



**THE INITIAL ACTUARIAL VALUATION FOR
CITY OF KIRKWOOD
AS OF MARCH 31, 2017**

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May 22, 2017

City of Kirkwood
Kirkwood, Missouri

Ladies and Gentlemen:

Submitted in this report are the results of the actuarial valuation prepared to determine the employer contribution rates required to support, for your employees, the 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 the adoption of LAGERS benefits by a political subdivision (Sections 105.660 - 106.685 RSMo).

The contribution requirement for benefits likely to accrue as a result of the future service of your employees is described on pages 4 thru 11 as the current cost plus the disability cost. This contribution rate, expressed as a percent of active employee payroll, will depend on the benefit program adopted.

The contribution requirement to pay for benefits likely to result from service rendered by your employees before you join LAGERS is described on pages 4 thru 11 as the prior service cost. The value established for prior service is called the unfunded actuarial accrued liability (these amounts are further described in Appendix I). The prior service cost is the rate of contribution designed to pay for the unfunded actuarial accrued liability over a period of not more than 30 years.

Section 70.730 of the Revised Statutes of Missouri requires participating employers to contribute the current cost, disability cost, and prior service cost (the total employer cost as shown on pages 4 thru 11). These contributions are mandatory after official action has been taken to join the System.

The total annual dollar costs shown on pages 12 and 13 represent the dollar cost of each benefit program for a one year period based on the payroll reported for this actuarial valuation. In budgeting amounts for LAGERS contributions you should consider any changes in payroll which have been made since data was submitted for the valuation and any changes anticipated to be made before the end of the period for which you are preparing the budget.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II 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.

The computed contributions required for LAGERS participation 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 III and IV.

Projections needed to comply with Missouri state disclosure requirements (Section 105.665 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision are available upon request from LAGERS.

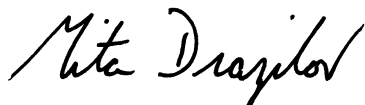
Please note that this entire report must be available as public information for at least 45 calendar days prior to the date final official action is taken by your governing body to join the System. You may wish to make notice of this report in the official minutes of the next meeting of your governing body. This action would not be binding on your subdivision, yet would establish the beginning date of the 45 day waiting period.

In accordance with LAGERS Board policy, the employer contribution rates established by this valuation report are valid for purposes of joining the System for a two year period from the date of this valuation which was March 31, 2017. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

Mita Drazilov is a member of the American Academy of Actuaries and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinion 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 which they feel 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 III of this report.

City of Kirkwood

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.00%	3.10%	0.20%	4.30%
	Police	1.20	3.30	0.40	4.90
	Fire	1.10	4.10	0.60	5.80
L-3	General	1.30	4.40	0.30	6.00
	Police	1.60	4.70	0.50	6.80
	Fire	1.40	5.80	0.70	7.90
LT-4(65)	General	1.10	3.70	0.20	5.00
	Police	1.50	4.70	0.40	6.60
	Fire	1.30	6.00	0.60	7.90
LT-5(65)	General	1.40	4.90	0.30	6.60
	Police	1.80	5.70	0.50	8.00
	Fire	1.60	7.20	0.70	9.50
L-7	General	1.60	5.70	0.30	7.60
	Police	2.00	6.10	0.60	8.70
	Fire	1.70	7.60	0.80	10.10
LT-8(65)	General	1.70	6.10	0.30	8.10
	Police	2.20	6.80	0.60	9.60
	Fire	1.80	8.50	0.80	11.10
L-12	General	2.00	7.10	0.40	9.50
	Police	2.40	7.50	0.70	10.60
	Fire	2.00	9.30	0.90	12.20
LT-14(65)	General	2.00	7.20	0.40	9.60
	Police	2.50	7.90	0.70	11.10
	Fire	2.00	9.80	0.90	12.70
L-6	General	2.30	8.40	0.50	11.20
	Police	2.80	8.90	0.80	12.50
	Fire	2.30	11.10	1.00	14.40
L-11	Police	3.60	11.80	1.00	16.40
	Fire	2.90	14.50	1.20	18.60

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.00%	3.20%	0.20%	4.40%
	Police	1.30	3.50	0.40	5.20
	Fire	1.10	4.40	0.60	6.10
L-3	General	1.40	4.60	0.30	6.30
	Police	1.70	5.00	0.50	7.20
	Fire	1.40	6.20	0.70	8.30
LT-4(65)	General	1.20	3.90	0.20	5.30
	Police	1.60	4.90	0.40	6.90
	Fire	1.40	6.30	0.60	8.30
LT-5(65)	General	1.50	5.20	0.30	7.00
	Police	1.90	6.00	0.50	8.40
	Fire	1.60	7.70	0.70	10.00
L-7	General	1.70	6.00	0.30	8.00
	Police	2.10	6.40	0.60	9.10
	Fire	1.70	8.00	0.80	10.50
LT-8(65)	General	1.80	6.40	0.30	8.50
	Police	2.20	7.10	0.60	9.90
	Fire	1.90	8.90	0.80	11.60
L-12	General	2.00	7.40	0.40	9.80
	Police	2.50	7.90	0.70	11.10
	Fire	2.00	9.80	0.90	12.70
LT-14(65)	General	2.10	7.60	0.40	10.10
	Police	2.50	8.30	0.70	11.50
	Fire	2.10	10.30	0.90	13.30
L-6	General	2.40	8.80	0.50	11.70
	Police	2.90	9.40	0.80	13.10
	Fire	2.40	11.50	1.00	14.90
L-11	Police	3.80	12.30	1.00	17.10
	Fire	3.00	15.20	1.20	19.40

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(No member contributions)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.20%	6.50%	0.20%	7.90%
	Police	1.40	6.90	0.40	8.70
	Fire	1.10	7.90	0.60	9.60
L-3	General	1.50	7.90	0.30	9.70
	Police	1.80	8.40	0.50	10.70
	Fire	1.40	9.70	0.70	11.80
LT-4(65)	General	1.30	7.20	0.20	8.70
	Police	1.70	8.20	0.40	10.30
	Fire	1.40	9.80	0.60	11.80
LT-5(65)	General	1.60	8.40	0.30	10.30
	Police	2.00	9.40	0.50	11.90
	Fire	1.60	11.10	0.70	13.40
L-7	General	1.80	9.30	0.30	11.40
	Police	2.10	9.80	0.60	12.50
	Fire	1.70	11.50	0.80	14.00
LT-8(65)	General	1.90	9.70	0.30	11.90
	Police	2.30	10.50	0.60	13.40
	Fire	1.80	12.40	0.80	15.00
L-12	General	2.10	10.70	0.40	13.20
	Police	2.50	11.30	0.70	14.50
	Fire	2.00	13.20	0.90	16.10
LT-14(65)	General	2.10	10.90	0.40	13.40
	Police	2.60	11.70	0.70	15.00
	Fire	2.00	13.70	0.90	16.60
L-6	General	2.40	12.10	0.50	15.00
	Police	2.80	12.80	0.80	16.40
	Fire	2.30	15.00	1.00	18.30
L-11	Police	3.50	15.80	1.00	20.30
	Fire	2.80	18.50	1.20	22.50

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(No member contributions)

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.20%	6.70%	0.20%	8.10%
	Police	1.50	7.10	0.40	9.00
	Fire	1.20	8.20	0.60	10.00
L-3	General	1.60	8.20	0.30	10.10
	Police	1.80	8.60	0.50	10.90
	Fire	1.50	10.00	0.70	12.20
LT-4(65)	General	1.40	7.40	0.20	9.00
	Police	1.80	8.50	0.40	10.70
	Fire	1.40	10.10	0.60	12.10
LT-5(65)	General	1.60	8.70	0.30	10.60
	Police	2.10	9.70	0.50	12.30
	Fire	1.70	11.50	0.70	13.90
L-7	General	1.90	9.60	0.30	11.80
	Police	2.20	10.20	0.60	13.00
	Fire	1.70	11.90	0.80	14.40
LT-8(65)	General	1.90	10.00	0.30	12.20
	Police	2.30	10.90	0.60	13.80
	Fire	1.90	12.80	0.80	15.50
L-12	General	2.20	11.10	0.40	13.70
	Police	2.60	11.70	0.70	15.00
	Fire	2.00	13.70	0.90	16.60
LT-14(65)	General	2.20	11.30	0.40	13.90
	Police	2.60	12.10	0.70	15.40
	Fire	2.10	14.20	0.90	17.20
L-6	General	2.50	12.50	0.50	15.50
	Police	2.90	13.30	0.80	17.00
	Fire	2.30	15.50	1.00	18.80
L-11	Police	3.60	16.40	1.00	21.00
	Fire	2.90	19.20	1.20	23.30

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	0.90%	3.50%	0.20%	4.60%
	Police	1.20	3.50	0.40	5.10
	Fire	1.00	4.50	0.60	6.10
L-3	General	1.20	4.90	0.30	6.40
	Police	1.60	5.00	0.50	7.10
	Fire	1.30	6.30	0.70	8.30
LT-4(65)	General	1.10	4.70	0.20	6.00
	Police	1.60	5.70	0.40	7.70
	Fire	1.40	6.90	0.60	8.90
LT-5(65)	General	1.40	5.80	0.30	7.50
	Police	1.90	6.20	0.50	8.60
	Fire	1.60	8.10	0.70	10.40
L-7	General	1.50	6.40	0.30	8.20
	Police	1.90	6.50	0.60	9.00
	Fire	1.60	8.20	0.80	10.60
LT-8(65)	General	1.60	6.90	0.30	8.80
	Police	2.10	7.30	0.60	10.00
	Fire	1.80	9.40	0.80	12.00
L-12	General	1.80	7.80	0.40	10.00
	Police	2.30	7.90	0.70	10.90
	Fire	1.90	10.00	0.90	12.80
LT-14(65)	General	1.90	8.10	0.40	10.40
	Police	2.40	8.30	0.70	11.40
	Fire	1.90	10.70	0.90	13.50
L-6	General	2.10	9.20	0.50	11.80
	Police	2.70	9.40	0.80	12.90
	Fire	2.10	11.90	1.00	15.00
L-11	Police	3.50	12.30	1.00	16.80
	Fire	2.70	15.60	1.20	19.50

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.

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.00%	3.70%	0.20%	4.90%
	Police	1.20	3.70	0.40	5.30
	Fire	1.00	4.80	0.60	6.40
L-3	General	1.30	5.20	0.30	6.80
	Police	1.60	5.20	0.50	7.30
	Fire	1.30	6.70	0.70	8.70
LT-4(65)	General	1.10	4.90	0.20	6.20
	Police	1.70	5.40	0.40	7.50
	Fire	1.40	7.30	0.60	9.30
LT-5(65)	General	1.40	6.10	0.30	7.80
	Police	1.90	6.50	0.50	8.90
	Fire	1.60	8.50	0.70	10.80
L-7	General	1.60	6.70	0.30	8.60
	Police	2.00	6.70	0.60	9.30
	Fire	1.60	8.60	0.80	11.00
LT-8(65)	General	1.70	7.30	0.30	9.30
	Police	2.20	7.60	0.60	10.40
	Fire	1.80	9.80	0.80	12.40
L-12	General	1.90	8.20	0.40	10.50
	Police	2.40	8.30	0.70	11.40
	Fire	1.90	10.50	0.90	13.30
LT-14(65)	General	1.90	8.50	0.40	10.80
	Police	2.50	8.70	0.70	11.90
	Fire	2.00	11.10	0.90	14.00
L-6	General	2.20	9.70	0.50	12.40
	Police	2.80	9.80	0.80	13.40
	Fire	2.20	12.40	1.00	15.60
L-11	Police	3.60	13.00	1.00	17.60
	Fire	2.80	16.20	1.20	20.20

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.

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(No member contributions)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.10%	6.90%	0.20%	8.20%
	Police	1.40	7.10	0.40	8.90
	Fire	1.10	8.30	0.60	10.00
L-3	General	1.40	8.40	0.30	10.10
	Police	1.70	8.60	0.50	10.80
	Fire	1.30	10.20	0.70	12.20
LT-4(65)	General	1.30	8.10	0.20	9.60
	Police	1.80	8.70	0.40	10.90
	Fire	1.40	10.80	0.60	12.80
LT-5(65)	General	1.50	9.30	0.30	11.10
	Police	2.00	9.80	0.50	12.30
	Fire	1.60	12.00	0.70	14.30
L-7	General	1.70	9.90	0.30	11.90
	Police	2.10	10.20	0.60	12.90
	Fire	1.60	12.10	0.80	14.50
LT-8(65)	General	1.80	10.50	0.30	12.60
	Police	2.30	11.00	0.60	13.90
	Fire	1.80	13.30	0.80	15.90
L-12	General	2.00	11.50	0.40	13.90
	Police	2.40	11.70	0.70	14.80
	Fire	1.90	13.90	0.90	16.70
LT-14(65)	General	2.00	11.70	0.40	14.10
	Police	2.50	12.10	0.70	15.30
	Fire	2.00	14.50	0.90	17.40
L-6	General	2.20	13.00	0.50	15.70
	Police	2.80	13.20	0.80	16.80
	Fire	2.10	15.80	1.00	18.90
L-11	Police	3.40	16.30	1.00	20.70
	Fire	2.70	19.50	1.20	23.40

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.

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(No member contributions)

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	1.20%	7.10%	0.20%	8.50%
	Police	1.40	7.30	0.40	9.10
	Fire	1.10	8.60	0.60	10.30
L-3	General	1.40	8.70	0.30	10.40
	Police	1.80	8.90	0.50	11.20
	Fire	1.40	10.50	0.70	12.60
LT-4(65)	General	1.30	8.40	0.20	9.90
	Police	1.80	9.00	0.40	11.20
	Fire	1.50	11.10	0.60	13.20
LT-5(65)	General	1.60	9.60	0.30	11.50
	Police	2.10	10.20	0.50	12.80
	Fire	1.60	12.40	0.70	14.70
L-7	General	1.70	10.30	0.30	12.30
	Police	2.10	10.50	0.60	13.20
	Fire	1.60	12.50	0.80	14.90
LT-8(65)	General	1.80	10.90	0.30	13.00
	Police	2.30	11.40	0.60	14.30
	Fire	1.80	13.70	0.80	16.30
L-12	General	2.00	11.80	0.40	14.20
	Police	2.50	12.10	0.70	15.30
	Fire	1.90	14.40	0.90	17.20
LT-14(65)	General	2.10	12.10	0.40	14.60
	Police	2.60	12.50	0.70	15.80
	Fire	2.00	15.00	0.90	17.90
L-6	General	2.30	13.40	0.50	16.20
	Police	2.80	13.70	0.80	17.30
	Fire	2.20	16.30	1.00	19.50
L-11	Police	3.60	16.90	1.00	21.50
	Fire	2.70	20.20	1.20	24.10

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.

* It was assumed that prior service would be given for vesting purposes only.

City of Kirkwood

Employer Contribution Dollars

Regular Retirement Eligibility

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 426,901	\$ 228,026	\$ 250,839
L-3	595,676	316,444	341,660
LT-4(65)	496,396	307,137	341,660
LT-5(65)	655,243	372,287	410,857
L-7	754,523	404,863	436,806
LT-8(65)	804,162	446,745	480,054
L-12	943,153	493,281	527,627
LT-14(65)	953,081	516,549	549,251
L-6	1,111,928	581,699	622,773
L-11	N/A	763,189	804,415

3 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 436,829	\$ 241,987	\$ 263,814
L-3	625,460	335,059	358,960
LT-4(65)	526,180	321,098	358,960
LT-5(65)	694,955	390,902	432,481
L-7	794,234	423,477	454,105
LT-8(65)	843,874	460,706	501,678
L-12	972,937	516,549	549,251
LT-14(65)	1,002,721	535,163	575,200
L-6	1,161,568	609,621	644,397
L-11	N/A	795,764	839,014

Non-Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 784,306	\$ 404,863	\$ 415,182
L-3	963,009	497,934	510,328
LT-4(65)	863,730	479,320	510,328
LT-5(65)	1,022,577	553,778	579,525
L-7	1,131,784	581,699	605,474
LT-8(65)	1,181,424	623,581	648,722
L-12	1,310,487	674,771	696,295
LT-14(65)	1,330,343	698,039	717,919
L-6	1,489,189	763,189	791,441
L-11	N/A	944,679	973,083

3 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 804,162	\$ 418,823	\$ 432,481
L-3	1,002,721	507,242	527,627
LT-4(65)	893,514	497,934	523,302
LT-5(65)	1,052,360	572,392	601,149
L-7	1,171,496	604,967	622,773
LT-8(65)	1,211,207	642,196	670,346
L-12	1,360,126	698,039	717,919
LT-14(65)	1,379,982	716,653	743,868
L-6	1,538,829	791,111	813,065
L-11	N/A	977,254	1,007,682

PLEASE NOTE THAT THE ABOVE INFORMATION IS BASED ON THE PERSONNEL AND PAYROLL DATA SUBMITTED FOR THE ACTUARIAL VALUATION. IN BUDGETING AMOUNTS FOR LAGERS CONTRIBUTIONS YOU SHOULD CONSIDER ANY CHANGES WHICH HAVE BEEN MADE SINCE DATA WAS SUBMITTED FOR THE VALUATION AND ANY CHANGES ANTICIPATED TO BE MADE BEFORE THE END OF THE PERIOD FOR WHICH YOU ARE PREPARING THE BUDGET.

City of Kirkwood

Employer Contribution Dollars

Rule of 80 Retirement Eligibility

Employer contributions are payable monthly, and each month's actual dollar contribution will be the contribution percent multiplied by the payroll during the month. If payroll during your first year of LAGERS participation equals the annual payroll reported for this valuation, the approximate employer dollar contribution for the year would be as follows:

Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 456,685	\$ 237,333	\$ 263,814
L-3	635,387	330,405	358,960
LT-4(65)	595,676	358,327	384,908
LT-5(65)	744,595	400,209	449,781
L-7	814,090	418,823	458,430
LT-8(65)	873,658	465,359	518,978
L-12	992,793	507,242	553,576
LT-14(65)	1,032,505	530,510	583,850
L-6	1,171,496	600,313	648,722
L-11	N/A	781,804	843,339

3 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 486,469	\$ 246,640	\$ 276,788
L-3	675,099	339,712	376,259
LT-4(65)	615,532	349,019	402,208
LT-5(65)	774,378	414,170	467,080
L-7	853,802	432,784	475,730
LT-8(65)	923,297	483,974	536,277
L-12	1,042,433	530,510	575,200
LT-14(65)	1,072,216	553,778	605,474
L-6	1,231,063	623,581	674,671
L-11	N/A	819,032	873,612

Non-Contributory Plan

5 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 814,090	\$ 414,170	\$ 432,481
L-3	1,002,721	502,588	527,627
LT-4(65)	953,081	507,242	553,576
LT-5(65)	1,102,000	572,392	618,448
L-7	1,181,424	600,313	627,098
LT-8(65)	1,250,919	646,849	687,645
L-12	1,379,982	688,732	722,244
LT-14(65)	1,399,838	712,000	752,518
L-6	1,558,685	781,804	817,390
L-11	N/A	963,294	1,012,006

3 Year FAS			
Benefit Program	General	Police	Fire
L-1	\$ 843,874	\$ 423,477	\$ 445,456
L-3	1,032,505	521,202	544,927
LT-4(65)	982,865	521,202	570,875
LT-5(65)	1,141,712	595,660	635,748
L-7	1,221,135	614,274	644,397
LT-8(65)	1,290,631	665,464	704,945
L-12	1,409,766	712,000	743,868
LT-14(65)	1,449,478	735,268	774,142
L-6	1,608,325	805,072	843,339
L-11	N/A	1,000,522	1,042,280

PLEASE NOTE THAT THE ABOVE INFORMATION IS BASED ON THE PERSONNEL AND PAYROLL DATA SUBMITTED FOR THE ACTUARIAL VALUATION. IN BUDGETING AMOUNTS FOR LAGERS CONTRIBUTIONS YOU SHOULD CONSIDER ANY CHANGES WHICH HAVE BEEN MADE SINCE DATA WAS SUBMITTED FOR THE VALUATION AND ANY CHANGES ANTICIPATED TO BE MADE BEFORE THE END OF THE PERIOD FOR WHICH YOU ARE PREPARING THE BUDGET.

City of Kirkwood

Employees and Payroll Included in the Valuation

	General	Police	Fire
Number of Employees	164	61	52
Annual Payroll	\$ 9,927,929	\$ 4,653,593	\$ 4,324,814

Information regarding the age and service characteristics of the employees is contained in Appendix V.

UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)

If the decision is made to join LAGERS the governing body also must decide how much credit to grant employees for their service before the membership date. The options are to cover 25%, 50%, 75% or 100% of prior service. The granting of prior service credit results in the establishment of an actuarial accrued liability. Because your political subdivision will not have established an asset balance with the System as of the membership date, the value established for prior service is an unfunded actuarial accrued liability.

The policy of the LAGERS Board of Trustees provides that unfunded liabilities are to be paid for by level percent of payroll contributions over a period of 30 years. The contribution rates shown on pages 4 through 11 as the "Prior Service Cost" are designed to pay for the applicable unfunded actuarial accrued liability. This procedure will allow your political subdivision to retire the unfunded actuarial accrued liability in an orderly fashion over a period of years without the need for an immediate large payment upon joining the System.

Should the governing body elect to grant credit for 100% of the employees' prior service, the unfunded actuarial accrued liability as of the date of this valuation would be as follows:

City of Kirkwood

Regular Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 1,756,520	\$ 1,830,687	\$ 2,110,900	\$ 2,177,958
	Police	996,087	1,039,817	1,158,724	1,195,643
	Fire	811,714	841,515	862,988	888,760
L-3	General	\$ 2,322,453	\$ 2,414,458	\$ 2,638,747	\$ 2,722,327
	Police	1,317,847	1,371,113	1,448,324	1,494,525
	Fire	1,046,616	1,083,167	1,078,813	1,111,008
LT-4(65)	General	1,936,702	2,017,256	2,289,617	2,362,845
	Police	1,253,507	1,306,407	1,414,588	1,460,640
	Fire	1,009,272	1,045,751	1,059,365	1,091,788
LT-5(65)	General	2,457,634	2,554,279	2,772,840	2,861,018
	Police	1,510,974	1,571,005	1,640,263	1,693,280
	Fire	1,194,709	1,236,475	1,226,008	1,263,246
L-7	General	2,885,333	2,995,128	3,166,505	3,266,861
	Police	1,634,466	1,696,874	1,738,070	1,793,374
	Fire	1,279,190	1,322,451	1,294,575	1,333,192
LT-8(65)	General	2,975,416	3,088,396	3,255,710	3,359,310
	Police	1,763,130	1,830,189	1,866,009	1,925,961
	Fire	1,377,932	1,424,561	1,392,716	1,434,707
L-12	General	3,445,519	3,572,535	3,694,307	3,811,331
	Police	1,947,576	2,019,613	2,027,706	2,092,267
	Fire	1,510,318	1,560,079	1,510,376	1,555,434
LT-14(65)	General	3,490,609	3,619,164	3,738,980	3,857,412
	Police	2,011,871	2,086,264	2,091,690	2,158,518
	Fire	1,559,652	1,611,178	1,559,446	1,606,129
L-6	General	4,003,420	4,147,627	4,222,096	4,355,816
	Police	2,259,319	2,341,620	2,317,402	2,391,224
	Fire	1,740,193	1,797,058	1,726,102	1,777,513
L-11	Police	2,967,430	3,076,852	2,896,648	2,989,051
	Fire	2,241,428	2,315,826	2,157,626	2,222,015

City of Kirkwood

UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)

Rule of 80 Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 1,627,230	\$ 1,696,181	\$ 1,954,186	\$ 2,017,558
	Police	972,521	1,015,362	1,127,591	1,164,268
	Fire	762,375	791,165	810,747	836,245
L-3	General	\$ 2,145,514	\$ 2,231,492	\$ 2,442,666	\$ 2,521,997
	Police	1,282,942	1,335,195	1,409,477	1,455,332
	Fire	980,933	1,016,527	1,013,386	1,045,286
LT-4(65)	General	1,921,001	2,000,408	2,246,030	2,319,636
	Police	1,307,524	1,362,388	1,460,914	1,509,600
	Fire	1,034,894	1,073,296	1,081,941	1,116,997
LT-5(65)	General	2,365,947	2,459,515	2,661,626	2,748,583
	Police	1,534,216	1,595,413	1,659,479	1,714,355
	Fire	1,185,280	1,228,139	1,216,779	1,255,809
L-7	General	2,661,586	2,763,936	2,931,266	3,026,276
	Police	1,588,531	1,649,761	1,691,327	1,746,419
	Fire	1,197,687	1,246,207	1,216,149	1,254,320
LT-8(65)	General	2,808,516	2,916,047	3,077,314	3,177,278
	Police	1,755,989	1,823,363	1,857,990	1,919,067
	Fire	1,333,862	1,380,650	1,351,715	1,394,658
L-12	General	3,175,116	3,293,504	3,419,854	3,530,714
	Police	1,890,920	1,961,798	1,973,246	2,037,403
	Fire	1,413,072	1,461,463	1,418,894	1,463,323
LT-14(65)	General	3,248,607	3,369,591	3,492,792	3,606,218
	Police	1,974,636	2,048,486	2,056,588	2,123,766
	Fire	1,481,183	1,532,010	1,486,665	1,533,488
L-6	General	3,686,453	3,821,235	3,908,438	4,035,182
	Police	2,192,234	2,273,010	2,255,090	2,328,573
	Fire	1,627,449	1,682,738	1,621,463	1,672,292
L-11	Police	2,875,415	2,982,736	2,818,955	2,910,663
	Fire	2,094,874	2,167,322	2,026,771	2,090,571

APPENDIX II

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

Percent Increase in Individual's Pay During Next Year	
Sample Ages	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 III

**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-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-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 other-wise 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 IV

**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 Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 FAS¹ to age 65)
1.00% of FAS¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 FAS¹ to age 65)
1.25% of FAS¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 FAS¹ to age 65)
1.50% of FAS¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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 and 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.

³ 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 FAS¹ to age 65)
1.75% of FAS¹ at age 65)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	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%

¹ "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 and 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.

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

APPENDIX V

**AGE AND SERVICE
CHARACTERISTICS OF
EMPLOYEES**

City of Kirkwood - General

March 31, 2017

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24	3							3	\$ 53,026
25-29	4							4	\$ 150,227
30-34	9	3						12	\$ 566,659
35-39	12	6	3					21	\$ 1,010,376
40-44	6	2	3	2				13	\$ 781,515
45-49	7	6	2	5		1		21	\$ 1,172,732
50-54	3	4	3	4	2	7	1	24	\$ 1,539,698
55-59	7	5	2	6	4	6	6	36	\$ 2,770,649
60-64	2	2	2	6	3	2	7	24	\$ 1,559,922
65-69	2	1		1	1	1		6	\$ 323,125
70 & Over									
Totals	55	29	15	24	10	17	14	164	\$ 9,927,929

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 49.1 years.

Benefit Service: 0.0 years.

Annual Pay: \$60,536.

City of Kirkwood - Police

March 31, 2017

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24	2							2	\$ 108,227
25-29	3							3	\$ 185,306
30-34	4	4	1					9	\$ 595,150
35-39	1	4	2					7	\$ 481,317
40-44	3	1	4	4	1			13	\$ 952,213
45-49		4	2	1	2			9	\$ 694,626
50-54	1	1			1	1	1	5	\$ 444,032
55-59		1		1	1	3	3	9	\$ 787,609
60-64		1			1		1	3	\$ 270,878
65-69				1				1	\$ 134,235
70 & Over									
Totals	14	16	9	7	6	4	5	61	\$ 4,653,593

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 43.8 years.

Benefit Service: 0.0 years.

Annual Pay: \$76,288.

City of Kirkwood - Fire

March 31, 2017

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24	1							1	\$ 15,316
25-29	6							6	\$ 395,144
30-34	4	3	1					8	\$ 575,301
35-39	2	1	1					4	\$ 315,592
40-44	1	5	1	2				9	\$ 781,720
45-49				2	3	2		7	\$ 686,798
50-54			4	1	3	3		11	\$ 977,588
55-59					1	2	2	5	\$ 489,559
60-64					1			1	\$ 87,796
65-69									
70 & Over									
Totals	14	9	7	5	8	7	2	52	\$ 4,324,814

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 42.8 years.

Benefit Service: 0.0 years.

Annual Pay: \$83,169.

May 22, 2017 E-mail

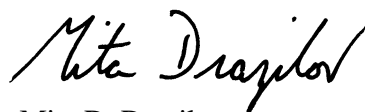
Mr. Keith Hughes, Executive Secretary
Missouri Local Government
Employees Retirement System
P.O. Box 1665
Jefferson City, Missouri 65102

Dear Keith:

Enclosed is the report of the March 31, 2017 Initial Actuarial
Valuation of LAGERS benefits for the employees of

City of Kirkwood

Sincerely,



Mita D. Drazilov

MDD:rmg

May 22, 2017

City of Kirkwood
Kirkwood, Missouri

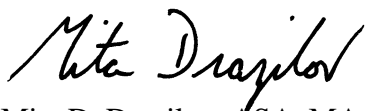
Ladies and Gentlemen:

This report contains projections needed to comply with Missouri state disclosure requirements (Section 105.660 of the RSMo) regarding the adoption of LAGERS benefits by a political subdivision. This report is intended to be a supplement to the March 31, 2017 Initial Valuation for the City of Kirkwood dated May 22, 2017.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of the Initial Valuation 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.

Mita Drazilov is a member of the American Academy of Actuaries and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinion herein.

Respectfully submitted,



Mita D. Drazilov, ASA, MAAA

City of Kirkwood - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)
(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	4.3%	\$426,901	\$ 1,756,520	6.0%	\$595,676	\$ 2,322,453	5.0%	\$496,396	\$ 1,936,702
2018	10,250,587	4.3	440,775	1,780,584	6.0	615,035	2,354,270	5.0	512,529	1,963,235
2019	10,583,731	4.3	455,100	1,803,036	6.0	635,024	2,383,956	5.0	529,187	1,987,990
2020	10,927,702	4.3	469,891	1,823,650	6.0	655,662	2,411,212	5.0	546,385	2,010,719
2021	11,282,852	4.3	485,163	1,842,180	6.0	676,971	2,435,712	5.0	564,143	2,031,150
2022	11,649,545	4.3	500,930	1,858,359	6.0	698,973	2,457,103	5.0	582,477	2,048,988
2023	12,028,155	4.3	517,211	1,871,896	6.0	721,689	2,475,001	5.0	601,408	2,063,914
2024	12,419,070	4.3	534,020	1,882,475	6.0	745,144	2,488,989	5.0	620,954	2,075,579
2025	12,822,690	4.3	551,376	1,889,755	6.0	769,361	2,498,614	5.0	641,135	2,083,605
2026	13,239,427	4.3	569,295	1,893,363	6.0	794,366	2,503,385	5.0	661,971	2,087,584

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	6.5%	\$645,315	\$ 2,457,634	7.6%	\$754,523	\$ 2,885,333	8.1%	\$804,162	\$ 2,975,416
2018	10,250,587	6.5	666,288	2,491,303	7.6	779,045	2,924,862	8.1	830,298	3,016,179
2019	10,583,731	6.5	687,943	2,522,717	7.6	804,364	2,961,743	8.1	857,282	3,054,211
2020	10,927,702	6.5	710,301	2,551,559	7.6	830,505	2,995,604	8.1	885,144	3,089,130
2021	11,282,852	6.5	733,385	2,577,485	7.6	857,497	3,026,042	8.1	913,911	3,120,518
2022	11,649,545	6.5	757,220	2,600,121	7.6	885,365	3,052,618	8.1	943,613	3,147,923
2023	12,028,155	6.5	781,830	2,619,061	7.6	914,140	3,074,854	8.1	974,281	3,170,854
2024	12,419,070	6.5	807,240	2,633,863	7.6	943,849	3,092,232	8.1	1,005,945	3,188,775
2025	12,822,690	6.5	833,475	2,644,048	7.6	974,524	3,104,190	8.1	1,038,638	3,201,106
2026	13,239,427	6.5	860,563	2,649,097	7.6	1,006,196	3,110,117	8.1	1,072,394	3,207,218

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	9.5%	\$943,153	\$ 3,445,519	9.6%	\$953,081	\$ 3,490,609	11.2%	\$1,111,928	\$ 4,003,420
2018	10,250,587	9.5	973,806	3,492,722	9.6	984,056	3,538,430	11.2	1,148,066	4,058,266
2019	10,583,731	9.5	1,005,454	3,536,763	9.6	1,016,038	3,583,047	11.2	1,185,378	4,109,438
2020	10,927,702	9.5	1,038,132	3,577,199	9.6	1,049,059	3,624,012	11.2	1,223,903	4,156,421
2021	11,282,852	9.5	1,071,871	3,613,547	9.6	1,083,154	3,660,835	11.2	1,263,679	4,198,654
2022	11,649,545	9.5	1,106,707	3,645,282	9.6	1,118,356	3,692,986	11.2	1,304,749	4,235,528
2023	12,028,155	9.5	1,142,675	3,671,835	9.6	1,154,703	3,719,887	11.2	1,347,153	4,266,381
2024	12,419,070	9.5	1,179,812	3,692,587	9.6	1,192,231	3,740,911	11.2	1,390,936	4,290,493
2025	12,822,690	9.5	1,218,156	3,706,866	9.6	1,230,978	3,755,377	11.2	1,436,141	4,307,085
2026	13,239,427	9.5	1,257,746	3,713,944	9.6	1,270,985	3,762,548	11.2	1,482,816	4,315,309

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)
(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	4.4%	\$436,829	\$ 1,830,687	6.3%	\$625,460	\$ 2,414,458	5.3%	\$526,180	\$ 2,017,256
2018	10,250,587	4.4	451,026	1,855,767	6.3	645,787	2,447,536	5.3	543,281	2,044,892
2019	10,583,731	4.4	465,684	1,879,167	6.3	666,775	2,478,398	5.3	560,938	2,070,677
2020	10,927,702	4.4	480,819	1,900,651	6.3	688,445	2,506,733	5.3	579,168	2,094,351
2021	11,282,852	4.4	496,445	1,919,963	6.3	710,820	2,532,204	5.3	597,991	2,115,632
2022	11,649,545	4.4	512,580	1,936,825	6.3	733,921	2,554,443	5.3	617,426	2,134,212
2023	12,028,155	4.4	529,239	1,950,933	6.3	757,774	2,573,050	5.3	637,492	2,149,758
2024	12,419,070	4.4	546,439	1,961,959	6.3	782,401	2,587,592	5.3	658,211	2,161,908
2025	12,822,690	4.4	564,198	1,969,546	6.3	807,829	2,597,598	5.3	679,603	2,170,268
2026	13,239,427	4.4	582,535	1,973,307	6.3	834,084	2,602,558	5.3	701,690	2,174,412

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	7.0%	\$694,955	\$ 2,554,279	8.0%	\$794,234	\$ 2,995,128	8.5%	\$843,874	\$ 3,088,396
2018	10,250,587	7.0	717,541	2,589,272	8.0	820,047	3,036,161	8.5	871,300	3,130,707
2019	10,583,731	7.0	740,861	2,621,921	8.0	846,698	3,074,445	8.5	899,617	3,170,183
2020	10,927,702	7.0	764,939	2,651,897	8.0	874,216	3,109,595	8.5	928,855	3,206,427
2021	11,282,852	7.0	789,800	2,678,843	8.0	902,628	3,141,191	8.5	959,042	3,239,007
2022	11,649,545	7.0	815,468	2,702,370	8.0	931,964	3,168,778	8.5	990,211	3,267,453
2023	12,028,155	7.0	841,971	2,722,055	8.0	962,252	3,191,860	8.5	1,022,393	3,291,254
2024	12,419,070	7.0	869,335	2,737,439	8.0	993,526	3,209,899	8.5	1,055,621	3,309,855
2025	12,822,690	7.0	897,588	2,748,025	8.0	1,025,815	3,222,312	8.5	1,089,929	3,322,654
2026	13,239,427	7.0	926,760	2,753,272	8.0	1,059,154	3,228,465	8.5	1,125,351	3,328,999

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	9.8%	\$972,937	\$ 3,572,535	10.1%	\$1,002,721	\$ 3,619,164	11.7%	\$1,161,568	\$ 4,147,627
2018	10,250,587	9.8	1,004,558	3,621,478	10.1	1,035,309	3,668,746	11.7	1,199,319	4,204,449
2019	10,583,731	9.8	1,037,206	3,667,143	10.1	1,068,957	3,715,007	11.7	1,238,297	4,257,464
2020	10,927,702	9.8	1,070,915	3,709,069	10.1	1,103,698	3,757,480	11.7	1,278,541	4,306,139
2021	11,282,852	9.8	1,105,719	3,746,757	10.1	1,139,568	3,795,659	11.7	1,320,094	4,349,893
2022	11,649,545	9.8	1,141,655	3,779,662	10.1	1,176,604	3,828,994	11.7	1,362,997	4,388,095
2023	12,028,155	9.8	1,178,759	3,807,194	10.1	1,214,844	3,856,886	11.7	1,407,294	4,420,059
2024	12,419,070	9.8	1,217,069	3,828,711	10.1	1,254,326	3,878,684	11.7	1,453,031	4,445,040
2025	12,822,690	9.8	1,256,624	3,843,517	10.1	1,295,092	3,893,683	11.7	1,500,255	4,462,229
2026	13,239,427	9.8	1,297,464	3,850,856	10.1	1,337,182	3,901,118	11.7	1,549,013	4,470,750

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - General

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	7.9%	\$784,306	\$ 2,110,900	9.7%	\$963,009	\$ 2,638,747	8.7%	\$863,730	\$ 2,289,617
2018	10,250,587	7.9	809,796	2,139,819	9.7	994,307	2,674,897	8.7	891,801	2,320,984
2019	10,583,731	7.9	836,115	2,166,801	9.7	1,026,622	2,708,626	8.7	920,785	2,350,250
2020	10,927,702	7.9	863,288	2,191,574	9.7	1,059,987	2,739,594	8.7	950,710	2,377,120
2021	11,282,852	7.9	891,345	2,213,842	9.7	1,094,437	2,767,431	8.7	981,608	2,401,274
2022	11,649,545	7.9	920,314	2,233,285	9.7	1,130,006	2,791,736	8.7	1,013,510	2,422,363
2023	12,028,155	7.9	950,224	2,249,553	9.7	1,166,731	2,812,072	8.7	1,046,449	2,440,008
2024	12,419,070	7.9	981,107	2,262,267	9.7	1,204,650	2,827,965	8.7	1,080,459	2,453,798
2025	12,822,690	7.9	1,012,993	2,271,015	9.7	1,243,801	2,838,901	8.7	1,115,574	2,463,287
2026	13,239,427	7.9	1,045,915	2,275,351	9.7	1,284,224	2,844,322	8.7	1,151,830	2,467,991

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	10.3%	\$1,022,577	\$ 2,772,840	11.4%	\$1,131,784	\$ 3,166,505	11.9%	\$1,181,424	\$ 3,255,710
2018	10,250,587	10.3	1,055,810	2,810,827	11.4	1,168,567	3,209,886	11.9	1,219,820	3,300,313
2019	10,583,731	10.3	1,090,124	2,846,270	11.4	1,206,545	3,250,361	11.9	1,259,464	3,341,928
2020	10,927,702	10.3	1,125,553	2,878,811	11.4	1,245,758	3,287,522	11.9	1,300,397	3,380,136
2021	11,282,852	10.3	1,162,134	2,908,062	11.4	1,286,245	3,320,926	11.9	1,342,659	3,414,481
2022	11,649,545	10.3	1,199,903	2,933,602	11.4	1,328,048	3,350,092	11.9	1,386,296	3,444,468
2023	12,028,155	10.3	1,238,900	2,954,971	11.4	1,371,210	3,374,495	11.9	1,431,350	3,469,559
2024	12,419,070	10.3	1,279,164	2,971,672	11.4	1,415,774	3,393,567	11.9	1,477,869	3,489,168
2025	12,822,690	10.3	1,320,737	2,983,164	11.4	1,461,787	3,406,690	11.9	1,525,900	3,502,661
2026	13,239,427	10.3	1,363,661	2,988,860	11.4	1,509,295	3,413,195	11.9	1,575,492	3,509,349

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	13.2%	\$1,310,487	\$ 3,694,307	13.4%	\$1,330,343	\$ 3,738,980	15.0%	\$1,489,189	\$ 4,222,096
2018	10,250,587	13.2	1,353,077	3,744,918	13.4	1,373,579	3,790,203	15.0	1,537,588	4,279,938
2019	10,583,731	13.2	1,397,052	3,792,139	13.4	1,418,220	3,837,995	15.0	1,587,560	4,333,905
2020	10,927,702	13.2	1,442,457	3,835,494	13.4	1,464,312	3,881,875	15.0	1,639,155	4,383,454
2021	11,282,852	13.2	1,489,336	3,874,466	13.4	1,511,902	3,921,318	15.0	1,692,428	4,427,994
2022	11,649,545	13.2	1,537,740	3,908,493	13.4	1,561,039	3,955,756	15.0	1,747,432	4,466,882
2023	12,028,155	13.2	1,587,716	3,936,964	13.4	1,611,773	3,984,571	15.0	1,804,223	4,499,420
2024	12,419,070	13.2	1,639,317	3,959,214	13.4	1,664,155	4,007,090	15.0	1,862,861	4,524,849
2025	12,822,690	13.2	1,692,595	3,974,524	13.4	1,718,240	4,022,586	15.0	1,923,404	4,542,347
2026	13,239,427	13.2	1,747,604	3,982,113	13.4	1,774,083	4,030,267	15.0	1,985,914	4,551,021

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - General

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	8.1%	\$804,162	\$ 2,177,958	10.1%	\$1,002,721	\$ 2,722,327	9.0%	\$893,514	\$ 2,362,845
2018	10,250,587	8.1	830,298	2,207,796	10.1	1,035,309	2,759,622	9.0	922,553	2,395,216
2019	10,583,731	8.1	857,282	2,235,635	10.1	1,068,957	2,794,419	9.0	952,536	2,425,418
2020	10,927,702	8.1	885,144	2,261,195	10.1	1,103,698	2,826,367	9.0	983,493	2,453,148
2021	11,282,852	8.1	913,911	2,284,171	10.1	1,139,568	2,855,085	9.0	1,015,457	2,478,074
2022	11,649,545	8.1	943,613	2,304,231	10.1	1,176,604	2,880,159	9.0	1,048,459	2,499,837
2023	12,028,155	8.1	974,281	2,321,016	10.1	1,214,844	2,901,139	9.0	1,082,534	2,518,047
2024	12,419,070	8.1	1,005,945	2,334,134	10.1	1,254,326	2,917,535	9.0	1,117,716	2,532,278
2025	12,822,690	8.1	1,038,638	2,343,160	10.1	1,295,092	2,928,817	9.0	1,154,042	2,542,070
2026	13,239,427	8.1	1,072,394	2,347,634	10.1	1,337,182	2,934,410	9.0	1,191,548	2,546,924

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	10.6%	\$1,052,360	\$ 2,861,018	11.8%	\$1,171,496	\$ 3,266,861	12.2%	\$1,211,207	\$ 3,359,310
2018	10,250,587	10.6	1,086,562	2,900,214	11.8	1,209,569	3,311,616	12.2	1,250,572	3,405,332
2019	10,583,731	10.6	1,121,875	2,936,784	11.8	1,248,880	3,353,373	12.2	1,291,215	3,448,271
2020	10,927,702	10.6	1,158,336	2,970,360	11.8	1,289,469	3,391,712	12.2	1,333,180	3,487,695
2021	11,282,852	10.6	1,195,982	3,000,542	11.8	1,331,377	3,426,175	12.2	1,376,508	3,523,133
2022	11,649,545	10.6	1,234,852	3,026,894	11.8	1,374,646	3,456,265	12.2	1,421,244	3,554,074
2023	12,028,155	10.6	1,274,984	3,048,943	11.8	1,419,322	3,481,442	12.2	1,467,435	3,579,963
2024	12,419,070	10.6	1,316,421	3,066,175	11.8	1,465,450	3,501,118	12.2	1,515,127	3,600,196
2025	12,822,690	10.6	1,359,205	3,078,032	11.8	1,513,077	3,514,657	12.2	1,564,368	3,614,118
2026	13,239,427	10.6	1,403,379	3,083,909	11.8	1,562,252	3,521,368	12.2	1,615,210	3,621,019

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	13.7%	\$1,360,126	\$ 3,811,331	13.9%	\$1,379,982	\$ 3,857,412	15.5%	\$1,538,829	\$ 4,355,816
2018	10,250,587	13.7	1,404,330	3,863,546	13.9	1,424,832	3,910,258	15.5	1,588,841	4,415,490
2019	10,583,731	13.7	1,449,971	3,912,263	13.9	1,471,139	3,959,564	15.5	1,640,478	4,471,167
2020	10,927,702	13.7	1,497,095	3,956,992	13.9	1,518,951	4,004,833	15.5	1,693,794	4,522,286
2021	11,282,852	13.7	1,545,751	3,997,199	13.9	1,568,316	4,045,526	15.5	1,748,842	4,568,237
2022	11,649,545	13.7	1,595,988	4,032,304	13.9	1,619,287	4,081,055	15.5	1,805,679	4,608,357
2023	12,028,155	13.7	1,647,857	4,061,677	13.9	1,671,914	4,110,783	15.5	1,864,364	4,641,926
2024	12,419,070	13.7	1,701,413	4,084,632	13.9	1,726,251	4,134,016	15.5	1,924,956	4,668,161
2025	12,822,690	13.7	1,756,709	4,100,427	13.9	1,782,354	4,150,002	15.5	1,987,517	4,686,213
2026	13,239,427	13.7	1,813,801	4,108,257	13.9	1,840,280	4,157,926	15.5	2,052,111	4,695,161

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)
(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	4.6%	\$456,685	\$ 1,627,230	6.4%	\$635,387	\$ 2,145,514	6.0%	\$595,676	\$ 1,921,001
2018	10,250,587	4.6	471,527	1,649,523	6.4	656,038	2,174,907	6.0	615,035	1,947,318
2019	10,583,731	4.6	486,852	1,670,322	6.4	677,359	2,202,331	6.0	635,024	1,971,872
2020	10,927,702	4.6	502,674	1,689,419	6.4	699,373	2,227,510	6.0	655,662	1,994,416
2021	11,282,852	4.6	519,011	1,706,585	6.4	722,103	2,250,144	6.0	676,971	2,014,681
2022	11,649,545	4.6	535,879	1,721,573	6.4	745,571	2,269,906	6.0	698,973	2,032,375
2023	12,028,155	4.6	553,295	1,734,114	6.4	769,802	2,286,441	6.0	721,689	2,047,180
2024	12,419,070	4.6	571,277	1,743,915	6.4	794,820	2,299,363	6.0	745,144	2,058,750
2025	12,822,690	4.6	589,844	1,750,659	6.4	820,652	2,308,255	6.0	769,361	2,066,711
2026	13,239,427	4.6	609,014	1,754,002	6.4	847,323	2,312,663	6.0	794,366	2,070,657

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	7.5%	\$744,595	\$ 2,365,947	8.2%	\$814,090	\$ 2,661,586	8.8%	\$873,658	\$ 2,808,516
2018	10,250,587	7.5	768,794	2,398,360	8.2	840,548	2,698,049	8.8	902,052	2,846,992
2019	10,583,731	7.5	793,780	2,428,602	8.2	867,866	2,732,070	8.8	931,368	2,882,891
2020	10,927,702	7.5	819,578	2,456,368	8.2	896,072	2,763,306	8.8	961,638	2,915,851
2021	11,282,852	7.5	846,214	2,481,327	8.2	925,194	2,791,384	8.8	992,891	2,945,479
2022	11,649,545	7.5	873,716	2,503,119	8.2	955,263	2,815,899	8.8	1,025,160	2,971,347
2023	12,028,155	7.5	902,112	2,521,353	8.2	986,309	2,836,411	8.8	1,058,478	2,992,991
2024	12,419,070	7.5	931,430	2,535,603	8.2	1,018,364	2,852,441	8.8	1,092,878	3,009,906
2025	12,822,690	7.5	961,702	2,545,408	8.2	1,051,461	2,863,472	8.8	1,128,397	3,021,545
2026	13,239,427	7.5	992,957	2,550,268	8.2	1,085,633	2,868,940	8.8	1,165,070	3,027,315

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	10.0%	\$992,793	\$ 3,175,116	10.4%	\$1,032,505	\$ 3,248,607	11.8%	\$1,171,496	\$ 3,686,453
2018	10,250,587	10.0	1,025,059	3,218,615	10.4	1,066,061	3,293,112	11.8	1,209,569	3,736,957
2019	10,583,731	10.0	1,058,373	3,259,200	10.4	1,100,708	3,334,636	11.8	1,248,880	3,784,078
2020	10,927,702	10.0	1,092,770	3,296,462	10.4	1,136,481	3,372,761	11.8	1,289,469	3,827,341
2021	11,282,852	10.0	1,128,285	3,329,957	10.4	1,173,417	3,407,031	11.8	1,331,377	3,866,230
2022	11,649,545	10.0	1,164,955	3,359,202	10.4	1,211,553	3,436,953	11.8	1,374,646	3,900,185
2023	12,028,155	10.0	1,202,816	3,383,672	10.4	1,250,928	3,461,989	11.8	1,419,322	3,928,595
2024	12,419,070	10.0	1,241,907	3,402,795	10.4	1,291,583	3,481,555	11.8	1,465,450	3,950,798
2025	12,822,690	10.0	1,282,269	3,415,954	10.4	1,333,560	3,495,018	11.8	1,513,077	3,966,076
2026	13,239,427	10.0	1,323,943	3,422,477	10.4	1,376,900	3,501,692	11.8	1,562,252	3,973,649

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)
(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	4.9%	\$486,469	\$ 1,696,181	6.8%	\$675,099	\$ 2,231,492	6.2%	\$615,532	\$ 2,000,408
2018	10,250,587	4.9	502,279	1,719,418	6.8	697,040	2,262,063	6.2	635,536	2,027,813
2019	10,583,731	4.9	518,603	1,741,099	6.8	719,694	2,290,586	6.2	656,191	2,053,382
2020	10,927,702	4.9	535,457	1,761,005	6.8	743,084	2,316,774	6.2	677,518	2,076,858
2021	11,282,852	4.9	552,860	1,778,898	6.8	767,234	2,340,315	6.2	699,537	2,097,961
2022	11,649,545	4.9	570,828	1,794,521	6.8	792,169	2,360,868	6.2	722,272	2,116,386
2023	12,028,155	4.9	589,380	1,807,593	6.8	817,915	2,378,065	6.2	745,746	2,131,802
2024	12,419,070	4.9	608,534	1,817,809	6.8	844,497	2,391,505	6.2	769,982	2,143,850
2025	12,822,690	4.9	628,312	1,824,839	6.8	871,943	2,400,753	6.2	795,007	2,152,140
2026	13,239,427	4.9	648,732	1,828,323	6.8	900,281	2,405,337	6.2	820,844	2,156,249

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	7.8%	\$774,378	\$ 2,459,515	8.6%	\$853,802	\$ 2,763,936	9.3%	\$923,297	\$ 2,916,047
2018	10,250,587	7.8	799,546	2,493,210	8.6	881,550	2,801,802	9.3	953,305	2,955,996
2019	10,583,731	7.8	825,531	2,524,648	8.6	910,201	2,837,131	9.3	984,287	2,993,269
2020	10,927,702	7.8	852,361	2,553,512	8.6	939,782	2,869,568	9.3	1,016,276	3,027,491
2021	11,282,852	7.8	880,062	2,579,458	8.6	970,325	2,898,725	9.3	1,049,305	3,058,253
2022	11,649,545	7.8	908,665	2,602,112	8.6	1,001,861	2,924,183	9.3	1,083,408	3,085,112
2023	12,028,155	7.8	938,196	2,621,067	8.6	1,034,421	2,945,484	9.3	1,118,618	3,107,585
2024	12,419,070	7.8	968,687	2,635,880	8.6	1,068,040	2,962,131	9.3	1,154,974	3,125,148
2025	12,822,690	7.8	1,000,170	2,646,073	8.6	1,102,751	2,973,586	9.3	1,192,510	3,137,233
2026	13,239,427	7.8	1,032,675	2,651,126	8.6	1,138,591	2,979,264	9.3	1,231,267	3,143,223

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	10.5%	\$1,042,433	\$ 3,293,504	10.8%	\$1,072,216	\$ 3,369,591	12.4%	\$1,231,063	\$ 3,821,235
2018	10,250,587	10.5	1,076,312	3,338,625	10.8	1,107,063	3,415,754	12.4	1,271,073	3,873,585
2019	10,583,731	10.5	1,111,292	3,380,723	10.8	1,143,043	3,458,824	12.4	1,312,383	3,922,428
2020	10,927,702	10.5	1,147,409	3,419,375	10.8	1,180,192	3,498,369	12.4	1,355,035	3,967,273
2021	11,282,852	10.5	1,184,699	3,454,119	10.8	1,218,548	3,533,916	12.4	1,399,074	4,007,584
2022	11,649,545	10.5	1,223,202	3,484,454	10.8	1,258,151	3,564,952	12.4	1,444,544	4,042,780
2023	12,028,155	10.5	1,262,956	3,509,836	10.8	1,299,041	3,590,920	12.4	1,491,491	4,072,229
2024	12,419,070	10.5	1,304,002	3,529,672	10.8	1,341,260	3,611,215	12.4	1,539,965	4,095,244
2025	12,822,690	10.5	1,346,382	3,543,321	10.8	1,384,851	3,625,180	12.4	1,590,014	4,111,080
2026	13,239,427	10.5	1,390,140	3,550,087	10.8	1,429,858	3,632,102	12.4	1,641,689	4,118,930

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - General

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	8.2%	\$814,090	\$ 1,954,186	10.1%	\$1,002,721	\$ 2,442,666	9.6%	\$953,081	\$ 2,246,030
2018	10,250,587	8.2	840,548	1,980,958	10.1	1,035,309	2,476,130	9.6	984,056	2,276,800
2019	10,583,731	8.2	867,866	2,005,937	10.1	1,068,957	2,507,352	9.6	1,016,038	2,305,509
2020	10,927,702	8.2	896,072	2,028,871	10.1	1,103,698	2,536,018	9.6	1,049,059	2,331,868
2021	11,282,852	8.2	925,194	2,049,486	10.1	1,139,568	2,561,786	9.6	1,083,154	2,355,562
2022	11,649,545	8.2	955,263	2,067,485	10.1	1,176,604	2,584,285	9.6	1,118,356	2,376,249
2023	12,028,155	8.2	986,309	2,082,545	10.1	1,214,844	2,603,110	9.6	1,154,703	2,393,558
2024	12,419,070	8.2	1,018,364	2,094,315	10.1	1,254,326	2,617,822	9.6	1,192,231	2,407,086
2025	12,822,690	8.2	1,051,461	2,102,414	10.1	1,295,092	2,627,945	9.6	1,230,978	2,416,394
2026	13,239,427	8.2	1,085,633	2,106,429	10.1	1,337,182	2,632,963	9.6	1,270,985	2,421,008

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	11.1%	\$1,102,000	\$ 2,661,626	11.9%	\$1,181,424	\$ 2,931,266	12.6%	\$1,250,919	\$ 3,077,314
2018	10,250,587	11.1	1,137,815	2,698,090	11.9	1,219,820	2,971,424	12.6	1,291,574	3,119,473
2019	10,583,731	11.1	1,174,794	2,732,111	11.9	1,259,464	3,008,892	12.6	1,333,550	3,158,808
2020	10,927,702	11.1	1,212,975	2,763,347	11.9	1,300,397	3,043,292	12.6	1,376,890	3,194,922
2021	11,282,852	11.1	1,252,397	2,791,425	11.9	1,342,659	3,074,215	12.6	1,421,639	3,227,385
2022	11,649,545	11.1	1,293,099	2,815,940	11.9	1,386,296	3,101,214	12.6	1,467,843	3,255,729
2023	12,028,155	11.1	1,335,125	2,836,452	11.9	1,431,350	3,123,804	12.6	1,515,548	3,279,445
2024	12,419,070	11.1	1,378,517	2,852,483	11.9	1,477,869	3,141,459	12.6	1,564,803	3,297,979
2025	12,822,690	11.1	1,423,319	2,863,514	11.9	1,525,900	3,153,607	12.6	1,615,659	3,310,732
2026	13,239,427	11.1	1,469,576	2,868,982	11.9	1,575,492	3,159,629	12.6	1,668,168	3,317,054

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	13.9%	\$1,379,982	\$ 3,419,854	14.1%	\$1,399,838	\$ 3,492,792	15.7%	\$1,558,685	\$ 3,908,438
2018	10,250,587	13.9	1,424,832	3,466,705	14.1	1,445,333	3,540,643	15.7	1,609,342	3,961,983
2019	10,583,731	13.9	1,471,139	3,510,418	14.1	1,492,306	3,585,288	15.7	1,661,646	4,011,941
2020	10,927,702	13.9	1,518,951	3,550,552	14.1	1,540,806	3,626,278	15.7	1,715,649	4,057,809
2021	11,282,852	13.9	1,568,316	3,586,629	14.1	1,590,882	3,663,124	15.7	1,771,408	4,099,040
2022	11,649,545	13.9	1,619,287	3,618,128	14.1	1,642,586	3,695,295	15.7	1,828,979	4,135,039
2023	12,028,155	13.9	1,671,914	3,644,484	14.1	1,695,970	3,722,213	15.7	1,888,420	4,165,160
2024	12,419,070	13.9	1,726,251	3,665,081	14.1	1,751,089	3,743,250	15.7	1,949,794	4,188,700
2025	12,822,690	13.9	1,782,354	3,679,254	14.1	1,807,999	3,757,725	15.7	2,013,162	4,204,898
2026	13,239,427	13.9	1,840,280	3,686,279	14.1	1,866,759	3,764,900	15.7	2,078,590	4,212,927

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - General

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	8.5%	\$843,874	\$ 2,017,558	10.4%	\$1,032,505	\$ 2,521,997	9.9%	\$982,865	\$ 2,319,636
2018	10,250,587	8.5	871,300	2,045,198	10.4	1,066,061	2,556,548	9.9	1,014,808	2,351,415
2019	10,583,731	8.5	899,617	2,070,987	10.4	1,100,708	2,588,784	9.9	1,047,789	2,381,065
2020	10,927,702	8.5	928,855	2,094,664	10.4	1,136,481	2,618,381	9.9	1,081,842	2,408,288
2021	11,282,852	8.5	959,042	2,115,948	10.4	1,173,417	2,644,986	9.9	1,117,002	2,432,758
2022	11,649,545	8.5	990,211	2,134,531	10.4	1,211,553	2,668,215	9.9	1,153,305	2,454,123
2023	12,028,155	8.5	1,022,393	2,150,080	10.4	1,250,928	2,687,651	9.9	1,190,787	2,472,000
2024	12,419,070	8.5	1,055,621	2,162,232	10.4	1,291,583	2,702,841	9.9	1,229,488	2,485,971
2025	12,822,690	8.5	1,089,929	2,170,593	10.4	1,333,560	2,713,293	9.9	1,269,446	2,495,584
2026	13,239,427	8.5	1,125,351	2,174,738	10.4	1,376,900	2,718,474	9.9	1,310,703	2,500,349

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	11.5%	\$1,141,712	\$ 2,748,583	12.3%	\$1,221,135	\$ 3,026,276	13.0%	\$1,290,631	\$ 3,177,278
2018	10,250,587	11.5	1,178,818	2,786,238	12.3	1,260,822	3,067,736	13.0	1,332,576	3,220,806
2019	10,583,731	11.5	1,217,129	2,821,371	12.3	1,301,799	3,106,418	13.0	1,375,885	3,261,418
2020	10,927,702	11.5	1,256,686	2,853,628	12.3	1,344,107	3,141,933	13.0	1,420,601	3,298,706
2021	11,282,852	11.5	1,297,528	2,882,623	12.3	1,387,791	3,173,858	13.0	1,466,771	3,332,224
2022	11,649,545	11.5	1,339,698	2,907,939	12.3	1,432,894	3,201,732	13.0	1,514,441	3,361,489
2023	12,028,155	11.5	1,383,238	2,929,121	12.3	1,479,463	3,225,055	13.0	1,563,660	3,385,975
2024	12,419,070	11.5	1,428,193	2,945,675	12.3	1,527,546	3,243,282	13.0	1,614,479	3,405,111
2025	12,822,690	11.5	1,474,609	2,957,066	12.3	1,577,191	3,255,824	13.0	1,666,950	3,418,279
2026	13,239,427	11.5	1,522,534	2,962,712	12.3	1,628,450	3,262,041	13.0	1,721,126	3,424,806

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 9,927,929	14.2%	\$1,409,766	\$ 3,530,714	14.6%	\$1,449,478	\$ 3,606,218	16.2%	\$1,608,325	\$ 4,035,182
2018	10,250,587	14.2	1,455,583	3,579,084	14.6	1,496,586	3,655,623	16.2	1,660,595	4,090,463
2019	10,583,731	14.2	1,502,890	3,624,214	14.6	1,545,225	3,701,718	16.2	1,714,564	4,142,041
2020	10,927,702	14.2	1,551,734	3,665,649	14.6	1,595,444	3,744,040	16.2	1,770,288	4,189,397
2021	11,282,852	14.2	1,602,165	3,702,895	14.6	1,647,296	3,782,083	16.2	1,827,822	4,231,965
2022	11,649,545	14.2	1,654,235	3,735,415	14.6	1,700,834	3,815,299	16.2	1,887,226	4,269,132
2023	12,028,155	14.2	1,707,998	3,762,625	14.6	1,756,111	3,843,091	16.2	1,948,561	4,300,230
2024	12,419,070	14.2	1,763,508	3,783,890	14.6	1,813,184	3,864,811	16.2	2,011,889	4,324,534
2025	12,822,690	14.2	1,820,822	3,798,522	14.6	1,872,113	3,879,756	16.2	2,077,276	4,341,257
2026	13,239,427	14.2	1,879,999	3,805,775	14.6	1,932,956	3,887,164	16.2	2,144,787	4,349,547

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Police

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 4,653,593	4.9%	\$228,026	\$ 996,087	6.8%	\$316,444	\$ 1,317,847	6.6%	\$307,137	\$ 1,253,507	8.0%	\$372,287	\$ 1,510,974	8.7%	\$404,863	\$ 1,634,466
2018	4,804,834	4.9	235,437	1,009,733	6.8	326,729	1,335,901	6.6	317,119	1,270,680	8.0	384,387	1,531,674	8.7	418,021	1,656,858
2019	4,960,991	4.9	243,089	1,022,465	6.8	337,347	1,352,746	6.6	327,425	1,286,702	8.0	396,879	1,550,987	8.7	431,606	1,677,750
2020	5,122,223	4.9	250,989	1,034,155	6.8	348,311	1,368,212	6.6	338,067	1,301,413	8.0	409,778	1,568,719	8.7	445,633	1,696,932
2021	5,288,695	4.9	259,146	1,044,663	6.8	359,631	1,382,114	6.6	349,054	1,314,637	8.0	423,096	1,584,659	8.7	460,116	1,714,174
2022	5,460,578	4.9	267,568	1,053,838	6.8	371,319	1,394,252	6.6	360,398	1,326,183	8.0	436,846	1,598,576	8.7	475,070	1,729,228
2023	5,638,047	4.9	276,264	1,061,515	6.8	383,387	1,404,408	6.6	372,111	1,335,843	8.0	451,044	1,610,221	8.7	490,510	1,741,824
2024	5,821,284	4.9	285,243	1,067,514	6.8	395,847	1,412,345	6.6	384,205	1,343,393	8.0	465,703	1,619,321	8.7	506,452	1,751,668
2025	6,010,476	4.9	294,513	1,071,642	6.8	408,712	1,417,807	6.6	396,691	1,348,588	8.0	480,838	1,625,583	8.7	522,911	1,758,442
2026	6,205,816	4.9	304,085	1,073,688	6.8	421,995	1,420,514	6.6	409,584	1,351,163	8.0	496,465	1,628,687	8.7	539,906	1,761,800

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 4,653,593	9.6%	\$446,745	\$ 1,763,130	10.6%	\$493,281	\$ 1,947,576	11.1%	\$516,549	\$ 2,011,871	12.5%	\$581,699	\$ 2,259,319	16.4%	\$763,189	\$ 2,967,430
2018	4,804,834	9.6	461,264	1,787,285	10.6	509,312	1,974,257	11.1	533,337	2,039,433	12.5	600,604	2,290,271	16.4	787,993	3,008,083
2019	4,960,991	9.6	476,255	1,809,822	10.6	525,865	1,999,151	11.1	550,670	2,065,149	12.5	620,124	2,319,150	16.4	813,603	3,046,013
2020	5,122,223	9.6	491,733	1,830,514	10.6	542,956	2,022,007	11.1	568,567	2,088,760	12.5	640,278	2,345,665	16.4	840,045	3,080,838
2021	5,288,695	9.6	507,715	1,849,114	10.6	560,602	2,042,552	11.1	587,045	2,109,984	12.5	661,087	2,369,499	16.4	867,346	3,112,142
2022	5,460,578	9.6	524,215	1,865,354	10.6	578,821	2,060,490	11.1	606,124	2,128,515	12.5	682,572	2,390,309	16.4	895,535	3,139,474
2023	5,638,047	9.6	541,253	1,878,942	10.6	597,633	2,075,499	11.1	625,823	2,144,020	12.5	704,756	2,407,721	16.4	924,640	3,162,343
2024	5,821,284	9.6	558,843	1,889,561	10.6	617,056	2,087,229	11.1	646,163	2,156,137	12.5	727,661	2,421,329	16.4	954,691	3,180,216
2025	6,010,476	9.6	577,006	1,896,868	10.6	637,110	2,095,300	11.1	667,163	2,164,475	12.5	751,310	2,430,692	16.4	985,718	3,192,514
2026	6,205,816	9.6	595,758	1,900,490	10.6	657,816	2,099,301	11.1	688,846	2,168,608	12.5	775,727	2,435,333	16.4	1,017,754	3,198,610

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Police

Employer Contribution Rates (Contributory Plan - 3 Year FAS)
(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	5.2%	\$241,987	\$ 1,039,817	7.2%	\$335,059	\$ 1,371,113	6.9%	\$321,098	\$ 1,306,407	8.4%	\$390,902	\$ 1,571,005	9.1%	\$423,477	\$ 1,696,874
2018	4,804,834	5.2	249,851	1,054,062	7.2	345,948	1,389,897	6.9	331,534	1,324,305	8.4	403,606	1,592,528	9.1	437,240	1,720,121
2019	4,960,991	5.2	257,972	1,067,353	7.2	357,191	1,407,423	6.9	342,308	1,341,004	8.4	416,723	1,612,609	9.1	451,450	1,741,811
2020	5,122,223	5.2	266,356	1,079,556	7.2	368,800	1,423,514	6.9	353,433	1,356,336	8.4	430,267	1,631,046	9.1	466,122	1,761,725
2021	5,288,695	5.2	275,012	1,090,525	7.2	380,786	1,437,978	6.9	364,920	1,370,118	8.4	444,250	1,647,619	9.1	481,271	1,779,626
2022	5,460,578	5.2	283,950	1,100,102	7.2	393,162	1,450,607	6.9	376,780	1,382,151	8.4	458,689	1,662,089	9.1	496,913	1,795,255
2023	5,638,047	5.2	293,178	1,108,116	7.2	405,939	1,461,174	6.9	389,025	1,392,219	8.4	473,596	1,674,196	9.1	513,062	1,808,332
2024	5,821,284	5.2	302,707	1,114,379	7.2	419,132	1,469,432	6.9	401,669	1,400,087	8.4	488,988	1,683,658	9.1	529,737	1,818,552
2025	6,010,476	5.2	312,545	1,118,688	7.2	432,754	1,475,114	6.9	414,723	1,405,501	8.4	504,880	1,690,169	9.1	546,953	1,825,584
2026	6,205,816	5.2	322,702	1,120,824	7.2	446,819	1,477,931	6.9	428,201	1,408,185	8.4	521,289	1,693,396	9.1	564,729	1,829,070

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	9.9%	\$460,706	\$ 1,830,189	11.1%	\$516,549	\$ 2,019,613	11.5%	\$535,163	\$ 2,086,264	13.1%	\$609,621	\$ 2,341,620	17.1%	\$795,764	\$ 3,076,852
2018	4,804,834	9.9	475,679	1,855,262	11.1	533,337	2,047,281	11.5	552,556	2,114,845	13.1	629,433	2,373,700	17.1	821,627	3,119,004
2019	4,960,991	9.9	491,138	1,878,656	11.1	550,670	2,073,096	11.5	570,514	2,141,512	13.1	649,890	2,403,631	17.1	848,329	3,158,333
2020	5,122,223	9.9	507,100	1,900,135	11.1	568,567	2,096,798	11.5	589,056	2,165,996	13.1	671,011	2,431,112	17.1	875,900	3,194,442
2021	5,288,695	9.9	523,581	1,919,442	11.1	587,045	2,118,103	11.5	608,200	2,188,004	13.1	692,819	2,455,814	17.1	904,367	3,226,900
2022	5,460,578	9.9	540,597	1,936,299	11.1	606,124	2,136,705	11.5	627,966	2,207,220	13.1	715,336	2,477,382	17.1	933,759	3,255,240
2023	5,638,047	9.9	558,167	1,950,404	11.1	625,823	2,152,269	11.5	648,375	2,223,298	13.1	738,584	2,495,428	17.1	964,106	3,278,952
2024	5,821,284	9.9	576,307	1,961,427	11.1	646,163	2,164,433	11.5	669,448	2,235,863	13.1	762,588	2,509,531	17.1	995,440	3,297,484
2025	6,010,476	9.9	595,037	1,969,012	11.1	667,163	2,172,803	11.5	691,205	2,244,509	13.1	787,372	2,519,235	17.1	1,027,791	3,310,236
2026	6,205,816	9.9	614,376	1,972,772	11.1	688,846	2,176,952	11.5	713,669	2,248,795	13.1	812,962	2,524,045	17.1	1,061,195	3,316,557

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Police

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	8.7%	\$404,863	\$ 1,158,724	10.7%	\$497,934	\$ 1,448,324	10.3%	\$479,320	\$ 1,414,588	11.9%	\$553,778	\$ 1,640,263	12.5%	\$581,699	\$ 1,738,070
2018	4,804,834	8.7	418,021	1,174,598	10.7	514,117	1,468,166	10.3	494,898	1,433,968	11.9	571,775	1,662,734	12.5	600,604	1,761,881
2019	4,960,991	8.7	431,606	1,189,409	10.7	530,826	1,486,679	10.3	510,982	1,452,049	11.9	590,358	1,683,700	12.5	620,124	1,784,097
2020	5,122,223	8.7	445,633	1,203,007	10.7	548,078	1,503,676	10.3	527,589	1,468,650	11.9	609,545	1,702,950	12.5	640,278	1,804,494
2021	5,288,695	8.7	460,116	1,215,231	10.7	565,890	1,518,955	10.3	544,736	1,483,573	11.9	629,355	1,720,254	12.5	661,087	1,822,829
2022	5,460,578	8.7	475,070	1,225,904	10.7	584,282	1,532,295	10.3	562,440	1,496,602	11.9	649,809	1,735,362	12.5	682,572	1,838,838
2023	5,638,047	8.7	490,510	1,234,834	10.7	603,271	1,543,457	10.3	580,719	1,507,504	11.9	670,928	1,748,003	12.5	704,756	1,852,233
2024	5,821,284	8.7	506,452	1,241,813	10.7	622,877	1,552,180	10.3	599,592	1,516,024	11.9	692,733	1,757,882	12.5	727,661	1,862,701
2025	6,010,476	8.7	522,911	1,246,615	10.7	643,121	1,558,182	10.3	619,079	1,521,887	11.9	715,247	1,764,680	12.5	751,310	1,869,904
2026	6,205,816	8.7	539,906	1,248,995	10.7	664,022	1,561,157	10.3	639,199	1,524,793	11.9	738,492	1,768,050	12.5	775,727	1,873,475

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	13.4%	\$623,581	\$ 1,866,009	14.5%	\$674,771	\$ 2,027,706	15.0%	\$698,039	\$ 2,091,690	16.4%	\$763,189	\$ 2,317,402	20.3%	\$944,679	\$ 2,896,648
2018	4,804,834	13.4	643,848	1,891,573	14.5	696,701	2,055,485	15.0	720,725	2,120,346	16.4	787,993	2,349,150	20.3	975,381	2,936,332
2019	4,960,991	13.4	664,773	1,915,425	14.5	719,344	2,081,403	15.0	744,149	2,147,082	16.4	813,603	2,378,771	20.3	1,007,081	2,973,357
2020	5,122,223	13.4	686,378	1,937,324	14.5	742,722	2,105,200	15.0	768,333	2,171,629	16.4	840,045	2,405,967	20.3	1,039,811	3,007,351
2021	5,288,695	13.4	708,685	1,957,009	14.5	766,861	2,126,591	15.0	793,304	2,193,695	16.4	867,346	2,430,414	20.3	1,073,605	3,037,908
2022	5,460,578	13.4	731,717	1,974,196	14.5	791,784	2,145,267	15.0	819,087	2,212,961	16.4	895,535	2,451,759	20.3	1,108,497	3,064,588
2023	5,638,047	13.4	755,498	1,988,577	14.5	817,517	2,160,894	15.0	845,707	2,229,081	16.4	924,640	2,469,618	20.3	1,144,524	3,086,912
2024	5,821,284	13.4	780,052	1,999,816	14.5	844,086	2,173,107	15.0	873,193	2,241,679	16.4	954,691	2,483,575	20.3	1,181,721	3,104,358
2025	6,010,476	13.4	805,404	2,007,549	14.5	871,519	2,181,510	15.0	901,571	2,250,348	16.4	985,718	2,493,179	20.3	1,220,127	3,116,363
2026	6,205,816	13.4	831,579	2,011,382	14.5	899,843	2,185,676	15.0	930,872	2,254,645	16.4	1,017,754	2,497,940	20.3	1,259,781	3,122,314

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Police

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	9.0%	\$418,823	\$ 1,195,643	10.9%	\$507,242	\$ 1,494,525	10.7%	\$497,934	\$ 1,460,640	12.3%	\$572,392	\$ 1,693,280	13.0%	\$604,967	\$ 1,793,374
2018	4,804,834	9.0	432,435	1,212,023	10.9	523,727	1,515,000	10.7	514,117	1,480,651	12.3	590,995	1,716,478	13.0	624,628	1,817,943
2019	4,960,991	9.0	446,489	1,227,306	10.9	540,748	1,534,103	10.7	530,826	1,499,321	12.3	610,202	1,738,122	13.0	644,929	1,840,866
2020	5,122,223	9.0	461,000	1,241,338	10.9	558,322	1,551,642	10.7	548,078	1,516,463	12.3	630,033	1,757,994	13.0	665,889	1,861,913
2021	5,288,695	9.0	475,983	1,253,951	10.9	576,468	1,567,408	10.7	565,890	1,531,872	12.3	650,509	1,775,857	13.0	687,530	1,880,832
2022	5,460,578	9.0	491,452	1,264,964	10.9	595,203	1,581,174	10.7	584,282	1,545,325	12.3	671,651	1,791,453	13.0	709,875	1,897,350
2023	5,638,047	9.0	507,424	1,274,178	10.9	614,547	1,592,692	10.7	603,271	1,556,582	12.3	693,480	1,804,503	13.0	732,946	1,911,171
2024	5,821,284	9.0	523,916	1,281,379	10.9	634,520	1,601,693	10.7	622,877	1,565,379	12.3	716,018	1,814,701	13.0	756,767	1,921,972
2025	6,010,476	9.0	540,943	1,286,334	10.9	655,142	1,607,887	10.7	643,121	1,571,432	12.3	739,289	1,821,719	13.0	781,362	1,929,404
2026	6,205,816	9.0	558,523	1,288,790	10.9	676,434	1,610,957	10.7	664,022	1,574,433	12.3	763,315	1,825,198	13.0	806,756	1,933,088

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	13.8%	\$642,196	\$ 1,925,961	15.0%	\$698,039	\$ 2,092,267	15.4%	\$716,653	\$ 2,158,518	17.0%	\$791,111	\$ 2,391,224	21.0%	\$977,254	\$ 2,989,051
2018	4,804,834	13.8	663,067	1,952,346	15.0	720,725	2,120,931	15.4	739,944	2,188,089	17.0	816,822	2,423,983	21.0	1,009,015	3,030,001
2019	4,960,991	13.8	684,617	1,976,964	15.0	744,149	2,147,675	15.4	763,993	2,215,679	17.0	843,368	2,454,548	21.0	1,041,808	3,068,207
2020	5,122,223	13.8	706,867	1,999,567	15.0	768,333	2,172,229	15.4	788,822	2,241,011	17.0	870,778	2,482,611	21.0	1,075,667	3,103,286
2021	5,288,695	13.8	729,840	2,019,884	15.0	793,304	2,194,301	15.4	814,459	2,263,782	17.0	899,078	2,507,837	21.0	1,110,626	3,134,818
2022	5,460,578	13.8	753,560	2,037,623	15.0	819,087	2,213,572	15.4	840,929	2,283,663	17.0	928,298	2,529,862	21.0	1,146,721	3,162,349
2023	5,638,047	13.8	778,050	2,052,466	15.0	845,707	2,229,696	15.4	868,259	2,300,298	17.0	958,468	2,548,290	21.0	1,183,990	3,185,385
2024	5,821,284	13.8	803,337	2,064,066	15.0	873,193	2,242,298	15.4	896,478	2,313,299	17.0	989,618	2,562,692	21.0	1,222,470	3,203,388
2025	6,010,476	13.8	829,446	2,072,048	15.0	901,571	2,250,969	15.4	925,613	2,322,245	17.0	1,021,781	2,572,602	21.0	1,262,200	3,215,776
2026	6,205,816	13.8	856,403	2,076,005	15.0	930,872	2,255,267	15.4	955,696	2,326,679	17.0	1,054,989	2,577,514	21.0	1,303,221	3,221,916

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Police

Employer Contribution Rates (Contributory Plan - 5 Year FAS)
(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	5.1%	\$237,333	\$ 972,521	7.1%	\$330,405	\$ 1,282,942	7.2%	\$335,059	\$ 1,307,524	8.6%	\$400,209	\$ 1,534,216	9.0%	\$418,823	\$ 1,588,531
2018	4,804,834	5.1	245,047	985,844	7.1	341,143	1,300,518	7.2	345,948	1,325,437	8.6	413,216	1,555,235	9.0	432,435	1,610,294
2019	4,960,991	5.1	253,011	998,275	7.1	352,230	1,316,917	7.2	357,191	1,342,150	8.6	426,645	1,574,846	9.0	446,489	1,630,599
2020	5,122,223	5.1	261,233	1,009,688	7.1	363,678	1,331,973	7.2	368,800	1,357,495	8.6	440,511	1,592,851	9.0	461,000	1,649,242
2021	5,288,695	5.1	269,723	1,019,947	7.1	375,497	1,345,507	7.2	380,786	1,371,288	8.6	454,828	1,609,036	9.0	475,983	1,666,000
2022	5,460,578	5.1	278,489	1,028,905	7.1	387,701	1,357,324	7.2	393,162	1,383,331	8.6	469,610	1,623,167	9.0	491,452	1,680,631
2023	5,638,047	5.1	287,540	1,036,400	7.1	400,301	1,367,211	7.2	405,939	1,393,408	8.6	484,872	1,634,991	9.0	507,424	1,692,873
2024	5,821,284	5.1	296,885	1,042,257	7.1	413,311	1,374,938	7.2	419,132	1,401,283	8.6	500,630	1,644,231	9.0	523,916	1,702,441
2025	6,010,476	5.1	306,534	1,046,287	7.1	426,744	1,380,255	7.2	432,754	1,406,702	8.6	516,901	1,650,589	9.0	540,943	1,709,024
2026	6,205,816	5.1	316,497	1,048,285	7.1	440,613	1,382,891	7.2	446,819	1,409,388	8.6	533,700	1,653,741	9.0	558,523	1,712,287

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	10.0%	\$465,359	\$ 1,755,989	10.9%	\$507,242	\$ 1,890,920	11.4%	\$530,510	\$ 1,974,636	12.9%	\$600,313	\$ 2,192,234	16.8%	\$781,804	\$ 2,875,415
2018	4,804,834	10.0	480,483	1,780,046	10.9	523,727	1,916,825	11.4	547,751	2,001,688	12.9	619,824	2,222,267	16.8	807,212	2,914,808
2019	4,960,991	10.0	496,099	1,802,491	10.9	540,748	1,940,995	11.4	565,553	2,026,928	12.9	639,968	2,250,288	16.8	833,446	2,951,562
2020	5,122,223	10.0	512,222	1,823,099	10.9	558,322	1,963,186	11.4	583,933	2,050,102	12.9	660,767	2,276,015	16.8	860,533	2,985,307
2021	5,288,695	10.0	528,870	1,841,623	10.9	576,468	1,983,134	11.4	602,911	2,070,933	12.9	682,242	2,299,141	16.8	888,501	3,015,640
2022	5,460,578	10.0	546,058	1,857,797	10.9	595,203	2,000,551	11.4	622,506	2,089,121	12.9	704,415	2,319,333	16.8	917,377	3,042,124
2023	5,638,047	10.0	563,805	1,871,330	10.9	614,547	2,015,124	11.4	642,737	2,104,339	12.9	727,308	2,336,228	16.8	947,192	3,064,284
2024	5,821,284	10.0	582,128	1,881,906	10.9	634,520	2,026,513	11.4	663,626	2,116,232	12.9	750,946	2,349,432	16.8	977,976	3,081,602
2025	6,010,476	10.0	601,048	1,889,183	10.9	655,142	2,034,350	11.4	685,194	2,124,416	12.9	775,351	2,358,517	16.8	1,009,760	3,093,519
2026	6,205,816	10.0	620,582	1,892,790	10.9	676,434	2,038,235	11.4	707,463	2,128,473	12.9	800,550	2,363,021	16.8	1,042,577	3,099,426

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
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City of Kirkwood - Police

Employer Contribution Rates (Contributory Plan - 3 Year FAS)
(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	5.3%	\$246,640	\$ 1,015,362	7.3%	\$339,712	\$ 1,335,195	7.5%	\$349,019	\$ 1,362,388	8.9%	\$414,170	\$ 1,595,413	9.3%	\$432,784	\$ 1,649,761
2018	4,804,834	5.3	254,656	1,029,272	7.3	350,753	1,353,487	7.5	360,363	1,381,053	8.9	427,630	1,617,270	9.3	446,850	1,672,362
2019	4,960,991	5.3	262,933	1,042,250	7.3	362,152	1,370,554	7.5	372,074	1,398,467	8.9	441,528	1,637,663	9.3	461,372	1,693,449
2020	5,122,223	5.3	271,478	1,054,166	7.3	373,922	1,386,223	7.5	384,167	1,414,456	8.9	455,878	1,656,386	9.3	476,367	1,712,810
2021	5,288,695	5.3	280,301	1,064,877	7.3	386,075	1,400,308	7.5	396,652	1,428,828	8.9	470,694	1,673,216	9.3	491,849	1,730,214
2022	5,460,578	5.3	289,411	1,074,229	7.3	398,622	1,412,606	7.5	409,543	1,441,376	8.9	485,991	1,687,911	9.3	507,834	1,745,409
2023	5,638,047	5.3	298,816	1,082,054	7.3	411,577	1,422,896	7.5	422,854	1,451,875	8.9	501,786	1,700,206	9.3	524,338	1,758,123
2024	5,821,284	5.3	308,528	1,088,169	7.3	424,954	1,430,938	7.5	436,596	1,460,081	8.9	518,094	1,709,815	9.3	541,379	1,768,059
2025	6,010,476	5.3	318,555	1,092,377	7.3	438,765	1,436,471	7.5	450,786	1,465,727	8.9	534,932	1,716,427	9.3	558,974	1,774,896
2026	6,205,816	5.3	328,908	1,094,463	7.3	453,025	1,439,214	7.5	465,436	1,468,526	8.9	552,318	1,719,704	9.3	577,141	1,778,285

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	10.4%	\$483,974	\$ 1,823,363	11.4%	\$530,510	\$ 1,961,798	11.9%	\$553,778	\$ 2,048,486	13.4%	\$623,581	\$ 2,273,010	17.6%	\$819,032	\$ 2,982,736
2018	4,804,834	10.4	499,703	1,848,343	11.4	547,751	1,988,674	11.9	571,775	2,076,550	13.4	643,848	2,304,150	17.6	845,651	3,023,599
2019	4,960,991	10.4	515,943	1,871,649	11.4	565,553	2,013,750	11.9	590,358	2,102,734	13.4	664,773	2,333,204	17.6	873,134	3,061,725
2020	5,122,223	10.4	532,711	1,893,047	11.4	583,933	2,036,773	11.9	609,545	2,126,774	13.4	686,378	2,359,879	17.6	901,511	3,096,730
2021	5,288,695	10.4	550,024	1,912,282	11.4	602,911	2,057,468	11.9	629,355	2,148,384	13.4	708,685	2,383,858	17.6	930,810	3,128,196
2022	5,460,578	10.4	567,900	1,929,076	11.4	622,506	2,075,537	11.9	649,809	2,167,252	13.4	731,717	2,404,794	17.6	961,062	3,155,669
2023	5,638,047	10.4	586,357	1,943,128	11.4	642,737	2,090,656	11.9	670,928	2,183,039	13.4	755,498	2,422,311	17.6	992,296	3,178,656
2024	5,821,284	10.4	605,414	1,954,110	11.4	663,626	2,102,472	11.9	692,733	2,195,377	13.4	780,052	2,436,001	17.6	1,024,546	3,196,621
2025	6,010,476	10.4	625,090	1,961,667	11.4	685,194	2,110,602	11.9	715,247	2,203,867	13.4	805,404	2,445,421	17.6	1,057,844	3,208,982
2026	6,205,816	10.4	645,405	1,965,413	11.4	707,463	2,114,632	11.9	738,492	2,208,075	13.4	831,579	2,450,090	17.6	1,092,224	3,215,109

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Police

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	8.9%	\$414,170	\$ 1,127,591	10.8%	\$502,588	\$ 1,409,477	10.9%	\$507,242	\$ 1,460,914	12.3%	\$572,392	\$ 1,659,479	12.9%	\$600,313	\$ 1,691,327
2018	4,804,834	8.9	427,630	1,143,039	10.8	518,922	1,428,787	10.9	523,727	1,480,928	12.3	590,995	1,682,214	12.9	619,824	1,714,498
2019	4,960,991	8.9	441,528	1,157,452	10.8	535,787	1,446,803	10.9	540,748	1,499,602	12.3	610,202	1,703,426	12.9	639,968	1,736,117
2020	5,122,223	8.9	455,878	1,170,685	10.8	553,200	1,463,344	10.9	558,322	1,516,747	12.3	630,033	1,722,901	12.9	660,767	1,755,966
2021	5,288,695	8.9	470,694	1,182,580	10.8	571,179	1,478,213	10.9	576,468	1,532,159	12.3	650,509	1,740,407	12.9	682,242	1,773,808
2022	5,460,578	8.9	485,991	1,192,966	10.8	589,742	1,491,195	10.9	595,203	1,545,615	12.3	671,651	1,755,692	12.9	704,415	1,789,386
2023	5,638,047	8.9	501,786	1,201,656	10.8	608,909	1,502,057	10.9	614,547	1,556,874	12.3	693,480	1,768,481	12.9	727,308	1,802,420
2024	5,821,284	8.9	518,094	1,208,447	10.8	628,699	1,510,546	10.9	634,520	1,565,673	12.3	716,018	1,778,476	12.9	750,946	1,812,607
2025	6,010,476	8.9	534,932	1,213,120	10.8	649,131	1,516,387	10.9	655,142	1,571,728	12.3	739,289	1,785,353	12.9	775,351	1,819,616
2026	6,205,816	8.9	552,318	1,215,436	10.8	670,228	1,519,283	10.9	676,434	1,574,729	12.3	763,315	1,788,762	12.9	800,550	1,823,091

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	13.9%	\$646,849	\$ 1,857,990	14.8%	\$688,732	\$ 1,973,246	15.3%	\$712,000	\$ 2,056,588	16.8%	\$781,804	\$ 2,255,090	20.7%	\$963,294	\$ 2,818,955
2018	4,804,834	13.9	667,872	1,883,444	14.8	711,115	2,000,279	15.3	735,140	2,084,763	16.8	807,212	2,285,984	20.7	994,601	2,857,574
2019	4,960,991	13.9	689,578	1,907,193	14.8	734,227	2,025,501	15.3	759,032	2,111,051	16.8	833,446	2,314,809	20.7	1,026,925	2,893,606
2020	5,122,223	13.9	711,989	1,928,998	14.8	758,089	2,048,658	15.3	783,700	2,135,187	16.8	860,533	2,341,274	20.7	1,060,300	2,926,688
2021	5,288,695	13.9	735,129	1,948,598	14.8	782,727	2,069,474	15.3	809,170	2,156,882	16.8	888,501	2,365,063	20.7	1,094,760	2,956,426
2022	5,460,578	13.9	759,020	1,965,711	14.8	808,166	2,087,649	15.3	835,468	2,175,824	16.8	917,377	2,385,834	20.7	1,130,340	2,982,390
2023	5,638,047	13.9	783,689	1,980,030	14.8	834,431	2,102,856	15.3	862,621	2,191,673	16.8	947,192	2,403,213	20.7	1,167,076	3,004,115
2024	5,821,284	13.9	809,158	1,991,220	14.8	861,550	2,114,741	15.3	890,656	2,204,060	16.8	977,976	2,416,795	20.7	1,205,006	3,021,093
2025	6,010,476	13.9	835,456	1,998,920	14.8	889,550	2,122,919	15.3	919,603	2,212,583	16.8	1,009,760	2,426,141	20.7	1,244,169	3,032,776
2026	6,205,816	13.9	862,608	2,002,737	14.8	918,461	2,126,973	15.3	949,490	2,216,808	16.8	1,042,577	2,430,774	20.7	1,284,604	3,038,567

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Police

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	9.1%	\$423,477	\$ 1,164,268	11.2%	\$521,202	\$ 1,455,332	11.2%	\$521,202	\$ 1,509,600	12.8%	\$595,660	\$ 1,714,355	13.2%	\$614,274	\$ 1,746,419
2018	4,804,834	9.1	437,240	1,180,218	11.2	538,141	1,475,270	11.2	538,141	1,530,281	12.8	615,019	1,737,841	13.2	634,238	1,770,345
2019	4,960,991	9.1	451,450	1,195,100	11.2	555,631	1,493,872	11.2	555,631	1,549,577	12.8	635,007	1,759,754	13.2	654,851	1,792,668
2020	5,122,223	9.1	466,122	1,208,764	11.2	573,689	1,510,951	11.2	573,689	1,567,293	12.8	655,645	1,779,873	13.2	676,133	1,813,163
2021	5,288,695	9.1	481,271	1,221,046	11.2	592,334	1,526,304	11.2	592,334	1,583,218	12.8	676,953	1,797,958	13.2	698,108	1,831,586
2022	5,460,578	9.1	496,913	1,231,770	11.2	611,585	1,539,709	11.2	611,585	1,597,122	12.8	698,954	1,813,748	13.2	720,796	1,847,672
2023	5,638,047	9.1	513,062	1,240,743	11.2	631,461	1,550,925	11.2	631,461	1,608,756	12.8	721,670	1,826,960	13.2	744,222	1,861,131
2024	5,821,284	9.1	529,737	1,247,755	11.2	651,984	1,559,690	11.2	651,984	1,617,848	12.8	745,124	1,837,285	13.2	768,409	1,871,650
2025	6,010,476	9.1	546,953	1,252,580	11.2	673,173	1,565,721	11.2	673,173	1,624,104	12.8	769,341	1,844,390	13.2	793,383	1,878,888
2026	6,205,816	9.1	564,729	1,254,972	11.2	695,051	1,568,711	11.2	695,051	1,627,205	12.8	794,344	1,847,912	13.2	819,168	1,882,476

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,653,593	14.3%	\$665,464	\$ 1,919,067	15.3%	\$712,000	\$ 2,037,403	15.8%	\$735,268	\$ 2,123,766	17.3%	\$805,072	\$ 2,328,573	21.5%	\$1,000,522	\$ 2,910,663
2018	4,804,834	14.3	687,091	1,945,358	15.3	735,140	2,065,315	15.8	759,164	2,152,861	17.3	831,236	2,360,474	21.5	1,033,039	2,950,539
2019	4,960,991	14.3	709,422	1,969,888	15.3	759,032	2,091,357	15.8	783,837	2,180,007	17.3	858,251	2,390,238	21.5	1,066,613	2,987,743
2020	5,122,223	14.3	732,478	1,992,410	15.3	783,700	2,115,267	15.8	809,311	2,204,931	17.3	886,145	2,417,565	21.5	1,101,278	3,021,902
2021	5,288,695	14.3	756,283	2,012,655	15.3	809,170	2,136,760	15.8	835,614	2,227,335	17.3	914,944	2,442,130	21.5	1,137,069	3,052,607
2022	5,460,578	14.3	780,863	2,030,331	15.3	835,468	2,155,526	15.8	862,771	2,246,896	17.3	944,680	2,463,578	21.5	1,174,024	3,079,416
2023	5,638,047	14.3	806,241	2,045,121	15.3	862,621	2,171,228	15.8	890,811	2,263,263	17.3	975,382	2,481,524	21.5	1,212,180	3,101,848
2024	5,821,284	14.3	832,444	2,056,679	15.3	890,656	2,183,499	15.8	919,763	2,276,054	17.3	1,007,082	2,495,549	21.5	1,251,576	3,119,379
2025	6,010,476	14.3	859,498	2,064,632	15.3	919,603	2,191,943	15.8	949,655	2,284,856	17.3	1,039,812	2,505,199	21.5	1,292,252	3,131,442
2026	6,205,816	14.3	887,432	2,068,574	15.3	949,490	2,196,128	15.8	980,519	2,289,219	17.3	1,073,606	2,509,983	21.5	1,334,250	3,137,421

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 4,324,814	5.8%	\$250,839	\$ 811,714	7.9%	\$341,660	\$ 1,046,616	7.9%	\$341,660	\$ 1,009,272	9.5%	\$410,857	\$ 1,194,709	10.1%	\$436,806	\$ 1,279,190
2018	4,465,370	5.8	258,991	822,834	7.9	352,764	1,060,954	7.9	352,764	1,023,099	9.5	424,210	1,211,076	10.1	451,002	1,296,715
2019	4,610,495	5.8	267,409	833,209	7.9	364,229	1,074,332	7.9	364,229	1,036,000	9.5	437,997	1,226,347	10.1	465,660	1,313,066
2020	4,760,336	5.8	276,099	842,735	7.9	376,067	1,086,615	7.9	376,067	1,047,845	9.5	452,232	1,240,368	10.1	480,794	1,328,078
2021	4,915,047	5.8	285,073	851,298	7.9	388,289	1,097,656	7.9	388,289	1,058,492	9.5	466,929	1,252,971	10.1	496,420	1,341,572
2022	5,074,786	5.8	294,338	858,774	7.9	400,908	1,107,296	7.9	400,908	1,067,788	9.5	482,105	1,263,975	10.1	512,553	1,353,354
2023	5,239,717	5.8	303,904	865,030	7.9	413,938	1,115,362	7.9	413,938	1,075,566	9.5	497,773	1,273,182	10.1	529,211	1,363,212
2024	5,410,008	5.8	313,780	869,919	7.9	427,391	1,121,666	7.9	427,391	1,081,645	9.5	513,951	1,280,378	10.1	546,411	1,370,916
2025	5,585,833	5.8	323,978	873,283	7.9	441,281	1,126,004	7.9	441,281	1,085,828	9.5	530,654	1,285,329	10.1	564,169	1,376,217
2026	5,767,373	5.8	334,508	874,951	7.9	455,622	1,128,154	7.9	455,622	1,087,901	9.5	547,900	1,287,783	10.1	582,505	1,378,845

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2017	\$ 4,324,814	11.1%	\$480,054	\$ 1,377,932	12.2%	\$527,627	\$ 1,510,318	12.7%	\$549,251	\$ 1,559,652	14.4%	\$622,773	\$ 1,740,193	18.6%	\$804,415	\$ 2,241,428
2018	4,465,370	11.1	495,656	1,396,809	12.2	544,775	1,531,009	12.7	567,102	1,581,019	14.4	643,013	1,764,033	18.6	830,559	2,272,135
2019	4,610,495	11.1	511,765	1,414,422	12.2	562,480	1,550,314	12.7	585,533	1,600,955	14.4	663,911	1,786,276	18.6	857,552	2,300,785
2020	4,760,336	11.1	528,397	1,430,593	12.2	580,761	1,568,039	12.7	604,563	1,619,259	14.4	685,488	1,806,698	18.6	885,422	2,327,090
2021	4,915,047	11.1	545,570	1,445,129	12.2	599,636	1,583,972	12.7	624,211	1,635,712	14.4	707,767	1,825,056	18.6	914,199	2,350,735
2022	5,074,786	11.1	563,301	1,457,821	12.2	619,124	1,597,883	12.7	644,498	1,650,077	14.4	730,769	1,841,084	18.6	943,910	2,371,380
2023	5,239,717	11.1	581,609	1,468,440	12.2	639,245	1,609,523	12.7	665,444	1,662,097	14.4	754,519	1,854,495	18.6	974,587	2,388,654
2024	5,410,008	11.1	600,511	1,476,739	12.2	660,021	1,618,620	12.7	687,071	1,671,491	14.4	779,041	1,864,976	18.6	1,006,261	2,402,154
2025	5,585,833	11.1	620,027	1,482,450	12.2	681,472	1,624,879	12.7	709,401	1,677,955	14.4	804,360	1,872,188	18.6	1,038,965	2,411,443
2026	5,767,373	11.1	640,178	1,485,281	12.2	703,620	1,627,982	12.7	732,456	1,681,159	14.4	830,502	1,875,763	18.6	1,072,731	2,416,048

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
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- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Contributory Plan - 3 Year FAS)
(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	6.1%	\$263,814	\$ 841,515	8.3%	\$358,960	\$ 1,083,167	8.3%	\$358,960	\$ 1,045,751	10.0%	\$432,481	\$ 1,236,475	10.5%	\$454,105	\$ 1,322,451
2018	4,465,370	6.1	272,388	853,044	8.3	370,626	1,098,006	8.3	370,626	1,060,078	10.0	446,537	1,253,415	10.5	468,864	1,340,568
2019	4,610,495	6.1	281,240	863,800	8.3	382,671	1,111,851	8.3	382,671	1,073,445	10.0	461,050	1,269,220	10.5	484,102	1,357,472
2020	4,760,336	6.1	290,380	873,676	8.3	395,108	1,124,563	8.3	395,108	1,085,718	10.0	476,034	1,283,731	10.5	499,835	1,372,992
2021	4,915,047	6.1	299,818	882,553	8.3	407,949	1,135,990	8.3	407,949	1,096,750	10.0	491,505	1,296,775	10.5	516,080	1,386,943
2022	5,074,786	6.1	309,562	890,304	8.3	421,207	1,145,967	8.3	421,207	1,106,382	10.0	507,479	1,308,164	10.5	532,853	1,399,124
2023	5,239,717	6.1	319,623	896,789	8.3	434,897	1,154,315	8.3	434,897	1,114,441	10.0	523,972	1,317,693	10.5	550,170	1,409,316
2024	5,410,008	6.1	330,010	901,857	8.3	449,031	1,160,839	8.3	449,031	1,120,739	10.0	541,001	1,325,140	10.5	568,051	1,417,281
2025	5,585,833	6.1	340,736	905,345	8.3	463,624	1,165,328	8.3	463,624	1,125,073	10.0	558,583	1,330,264	10.5	586,512	1,422,762
2026	5,767,373	6.1	351,810	907,074	8.3	478,692	1,167,553	8.3	478,692	1,127,221	10.0	576,737	1,332,804	10.5	605,574	1,425,479

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	11.6%	\$501,678	\$ 1,424,561	12.7%	\$549,251	\$ 1,560,079	13.3%	\$575,200	\$ 1,611,178	14.9%	\$644,397	\$ 1,797,058	19.4%	\$839,014	\$ 2,315,826
2018	4,465,370	11.6	517,983	1,444,077	12.7	567,102	1,581,452	13.3	593,894	1,633,251	14.9	665,340	1,821,677	19.4	866,282	2,347,552
2019	4,610,495	11.6	534,817	1,462,286	12.7	585,533	1,601,393	13.3	613,196	1,653,845	14.9	686,964	1,844,647	19.4	894,436	2,377,153
2020	4,760,336	11.6	552,199	1,479,004	12.7	604,563	1,619,702	13.3	633,125	1,672,753	14.9	709,290	1,865,737	19.4	923,505	2,404,331
2021	4,915,047	11.6	570,145	1,494,032	12.7	624,211	1,636,160	13.3	653,701	1,689,750	14.9	732,342	1,884,695	19.4	953,519	2,428,761
2022	5,074,786	11.6	588,675	1,507,153	12.7	644,498	1,650,529	13.3	674,947	1,704,590	14.9	756,143	1,901,247	19.4	984,508	2,450,091
2023	5,239,717	11.6	607,807	1,518,132	12.7	665,444	1,662,552	13.3	696,882	1,717,007	14.9	780,718	1,915,096	19.4	1,016,505	2,467,938
2024	5,410,008	11.6	627,561	1,526,712	12.7	687,071	1,671,948	13.3	719,531	1,726,711	14.9	806,091	1,925,919	19.4	1,049,542	2,481,886
2025	5,585,833	11.6	647,957	1,532,616	12.7	709,401	1,678,413	13.3	742,916	1,733,388	14.9	832,289	1,933,367	19.4	1,083,652	2,491,484
2026	5,767,373	11.6	669,015	1,535,542	12.7	732,456	1,681,618	13.3	767,061	1,736,698	14.9	859,339	1,937,059	19.4	1,118,870	2,496,241

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	9.6%	\$415,182	\$ 862,988	11.8%	\$510,328	\$ 1,078,813	11.8%	\$510,328	\$ 1,059,365	13.4%	\$579,525	\$ 1,226,008	14.0%	\$605,474	\$ 1,294,575
2018	4,465,370	9.6	428,676	874,811	11.8	526,914	1,093,593	11.8	526,914	1,073,878	13.4	598,360	1,242,804	14.0	625,152	1,312,310
2019	4,610,495	9.6	442,608	885,842	11.8	544,038	1,107,383	11.8	544,038	1,087,419	13.4	617,806	1,258,475	14.0	645,469	1,328,857
2020	4,760,336	9.6	456,992	895,970	11.8	561,720	1,120,044	11.8	561,720	1,099,851	13.4	637,885	1,272,863	14.0	666,447	1,344,050
2021	4,915,047	9.6	471,845	905,074	11.8	579,976	1,131,425	11.8	579,976	1,111,026	13.4	658,616	1,285,796	14.0	688,107	1,357,707
2022	5,074,786	9.6	487,179	913,023	11.8	598,825	1,141,362	11.8	598,825	1,120,783	13.4	680,021	1,297,088	14.0	710,470	1,369,631
2023	5,239,717	9.6	503,013	919,674	11.8	618,287	1,149,676	11.8	618,287	1,128,947	13.4	702,122	1,306,536	14.0	733,560	1,379,608
2024	5,410,008	9.6	519,361	924,872	11.8	638,381	1,156,174	11.8	638,381	1,135,327	13.4	724,941	1,313,920	14.0	757,401	1,387,405
2025	5,585,833	9.6	536,240	928,449	11.8	659,128	1,160,645	11.8	659,128	1,139,717	13.4	748,502	1,319,001	14.0	782,017	1,392,770
2026	5,767,373	9.6	553,668	930,222	11.8	680,550	1,162,861	11.8	680,550	1,141,893	13.4	772,828	1,321,520	14.0	807,432	1,395,429

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	15.0%	\$648,722	\$ 1,392,716	16.1%	\$696,295	\$ 1,510,376	16.6%	\$717,919	\$ 1,559,446	18.3%	\$791,441	\$ 1,726,102	22.5%	\$973,083	\$ 2,157,626
2018	4,465,370	15.0	669,806	1,411,796	16.1	718,925	1,531,068	16.6	741,251	1,580,810	18.3	817,163	1,749,749	22.5	1,004,708	2,187,185
2019	4,610,495	15.0	691,574	1,429,598	16.1	742,290	1,550,374	16.6	765,342	1,600,743	18.3	843,721	1,771,812	22.5	1,037,361	2,214,764
2020	4,760,336	15.0	714,050	1,445,943	16.1	766,414	1,568,099	16.6	790,216	1,619,044	18.3	871,141	1,792,069	22.5	1,071,076	2,240,085
2021	4,915,047	15.0	737,257	1,460,635	16.1	791,323	1,584,032	16.6	815,898	1,635,495	18.3	899,454	1,810,278	22.5	1,105,886	2,262,846
2022	5,074,786	15.0	761,218	1,473,463	16.1	817,041	1,597,944	16.6	842,414	1,649,858	18.3	928,686	1,826,176	22.5	1,141,827	2,282,719
2023	5,239,717	15.0	785,958	1,484,196	16.1	843,594	1,609,584	16.6	869,793	1,661,876	18.3	958,868	1,839,478	22.5	1,178,936	2,299,347
2024	5,410,008	15.0	811,501	1,492,584	16.1	871,011	1,618,681	16.6	898,061	1,671,268	18.3	990,031	1,849,874	22.5	1,217,252	2,312,342
2025	5,585,833	15.0	837,875	1,498,356	16.1	899,319	1,624,941	16.6	927,248	1,677,731	18.3	1,022,207	1,857,028	22.5	1,256,812	2,321,284
2026	5,767,373	15.0	865,106	1,501,217	16.1	928,547	1,628,044	16.6	957,384	1,680,935	18.3	1,055,429	1,860,574	22.5	1,297,659	2,325,716

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	10.0%	\$432,481	\$ 888,760	12.2%	\$527,627	\$ 1,111,008	12.1%	\$523,302	\$ 1,091,788	13.9%	\$601,149	\$ 1,263,246	14.4%	\$622,773	\$ 1,333,192
2018	4,465,370	10.0	446,537	900,936	12.2	544,775	1,126,229	12.1	540,310	1,106,745	13.9	620,686	1,280,552	14.4	643,013	1,351,457
2019	4,610,495	10.0	461,050	912,296	12.2	562,480	1,140,430	12.1	557,870	1,120,700	13.9	640,859	1,296,699	14.4	663,911	1,368,498
2020	4,760,336	10.0	476,034	922,726	12.2	580,761	1,153,468	12.1	576,001	1,133,513	13.9	661,687	1,311,524	14.4	685,488	1,384,144
2021	4,915,047	10.0	491,505	932,102	12.2	599,636	1,165,188	12.1	594,721	1,145,031	13.9	683,192	1,324,850	14.4	707,767	1,398,208
2022	5,074,786	10.0	507,479	940,288	12.2	619,124	1,175,421	12.1	614,049	1,155,087	13.9	705,395	1,336,485	14.4	730,769	1,410,488
2023	5,239,717	10.0	523,972	947,137	12.2	639,245	1,183,983	12.1	634,006	1,163,501	13.9	728,321	1,346,220	14.4	754,519	1,420,762
2024	5,410,008	10.0	541,001	952,490	12.2	660,021	1,190,674	12.1	654,611	1,170,077	13.9	751,991	1,353,828	14.4	779,041	1,428,792
2025	5,585,833	10.0	558,583	956,173	12.2	681,472	1,195,278	12.1	675,886	1,174,602	13.9	776,431	1,359,063	14.4	804,360	1,434,317
2026	5,767,373	10.0	576,737	957,999	12.2	703,620	1,197,560	12.1	697,852	1,176,845	13.9	801,665	1,361,658	14.4	830,502	1,437,056

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	15.5%	\$670,346	\$ 1,434,707	16.6%	\$717,919	\$ 1,555,434	17.2%	\$743,868	\$ 1,606,129	18.8%	\$813,065	\$ 1,777,513	23.3%	\$1,007,682	\$ 2,222,015
2018	4,465,370	15.5	692,132	1,454,362	16.6	741,251	1,576,743	17.2	768,044	1,628,133	18.8	839,490	1,801,865	23.3	1,040,431	2,252,456
2019	4,610,495	15.5	714,627	1,472,701	16.6	765,342	1,596,625	17.2	793,005	1,648,663	18.8	866,773	1,824,585	23.3	1,074,245	2,280,858
2020	4,760,336	15.5	737,852	1,489,538	16.6	790,216	1,614,879	17.2	818,778	1,667,512	18.8	894,943	1,845,445	23.3	1,109,158	2,306,935
2021	4,915,047	15.5	761,832	1,504,673	16.6	815,898	1,631,288	17.2	845,388	1,684,455	18.8	924,029	1,864,196	23.3	1,145,206	2,330,376
2022	5,074,786	15.5	786,592	1,517,888	16.6	842,414	1,645,615	17.2	872,863	1,699,248	18.8	954,060	1,880,568	23.3	1,182,425	2,350,842
2023	5,239,717	15.5	812,156	1,528,945	16.6	869,793	1,657,602	17.2	901,231	1,711,626	18.8	985,067	1,894,267	23.3	1,220,854	2,367,966
2024	5,410,008	15.5	838,551	1,537,586	16.6	898,061	1,666,970	17.2	930,521	1,721,300	18.8	1,017,082	1,904,973	23.3	1,260,532	2,381,349
2025	5,585,833	15.5	865,804	1,543,532	16.6	927,248	1,673,416	17.2	960,763	1,727,956	18.8	1,050,137	1,912,340	23.3	1,301,499	2,390,558
2026	5,767,373	15.5	893,943	1,546,479	16.6	957,384	1,676,611	17.2	991,988	1,731,255	18.8	1,084,266	1,915,992	23.3	1,343,798	2,395,123

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Contributory Plan - 5 Year FAS)
(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	6.1%	\$263,814	\$ 762,375	8.3%	\$358,960	\$ 980,933	8.9%	\$384,908	\$ 1,034,894	10.4%	\$449,781	\$ 1,185,280	10.6%	\$458,430	\$ 1,197,687
2018	4,465,370	6.1	272,388	772,819	8.3	370,626	994,372	8.9	397,418	1,049,072	10.4	464,398	1,201,518	10.6	473,329	1,214,095
2019	4,610,495	6.1	281,240	782,564	8.3	382,671	1,006,910	8.9	410,334	1,062,300	10.4	479,491	1,216,668	10.6	488,712	1,229,404
2020	4,760,336	6.1	290,380	791,511	8.3	395,108	1,018,422	8.9	423,670	1,074,445	10.4	495,075	1,230,578	10.6	504,596	1,243,460
2021	4,915,047	6.1	299,818	799,553	8.3	407,949	1,028,770	8.9	437,439	1,085,362	10.4	511,165	1,243,082	10.6	520,995	1,256,095
2022	5,074,786	6.1	309,562	806,575	8.3	421,207	1,037,805	8.9	451,656	1,094,894	10.4	527,778	1,253,999	10.6	537,927	1,267,126
2023	5,239,717	6.1	319,623	812,450	8.3	434,897	1,045,365	8.9	466,335	1,102,870	10.4	544,931	1,263,134	10.6	555,410	1,276,356
2024	5,410,008	6.1	330,010	817,042	8.3	449,031	1,051,273	8.9	481,491	1,109,103	10.4	562,641	1,270,273	10.6	573,461	1,283,570
2025	5,585,833	6.1	340,736	820,202	8.3	463,624	1,055,338	8.9	497,139	1,113,392	10.4	580,927	1,275,185	10.6	592,098	1,288,534
2026	5,767,373	6.1	351,810	821,768	8.3	478,692	1,057,353	8.9	513,296	1,115,518	10.4	599,807	1,277,620	10.6	611,342	1,290,994

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	12.0%	\$518,978	\$ 1,333,862	12.8%	\$553,576	\$ 1,413,072	13.5%	\$583,850	\$ 1,481,183	15.0%	\$648,722	\$ 1,627,449	19.5%	\$843,339	\$ 2,094,874
2018	4,465,370	12.0	535,844	1,352,136	12.8	571,567	1,432,431	13.5	602,825	1,501,475	15.0	669,806	1,649,745	19.5	870,747	2,123,573
2019	4,610,495	12.0	553,259	1,369,186	12.8	590,143	1,450,493	13.5	622,417	1,520,408	15.0	691,574	1,670,547	19.5	899,047	2,150,350
2020	4,760,336	12.0	571,240	1,384,840	12.8	609,323	1,467,076	13.5	642,645	1,537,791	15.0	714,050	1,689,646	19.5	928,266	2,174,935
2021	4,915,047	12.0	589,806	1,398,911	12.8	629,126	1,481,983	13.5	663,531	1,553,416	15.0	737,257	1,706,814	19.5	958,434	2,197,034
2022	5,074,786	12.0	608,974	1,411,197	12.8	649,573	1,494,998	13.5	685,096	1,567,059	15.0	761,218	1,721,804	19.5	989,583	2,216,329
2023	5,239,717	12.0	628,766	1,421,477	12.8	670,684	1,505,888	13.5	707,362	1,578,474	15.0	785,958	1,734,346	19.5	1,021,745	2,232,473
2024	5,410,008	12.0	649,201	1,429,511	12.8	692,481	1,514,399	13.5	730,351	1,587,395	15.0	811,501	1,744,148	19.5	1,054,952	2,245,090
2025	5,585,833	12.0	670,300	1,435,039	12.8	714,987	1,520,255	13.5	754,087	1,593,534	15.0	837,875	1,750,893	19.5	1,089,237	2,253,772
2026	5,767,373	12.0	692,085	1,437,779	12.8	738,224	1,523,158	13.5	778,595	1,596,577	15.0	865,106	1,754,236	19.5	1,124,638	2,258,076

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Contributory Plan - 3 Year FAS)
(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	6.4%	\$276,788	\$ 791,165	8.7%	\$376,259	\$ 1,016,527	9.3%	\$402,208	\$ 1,073,296	10.8%	\$467,080	\$ 1,228,139	11.0%	\$475,730	\$ 1,239,644
2018	4,465,370	6.4	285,784	802,004	8.7	388,487	1,030,453	9.3	415,279	1,088,000	10.8	482,260	1,244,964	11.0	491,191	1,256,627
2019	4,610,495	6.4	295,072	812,117	8.7	401,113	1,043,446	9.3	428,776	1,101,719	10.8	497,933	1,260,662	11.0	507,154	1,272,472
2020	4,760,336	6.4	304,662	821,402	8.7	414,149	1,055,376	9.3	442,711	1,114,315	10.8	514,116	1,275,075	11.0	523,637	1,287,020
2021	4,915,047	6.4	314,563	829,748	8.7	427,609	1,066,100	9.3	457,099	1,125,637	10.8	530,825	1,288,031	11.0	540,655	1,300,097
2022	5,074,786	6.4	324,786	837,035	8.7	441,506	1,075,463	9.3	471,955	1,135,523	10.8	548,077	1,299,343	11.0	558,226	1,311,515
2023	5,239,717	6.4	335,342	843,132	8.7	455,855	1,083,297	9.3	487,294	1,143,795	10.8	565,889	1,308,808	11.0	576,369	1,321,069
2024	5,410,008	6.4	346,241	847,897	8.7	470,671	1,089,419	9.3	503,131	1,150,259	10.8	584,281	1,316,205	11.0	595,101	1,328,535
2025	5,585,833	6.4	357,493	851,176	8.7	485,967	1,093,632	9.3	519,482	1,154,707	10.8	603,270	1,321,295	11.0	614,442	1,333,673
2026	5,767,373	6.4	369,112	852,801	8.7	501,761	1,095,720	9.3	536,366	1,156,912	10.8	622,876	1,323,818	11.0	634,411	1,336,220

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	12.4%	\$536,277	\$ 1,380,650	13.3%	\$575,200	\$ 1,461,463	14.0%	\$605,474	\$ 1,532,010	15.6%	\$674,671	\$ 1,682,738	20.2%	\$873,612	\$ 2,167,322
2018	4,465,370	12.4	553,706	1,399,565	13.3	593,894	1,481,485	14.0	625,152	1,552,998	15.6	696,598	1,705,791	20.2	902,005	2,197,014
2019	4,610,495	12.4	571,701	1,417,213	13.3	613,196	1,500,166	14.0	645,469	1,572,580	15.6	719,237	1,727,300	20.2	931,320	2,224,717
2020	4,760,336	12.4	590,282	1,433,416	13.3	633,125	1,517,317	14.0	666,447	1,590,559	15.6	742,612	1,747,048	20.2	961,588	2,250,152
2021	4,915,047	12.4	609,466	1,447,981	13.3	653,701	1,532,734	14.0	688,107	1,606,721	15.6	766,747	1,764,800	20.2	992,839	2,273,016
2022	5,074,786	12.4	629,273	1,460,698	13.3	674,947	1,546,195	14.0	710,470	1,620,832	15.6	791,667	1,780,299	20.2	1,025,107	2,292,978
2023	5,239,717	12.4	649,725	1,471,338	13.3	696,882	1,557,458	14.0	733,560	1,632,639	15.6	817,396	1,793,267	20.2	1,058,423	2,309,681
2024	5,410,008	12.4	670,841	1,479,654	13.3	719,531	1,566,260	14.0	757,401	1,641,866	15.6	843,961	1,803,402	20.2	1,092,822	2,322,735
2025	5,585,833	12.4	692,643	1,485,376	13.3	742,916	1,572,317	14.0	782,017	1,648,215	15.6	871,390	1,810,376	20.2	1,128,338	2,331,717
2026	5,767,373	12.4	715,154	1,488,212	13.3	767,061	1,575,319	14.0	807,432	1,651,362	15.6	899,710	1,813,833	20.2	1,165,009	2,336,169

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)
(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	10.0%	\$432,481	\$ 810,747	12.2%	\$527,627	\$ 1,013,386	12.8%	\$553,576	\$ 1,081,941	14.3%	\$618,448	\$ 1,216,779	14.5%	\$627,098	\$ 1,216,149
2018	4,465,370	10.0	446,537	821,854	12.2	544,775	1,027,269	12.8	571,567	1,096,763	14.3	638,548	1,233,449	14.5	647,479	1,232,810
2019	4,610,495	10.0	461,050	832,217	12.2	562,480	1,040,222	12.8	590,143	1,110,592	14.3	659,301	1,249,002	14.5	668,522	1,248,355
2020	4,760,336	10.0	476,034	841,732	12.2	580,761	1,052,115	12.8	609,323	1,123,289	14.3	680,728	1,263,282	14.5	690,249	1,262,627
2021	4,915,047	10.0	491,505	850,285	12.2	599,636	1,062,805	12.8	629,126	1,134,703	14.3	702,852	1,276,118	14.5	712,682	1,275,456
2022	5,074,786	10.0	507,479	857,753	12.2	619,124	1,072,139	12.8	649,573	1,144,668	14.3	725,694	1,287,325	14.5	735,844	1,286,658
2023	5,239,717	10.0	523,972	864,001	12.2	639,245	1,079,949	12.8	670,684	1,153,006	14.3	749,280	1,296,702	14.5	759,759	1,296,030
2024	5,410,008	10.0	541,001	868,884	12.2	660,021	1,086,053	12.8	692,481	1,159,522	14.3	773,631	1,304,031	14.5	784,451	1,303,355
2025	5,585,833	10.0	558,583	872,244	12.2	681,472	1,090,253	12.8	714,987	1,164,006	14.3	798,774	1,309,074	14.5	809,946	1,308,395
2026	5,767,373	10.0	576,737	873,910	12.2	703,620	1,092,335	12.8	738,224	1,166,229	14.3	824,734	1,311,574	14.5	836,269	1,310,893

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	15.9%	\$687,645	\$ 1,351,715	16.7%	\$722,244	\$ 1,418,894	17.4%	\$752,518	\$ 1,486,665	18.9%	\$817,390	\$ 1,621,463	23.4%	\$1,012,006	\$ 2,026,771
2018	4,465,370	15.9	709,994	1,370,233	16.7	745,717	1,438,333	17.4	776,974	1,507,032	18.9	843,955	1,643,677	23.4	1,044,897	2,054,537
2019	4,610,495	15.9	733,069	1,387,511	16.7	769,953	1,456,469	17.4	802,226	1,526,035	18.9	871,384	1,664,403	23.4	1,078,856	2,080,443
2020	4,760,336	15.9	756,893	1,403,374	16.7	794,976	1,473,121	17.4	828,298	1,543,482	18.9	899,704	1,683,432	23.4	1,113,919	2,104,229
2021	4,915,047	15.9	781,492	1,417,634	16.7	820,813	1,488,089	17.4	855,218	1,559,165	18.9	928,944	1,700,537	23.4	1,150,121	2,125,610
2022	5,074,786	15.9	806,891	1,430,084	16.7	847,489	1,501,158	17.4	883,013	1,572,858	18.9	959,135	1,715,472	23.4	1,187,500	2,144,278
2023	5,239,717	15.9	833,115	1,440,501	16.7	875,033	1,512,093	17.4	911,711	1,584,315	18.9	990,307	1,727,968	23.4	1,226,094	2,159,898
2024	5,410,008	15.9	860,191	1,448,642	16.7	903,471	1,520,639	17.4	941,341	1,593,269	18.9	1,022,492	1,737,734	23.4	1,265,942	2,172,105
2025	5,585,833	15.9	888,147	1,454,244	16.7	932,834	1,526,519	17.4	971,935	1,599,430	18.9	1,055,722	1,744,454	23.4	1,307,085	2,180,505
2026	5,767,373	15.9	917,012	1,457,021	16.7	963,151	1,529,434	17.4	1,003,523	1,602,484	18.9	1,090,033	1,747,785	23.4	1,349,565	2,184,669

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

City of Kirkwood - Fire

Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)
(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program			LT-5(65) Benefit Program			L-7 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	10.3%	\$445,456	\$ 836,245	12.6%	\$544,927	\$ 1,045,286	13.2%	\$570,875	\$ 1,116,997	14.7%	\$635,748	\$ 1,255,809	14.9%	\$644,397	\$ 1,254,320
2018	4,465,370	10.3	459,933	847,701	12.6	562,637	1,059,606	13.2	589,429	1,132,300	14.7	656,409	1,273,013	14.9	665,340	1,271,504
2019	4,610,495	10.3	474,881	858,390	12.6	580,922	1,072,967	13.2	608,585	1,146,578	14.7	677,743	1,289,065	14.9	686,964	1,287,537
2020	4,760,336	10.3	490,315	868,204	12.6	599,802	1,085,234	13.2	628,364	1,159,687	14.7	699,769	1,303,803	14.9	709,290	1,302,257
2021	4,915,047	10.3	506,250	877,026	12.6	619,296	1,096,261	13.2	648,786	1,171,470	14.7	722,512	1,317,051	14.9	732,342	1,315,489
2022	5,074,786	10.3	522,703	884,728	12.6	639,423	1,105,889	13.2	669,872	1,181,758	14.7	745,994	1,328,618	14.9	756,143	1,327,042
2023	5,239,717	10.3	539,691	891,173	12.6	660,204	1,113,945	13.2	691,643	1,190,366	14.7	770,238	1,338,296	14.9	780,718	1,336,709
2024	5,410,008	10.3	557,231	896,210	12.6	681,661	1,120,241	13.2	714,121	1,197,094	14.7	795,271	1,345,860	14.9	806,091	1,344,264
2025	5,585,833	10.3	575,341	899,676	12.6	703,815	1,124,573	13.2	737,330	1,201,723	14.7	821,117	1,351,064	14.9	832,289	1,349,462
2026	5,767,373	10.3	594,039	901,394	12.6	726,689	1,126,720	13.2	761,293	1,204,018	14.7	847,804	1,353,644	14.9	859,339	1,352,039

Valuation Year	Estimated Projected Payroll	LT-8(65) Benefit Program			L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program			L-11 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2017	\$ 4,324,814	16.3%	\$704,945	\$ 1,394,658	17.2%	\$743,868	\$ 1,463,323	17.9%	\$774,142	\$ 1,533,488	19.5%	\$843,339	\$ 1,672,292	24.1%	\$1,042,280	\$ 2,090,571
2018	4,465,370	16.3	727,855	1,413,765	17.2	768,044	1,483,370	17.9	799,301	1,554,497	19.5	870,747	1,695,202	24.1	1,076,154	2,119,212
2019	4,610,495	16.3	751,511	1,431,592	17.2	793,005	1,502,074	17.9	825,279	1,574,098	19.5	899,047	1,716,577	24.1	1,111,129	2,145,934
2020	4,760,336	16.3	775,935	1,447,959	17.2	818,778	1,519,247	17.9	852,100	1,592,095	19.5	928,266	1,736,203	24.1	1,147,241	2,170,468
2021	4,915,047	16.3	801,153	1,462,672	17.2	845,388	1,534,684	17.9	879,793	1,608,272	19.5	958,434	1,753,844	24.1	1,184,526	2,192,522
2022	5,074,786	16.3	827,190	1,475,518	17.2	872,863	1,548,162	17.9	908,387	1,622,396	19.5	989,583	1,769,247	24.1	1,223,023	2,211,777
2023	5,239,717	16.3	854,074	1,486,266	17.2	901,231	1,559,439	17.9	937,909	1,634,214	19.5	1,021,745	1,782,135	24.1	1,262,772	2,227,888
2024	5,410,008	16.3	881,831	1,494,666	17.2	930,521	1,568,252	17.9	968,391	1,643,450	19.5	1,054,952	1,792,207	24.1	1,303,812	2,240,479
2025	5,585,833	16.3	910,491	1,500,446	17.2	960,763	1,574,316	17.9	999,864	1,649,805	19.5	1,089,237	1,799,138	24.1	1,346,186	2,249,143
2026	5,767,373	16.3	940,082	1,503,311	17.2	991,988	1,577,322	17.9	1,032,360	1,652,955	19.5	1,124,638	1,802,573	24.1	1,389,937	2,253,438

Notes regarding the above projections:

- 1) The purpose of the above projections is to comply with the requirements of Section 105.660 of the Revised Statutes of Missouri (RSMo). The projection results may not be applicable for other purposes.
- 2) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.25%.
- 3) 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.
- 4) Differences between the date of the initial valuation and the actuarial valuation date of February 28th have not been incorporated in the above results.
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