



THE CITY OF COTTLEVILLE SUPPLEMENTAL ACTUARIAL VALUATION OF ALTERNATE LAGERS BENEFITS FEBRUARY 28, 2017

Table of Contents

	Page
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	



November 20, 2017

The City of Cottleville Cottleville, 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 28, 2017. 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 28, 2017.

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 Cottleville November 20, 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 JCPER@senate.mo.gov.

The valuation was based on the same data as was used in your February 28, 2017 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,

Mita D. Drazilov, ASA, MAAA

Nata Drazilor

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 Cottleville

Computed Employer Contribution Rates - General Employees As of February 28, 2017

Benefit Plans	<u>Present</u>	<u>Alternate</u>
# Benefit Program:	L-3	L-7
Final Average Salary:	5 year	5 year
Member Contributions:	Contributory	Contributory
# Retirement Eligibility:	Regular	Rule of 80

Present Plan	Rates
Current Service Cost	4.6%
Disability Cost	0.3
Prior Service Cost	<u>2.8</u>
Total	7.7%
Alternate Plan	
Current Service Cost	6.3%
Disability Cost	0.3
Prior Service Cost*	<u>5.0</u>
Total	11.6%
INCREASE IN CONTRIBUTION RATE FOR ALTERNATE PLAN	<u>3.9%</u>

Employer contribution rates shown above are for the fiscal year beginning in 2018. If the alternate plan is adopted prior to the fiscal year beginning in 2018, 3.9% would be added to the employer contribution rate currently in effect.

The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

[#] Change in provisions from present plan.

^{*} Adoption of the alternate plan would increase the actuarial accrued liability by \$89,712 which was amortized over a 20 year period to compute the increase in the Prior Service Cost.

The City of Cottleville

Projected Estimated Employer Contribution Rates - General Employees As of February 28, 2017

		Present Plan				Alternate Plan			Change Due to Proposed Provisions		
			l Employer	Estimated		l Employer	Estimated		l Employer	Estimated	
Valuation	Estimated	Contr	ibution	Difference	Contr	ibution	Difference	Contr	ibution	Difference	
Date	Projected	As a % of	Annual	Between	As a % of	Annual	Between	As a % of	Annual	Between	
Feb. 28	Payroll	Payroll	Dollars	AAL and AVA	Payroll	Dollars	AAL and AVA	Payroll	Dollars	AAL and AVA	
2017	\$300,046	7.7%	\$23,104	\$119,104	11.6%	\$34,805	\$208,816	3.9%	\$11,701	\$89,712	
2018	309,797	7.7	23,854	118,975	11.6	35,936	208,451	3.9	12,082	89,476	
2019	319,865	7.7	24,630	118,553	11.6	37,104	207,557	3.9	12,474	89,004	
2020	330,261	7.7	25,430	117,807	11.6	38,310	206,079	3.9	12,880	88,272	
2021	340,994	7.7	26,257	116,702	11.6	39,555	203,955	3.9	13,298	87,253	
2022	352,076	7.7	27,110	115,204	11.6	40,841	201,123	3.9	13,731	85,919	
2023	363,518	7.7	27,991	113,274	11.6	42,168	197,513	3.9	14,177	84,239	
2024	375,332	7.7	28,901	110,869	11.6	43,539	193,050	3.9	14,638	82,181	
2025	387,530	7.7	29,840	107,945	11.6	44,953	187,653	3.9	15,113	79,708	
2026	400.125	7.7	30.810	104,453	11.6	46,415	181.235	3.9	15.605	76,782	

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.
- 5) Differences between fiscal end dates of the employer and the actuarial valuation date of February 28th 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 28, 2017, the actuarial value of assets is \$215,654; the estimated market value of assets is \$214,368; the actuarial accrued liability is \$334,758; and the funded ratio is 64.4%. 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 28, 2017, there is no difference between the capped and uncapped employer contribution rate.

The City of Cottleville

Computed Employer Contribution Rates - Police Employees As of February 28, 2017

Benefit Plans	Present	<u>Alternate</u>
# Benefit Program:	L-3	L-7
Final Average Salary:	5 year	5 year
Member Contributions:	Contributory	Contributory
# Retirement Eligibility:	Regular	Rule of 80

Present Plan	<u>Rates</u>	
Current Service Cost	4.7%	
Disability Cost	0.5	
Prior Service Cost	<u>3.4</u>	
Total	8.6%	
Alternate Plan		
Current Service Cost	6.5%	
Disability Cost	0.6	
Prior Service Cost*	<u>4.7</u>	
Total	11.8%	
INCREASE IN CONTRIBUTION RATE FOR ALTERNATE PLAN	<u>3.2%</u>	

Employer contribution rates shown above are for the fiscal year beginning in 2018. If the alternate plan is adopted prior to the fiscal year beginning in 2018, 3.2% would be added to the employer contribution rate currently in effect.

The cost for the Rule of 80 provision is very dependent upon the age at hire of the employees. If hiring practices in the future differ from those of the past, the cost for this provision could increase or decrease. The cost shown is based on the age and service characteristics of the present group.

[#] Change in provisions from present plan.

^{*} Adoption of the alternate plan would increase the actuarial accrued liability by \$121,864 which was amortized over a 20 year period to compute the increase in the Prior Service Cost.

The City of Cottleville Projected Estimated Employer Contribution Rates - Police Employees

As of February 28, 2017

			Present Plan	n	Alternate Plan			Change Due to Proposed Provisions		
			Employer	Estimated		Employer	Estimated		Employer	Estimated
Valuation	Estimated	Contr	ibution	_ Difference	Contr	ibution	Difference	Contr	ibution	Difference
Date	Projected	As a % of	Annual	Between	As a % of	Annual	Between	As a % of	Annual	Between
Feb. 28	Payroll	Payroll	Dollars	AAL and AVA	Payroll	Dollars	AAL and AVA	Payroll	Dollars	AAL and AVA
2017	\$659,099	8.6%	\$56,683	\$346,301	11.8%	\$77,774	\$468,165	3.2%	\$21,091	\$121,864
2018	680,520	8.6	58,525	348,006	11.8	80,301	469,550	3.2	21,776	121,544
2019	702,637	8.6	60,427	349,075	11.8	82,911	469,978	3.2	22,484	120,903
2020	725,473	8.6	62,391	349,435	11.8	85,606	469,343	3.2	23,215	119,908
2021	749,051	8.6	64,418	349,011	11.8	88,388	467,535	3.2	23,970	118,524
2022	773,395	8.6	66,512	347,720	11.8	91,261	464,432	3.2	24,749	116,712
2023	798,530	8.6	68,674	345,472	11.8	94,227	459,902	3.2	25,553	114,430
2024	824,482	8.6	70,905	342,168	11.8	97,289	453,802	3.2	26,384	111,634
2025	851,278	8.6	73,210	337,702	11.8	100,451	445,977	3.2	27,241	108,275
2026	878,945	8.6	75,589	331,961	11.8	103,716	436,261	3.2	28,127	104,300

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.
- 5) Differences between fiscal end dates of the employer and the actuarial valuation date of February 28th 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 28, 2017, the actuarial value of assets is \$421,741; the estimated market value of assets is \$419,226; the actuarial accrued liability is \$768,042; and the funded ratio is 54.9%. 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 28, 2017, 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 and disability 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.

Separations From Active Employment (Not Including Death-In-Service)

Before Age & Service Retirement and Individual Pay Increase Assumptions

Percent of Active Members Separating Within Next Year

			General I	Members						
Sample	Years of	N	Men		Women		Police		Fire	
Ages	Service	Disability	Withdrawal	Disability	Withdrawal	Disability	Withdrawal	Disability	Withdrawal	
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	0.09%	7.30	0.02%	10.80	0.10%	9.80	0.06%	5.00	
30		0.12	6.50	0.03	8.90	0.11	7.80	0.10	4.00	
35		0.15	5.00	0.06	7.40	0.16	6.10	0.23	2.80	
40		0.21	3.70	0.10	5.70	0.22	4.40	0.35	2.20	
45		0.30	3.00	0.16	4.20	0.34	3.20	0.56	1.80	
50		0.44	2.40	0.24	3.30	0.53	1.80	0.85	1.00	
55		0.68	1.80	0.34	2.50	0.88	1.00	1.31	0.50	
60		1.02	1.00	0.48	1.20		0.00		0.00	
65			0.00		0.00		0.00		0.00	

Percent Increase in Individual's Pay

Sample		During Next Year					
	Ages	General & Police	Fire				
	25	6.55%	7.15%				
	30	5.75	6.05				
	35	5.25	5.15				
	40	4.75	4.45				
	45	4.25	4.15				
	50	3.85	3.85				
	55	3.65	3.65				
	60	3.55	3.25				
	65	3.25	3.25				

Schedule 2.

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

Early Retirement

Retirement General Members		ment General Members Retirement			
Ages	Men	Women	Ages	Police	Fire
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 General Members		Retirement			
Ages	Men	Women	Ages	Police	Fire
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	General	General Members		
Ages	es Men Women		Police	Fire
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 28, 2017

(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: 1.60% 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 ¹)

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service	ce:			
\$1,500	\$ 525	\$ 875	\$1,400	93%
2,000	700	1,016	1,716	86%
2,500	875	1,157	2,032	81%
3,000	1,050	1,297	2,347	78%
3,500	1,225	1,438	2,663	76%
4,000	1,400	1,579	2,979	74%
25 Years of Service	ce:			
\$1,500	\$ 375	\$ 875	\$1,250	83%
2,000	500	1,016	1,516	76%
2,500	625	1,157	1,782	71%
3,000	750	1,297	2,047	68%
3,500	875	1,438	2,313	66%
4,000	1,000	1,579	2,579	64%
15 Years of Service	ce:			
\$1,500	\$225	\$ 875	\$1,100	73%
2,000	300	1,016	1,316	66%
2,500	375	1,157	1,532	61%
3,000	450	1,297	1,747	58%
3,500	525	1,438	1,963	56%
4,000	600	1,579	2,179	54%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(L-3 Benefit Program is Years of Credited Service times: 1.25% of FAS I)

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Servi	ce:			
\$1,500	\$ 656	\$ 875	\$1,531	102%
2,000	875	1,016	1,891	95%
2,500	1,094	1,157	2,251	90%
3,000	1,313	1,297	2,610	87%
3,500	1,531	1,438	2,969	85%
4,000	1,750	1,579	3,329	83%
25 Years of Servi	ce:			
\$1,500	\$ 469	\$ 875	\$1,344	90%
2,000	625	1,016	1,641	82%
2,500	781	1,157	1,938	78%
3,000	938	1,297	2,235	75%
3,500	1,094	1,438	2,532	72%
4,000	1,250	1,579	2,829	71%
15 Years of Servi	ce:			
\$1,500	\$281	\$ 875	\$1,156	77%
2,000	375	1,016	1,391	70%
2,500	469	1,157	1,626	65%
3,000	563	1,297	1,860	62%
3,500	656	1,438	2,094	60%
4,000	750	1,579	2,329	58%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(L-7 Benefit Program is Years of Credited Service times: 1.50% of FAS I)

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Servi	ce:			
\$1,500	\$ 788	\$ 875	\$1,663	111%
2,000	1,050	1,016	2,066	103%
2,500	1,313	1,157	2,470	99%
3,000	1,575	1,297	2,872	96%
3,500	1,838	1,438	3,276	94%
4,000	2,100	1,579	3,679	92%
25 Years of Servi	ce:			
\$1,500	\$ 563	\$ 875	\$1,438	96%
2,000	750	1,016	1,766	88%
2,500	938	1,157	2,095	84%
3,000	1,125	1,297	2,422	81%
3,500	1,313	1,438	2,751	79%
4,000	1,500	1,579	3,079	77%
15 Years of Servi	ce:			
\$1,500	\$338	\$ 875	\$1,213	81%
2,000	450	1,016	1,466	73%
2,500	563	1,157	1,720	69%
3,000	675	1,297	1,972	66%
3,500	788	1,438	2,226	64%
4,000	900	1,579	2,479	62%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1ϕ .

(L-9 Benefit Program is Years of Credited Service times: 1.60% of FAS I)

	Estimated	Estin	nated
LAGERS	Social	Month	ly Total
BENEFIT ³	Security ²	\$	% of FAS
e:			
\$ 840	\$ 875	\$1,715	114%
1,120	1,016	2,136	107%
1,400	1,157	2,557	102%
1,680	1,297	2,977	99%
1,960	1,438	3,398	97%
2,240	1,579	3,819	95%
e:			
\$ 600	\$ 875	\$1,475	98%
800	1,016	1,816	91%
1,000	1,157	2,157	86%
1,200	1,297	2,497	83%
1,400	1,438	2,838	81%
1,600	1,579	3,179	79%
e:			
\$360	\$ 875	\$1,235	82%
480	1,016	1,496	75%
600	1,157	1,757	70%
720	1,297	2,017	67%
840	1,438	2,278	65%
960	1,579	2,539	63%
•	## SENEFIT 3 ##	LAGERS BENEFIT 3 Security 2 e: \$ 840 \$ 875 1,120 1,016 1,400 1,157 1,680 1,297 1,960 1,438 2,240 1,579 e: \$ 600 \$ 875 800 1,016 1,000 1,157 1,200 1,297 1,400 1,438 1,600 1,579 e: \$ 360 \$ 875 480 1,016 600 1,157 720 1,297 840 1,438	LAGERS BENEFIT 3 Social Security 2 Month e: \$ \$ 840 \$ 875 \$1,715 1,120 1,016 2,136 1,400 1,157 2,557 1,680 1,297 2,977 1,960 1,438 3,398 2,240 1,579 3,819 e: \$ 600 \$ 875 \$1,475 800 1,016 1,816 1,000 1,157 2,157 1,200 1,297 2,497 1,400 1,438 2,838 1,600 1,579 3,179 e: \$360 \$ 875 \$1,235 480 1,016 1,496 600 1,157 1,757 720 1,297 2,017 840 1,438 2,278

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1ϕ .

(L-12 Benefit Program is Years of Credited Service times: 1.75% of FAS I)

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service	ee:			
\$1,500	\$ 919	\$ 875	\$1,794	120%
2,000	1,225	1,016	2,241	112%
2,500	1,531	1,157	2,688	108%
3,000	1,838	1,297	3,135	105%
3,500	2,144	1,438	3,582	102%
4,000	2,450	1,579	4,029	101%
25 Years of Service	ee:			
\$1,500	\$ 656	\$ 875	\$1,531	102%
2,000	875	1,016	1,891	95%
2,500	1,094	1,157	2,251	90%
3,000	1,313	1,297	2,610	87%
3,500	1,531	1,438	2,969	85%
4,000	1,750	1,579	3,329	83%
15 Years of Service	ee:			
\$1,500	\$ 394	\$ 875	\$1,269	85%
2,000	525	1,016	1,541	77%
2,500	656	1,157	1,813	73%
3,000	788	1,297	2,085	70%
3,500	919	1,438	2,357	67%
4,000	1,050	1,579	2,629	66%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(L-6 Benefit Program is Years of Credited Service times: 2.00% of FAS I)

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service	ce:			
\$1,500	\$1,050	\$ 875	\$1,925	128%
2,000	1,400	1,016	2,416	121%
2,500	1,750	1,157	2,907	116%
3,000	2,100	1,297	3,397	113%
3,500	2,450	1,438	3,888	111%
4,000	2,800	1,579	4,379	109%
25 Years of Service	ce:			
\$1,500	\$ 750	\$ 875	\$1,625	108%
2,000	1,000	1,016	2,016	101%
2,500	1,250	1,157	2,407	96%
3,000	1,500	1,297	2,797	93%
3,500	1,750	1,438	3,188	91%
4,000	2,000	1,579	3,579	89%
15 Years of Service	ce:			
\$1,500	\$ 450	\$ 875	\$1,325	88%
2,000	600	1,016	1,616	81%
2,500	750	1,157	1,907	76%
3,000	900	1,297	2,197	73%
3,500	1,050	1,438	2,488	71%
4,000	1,200	1,579	2,779	69%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1ϕ .

(L-11 Benefit Program is Years of Credited Service times: 2.50% of FAS I)

Final		Estimated	Estin	nated
Average	LAGERS	Social	Month	ly Total
Salary (FAS) ¹	BENEFIT ³	Security ²	\$	% of FAS
35 Years of Service	ce:			
\$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	ce:			
\$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	ce:			
\$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%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(LT-4(62) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 62)
1.00% of FAS ¹ at age 62)

Final	LAGERS BENEFIT ³		Estimated	Esti	mated	Pen	cent
Average			Social	Monthly Total		of FAS	
Salary (FAS) ¹	To 62	At 62	Security ²	To 62	At 62	To 62	At 62
35 Years of Serv	ice:						
\$1,500	\$1,050	\$ 525	\$ 737	\$1,050	\$1,262	70%	84%
2,000	1,400	700	871	1,400	1,571	70%	79%
2,500	1,750	875	973	1,750	1,848	70%	74%
3,000	2,100	1,050	1,091	2,100	2,141	70%	71%
3,500	2,450	1,225	1,209	2,450	2,434	70%	70%
4,000	2,800	1,400	1,327	2,800	2,727	70%	68%
25 Years of Serv	ice:						
\$1,500	\$ 750	\$ 375	\$ 737	\$ 750	\$1,112	50%	74%
2,000	1,000	500	871	1,000	1,371	50%	69%
2,500	1,250	625	973	1,250	1,598	50%	64%
3,000	1,500	750	1,091	1,500	1,841	50%	61%
3,500	1,750	875	1,209	1,750	2,084	50%	60%
4,000	2,000	1,000	1,327	2,000	2,327	50%	58%
15 Years of Serv	ice:						
\$1,500	\$ 450	\$225	\$ 737	\$ 450	\$ 962	30%	64%
2,000	600	300	871	600	1,171	30%	59%
2,500	750	375	973	750	1,348	30%	54%
3,000	900	450	1,091	900	1,541	30%	51%
3,500	1,050	525	1,209	1,050	1,734	30%	50%
4,000	1,200	600	1,327	1,200	1,927	30%	48%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(LT-4(65) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 65)
1.00% of FAS ¹ at age 65)

Final	LAC	LAGERS		Esti	mated	Pen	cent
Average	BEN	EFIT ³	Social	Month	ıly Total	of I	FAS
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Serv	ice:						
\$1,500	\$1,050	\$ 525	\$ 875	\$1,050	\$1,400	70%	93%
2,000	1,400	700	1,016	1,400	1,716	70%	86%
2,500	1,750	875	1,157	1,750	2,032	70%	81%
3,000	2,100	1,050	1,297	2,100	2,347	70%	78%
3,500	2,450	1,225	1,438	2,450	2,663	70%	76%
4,000	2,800	1,400	1,579	2,800	2,979	70%	74%
25 Years of Serv	ice:						
\$1,500	\$ 750	\$ 375	\$ 875	\$ 750	\$1,250	50%	83%
2,000	1,000	500	1,016	1,000	1,516	50%	76%
2,500	1,250	625	1,157	1,250	1,782	50%	71%
3,000	1,500	750	1,297	1,500	2,047	50%	68%
3,500	1,750	875	1,438	1,750	2,313	50%	66%
4,000	2,000	1,000	1,579	2,000	2,579	50%	64%
15 Years of Serv	ice:						
\$1,500	\$ 450	\$225	\$ 875	\$ 450	\$1,100	30%	73%
2,000	600	300	1,016	600	1,316	30%	66%
2,500	750	375	1,157	750	1,532	30%	61%
3,000	900	450	1,297	900	1,747	30%	58%
3,500	1,050	525	1,438	1,050	1,963	30%	56%
4,000	1,200	600	1,579	1,200	2,179	30%	54%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1ϕ .

(LT-5(62) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 62)

1.25% of FAS ¹ at age 62)

Final	LAGERS BENEFIT ³		Estimated	Esti	Estimated		cent
Average			Social	Monthly Total		of FAS	
Salary (FAS) ¹	To 62	At 62	Security ²	To 62	At 62	To 62	At 62
35 Years of Serv	rice:						
\$1,500	\$1,050	\$ 656	\$ 737	\$1,050	\$1,393	70%	93%
2,000	1,400	875	871	1,400	1,746	70%	87%
2,500	1,750	1,094	973	1,750	2,067	70%	83%
3,000	2,100	1,313	1,091	2,100	2,404	70%	80%
3,500	2,450	1,531	1,209	2,450	2,740	70%	78%
4,000	2,800	1,750	1,327	2,800	3,077	70%	77%
25 Years of Serv	rice:						
\$1,500	\$ 750	\$ 469	\$ 737	\$ 750	\$1,206	50%	80%
2,000	1,000	625	871	1,000	1,496	50%	75%
2,500	1,250	781	973	1,250	1,754	50%	70%
3,000	1,500	938	1,091	1,500	2,029	50%	68%
3,500	1,750	1,094	1,209	1,750	2,303	50%	66%
4,000	2,000	1,250	1,327	2,000	2,577	50%	64%
15 Years of Serv	rice:						
\$1,500	\$ 450	\$281	\$ 737	\$ 450	\$1,018	30%	68%
2,000	600	375	871	600	1,246	30%	62%
2,500	750	469	973	750	1,442	30%	58%
3,000	900	563	1,091	900	1,654	30%	55%
3,500	1,050	656	1,209	1,050	1,865	30%	53%
4,000	1,200	750	1,327	1,200	2,077	30%	52%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(LT-5(65) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 65)

1.25% of FAS ¹ at age 65)

Final	LAGERS BENEFIT ³		Estimated	Esti	mated	Per	cent
Average			Social	Monthly Total		of FAS	
Salary (FAS) ¹	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Serv	ice:						
\$1,500	\$1,050	\$ 656	\$ 875	\$1,050	\$1,531	70%	102%
2,000	1,400	875	1,016	1,400	1,891	70%	95%
2,500	1,750	1,094	1,157	1,750	2,251	70%	90%
3,000	2,100	1,313	1,297	2,100	2,610	70%	87%
3,500	2,450	1,531	1,438	2,450	2,969	70%	85%
4,000	2,800	1,750	1,579	2,800	3,329	70%	83%
25 Years of Serv	ice:						
\$1,500	\$ 750	\$ 469	\$ 875	\$ 750	\$1,344	50%	90%
2,000	1,000	625	1,016	1,000	1,641	50%	82%
2,500	1,250	781	1,157	1,250	1,938	50%	78%
3,000	1,500	938	1,297	1,500	2,235	50%	75%
3,500	1,750	1,094	1,438	1,750	2,532	50%	72%
4,000	2,000	1,250	1,579	2,000	2,829	50%	71%
15 Years of Serv	ice:						
\$1,500	\$ 450	\$281	\$ 875	\$ 450	\$1,156	30%	77%
2,000	600	375	1,016	600	1,391	30%	70%
2,500	750	469	1,157	750	1,626	30%	65%
3,000	900	563	1,297	900	1,860	30%	62%
3,500	1,050	656	1,438	1,050	2,094	30%	60%
4,000	1,200	750	1,579	1,200	2,329	30%	58%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(LT-8(62) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 62)
1.50% of FAS ¹ at age 62)

Final	LAC	LAGERS		Esti	mated	Per	cent
Average	Average BEN		Social	Montl	nly Total	of l	FAS
Salary (FAS) ¹	To 62	At 62	Security ²	To 62	At 62	To 62	At 62
35 Years of Serv	ice:						
\$1,500	\$1,050	\$ 788	\$ 737	\$1,050	\$1,525	70%	102%
2,000	1,400	1,050	871	1,400	1,921	70%	96%
2,500	1,750	1,313	973	1,750	2,286	70%	91%
3,000	2,100	1,575	1,091	2,100	2,666	70%	89%
3,500	2,450	1,838	1,209	2,450	3,047	70%	87%
4,000	2,800	2,100	1,327	2,800	3,427	70%	86%
25 Years of Serv	ice:						
\$1,500	\$ 750	\$ 563	\$ 737	\$ 750	\$1,300	50%	87%
2,000	1,000	750	871	1,000	1,621	50%	81%
2,500	1,250	938	973	1,250	1,911	50%	76%
3,000	1,500	1,125	1,091	1,500	2,216	50%	74%
3,500	1,750	1,313	1,209	1,750	2,522	50%	72%
4,000	2,000	1,500	1,327	2,000	2,827	50%	71%
15 Years of Serv	ice:						
\$1,500	\$ 450	\$338	\$ 737	\$ 450	\$1,075	30%	72%
2,000	600	450	871	600	1,321	30%	66%
2,500	750	563	973	750	1,536	30%	61%
3,000	900	675	1,091	900	1,766	30%	59%
3,500	1,050	788	1,209	1,050	1,997	30%	57%
4,000	1,200	900	1,327	1,200	2,227	30%	56%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(LT-8(65) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 65)
1.50% of FAS ¹ at age 65)

Final	LAGERS BENEFIT ³		Estimated Social	Estimated Monthly Total		Percent of FAS	
Average Salary (FAS) ¹							
	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Serv	ice:						
\$1,500	\$1,050	\$ 788	\$ 875	\$1,050	\$1,663	70%	111%
2,000	1,400	1,050	1,016	1,400	2,066	70%	103%
2,500	1,750	1,313	1,157	1,750	2,470	70%	99%
3,000	2,100	1,575	1,297	2,100	2,872	70%	96%
3,500	2,450	1,838	1,438	2,450	3,276	70%	94%
4,000	2,800	2,100	1,579	2,800	3,679	70%	92%
25 Years of Serv	ice:						
\$1,500	\$ 750	\$ 563	\$ 875	\$ 750	\$1,438	50%	96%
2,000	1,000	750	1,016	1,000	1,766	50%	88%
2,500	1,250	938	1,157	1,250	2,095	50%	84%
3,000	1,500	1,125	1,297	1,500	2,422	50%	81%
3,500	1,750	1,313	1,438	1,750	2,751	50%	79%
4,000	2,000	1,500	1,579	2,000	3,079	50%	77%
15 Years of Serv	ice:						
\$1,500	\$ 450	\$338	\$ 875	\$ 450	\$1,213	30%	81%
2,000	600	450	1,016	600	1,466	30%	73%
2,500	750	563	1,157	750	1,720	30%	69%
3,000	900	675	1,297	900	1,972	30%	66%
3,500	1,050	788	1,438	1,050	2,226	30%	64%
4,000	1,200	900	1,579	1,200	2,479	30%	62%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(LT-10(65) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 65)

1.60% of FAS ¹ at age 65)

Final	LAGERS BENEFIT ³		Estimated Social	Estimated Monthly Total		Percent of FAS	
Average Salary (FAS) ¹							
	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Serv	ice:						
\$1,500	\$1,050	\$ 840	\$ 875	\$1,050	\$1,715	70%	114%
2,000	1,400	1,120	1,016	1,400	2,136	70%	107%
2,500	1,750	1,400	1,157	1,750	2,557	70%	102%
3,000	2,100	1,680	1,297	2,100	2,977	70%	99%
3,500	2,450	1,960	1,438	2,450	3,398	70%	97%
4,000	2,800	2,240	1,579	2,800	3,819	70%	95%
25 Years of Serv	ice:						
\$1,500	\$750	\$ 600	\$ 875	\$ 750	\$1,475	50%	98%
2,000	1,000	800	1,016	1,000	1,816	50%	91%
2,500	1,250	1,000	1,157	1,250	2,157	50%	86%
3,000	1,500	1,200	1,297	1,500	2,497	50%	83%
3,500	1,750	1,400	1,438	1,750	2,838	50%	81%
4,000	2,000	1,600	1,579	2,000	3,179	50%	79%
15 Years of Serv	ice:						
\$1,500	\$ 450	\$360	\$ 875	\$ 450	\$1,235	30%	82%
2,000	600	480	1,016	600	1,496	30%	75%
2,500	750	600	1,157	750	1,757	30%	70%
3,000	900	720	1,297	900	2,017	30%	67%
3,500	1,050	840	1,438	1,050	2,278	30%	65%
4,000	1,200	960	1,579	1,200	2,539	30%	63%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1¢.

(LT-14(65) Benefit Program is Years of Credited Service times: 2.00% of FAS ¹ to age 65)
1.75% of FAS ¹ at age 65)

Final	LAGERS BENEFIT ³		Estimated Social	Estimated Monthly Total		Percent of FAS	
Average Salary (FAS) ¹							
	To 65	At 65	Security ²	To 65	At 65	To 65	At 65
35 Years of Serv	ice:						
\$1,500	\$1,050	\$ 919	\$ 875	\$1,050	\$1,794	70%	120%
2,000	1,400	1,225	1,016	1,400	2,241	70%	112%
2,500	1,750	1,531	1,157	1,750	2,688	70%	108%
3,000	2,100	1,838	1,297	2,100	3,135	70%	105%
3,500	2,450	2,144	1,438	2,450	3,582	70%	102%
4,000	2,800	2,450	1,579	2,800	4,029	70%	101%
25 Years of Serv	ice:						
\$1,500	\$ 750	\$ 656	\$ 875	\$ 750	\$1,531	50%	102%
2,000	1,000	875	1,016	1,000	1,891	50%	95%
2,500	1,250	1,094	1,157	1,250	2,251	50%	90%
3,000	1,500	1,313	1,297	1,500	2,610	50%	87%
3,500	1,750	1,531	1,438	1,750	2,969	50%	85%
4,000	2,000	1,750	1,579	2,000	3,329	50%	83%
15 Years of Serv	ice:						
\$1,500	\$ 450	\$ 394	\$ 875	\$ 450	\$1,269	30%	85%
2,000	600	525	1,016	600	1,541	30%	77%
2,500	750	656	1,157	750	1,813	30%	73%
3,000	900	788	1,297	900	2,085	30%	70%
3,500	1,050	919	1,438	1,050	2,357	30%	67%
4,000	1,200	1,050	1,579	1,200	2,629	30%	66%

[&]quot;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.

² "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 2017 - it does not include any amounts which might be payable to an eligible spouse or children.

Amounts are shown to nearest \$1, for simplicity; actual amounts are to nearest 1ϕ .



November 20, 2017 E-mail

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

Dear Bob:

Enclosed is the report of the February 28, 2017 Supplemental Actuarial Valuation of LAGERS benefits for the employees of:

The City of Cottleville

Sincerely,

Mita D. Drazilov, ASA, MAAA

Mita Drazilor

MDD:rmg Enclosure