



**THE CITY OF SHREWSBURY**  
**SUPPLEMENTAL ACTUARIAL VALUATION OF ALTERNATE LAGERS BENEFITS**  
**FEBRUARY 29, 2016**

## Table of Contents

	<b>Page</b>
Actuary's Certification Letter.....	1
Alternate Plan Employer Contribution Rates.....	3
Appendix I	
Summary of Financial Assumptions	
Appendix II	
Summary of LAGERS Provisions	
Appendix III	
Benefit Illustrations	

May 24, 2017

The City of Shrewsbury  
Shrewsbury, Missouri

Ladies and Gentlemen:

Submitted in this report are the results of an actuarial valuation prepared to determine the employer contribution rates required to support, for your employees, certain benefits provided by the Missouri Local Government Employees Retirement System (LAGERS). This report contains the information needed to comply with Missouri state disclosure requirements regarding changes in LAGERS benefits by a political subdivision (Sections 105.660 - 105.685 RSMo).

The contribution requirement for benefits likely to accrue as a result of the future service of your employees is described in this report as the current cost plus the disability cost. This contribution rate, expressed as a percent of active employee payroll, will depend on the benefit plan adopted.

The contribution requirement to pay for benefits likely to result from service rendered by your employees prior to the valuation date, the liability for which is not covered by present employer account balances, is described in this report as the prior service cost. The prior service cost is the rate of contribution designed to pay for any unfunded actuarial accrued liability.

Section 70.730 of the Revised Statutes of Missouri requires participating employers to contribute the current cost, disability cost, and prior service cost for the benefit plan in effect. These contributions are mandatory.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix I of this report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 29, 2016. Annual actuarial valuation results for the political subdivision and information pertaining to those results may be found in the political subdivision's annual actuarial valuation report as of February 29, 2016.

The computed contribution rates will permit the System to continue to operate in accordance with the actuarial principles of level cost financing and the state law which governs LAGERS. Summary provisions of the law as well as benefit illustrations can be found in Appendices II and III.

The City of Shrewsbury  
May 24, 2017  
Page 2

In accordance with 105.675 RSMo, note that this entire report must be available as public information for at least 45 calendar days prior to the date final official action is taken by your governing body to adopt an alternate benefit plan. You may wish to make notice of this report in the official minutes of the next meeting of your governing body. This action would not be binding on your subdivision, yet would establish the beginning date of the 45 day waiting period. The statement of cost must also be provided to the Joint Committee on Public Employee Retirement. The statement can be mailed to the State Capitol, Room 219-A, Jefferson City, MO 65101 or e-mailed to [jcpers@senate.mo.gov](mailto:jcpers@senate.mo.gov).

The valuation was based on the same data as was used in your February 29, 2016 annual actuarial valuation. If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

Mita D. Drazilov is a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

A handwritten signature in black ink that reads "Mita Drazilov". The signature is written in a cursive, flowing style.

Mita D. Drazilov, ASA, MAAA

## **Alternate Plan Provisions Affecting Employer Contribution Rates**

The law governing LAGERS provides for either a contributory plan or a non-contributory plan, with benefits based on either a 5 year or 3 year Final Average Salary (FAS).

***Contributory Plan.*** Under the contributory plan, each covered member contributes 4% of compensation to LAGERS. If an employee terminates before being eligible for an immediate benefit, the member's contributions, plus any interest credited to the member's individual account, are refunded upon request.

***Non-Contributory Plan.*** Under the non-contributory plan, there is no individual employee contribution to the plan, no individual account maintained for each employee, and no refund paid to employees who terminate before being eligible for a benefit.

The law further provides for nine different benefit programs (benefit formula factors) and allows an employer to elect "rule of 80" eligibility for benefits. Under the rule of 80, employees are eligible for unreduced benefits at the earlier of (i) attainment of their minimum service retirement age or (ii) such time as their years of age plus years of LAGERS credited service equals 80.

In total this allows for 72 different combinations of benefit plans, giving employers considerable latitude in designing the retirement program that best suits their particular situation.

The applicable combinations of these items may be changed from time to time, however, there are limitations on the frequency of changes. A more detailed description of plan provisions may be found in Appendix II of this report.

**The City of Shrewsbury**  
**Computed Employer Contribution Rates - General Employees**  
**As of February 29, 2016**

<u>Benefit Plans</u>	<u>Present</u>	<u>Alternate</u>
# Benefit Program:	LT-5(62)	LT-8(65)
Final Average Salary:	3 year	3 year
Member Contributions:	Non-Contributory	Non-Contributory
Retirement Eligibility:	Regular	Regular

<u>Present Plan</u>	<u>Rates</u>
Current Service Cost	7.3%
Disability Cost	0.3
Prior Service Cost	<u>(5.5)</u>
Total	2.1%
<u>Alternate Plan</u>	
Current Service Cost	8.7%
Disability Cost	0.3
Prior Service Cost*	<u>(2.8)</u>
Total	6.2%
<b>INCREASE IN CONTRIBUTION RATE FOR ALTERNATE PLAN</b>	<u><b>4.1%</b></u>

**Employer contribution rates shown above are for the fiscal year beginning in 2017. If the alternate plan is adopted prior to the fiscal year beginning in 2017, 4.1% would be added to the employer contribution rate currently in effect.**

# Change in provisions from present plan.

\* Adoption of the alternate plan would increase the actuarial accrued liability by \$318,393 which was amortized over a 20 year period to compute the increase in the Prior Service Cost.

**The City of Shrewsbury**  
**Projected Estimated Employer Contribution Rates - General Employees**  
**As of February 29, 2016**

Valuation Date Feb. 28	Estimated Projected Payroll	Present Plan			Alternate Plan			Change Due to Proposed Provisions		
		Estimated Employer Contribution		Estimated Difference	Estimated Employer Contribution		Estimated Difference	Estimated Employer Contribution		Estimated Difference
		As a % of Payroll	Annual Dollars	Between AAL and AVA	As a % of Payroll	Annual Dollars	Between AAL and AVA	As a % of Payroll	Annual Dollars	Between AAL and AVA
2016	\$868,203	2.1%	\$18,232	\$(487,544)	6.2%	\$53,829	\$(169,151)	4.1%	\$35,597	\$318,393
2017	896,420	2.1	18,825	(473,287)	6.2	55,578	(155,731)	4.1	36,753	317,556
2018	925,554	2.1	19,437	(456,383)	6.2	57,384	(140,502)	4.1	37,947	315,881
2019	955,635	2.1	20,068	(436,589)	6.2	59,249	(123,307)	4.1	39,181	313,282
2020	986,693	2.1	20,721	(413,641)	6.2	61,175	(103,975)	4.1	40,454	309,666
2021	1,018,761	2.1	21,394	(387,255)	6.2	63,163	(82,324)	4.1	41,769	304,931
2022	1,051,871	2.1	22,089	(357,124)	6.2	65,216	(58,153)	4.1	43,127	298,971
2023	1,086,057	2.1	22,807	(322,917)	6.2	67,336	(31,252)	4.1	44,529	291,665
2024	1,121,354	2.1	23,548	(284,277)	6.2	69,524	(1,389)	4.1	45,976	282,888
2025	1,157,798	2.1	24,314	(240,819)	6.2	71,783	31,684	4.1	47,469	272,503

AAL = Actuarial Accrued Liability  
AVA = Actuarial Value of Assets

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) For purposes of the above projections, it was assumed that all actuarial assumptions would be realized. In particular, it was assumed that the actuarial value of assets would earn 7.25% in each year.
- 3) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 4) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections. Revisions to the funding policy were recently adopted by the Board. The revisions will go into effect beginning with the 2017 valuations and are not reflected in the above projections.
- 5) Differences between fiscal end dates of the employer and the actuarial valuation date of February 29<sup>th</sup> have not been incorporated in the above results.
- 6) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

Other disclosures required by Section 105.665 of the Revised Statutes of Missouri (RSMo):

- 1) As of February 29, 2016, the actuarial value of assets is \$2,238,851; the estimated market value of assets is \$2,100,235; the actuarial accrued liability is \$1,751,307; and the funded ratio is 127.8%. These results are based on the assets and liabilities associated with the Employer Accumulation Fund and the Member Deposit Fund for this division.
- 2) Under Section 70.730 of the Revised Statutes of Missouri, the computed employer contribution rate shall not exceed the contribution rate for the immediately preceding fiscal year by more than one percent (not including the effects of any benefit changes). As of February 29, 2016, there is no difference between the capped and uncapped employer contribution rate.

**The City of Shrewsbury**  
**Computed Employer Contribution Rates - Police Employees**  
**As of February 29, 2016**

<u>Benefit Plans</u>	<u>Present</u>	<u>Alternate</u>
# Benefit Program:	LT-5(62)	LT-8(65)
Final Average Salary:	3 year	3 year
Member Contributions:	Non-Contributory	Non-Contributory
Retirement Eligibility:	Regular	Regular

<u>Present Plan</u>	<u>Rates</u>
Current Service Cost	8.8%
Disability Cost	0.5
Prior Service Cost	<u>(1.2)</u>
Total	8.1%

<u>Alternate Plan</u>	
Current Service Cost	10.4%
Disability Cost	0.6
Prior Service Cost*	<u>1.7</u>
Total	12.7%

**INCREASE IN CONTRIBUTION  
RATE FOR ALTERNATE PLAN** 4.6%

**Employer contribution rates shown above are for the fiscal year beginning in 2017. If the alternate plan is adopted prior to the fiscal year beginning in 2017, 4.6% would be added to the employer contribution rate currently in effect.**

# Change in provisions from present plan.

\* Adoption of the alternate plan would increase the actuarial accrued liability by \$466,464 which was amortized over a 20 year period to compute the increase in the Prior Service Cost.



**The City of Shrewsbury**  
**Projected Estimated Employer Contribution Rates - Police Employees**  
**As of February 29, 2016**

Valuation Date Feb. 28	Estimated Projected Payroll	Present Plan			Alternate Plan			Change Due to Proposed Provisions		
		Estimated Employer Contribution		Estimated Difference Between AAL and AVA	Estimated Employer Contribution		Estimated Difference Between AAL and AVA	Estimated Employer Contribution		Estimated Difference Between AAL and AVA
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2016	\$1,173,442	8.1%	\$95,049	\$(161,684)	12.7%	\$149,027	\$304,780	4.6%	\$53,978	\$466,464
2017	1,211,579	8.1	98,138	(158,384)	12.7	153,871	306,854	4.6	55,733	465,238
2018	1,250,955	8.1	101,327	(154,356)	12.7	158,871	308,428	4.6	57,544	462,784
2019	1,291,611	8.1	104,620	(149,533)	12.7	164,035	309,443	4.6	59,415	458,976
2020	1,333,588	8.1	108,021	(143,840)	12.7	169,366	309,838	4.6	61,345	453,678
2021	1,376,930	8.1	111,531	(137,196)	12.7	174,870	309,546	4.6	63,339	446,742
2022	1,421,680	8.1	115,156	(129,516)	12.7	180,553	308,493	4.6	65,397	438,009
2023	1,467,885	8.1	118,899	(120,706)	12.7	186,421	306,600	4.6	67,522	427,306
2024	1,515,591	8.1	122,763	(110,666)	12.7	192,480	303,782	4.6	69,717	414,448
2025	1,564,848	8.1	126,753	(99,287)	12.7	198,736	299,945	4.6	71,983	399,232

AAL = Actuarial Accrued Liability  
AVA = Actuarial Value of Assets

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) For purposes of the above projections, it was assumed that all actuarial assumptions would be realized. In particular, it was assumed that the actuarial value of assets would earn 7.25% in each year.
- 3) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 4) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections. Revisions to the funding policy were recently adopted by the Board. The revisions will go into effect beginning with the 2017 valuations and are not reflected in the above projections.
- 5) Differences between fiscal end dates of the employer and the actuarial valuation date of February 29<sup>th</sup> have not been incorporated in the above results.
- 6) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

Other disclosures required by Section 105.665 of the Revised Statutes of Missouri (RSMo):

- 1) As of February 29, 2016, the actuarial value of assets is \$3,048,954; the estimated market value of assets is \$2,860,182; the actuarial accrued liability is \$2,887,270; and the funded ratio is 105.6%. These results are based on the assets and liabilities associated with the Employer Accumulation Fund and the Member Deposit Fund for this division.
- 2) Under Section 70.730 of the Revised Statutes of Missouri, the computed employer contribution rate shall not exceed the contribution rate for the immediately preceding fiscal year by more than one percent (not including the effects of any benefit changes). As of February 29, 2016, there is no difference between the capped and uncapped employer contribution rate.

**The City of Shrewsbury**  
**Computed Employer Contribution Rates - Fire Employees**  
**As of February 29, 2016**

<u>Benefit Plans</u>	<u>Present</u>	<u>Alternate</u>
# Benefit Program:	LT-5(62)	LT-8(65)
Final Average Salary:	3 year	3 year
Member Contributions:	Non-Contributory	Non-Contributory
Retirement Eligibility:	Regular	Regular

<u>Present Plan</u>	<u>Rates</u>
Current Service Cost	10.2%
Disability Cost	0.7
Prior Service Cost	<u>(10.2)</u>
Total	0.7%

<u>Alternate Plan</u>	
Current Service Cost	12.0%
Disability Cost	0.8
Prior Service Cost*	<u>(12.0)</u>
Total	0.8%

**INCREASE IN CONTRIBUTION  
RATE FOR ALTERNATE PLAN**                      0.1% @

**Employer contribution rates shown above are for the fiscal year beginning in 2017. If the alternate plan is adopted prior to the fiscal year beginning in 2017, 0.1% would be added to the employer contribution rate currently in effect.**

# Change in provisions from present plan.

\* Adoption of the alternate plan would increase the actuarial accrued liability by \$483,812 which was amortized over a 20 year period to compute the increase in the Prior Service Cost.

@ The increase of 0.1% as shown above, includes the estimated cost (value) of the change in benefit provisions equal to 5.3% of payroll and (5.2)% of payroll due to the funded status of this group as of February 29, 2016.

**The City of Shrewsbury**  
**Projected Estimated Employer Contribution Rates - Fire Employees**  
**As of February 29, 2016**

Valuation Date Feb. 28	Estimated Projected Payroll	Present Plan			Alternate Plan			Change Due to Proposed Provisions		
		Estimated Employer Contribution		Estimated Difference Between AAL and AVA	Estimated Employer Contribution		Estimated Difference Between AAL and AVA	Estimated Employer Contribution		Estimated Difference Between AAL and AVA
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2016	\$1,038,158	0.7%	\$7,267	\$(1,717,685)	0.8%	\$8,305	\$(1,233,873)	0.1%	\$1,038	\$483,812
2017	1,071,898	0.7	7,503	(1,730,653)	0.8	8,575	(1,194,129)	0.1	1,072	536,524
2018	1,106,735	0.7	7,747	(1,740,848)	0.8	8,854	(1,146,827)	0.1	1,107	594,021
2019	1,142,704	0.7	7,999	(1,747,451)	0.8	9,142	(1,091,250)	0.1	1,143	656,201
2020	1,179,842	0.7	8,259	(1,750,676)	0.8	9,439	(1,026,628)	0.1	1,180	724,048
2021	1,218,187	0.7	8,527	(1,749,525)	0.8	9,745	(952,120)	0.1	1,218	797,405
2022	1,257,778	0.7	8,804	(1,744,075)	0.8	10,062	(866,826)	0.1	1,258	877,249
2023	1,298,656	0.7	9,091	(1,733,091)	0.8	10,389	(769,777)	0.1	1,298	963,314
2024	1,340,862	0.7	9,386	(1,716,466)	0.8	10,727	(659,913)	0.1	1,341	1,056,553
2025	1,384,440	0.7	9,691	(1,694,006)	0.8	11,076	(536,101)	0.1	1,385	1,157,905

AAL = Actuarial Accrued Liability  
AVA = Actuarial Value of Assets

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.665 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) For purposes of the above projections, it was assumed that all actuarial assumptions would be realized. In particular, it was assumed that the actuarial value of assets would earn 7.25% in each year.
- 3) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 4) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections. Revisions to the funding policy were recently adopted by the Board. The revisions will go into effect beginning with the 2017 valuations and are not reflected in the above projections.
- 5) Differences between fiscal end dates of the employer and the actuarial valuation date of February 29<sup>th</sup> have not been incorporated in the above results.
- 6) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

Other disclosures required by Section 105.665 of the Revised Statutes of Missouri (RSMo):

- 1) As of February 29, 2016, the actuarial value of assets is \$4,273,179; the estimated market value of assets is \$4,008,611; the actuarial accrued liability is \$2,555,494; and the funded ratio is 167.2%. These results are based on the assets and liabilities associated with the Employer Accumulation Fund and the Member Deposit Fund for this division.
- 2) Under Section 70.730 of the Revised Statutes of Missouri, the computed employer contribution rate shall not exceed the contribution rate for the immediately preceding fiscal year by more than one percent (not including the effects of any benefit changes). As of February 29, 2016, there is no difference between the capped and uncapped employer contribution rate.

---

## **APPENDIX I**

### **SUMMARY OF FINANCIAL ASSUMPTIONS**

---

## **Summary of Assumptions Used in Actuarial Valuations**

### **Assumptions Adopted by Board of Trustees After Consulting With Actuary**

1. The investment return rate used in making the valuations was 7.25% per year, net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. The price inflation rate used in making the valuations was 2.50% and the wage inflation rate used in making the valuations was 3.25%. The 7.25% investment return rate translates to an assumed real rate of return over price inflation of 4.75% and over wage inflation of 4.00%. Adopted 2011 and 2016.
2. The healthy retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The disabled retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The pre-retirement mortality tables used were the RP-2014 employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. For both the post-retirement and pre-retirement tables, the base year for males was then established to be 2017. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to the above described tables. Adopted 2016.
3. The probabilities of withdrawal from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2016.
4. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2016.
5. Post-retirement cost of living allowances are assumed to be 2.50% per year. Adopted 2016.
6. Total active member payroll is assumed to increase 3.25% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. In effect, this assumes no change in the number of active members per employer. Adopted 2016.
7. An individual entry-age actuarial cost method of valuation was used in determining age and service allowance actuarial liabilities and normal cost. Adopted 1986.
8. The data about persons now covered was furnished by the political subdivision. Although examined for general reasonableness, the data was not audited by us.

**Schedule 1.**

**Withdrawal From Active Employment Before Age & Service Retirement  
and Individual Pay Increase Assumptions**

Sample Ages	Years of Service	Percent of Active Members Separating Within Next Year				Percent Increase in Individual's Pay During Next Year Excluding Fire
		General Members		Police	Fire	
		Men	Women			
All	0	19.00%	22.00%	18.00%	10.00%	
	1	17.00	20.00	17.00	8.00	
	2	15.00	17.00	16.00	7.00	
	3	13.00	14.00	13.00	6.00	
	4	11.00	13.00	12.00	6.00	
25	5 & Over	7.30	10.80	9.80	5.00	6.6%
30		6.50	8.90	7.80	4.00	5.8
35		5.00	7.40	6.10	2.80	5.3
40		3.70	5.70	4.40	2.20	4.8
45		3.00	4.20	3.20	1.80	4.3
50		2.40	3.30	1.80	1.00	3.9
55		1.80	2.50	1.00	0.50	3.7
60		1.00	1.20	0.00	0.00	3.6
65	0.00	0.00	0.00	0.00	3.3	

Sample Ages	Percent Increase in Individual's Pay During Next Year Fire
	Fire
25	7.2%
30	6.1
35	5.2
40	4.5
45	4.2
50	3.9
55	3.7
60	3.3
65	3.3

## Schedule 2.

### Percent of Eligible Active Members Retiring Within Next Year Without Rule of 80 Eligibility

#### Early Retirement

Retirement Ages	General Members		Retirement Ages	Police	Fire
	Men	Women			
55	3.00%	3.00%	50	2.50%	2.50%
56	3.00%	3.00%	51	2.50%	2.50%
57	3.00%	3.00%	52	2.50%	2.50%
58	3.00%	3.00%	53	2.50%	2.50%
59	3.00%	3.00%	54	2.50%	2.50%

#### Normal Retirement

Retirement Ages	General Members		Retirement Ages	Police	Fire
	Men	Women			
60	10%	10%	55	10%	13%
61	10	10	56	10	13
62	25	15	57	10	13
63	20	15	58	10	13
64	20	15	59	10	13
65	25	25	60	10	15
66	25	25	61	10	15
67	20	25	62	25	20
68	20	25	63	20	20
69	20	20	64	20	20
70	100	100	65	100	100

**Schedule 2. (Continued)**

**Percent of Eligible Active Members Retiring Within Next Year  
With Rule of 80 Eligibility**

Retirement Ages	General Members		Police	Fire
	Men	Women		
50	15%	15%	25%	25%
51	15	15	25	20
52	15	15	15	20
53	15	15	15	20
54	15	15	15	20
55	15	15	15	20
56	15	15	15	20
57	15	15	15	25
58	15	15	15	25
59	15	15	15	25
60	15	15	15	35
61	15	15	25	35
62	30	15	30	45
63	30	15	30	45
64	30	20	30	45
65	30	25	100	100
66	30	25		
67	30	25		
68	30	25		
69	30	25		
70	100	100		



---

## **APPENDIX II**

### **SUMMARY OF LAGERS PROVISIONS**

---

**Missouri Local Government Employees Retirement System**  
**Brief Summary of LAGERS**  
**Benefits and Conditions Evaluated and/or Considered**  
**as of February 29, 2016**  
**(Section References are to RSMo)**

**Voluntary Retirement.** Sections 70.645 & 70.600. A member may retire with an age & service allowance after both (i) completing 5 years of credited service, and (ii) attaining the minimum service retirement age.

The minimum service retirement age is age 60 for a general employee and age 55 for a police or fire employee. Optionally, employers may also elect to provide for unreduced benefits for employees whose combination of years of age and years of service equals 80 or more.

**Final Average Salary.** Section 70.600. The average of a member's monthly compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) of credited service producing the highest monthly average, which period is contained within the 120 consecutive months of credited service immediately preceding retirement.

**Age & Service Allowance.** Section 70.655. The allowance, payable monthly for life, equals a specified percent of a member's final average salary multiplied by the number of years of credited service. Each employer elects the percent applicable to its members, from the following programs:

L-1 Benefit Program:	1.00% for life
L-3 Benefit Program:	1.25% for life
L-7 Benefit Program:	1.50% for life
L-9 Benefit Program:	1.60% for life
L-12 Benefit Program:	1.75% for life
L-6 Benefit Program:	2.00% for life
LT-4(65) Benefit Program:	1.00% for life, plus 1.00% to age 65
LT-5(65) Benefit Program:	1.25% for life, plus 0.75% to age 65
LT-8(65) Benefit Program:	1.50% for life, plus 0.50% to age 65
LT-10(65) Benefit Program:	1.60% for life, plus 0.40% to age 65
LT-14(65) Benefit Program:	1.75% for life, plus 0.25% to age 65

The only LT benefit programs available for adoption after August 1, 1994 are the LT(65) programs.

Benefit programs L-9 and LT-10(65) are unavailable for adoption after August 1, 2005.

Benefit program L-11, available only to groups not covered by social security, provides for 2.5% for life.

Subsequent to joining the System the governing body can elect to change benefit programs for the employees, but not more often than once every 2 years.

**Early Allowance.** Section 70.670. A member may retire with an early allowance after both (i) completing 5 years of credited service, and (ii) attaining age 55 if a general employee or age 50 if a police or fire employee. The early allowance amount, payable monthly for life, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of early retirement, but reduced to reflect the fact that the age when payments begin is younger than the minimum service retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month the age at retirement is younger than the minimum service retirement age.

**Deferred Allowance.** Section 70.675. If a member leaves LAGERS-covered employment (i) before attaining the early retirement age, and (ii) after completing 5 years of credited service, the member becomes eligible for a deferred allowance; provided the former member lives to the minimum service retirement age and does not withdraw the accumulated contributions.

The deferred allowance amount, payable monthly for life from the minimum service retirement age, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of leaving LAGERS coverage.

Deferred allowances are also payable any time after reaching the early retirement age, with the reduction for early retirement noted on the previous page.

**Non-Duty Disability Allowance.** Section 70.680. A member with 5 or more years of credited service who becomes totally and permanently disabled from other than duty-connected causes becomes eligible to receive a non-duty disability allowance computed in the same manner as an age & service allowance, based upon the service & earnings record to time of disability.

**Duty Disability Allowance.** Section 70.680. A member regardless of credited service who becomes totally and permanently disabled from duty-connected causes becomes eligible to receive a duty disability allowance computed in the same manner as an age & service allowance, based upon the earnings record to time of disability but based upon the years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

**Death-in-Service.** Section 70.661. Upon the death of a member who had completed 5 years of credited service, the eligible surviving dependents receive the following benefits:

- (a) The surviving spouse receives an allowance equal to the Option A allowance (joint and 75% survivor benefit) computed based upon the deceased members' service & earnings record to time of death.
- (b) When no spouse benefit is payable, the dependent children under age 18 (age 23 if they are full time students) each receive an equal share of 60% of an age & service allowance computed based upon the deceased member's service & earnings record to time of death.
- (c) If the death is determined to be duty related, the 5 year service requirement is waived and the benefit is based on years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

**Benefit Changes After Retirement.** Section 70.655. For retirements effective after September 28, 1975, there is an annual redetermination of monthly benefit amount, beginning the October first following 12 months of retirement. As of each October first the amount of each eligible benefit is redetermined as follows:

- (a) Subject to the maximum in (b), the redetermined amount is the amount otherwise payable multiplied by: 100% plus up to 4%, as determined by the LAGERS Board of Trustees, for each full year of retirement.
- (b) The redetermined amount may not exceed the amount otherwise payable multiplied by the ratio of the Consumer Price Index for the immediately preceding month of June to the Consumer Price Index for the month of June immediately preceding retirement.

**Member Contributions.** Sections 70.690 & 70.705. Each member contributes 4% of compensation beginning after completion of sufficient employment for 6 months of credited service.

If a member leaves LAGERS-covered employment before an allowance is payable, the accumulated contributions are refunded to the member. If the member dies, his accumulated contributions are refunded to a designated beneficiary.

The law governing LAGERS also has a provision for the adoption of a non-contributory plan in which the full cost of LAGERS participation is paid by the employer. Adoption of the non-contributory provisions may be done at the time of membership or a later date; however, a change from contributory to non-contributory or vice-versa may not be made more frequently than every 2 years. Under the non-contributory provisions there is no individual account maintained for each employee and no refund of contributions if an employee terminates before being eligible for a benefit.

**Employer Contributions.** Section 70.730. Each employer contributes the remainder amounts necessary to finance the employees' participation in LAGERS. Contributions to LAGERS are determined based upon level-percent-of-payroll principles, so that contribution rates do not have to increase over decades of time.

---

## **APPENDIX III**

### **BENEFIT ILLUSTRATIONS**

---

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
**(L-1 Benefit Program is Years of Credited Service**  
**times: 1.00% of FAS <sup>1</sup> )**

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 882	\$1,407	94%
2,000	700	1,028	1,728	86%
2,500	875	1,174	2,049	82%
3,000	1,050	1,320	2,370	79%
3,500	1,225	1,465	2,690	77%
4,000	1,400	1,611	3,011	75%
25 Years of Service:				
\$1,500	\$ 375	\$ 882	\$1,257	84%
2,000	500	1,028	1,528	76%
2,500	625	1,174	1,799	72%
3,000	750	1,320	2,070	69%
3,500	875	1,465	2,340	67%
4,000	1,000	1,611	2,611	65%
15 Years of Service:				
\$1,500	\$225	\$ 882	\$1,107	74%
2,000	300	1,028	1,328	66%
2,500	375	1,174	1,549	62%
3,000	450	1,320	1,770	59%
3,500	525	1,465	1,990	57%
4,000	600	1,611	2,211	55%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(L-3 Benefit Program is Years of Credited Service  
times: 1.25% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 882	\$1,538	103%
2,000	875	1,028	1,903	95%
2,500	1,094	1,174	2,268	91%
3,000	1,313	1,320	2,633	88%
3,500	1,531	1,465	2,996	86%
4,000	1,750	1,611	3,361	84%
25 Years of Service:				
\$1,500	\$ 469	\$ 882	\$1,351	90%
2,000	625	1,028	1,653	83%
2,500	781	1,174	1,955	78%
3,000	938	1,320	2,258	75%
3,500	1,094	1,465	2,559	73%
4,000	1,250	1,611	2,861	72%
15 Years of Service:				
\$1,500	\$281	\$ 882	\$1,163	78%
2,000	375	1,028	1,403	70%
2,500	469	1,174	1,643	66%
3,000	563	1,320	1,883	63%
3,500	656	1,465	2,121	61%
4,000	750	1,611	2,361	59%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(L-7 Benefit Program is Years of Credited Service  
times: 1.50% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 882	\$1,670	111%
2,000	1,050	1,028	2,078	104%
2,500	1,313	1,174	2,487	99%
3,000	1,575	1,320	2,895	97%
3,500	1,838	1,465	3,303	94%
4,000	2,100	1,611	3,711	93%
25 Years of Service:				
\$1,500	\$ 563	\$ 882	\$1,445	96%
2,000	750	1,028	1,778	89%
2,500	938	1,174	2,112	84%
3,000	1,125	1,320	2,445	82%
3,500	1,313	1,465	2,778	79%
4,000	1,500	1,611	3,111	78%
15 Years of Service:				
\$1,500	\$338	\$ 882	\$1,220	81%
2,000	450	1,028	1,478	74%
2,500	563	1,174	1,737	69%
3,000	675	1,320	1,995	67%
3,500	788	1,465	2,253	64%
4,000	900	1,611	2,511	63%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.



**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(L-9 Benefit Program is Years of Credited Service  
times: 1.60% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 840	\$ 882	\$1,722	115%
2,000	1,120	1,028	2,148	107%
2,500	1,400	1,174	2,574	103%
3,000	1,680	1,320	3,000	100%
3,500	1,960	1,465	3,425	98%
4,000	2,240	1,611	3,851	96%
25 Years of Service:				
\$1,500	\$ 600	\$ 882	\$1,482	99%
2,000	800	1,028	1,828	91%
2,500	1,000	1,174	2,174	87%
3,000	1,200	1,320	2,520	84%
3,500	1,400	1,465	2,865	82%
4,000	1,600	1,611	3,211	80%
15 Years of Service:				
\$1,500	\$360	\$ 882	\$1,242	83%
2,000	480	1,028	1,508	75%
2,500	600	1,174	1,774	71%
3,000	720	1,320	2,040	68%
3,500	840	1,465	2,305	66%
4,000	960	1,611	2,571	64%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(L-12 Benefit Program is Years of Credited Service  
times: 1.75% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 882	\$1,801	120%
2,000	1,225	1,028	2,253	113%
2,500	1,531	1,174	2,705	108%
3,000	1,838	1,320	3,158	105%
3,500	2,144	1,465	3,609	103%
4,000	2,450	1,611	4,061	102%
25 Years of Service:				
\$1,500	\$ 656	\$ 882	\$1,538	103%
2,000	875	1,028	1,903	95%
2,500	1,094	1,174	2,268	91%
3,000	1,313	1,320	2,633	88%
3,500	1,531	1,465	2,996	86%
4,000	1,750	1,611	3,361	84%
15 Years of Service:				
\$1,500	\$ 394	\$ 882	\$1,276	85%
2,000	525	1,028	1,553	78%
2,500	656	1,174	1,830	73%
3,000	788	1,320	2,108	70%
3,500	919	1,465	2,384	68%
4,000	1,050	1,611	2,661	67%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(L-6 Benefit Program is Years of Credited Service  
times: 2.00% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 882	\$1,932	129%
2,000	1,400	1,028	2,428	121%
2,500	1,750	1,174	2,924	117%
3,000	2,100	1,320	3,420	114%
3,500	2,450	1,465	3,915	112%
4,000	2,800	1,611	4,411	110%
25 Years of Service:				
\$1,500	\$ 750	\$ 882	\$1,632	109%
2,000	1,000	1,028	2,028	101%
2,500	1,250	1,174	2,424	97%
3,000	1,500	1,320	2,820	94%
3,500	1,750	1,465	3,215	92%
4,000	2,000	1,611	3,611	90%
15 Years of Service:				
\$1,500	\$ 450	\$ 882	\$1,332	89%
2,000	600	1,028	1,628	81%
2,500	750	1,174	1,924	77%
3,000	900	1,320	2,220	74%
3,500	1,050	1,465	2,515	72%
4,000	1,200	1,611	2,811	70%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(L-11 Benefit Program is Years of Credited Service  
times: 2.50% of FAS <sup>1</sup> )

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>	Estimated Social Security <sup>2</sup>	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,313		\$1,313	88%
2,000	1,750		1,750	88%
2,500	2,188		2,188	88%
3,000	2,625		2,625	88%
3,500	3,063		3,063	88%
4,000	3,500		3,500	88%
25 Years of Service:				
\$1,500	\$ 938		\$ 938	63%
2,000	1,250		1,250	63%
2,500	1,563		1,563	63%
3,000	1,875		1,875	63%
3,500	2,188		2,188	63%
4,000	2,500		2,500	63%
15 Years of Service:				
\$1,500	\$ 563		\$ 563	38%
2,000	750		750	38%
2,500	938		938	38%
3,000	1,125		1,125	38%
3,500	1,313		1,313	38%
4,000	1,500		1,500	38%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-4(62) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 62)  
1.00% of FAS<sup>1</sup> at age 62)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 62	At 62		To 62	At 62	To 62	At 62
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 740	\$1,050	\$1,265	70%	84%
2,000	1,400	700	879	1,400	1,579	70%	79%
2,500	1,750	875	984	1,750	1,859	70%	74%
3,000	2,100	1,050	1,105	2,100	2,155	70%	72%
3,500	2,450	1,225	1,227	2,450	2,452	70%	70%
4,000	2,800	1,400	1,349	2,800	2,749	70%	69%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 740	\$ 750	\$1,115	50%	74%
2,000	1,000	500	879	1,000	1,379	50%	69%
2,500	1,250	625	984	1,250	1,609	50%	64%
3,000	1,500	750	1,105	1,500	1,855	50%	62%
3,500	1,750	875	1,227	1,750	2,102	50%	60%
4,000	2,000	1,000	1,349	2,000	2,349	50%	59%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 740	\$ 450	\$ 965	30%	64%
2,000	600	300	879	600	1,179	30%	59%
2,500	750	375	984	750	1,359	30%	54%
3,000	900	450	1,105	900	1,555	30%	52%
3,500	1,050	525	1,227	1,050	1,752	30%	50%
4,000	1,200	600	1,349	1,200	1,949	30%	49%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 62 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-4(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 65)  
1.00% of FAS<sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 882	\$1,050	\$1,407	70%	94%
2,000	1,400	700	1,028	1,400	1,728	70%	86%
2,500	1,750	875	1,174	1,750	2,049	70%	82%
3,000	2,100	1,050	1,320	2,100	2,370	70%	79%
3,500	2,450	1,225	1,465	2,450	2,690	70%	77%
4,000	2,800	1,400	1,611	2,800	3,011	70%	75%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 882	\$ 750	\$1,257	50%	84%
2,000	1,000	500	1,028	1,000	1,528	50%	76%
2,500	1,250	625	1,174	1,250	1,799	50%	72%
3,000	1,500	750	1,320	1,500	2,070	50%	69%
3,500	1,750	875	1,465	1,750	2,340	50%	67%
4,000	2,000	1,000	1,611	2,000	2,611	50%	65%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 882	\$ 450	\$1,107	30%	74%
2,000	600	300	1,028	600	1,328	30%	66%
2,500	750	375	1,174	750	1,549	30%	62%
3,000	900	450	1,320	900	1,770	30%	59%
3,500	1,050	525	1,465	1,050	1,990	30%	57%
4,000	1,200	600	1,611	1,200	2,211	30%	55%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-5(62) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 62)  
1.25% of FAS<sup>1</sup> at age 62)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 62	At 62		To 62	At 62	To 62	At 62
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 740	\$1,050	\$1,396	70%	93%
2,000	1,400	875	879	1,400	1,754	70%	88%
2,500	1,750	1,094	984	1,750	2,078	70%	83%
3,000	2,100	1,313	1,105	2,100	2,418	70%	81%
3,500	2,450	1,531	1,227	2,450	2,758	70%	79%
4,000	2,800	1,750	1,349	2,800	3,099	70%	77%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 740	\$ 750	\$1,209	50%	81%
2,000	1,000	625	879	1,000	1,504	50%	75%
2,500	1,250	781	984	1,250	1,765	50%	71%
3,000	1,500	938	1,105	1,500	2,043	50%	68%
3,500	1,750	1,094	1,227	1,750	2,321	50%	66%
4,000	2,000	1,250	1,349	2,000	2,599	50%	65%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 740	\$ 450	\$1,021	30%	68%
2,000	600	375	879	600	1,254	30%	63%
2,500	750	469	984	750	1,453	30%	58%
3,000	900	563	1,105	900	1,668	30%	56%
3,500	1,050	656	1,227	1,050	1,883	30%	54%
4,000	1,200	750	1,349	1,200	2,099	30%	52%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 62 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-5(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 65)  
1.25% of FAS<sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 882	\$1,050	\$1,538	70%	103%
2,000	1,400	875	1,028	1,400	1,903	70%	95%
2,500	1,750	1,094	1,174	1,750	2,268	70%	91%
3,000	2,100	1,313	1,320	2,100	2,633	70%	88%
3,500	2,450	1,531	1,465	2,450	2,996	70%	86%
4,000	2,800	1,750	1,611	2,800	3,361	70%	84%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 882	\$ 750	\$1,351	50%	90%
2,000	1,000	625	1,028	1,000	1,653	50%	83%
2,500	1,250	781	1,174	1,250	1,955	50%	78%
3,000	1,500	938	1,320	1,500	2,258	50%	75%
3,500	1,750	1,094	1,465	1,750	2,559	50%	73%
4,000	2,000	1,250	1,611	2,000	2,861	50%	72%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 882	\$ 450	\$1,163	30%	78%
2,000	600	375	1,028	600	1,403	30%	70%
2,500	750	469	1,174	750	1,643	30%	66%
3,000	900	563	1,320	900	1,883	30%	63%
3,500	1,050	656	1,465	1,050	2,121	30%	61%
4,000	1,200	750	1,611	1,200	2,361	30%	59%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.



**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-8(62) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 62)  
1.50% of FAS<sup>1</sup> at age 62)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 62	At 62		To 62	At 62	To 62	At 62
35 Years of Service:							
\$1,500	\$1,050	\$ 788	\$ 740	\$1,050	\$1,528	70%	102%
2,000	1,400	1,050	879	1,400	1,929	70%	96%
2,500	1,750	1,313	984	1,750	2,297	70%	92%
3,000	2,100	1,575	1,105	2,100	2,680	70%	89%
3,500	2,450	1,838	1,227	2,450	3,065	70%	88%
4,000	2,800	2,100	1,349	2,800	3,449	70%	86%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 740	\$ 750	\$1,303	50%	87%
2,000	1,000	750	879	1,000	1,629	50%	81%
2,500	1,250	938	984	1,250	1,922	50%	77%
3,000	1,500	1,125	1,105	1,500	2,230	50%	74%
3,500	1,750	1,313	1,227	1,750	2,540	50%	73%
4,000	2,000	1,500	1,349	2,000	2,849	50%	71%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 740	\$ 450	\$1,078	30%	72%
2,000	600	450	879	600	1,329	30%	66%
2,500	750	563	984	750	1,547	30%	62%
3,000	900	675	1,105	900	1,780	30%	59%
3,500	1,050	788	1,227	1,050	2,015	30%	58%
4,000	1,200	900	1,349	1,200	2,249	30%	56%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 62 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-8(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 65)  
1.50% of FAS<sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 788	\$ 882	\$1,050	\$1,670	70%	111%
2,000	1,400	1,050	1,028	1,400	2,078	70%	104%
2,500	1,750	1,313	1,174	1,750	2,487	70%	99%
3,000	2,100	1,575	1,320	2,100	2,895	70%	97%
3,500	2,450	1,838	1,465	2,450	3,303	70%	94%
4,000	2,800	2,100	1,611	2,800	3,711	70%	93%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 882	\$ 750	\$1,445	50%	96%
2,000	1,000	750	1,028	1,000	1,778	50%	89%
2,500	1,250	938	1,174	1,250	2,112	50%	84%
3,000	1,500	1,125	1,320	1,500	2,445	50%	82%
3,500	1,750	1,313	1,465	1,750	2,778	50%	79%
4,000	2,000	1,500	1,611	2,000	3,111	50%	78%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 882	\$ 450	\$1,220	30%	81%
2,000	600	450	1,028	600	1,478	30%	74%
2,500	750	563	1,174	750	1,737	30%	69%
3,000	900	675	1,320	900	1,995	30%	67%
3,500	1,050	788	1,465	1,050	2,253	30%	64%
4,000	1,200	900	1,611	1,200	2,511	30%	63%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-10(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 65)  
1.60% of FAS<sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 840	\$ 882	\$1,050	\$1,722	70%	115%
2,000	1,400	1,120	1,028	1,400	2,148	70%	107%
2,500	1,750	1,400	1,174	1,750	2,574	70%	103%
3,000	2,100	1,680	1,320	2,100	3,000	70%	100%
3,500	2,450	1,960	1,465	2,450	3,425	70%	98%
4,000	2,800	2,240	1,611	2,800	3,851	70%	96%
25 Years of Service:							
\$1,500	\$750	\$ 600	\$ 882	\$ 750	\$1,482	50%	99%
2,000	1,000	800	1,028	1,000	1,828	50%	91%
2,500	1,250	1,000	1,174	1,250	2,174	50%	87%
3,000	1,500	1,200	1,320	1,500	2,520	50%	84%
3,500	1,750	1,400	1,465	1,750	2,865	50%	82%
4,000	2,000	1,600	1,611	2,000	3,211	50%	80%
15 Years of Service:							
\$1,500	\$ 450	\$360	\$ 882	\$ 450	\$1,242	30%	83%
2,000	600	480	1,028	600	1,508	30%	75%
2,500	750	600	1,174	750	1,774	30%	71%
3,000	900	720	1,320	900	2,040	30%	68%
3,500	1,050	840	1,465	1,050	2,305	30%	66%
4,000	1,200	960	1,611	1,200	2,571	30%	64%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

**Missouri LAGERS**  
**Illustrations of Age and Service Allowance Amounts**  
**For Sample Combinations of Service & Salary**  
(LT-14(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS<sup>1</sup> to age 65)  
1.75% of FAS<sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 919	\$ 882	\$1,050	\$1,801	70%	120%
2,000	1,400	1,225	1,028	1,400	2,253	70%	113%
2,500	1,750	1,531	1,174	1,750	2,705	70%	108%
3,000	2,100	1,838	1,320	2,100	3,158	70%	105%
3,500	2,450	2,144	1,465	2,450	3,609	70%	103%
4,000	2,800	2,450	1,611	2,800	4,061	70%	102%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 882	\$ 750	\$1,538	50%	103%
2,000	1,000	875	1,028	1,000	1,903	50%	95%
2,500	1,250	1,094	1,174	1,250	2,268	50%	91%
3,000	1,500	1,313	1,320	1,500	2,633	50%	88%
3,500	1,750	1,531	1,465	1,750	2,996	50%	86%
4,000	2,000	1,750	1,611	2,000	3,361	50%	84%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 882	\$ 450	\$1,276	30%	85%
2,000	600	525	1,028	600	1,553	30%	78%
2,500	750	656	1,174	750	1,830	30%	73%
3,000	900	788	1,320	900	2,108	30%	70%
3,500	1,050	919	1,465	1,050	2,384	30%	68%
4,000	1,200	1,050	1,611	1,200	2,661	30%	67%

<sup>1</sup> "Final Average Salary" means the monthly average of an employee's compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) when they were highest, contained within the last 120 months of Credited Service.

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit. The benefit is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2016 - it does not include any amounts which might be payable to an eligible spouse or children.

<sup>3</sup> Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

May 24, 2017 E-mail

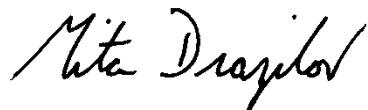
Mr. Keith Hughes  
Executive Secretary  
Missouri Local Government  
Employees Retirement System  
P.O. Box 1665  
Jefferson City, Missouri 65102

Dear Keith:

Enclosed is the report of the February 29, 2016 Supplemental Actuarial Valuation of LAGERS benefits for the employees of:

The City of Shrewsbury

Sincerely,



Mita D. Drazilov, ASA, MAAA

MDD:rmg  
Enclosure