30	10.00
31	10.00
32	10.00
33	20.00
34	20.00
35 or more	100.00

100% retirement assumed at age 70

It was assumed that grandfathered members with less than 20 years of service as of February 1, 2013, will not retire prior to age 55. The retirement rates for the year the member first becomes eligible at age 55 were increased by 5.00% for each year of service over 20 years.



# Actuarial Assumptions

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**Marital status** varies by gender. A male spouse is assumed to be three years older than a female spouse. One hundred percent of members are assumed to be married.

**Sick Leave Benefits.** In 2010, the City of St. Louis passed ordinances 67845 and 67846 which effectively ended the practice of firefighters accruing sick leave for retirement benefit purposes. Sick leave accrued prior to September 26, 2010, can still be used for retirement benefit purposes. Based on the 2015 Settlement Agreement between FRS and the City, the accrued sick leave balance as of February 1, 2013, can be converted to a pension benefit upon retirement.

It is assumed that the sick leave balance remaining as of the actuarial valuation date will be maintained until the member retires. It is assumed that members will elect to receive 50 percent of the value as a lump sum deposit into the DROP account, and receive 25 percent as service added to the credited service used in the calculation of the retirement benefit and receive 25 percent of the value as additional pay solely for purposes of determining the final average earnings used in the calculation of the retirement benefit.

Furthermore, it is assumed that if a member has not participated in the DROP, the member will participate in the DROP when pension payments commence and the benefit increase and lump sum will be payable four years later at actual retirement. If the member has participated in the DROP and subsequently returned to active service, the benefit increase and lump sum are assumed to be payable immediately upon retirement.

Pursuant to BB109, and subsequent settlement agreements, it is assumed that sick leave benefits do not include salary increases after February 1, 2013.

**Shift Differential.** No assumption is made for shift differential because it was removed for active members for City fiscal year ending June 30, 2011, and is not expected to be reinstated.

**DROP Benefits.** It is assumed that members will enter the DROP with 23 years of service. If the member has more than 23 years of service at the actuarial valuation date, it is assumed that the member will enter the DROP the following year. Members with less than 20 years of service as of February 1, 2013, are assumed to enter the DROP at the later of 23 years of service or age 55. It is assumed that members who enter the DROP with less than 30 years of service will return to active status after completing five years in the DROP. DROP balances are assumed to earn 7.625 percent. If a member with a DROP balance dies prior to termination of employment, it is assumed that a lump sum payment equal to the amount in the member's DROP account shall be paid to the beneficiary or the member's estate.

Pursuant to BB109, it is assumed that DROP benefits do not include salary increases after February 1, 2013.

# Summary of Plan Provisions

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The Retirement System was revised effective January 1, 1960, under Ordinance 49623.

Prior to January 1, 1960, there were two groups of members, one group referred to as “Old Plan” and the other group as “New Plan.” There is no longer a need for this separation in the active members because the revised system makes no distinction between the “Old Plan” members and the “New Plan” members. The retirees are divided into Old Plan, 1944 Plan (New Plan) and 1960 Plan (Ordinance 49623).

## Provisions Attributable to Board Bill 109

First effective with the actuarial valuation as of October 1, 2013, the actuarial valuation reflects the changes attributable to Ordinance 69245, Ordinance 69353, and Judge Dierker’s subsequent ruling (Board Bill 109 or BB109). Our understanding of the key changes to the FRS is as follows:

- FRS is frozen as of February 1, 2013. That is, benefits paid from FRS will be based on the member’s service and salary earned as of February 1, 2013. Participants with benefit service in FRS are classified as “grandfathered” members.
- Firefighters hired after February 1, 2013, are not members of FRS.
- Vesting and eligibility service earned after February 1, 2013, in the newly established Firemen’s Retirement Plan of St. Louis (FRP) will count towards vesting and eligibility service in FRS.
- Ancillary benefits, for pre-retirement death or disability occurring after February 1, 2013, are assumed to be paid from the newly established FRP. FRS members who become disabled or die before retirement are eligible for a refund of contributions made to FRS.
- Employer contributions to the frozen FRS will continue to be calculated under the Frozen Initial Liability cost method.
- Member contributions after February 1, 2013, from “grandfathered” participants in FRS will be paid to the FRP.
- Grandfathered members with 20 or more years of service as of February 1, 2013, are eligible to retire with unreduced FRP benefits if retirement commences before age 55.
- Grandfathered members with less than 20 years of service as of February 1, 2013, are eligible to retire with actuarially reduced FRP benefits if retirement commences before age 55.

## Service Retirement

Retirements after June 3, 1978: Voluntary retirement after 20 or more years of service. Compulsory retirement at age 60 with 30 years of service. The monthly retirement allowance consists of 40 percent of the final two-year average monthly compensation at 20 years of service, plus 2.0 percent of such final average compensation for each of the next five years of service (50 percent of final average compensation after 25 years of service), plus 4.0 percent of such final average compensation for each additional year of service over 25 years, but with a maximum of 30 years (70 percent of final average compensation after 30 years of service).

Effective October 3, 1982, any retired firefighter may act as a special advisor to the retirement system and thereby be entitled to a minimum pension of \$350.00 per month.

Effective October 1, 1989, any unused accrued sick leave will be added to the years of service used to determine the monthly pension allowance. If the total years of service are limited to 30 years as described above, the unused accrued sick leave will be added to 30.

# Summary of Plan Provisions

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Effective November 28, 1995, the monthly retirement allowance consists of 40 percent of the final two-year average monthly compensation at 20 years of service, plus 2.0 percent of such final average compensation for each of the next five years of service (50 percent of final average compensation after 25 years of service), plus 5.0 percent of such final average compensation for each additional year of service over 25 years, but with a maximum of 30 years (75 percent of final average compensation after 30 years of service).

Effective July 1, 2002, a Member has three options for use of unused sick leave and service retirement:

- Receive 100 percent of the value (sick leave multiplied by rate of pay) as a lump sum deposit into the DROP account;
- Receive 100 percent of the sick leave as service added to the credited service used in the calculation of the retirement benefit; or
- Receive 50 percent of the value as a lump sum deposit into the DROP account, and receive 25 percent as service added to the credited service used in the calculation of the retirement benefit and receive 25 percent of the value as additional pay solely for purposes of determining the final average earnings used in the calculation of the retirement benefit.

In 2010, the City of St. Louis passed ordinances 67845 and 67846 which effectively ended the practice of firefighters accruing sick leave for retirement benefit purposes. Sick leave accrued prior to September 26, 2010, can be converted to a pension benefit at retirement.

As part of the 2015 Settlement Agreement, accrued sick leave earned through February 1, 2013, can be converted to a pension benefit at retirement.

## Ordinary Disability Retirement

Provides a service retirement allowance if 20 or more years of service. Provides for a monthly retirement allowance after five years of service (but less than 20 years) which is the largest of (a) 90 percent of the monthly service retirement allowance based on the actual service or (b) one-fourth of the final two-year average monthly compensation. In addition, a monthly benefit of 10 percent of the final two-year average monthly compensation, for each unmarried dependent child under age eighteen, but not in excess of three children, is provided.

**Benefits are paid by FRS if disability occurred prior to February 1, 2013.**

# Summary of Plan Provisions

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## Accidental Disability Retirement

Provides for retirement if the member is totally and permanently incapacitated for duty as the result of an accident or exposure occurring while in the actual performance of duty. The monthly retirement allowance is 75 percent of the highest monthly salary in effect for the highest step in the range of salary, for his rank held at retirement.

If the accident immediately, totally and permanently incapacitates the member from performing any type of work and confines him to his home, the Board may provide an increased retirement allowance not to exceed 100 percent of the member's actual rate of compensation as of the date his disability allowance began.

**Benefits are paid by FRS if disability occurred prior to February 1, 2013.**

## DROP Benefit

A member eligible for service retirement may defer receipt of the service retirement benefit for up to five years while continuing active employment. Contributions by the member while in the DROP are one percent of annual compensation. The amount the member would have received as a service retirement benefit is deposited into the DROP account. A member terminating the DROP plan may retire or continue active service. Service while in the DROP will not count as creditable service. Upon termination of employment, the member may choose to receive the DROP account with the interest earned by the account.

## Ordinary Death Benefit

Provides for the following benefits after death which occurs:

- (1) While in service, a monthly retirement allowance to the widow during widowhood of the greater of (1) 50 percent<sup>a</sup> of the final two-year average monthly compensation or (2) \$200. In addition, 10 percent of each unmarried dependent child under age eighteen in her care, but not in excess of three children. **Benefits are paid by FRS if death occurred prior to February 1, 2013.**
- (2) After service retirement, accidental disability retirement or ordinary disability retirement, a monthly allowance to the widow during widowhood of the greater of (1) 50 percent<sup>a</sup> of the final two-year average monthly compensation, or (2) \$200. In addition, 10 percent of such compensation for each unmarried dependent child under eighteen in her care but not in excess of three children. **Benefits are paid by FRS if retirement occurred prior to February 1, 2013.**

<sup>a</sup> Assumes the widow has applied for and been appointed to the status of special consultant; if not the amount is 25 percent.

# Summary of Plan Provisions

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## Accidental Death Benefit

Provides, if death is the result of an accident or exposure while in the actual performance of duty, a monthly allowance to the widow during her widowhood of the greater of (1) 50 percent of the final two-year average monthly compensation or (2) \$200. In addition, 10 percent for each unmarried dependent child under 18 in her care but not in excess of three children. **Benefits are paid by FRS if death occurred prior to February 1, 2013.**

## \$2,000 Lump Sum Death Benefit

Provides a \$2,000 lump sum amount upon the death of an active or retired member. **Lump sum death benefits are paid by FRS if retirement occurred prior to February 1, 2013, or if pre-retirement death occurred prior to February 1, 2013.**

## Cost-of-Living Adjustments

(Ordinance 56444) Retirement allowances to members who retired after March 16, 1973, and prior to December 28, 1983, shall be increased 3.0 percent whenever the Consumer Price Index released by the U.S. Department of Labor shows an increase of at least 3.0 percent for three consecutive months in the preceding twelve-month period. Prior to August 31, 1980, each increase was applied to the base retirement benefit at time of retirement. Commencing August 31, 1980, the cost-of-living adjustment is made to the current retirement benefit.

Ordinance 59018 changed the cost-of-living provision for anyone retiring after December 28, 1983. For those members who retired subsequent to December 28, 1983, the cost-of-living increases for service or ordinary disability retirement are based upon the number of years of service at retirement, and are subject to a maximum of the actual increase in the Consumer Price Index over the most recent 12 months.

For a member with less than 25 years of service at retirement, the cost-of-living is 1.5 percent per year up to age 60 and 5.0 percent per year after age 60 with a 25 percent maximum applied past age 60. For a member with at least 25 years of service but less than 30 years at retirement, the cost-of-living increase is 2.25 percent per year up to age 60 and 5.0 percent per year after age 60 with a 25 percent maximum applied past age 60. For a member with 30 or more years of service at retirement, the cost-of-living increase is 3.0 percent per year up to age 60 and 5.0 percent per year after age 60 with a 25 percent maximum applied past age 60. For a member who retires at age 60 or later, the cost-of-living increase is 5.0 percent per year with a 25 percent maximum applied.

For a member who retires with an accidental disability retirement, the cost-of-living increase is 3.0 percent per year up to age 60 and 5.0 percent per year after age 60 with a 25 percent maximum applied past age 60.

# Summary of Plan Provisions

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## Return of Contributions

Upon service retirement, ordinary disability, accidental disability or death of an active member, contributions without interest are refunded. Upon withdrawal from service of a member prior to eligibility for a service retirement allowance, the entire amount of the member's contributions with interest accumulated is returned to the member in lieu of any other benefits.